

S.P.A.R.K.

South Peninsula Amateur Radio Klub Newsletter

Vol. MCMXCVII No 9 Rptr:W6APZ/R 145.230(-.600)MHz - Club Stn: WA6NKK Wednesday, November 26, 1997

The October 1997 Meeting...

Where: Harry's Hofbrau, Mt. View, on El Camino, a couple of blocks west of 237

When: Thursday, 2 October 1997
6:00 PM

Subject: Food 'n' Fellowship

The Prez Sez...

The August meeting was well attended and we had a nice get together. The show and tell was interesting with several projects being handed around the group for inspection. This is the type of meeting that would be even nicer if some of you reclusive members would attend and we could become better acquainted.

I suggested that we start a club project which could eventually be used in the club hamshack. My suggestion was an ATV station with video input such as a camera or VCR, an RF source, some means of modulating the RF signal, some means of converting a received signal to a normal TV channel. Then, if we could get a used TV set or monitor and some of the other equipment, we could set up the ATV facility in our hamshack. On the other hand, if most of you think that ATV is not the most desirable project, we are open to suggestions. Think of something that a good number of our members would be interested in and come to the next meeting and tell us. If ATV is a good project, then come to the next meeting and present some ideas to get us started.

As I say repeatedly in this column, we have an excellent hamshack in the cafeteria building, with access from the parking lot. There at least four of us that wander into the hamshack occasionally and always make some contacts during lunch hour. You have my word that the hamshack is never overcrowded and if you have the proper license, even you can make a quick QSO to England during lunch hour. Today is Wednesday and I just made a contact with G3CCX, Pete, in Rustington, West Sussex, GB. Our station is operational on all of the HF ham bands. We also have 2M packet and voice.

This month the meeting is planned for Harry's Hofbrau in Mountain View, on El Camino. We meet every fourth month at Harry's so that those who cannot make it for a lunch hour meeting and those who prefer to meet away from the work facility can attend a meeting. You do not have to have a full meal. Some of us just have a sandwich and drink, or just a drink, or even if you like you can order a full meal. This is a no host type of dinner, so you just order what you like, pay for it, then bring it into the front room and eat. The atmosphere has always been friendly and fun.

I am open to suggestions for the presentations for the November and December meetings. If you can make a presentation or know of someone who can, please let me know so I can make arrangements. The presentation will be in the auditorium in building 3.

We will be looking forward to seeing you Thursday, October 2, 1997 at 6:00pm in Harry's Hofbrau in Mountain View (El Camino, a couple of blocks west of 237, on the left hand side (if you are traveling west).

73, Ian, AF6K

September Meeting Minutes

The September '97 SPARK meeting was held on Thursday, September 4 at SS/L in Building 28. The following members (12) attended the meeting: Ian Kushner/AF6K, Rich Stiebel/W6APZ, Gary Hendra/WA6SUW, Jack Rowe/KD6SU, Rolf Klibo/N6NFI, Collin Lim/KD6YCV, Dan Connell/W6ASD, Dom Garofano/W6SKO, Mike Spate/KD6DC, Bob White/WO3B, Jerry Bliss/K6III, and Bill Jimenez/KE6FTO. One visitor attended the meeting: Paul Trainer/N6YNU. All four SPARK officers attended the meeting: Ian Kushner (President), Mike Spate (Vice President), Rolf Klibo (Treasurer), and Collin Lim (Secretary). With the absence of the President at the beginning of the meeting, Vice President Rolf Klibo called the meeting to order at 12:15 PM.

President's Report: Next month's meeting will be held at Harry's Hofbrau on El Camino Real in Mountain View.

Vice President's Report: None.

Secretary's Report: None.

Treasurer's Report: SPARK has about 35 paid members.

Old Business: None.

New Business: Mike Spate announced that the HAM shack license (WA6NKK) has been renewed and good for another 10 years. Mike also mentioned that the cabinets at the HAM shack need to be attached to the wall for earthquake proof. Volunteers are needed for this task.

