

NARS NEWS

The Northwest Amateur Radio Society

Houston, Texas

November 1996

A Wealth of Local Knowledge

Come to the general membership meeting on Friday, November 22, and hear George Diletto KD0RW from Houston Amateur Radio Supply. PLEASE NOTE: this is NOT the usual 3rd Friday, but the 4th Friday; the date had to be changed due to a conflict in room scheduling at the Spring Cypress Presbyterian Church.

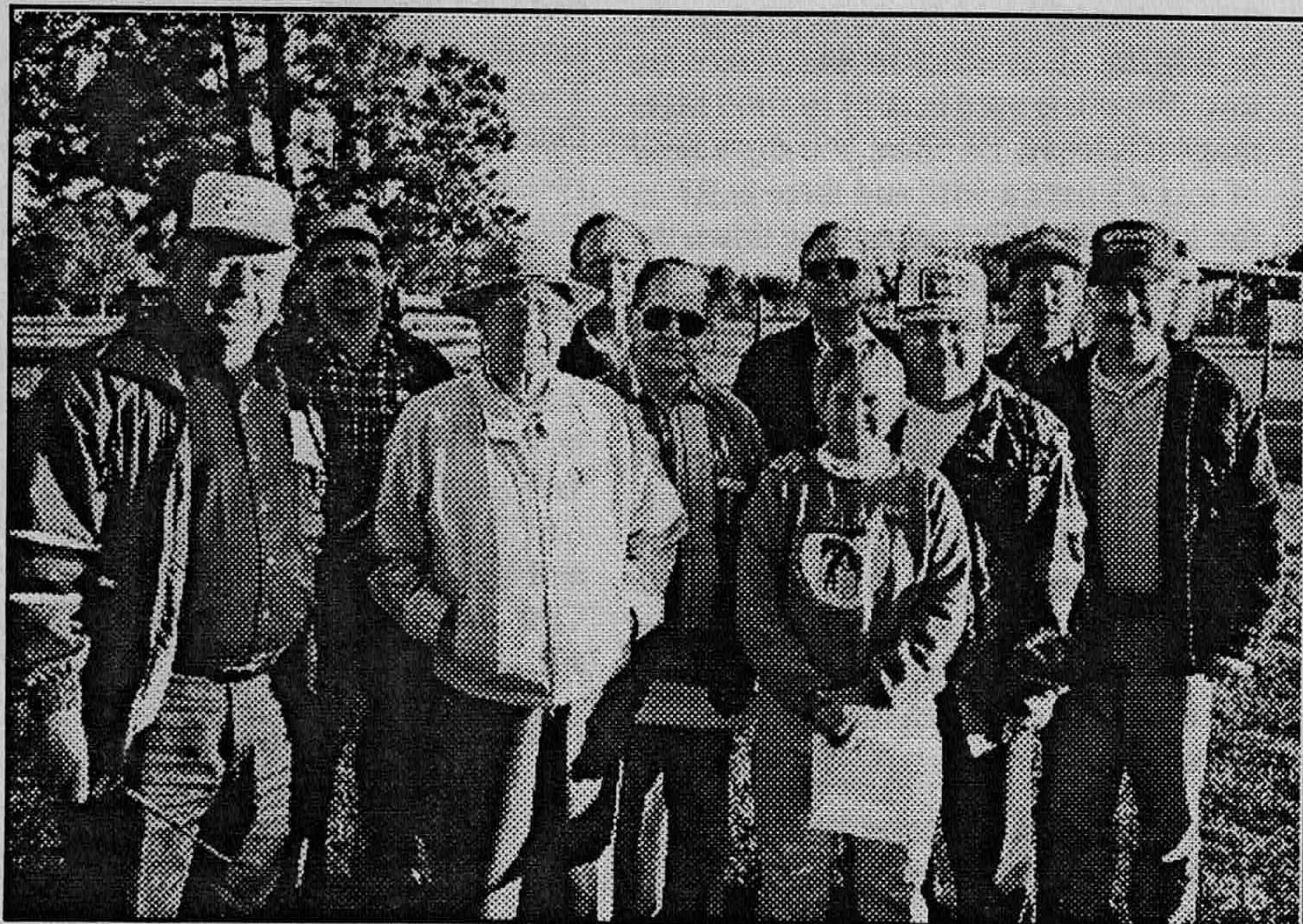
He will discuss various types of feedlines, and problems associated with them. Solutions to these problems will be discussed. George will also bring information bulletins from manufacturers concerning using

certain types of batteries that void their warranties.

George has been an amateur operator for a 'helluva long time' (He can't remember when he was first licensed, but thinks that he was in his early twenties). He was a manager for HRO for quite a few years, did service work for CW Electronics and was trained at the Yaesu, Standard Radio, and ICOM service schools. Now he is the owner of Houston's only true ham store.

