

NARS NEWS

The Northwest Amateur Radio Society

Houston, Texas

August 1996

ARRL Rep to Speak at August Meeting

ARRL West Gulf Division Director Tom Comstock K5TC is scheduled to be the speaker at our general membership meeting on Friday, August 16. Tom will tell us the direction ARRL is taking in relation to current events and the coming WRC-97 meeting in Geneva. And since he is our representative, he will be interested in your views as an amateur

radio operator.

A group will treat him to dinner prior to the meeting. The dinner is at Goodson's Restaurant at 5:30 pm in Tomball.

Tom is an excellent, entertaining speaker. Don't miss this special opportunity to meet him.

New RF Standards

New FCC RF safety standards effective January 1, 1997, could affect the way some hams operate, perhaps especially those using vehicle-mounted antennas. As a result of a Report and Order adopted by the FCC on August 1 (ET Docket No. 93-62, Guidelines for Evaluating the Environmental Effects of Radio-frequency Radiation), Part 97 will require hams running more than 50 W PEP to conduct routine RF radiation evaluations to determine if RF fields are sufficient to cause human exposure to RF radiation levels in excess of those specified." Measurements made during a Commission/EPA study of several typical amateur stations in 1990 indicated that there may be some situations where excessive exposures could occur," the FCC said in ending the blanket exemption for Amateur Radio.

Amateur operation at power levels of 50 W PEP or less is "categorically excluded" from the exposure requirement in most cases. Where routine evaluation indicates that the RF radiation could be in excess of the limits, "the licensee must take action to prevent such an occurrence," the Report and Order stated. The FCC said this could mean altering operating patterns, relocating the antenna, revising the station's technical parameters--such as frequency, power or emission type--or "combinations of these and other remedies."

"Exactly what is involved in conducting a 'routine RF radiation evaluation' is not yet clear," observed ARRL Executive Secretary David Sumner, K1ZZ, adding that the FCC has promised to release a revised OST/OET Bulletin Number 65, "Evaluation Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." The League is now studying the 100-plus page docket, to see if the League should seek reconsideration of any aspects of the FCC decision. Sumner noted that the FCC expects it will not be difficult for most amateur stations to show that the specified limits will be met.

In the Report and Order, the Commission adopted Maximum Permissible Exposure (MPE) limits for electric and magnetic field strength and power density for transmitters operating at frequencies from 300 kHz to 100 GHz. These MPE limits are generally based on recommendations of the National Council on Radiation Protection and Measurement (NCRP) and, in many respects, are also generally based on the guidelines issued by the Institute of Electrical and Electronics Engineers Inc (IEEE) and subsequently adopted by the American National Standards Institute (ANSI) as an ANSI standard (ANSI/IEEE C95.1-1992).

Continued on Page 2

Important Dates

Friday, August 16, 7:30 pm - NARS monthly General Membership meeting, Cypress Creek Presbyterian Church - Eyeball QSO's, 7:00 pm

Saturday, August 24, 8:30 am - VE License Exam Session, Tomball Community Center, S. Cherry and Market (just south of Main Street).

Tuesday, August 27, 7:30 pm - NARS Board of Directors Meeting, IHOP, 5790 FM 1960 W, just West of Champions Forest Dr.

August 31, NARS News deadline for articles to appear in September issue.

Notice:

NARS membership dues is \$25 per year, renewable on anniversary of last year's full payment.

BREAKFAST

at Bleachers

2318 W FM 1960

Saturdays

8:00 AM

President's Corner

August 1996

During the July NARS Board of Director's meeting and we viewed the NARS Web page. Yes, NARS has joined the information age. Soon out there on the World Wide Web you can view all the latest club information on the Internet. We will have past newsletters, pictures of events, notices, and links to other WWW sites. A person can even print out a membership form to join, renew, or update information. It is still in beta testing and will be available soon.

Boy, is it hot outside or what? I have been hiding inside hoping to avoid the heat. Lately, I have been trying my hand in computer building. Except for the occasional trip to the computer store it has kept me cool. This has been a challenging and rewarding project for me. I have succeeded and I am typing on it now.

I want to take this time to thank Keith WD5DXL for putting together some great newsletters. I think that all the pictures he has added really show the best of the club. What do you think?

A great big atta boy goes to Paul N5NXS for his presentation on PACKET radio at the meeting last month. He showed me some new stuff and explained a few of the mysteries of that corner of the hobby.

