The Carolina DX Association

The Pileup

HAMFEST EDITION

Carolina DX Association

MARCH-APRIL, 1993 BILL TAYLOR - KD4IL - EDITOR

From The Presidents Desk

February 1993

PRESIDENTIAL PONDERINGS

As the Charlotte Hamfest approaches, I see the CDXA a buzz with preparatory works, and I'm impressed with all the folks pitching in. Our Quarterly meeting will be held again this year at **Valentino's Saturday night March 13th (7:00PM).** We will have hot and cold finger foods and a cash bar. A $10 per person fee will be collected at the door. CDXA will fund the remainder. You also might like to join us **Friday Night at Trio's on Hwy 51 in Pineville (7:00PM).** We will gather there for an informal dutch treat meal to visit with our out-of-town guests and our local folks too.

The CDXA booth will likely be located in the exact same spot as it was last year. As of this writing, Robert gives pretty reliable odds on the location, but there is still some shuffling going on. So anyway, find us and say "Hey" ! Paid up members will be offered a special service this year. CDXA will be providing the opportunity for you to have your packet radio deviation set by our own KOSD. I said radio deviation, not other deviations you all may possess. So here is what you must bring: Radio & power cord, radio manual, cords to your TNC, TNC power cord and manual. CDXA members are providing: DC Power Supply, laptop computer w/RS-232 cord, PL-259 cable, and a Dummy Load. All this together with some super dooper high tech whatzit that Stephen is bringing from his employer. This is a Saturday only deviation adjustment thing. Bring your stuff, pay your dues (if still outstanding), and Stephen will do his thing sometime during Saturday (the 13th). Aren't you glad it isn't Friday, and that out technician's name isn't Freddy.

Plans are also to have InstaTrac, a satellite tracking program working. Ask WA4PLR and AA4SC anything you want about all that space stuff. For those out there who haven't seen the PacketCluster in action, come on down and check it out. All in all, I believe you will really enjoy visiting our booth. If you would like to help man the booth, please let Rick, AA4SC know of your desires. No, not THOSE desires, just your willingness to help out.

Don't forget the Wednesday lunches at Shoney's Midtown Square Mall at noon. It's fun! Also watch for details of our next Technical meeting coming soon. Our last one was a "stroke of genius" GROUNDED in great information by W4BZ.

See ya'll at the Hamfest! **73 Joe WD4R**

Charlotte Hamfest & ComputerFair

Saturday Forums
March 13

11:00	**SINGLE-OP CONTESTING** K1AR, John Dorr - CQ
12:15	**VHF OPEN FORUM** W3EP (QST) & N6CL (CQ)
2:30	**PHASED VERTICAL ARRAYS** K8UR/4, Dennis Mitchell [President - ComTek, Inc.]

SUNDAY FORUMS
MARCH 14

10:00	**WIRE and CABLE** N8UG, Press Jones [The Wireman, Inc.]
11:15	**DESECHEO ISLAND, 1993** Ron Oates, AA4VK/KP5 Murray Adams, WA4DAN/KP5
12:15	**DXCC QUESTIONS & ANSWERS** Gary Dixon, K4MQG * Chuck Hutchinson, K8CH

* Special Notice: Chuck, K8CH, specified no more than 110 QSL's per person for DXCC verification.

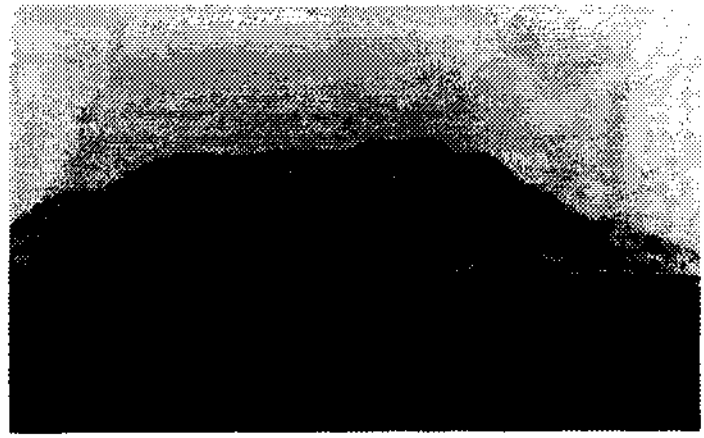
DX Net Report From AGKD4IL
AG4L 9-Feb-1993 0031Z Pile-Up Net Report

My first net report begins as we cover the period from January 6 through February 3, 1993. Many have checked in over this period. Our average attendance increased to 19.6, up from 13.6 the last quarter of 1992.

