SCCARA-GRAM

Santa Clara County Amateur Radio Association

Volume 13, Number 1 **January 1997**

RF Rules Delayed

This just in... FCC delays new RF-exposure rules

ARRL special bulletin, Dec. 24 1996

The FCC has postponed for one year, until January 1, 1998, the date for hams to comply with its new RF-exposure regulations. The ARRL was among those requesting the delay this fall. The League said that the additional time was needed for the FCC to draft implementation guidelines that amateurs could use to help them comply with the regulations--released on August 1, 1996 as ET Docket 93-62. Among other things, the regulations would require hams running 50 W PEP or more to conduct "routine RF radiation evaluations" to determine if RF fields were sufficient to cause human exposure to RF radiation levels in excess of those specified in the proposed regulations. The ARRL also has asked the FCC to reconsider the 50-W threshold, but the FCC report (DC 96-112) extending the compliance deadline did not address that issue.

The FCC announcement--which the ARRL obtained just before noon on Christmas Eve--noted that more time would be needed for affected licensees to determine that they comply with the new requirements. The extension also will allow required changes to Amateur Radio operator examinations to be made at the time (routine revisions are made between now and July 1, 1998). In announcing the extension, the FCC said it disagreed with those petitioners who suggested that the time extension "will have significant adverse effects on public health."

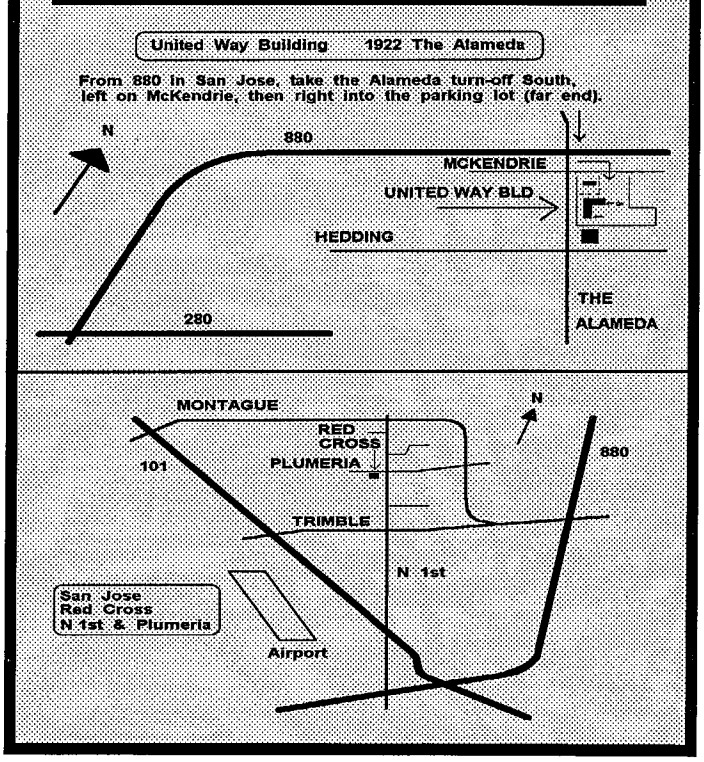
Since the FCC announced the RF-exposure regulations, the ARRL has worked with technically knowledgeable volunteers to assist the staff, the RF Safety Committee, and the FCC in coming up with a workable ham radio approach toward RF safety. ARRL Laboratory Supervisor Ed Hare, KA1CV--the ARRL HQ liaison to the

Calendar

1/13 **SCCARA General Meeting**
1/20 **SCCARA Board Meeting**--(San Jose Red Cross, 7:00p, all are welcome)
2/10 **SCCARA General Meeting**

Next General Meeting:

Day: Monday, January 13, 1997
Time: 7:30 PM
Place: United Way Building
Agenda: Arthur Lange will talk about GPS and amateur radio.



The *SCCARA-GRAM* is published monthly by the **SANTA CLARA COUNTY AMATEUR RADIO ASSOCIATION**, PO Box 6, San Jose CA 95103-0006. Permission to reprint articles is hereby granted, provided the source is properly credited.

SCCARA was formed as a general interest amateur radio club in 1921 and became a non-profit corporation in 1947. SCCARA is an affiliate of the American Radio Relay League (ARRL).

