



Hamming West of the Pecos

The February club meeting will be presented by Loyd - KM5OE. Loyd's program, "Hamming West of the Pecos," will give us first hand insight of what it's like hamming from Jeff-Davis county and points west. Loyd will highlight HF and VHF/UHF operation plus a surprise or two. See you at the meeting on the 19th. This plans to be a good evening.

-- H.O., WA5MLT

Novice/Technician Class Scheduled for 1999

The 1999 edition of the NARS license class for Novices and Technicians will begin on Wednesday, April 7. All sessions will be held at the Prince of Peace Catholic Community located on the Tomball Parkway (FM 249) just south of Cypresswood, and will begin at 7:00 PM. The first evening will include registration and an Introduction to Amateur Radio, with actual classes beginning on Thursday, April 8. The course will continue with two sessions a week, again on Wednesdays and Thursdays, for a total of seventeen sessions. The complete course will cover Morse Code, necessary rules and regulations, and technical material enabling candidates to successfully complete all examination elements for a Technician-Plus license.

Cost of the program will be \$20.00 plus the cost of the textbook (under \$20.00), ARRL's "Now You're Talking." The text may be purchased at The Houston Amateur Radio Supply, 181 Cypresswood Drive, or Electronic Parts Outlet (2 locations). For more information or to reserve a space in the class, call Marian Denton, KB5SGV, at 281/469-8331 or Joe Sokolowski, KD5KR, at 281/353-2196. Enrollment will be limited, so get your request in early!

-- Joe KD5KR

Feedback -- ARRL Board Meeting

Dear H. O. and NARS Members:

Thanks so much for the great hospitality you showed us at the Houston Marriott on January 16. It was great to meet the group and have an opportunity to talk about the interests of the Club and it's Members. You sure did give us great weather for our meeting! Was hard to come back to the cold and snow we have here in Michigan.

If you get a chance, take a look at the Great Lakes Division Web Page. Just one of the many pages that I keep up in the Division. <http://facops.albion.edu/arrl/>

Again H.O., thanks for all the great hospitality and please pass my best to the whole group.

73...

George Race - WB8BGY

Great Lakes Division Vice Director

Important Dates

Friday, February 19, 6:30-9:30 PM

NARS General Membership Meeting at Spring Cypress Presbyterian Church, 6000 Spring Cypress Road

Tuesday, February 23, 7:30 PM

NARS Board of Directors meeting, H.O. Townsend's home, 16880 E. Maglitto Circle

Saturday, February 27, 8:30 AM

License Exam Session. Tomball Community Center, S. Cherry & Market streets (just South of Main.)

Contests:

February 20-21 -- ARRL DX Contest (CW)

February 26-28 -- CQWW 160m SSB test

REF French Contest

YL International Contest

RSGB 7 MHz Contest

Colorado QRP QSO Party

N. Carolina QSO Party

UBA CW DX Contest

March 6-7 -- ARRL DX Contest (SSB)

March 9-10 -- CLARA Family HF Contest

March 13-15 -- RSGB Commonwealth CW

QCWA QSO SSB Party

Wisconsin QSO Party

Notice:

NARS membership dues - \$20 per year, renewable on anniversary of last year's full payment.

Deadline for articles to appear in March issue - **Friday, February 26.**

BREAKFAST

at Victors

4710 W FM 1960

Saturdays

8:00 AM

President's Corner February 1999

Howdy all...

January has seen the NARS baton passed to a new group. And by all accounts, I believe this year we enter the 14th year of club activities. Hats off to last year's crew lead by Joe - KD5KR. Thanks, Joe, for a great year of activities. You've certainly raised the mark for us newbies.

Hat's off and a big word of thanks and appreciation to Dianna - KB5VSF, the outgoing VP, for masterfully orchestrating this year's banquet. The fellowship was great, the food was great, and certain beach buddy door prizes were very well placed. Should I mention the coveted "Kenwood" license plate holders?

The club has a lot of challenges this year. Probably the first one is getting ready for the annual Novice/Technician class. After that is TQP and Field Day, and, and, ... Yes, there are a lot of ways to participate in club activities. And, that leads me to say "take part" this year. Clubs and organizations like ours can only survive through members who participate (OK, maybe with a few friendly volunteers). For example, how do we top last years Novice/Technician class? How do we top last years TQP? How do we top last years Field Day? Well, I think we do want to top last years efforts while having fun the Narsian way!

A number of your board members attended the ARRL Winter Board Meeting here in Houston, January 16th. We met a number of Directors and Vice Directors from all over the country along with League President Rod Stafford - W6ROD and Pat - VE3PD President of the Canadian Radio Club. The hospitably hour was a real eye opener. The League officials were very cordial and outgoing, full of questions about amateur radio in our region, and our club. It was a real pleasure explaining how active our club is and all of the varied interests of our membership. They were grateful for our participation in the hospitably hour.

I appreciate the opportunity to serve and put something back into Amateur Radio. So, let's chase DX, contest until the wee morning hours, swat skeeters at FD, bring new people into ham radio, up-grade as much as possible, field a good crowd at the special events we serve, always provide more information than the requesting station can possibly absorb over the repeater, attend swap meets and hamfests where possible, and over eat at the next Narsian event.

73 de H. O. -- WA5MLT

For the intellectuals in the club, I'm going to offer some of my mental ramblings in this newsletter from time to time when the Old Timer has space. Most members that know me know that I like to operate low power or QRP radios that have an output of 5 watts or less and usually operate CW. I was the lone QRPer in the club a few years ago and the powers that be made me sit in the back of the room at club meetings. But, the ranks have grown with time and now we have infiltrated the upper echelon of the club with the election of WA8GHZ, a die hard QRPCW op, as vice president and now I am going to write about QRP in the newsletter. It's getting better all the time. Most of my ramblings will be about QRP stuff, but I've been known to get off the subject every now and again, so if I do, I trust some of you will set me straight.