Those with perfect attendance during this period were: N4DDZ, WA4SSI, N4UH, N4ZC, and AB4ZM. Those missing only once were:KC4DBY, K4HJE, K4UAS, KD4VKC, WB4WVV, and N4YDT.

I hope the net will continue to grow. Come on out and join us each Wednesday evening at 8:30PM local time on the 147.36 Mhz. Boone, NCrepeater. Let's talk DX. All are welcome. Gud DX and CU on the net.

Bruce, AG4L



DESECHEO ISLAND - 1993

Five DEDICATED DX'ers departed KP4 on December 28th and headed into rough waters to make the trip to Desecheo. Landing at KP5 wasn't much better, as one of the dingys—with equipment—was flipped by the Winter surf. If that wasn't enough.. the next morning, some 'unwelcome' visitors to the island had carried off the group's spare generator and gasoline.

A NICE PLACE TO VISIT! However, these are just small problems for fearless DXpeditioners. 4 1/2 days later the group had amassed 23,000 QSO's, including 650 on RTTY and 200 on 160 Meters.

For more on this exciting trip, join Ron — AA4VK/KP5—and Murray — WA4DAN/KP5 —at the Charlotte Hamfest (Sunday @ 11:15 AM).
(WA4VCC)

PacketCluster News

The PacketCluster system is running fairly well now after York Electric was able to find and fix a MAJOR noise problem in the KD4IL neighborhood. Work is progressing on the 9600 baud backbone with several system now up. We will have a complete report on the new backbone in the Next Pileup.
Bill Taylor KD4IL

Hamfest Happenings

NEW DIRECTOR OF MARKETING FOR CQ COMMUNICATIONS, INC. TO GIVE PROGRAM ON SINGLE-OP CONTESTING.

John Dorr, K1AR—who has recently accepted the position of Director of Marketing for CQ Communications, Inc.—will be at the Charlotte Hamfest representing CQ magazine, as well as presenting a program on Saturday morning (11AM) on ideas and helpful hints in preparing for a contest, the actual operating of a contest and the wrap-up activities of a contest. This forum will be skewed to the single operator, both experienced and the newcomer.

K1AR's credentials as a contest aficionado, include 15 Single-Op Championships (USA) in major DX contests, participation in many winning multi-efforts, has logged over 170,000 contest QSO'S since 1979 and is the Contest Editor of CQ Magazine.

John received his BSEE/MSEE degree from the University of Massachusetts, was licensed in 1969 as WA2LQZ and is currently a member of the Honor Roll, with all countries confirmed.

(WA4VCC)

AN INTERESTING CONCEPT: A FORUM CHAIRED BY BOTH QST & CQ

If you're interested in chasing DX on 6 meters or working a ZS6 over a 500,000 mile path (EME) ...the VHF OPEN FORUM (Saturday @ 12: 15 PM) stacks-up to be a good one.

This forum will be led by Emil Pocock, W3EP/1, VHF Editor for QST and Joe Lynch, N6CL/5, VHF Editor for CQ Magazine.

W3EP was licensed in 1961, received his PhD in History from Indiana University and currently is on the faculty at Eastern Connecticut State University. Emil is responsible for numerous published works and presentations on weather and radio propagation. He has his WAS on 6, as well as 95 countries confirmed on that band.