The club station, W6UW, is currently out of service.

Articles for the SCCARA-GRAM must be submitted to the editor a week before the last Monday of the month.

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Editor	Gary Mitchell, WB6YRU	265-2336
Facilities	Don Village, K6PBQ	263-2789
Photographer	Bob Keller, KB6OHO	725-1034

COMMITTEES

Repeater	Keith Butts, KN6K	248-3849
Youth Group	George Brady, AB6OZ	729-9012

SCCARA REPEATERS

SCCARA owns and operates two repeaters under the call W6UU:

2 meter:	146.385 +	PL 114.8 (none for basic use)
70 cm:	442.425 +	PL 107.2

Phone patch capability is available (auto-dial and auto-patch). The two meter repeater is located in the Mt. Hamilton foothills, Alum Rock area. The 70 cm repeater is located at the Alexian Brothers Hospital, North of 280 and 101.

SCCARA NETS

On our two meter repeater: Mondays at 7:30 PM, (not the second monday--it's our meeting night). Net control: Joe WA6DXP.

On ten meters, 28.385 MHz USB, Thursdays at 8:00 PM. Net control: Wally KA6YMD.

Visitors welcome to join in on the SCCARA nets.

IMPORTANT TELEPHONE NUMBERS

SCCARA HOTLINE:	249-6909
ARRL LICENSE (VEC) HOTLINE:	984-8353

ARRL RF Safety Committee--has spearheaded the ARRL's effort. "The ARRL is very pleased that the FCC extended the compliance date," Hare said. "As all parties involved tried to fully understand the new requirements, it soon became obvious that neither the FCC nor the ham radio community was ready for the January 1, 1997, implementation deadline."

Hare said the delay will give both the FCC and hams more time to better understand the implications of the rules and will give hams an opportunity to evaluate their stations as the regulations will require (see "The FCC's New RF-Exposure Regulations," QST, Jan 1997, p 47).

The entire text of Report DC 96-112 may be found on the ARRL Web at http://www.arrl.org/fcc/dc96-112.html (or click on What's New or RF Safety News). See Happenings in February QST for additional information.

Good and Welfare

Long time SCCARA member, John Tanner K6EJF recently had a triple heart bypass operation. The operation was performed in O'Conners hospital approximately one month ago. It was successful but John is still in the hospital on doctor's orders to more fully recuperate before being released.

Phone calls and eyeball QSOs are encouraged. He needs support from friends.

Roy, K6VIP

Meeting Minutes

General Meeting, Dec. 17, 1996

[No minutes were received by the deadline. However, there was a final addition to the board: Wally KA6YMD was elected director. --Editor]

Board Meeting, Dec. 23, 1996

[No minutes were received by the deadline. --Editor]

CQ JOTA

On Sunday Oct. 20, 1996 I operated JAMBOREE ON THE AIR. This year I had two troops for a total of 12 scouts and leaders over to operate JOTA.

Band conditions were noisy, but we were able to work a station in CT and NJ on 20 meters.

I also set up a code practice oscillator for the scouts and leaders to practice sending their name etc. in Morse code.

The scouts and I had a great time and look forward to JAMBOREE 1997.

73, Don Village, K6PBQ

REACT

Do Hams/amateur radio operators ever operate at a lower frequency? Do they know how to REACT? Of course they do and here's the proof.

The following picture was collected from the archives of BAER REACT. Rod Stafford, President of the ARRL, gives the oath of office to the new slate of officers for 1995.

What is REACT and what do they do? REACT means Radio Emergency Activated Citizens Teams. They are volunteers who monitor Channel 9 CB and GMRS (General Mobil Radio Service). The teams now include amateur radio operators as well.

REACT has been around since W.W. II as civilians became extra eyes and ears for the police and military,informing them of unusual activity. What do they do now-a-days? They provide communications for many different types of events from small one-day festivals to three day events such as *Tapestry & Talent* or *The America Festivals* in San Jose. There are *Drop Walls for Hunger* races (bicycle & foot/running) that require people to be stretched out from point Q to point B. "REACT-ors" direct traffic, provide first aid, as well as communications.

BAER REACT is one of five teams in the U.S. that provide a full service first aid team, including the delivery of oxygen when necessary. REACT has provided first aid and communications for parades in Santa Clara County from San Jose to Gilroy.

