## the magazine of the National Radio Club

VOLUME 40
DECEMBER 30. 1972
NUMBER
"I have been a member continuously since joining in 1951 and want to extend my thanks and congratulations to the Boston clan for a job mighty well done." (Duane McMurray, Iowa)

IN THIS ISSUE...

Limitations in the Use of the A Index for MW DX'ing, I - Gordon Nelson

NEW MEMBERS THIS WEEK。.
*C. F. Adamson, 103 W. Main St., Bldg. 9, Apt. 3, LeRoy, NY 14482
*Fred Spurrell, 647 SW 132nd, Seattle, Wash. 98146
*Robert Dykes, 9230 Kenilworth, Houston, Tx. , 77024
V
*Wm. Krakow, Physics Department, U. N. C., Chapel Hill, N. C. 27514
Welcome to the NRC, people; we hope to be reading of your DX activities often here in DX NEWS.

SCHEDULE,FOR DX NEWS...

This issue is going to the printer at least a day late; we are holding for the arrival of Page Taylor's IDXD section which at this moment has been in the mail for. 4 days Special Delivery from New Jersey to Boston. . . We take our regular one week skip next week and then resume weekly publication until late spring.

1973 DOMESTIC LOG PROGRESS REPORT。..

The final updated copy for the new Domestic Log has been received at $H Q$ and is now being Xeroxed to produce the copies to be sent to the proofreaders. Additional copies are being sent to the members who have volunteered to help prepare the alphabetical/frequency tabulation. Format, size, and price will be roughly the same as for the previous edition - the only major change is the alphabetical call/freq tabulation. More info next time...

ANOTHER SMALLISSUE...
We may be the largest MW DX club but you wouldn't know it from the size of some of our recent issues... The only things we're holding here at $H Q$ are some technical articles dealing with patterns; they're being retyped and redrawn to render them suitable for reproduction... The Editors and Publication Committee are waiting to hear from you - why be quict and shy.. ?

GREDITS $+=$
Publication crew for the last couple of issues: Chuck and Jackie Rossier, Grace-Anne Stipe, Ray Moore, Hal Robie, Diane Nelson, Big George and GPN...

## HQ LOSES ITS OWN AMAZING GRACE...

One of the BPC's most faithful workers, Grace-Anne Stipe, will be leaving our ranks very shortly... By the time you read this she'll be Mrs. Victor Benoudida and on her way to live in Paris where she'll keep us up to date on the European scene. Best of luck to Grace-Anne and Victor and we'll really miss her around here!

## TROUBIE RIGHT HERE IN RIVER CITY...

Compared with the goings -on in some of the other DX clubs things are usually pretty quiet here in the NRC - we just keep grinding out DX NEWS, special projects such as the Pattern Book and the Logs, and try to find time to continue our own DX'ing and research efforts to improve the state of MW DX art... A couple of unpleasant items have come to the attention of the $H Q$ crew recently, however, and since they have implications beyond just the NRC we feel they should be aired. The first is a letter from Richard E. Wood:
"It has come to my attention that my NRC Musing of Aug. 29, 1972 (Vol. 39, no. 31 of DX News ) was rudely plagiarized, without my permission or my being informed or sent a copy of the issue in question, by the Arctic Radio Club's MW Eko of Oct. 2, 1972. Since this plagiarism of my material was done without my knowledge or my being informed, I expect an explanation and an apology. Likewise, I expect NRC to prevent future incidents of this kind. If this is not done and my Musings are liable aga again to be subjected to such misuse. I will no longer be able to support NRC and will have to reconsider my status as a member. It should, incidentally, be remembered that ARC is not an open club dedicated to furthering DX-ing, but a closed self-styled elite group whose elitism seems to be furthered by plagiarizing other people's material in a discourteous manner. May I look forward to your early and specific reply?"

We feel that several points warrent comment. The Musing in question concerned Wood's recent trip to Alaska and reception conditions during that time. "Plagiarism" is a very serious and emotion-laden charge, yet all of the English language dictionary definitions we can find stress that plagiarism is the use of material created by someone else yet claimed as one's own work... Yet the Musing in question was fully credited to "Dr Richard E Wood"; perhaps then we'd like to suggest that it's nothing as serious as plagiarism but the definitely lesser sin of reprinting without the permission of the author..? The interrelationship between the various $D X$ club publications is quite casual. The NRC maintains exchange relations with most of the major DX clubs interested in MW DX throughout the world; vital information and relevant articleshave been freely exchanged and reprinted for many years, always with due credit given to the original sources. Over the years our own IDXD section has profited greatly by the material originated by clubs such as MW Circle (England), the two New Zealand clubs, Arctic, the Benelux club, etc. By the same token these overseas clubs - all volunteer and nonprofit efforts such as the NRC - have drawn heavily on DX NEWS. Many of the new items appearing in our IDXD section are immediately picked up by the overseas clubs; likewise many of the original technical
articles appearing in DX NEWS - especially those by GPN - have been reproduced in various overseas bulletins. We feel that such an exchange of information is vital to the continued growth and progress of the MW DX hobby.