N6CL was first licensed in 1960, received his MBA in Marketing from Oklahoma City University, and is currently an instructor for the FAA in Oak city. Likewise, Joe has written a number of articles for Communications Quarterly and Sky and Telescope magazines. Although a dedicated VHF op, N6CL has just completed his 5BDXCC. (WA4VCC)

COAX, HARDLINE, BALUNS, ANTENNA WIRE, TUNERS,ETC

Ever wondered about the right balun to use on a beverage antenna? Or, whether this new flexible coax is worth the money? Join N8UG, Press Jones (The Wireman) for an informal, tech session about Wire and Cable at the Charlotte Hamfest (Sunday @ 10:00 AM).

N8UG has been heavily involved in the design and manufacturing of wire and cable for the Amateur and Commercial market for the past
10 years. 'The Wireman' brings his experience and savvy to this Q&A session, along with his answers to the 10 most common misconceptions. A copy of the WIREBOOK will be given to each person attending this forum.

Press was first licensed in 1975 and is the President of Certified Communications. Inc

(WA4VCC)

RUSSIAN SATELLITE RS12 -- Henry Elwell, N4UH

An easy introduction into satellite operation may be done with normal HF equipment: 15m transmitting and 10m receiving equipment. RS-12/13, as it is known, is a Russian satellite launched 4 February 1991 into a low Earth orbit: about 120 miles above the Earth. It uses a 15m uplink and a 10m downlink. Signals from it are usually strong, and most users call "CQ RS12" when accessing the satellite to avoid confusion with other terrestrial 15 meter activity. Many more years of service are expected from RS-12.

The satellite has a north to south orbit which progresses westwardly during its 90 minute flight around the Earth. Thus its first orbit might be at a bearing of 90 degrees from Salisbury, and its next one would be about 270 degrees. Because of the curvature of the Earth, and its low altitude, the time it is in "sight", is approximately 10 minutes. Knowledge of when it can be heard at various times of the day may be obtained from a computer program: QUIKTRAK is one of a number of different programs available.

The way it works is to listen on 29,407 kHz at the appointed time to hear the beacon on the frequency. The beacon is a small transmitter, which is continually transmitting code group interspersed with its call, "de RS12". When it is heard, tune between 29,410 to 29,450 kHz, and you will hear cw or ssb signals either calling CQ or in a contact with another station. No signals will have been heard prior to this time as the frequency range is so high in the 10m band, it is not used except for satellite work.

To be a part of the activity, your transmitter must be putting out a signal between 21,210 and 21,250 kHz. Your signal goes to the satellite receiver on those frequencies, and transmits on the 10m frequencies: similar to the operation of a 2m repeater, for example. The nice thing about it is if you are transmitting on 21,225 kHz, your 10m signal will fall on the 225 kHz portion of the 29 mHz frequency: ie. 21,225 to 29,225 kHz, or 21,247 to 29,247 kHz.

Operation can be done by two ways. If you have a separate transmitter for 15m, and a receiver for 10m, you will need separate antennas, of course; dipoles running north/south would be best to give lobes to the east and west. If you have a newer transceiver with split band capability, only one antenna is required. At N4UH, the Kenwood TS-850 permits setting a transmitting frequency on 15m, and a receiving frequency on 10m; the proper band is automatically selected when going from transmit to receive. A triband Yagi, TH7DX, permits transmission and reception for either band.

When the beacon is heard, a "CQ RS12 de N4UH" is sent out on the 15m band at say, 21,230 kHz. The receiver is then

tuned to 29,430 kHz to listen for a reply. If one is heard, a contact is made, but kept short due to the 10 minute access time to the satellite. Or, if I hear someone calling CQ on 10m, say on 29,218 kHz, I tune the transmitter to 21,218 kHz, and give him a shout. So far I have had contacts with the States of CA, MN, NH, CT, AL, NC, MD, NJ, IN, MO, plus a couple of Canadians, and a Cuban.

When the maximum usable frequency, MUF, is higher than the 15m band, and European signals are coming in when the satellite is available, their signals on the second or third bounce between the ionosphere and Earth will get into the satellite receiver and be transmitted into the 29 mHz band in the same fashion a direct signal will do so. When the MUF is lower than 15m, that cannot happen.