BAER REACT's symbol is a "teddy" bear. They specialize delivering communications and first aid with as much T.L.C. as possible. The people are diversified and possess a wide range of capabilities in many areas to provide a maximum of services to those whom they serve in the community. All members are volunteers and enjoy the work they do.

BAER REACT has participated in disaster drills to test their skills and find our weaknesses. Then they tailor training efforts to correct the weaknesses. REACT is an integral part of the disaster system. They were very busy during the 1989 Loma Prieta earthquake.

Like amateur radio, CB communications worked when the phone didn't. The continual training is necessary to keep us in tip-top condition, ready for any disaster when REACT will be pressed into service again.

Barbara K. Britten, KD6QEI

(left to right) Rod Stafford; Barbara Britten, KD6QEI First Aid Team Leader; Dennis Steiner, Sgt. at Arms; Candy Hood, President; Cheyenne Starr, Communications officer; Steve Starr, Treasurer; Michael Healy, Vice President; and Cheryl Gingrinch, Secretary.

Introduction To Packet Radio

by
Larry Kenney, WB9LOZ
Part 20

In the previous 19 parts of this series, I have attempted to cover all of the basics of packet radio - from setting up your TNC and making your first QSO, to using digipeaters, the packet node network, bulletin board systems and even TCP/IP. Many of the TNC commands have been explained, including the best settings for normal use, and I've offered some suggestions that should make it easier and more enjoyable for you to use packet radio.

Now that you have the basics, you might want to continue with your study by investigating some of the other facets of packet radio. There are several programs available that I haven't covered in this series that you might find interesting. There's the Packet Cluster software used by the DX Spotting Network for finding those rare DX stations, APRS-the Automatic Packet Reporting System that's now very popular for station locating and for use with GPS, the Global Positioning Satellites. There are other networking programs like Tex-Net and Rose, and new computer programs specifically written for packet and the other digital modes. The list goes on and on. PAC-SAT, the amateur packet satellite program, is growing in popularity as more satellites carrying packet radio equipment are released. High speed modems running at speeds of up to 56 kilobaud are just around the corner for general use on packet radio. What developments will be next?

To keep up with the latest developments in Packet Radio, join your local packet radio group or digital communications club. Become a member of TAPR, the Tuscon Amateur Packet Radio Corporation, the national organization that is devoted to packet radio development and education. TAPR has a quarterly newsletter and offers kits, publications, and a disk library of software and information (including this "Introduction to Packet Radio" that you're reading). You can contact them at (817) 383-0000. Read the packet columns in "QST", "CQ", "73" and other ham magazines and look for bulletins on your local BBS offering new information and discussions of developing systems, software, and hardware. Packet Radio, and digital communications in general, are still relatively new areas and I'm sure you'll be seeing lots of changes in the years ahead.

I'd like to thank the following people for their help in preparing this series: Don Simon, NI6A; Bill Choisser, K9AT; Don Fay, K4CEF; Scott Cronk, N7FSP; Roy Engehausen, AA4RE; and Hank Oredson, W0RLI. Their help and their answers to my questions are greatly appreciated.

If you have any comments on this "Introduction to Packet Radio" series or you would like to correct or update any of the information contained in the series, please send me a packet message or write me a letter. I would enjoy hearing from you, and your comments would be very much appreciated. I hope that you've found this series to be informative and helpful in making packet radio more enjoyable for you.

73, Larry Kenney
WB9LOZ @ W6PW.#NCA.CA.USA.NOAM
4145 21st Street
San Francisco CA 94114-2710

Packet Pieces

Downloaded from the packet network:

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Date: 9 Dec 96 21:11
From: W2XO@W2XO
To: SAT@AMSAT
Subject: THE END OF AMSAT-OSCAR 13

HR AMSAT news service bulletin 343.03, Dec. 8 1996
From AMSAT HQ, Silver Spring MD

On December 5, 1996, apparently at approximately 0900 UTC, AMSAT OSCAR-13 re-entered the Earth's atmosphere and burned up.

AMSAT OSCAR-13 was successfully launched on June 15, 1988, into a highly elliptical orbit on board the first test flight of the new European ARIANE 4 rocket. Over the years, AMSAT OSCAR-13 has enabled direct radio contacts among the world-wide community of nearly 2 million radio amateurs.