At August's meeting the speaker will be Tom Comstock N5TC. He is the ARRL West Gulf Division Director. I am looking forward to seeing y'all there.

I can't believe that summer vacation for the schools is almost over. So drive careful and keep in mind that the children will be on their way to and from school.

By Walter Hock KK5LO

Continued from Page 1

The Commission used the 1992 ANSI/IEEE standards instead of the 1982 ANSI standards that had formed the basis for the existing rules under which Amateur Radio stations were categorically exempted. Sumner said that for high-power mobile operation and for operation with indoor antennas, particularly in apartment buildings and other situations where there is "uncontrolled exposure" to neighbors and the general public, "amateurs may well have to make changes in how they operate." He said the ARRL Lab staff and the RF Safety Committee will be evaluating the new requirements.

The new regulations also will require the addition of five questions on RF environmental safety to the amateur examinations for Novice, Technician, and General-class elements 2, 3(A) and 4(B). Sumner noted that the Commission's Report and Order does not take into account the practical problems associated with such a significant revision to the volunteer-administered amateur examinations, and that more time than the Commission has allowed will be required to do a good job.

The Commission acknowledged the updated guidelines generally are more stringent than the current rules but said that the new rules will protect the public and workers from strong RF emissions. Adoption of new rules by August 6 was required by the Telecommunications Act of 1996.

The FCC encourages the amateur community "to develop and disseminate information in the form of tables, charts and computer analytical tools that relate such variables as operating patterns, emission types, frequencies, power and distance from antennas." The Commission said it intends to provide "straightforward methods for amateur operators to determine potential exposure levels" by year's end.

In comments filed earlier with the FCC, the ARRL strongly opposed adoption of the new requirements. The ARRL said most Amateur Radio users do not possess the requisite equipment, technical skills, and/or financial resources to conduct an environmental analysis. The League has, for several years, recommended a policy of "prudent avoidance" of exposure to electro-magnetic radiation as a common-sense approach to potential -- but not yet proven -- health hazards and against such

practices as running high power to indoor antennas or to mobile antennas that might expose the vehicle's occupants. The ARRL also argued that amateur stations, because of their intermittent operation, low duty cycles, and relatively low power levels, rarely exceed the 1992 ANSI/IEEE standard.

Finally, the ARRL noted that unlike other radio services, RF safety questions already are included in amateur license examinations. But the FCC expressed concern that Amateur Radio operations "are likely to be located in residential neighborhoods and may expose persons to RF fields in excess of the MPE guidelines."

For now, the League advises hams not to panic and to read up on the subject. You can download the complete Report and Order by pointing to http://www.fcc.gov/Bureaus/Engineering_Technology/Orders/fcc96326.txt. Other resources are available on the ARRL Web page at <http://www.arrl.org/news/rfsafety/>.

General information on RF safety is available in the safety sections of The 1996 ARRL Handbook and in the 15th edition of The ARRL Antenna Book. These materials offer guidelines on how to comply with the ANSI standard referred to in the Report and Order.

QST de W1AW, ARRL Bulletin 50, August 6, 1996

Submitted by Bill Rister KC5EZQ



by Keith Dutson

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I almost did not have time this month to get the news out in time for distribution prior to the monthly meeting. Please note the deadline for articles is the last day of each month.