RS12 is a unique satellite because it is "flying" above the ionosphere. It is interesting to speculate on its signal strength when the ionosphere is between it and Earth due to a high MUF, and its strength at night or whenever the ionosphere has not formed due to an MUF lower than 21 mHz. I have worked stations under both conditions, but it seems as if the night signals are stronger. Another interesting phenomena is noted by my friend NM7M, who is studying its propagation features. He has found, and I have heard, the satellite signal "coming back to life" twenty minutes after it has passed the Salisbury area. Bob says that we are hearing a one-hop return from the satellite as it passes over the Equator. Its signal at that point is too week to use for communications because of the low output of its transmitter.

Included is the schedule for RS12 during the first two weeks of February with the following comments. AOS means acquisition of signal, LOS is loss of signal, and the time is given in UTC. DX/EL is the elevation of the satellite from our location. If it is less than 25 degrees, it is probably too far away to give good signal strengths. The AZ is the bearing or azimuth of it location. When around 270 degrees, it is in the west of us, and around 90, it is to the east of us, for those using directional antennas. When it is to the east, it is out over the Atlantic ocean, and stations along the east coast will probably be the only ones heard. To work the western States, the satellite must be in the westerly direction.

Give RS12 a try. See if you can hear the beacon on 29,407 kHz. Then listen to stations in contact between 29,410 and 29,450 kHz. Because the stations being heard are being retransmitted by RS12, you will be able to hear both sides of the QSO without regard to the skip-distance. As long as you can hear RS12, you will hear everything it is hearing and retransmitting.

The next step is to arrange your station so you can transmit on 15m and join in the fun.

SCHEDULE FOR SATELLITE RS-12/13 FOR N4UH FROM EPOCH 13MAR93 041537 01:32

DATE	AOS	MAX	LOS	EPOCH	DX/EL	AZ	ORBIT
13MAR93	054522	055056	060230	13MAR93	41 EL	273	10575
13MAR93	073534	073747	073959	13MAR93	1 EL	288	10536
13MAR93	154635	155156	155716	13MAR93	7 EL	77	10541
13MAR93	172734	173620	174506	13MAR93	71 EL	89	10542
13MAR93	191520	192236	192953	13MAR93	15 EL	292	10543
14MAR93	024446	024949	025453	14MAR93	5 EL	62	10547
14MAR93	042757	043649	044540	14MAR93	53 EL	77	10548
14MAR93	061419	062159	062939	14MAR93	20 EL	276	10549
14MAR93	161221	161938	162654	14MAR93	17 EL	83	10555
14MAR93	175555	180441	181327	14MAR93	60 EL	285	10556
14MAR93	194606	195126	195647	14MAR93	6 EL	297	10557
15MAR93	031145	031854	032602	15MAR93	13 EL	68	10561
15MAR93	045611	050507	051403	15MAR93	80 EL	279	10562
15MAR93	064339	064940	065542	15MAR93	9 EL	282	10567
15MAR93	163914	164733	165552	15MAR93	35 EL	87	10569
15MAR93	182452	183311	184130	15MAR93	30 EL	287	10570
16MAR93	033924	034740	035555	16MAR93	27 EL	74	10575
16MAR93	052440	053314	054148	16MAR93	41 EL	273	10576
16MAR93	071452	071705	071918	16MAR93	1 EL	288	10577
16MAR93	152552	153117	153642	16MAR93	7 EL	77	10582
16MAR93	170651	171537	172423	16MAR93	70 EL	90	10583
16MAR93	185436	190153	190910	16MAR93	15 EL	292	10584