New Business: Jack Rowe motioned the Club to look into the possibility of being the beneficiary of the call sign W6BIP, which belongs to W. E. Bachman, an honorary member of the Club. Mike Spate seconded the motioned. A vote was taken and the motion was passed.

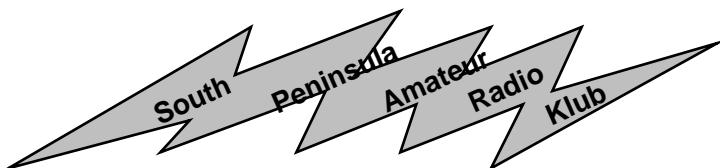
New Business: Gary Hendra asked members to bring in HAM or Club related photos for posting on the SPARK web page.

At 12:30 PM, meeting was officially over. Show and tell followed.

Collin Lim/KD6YCV

SPARK Web Site

SPARK now has a very impressive World Wide Web site located at www.macscouter.com/SPARK. If you have photo's, anecdotes, or anything that would show the world what SPARK is all about, please send it to the SPARK Webmaster Collin Lim, lim.collin@ssd.loral.com.



Wanted

HP 5245 L counter in working condition. Mine just recently died. Will pay top dollar (as determined by extensive negotiation. I don't know where they can still be bought otherwise). Will consider others that will take the plug-in modules, or will consider another counter that goes up to 6 GHz preferable, 2.5 GHz minimum."

Thanks. Fred NM6J

REPEATER
REPEATER
REPEATER
REPEATER

WE HAD THE CAPACITY TO FIX THE PROBLEM

The Micor AC supply has been working well since we replaced the main fuse last month, so it was time to trouble shoot the DC/DC converter to determine why spurs were being transmitted on 145.270 and 145.310 MHz. Our first thought was that the oscillator was being modulated by the chopper in the DC/DC converter. Most FM transmitters have several stages of frequency multiplication, which would also multiply the switching frequency. This fact led us to believe that the oscillator was not the problem. If it had been the culprit, the spurs would probably have been farther away from the carrier than 40 kHz. Since it was easy to substitute a 8.5 Volt gel-cell for the 9 volts going to the oscillator, while the rest of the repeater operated from the DC/DC converter, we tried that approach. The spur was still there.

Looking at the Micor power supply schematic, we saw three voltage lines feeding the transmitter: 9.6 VDC, 12 VDC for the low level stages, and 13.8 VDC for the power amplifier. Leaving the 8 Volt battery on the oscillator, we connected a 12 Volt battery to power the low-level stages. Again, the spur was still there. That left the 13.8 Volt line. We then powered the entire repeater from the 8 Volt gel-cell and a 12 Volt car battery. No spur. That confirmed that the 40 kHz switching frequency from the DC/DC converter was modulating the final amplifiers directly.

Upon reflection, I realized that Amplitude Modulation (AM) consists of causing the DC power going to the final RF amplifier to increase and decrease in response to the voice. In AM, if a 1 kHz tone is presented to the microphone, AM sidebands 1 kHz on either side of the carrier appear. It follows, therefore, that if a 40 kHz tone were impressed on the DC going to the final amplifier, sidebands 40 kHz away would be produced! Apparently that is exactly what was happening in our case. Since the RF out of the final was FM modulated, each sideband would have the same FM audio signal as the main carrier, which explains why the 523 audio was heard on 145.270 and 145.310.

To attenuate the 40 kHz switching frequency, a 1000 ufd capacitor was placed across the 13.8 VDC input to the final amplifier section. On September 11, while W6APZ pulled the AC plug to force the repeater to operate on DC power, VE3FZK and N6NFI were listening on 145.270 and 145.310 from two different locations from which they had previously heard 523 coming through on 527. Neither one could detect any trace of the 145.230 signal on any frequency other than 145.230. The capacitor cured the problem.

PUBLIC SERVICE EVENT OCTOBER 6

On Sunday, October 6, from approximately 6 AM to 2 PM, the repeater will be used to support the Walktoberfest. Please give net traffic priority use of the frequency during this time.