AMSAT OSCAR-13 had been constructed within four years by an international project group under the leadership of Dr. Karl Meinzer of AMSAT-DL.

During its operational period, AMSAT OSCAR-13 was monitored and controlled by a group of ground stations in Germany, the United Kingdom, Australia, New Zealand and the U.S.

Upon its re-entry, AMSAT OSCAR-13 has had a life span of over eight years. Originally the mission had been conceived to last only seven years. Overheating of the satellite due to air friction in the upper atmosphere resulted in the destruction of the solar panels on November 24 and the consequent interruption of all radio links. Amateurs were still making use of the satellite's Mode B transponder as late as about 2300 UTC November 23. Prior to this the

on-board monitoring system had transmitted much data relating to the satellite's behavior in the upper atmosphere to ground stations for evaluation.

When asked about the cause of AO-13's demise, Dr. Thomas Clark W3IWI commented that "the decay of the orbit was caused by the gravitational attraction of the Sun and the Moon. The elliptical orbit was stretched so that the satellite gradually approached the Earth which lies at one of the two focal points of the ellipse. This phenomenon motivated AMSAT to develop new analytical and computational methods to allow long term predictions for future satellites on similar, highly elliptical orbits." He further emphasized that "the underlying cause of the AO-13 'crash' was NOT atmospheric drag. AO-13 was intentionally put into a high eccentricity 'Molniya' orbit with an eccentricity ~0.7. Such orbits are unstable because of the gravitational effects of the sun and moon. Just like the tides in the ocean, the satellite is 'nudged' gently by the Sun and Moon twice per orbit."

Dr. Viktor W. Kudielka A.R.S. OE1VKW further noted that "Contrary to the true Molniya orbits with a liberating argument of perigee near 270 degrees (apogee always more or less in the north) due to an inclination around 63 degrees, AO-10 and AO-13 (at inclinations of 26 and 56 degrees respectively) show circulating arguments of perigee. The major problem for AO-13 was the 2:1 resonance of nodal to apsidal motion (near 56 degrees inclination). When calculating the orbit of AO-13 beyond the actual reentry, height of perigee is varying between -115 km and +5000 km with a period of about 40 years.

James Miller G3RUH commented that Dr. Kudielka statement can be explained by saying that the drift of RAAN is proportional to the cosine of the inclination, and the drift in Argument of perigee is proportional to (5*Cos^2(IN) - 1)/2 and their ratio is thus 2*C/(5*C*C-1) where C=Cos (IN).

For IN=56.1 degrees, this ratio comes out at just 2:1. So as the argument of perigee goes right round the clock once, the RAAN does it twice. The interactions from Sun and Moon cause Eccentricity to fluctuate. The magnitude of this fluctuation is strongly influenced by that 2:1 factor. If, as with AO-13, eccentricity fluctuates too much, the satellite crashes into the Earth."

In fact G3RUH continued, "AO-13's inclination was about 57 degrees, so its "resonance" was nearer 2.25:1. RAAN went "round the clock" in just under 6 years, Arg. Perigee would have been about 13 years, and after 40 years all the cherries line up again; 7 RAANs to 3 ARG-Ps."

Miller concluded that "These kind of interactions have been the focus of continuous study by Viktor OE1VKW for nearly a decade, and are central to making a wise selection of P3D's orbit. His analysis, simulation and above all interpretation have been continuously documented in the interim, and are a remarkable contribution to our understanding of this discipline."

ANS notes that both Drs. Clark and Kudielka as well a James Miller G3RUH made very accurate predictions of the end of AO-13 long before the event actually took place. Dr. Clark's July 1990 prediction, done in collaboration with Dr. Erricos C. Pavlis, called for re-entry sometime on December 5, 1996.

In response to questions regarding the possibility of the same fate befalling the next AMSAT satellite, Phase 3-D, as G3RUH has indicated, it's orbit has been calculated using these new methods and has been determined that it will be more stable over the long term. In addition, Phase 3-D will carry a long lifetime low thrust arc-jet propulsion system intended to be used to correct any orbital perturbations which might occur.

Phase 3-D is scheduled to be launched into space during the first half of 1997 as apparently the only satellite payload for the second test flight of the new ARIANE 5 launcher.