0=RETURN, 1=CONTINUE, 2=SCROLL, 7=STEP1

SCHEDULE FOR SATELLITE RS-12/13 FOR N4UH FROM EPOCH 16MAR93 190910 01:33

DATE	AOS	MAX	LOS	EPOCH	DX/EL	AZ	ORBIT
17MAR93	022405	022908	023411	17MAR93	5 EL	62	10588
17MAR93	040715	041607	042458	17MAR93	53 EL	77	10589
17MAR93	055337	060117	060857	17MAR93	20 EL	276	10590
17MAR93	155142	155859	160616	17MAR93	17 EL	82	10596
17MAR93	173508	174354	175240	17MAR93	60 EL	281	10597
17MAR93	192523	193043	193604	17MAR93	6 EL	297	10598
18MAR93	025104	025812	030521	18MAR93	13 EL	68	10602
18MAR93	043530	044426	045322	18MAR93	80 EL	280	10603
18MAR93	062257	062859	063500	18MAR93	9 EL	282	10604
18MAR93	161837	162656	163516	18MAR93	35 EL	85	10610
18MAR93	180403	181222	182041	18MAR93	30 EL	285	10611
19MAR93	031842	032658	033514	19MAR93	27 EL	74	10616
19MAR93	050359	051232	052106	19MAR93	41 EL	273	10617
19MAR93	065410	065623	065836	19MAR93	1 EL	288	10618
19MAR93	150509	151034	151559	19MAR93	7 EL	77	10623
19MAR93	164601	165458	170349	19MAR93	70 EL	86	10624
19MAR93	183[illegible]	184109	184826	19MAR93	15 EL	291	10625
20MAR93	020[illegible]	020827	021330	20MAR93	5 EL	62	10629
20MAR93	034[illegible]	035525	040417	20MAR93	53 EL	77	10630
20MAR93	053[illegible]	054031	054807	20MAR93	20 EL	277	10631
20MAR93	153059	153816	154533	20MAR93	17 EL	82	10637
20MAR93	171424	172315	173206	20MAR93	60 EL	284	10638

0=RETURN, 1=CONTINUE, 2=SCROLL, 7=STEP1

SCHEDULE FOR SATELLITE RS-12/13 FOR N4UH FROM EPOCH 20MAR93 172206 01:34

DATE	AOS	MAX	LOS	EPOCH	DX/EL	AZ	ORBIT
20MAR93	190439	191008	191538	20MAR93	6 EL	298	10679
21MAR93	023022	023731	024439	21MAR93	13 EL	68	10647
21MAR93	041448	042344	043240	21MAR93	30 EL	280	10644
21MAR93	060216	060812	061409	21MAR93	9 EL	282	10645
21MAR93	155754	160613	161433	21MAR93	35 EL	95	10651
21MAR93	174319	175143	180007	21MAR93	30 EL	286	10652
22MAR93	025801	030612	031423	22MAR93	27 EL	73	10657
22MAR93	044317	045151	050024	22MAR93	41 EL	273	10658
22MAR93	063329	063541	063754	22MAR93	1 EL	288	10659
22MAR93	144426	144956	145525	22MAR93	7 EL	77	10664
22MAR93	162524	163415	164306	22MAR93	70 EL	97	10665
22MAR93	181309	182026	182743	22MAR93	15 EL	291	10666
23MAR93	014242	014736	015230	23MAR93	5 EL	61	10670
23MAR93	032552	033444	034335	23MAR93	52 EL	77	10671
23MAR93	051214	051950	052725	23MAR93	20 EL	277	10672
23MAR93	151016	151733	152450	23MAR93	17 EL	82	10678
23MAR93	165341	170232	171123	23MAR93	60 EL	283	10679
23MAR93	184355	184925	185454	23MAR93	6 EL	297	10680
24MAR93	020941	021645	022349	24MAR93	13 EL	68	10684
24MAR93	035407	040302	041158	24MAR93	80 EL	280	10685
24MAR93	054134	054731	055328	24MAR93	9 EL	282	10686
24MAR93	153711	154530.	155350	24MAR93	35 EL	86	10692