Winter time is traditionally a busy time in QRP circles with building projects and operating events. When the weather gets messy outside it is a good time to start some of those building projects that you have thought of during the year. Dan Clark, KK5LD, and I are eagerly awaiting the release date of the new Elecraft K2 QRP transceiver. (It will probably be out by the time you read this.) Capt'n Kirk and I saw the prototype at the Dayton Hamvention in May of last year. Good looking radio. It is an all band SSB/CW kit with Yeacomwood-like features such as two VFOs with multiple memories, split TX/RX operation, RIT/XIT, full break in CW, built in memory keyer, narrow IF crystal filtering, and IF derived AGC. It has been tested per the ARRL Test Procedures Manual and the results compare favorably with the FT1000MP and OmniIV+. The basic radio will be 10 watt output CW for 80 thru 10 meters. You can add the SSB board, a 160 meter board with 2nd RX antenna, a Noise Blanker board and a higher power PA board as options. It looks to me like the fanciest kit radio since Heathkit. Word on the street now is they are going to start taking orders on January 25. If you have WWW capabilities you can look for yourself at www.elecraft.com.

Tom Hoherd, KK5YU, has been contemplating building a kit radio for a while but wasn't sure what radio to start with. Well, the Northern California QRP Club (Nor-Cal) has just made it easier for Tom and any of the rest of you that have been wondering, "Can I do it?" to get started. The autumn issue of their journal, QRPP, is an 82 page complete tutorial on building the Small Wonder Labs SW-40 single band, 5 watt CW transceiver kit. The kit was built as a group project on the

QRP-L reflector with a few of the engineer types giving the classes on how each section of the radio worked as it was being built. All of the lessons and questions and answers that came up during the process have been published as sort of a text book on building this radio. The kit is available from Small Wonder Labs in the exact form as was used and costs \$55.00 postpaid for the semi kit. The enclosure is an option. The manual that comes with the kit is almost a tutorial itself and Dave Benson at SWL offers excellent technical support. There will be issues of the QRPP magazine available soon as the club has printed extras for sale to the public for this issue only. I'll keep you informed.

So, If you have been wanting to build a kit transceiver and don't know where to start, here's the perfect place and you'll have something to show us at Home Brew night next December. (Late word from Tom is he has received his kit and is getting started. Way to go Tom.)

Winter also brings lots of operating events. There's the QRP-L 40 Meter Fox hunt that has been going on since September. Two nights a week we try to find and contact a pre-designated fox station in some part of North America. There is a team competition within the hunt and a group of NARSians, KK5LD, KQ5U, W5SB and K5ZTY, are known as the Houston Hounds and are currently in first place. Winning this event and 50 cents will get you a Coke at some places but it is a reason to get on the air, use CW and work on your pile up breaking skills a couple of times a week. I was the fox on Tuesday night Dec. 8th. Man what a rush to have 200 people calling you all at one time. I get one more shot at it as the last fox of the season on Thursday night March 4th. Plan to get on and give me a call.

Watch for the Colorado QRP Club QSO Party, February 28, from 4pm til 10pm local.

Every first Monday night of the month there is a 2 hour contest called the Spartan Sprint. This one is scored as number of contacts per pound of station weight. It is sponsored by a backpacking club that likes minimization for obvious reasons. They also have what they call the Tubby division for all of us that don't minimize and the Tubbys are scored by most number of contacts. You probably will never see the results of these contests published in QST or CQ but they are plenty of fun anyhow. Good enough reason to turn off the TV and computer and get on the air with that kit transceiver that you just built.

I'll try to think of some more stuff for next month

--73, Unca' Zed

Ionospheric Propagation

Those amateur radio operators interested in upgrading to HF operating may find a brief explanation of radiation and the ionosphere helpful.

The lower the angle above the horizon at which a radio wave leaves the antenna, the less refraction in the ionosphere that is required to bring the wave back to earth. This is the basis for the emphasis on low radiation angles in the pursuit of DX on the HF bands.