ANS thanks Peter Guelzow DB2OS, James Miller G3RUH, Viktor W. Kudielka OE1VKW and Tom Clark W3IWI for the information used in preparing this bulletin.

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Date: 16 Dec 96 19:27
From: W1AW@W1AW
To: QST@ARRL
Subject: ARLB095 TAPR Digital Directory

QST de W1AW ARRL Bulletin 95
From ARRL Headquarters, Newington CT Dec. 16, 1996
To all radio amateurs

With the support of the ARRL, the Tucson Amateur Packet Radio Corporation (TAPR) will begin providing at the TAPR Internet site the information on digital systems that formerly appeared in the annual ARRL Repeater Directory. The digital directory information will be available at http://www.tapr.org/directory. Information on digital systems will not be published in the 1997-98 edition of the Repeater Directory, permitting the publication to better focus on its primary use as a guide to voice repeaters for traveling amateurs.

In planning the 1997-98 edition, the ARRL concluded that the Repeater Directory was no longer the most effective medium for this information. Discussions involving various regional digital groups that provide data to the digital section of the Repeater Directory led to the conclusion that TAPR was the logical group to take on the task of a new North American Digital System Directory.

This new database system will describe systems used by Amateur Radio stations involved in digital communications in United States, Canada, and Mexico. The Digital System Directory will be based on information provided by regional, state, and local organizations as well as individuals, in a nearly real-time format. This should allow information to be maintained and updated more frequently than in a yearly publication. TAPR will also work with participating organizations to make this information available on TAPR's yearly CD-ROM as well as some future publication for local/regional groups to distribute.

The purpose of the Digital System Directory is not to manage, coordinate, or regulate the usage of digital systems, but to provide the most up-to-date and accurate listing of digital systems that can be provided. Neither is it a formal organization, but a mechanism to allow regional groups to provide and share information regarding digital systems.

The Digital System Directory is intended for use by individuals to further their enjoyment of the hobby, and by organizations to help plan and develop digital networks.

Regional/Local groups have already begun to participate in the process. These groups include TwinsLAN, Texas Packet Radio Society, Miami Valley FM Association, Ohio Area Repeater Council, Puget Sound AR TCP/IP Group, Northern California Packet Association, Northern Illinois Packet Radio Frequency Council, Indiana Digital Experimenters Association, Central Lakeshore Experimenter's Digital Organization, HogNet Packet Radio Association, YCCC Sysops Association and the Missouri Amateur Packet Radio Society. TAPR encourages other regional groups to support this project by contributing data from their respective areas.

For further information on the project and how to get involved, regional groups should check http://www.tapr.org/directory or send e-mail to Carl Estey at wa0cqg@tapr.org.

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From ARRL Headquarters, Newington CT Dec. 20, 1996
To all radio amateurs

WRC99 Committee Supports HF CW Requirement

The special committee created by the ARRL to study issues relating to the 1999 World Radiocommunication Conference (WRC-99) has recommended that the ARRL Board of Directors not support changing the treaty requirement for Morse code testing to operate below 30 MHz. The committee submitted its final report to the ARRL Board this week.

The committee report contains recommended ARRL positions regarding possible changes in Article S25 of the international radio regulations. Consistent with the results of a survey of ARRL members, the committee recommended no change in the existing treaty obligation that administrations test prospective amateur licensees on their Morse code ability before authorizing them to operate below 30 MHz. The committee did support changes to Article S25 that would:

- Eliminate the so-called "banned countries" list
- Establish that providing communications in the event of natural disasters is a normal and desirable part of the international service provided by radio amateurs
- Reduce restrictions on international communications on behalf of third parties
- Aid in the establishment of an "International Amateur Permit."

The committee report also responded to the Board's request that it study possible changes to the amateur licensing structure in the United States. The committee offered some proposals for change, but recommended that the Board take no action on this part of its report until the committee's proposals are shared with the membership and there is an opportunity for member comment.

The Board will consider the committee's report and recommendations at its next regular meeting, January 17-18, 1997. If the Board accepts the report, it will be available for public release. An article giving the results of the survey will appear in February 1997 QST.