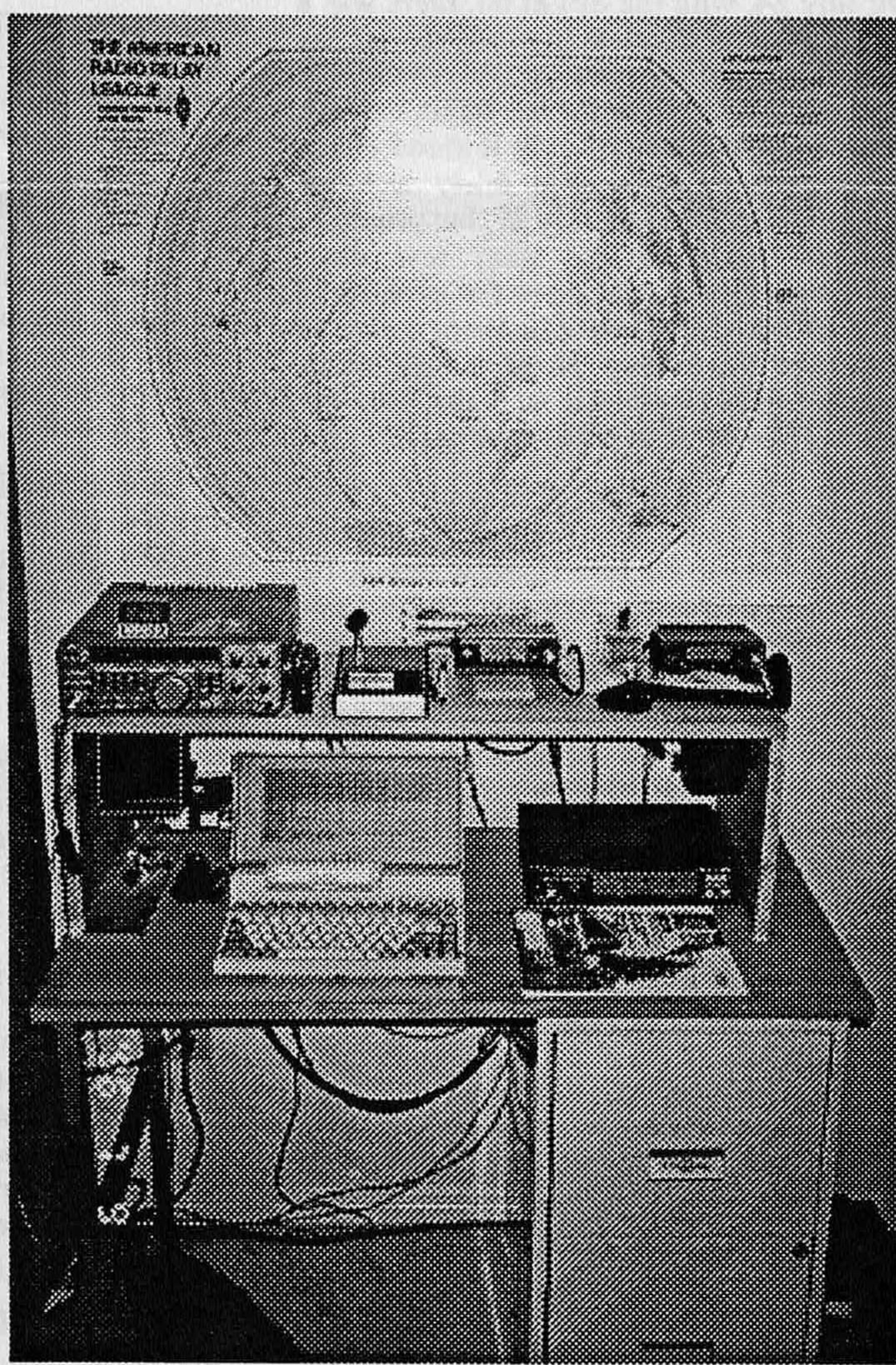
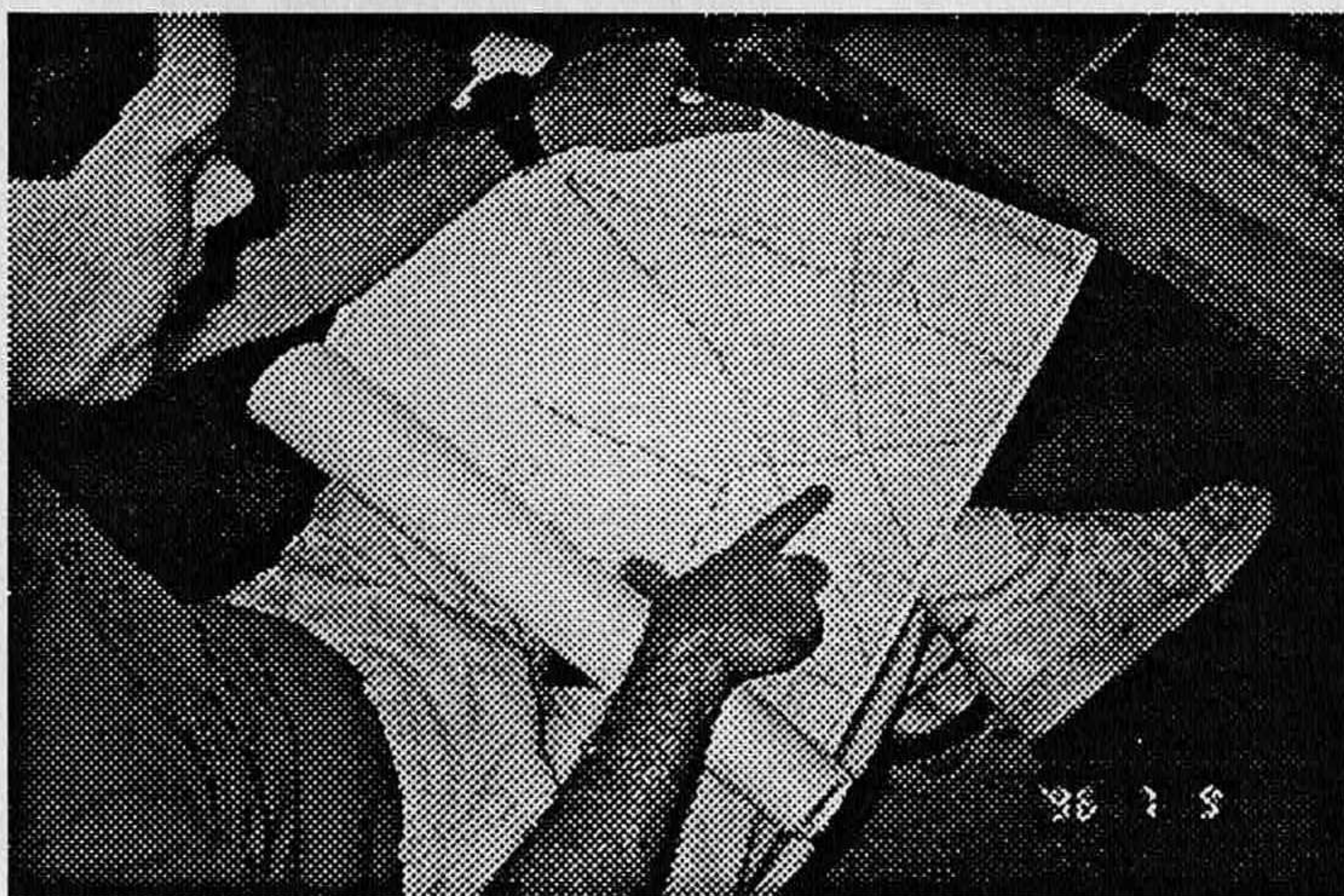
Our meetings have been getting better. Last month Paul Owen N5NXS presented a program on Packet Radio. He had everyone's attention well beyond the normal 9 pm meeting end time. Come on out and hear Tom Comstock this month.