73 de Rich, W6APZ <w6apz@sval.com>

ARRL Pacific Division Update

October 1997

by Brad Wyatt, K6WR, Director, Pacific Division, ARRL
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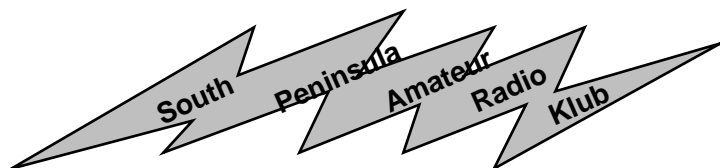
Amateur Radio RF Exposure Rules To Be Effective Jan. 1, 1998

The long-awaited FCC decision on RF Exposure rules for the amateur radio service were finally released in August. An excellent summary of the obligations the new rules places on individual hams is contained in October QST, pages 51 and 52. Two questions immediately will come to mind: when must individual hams be in compliance with the new regulations, and how must individual hams demonstrate such compliance. More details are provided in the QST article cited above, but in brief, here's the story.

When - The new regulations become effective Jan. 1, 1998; however, there will be a transition period for compliance by individuals, as follows.

1. New licensees after Jan. 1 1998 must be in compliance with the new regulations at the time for first licensing. The FCC is preparing a new version of Form 610, which will contain a statement to the effect that the new licensee understands and complies with the new regulations. That is, the applicant will certify compliance by the very act of signing off on the 610 application.
2. All those licensed prior to Jan. 1, 1998, will have to be in compliance with the new RF-Exposure regulations whenever a Form 610 is filed, such as for a license renewal, upgrade, or other modification. Because the same revised Form 610 as used by new license applications is used for such modifications, the act of signing off on the 610 will certify compliance.
3. All stations, new or old, must be in compliance with the new regulations no later than Sept. 1, 2000. This date must be met whether a Form 610 has been filed previously or not.

How - The full story of how each ham must determine compliance to the new regulations is too lengthy to present here; additional details may be found in the Oct. 1997 QST article. Briefly, each ham, with some exceptions, will need to perform a routine station evaluation to ensure that maximum permissible power levels, as described in the new FCC rules, are not exceeded. Those running at or below certain threshold power levels will be exempt from routine evaluations, although they will not be exempt from complying with the RF exposure levels prescribed by the regulations. The full list of the threshold power levels is given in the Table below. For example, from 160 through 40 meters routine evaluations need not be performed at output levels of 500 watts PEP or less, while at 2 meters the level that triggers an evaluation is 50 watts PEP.



Output PEP Thresholds for Routine Evaluation of Amateur Radio Stations

Band (Wavelength)	XMTR Power (Watts)
160 m	500
75 m	500
80 m	500
40 m	500
30 m	425
20 m	225
17 m	125
15 m	100
12 m	75
10 m	50
6-1.23 m	50
70 cm	70
33 cm	150
23 cm	200
13 cm and up	250

Additional details on performing evaluations, as well as details regarding maximum permissible RF exposure levels are given in the FCC document OET-65, now available on the WWW. A supplement specialized to the Amateur Radio Service is being prepared by the FCC, but is not yet released. See the ARRL RF-safety Web page at <http://www.arrl.org/news/rfsafety>, or at the FCC at <http://www.fcc.gov/oet/dockets/et93-62/>.

Federal Legal Protection for Volunteers Started Sept. 16, 1997

"The Volunteer Protection Act of 1997," Public Law 105-19, should provide Federal protection from "frivolous, arbitrary, or capricious" lawsuits against our OO/AmAux and VE volunteers as well as other volunteers. The law became effective on Sept. 16, 1997. The text is available on the WWW at <http://thomas.loc.gov/>. The text should also be available from other sources.