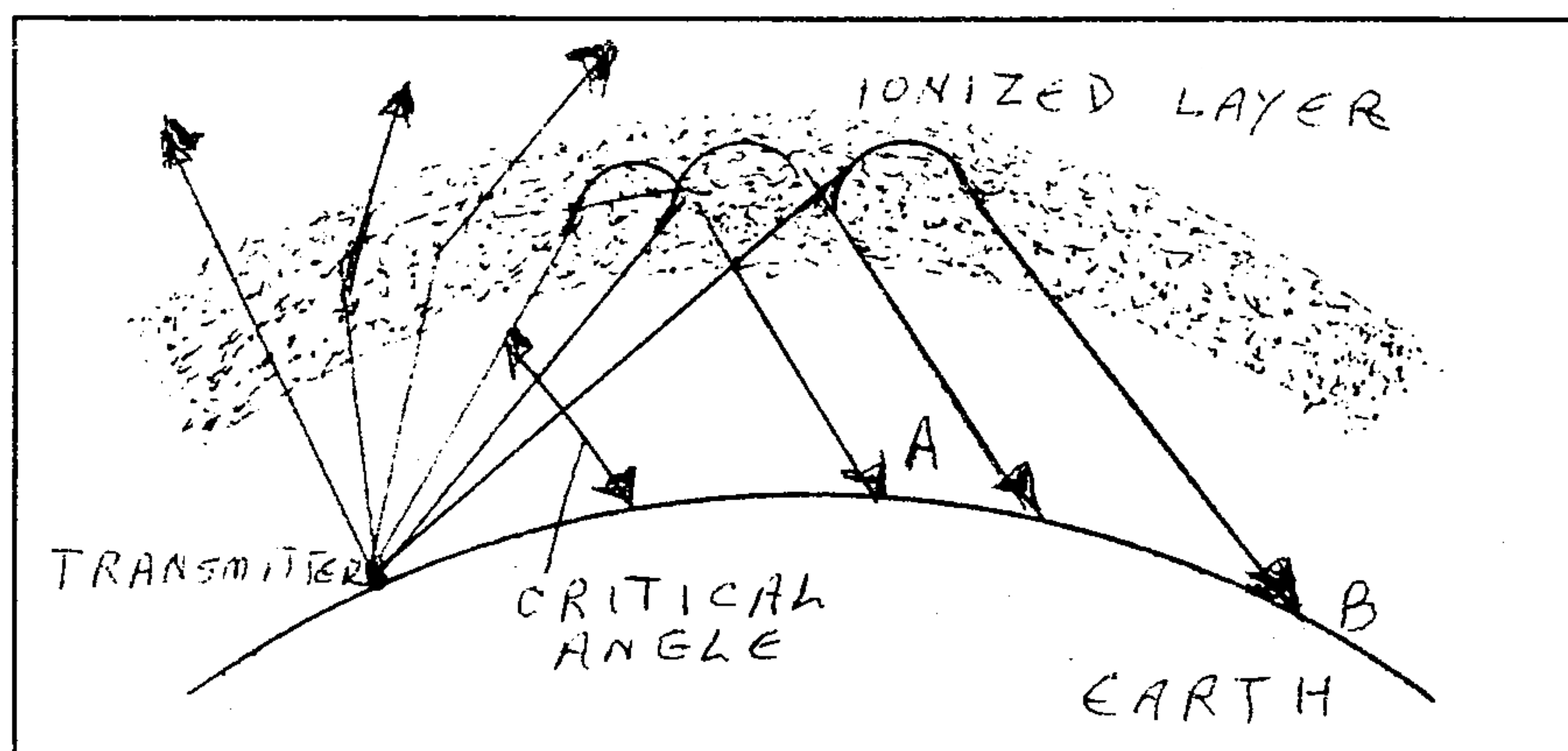
Some of the effects of radiation angle are illustrated below. The high angle waves are bent only slightly in the ionosphere, and so pass through it. The wave at the somewhat lower angle is just able to be returned from the ionosphere. In daylight it might be returned from the E-layer. The point on earth where this wave is returned from the ionosphere (A) is closer to the transmitting sta-

tion than the point of no return for the lowest angle wave, which returns to (B).

The waves at left leave the transmitter above the critical angle; they are refracted in the ionosphere, but not enough to return to earth. The wave at the critical angle will return to the earth. The lowest angle wave will return to earth further away than the wave at the critical angle. This explains the emphasis on low radiation angles for DX operation.

The highest radiation angle that will return a radio wave to earth under specific ionospheric conditions is the critical angle. Waves that meet the ionosphere at greater than the critical angle will pass through the ionosphere into space. There are many other aspects to propagation, but it is hoped the above basic explanation will be of help to those desiring to upgrade.

--Harry Gage, N5WIZ



VE Session Results

The examination session on Jan. 23 was long on VEs and a little short on candidates. We had two candidates, one of whom passed his five WPM code test and became a Tech+ licensee. The other chap passed his Extra Class written exam but failed the code portion. Participating VEs included K8CSG, KK5LO, KJ5X, K5WH, KM5LJ, KM5OT, WC5CW, KF5ND and N1LN. KB5TES provided help with the paperwork.

January Board Meeting

Treasurer's Report--The checkbook balance for 12/31/98 was \$4360.84.

George, KD5AYF, has arranged for the US Wx Service to provide a (2) hour presentation on Skywarn Observations in March. NOTE: This meeting will start at 7:00 PM.

Discussion about the lack of general member usage of the packet node again indicated that we perhaps should convert this to another use.

Texas QSO Party -- Walter Hock and George Edwards to coordinate this event for 1999.

Bill Rister had to decline being the coordinator of the NARS classes again this year. Joe Sokolowski and Jim Kirk agreed to co-chair the class. Starts April 7 and meeting on Wednesdays and Thursdays. A VE session for the class will be on June 3.

--Bob Argo, KC5JZO, Secretary

HOUSTON
AMATEUR RADIO
SUPPLY, INC.

George DiLetto, KDORW
President

Exit 68 I-45 North
181 Cypresswood Drive
Spring, TX 77388

800-471-7373
281-355-7373
Fax 281-355-8007

DX News

*A feeling of sadness and longing,
That is not akin to pain.
And resembles sorrow only,
I missed that one again. . .*

A crew of QPRers, accompanied by some older DX types, came calling on The Old Timer during one of the recent cold snaps. Something was obviously troubling them, or at least most of them. "Say, said one of the more impetuous ones, "what about this P51AA that showed up recently? Can he be real?" The Old Timer was not unaccustomed to such questions as this. "Well," he said, "did he sound like he could be real?" The answers came flooding quickly. Some had heard the P5; others had actually worked him! Most of the group, however, had not even heard the P5, but had seen the DX cluster postings. "But did he sound realistic", asked The Old Timer again? The reaction was definitely mixed. Some of the group appeared apprehensive, depending upon whether they had worked the P5 or were possibly in fear that they might have missed him. To put a stop to the conversation, The Old Timer said "It all depends. It all depends upon whether he was truly legitimate, and whether he can prove that he was. Remember the last word out of No. Korea said 'no way' for some time yet." "But should we send for a QSL" asked one of the older DX hands? "If you worked him, of course you should send him a card. Why not?", asked The Old Timer. "At worst you will get nothing back, at best you might have a winner. Remember WFWL!!" Satisfied, but not really satisfied, the group stumbled back down the hill, realizing that The Old Timer was right again. Work first, worry later!

The last quarter of 1997 had an average solar flux of 94.3. For 1998 that number was 135.4. During the last week of 1998 the SFI was way up, peaking at 184.4 on December 22. As we moved into 1999 the numbers were reassuring with the SFI at 165 during the first three days and stable geomagnetic conditions. By the time the Campbell Island DXpedition came on the air the SFI had dropped to 115, with A and K indices of 8 and 2. A week later the numbers had not changed significantly. With the SFI in the doldrums, a minor solar storm on January 12 caused the A index to jump into double digits. On Jan.22 the SFI reached an astonishing 238.8. This was a noon reading and was also solar

flare enhanced. Perhaps a hint of further things to come?