SHOW YOUR SHACK

Shack: Paul Owen N5NXS

Paul operates his neat shack each week using SSB on the 10 meter net. But the emphasis is on packet. He has two 2 meter transceivers as well as the Kenwood TS440S connected to an AEA PK232MBX all-mode Terminal Node Controller (TNC). Various maps are utilized to ascertain lat-long coordinates in this area.

HF digital modes are not used very often, but Paul recently did very well in a national RTTY contest, making about 40 contacts.



DX News

DX NOTES -- *"My ears are open wide tonight, For stranger, kith or kin, I would not bar a single door Where DX might enter in..."*

June wound down with the SFI resting in the low 70s and the A-index at a moderate single-digit level. Propagation was relatively poor, but 20 meters tended to open up in the late evenings. Daylight DX conditions were relatively poor.

On July 1 the SFI was 71 and the A index was 11. For the first week in the month, DX was slim to none -- and Slim had left town. By the weekend, things had begun to improve, marginally. During the second week of July the SFI spurted to the low 80s, accompanied by low indices for A & K. Band conditions for the Saturday of the IARU contest weekend were not terribly bad, but the Sunday following was very discouraging. As the SFI fell to 66 at the beginning of the third week in July, accompanied by an A index of 13, 20 meter band conditions deteriorated badly.

On July 24, with the SFI at 66, there was a nice 10-meter short-skip opening. As the end of the month arrived, the SFI reached the seventies just in time for the IOTA contest, and on the last day of July it stood at 80. Twenty meters was open fairly well for Europe from Texas on July 27, but promptly cratered again in the next few days. Seventeen meters was open the evening of July 29 with VKs and ZLs being heard in Houston. Rumblings heard on the bands indicate growing confidence that the low point of the cycle is here -- or near.