PL 105-19 is much broader in scope than the Amateur Radio Volunteer Services Act of 1997 -- To quote PL 105-19, "The purpose of this Act is to promote the interests of social service program beneficiaries and taxpayers and to sustain the availability of programs, nonprofit organizations, and governmental entities that depend on volunteer contributions by reforming the laws to provide certain protections from liability abuses related to volunteers serving nonprofit organizations and governmental agencies."

See p. 15, August 1997 QST for more information.

Pacific Division Hams Support ARRL Petition (RM-9150)

The vast majority of the supporting Comments to the proposed privatization plan to help enforce the FCC Rules in the Amateur Radio Service (RM 9150) came from Pacific Division hams. Many thanks for your support in the short time given us by the FCC!

The ARRL filed Reply Comments by the Sept. 15 deadline.

All we can do now is wait and hope that FCC will adopt a Notice of Proposed Rule Making in this matter to take the next step in the process.

Again, many thanks to all in the Pacific Division who submitted supporting Comments!

Gate 3 of the Vanity Call Program Opened Aug. 6, 1997

Gate 3 opened for Advanced Class licensees on Aug. 6, 1997. Details on the Vanity Call program can be found on the ARRL WWW site at www.arrl.org or by calling the FCC National Call Center at 1-888-CALL-FCC. To file, use Form 610-V available via the FCC Internet Homepage at <http://www.fcc.gov/wtb/amradsrv.html> or from ARRL HQ. The fee became \$50 for a 10 year license starting Sept. 15, 1997.

On Wednesday, September 17, the FCC issued some 500 to 600 vanity call signs to those who had filed applications on August 6, the opening day.

Applicants can check for new call signs at <http://www.arrl.org/fcc/fccl.html> or by using one of the other popular call sign databases.

The date for opening Gate 4 has not yet been announced.

Two Versions of FCC Form 159 Confuse Filers

With no fanfare, in July the FCC issued a new Form 159, Remittance Advice, that's somewhat different from the earlier version of the form issued in February. As of September 15, 1997, the FCC requires vanity call sign applicants to file a Form 159 with their applications no matter the method of payment. The FCC still was shipping the old Form 159 as of mid-summer, despite the revision.

While the two forms require essentially the same information, some item numbers on the new form--available via the FCC Web formpage site-- are different from those reported in last week's ARRL Letter, Vol. 16, No 36. For example, applicants enter the Payment Type Code (which is "WAVR") in Item 20A on the new version and Items 14A and 14B on the old version of Form 159. Under Item 21A on the new form, applicants filing only one application may write "1" or simply ignore the box.

The Fee Due, entered in Box 22A, rose to \$50 for the ten-year license term as of September 15, 1997. Hams can ignore Items 23A and 24A. Under Item 25, Payer TIN, and Item 26, Applicant TIN, applicants should supply the appropriate Social Security number(s). The new Form 159 contains a Section F for Credit Card Payment Information. Applicants must print their name and sign Form 159.

Thanks, ARRL Letter, Sept. 19, 1997.

Latest Band Threat News

There has been no specific new band threat news this month on the Little LEO matter. This situation may remain this way until WRC 97 opens in Geneva in November. However, other country's delegations may yet propose the "broad allocation" scheme as the Little LEO companies have been active all over the world selling this idea. See also p. 9, August 1997 QST.

For more information on spectrum matters involving the U. S. budget and other spectrum issues, see pages 15, 16, and 74, August 1997 QST.

ARRL VEC Pacific Division Phone Number

To obtain all the Amateur Radio license testing information for the ARRL VEC Pacific Division, call (408) 984-8353. Follow the menu to obtain the necessary details. This information is also available on the Pacific Division WWW site at www.pdarrl.org.

Ham Newsletter Competition Entries Sought

The Amateur Radio News Service (ARNS) seeks entries in its annual competition to identify and recognize "superior performance in Amateur Radio journalism" and to evaluate club newsletters "with suggestions for improvement."

The contest is open to all ham radio organizations, and membership in ARNS is not required to enter. Prospective applicants should obtain a contest entry form from ARNS by sending a business-size sase to ARNS President Lee Knirko, W9MOL, 11 S La Salle St., Suite 2100, Chicago, IL 60603-1302. The deadline for entries is December 31, 1997. Thanks - Jerry Boyd, K6BZ/ARNS.