Walter KK5LO

S. I. R. E. Team



Left to right: Bob Argo KC5JZO, Doug Hudspeth KC5NRR, Don Bedell KA3BKU, Harold Larsen KC5CNV, Bill Gary K8CSG, King Waters KK5LU, Kimberly Reiningger, Mike Lavender KB5WQJ, Tom Hoherd KK5YU, Jim Sutherland N5SBP; not shown, Keith Dutson WD5DXL See article on page 3.

Important Dates

Saturday - Sunday, November 16 - 18 - ARRL Sweepstakes, Phone

Wednesday, November 20, 7:30 pm - NARS Board of Directors meeting, IHOP, 5790 FM 1960 W, just West of Champions Forest Dr.

Friday, November 22, 7:30 pm - NARS monthly General Membership meeting, Spring Cypress Presbyterian Church - Eyeball QSO's, 7:00 pm

Saturday, November 23, 8:30 am - VE License Exam Session, Tomball Community Center, S. Cherry & Market streets (just South of Main)

Saturday, November 30 - NARS News deadline for articles to appear in December issue

Friday, January 17, 1997, 7:30 pm - NARS Annual Banquet, Valley Ranch Bar-Be-Que Restaurant

Saturday, December 14 - Sunmart Texas Trail Endurance Run, Huntsville (call Walter for info, 350-6633)

Friday, January 17, 1997, 7:30 pm - NARS Annual Banquet, Valley Ranch Bar-Be-Que Restaurant

Notice:

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

BREAKFAST

at Victors

4710 W FM 1960

Saturdays

8:00 AM

President's Corner

November 1996

We just had the October NARS Board of Director's meeting and we discussed the annual NARS Banquet, DX cluster for the NARS node, and the upcoming Sun Mart Texas Trail Endurance Run.

The Gulf Coast Ham Convention has come and gone. Saturday the NARS flea tables were set up by some members. Thanks go to those who helped set up and man the tables: Bill WA5DWX; Bill K8CSG; Bill K5ZTY (whew, am I through with all the Bills?); Larry WA5SAJ; Doug KC5NRR; Brad WD5GNI; O J WA1YIA; Gerald WA5TVM; Dick W5VHN; and all those whom I failed to write down your name. It was also good to see those who dropped by to say Hi or drop off some items for sale. Also, with items from the estate of Ken W5BKK, manned by Ann Edinborgh and Terry W5BKK, we completely covered the four tables and also spilled over onto the floor. Sunday, I wasn't able to go back, but some of the above people and others did. Thanks go to them again.

The NARS banquet will be held January 17, 1997 at Valley Ranch Bar-B-Que. (YUM YUM)

We have agreed to provide communications support for the Sun Mart Texas Trail Endurance Run which is to be held in Huntsville State Park on December 14, 1996. I am getting together a list of people to help. I need at least 16 amateurs. This event will last 12 hours and I know that some people can't tie up a whole day. I have decided to present the opportunity to work the morning, afternoon, or both if you so desire. We are invited to share in all the benefits of the runners, i.e. plenty of refreshments and a Bar-B-Que at the end. (I knew that would get your interest.)

The balloon presentation by John Allen KC5JRS was very good and my THANKS go to him for the program.

Elections will be held at the November general membership meeting. Remember, the meeting is on the fourth Friday, November 22, 1996. So, come out and vote for your favorite candidates for NARS officer positions.

This month's meeting topic is a presentation by George Di Letto KD0RW, owner of the Houston Amateur Radio Store. He has promised to address feedlines and bring some manufacturers warning bulletins he has gotten on their products.

Walter Hock KK5LO

How Do Ferrite Beads Work?

Since the article on ferrite beads appeared (to block out unwanted RF) there have been several inquiries on "How do ferrite beads work?" For those folks who already know the answer please bear with us as we try to explain the "how" for those who would like to know.

Let's start with the word ferrite. A ferrite is a compound, and one of the forms of pure metallic iron having high magnetic permeability, that in turn meaning having the power to conduct lines of magnetic force. Ferrite beads are composed of different mixtures of ferrite in a ceramic base and molded in the shape of whole beads, split beads or toroids (rings).

Those mixtures are given numbers by the manufacturer such as 43 and 77 among others, and they stand for standardized mixtures of ferrite vs. ceramic. The mixes are made this way to block different ranges of frequencies that are unwanted. The manufacturer has already determined the mix percentages by experimentation in their lab.

For example, ferrite mix 43 is used for tuned circuits in the frequency range .01 to 1 MHz. It is efficient and losses are low. But if it is used in the 1 to 1000 MHz range it is lossy. So when you slip a bead of mix 43 over a wire and there is RF in the 1 to 1000 MHz range going down the wire, it is just as though you put a resistor in the wire. But you did not have to cut the wire to insert the resistor; you just slip a bead over the wire. If the resistance of one bead is not enough you can add more beads or add longer beads to get more resistance. The beads, unlike a resistor, do not affect the wire at low frequencies so the audio, DC and other low frequency components go through the wire just as though the bead was not there.