WA1YIA finally managed to work CY0AA (Sable Isl.) -- on CW... from his mobile unit ... on his way to the June Board meeting. He also worked EA6 (the Balearic Is.) for a new one. Later in the month he worked ZK1AAU on Rarotonga in the So. Cook Islands. On July 23 KM5AO, WA1YIA and K8CSG worked the DXpedition to Cocos Island (TI9JJP) on 20 meters; KM5AO used his new HF-mobile capability to also work CO5JE and the Seal Island expedition, XJ1CWI.

Dick Rooney, W5VHN, received two new DXCC certificates, one his Satellite award, and the other one for Mixed DXCC.

DX worked: 5W1AU (W. Samoa); VK6ISL (Sholl Isl.); UA0AP (Siberia); 9G1YR (Ghana); NL7TB/KL7 (Barren Is.); YI1AK (Iraq); 9G1NS; BV5CN (China); FO5PI (Tahiti); DU1SAN (Philippines); TI9JJP (Cocos Isl.).

DX Heard: OD5NJ (Lebanon); HS0ZAA (Thailand); VU3AJK (India); XX9KC (Macao); YI1RS; XX9KC (Macao); 5B4KH

(Cyprus); XT2DP (Burkina Fasa); C21NJ (Nauru); ZL1CPL (New Zealand); 4A7EA (Sri Lanka); 9M2KY (W. Malaysia); VQ9WM (Chagos Archipelago).

A group of Dutch hams was scheduled to operate from the mountains of Liechtenstein (HB0) July 7-16. HB0 is one of those DX locations which is relatively easy to work -- whenever someone is there. Hope anyone that needed HB0 got it.

Some must be expecting the bands to improve. KJ5IP, KK5LO, WA1YIA, WA5REJ and KM5AO are all venturing into HF mobiling and are having some success at it. Mark reports that a kilowatt and a beam produce loud 20-meter signals from three blocks away as he passes my neighborhood on his way to work.

A multi-multi DXpedition should take place from Midway Island (KH4) in August. Midway is rapidly being demilitarized and should become "rare DX" before too long. If you need it, August may be the best bet for a while.

As noted above, NL7TB and others operated from the Barren Islands in the Gulf of Alaska. When I worked them I mentioned that we had placed a radio repeater there in 1990 to assist in wildlife survey work in conjunction with the Exxon oil spill cleanup. This prompted them to ask if we had also mounted any amateur radio operation in the process. I assured them we had not, which enables them to correctly claim the first amateur operation from this IOTA location.

The Andaman Islands (VU4) and the Laccadive Islands (VU7) are the two groups of DXCC islands controlled by India. Both groups are generally tough to work, usually via DXpeditions. There is an Indian chap on the Andamans who operates but only has a small home-built low-powered radio.

Jim Smith (VK9JS) has been working for a year or so to gain permission to visit the Andamans, operate there, and leave the station equipment for Mani to operate on a long-term basis. The trip is currently planned for early September, so you might be ready if/when VU4 comes on the air.

Laci, HA0HW, will operate from Crete August 5-19. Crete is one of the rarer Greek islands which counts separately for DXCC. Operated infrequently, it is one to work when one can. Laci will sign SV9/HA0HW/p while operating. WARC bands might be a good place to look.

Ogassawara Island will see two DXpeditions during August. JQ1SUO will operate /JD1 (mainly 20 meters) August

8-11. Gary, W5VSZ, will operate from Aug. 14 to Sep. 2 on CW/SSB/RTTY and eighty through ten meters, including the WARC bands. Ogassawara is operated only when DXpeditions go there, which generally means once a year or so. Not bad DX, especially while there are no sunspots.

ILL-FOUNDED RUMORS -- Malpelo Island is an uninhabited chunk of rock (a big chunk of rock) in the Pacific Ocean. It is owned by Colombia and is exceedingly difficult to land upon. A group from Colombia is planning an operation there next February, according to a rumor on the bands from Dayton. During two of the last three operations over the last twenty years I was in Saudi Arabia (on business or living/working there). Finally, when an operation coincided with my being at home, I worked them in 1990. Be advised -- this one does not come on very often! (Rumor killed by HK5JPS, who should certainly know).