The Kermadec DX Association displayed another example of their ability again during the first week of 1999. They arrived on Campbell Island on January 4 ahead of schedule and turned up on the air big-time on January 6. Somewhat to my surprise I heard K5VUU work them ahead of me, which got my attention. A bit suspicious, I took a look and found I had spent nearly ten minutes calling ZL9CI using my R5 vertical, rather than my beam. Upon switching to the beam I got them quickly on both SSB and CW on 15 meters. Steve got them on 17 meters the first night also. By mid-month it seems everyone who tried had worked them one or more times. The DXpedition team reported nearly 11,000 QSOs in their first 24-hours on the air. The DX team was there until January 24, which should have enabled all who need Campbell to get it in their logs. Their QSO total was something over 93,700. QSL to ZL3HU.

LOCAL EVENTS: My competition continues to multiply. K5VUU has his beam up and is working DX like crazy. Steve, KD5AIJ, put his beam up on New Years Day and shortly afterward sent me an e-mail listing some new accomplishments courtesy of the new antenna: 5R8FL (Madagascar), ZK3RW (Tokelau Isl.), JD1 (Minami Torishima), JT1BG (Mongolia) and T20FW (Tuvalu). George, K5VUU, also reports success with T20FW using his new beam. Ross Hardie, KD5FDW, is a recent product of our November exam session. He says he has worked some DX already, including LY2ZZ in Lithuania. Nice work, Ross, especially from your mobile! KJ5X worked VU2XX on 20m long-path on Jan. 22. K5VUU and KM5OE worked 5A1A back-to-back on January 26.

DX WORKED: XR3J (Chile--World Scout Jamboree) 15m 2116Z; EA9IE (Ceuta) 10m 1636Z; VP8CRB (Falkland Is.) 10m 2007Z; 3D2RY (Rotuma) 10m 2121Z; ZL9CI (Campbell Is.) 15m 0306Z; ZK3RW (Tokelau Is.) 15m 2236Z; A35VU (Tonga) 15m 2240Z; T20FW (Tuvalu) 15m 0226Z; CN8NK (Morocco) 15m 1603Z; FO0KOL (Marquesas Is.) 20m 1646Z; 3D2AG/P (Rotuma) 15m 2319Z; 3C1GS (Eq. Guinea) 15m 1705Z; V51E (Namibia) 15m 2012Z; ZL9CI (Campbell Isl.) 20m 1954Z; JD1BIY (Minami Torishima) 10m 0013Z; VU2XX 20m 1412Z; ZL2CPC (New Zealand) 10m 2307z; FO0XUU (Marquesas) 15m 2330Z; FO0AWI (Marquesas) 15m 2111Z; 3B8CF (Mauritius) 20m 0330Z; T33VU (Banaba) 10m 2331Z; HL2KAT (S. Korea) 15m 0142Z; DS5UCP (S. Korea) 15m 0019Z; YC8TXW (Indonesia) 15m 2334Z.

DX HEARD/NOT WORKED: ZL1ZNI (New Zealand) 10m 2030Z; ZL1CLE 10m 2132Z; ZL2OOO 10m 2150Z; CE3/NE4Z (Chile) 10m 2203Z.

QSL ROUTES: VP8CRB via K4QD; TN7OT via AL7OT; 3D2RY via OH1RY; ZL9CI via ZL2HU; T20FW via DK7YY; FO0KOL via OH1RY; JD1BIY via buro; T33VU via DL1VU.

The Zoli, HA5PP, operation in Eritrea is producing QSL cards which are singularly eye-catching. The key element is an Eritrean female native au naturel on the face of the card. KJ5X and K8CSG exhibited their cards at the Lunch Bunch gathering on January 13 and attracted significant attention.

XV300S showed up on frequency on Dec. 10. Despite the pileup I worked him

Donation in Memory of WB6QFL, SK

NARS has received an equipment donation from the surviving daughter and son-in law of Silent Key WB6QFL. The donation, by Mr & Mrs. Tom Bunner of Spring, Texas will add to the club's inventory for this year's silent auction. WB6QFL, Ozzie Rischbieter, was an accomplished equipment builder, and his now-donated equipment includes a Heathkit Marauder, Warrior, Phone Patch, Code Oscillator, etc. Also donated were several signal generators, test panels, an antique CW hand key and several hundred tubes in brand new condition in original boxes. NARS is thankful and pleased to receive this equipment in memory of WB6QFL, SK.

--WA8GHZ

DX News - Continued

Continued from Page 4

just before he went QRT. This is a special event station commemorating the founding of the city of Saigon 300 years ago. As is typical, any contact with any station in Vietnam is considered good DX.

H.O, WA5MLT, demonstrated his DXing skills during the 10-meter contest. He worked some 30 countries, including 3V8BB. Not bad for a recent retread. He also worked DU6BG on my coattails. Over the holidays he adjusted his array of dipoles and worked the following countries: DU4, SP7, CU3, FG/F5, YS1, V51, V4, ZP5, CX4, RW3, EA8, WP2, 6W6, etc.

Roy, AD5Q, worked ER1DA in Moldova on 40-meters one Wednesday evening recently. Roy says what followed was surprising. He began running what became the equivalent of a DXpedition pileup of people who were calling him! As he said, there was no DXpedition involved and no contest. Must have been a bunch of guys who needed rare Harris County, eh Roy?

Carl, DL1VU, began operating from Banaba as T33VU shortly after Christmas. Obviously, he favored CW rather heavily. He was fairly active through January, especially on 12-meters, 10-meters and a few others. Despite having consistently significant pileups, Carl could be worked if one was persistent. QSL via DL1VU or DL2MDZ.