Electronic Museum ARC Wins DXCC for Club

The EMARC club station, WB6WSL, was awarded a DXCC certificate by ARRL recently. It is one of the few clubs in the Pacific Division to win this award. Thanks, Omri Sterlin, AA6TA.

Coming Events

- Livermore Swap Meet - 1st Sunday of each month at Las Positas College in Livermore, CA, 7:00 AM to noon, all year. Talk in 147.045 from west, 145.35 from the east. Contact Noel Anklam, KC6QZK, (510) 447-3857 eves.

- Foothill Flea Market - 2nd Saturday of each month from March to October at Foothill College, Los Altos Hills, CA.

- Pacificon'97 (Pacific Division Convention) to be held at the Concord Hilton, Concord CA, Oct. 17-19, 1997. For information: (510) 932-6125; PACIFICON@designlink.com; WWW <http://www.mdarc.org>. Hotel reservations -- 1-800-826-2644 for the special room rate.

Hoo's Hoo...**Officers:**

President: Ian Kushner
Vice Pres: Mike Spate
Treasurer: Rolf Klibo
Secretary: Collin Lim

SS/L Shack Trustee: Ian Kushner, AF6K

Newsletter Editor: Gary Hendra, W6NOE -- SS/L
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Repeater Trustee/Control Operators(Primary):

Repeater Trustee: Rich Stiebel, W6APZ
 Control Operators: John Buonocore, KD6ZL, Dan Connell, W6ASD, Robert Reiling, W6JHJ, Rolf Klibo, N6NFI, Tom Holden, KN6KL; Gregg Schlaman, WA6ECQ

Repeater Technical Committee:

Committee Chairman: Rich Stiebel, W6APZ
 N6NFI - Rolf Klibo and KN6KL - Tom Holden

SS/L Training: Vacant

Picnic Committee:

Picnic Co-chairman: To be announced

Field Day Committee:

Chairman: To be announced.
 Members: To be announced

Other positions to be filled:

Club historian: To be announced.
 Retiree Representative: John Gibson, N6OM
 Club emergency comm coordinator: Randy Bassett, N6RUR
 Club ARRL Coordinator: To be announced
 Club swap meet coordinator: To be announced.
 Club Project coordinators: To be announced