Bhutan has been very rare since Pradhan, A51PN (whom I worked in 1973), left the air some fifteen to twenty years ago. Jim Smith, VK9NS, had a very short, low-power operation there early in the 1990s, but fell far short of meeting the demand. Barry, ZS1FJ, who operated last year from Kermadec Island, was reported to have asked for operating permission during January/February, 1997 (Another on-band rumor, this one killed by Barry himself).

On July 8, KA1JC announced she had confirmation that "the Hungarians have permission to operate and will be on from P5 (N. Korea) this evening at 0000Z." Operation was to be limited to 20m CW only, but no one appeared. The next day the rumor was that the Hungarians would appear on July 15 with powerful signals on all bands.

On July 15 I talked with KF8EP in Ohio who read me a letter received from the Minister of the P.T. & T. advising that he could not give anyone permission or authorization to operate from N. Korea. It appears that the story in last month's newsletter was (and is) still valid (Only P5-Slim has shown to date).

EA6BH was announced for a DXpedition to Annobon Island (3C0) in the coming weeks. Annobon lies in the elbow of West Africa and is rarely operated. The first operation from Annobon occurred in July, 1971 by Martti Laine, OH2BH. There have been very few operations from there since, and it is considered to be "rare" DX by most. Unfortunately, the rumor concerning EA6BH has been declared to be just that -- a rumor.

Bill Gary K8CSG

Tackling RFI - For Us and Our Neighbors

Have you been limiting your hours of HF or even VHF operation around your wife's or neighbor's complaints? I know of a net control operator on the mid-Atlantic coast who runs only barefoot on the net, and has to have frequent relays for check-ins around the country on 20 meters. He does this because his wife complains of TVI affecting her favorite programs at the same time he is running the net.

There often is no need for this if you try using the KISS method of suppressing the TVI, etc. - "KISS" meaning Bill Gary's definition of Keep It Simple Stupid (no offense to anyone). RFI and TVI have been with us for a long time. Now we have microwave ovens, VCRs and many other devices that do wrong things when they pick up RF. There are several ways to tackle the problem but most of them involve opening the affected equipment and adding suppresser capacitors, filters, and other circuit modifications.

Unfortunately there is a serious disadvantage associated with this approach. Any modifications made to domestic entertainment equipment can-and often are-blamed for later problems that arise in it. Modifying your own equipment is not so bad, but taking a soldering iron to your neighbor's stereo is risky. In fact you are urged not to do so by ARRL and other experts. It's desirable and beneficial to ADVISE your neighbor on what to do and how to do it, but not to touch your neighbor's equipment so you don't get blamed for any troubles later on.

An alternative approach is to use ferrite beads and toroids to reduce or eliminate the amount of RF entering the equipment - this is the KISS method. It is non-invasive on the equipment and most often will be found to be extremely helpful.

When you get a complaint from the XYL or a neighbor the first thing you should do is check your own station. Do you have a low pass filter on your rig between the transceiver or amplifier and your antenna? Also check your operating practice - like making sure your ALC is within bounds on your rig's output meter when transmitting, etc. Palomar Engineers are the foremost producers of

ferrite beads and toroids, and they recommend you use 2 split ferrite beads on your feed line close to the feed point of your antenna. This can greatly reduce or eliminate any spurious radiation from your feed line.

In my own house I was getting into my telephone and auxiliary TV with HF and into the kitchen radio on 2 meters. The telephone RFI was stopped with a K-Com filter. The TVI was stopped with a split bead on the coax just ahead of a Radio Shack Hi-pass filter and a toroid wound close to the TV chassis on the power cord. Once you have "de-bugged" your own home entertainment equipment it can serve as a model to show your neighbors how to do their own. Again, a word of caution-don't touch your neighbor's equipment. Do advise them on what to do - show them what you did on your own equipment and supervise if necessary.

Using ferrite beads and toroids is a simple and effective means of stopping RFI. Reception on my kitchen radio was completely blanked out when I transmitted on 2 meters. Eight turns on a toroid on the power cord next to the chassis solved the problem. My main TV is on cable and ham frequencies rarely if ever intrude on today's modern cable systems. If a neighbor does complain about RFI on their cable reception tell them to contact their cable company to service the problem - as the cable system is their property.

Most of us today live in subdivisions and are bound to run into some RFI problems like the above. Ferrite beads and toroids can handle many of the above problems nicely, but you may run into one or two stubborn cases where the problem requires expertise in depth. For those problems Palomar Engineers recommends the ARRL book entitled: Radio Frequency Interference - How to Find It And Fix It. Order it from ARRL @\$15/copy + S/H. For the stubborn RFI problems help is available from the ARRL Field Organization. Each region has Technical Specialists to help you with any RFI case. Get the name and phone number from our Section Manager who is listed in QST each month to schedule an appointment with a TS.