It is important to remember that the frequencies mentioned are those of the interfering signals to be eliminated; not the operating frequencies of the equipment being protected. So when you buy beads and toroids you must specify the physical size and mix

depending on the frequency of the RF interference. Palomar Engineers will supply you with charts of all their mixes and physical sites with the frequencies they cover. You can write to Palomar Engineers at: PO Box 46222, Escondido, CA 92046. They have an RF Interference Kit that sells for \$18 + \$6 S/H, which contains an assortment of whole beads, split beads and toroids.

In a nutshell that is the "how" of ferrite beads and toroids. Speaking of nutshells, I hope everyone enjoys cracking open walnuts or pecans and enjoys good eating and good visiting. Happy Thanksgiving.

73 Harry Gage N5WIZ

October Exam Session

The Amateur Radio examination session held on October 26 was one of the more successful of recent months. Seven candidates were examined on seventeen elements. One code element was not passed successfully; all others were passed, resulting in an array of upgrades and new licenses. Two individuals were certified as new Technician licensees. Two became Technician-Plus licensees. One individual upgraded to General, and two became Advanced Class licensees. One individual, Perry Cox of Conroe, passed thirteen wpm and the entire array of exam elements required for Advanced Class in one sitting. It probably helped that Perry was previously licensed when he was twelve years old in Mississippi as W5DRM. Participating VEs included K8CSG, WA5DWX, N5ET, WD5GAZ, and KI5ME. Two other amateurs from Compaq assisted in handling administrative chores.

Bill Gary K8CSG

Happy Thanksgiving

NARS Annual Banquet

Get ready for the 1997 edition of the annual NARS Banquet. Mark this on your calendar:

Valley Ranch Bar-Be-Que Restaurant
Friday, January 17, 1997, 7:00 pm

If you were not there last year, you missed a really wonderful get-together. This is without a doubt the most popular event of the year for NARS members

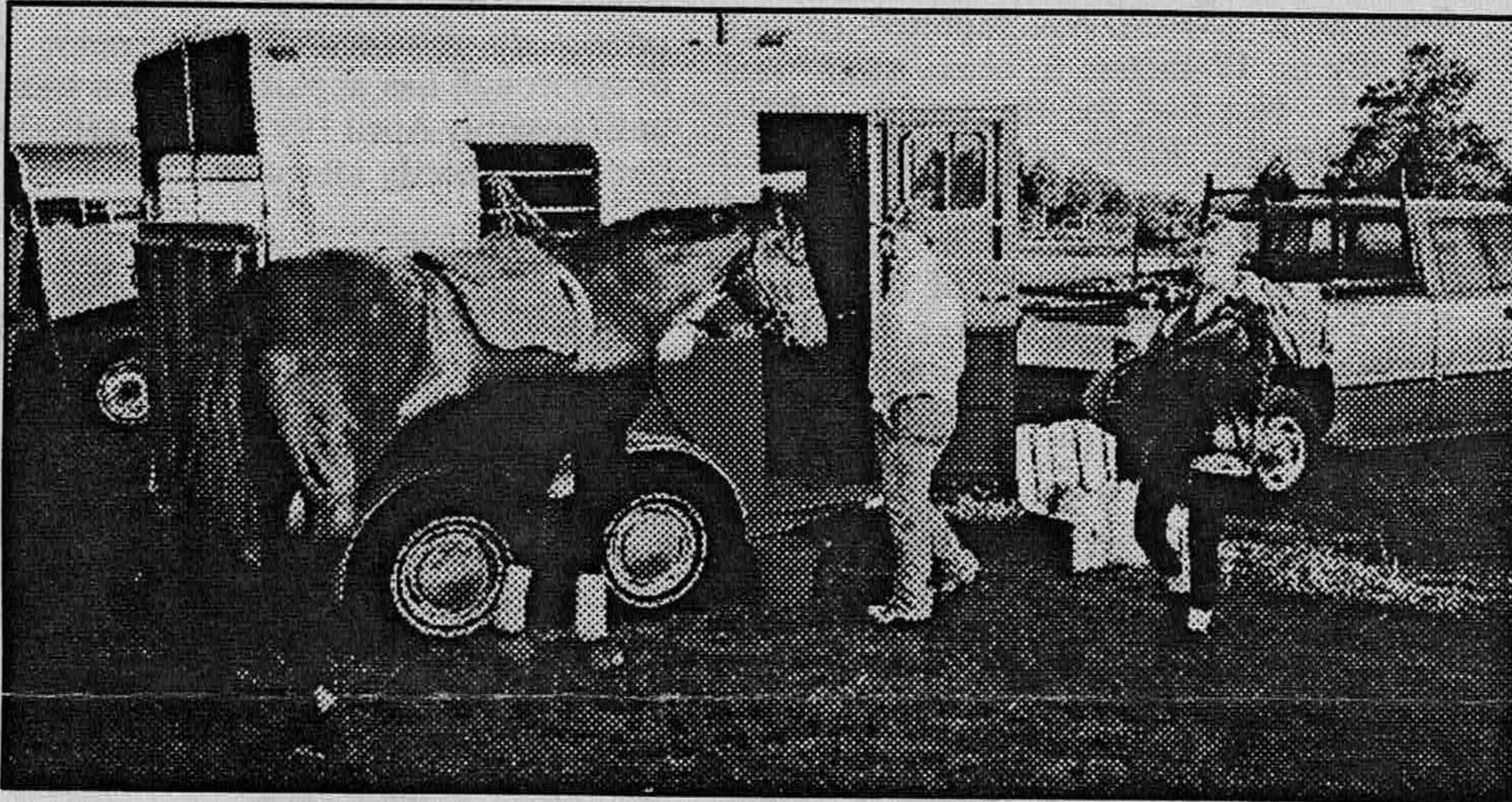
(Field Day may be a tie). You never know what you will see and hear from our officers and senior members at the Banquet. But you can be sure it will be fun and entertaining.