0=RETURN, 1=CONTINUE, 2=SCROLL, 7=STEP1

SCHEDULE FOR SATELLITE RS-12/13 FOR N4UH FROM EPOCH 24MAR93 155350

DATE	AOS	MAX	LOS	EPOCH	DX/EL	AZ	ORBIT
24MAR93	172236	173100	173924	24MAR93	31 EL	286	10697
25MAR93	023719	024530	025342	25MAR93	27 EL	73	10698
25MAR93	042236	043109	043943	25MAR93	41 EL	273	10699
25MAR93	061247	061500	061713	25MAR93	1 EL	288	10700
25MAR93	142343	142913	143442	25MAR93	7 EL	77	10705
25MAR93	160441	161332	162223	25MAR93	70 EL	98	10706
25MAR93	175226	175943	180700	25MAR93	15 EL	291	10707
26MAR93	012201	012655	013149	26MAR93	5 EL	61	10711
26MAR93	030511	031402	032253	26MAR93	52 EL	77	10712
26MAR93	045133	045908	050643	26MAR93	20 EL	277	10713
26MAR93	144933	145655	150416	26MAR93	17 EL	82	10719
26MAR93	163258	164149	165040	26MAR93	60 EL	282	10720
26MAR93	182311	182841	183411	26MAR93	6 EL	297	10721
27MAR93	014[redacted]	015603	020307	27MAR93	13 EL	68	10725
27MAR93	033[redacted]	034221	035116	27MAR93	80 EL	280	10726
27MAR93	052[redacted]	052649	053246	27MAR93	9 EL	282	10727
27MAR93	151628	152447	153307	27MAR93	35 EL	86	10733
27MAR93	170153	171017	171841	27MAR93	31 EL	285	10734
28MAR93	021638	022449	023300	28MAR93	27 EL	73	10739
28MAR93	040154	041027	041901	28MAR93	41 EL	273	10740
28MAR93	055206	055419	055631	28MAR93	1 EL	288	10741
28MAR93	140300	140830	141400	28MAR93	7 EL	77	10746

0=RETURN, 1=CONTINUE, 2=SCROLL, 7=STEP1

TO ROTATE W/O A ROTATOR

K8UR/4—Dennis Mitchell—will give a program at the Charlotte Hamfest (Saturday @ 2:30 PM) on how to work the world competitively without the help of a beam, a rotator or a tower.

Using computerized models, Dennis has designed phased 2 and/or 4 element vertical arrays for 10 thru 80 meters. The 'heart of these systems' is the Switchbox, which is manufactured by ComTek, Inc —owned and operated by K8UR/4 and located in Oriental, NC.

Dennis received a BS degree in physics from the University of Michigan, has been employed in the area(s) of microwave components and semiconductors, was CEO of Microwave Research & Mfg and now resides in Eastern North Carolina, where he competently mixes his hobby with his occupation. Any questions? Just listen to that BIG SIGNAL on 75 during the evenings and mornings.

(WA4VCC)

The INTERNATIONAL DX ASSOCIATION is devoted to the following:

*** To promote goodwill among amateur radio operators of the world.**

*** To support and abide by amateur radio rules as set forth by the FCC and other governing bodies.**

*** Promote good amateur radio operating practices.**

*** Promote and support DX operations in countries having limited or no amateur radio activity. To train local operators if possible.**

*** Provide equipment, funds and training material to DX operations.**

***Provide QSLs and act as QSL manager if needed.**

***Provide DX news and QSL routes via our information net conducted on 14.236 MHz at 2330Z and our quarterly newsletter.**

**** You have probably worked a "new one" because of INDEXA's support. A partial list of DX we have helped so far is:**

A5 CEØ D2 D6 FT5W FT5X FT5Z KH1 S9 S9 ST9 TT VK9 VU7 1S 3D2 3W 5A 5U also...Peter 1, Heard Is., Bouvet, S. Georgia, N. Cook, Malagasy & Mayotte.

Q S L ROUTE INFORMATION::

Many members of CDXA,SEDXC and the cluster often request the QSL route for worked stations on packet. This is a good place to obtain the needed information.

However, if you still need help,try the **INDEXA** information net. You have a better chance of getting the info you need because this is the only purpose of the net. Information only without any DX checking in, no LIST operation and no BS. You may check in to obtain the info you need and also to give the net new good info about DX you have, that would help others.

If you listen long enough, you may be able to provide info that some fellow amateur is looking for which is why we are there.

INDEXA Information net, 14236, starts 2330Z daily for about 2 hours. Staff members are VP2MO, W6CNA, NS6B, N5QGO, KF7SH and KA3HXO.