K-Com runs ads regularly in QST and is a good manufacturer of telephone RFI filters for \$16.95/up. I used a K-Com filter on my telephone with excellent results - no more RFI.

However, my neighbors with cordless phones found that K-Com filters did not help. Cordless phones are difficult cases and I have supplied them with copies of RFI literature from Palomar Engineers and have urged them to try both ferrite beads and toroids on their base stations as their power cords and antennas could both be picking up RF (The new 900 MHz cordless phones offer no problem with Ham RFI).

The biggest source of picking up RFI in subdivisions is the unshielded phone and power lines inside the walls of each house.

A short list of suppliers regarding the above info is: K-Com, Box 82, Randolph, OH 44265 for telephone filters, and Palomar Engineers, P.O. Box 462222, Escondido, CA 92046. Both will supply free literature on request.

On their tip (RFI) sheet Palomar Engineers tells how to isolate RFI generated by your computer. They say it most often is conducted out of your computer on the cables connecting the various accessories. Palomar makes special split beads 2" and 2 1/2" wide to accommodate flat ribbon cable to eliminate RFI. Using the principles they outline, ferrite beads and toroids can be extremely helpful.

Of course it is understood that the KISS method outlined here is a basic approach in solving RFI problems and that many experts have written complicated and complex solutions to some RFI situations. The idea here is to pursue the easiest solutions first leaving any difficult solutions that may be necessary for last.

So in summarizing, I hope this information will help those who are suffering garden variety RFI problems in their home and with their neighbors, and who are not averse to using the KISS method to help solve those problems. It should help make you and the neighbors a lot happier.

73 Harry Gage N5WIZ

TEXAS QSO PARTY 1996 FINAL RESULTS

Special Interest Group (SIG) List

TEXAS STATIONS		TEXAS MOBILES	
WA5DWX	169,538/48	N5RZ	120,246/44
NSDO	129,472/61	KI3L	69,160
WA5DTK	93,370/30	WA1YIA	21,948
K5RC	55,921/12	W3DYA	18,306
KZ8E	45,832/21	KG5U	12,852
K5ZTY	31,878/21	KK5LO	3,648
KC5ALW	30,798/21	N5BA	2,100
K0BCN/5	27,384		
WA5SAJ	22,378/31		
W5HNS	19,708/21		
K5XI	15,708/22	ORP	
AJ4F	10,191/20	K3WWP/QRP	192/8
AC5CT	8,150		
KZ-WA	4,386		
KB5ZXO	1,950	CLUB SCORES	
WB5CRG	1,850		
W5NR	1,710	NARS	254,378
WA5REJ	600	TDXS	191,007
K8CSG	288	Weekend Warriors	38,967
KK5DO	275	Mad River Radio Club	15,114
N5NXS	32	NTCC	8,510
K5WNO	18	Clear Lake ARC	2,197
KC5TBV	3	Gulf Coast Ham Conv.	3
N5WIZ	1		

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FOR NARS INFORMATION CALL

Marian Denton, 469-8331, for General Information and Bill Gary, 537-9240, for VE Exam Information or send E-Mail to nars@houston.net

NARS BREAKFAST every Saturday 8 AM at Bleachers Grill, located at 2318 W FM 1960 (@ Kuykendahl). Informal ragchew.

NARS NETS

NARS RAGCHEW - MONDAY 8:00 PM 28.444 MHz

NARS INFO - WEDNESDAY 8:00 PM 146.06 / .66 MHz

Net Coordinator OJ, WA1YIA

NARS REPEATERS

2 M - 146.060 / 146.660 MHz

70 cm - 449.375 / 444.375 MHz

Digipeter - 145.71 MHz

Call (W5BKK) Alias (NARS)

K5ZTY, Bill Stietenroth
893-3901, General Help

WA5DWX, Bill Denton
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W5NKZ, Jerry Smith
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KB5DTB, Joy Smith
444-4491, HF, Advanced OSCAR,
Antenna

N5WIZ, Harry Gage
370-7488, Basic Advice - RFI

W5VHN, Dick Rooney
288-8424, Satellite

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