Our Vice President, Paul Owen N5NXS has lined up a sumptuous meal of BBQ beef and links, beans, potato salad, cole slaw, iced tea, coffee and all the

trimmings, including a choice of pecan pie, banana pudding and apple cobbler for dessert. Price is \$12 for members, \$12 for their spouse/guest, \$15 for others. Get your reservation and payment in to Paul or to Keith Dutson, or send it to NARS, PO Box 690342, Houston, TX 77269-0342. Don't miss out on this great event!

Keith WD5DXL

S. I. R. E.



Saddling up for S.I.R.E. !

S.I.R.E. (Self Improvement through Rider Education) is an organization dedicated to underprivileged kids who are looking to improve their life, and have fun in the process. They get to ride and groom horses on a regular basis. NARS has been the sole provider of communications for the annual trail ride fund raiser since its inception. This was another successful year for both SIRE and NARS.

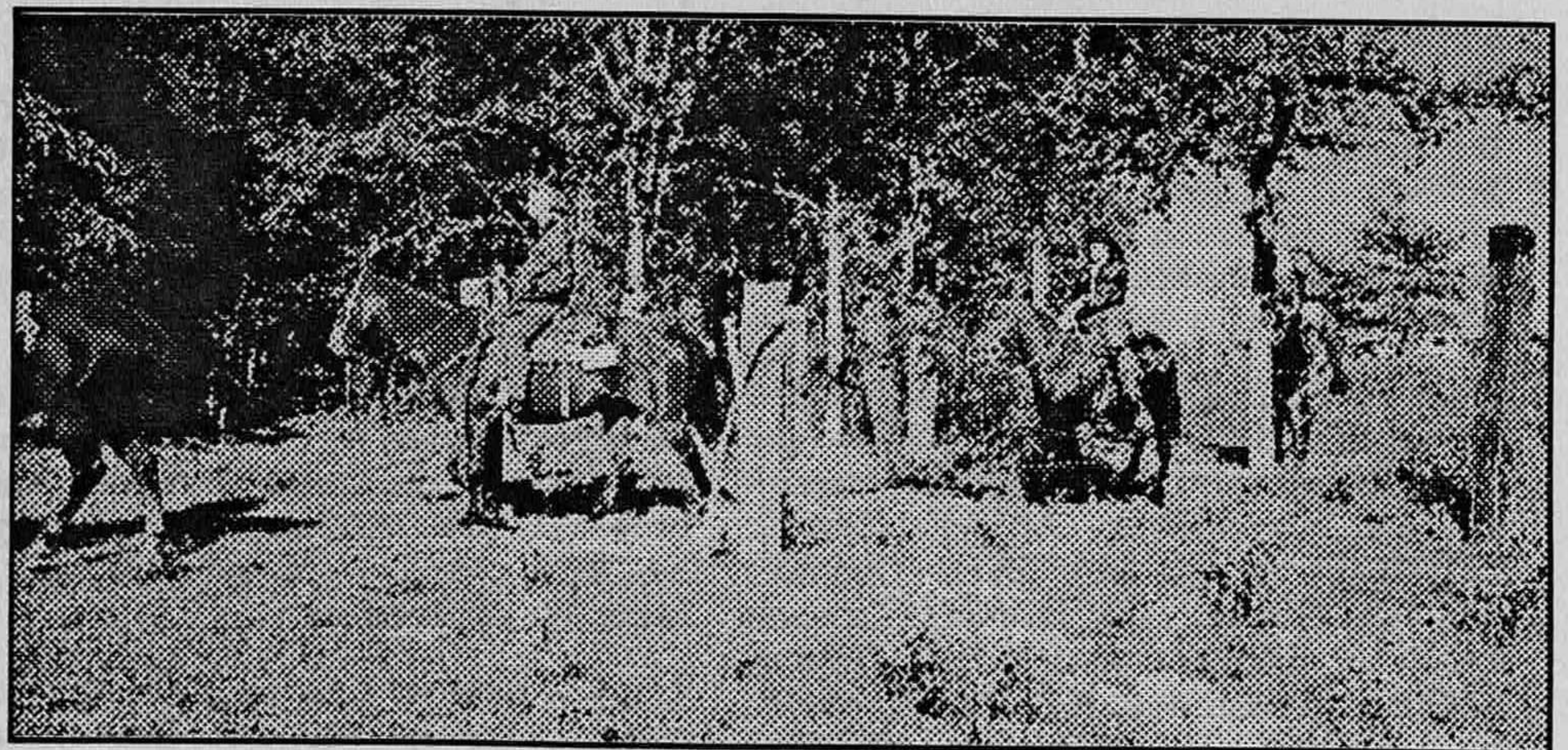
The NARS bunch met at the Whataburger in Tomball at 6:45 am on Saturday, October 19th. We left there at 7:30 and formed a caravan out to the Moss Rock Farm, just south of Montgomery on FM 149. At 8:00 we were receiving instructions and gate assignments. By 8:30 we were all at our stations on the 10 mile long trail laid out over several adjoining farms. Then there was a considerable wait and, finally, the first horses came through gate 1 at 9:45. By 10:30 all 73 riders had started and the