FR5ZQ/T should become active during a work assignment on Tromelin Is. sometime during February. Henry will be working on the weather station equipment, so his amateur activity will have to come in second to his work. Tromelin is one of the tougher entities to be worked and it will pay if one can take the time to work him. QSL to his callsign at his home on Reunion.

CN2UN has been operating with some United Nations groups in the Western Sahara, and has claimed his QSOs will count as W. Sahara for DXCC. Not so! The DXCC desk reports that only stations with SØ prefixes can count for W. Sahara.

Rumor says the YVboys are planning an operation from YVØ-Aves Island sometime in 2000. Nothing to get excited about yet, but one to keep in mind. Rumor also says that a DL-station plans to be QRV from P5 on April 1. (Is this perhaps April Fool. . . ?)

--K8CSG

NARS Supported Events for 1999

At its January meeting the NARS Board of Directors identified and approved club participation in several annual events for which NARS usually provides communications. This is the list: The March of Dimes, The Buffalo Bayou Regatta, Self-Improvement through Riding Experience (SIRE) and the SunMart Texas Trail Endurance Run. Other miscellaneous events come up from time to time, such as Scout-related ones, in which NARS members may participate. These four are the major items on which NARS will focus attention during 1999.

New Canadian Prefix for Nunavut

The following is an announcement received by Radio Amateurs of Canada.

Congratulations on the creation of Nunavut. On this occasion, we are delighted to assign a new distinctive call sign prefix. Prefix VY0 (Victor Yankee Zero) becomes effective 1 April 1999 for the territory of Nunavut to ensure a unique identification for the new territory. The Prefix VE8 (Victor Echo Eight) will remain for the use of the western Northwest territories.

--K5ZTY

New Enforcement Initiatives

Like a fresh breeze in the springtime, the FCC is showing renewed interest in enforcement of its rules vis-a-vis amateur operations. Riley Hollingsworth, K4ZDH, the FCC's Amateur Radio enforcer showed up recently on 3894kHz to discuss enforcement and encourage compliance. K4ZDH said he broke in on an argument that was growing increasingly nasty. During this tete-tete he confronted one individual he had already been in touch with about alleged misconduct on the air.

Even as he preached better behavior, K4ZDH said he understood from others on the frequency that someone was attempting to jam his signal. K4ZDH said he "hoped the monitoring folks were on the frequency, too."

This marks a significant change from the position of the former Chairman of the FCC who once voiced an opinion that the "FCC has no role in field operations. It is an ivory tower organization which should merely set policy from on high in Washington." When he was replaced it was good riddance, and it seems the FCC intends to clean up some of the shabby behavior we have all noted on our bands.

--K8CSG

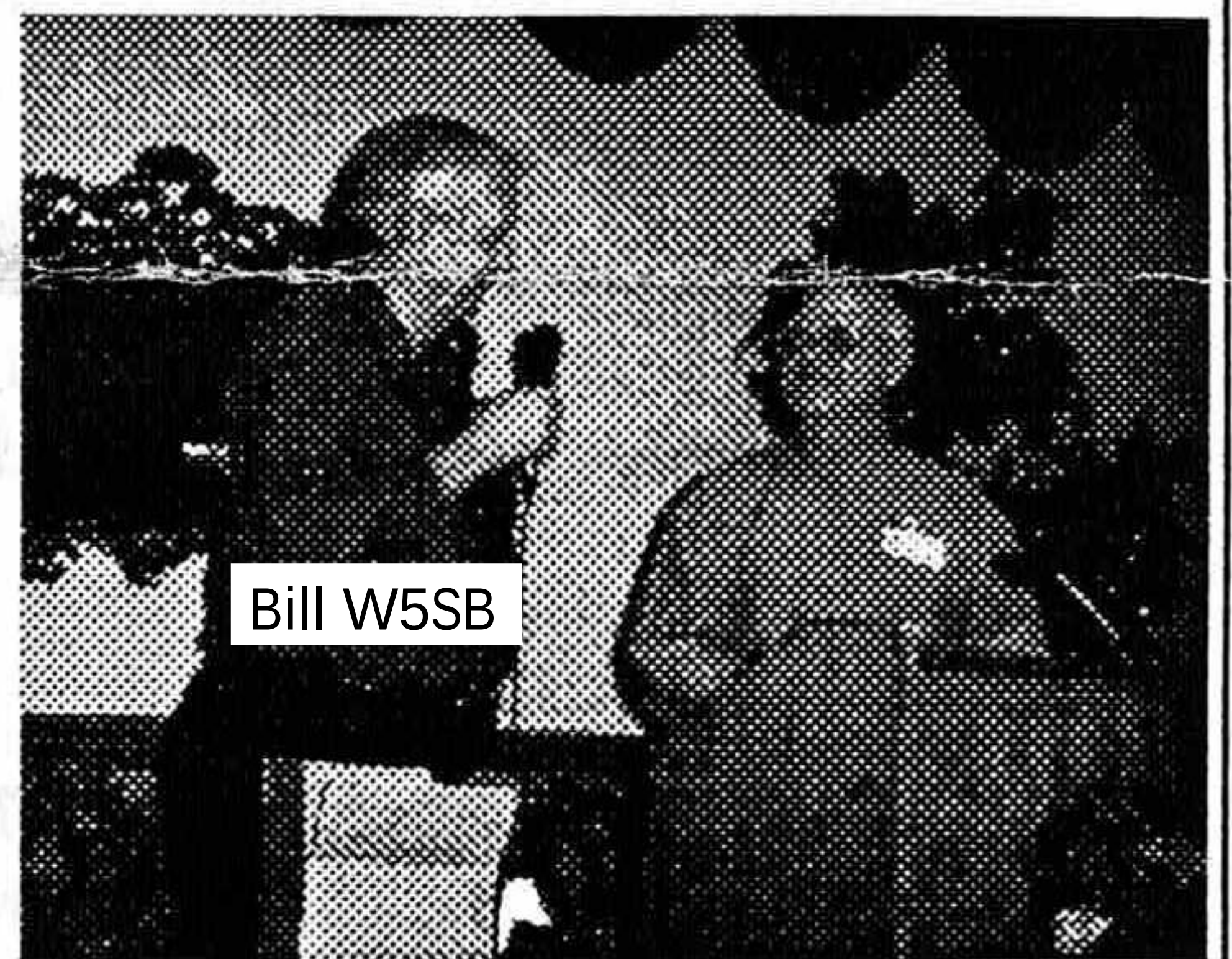
The Editor Sez . . .