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Date: Sun, 08 Dec 1996 10:30:51 -0500
From: Gary Pearce KN4AQ <kn4aq.gary@mms.net>
To: Coordinator Remailer <coordinator@cs.tamu.edu>
Subject: A Ham's Night Before Christmas

Yet another corruption of Clement Clarke Moore's classic Christmas tale, this time distorted by Gary Pearce KN4AQ and the Raleigh Amateur Radio Society, Raleigh, NC, December 2, 1996.

A Ham's Night Before Christmas

'Twas the night before Christmas,
And all through two-meters,
Not a signal was keying up
Any repeaters.

The antennas reached up
From the tower, quite high,
To catch the weak signals
That bounced from the sky.

The children, Tech-Pluses,
Took their HT's to bed,
And dreamed of the day
They'd be Extras, instead.

Mom put on her headphones,
I plugged in the key,
And we tuned 40 meters
For that rare ZK3.

When the meter was pegged
by a signal with power.
It smoked a small diode,
and, I swear, shook the tower.

Mom yanked off her phones,
And with all she could muster
Logged a spot of the signal
On the DX PacketCluster,

While I ran to the window
And peered up at the sky,
To see what could generate
RF that high.

It was way in the distance,
But the moon made it gleam -
A flying sleigh, with an
Eight element beam,

And a little old driver
who looked slightly mean.
So I though for a moment,
That it might be Wayne Green.

But no, it was Santa
The Santa of Hams.
On a mission, this Christmas
To clean up the bands.

He circled the tower,
Then stopped in his track,
And he slid down the coax
Right into the shack.

While Mom and I hid
Behind stacks of CQ,
This Santa of hamming
Knew just what to do.

He cleared off the shack desk
Of paper and parts,
And filled out all my late QSLs
For a start.

He ran copper braid,
Took a steel rod and pounded
It into the earth, till
The station was grounded.

He tightened loose fittings,
Resoldered connections,
Cranked down modulation,
Installed lightning protection.

He neutralized tubes
In my linear amp...
(Never worked right before --
Now it works like a champ).

A new, low-pass filter
Cleaned up the TV,
He corrected the settings
In my TNC.

He repaired the computer
That would not compute,
And he backed up the hard drive
And got it to boot.

Then, he reached really deep
In the bag that he brought,
And he pulled out a big box,
"A new rig?" I thought!

"A new Kenwood? An Icom?
A Yaesu, for me?!"
(If he thought I'd been bad
it might be QRP!)

Yes! The Ultimate Station!
How could I deserve this?
Could it be all those hours
that I worked Public Service?

He hooked it all up
And in record time, quickly
Worked 100 countries,
All down on 160.

I should have been happy,
It was my call he sent,
But the cards and the postage
Will cost two month's rent!

He made final adjustments,
And left a card by the key:
"To Gary, from Santa Claus.
Seventy-Three."

Then he grabbed his HT,
Looked me straight in the eye,
Punched a code on the pad,
And was gone - no good bye.

I ran back to the station,
And the pile-up was big,
But a card from St. Nick
Would be worth my new rig.

Oh, too late, for his final
came over the air.
It was copied all over.
It was heard everywhere.

The Ham's Santa exclaimed
What a ham might expect,
"Merry Christmas to all,
And to all, good DX."

kn4aq.gary@mms.net

ARRL Pacific Division Update

January 1997

Welcome to 1997

1997 will likely be another exciting year for Amateur Radio as we implement the new RF emission rules, many amateurs get used to their new vanity call signs, the sunspots slowly begin to reappear, and all the usual activities of clubs, hamfests and conventions start. Let's enjoy a great 1997!

NTIA Report Bullish on Ham HF Bands

High Frequency (3-30 MHz) Spectrum Planning Options--a planning document released Dec. 13, 1996, by the National Telecommunications and Information Administration, says the HF spectrum is flexible enough "to accommodate most, if not all," demands for additional HF spectrum, including new and bigger HF ham bands.

The report cites a potential 900 KHz or so of expanded or upgraded allocations for Amateur Radio in the HF spectrum, including:

- an exclusive, worldwide allocation at 3500-3800 KHz
- a new band at 4945-4995 KHz
- an "aligned worldwide" allocation at 6900-7200 KHz
- expanded worldwide primary allocations at 10100-10350 and 14000-14400 KHz
- expanded allocations at 18068-18318, 24740-24890, and 28000-30000 KHz.