front runners were more than halfway through the ride. While this was going on, some of the handicapped kids were getting short rides on a much smaller trail, led by SIRE volunteers. By 11:30 there were some riders wanting to go 'round again. They decided to just go around the "back 5" again. At 12:30 all

riders were in and hungry. The NARS volunteers joined in for Burgers, chips and drinks, and we even received a neat T-shirt to commemorate the event.

Kimberly and Warren Reininger are to be commended for loaning their ranch for the day, and convincing their neighbors to let the riders cross their farms also. SIRE raised more than \$17,000 to help maintain their facilities on a year-around basis. Special thanks to Jim Sutherland N5SBP for organizing the NARS group and working the event at the "holding area" where the trail intersected between the front and back 5 miles. Thanks also to the other volunteers: Doug Hudspeth KC5NRR, gate 1; Keith Dutson WD5DXL, gate 2; Bill Gary K8CSG, Gate 5; King Waters KK5LU, Gate 7; Harold Larsen KC5CNV, gate 8; Tom Hoherd KK5YU, gate 10; Bob Argo KC5JZO, gate 11; Don Bedell KA3BKU, gate 12; and Mike Lavender KB5WQJ, rover.

Keith WD5DXL



Riders enjoying the trail as they pass through gate two.

DX News

DX Quote -- *"This is the Law of DXing, That only the strong shall survive. That surely the weak shall perish, and only the Deserving survive..."*

October began with the solar flux index at 70, the A index at 3 and the K index at 1. At the end of the first week, the SFI had slipped to 69, with the A & K indices at 3 and 0. During the second week, the SFI fell to 68 and the A index went up to 16 -- harbingers of poor conditions. There were no visible sunspots for 34 successive days. During the convention weekend the SFI fell to 67. However KB5YVT and K8CSG enjoyed an opening into the Japan - No. Asia area, working JA3BOA almost back to back.

THE CQWW DX contest brought the usual array of expeditions to various islands with special contest callsigns. Some of the more interesting ones were 3C1SX (Equatorial Guinea), 7P8EL (Lesotho), FK5DX (New Caledonia), TL8MS (Central African Republic), and XX9X with Martti Laine in Macao. The contest (SSB section) has come and gone. It is always amazing to me how contests bring out DX stations even when the sunspot count is very low.

Several NARS members reported varying degrees of success in the contest. KM5AO reported before noon on Saturday that he had worked 17 new countries on 75 meters. Not bad for a fence-top antenna! WA1YIA reported he had run a covey of Japanese stations on 40m using a rooftop loop-like antenna. K8CSG spent about six hours contesting during the weekend, working 170 contacts which included 87 countries and nearly thirty zones via the hunt and pounce technique. KM5AO worked Asiatic Russia and American Samoa during his early activities in the contest. WD5DXL says he was very surprised to work an African station on 160-meters during the contest. Based on unusual callsigns heard during the contest it sounded more like the CO WPX contest.