Thanks for the responses to my request for help with material for the Newsletter. K5ZTY says he will provide QRP info from time to time, and N5WIZ has already sent me stuff for five issues. That is really good help. . . thanks fellows!

I would like to have someone to take care of contest info on a fairly regular basis. Anyone want the job? Keep in mind that contesting is a high interest of many NARS members.

-- K8CSG

Banquet Photos



Door Prizes

Door prizes for the NARS Banquet were contributed by these fine vendors. Please remember them when searching for things you need for your stations. NARS truly appreciates their contributions.

City Electronics
7015 Atwell
Houston, TX 77081-6005

EPO Outlet, Inc.
1776 Tomball Parkway, Suite 39
Houston, TX 77064

Ham Radio Outlet
1939 W. Dunlap Ave., Ste. 102A
Phoenix, AZ 85021

The annual NARS banquet was met with great anticipation on January 15th. The accommodations at the new location, "Wyndenhaven Terrace," were spectacular, the food was excellent and the service outstanding. It was a real change; we had room to walk about and just enjoy ourselves. There were ninety-

Kenwood Communications Corp.
2201 E. Dominguez Street
Long Beach, CA 90801-5745

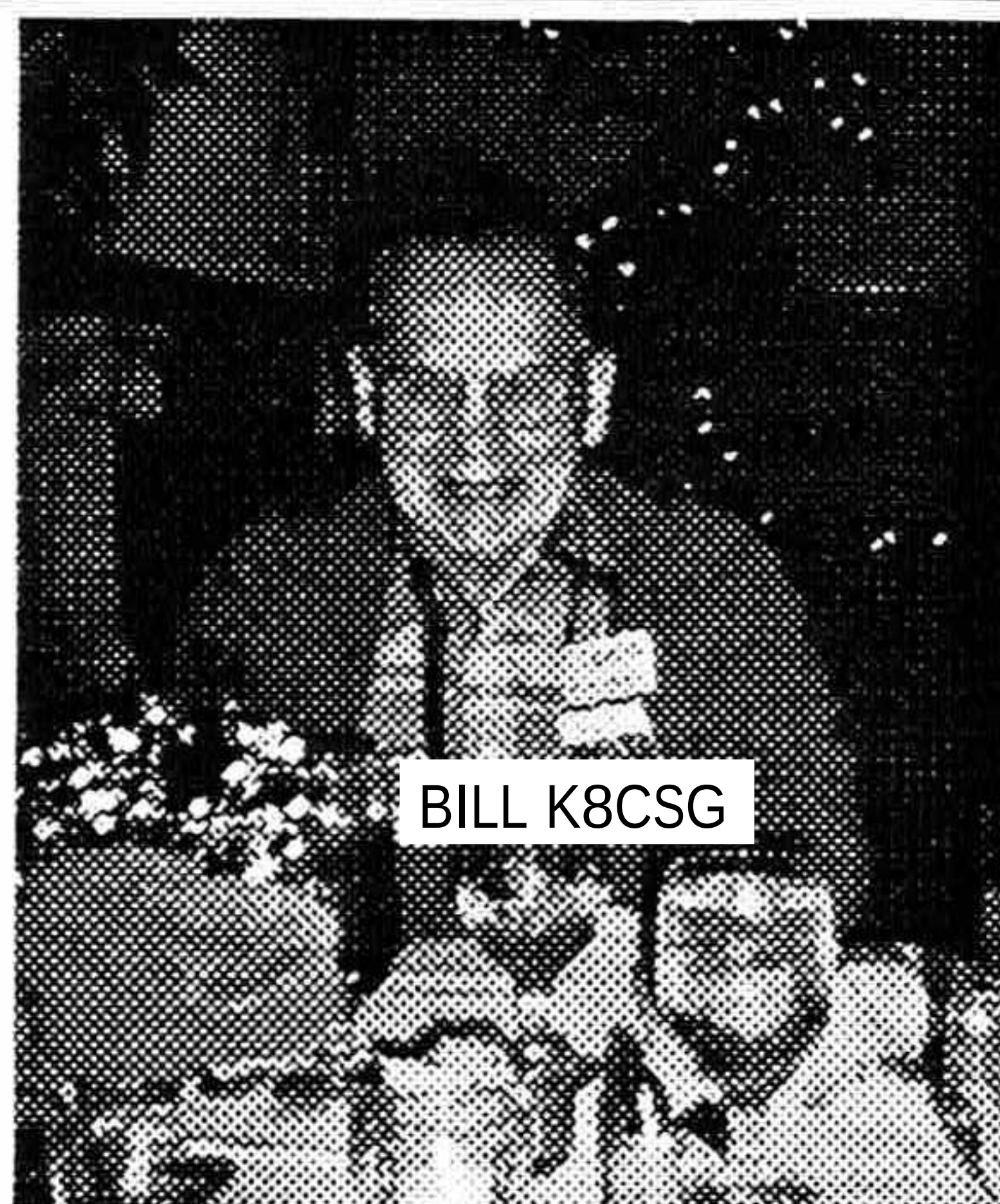
Houston Amateur Radio Supply
1811 Cypresswood Drive
Houston, TX 77388

Banquet Notes

four in attendance which was a terrific turnout. The nametags were an added touch thanks to my better half KC5NRR (Doug). The door prizes weren't too shabby either. What about those license plate holders!!! Joe did a great job as usual with the door prizes and awards. I thought the presentation of the award to Bob Helton was the highlight of the evening...this is what this club is all about -- SERVICE. I would like to give a "thank you" to Marian Denton, Laurie Meier and Margie Sokolowski for their help. I also would like to give a special thank you to Doug for all his support and help with this special event.