For further info about membership,contact Bill W4UNP, Gary K4MQG or Murphy W4WMQ.

Tnx & good DX. Murph.

Don't forget CDXA "get-together" during the Charlotte Hamfest. The first is at Trio's on highway 51 at 7PM on Friday night the 12th of March. The second is at Valentino's on Saturday night the 13 of March at 7PM. A $10.00 fee will be collected at the door on Saturday night to help defray the cost to CDXA.

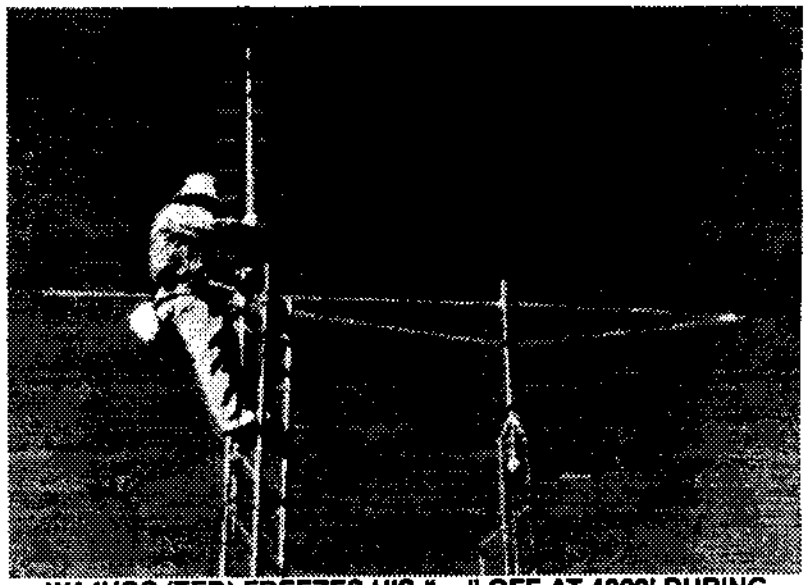
Notice: Check your mailing Label. If it does not say "93", your 93 dues are due!

The MARCH HAMFEST issue of the PILEUP will be the last one that members who have not paid 1993 dues will receive. Don't miss a single issue!!! The current rate for CDXA dues are $30 for packet using members and $15 otherwise. Dues payments should be sent to:

W4UNP, Bill Jennings

CDXA OFFICERS

President	WD4R	Joe Simpkins
Vice-President	AA4SC	Ric Porter
Secretary-Treasurer	W4UNP	Bill Jennings
Newsletter Editor	KD4IL	Bill Taylor
Net Manager	AG4L	Bruce Gragg

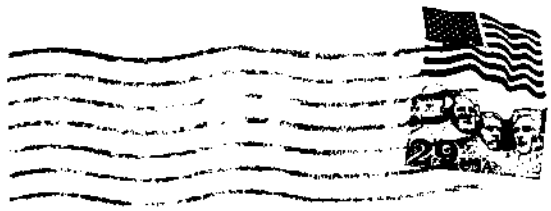


WA4VCC (TED) FREEZES HIS "...." OFF AT 4200' DURING WINTER VHF CONTEST

K4LVV'S (CONTEST CALL) UNOFFICIAL RESULTS FOR THE JANUARY VHF CONTEST WERE 677 CONTEST POINTS AND 152 MULTIPLIERS FOR A SCORE OF 102,104 POINTS. THE GROUP BELIEVES THIS IS THE FIRST TIME THE IOOK MARK HAS BEEN BROKEN BY A W4 STATION DURING THE WINTER CONTEST. THE SCORE Was ENTERED UNDER THE LIMITED MULTI - OP CATEGORY. OPERATORS WERE AA4SC (CDXA), AA4ZZ, K4LVV, WA4VCC (CDXA) , WB4TLX AND WB4WTC (CDXA).

THE PILEUP
PO Box 232
Fort Mill, SC
29716

First Class



WA4UNZ 92
Ken Boyd
202 Horseshoe Circle
Fort Mill, SC 29715