The solar flux spent the weekend hovering in the 70-71 range, with the A and K indices holding in the low single digits. Shortly after the contest the SFI dropped to 68 and the A index climbed to 12. One wonders how CQ manages that!

DX WORKED: ZB2CF (Gibraltar); OD5NJ (Lebanon); 5A1A (Libya); 9G1BJ and 9G1YR (Ghana); J52IM (Guinea-Bissau); OX3SA (Greenland); A61AN (Dubai); ZD7HI (St. Helena Isl.); 5X1D (Uganda); FO0SUC (Rurutu Isl.); BV5GQ (Taiwan); JA3BOA, JA1CG, & JH1EHO (Japan); JT1FBT (Mongolia); KC6/N5OK (Belau Isl.); 5N0MVE (Nigeria); BV5BG (Taiwan); VK2BEX/CY0 (Sable Island); C31LD (Andorra); AH8A (Am. Samoa);

HB0AON (Liechtenstein); V59T (Namibia); D25L (Angola); ZX0F (Fernando de Noronha); ZD7RSD (St. Helena Isl.).

DX HEARD: ET3BT and ET3BN (Ethiopia); 9N1RHM (Nepal); YB3OSE (Indonesia); OX3IA (Greenland); S52HA (Slovenia); A61AM (Dubai); FR5DX (Reunion Is.).

KB5YVT worked TL8/F5JKK, presumably in the Central African Republic. If this guy was not a "slim," Mike made an excellent contact for a new country. Paul, N5NXS, worked an IT9 in Sicily, and a couple of others during the last weekend in September. WA5DWX reported enough activity on 17-meters to cause some "real QRM." Not bad for the bottom of the sunspot cycle! KJ5IP and K8CSG worked 5A1A (Libya) on Oct. 1 (15-meters) and Greenland (OK3SA) on Oct. 8. Jim had his 5A1A card before the end of the month. KB5YVT reports that he worked 9K2NM in Kuwait City on 15-meters on Oct. 7. W5PDW worked A61AN (Dubai). Deryl K5WNO worked V31DE via RS-12 (satellite). KC5PCB worked LU1CFU on ten meters, a QSO over some 5500 miles or so, using a new homebrew antenna. This was followed during the DX contest weekend by contacts with Brazil (PY) and Tonga (A35).

October was supposed to see a major operation from Syria (YK). It didn't happen. Although 20 German operators were reported to have been in that country, they had been told to leave their equipment at home. Reports from Germany reflect considerable bitterness by some of their group. They apparently provided considerable ham equipment to a Syrian operator who apparently wanted more. He was rejected on his request for a satellite station and promised to interfere with their plans to operate from YK. Apparently he did just that.

Another planned departure for St. Paul Island had to be deferred again due to rotten weather. One of these days it may actually happen, but it now appears it will be in 1997. Rumor says the project has been scrapped for 1996.

The operations from Mauritius and Rodriguez Islands described last month will be delayed -- the license applications have been lost. The operation from Rodriguez has been canceled and no new date for Mauritius has been set.

There is a rumor floating about that there may be a short operation from Bouvet Island (3Y) by the South Georgia group in conjunction with their next trip to the islands of Antarctica.

On October 8 an interesting spot appeared on the DX cluster. A ZV0MB operating from "MV Island" stirred quite a bit of interest until it was learned that that MV Island is not "the" MV Island -- Malyjysotskij Island in the Gulf of Finland. The latter, operated for the first time in 1989 by Martti Laine and friends as 4J1FS, counts as a separate DXCC country, which makes it attractive to most. ZV0MB is Martim Vaz Island, a So. American IOTA counter and not bad DX, nonetheless, since it is part of the Trinidad Island group for DXCC.

It now appears there will be no operations from Scarborough Reef or from Pratus Island during the rest of 1996. The previously rumored Fall operation from Scarborough has apparently been scrubbed until possibly April 1997. The weather there goes sour shortly afterward.

73, Bill K8CSG

Special Interest Group (SIG) List

K5ZTY, Bill Stietenroth
893-3901, General Help
WA5DWX, Bill Denton
469-8331, General Help, Antennas
WA1YIA, OJ Quarles
955-1555, HF, General Help
WA5REJ, Allen Majeski
353-8652, General Help
WA5SAJ, Larry McCain
469-6709, General Help
AB5TV, Madison Jones
350-4330, General Help, CW
K8CSG, Bill Gary
537-9240, General Help, DX
KC5EZQ, Bill Rister
537-8596, 694-6074
VHF/UHF, General Help
K5WNO, Deral Kent
548-7476, RS12/13, Satellite
KC5RCC, George Carlson
376-8307, Electrical Design, Troubleshooting
KA3BKU, Don Bedell
370-6576, Packet
N5BA, Brian Derx
894-5942, VHF
KC5JZO, Bob Argo
288-7430, Computer Operating, Win'95
WD5DXL, Keith Dutson
351-7683, Computer Programming
W5NKZ, Jerry Smith
444-4491, HF, Advanced OSCAR, Antenna
KB5DTB, Joy Smith
444-4491, HF, Advanced OSCAR, Antenna
N5WIZ, Harry Gage
370-7488, Basic Advice - RFI
W5VHN, Dick Rooney
288-8424, Satellite
K5GQ, Mark Tyler
587-0256, Interference

Contest Connection

It's been a while since I have contributed to this column. I thought I would bring everyone up to date on the recent happenings in the world of contesting.