-- Dianna, KC5VSF

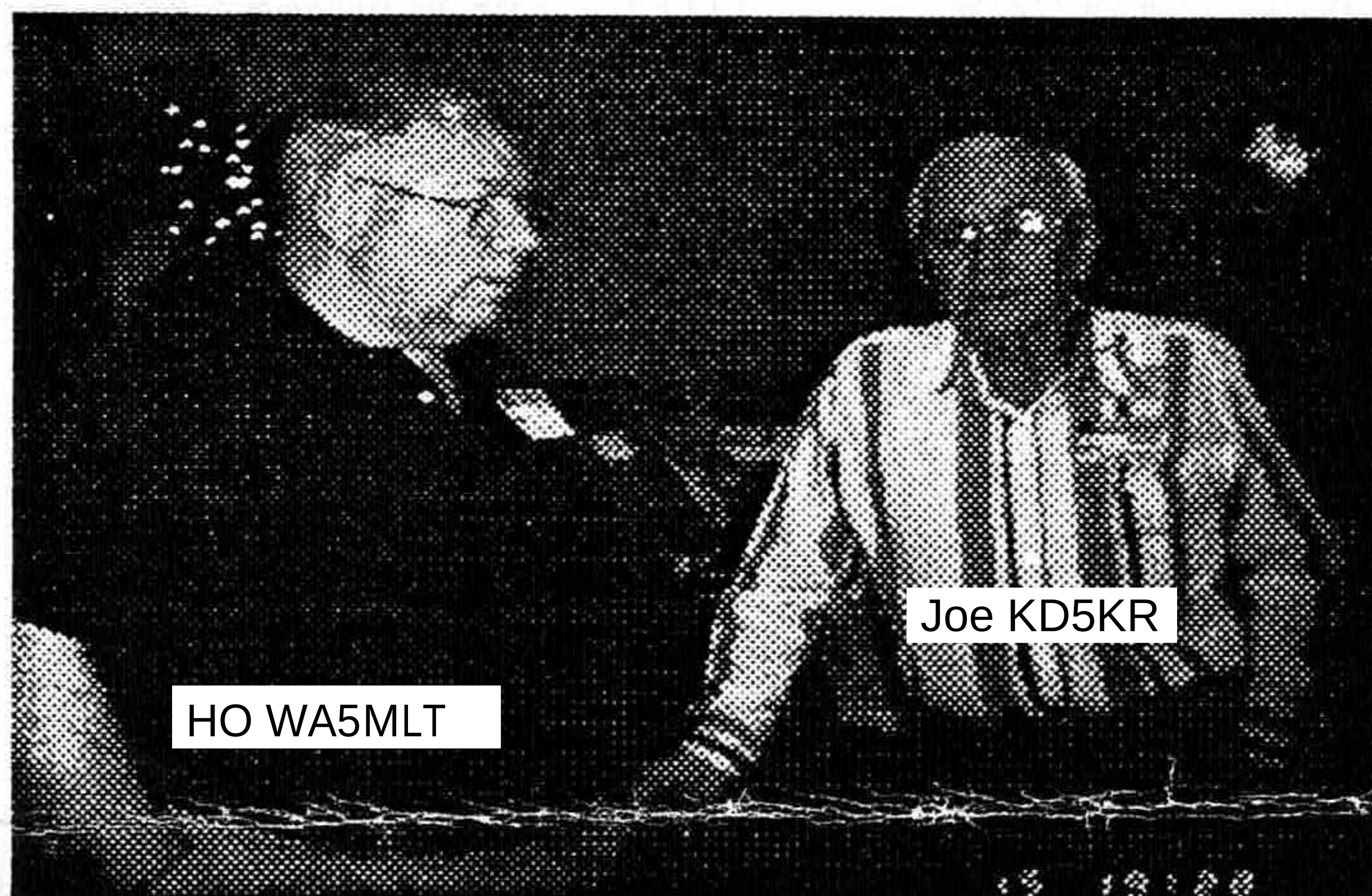
Banquet Photos



BILL K8CSG



PAUL N5NXS



HO WA5MLT

Joe KD5KR

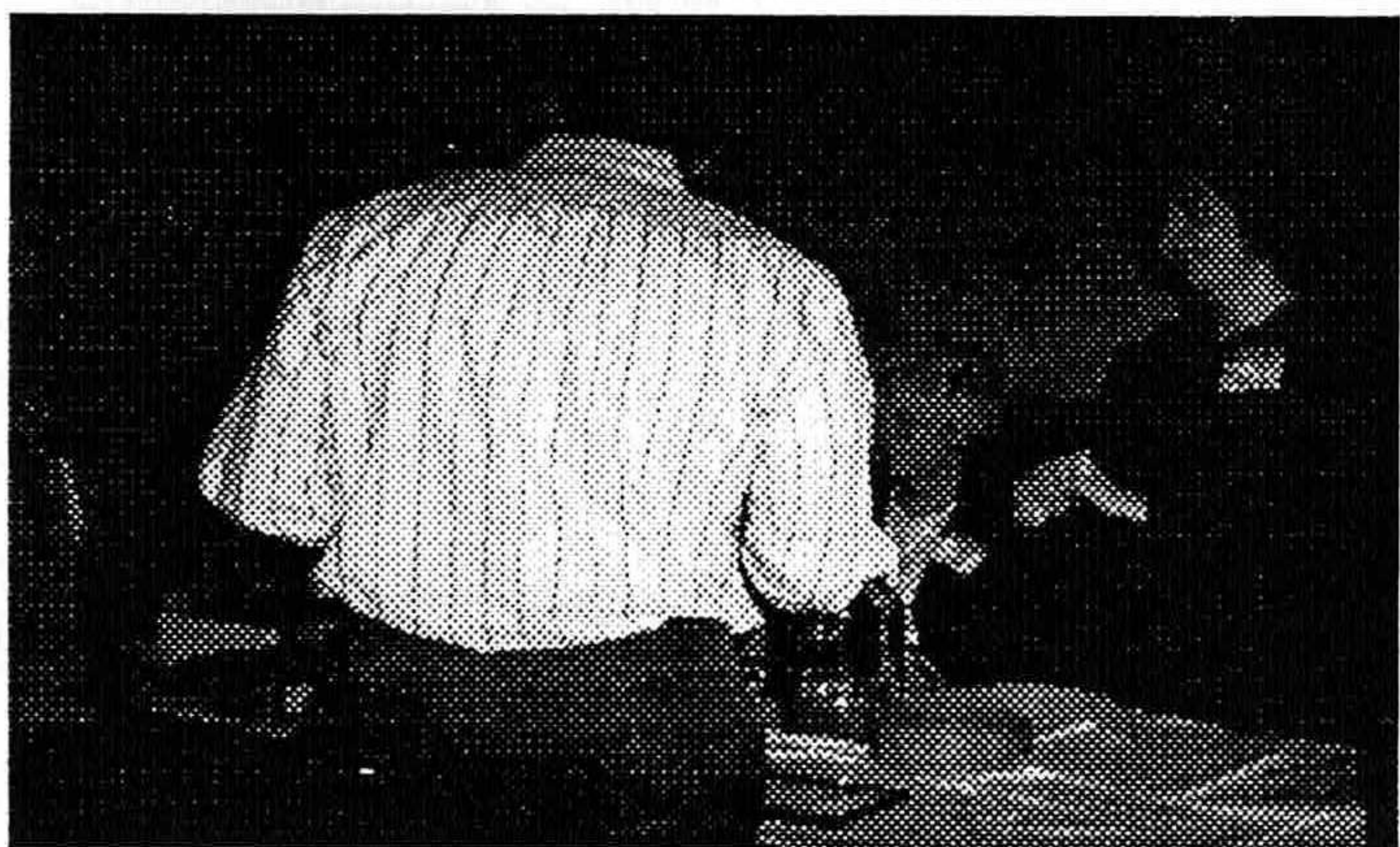


Walter KK5LO



Laurie N1YXU

Larry K5LBL



Welcome New Members

Tamara Egan, KD5EQY
Pat BeMent, KK5VN
Rhonda BeMent, KD5ECF
Doug Struckmeyer, KC5NDE
Gary Youney, K5QT
Ross Hardie, KD5FTW

Congratulations to Dan Clark, KK5LD on passing his Extra Class written exam

NARS Resource List

General Help:

Bill Stietenroth K5ZTY, 281/893-3901
Allen Majeski WA5REJ, 281/353-8653
Bill Denton W5SB, 281/469-8331

Antennas

O.J. Quarles K1OJ, 281/955-1555, HF
Larry McCain WA5SAJ, 281/469-6709
Madison Jones W5MJ, 281/350-4330

CW

Bill Gary K8CSG, 281/537-9240, DX
Bill Rister KC5EZQ, 281/537-8596
ATV

Satellite:

Deral Kent K5WNO, 281/548-7476
RS12/13
Dick Rooney W5VHN, 281/288-8424

Electrical Design, Troubleshooting:

George Carlson KC5RCC, 281/376-8307

Packet:

Don Bedell KA3BKU, 281/370-6576

VHF/UHF:

Brian Derx N5BA, 713/894-5942

Computer Operations:

Bob Argo KC5JZO, 281/288-7430

Computer Programming:

Keith Dutson WD5DXL, 281/351-7683

Interference (Basic Advice):

Harry Gage N5WIZ, 281/370-7488
Mark Tyler 281/587-0256

Card Checking for Awards:

DXCC - Bob Walworth N5ET, and Linda
Walworth KE5TF, 281/363-0209
WAS, VUCC - Brian Derx, N5BA
281/894-5942