No time schedule for possible implementation was given.

The complete report is on the world wide web at www.ntia.doc.gov/osmhome/reports/hfspo/contents.html

Proposal: Ease International Licensing

In comments filed in response to an FCC proposal that would make it easier for visiting foreign hams to temporarily operate in the U.S. and vice versa, the ARRL "heartily supports" the plan, but suggests some changes. Earlier this year, the FCC proposed amending the Amateur Radio rules to make it easier for hams holding a European Conference of Postal and Telecommunications Administrations (CEPT) radio-amateur license or an International Amateur Radio Permit (IARP) from certain countries in the Americas to operate during short visits to the U.S.

If finally approved, hams would be able to operate for short periods in participating countries without first obtaining another license or permit from the host country. The arrangement would also make it easier for U.S. hams to operate stations temporarily in several countries in Europe, Central and South America.

Vanity Calls Continue to be Issued

Gate 2 for Extra Class opened on Sept. 23, 1996. Approximately 4,500 calls were issued on Nov. 5, 1996, and more since (see page 70, Jan. QST). The calls issued for Pacific Division hams should appear on the Pacific Division Web site (www.pdarrl.org) shortly. ARRL has established a one-stop vanity call sign page at http://www.arrl.org/fcc/vanity.html.

For those receiving new calls, the ARRL/QST membership records will be updated automatically. To obtain new official ARRL appointee call-sign badges for your new call, send a photocopy of your current call-sign badge with the new call information to your badge engraver. They have received instructions from HQ to make new badges without the usual forms. Special VE badges will be replaced in accordance with the procedure that has already been sent to all ARRL VEs.

VHF, UHF Bands Challenged

2m/70cm Band Threats

The Geneva preparation meetings and the latest round of IWG2A meetings ended Nov. 15. The issue has not been dealt with as definitively as would have been expected at this relatively late date in the WRC-97 preparatory process.

Federal Emergency Management Agency (FEMA) has issued a statement supporting the hams' continued use of these bands. However, another challenger has appeared - NASA/JPL and other space agencies are looking at the 70 cm band for a satellite-carried synthetic aperture radar system (see page 72 of January QST).

Finally, the Little LEO folks have a satellite to be launched to collect data for a study of frequency sharing possibilities below 1 GHz. They were able to obtain permission to submit data later in 1997 potentially bypassing the preparatory meetings. ARRL and IARU are following this plan closely.

It is clear that the discussions will continue. The next IWG2A meeting is Jan. 7, 1997. However, it now seems likely that the U.S. delegation position for WRC-97 may NOT include support for Little LEO access to these bands, but the threat could come from somewhere else.

1296 MHz Band Threat

It now appears that various Federal agencies cannot come up with plans for the L5 frequency for GPS, so the Oct. 31 deadline has come and gone with no apparent new deadline. The best information is that the frequency for L5 will likely be 1309.7 MHz. We must always remember, however, that amateur radio is secondary to radiolocation and navigation systems in the 23 cm band.

2300-2310 MHz Band Threat

Public Law 104-208 made 2305-2310 MHz of the Amateur Band spectrum available for auction to finance

current 1997 Federal spending.

To save what we can, ARRL has filed comments to keep our secondary status at 2305-2310 MHz and to be elevated to primary from 2300-2305 MHz in Docket 96-228. We also filed a separate petition asking for the same allocations. There seems to be a real chance that this just might work.

Dec. QST, p. 15, and Jan. QST, p. 71 detail the first part of this story; Jan. QST, p. 16, tells the second. See also the ARRL WWW site.

5800 MHz Band Threat

This threat is by NPRM ET Docket 96-102, based on the petitions from Apple Computer and WINForum, to grant access to the Amateur Radio Spectrum from 5725-5875 MHz band for the NII/SUPERNET proposal for free spectrum for very high data rate LANs and other activities for schools, libraries, and hospitals. ARRL and many other Comments opposed this NPRM.

It is unclear what will happen in this NPRM as the FCC wants to grant something to this service, but how far they will go is unknown.

Further, this matter is apparently linked to the Telecommunications Act concept of Universal Service--a very difficult subject involving all aspects of the Telecommunications industry. Another party may also be asking for spectrum here--Transportation Information and Control System.