First I would like to congratulate the NARS crew on a really good finish on this year's Field Day. The results are in the November issue of QST. They have us finishing in 8th place in the 2A division. I felt like we probably would not be in the top ten, as our scores were down considerably from last year's 4th place finish. The results show that 600 logs were entered in 2A. It's nice to think that all the work put in by our members to make FD successful was rewarded by a nice top ten finish. Thanks to all that lent a helping hand in the June heat and rain. We will be using our new call sign W5NC at next year's FD. As far as I know, NARS has been using N5FD for the past ten years. This call belongs to Bruce Cline. We appreciate Bruce lending it to us every year. Hopefully we have not abused it too much. We will miss using November 5 Field Day as our FD call.

I would like to congratulate two other area groups that did well in Field Day. Some of our NARS members operated FD at the ranch of Mike KB5YVT near Bédias Texas. They operated as W5NN and were fortunate to win first place in 2A for the second straight year. I am told that this has never been done before. Great job guys. Another perennial power house in FD is the Texas DX Society. They operated as K5DX and finished a close second to W5NN. As the TV commercial says "Don't Mess With Texas" - especially South Texas - on Field Day weekend. Great job to all.

Did you catch the picture of Madison AB5TV and XYL Millie KC5UTP on page 21 in the November QST?

We have shifted gears a little in the contesting business: really no major efforts since the Texas QSO party, and the North American QSO party. NAQP was operated from my shack and we did fairly well. Final scores have not been announced on that one yet. O J and I had some fun working the California QSO party. We did not make a serious effort;

we worked both CW and Phone. It was mostly to test out my new FT-990. It passed with flying colors and is even better now that I have all the filters and a voice keyer installed. Recently, attention has been turned to QRP CW contesting. On September 21st we operated as a team in the New England QRP Afield contest at the YVT estate in Bédias. This was a field day type 6 hour operation, with wire antennas and QRP rigs powered by batteries. The weather was great and we all had a blast. We did well in the contest too. The teams were: O J W1YIA and me; Bill K5ZTY and his partner David Cain KK5GJ, with cuz W5OYH kibitzing on the side; and the third team was Madison AB5TV and Bob N5RP. O J and I finished 4th overall and 3rd in the hi power (5 watt) class. Bill and David were 6th overall and 4th in the 5 watt class. Madison and Bob enjoyed the woods and nice weather.

On the weekend of October 20 and 21 the Texas Yahoos - K5ZTY, WA1YIA, KF9RX, KB5YVT (W5NN) and me, assaulted the bands with our mighty QRP machines. When the weekend was over some impressive scores were turned in by the Texas Yahoos. I understand from eyewitnesses that Mike was operating two radios at a time: his FT-1000MP on one side and a vintage Heathkit HW-8 on the other. What a span of technology! His 1,000,000+ points proved the mix worked well along with some excellent operating skills. K5ZTY had 841,000 points, O J had 573,000, Herb was in the 80 to 90k range and I brought up the rear with 50k + points. Could it be another high finish or even a winner? We'll see when all scores are in and counted. All that on 5 watts or less - stay tuned.

Next up is the November ARRL Phone Sweepstakes. It starts at 3pm Sat, November 16th, and ends Sunday at 9pm. We got our sweep last year and finished 1st in the South Texas section. We are looking forward to doing better this year. Hopefully, bands will be in good shape. My shack will be open as usual for this one; hope to see a nice crowd. This is a 24 hour contest so we will be operating all night on Sat. Hope to get NW Territory early. Surprising

enough it was Nebraska that we didn't get until the closing hours of the contest last year. It was NWT that eluded us the year before, keeping us from getting the sweep.

For you newcomers, this is a contest to make as many contacts as possible, but what we are really trying to do is to work all of the ARRL Divisions including the Canadian provinces, 78 all told. When you work all 78, it's considered a clean sweep. It's great fun even if you do not play seriously. Give it a try. The Bands we'll be using are, 160, 75/80, 40, 20, 15 and 10 meters. If you are a novice or Tech + you can have a lot of fun on ten meters.