SPARK Roster 23 Sep 97

<u>Call Sign</u>	<u>First Name</u>	<u>Last Name</u>	<u>Company</u>	<u>Mail Stop</u>	<u>Preferred Phone</u>	<u>Status 1997</u>	<u>email</u>
K6PU	Kenneth	Anderson	Retired			Paid	k6pu@volcano.net
W6BIP	W. E.	Bachman	Retired		(415) 239-7151	Hon'r'm	
KD6PPJ	Joseph	Barela	LM/S&RS	S60		Paid	
N6RUR	Randy	Bassett	LM/WDL	S34	(408) 734-6036	Paid	rbassett@bassett.com
KC6UTN	Martin	Bittner	SS/L	G10	(415) 852-7527	Paid	
K6SMH	Jerry	Bliss	Retired		(408) 378-7777		
W6ASD	Dan	Connell	Retired		(415) 968-8998	Paid	ttvc78a@prodigy.com
NM6J	Fred	Dietrich	GlobalStar	G82	(415) 852-7188	Paid	
SM5UR	Bjorn	Forsberg	SS/L	G18	(415) 852-6926	Paid	
W6SKO	Dominick	Garofano	Retired		(415) 967-0604	Paid	
N6OM	John	Gibson	Retired		(408) 245-3369		
KD6UD	Warren	Gilleran	Retired		(408) 988-2706	Paid	
KK6US	Dave	Grybos	SS/L	G54	(415) 852-7464	Paid	
AA6SB	Al	Hadad	Retired		(408) 257-6875	Paid	
KD6ALH	V.E.	Harkins	LM/WDL		(408) 737-0215		
N6QCD	Ron	Haymore	SS/L	PS1	(415) 852-6056		
WA6SUW	Gary	Hendra	SS/L	G84	(415) 852-5649	Paid	hendra.gary@ssd.loral.com
KN6KL	Tom	Holden	SS/L	G14	(415) 852-4519	Paid	
W6THI	Lyn	Holsclaw	LM/WDL	T15	(408) 473-7942		
K8SNX	Dave	Honkala	Retired		(408) 578-9395		
W6XZ	John	Hudick	SS/L	G36	(415) 852-4808	Paid	mtnmann@aol.com
KD6LHL	John	Hutchinson	LM/WDL	N01	(408) 473-4438		
KD6KMZ	John	Jackson	SS/L	G55	852-4000 x1263	Paid	
KE6FTO	Bill	Jimenez	SS/L	H07	(415) 852-6815	Paid	jimenez.bill@ssd.loral.com
WA6ONT	Walter	Kaufman	SS/L	G17	(415) 852-5195	Paid	
K6EFB	Layard	Kirby	SS/L	G16	(415) 852-6395	Paid	kirby.layard@ssd.loral.com
N6NFI	Rolf	Klibo	SS/L	G16	(415) 852-7633	Paid	klibo.rolf@ssd.loral.com
N6HM	Howard	Krawetz	Retired		(408) 739-7936		
AF6K	Ian	Kushner	SS/L	H21	(415) 852-6790	Paid	kushner.ian@ssd.loral.com
KC6VAF	Edward	Lam	SS/L	H21		Paid	lam.ed@ssd.loral.com
KG6AC	Milo	Larsen	SS/L	G16	(415) 852-7284	Paid	larsen.milo@ssd.loral.com
W6KH	Dick	Le Massena	SS/L	G43	(415) 852-5912	Paid	
KD6YCV	Collin	Lim, Jr.	SS/L	H15	(415) 852-6615	Paid	lim.collin@ssd.loral.com
N6BLR	Tosh	Matsukuma	LM/WDL	X61	(408) 473-4229	Paid	
WA6BOJ	Mike	McClary	LM/WDL	X82	(408) 473-6051		
KF6HHL	Brad	Morris	SS/L	G82	(415) 852-5731	Paid	
K6IVR	J. T.	Nawrocki	SS/L	T50	(415) 852-4020	Paid	
KD6ZXT	Valerian	Popkoff	LM/Randtron		(415) 326-9500x	Paid	
W6JHJ	Robert	Reiling	LM/WDL	T30	(408) 473-7305	Paid	rrr@wdl.lmco.com
KH6PR	Phil	Reyes	LM/S&RS	S34	(408) 734-6069		
KD6SU	Jack	Rowe	Retired		(408) 733-9131	Paid	
KB6VMQ	Harry	Salvini	LM/WDL	X50	(408) 473-6410		
K6JBR	Thomas	Scherf	SS/L	H22	(415) 852-7917	Paid	
WA6ECQ	Gregg	Schlaman	SS/L	G55	(415) 852-4402		
KD6FWG	Todd	SeCoy	SS/L	H22	(415) 852-6201	Paid	
WA6JAO	Sam	Shankle	Retired		(408) 245-0858		
KD6DC	Mike	Spate	SS/L	H41	(415) 852-4130	Paid	
W6APZ	Rich	Stiebel	Retired		(415) 494-0128	Paid	w6apz@svpal.org
W6QZE	Kieth	Trammell	Retired		(408) 257-2464	Paid	w6qze@juno.com
KD6PLD	Steve	Walch	Associate		(415) 962-0896		
K6PKT	John	Walther	Ret'd	G69	(415) 852-6020	Paid	
WO3B	Robert	White	SS/L	L15	(415) 852-5313	Paid	
KB6NRB	John	Wilkerson	SS/L	L27	(415) 852-6077	Paid	
W6TKH	Samuel	Zuckswert	Retired		(415) 852-6340	Paid	

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