WAZ - Bill Gary K8CSG, 281/537-9240

NARS Public Information Officer:

George Levandoski, KD5AYF
713/895-0700 kd5ayf@juno.com

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about NARS. Send address, phone, e-mail
and other changes to:*

NARS Administrative Secretary
P O Box 690342
Houston, Texas 77269-0342

NETS

10M Ragchew: Monday 8:00 PM. 28.444
Coordinator: Jim Kirk KJ5X
jrkirk@wt.net 281/537-0718

2M Information: Wed. 8:00 PM. 146.66
Coordinator: Bill Gary K8CSG
bsnn87a@prodigy.com 281/537-9240

WEB SITE

URL: <http://www.flash.net/~nars/>
Webmaster: Ben Worell KM5OT
km5ot@bfweb.com 409/773-4484
Trustee: Walter Hock KK5LO
kk5lo@flash.net 281/350-6633

REPEATERS

2M -- 146.060/146.660 (KA5AKG)
70 cm -- 449.375/444.375 (KA5AKG)
Digipeater -- 145.710(W5NC alias NARS)

MEETINGS

Monthly General Membership at
Spring-Cypress Presbyterian Church
6000 Spring Cypress Road
Third Friday each month -- 7:30PM
Saturday Breakfast at Victors Restaurant
7:30 AM
Wednesday Lunch Bunch at various
locations 11:30 AM (Info. on 146.660)

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281/537-9240
bsnn87a@prodigy.com

Send all articles and materials other than
email for the Newsletter to:
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14934 Falling Creek Drive
Houston, Texas 77068

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ARRL Club No. 2120