If you have a chance to do some contesting, it adds another dimension to our hobby of Amateur Radio. You don't have to go at it seriously. Just jump in and give the serious guys some Q's. It's the non-serious contesters that give the serious ones all the scores by running up and down the band giving out Q's. The serious ones usually stay on a frequency depending on the guys hunting and pouncing to give them a large score. Without hunting and pouncing, it wouldn't be much of a contest. So get in there and give some contacts. Who knows, you may work a few new countries, states or counties along the way. Then again you may get hooked on it like I did.

73, Bill WA5DWX
bdenton@tenet.edu

Vanity Call Signs

The latest buzz going around is about the new vanity call signs, thanks to O J and his Internet connection to the FCC. NARS now has W5NC (NARS Club), which sounds MUCH better than the former KC5OGI. Notable changes for NARS members: O J Quarles K1OJ (WA1YIA); Madison Jones W5MJ (AB5TV); Jim Kirk KJ5X (KJ5IP), Mike Hance K5NZ (KB5YVT), Waldo Kielkowski K5NC (AB5FT).

Hope I didn't miss anyone. If so, just announce it on the 66 machine and it will spread like wildfire.

Keith WD5DXL

Results of N E ORP-Afield

Howdy! (I love that Texan talk)

Well here it is straight from the horse's mouth (see official report below - ed). The QRP team of WA5DWX and WA1YIA placed fourth overall and third in class (hi pwr 5w). The QRP team of K5ZTY and KK5GJ placed sixth overall and fourth in class. A very good showing I must say. Thanks to Uncle Zed for getting us involved and Mike KB5YVT for the hospitality...

Subj: QRP Afield 1996 - FINAL RESULTS
Date: 96-10-29 19:01:10 EST
To: qrp-l@Lehigh.EDU (Low Power Amateur Radio Discussion)

Score	Name Location	Call	NE #	Pwr
17,360	Robert "Bob" Stolzle Grant Parish, LA	AC5AM		lo/field
14,040	Meriden, CT ARC Godek's Farm, Wallingford, CT	W1NRG	300	hi/field
11352	Peter Beedlow Nr. I-80, 280, and 74, Henry Cty, IL	NN9K		hi/field
9472	Owen "OJ" Quarles Ranch of KB5YVT, Bedis, TX	WA1YIA		hi/field
9200	Pete Meier Indep. Oaks Park, Clarkston, MI	WK8S	292	lo/field
8680	Bill Stietenroth YVT Ranch, Bedis, TX	K5ZTY	440	hi/field
7424	Bob Kellogg Backyard, Greensboro, NC	AE4IC		hi/field
7040	Mike Pulley Christopher Creek. Pavson. AZ	WB4ZKA	241	lo/field
6960	Brian Kassel Backyard, Peoria, AZ	W5VBO		hi/field
6820	Ken Newman Gloucester Cty 4H Grounds, Mullica, NJ	N2CQ	458	hi/field

27 other scores are not listed

O J K1OJ (former WA1YIA)



by Keith Dutson

S
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X

October was a busy month. Now November seems even busier. Many have commented on the improved quality of last month's News. This is a result of employing a new printer who uses lithography instead of Xerography. I will strive to use this better quality from now on when scheduling permits; it takes several days instead of the convenient one hour turnaround for Xerography.

Bill Rister KC5EZQ noted an error of omission in last month's News. The Low Budget Antennas article was written by Wayne Sarosi KB4YLY.

For 1997 I want to organize a reporter team for the News. Mark Tyler K5GQ is the new Program Editor. In this capacity he will gather information about each monthly meeting program and have it submitted for the News. I also need an At-large Editor, whose responsibility is to gather news articles from our members. Finally, I would like to have a Public Service Editor who will gather articles on the many public service events supported by NARS members. How about YOU? You do not need to be able to write articles, only to gather the information (a quality usually abundant in ALL hams). Also, it would be nice if you have e-mail capabilities so you can submit data electronically. Think about this and call me at 351-7683 if you are interested.

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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 novotny@tenet.edu

NARS BREAKFAST every Saturday
8 AM at Victors, located at 4710 W FM
1960. Informal ragchew.

NARS LUNCH BUNCH every
Wednesday - location decided Tuesdays
on the informal morning 2 meter net.

NARS NETS

NARS RAGCHEW - MONDAY 8:00 PM
28.444 MHz
Net Coordinator - Open -

NARS INFO - WEDNESDAY 8:00 PM
146.06 / .66 MHz
Net Coordinator Bill, K8CSG

NARS REPEATERS

2 M - 146.060 / 146.660 MHz
Digipeter - 145.71 MHz
Call (W5NC) Alias (NARS)

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Tomball, TX 77375, (713) 351-7683,
Email 70570.405@compuserve.com

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Special Service Club affiliated with the
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ARRL Club No. 2120

NARS Mailing Address: P.O. Box 690342,
Houston, TX 77269-0342