For the latest news see QST (Dec. 1996, page 75), Pacific Division Updates, The ARRL Letter, Pacific Division WWW site, and the ARRL home page at http://www.arrl.org/ and select "Band Threat News." Unfortunately, the future of these threats is unknown. We won't be able to breathe easily about WRC-97 issues until the final gavel, some 11 months from now.

Awards and Scholarships

There are many awards and scholarships covering a wide range of situations available to licensed Amateurs. For example, the ARRL awards include the International Humanitarian; the Herb S. Brier Instructor of the Year; Professional Educator of the Year; Professional Instructor of the Year; Excellence in Recruiting; Phil McGan Memorial Silver Antenna; Hiram Percy Maxim Memorial; Field Organization Volunteer of the Year. Contact the Field Services Dept. at ARRL HQ for details. To apply for ARRL Foundation scholarships, write to The ARRL Foundation Inc, 225 Main St Newington CT 06111. Deadline for applications and transcripts is Feb. 1.

The Dayton Amateur Radio Association is now accepting applications for its 1997 college scholarships. Amateur Radio licensees graduating high school in 1997 are eligible for 2000 dollar scholarships. Interested students should send a self-addressed, stamped envelope for an application to DARA Scholarships, 45 Cinnamon Crt, Springboro OH 45066.

Other organizations will be announcing their dates for applications for their 1997 scholarships. Watch QST and other amateur radio publications for details.

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.

Brad Wyatt, K6WR
Director, ARRL Pacific Division

18400 Overlook Rd. #5
Los Gatos CA 95030-5850
(408) 395-2501 (voice & fax)

Packet: K6WR @ N0ARY.#NCA.CA.USA.NOAM
Internet: k6wr@arrl.org
Pacific Division WWW Home Page http://www.pdarrl.org/

Newsletter Notes

This issue contains the last part of Larry Kenny's fine series *Introduction to Packet*. The latest word from Larry is that he has a web page up and running. After a bit of updating, this series will be available there. The URL is http://www.slip.net/~lkenney/packet.html. Thanks again to Larry WB9LOZ for this nice contribution to the world of packet and amateur radio.

For this year, I would like to have more status reports from the officers. As you may recall, in previous years there have been reports from the Repeater Chairman and the Station Trustee about the club's hardware, not to mention updates from the Secretary and Treasurer. There were precious few such articles last year. Hopefully 1997 will see some improvement on that.

I'm also hopeful that more articles can be gleaned from the membership in 1997. Technical and instructional articles are part of what makes the *SCCARA-GRAM* useful to the membership--especially new members or potential new members and amateurs. The vast majority of such articles in 1996 were snagged from sources outside of SCCARA. There is a lot of technical expertise in SCCARA and it would be great to show some of it here. How about it, guys? Let's make 1997 a banner year for the *SCCARA-GRAM*!

73, Gary WB6YRU, editor

S.C.C.A.R.A. Membership Form for 1997

(Fill in name and address if there is no mailing label below; make corrections if the label is incorrect)

Name: _____ Call: _____ Class: E A G T+ T N

Address: _____ Licensed since (yr): _____

City: _____ State: _____ Zip: _ _ _ _ _ - _ _ _ _

Telephone: ( ) _____ ☐ New Member ☐ Renewal ☐ I'm also an ARRL member

For family memberships (at the same address), please list other name(s) and call(s):

_____

Annual membership dues are payable at the first of the year and expire the following December 31. New members joining on or after July 1, pay half the membership dues.

Annual Membership dues: ☐ Individual $15 ☐ Family $20 ☐ Student (under 18) $5 _____

I want _____ *SCCARA* badges @ $3 ea. Badge name & call: _____ .... _____

Please send the repeater Auto-Dial/Auto-Patch codes (no charge, circle): ..... Yes
WE MUST BE ABLE TO VERIFY YOUR AMATEUR LICENSE
BEFORE ANY REPEATER CODES WILL BE SENT TOTAL: _____

Give this completed form (or copy) with payment to the Secretary or Treasurer at any meeting or mail to the return address below:

== PLEASE DO NOT TEAR/CUT ========== PLEASE DO NOT TEAR/CUT ==

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