Wood demands that we apologize and "prevent future incidents of this kind". Fine, Richard, but how? The item in question was reproduced from DX NEWS without our knowledge or consent; how are we to go about preventing other individuals or organizations from reproducing material originated in DX NEWS? And why should the "plagiarizee" have to apologize for the sins of the plagiarizer?

We have sent a letter to Arctic requesting that they refrain from reprinting material originated by you, Richard. Otherwise we will continue to leave our material freely available to the clubs with which we maintain an exchange relationship; once we begin to limit the availability of material originating here in DX NEWS we can only expect the like in response - to the detriment of all we believe...

We cannot control the eventual destination of material appearing here in DX NEWS once DX NEWS hits the Post Office it's out of our hands both literally and figuratively. All we can suggest is that members who contribute material to DX NEWS and wish to deny it to specific other clubs ADDRESS THEIR GRIEVANCES TO THE OTHER CLUBS AND NOT TO THE NRC.

The delicate theme of interclub relations has also been raised in a second communica tion recently received at $H Q$. It appears that a number of members sharing joint membership with another DX club recently got together and decided that merger between the NRC and the other club is "necessary in the not-too-distant future" and has begun "investigating the XXXX constitution for loopholes to consummate a merger quickly if need be." This group has even decided on the structure of the new merged club and the bulletin format. Who'll get the responsibility and workload of publication is not made clear except that it won't be anyone in the group that's trying to engineer the merger. Should anyone have the timerity to question these fiats, a simple and efficient solution will be imposed: "Political considerations and individual soap-boxing should be cast aside in the higher interest".

During the more than 4 years that the Boston Publishing Committee has been shoulder ing the responsibility and workload for the production of DX NEWS and the operation of the NRC it has been our policy to refrain from any and all interference with the operations of other DX clubs. DX clubs are complex and fragile structures made possible by the volunteers who give freely of their time and resources to keep the wheels turning behind the scenes every week... The Publishing Committee does not believe that the NRC has any right to tell another club how it should be run and does not attempt to do so.

* The activities of this group are totally without the approval or sanction of the NRC Publishing Committee. We deplore this premeditated and calculated attempt to inter fere with the operations of another DX club and wish to make our position perfectly clear to all parties concerned. Merger is a bit like Utopia - easy to talk about but surprisingly difficult to actually attain. We seriously attempted a merger four years ago but it didn't work out; we still believe that a merger might well be in the best interests of the hobby and are always willing to discuss the nuts-and-bolts of such an arrangement with duly appointed representatives of other clubs.

F8ct113



Mon. Jan. 8 KDDA $1560 \quad 500$ D-1 Dumas, Arkansas IRCA 3:00-4:00
WGNG-550. Dasne Burnham, WGNG, 96 John St., Cumberlanã, R.I. 02864. KDDA-1560. Alan W. Eastham, G.M., KDDA, Box 215, Dumas, irk. 71639. 312-834-7015 WSBS 800 . Thomas Jaworski, HxD, WSBS, Great Barrineton, Vess. 01230. We Jon't have the time, but we BELIEVE it will be $2: 00$ to $3: 00$, E.S.T.!

Check Mon. Jan. 15 and/or Jan. 22 for possible silent morning by whrL, and if so, then look for these stations to TEST:


We are trying to finc out from WhRL about that promised Monday silent date, so if we get the dope and don't have time to get it into DX NEWS, do check those three Mondays, for one of them MIGHI just be the one!

WPCF-1430. First 15 minutes will be their frequency check, then will follow some music and frequent IDs, and plugs for the Newark Newe Padio Club. Reports go to Mr. Reed Kinney, Assistant Enginecr, WPCF Madio, B y y County Broadcastinc Co., Inc., Box 1430, Panama City, Florida, 32401.

CAROLITA COUGARS BASKEIBALL NETWORK


Very sincere Christmas, Chanukah, and New Yenr's wishes to all menbers of the NRC, And, let me once s, in remind you that Musins has been getting rather skimpy. The so-called "record" of 20 pagee a fev iscuce back was nut really a record, as it vala a combination of two weeks' cony from here in Brooklyn. This section is in need, aer! List your $D X$ day by hay, and frequency, anj be kind onough to double-
space!

BROOKLIN N 11226

CIRIS LJCAS - 407 Elmwood Avenue - Ithaca, New York - 14850
DX CX have been quite good, at least for domestic DXing, although I miss the Aurora of a few weeks ago. Loggings for past seven days: 11/28- wITC 1370 N.C. © $5: 14 \mathrm{pm}$. 11/29-WILA-1580 Va. © 5pm, WSPF-1000 N.C. © 5:16; WJAX-930 Fla. © $5: 30 \mathrm{pm}$, WTHB-1550 Ga. e $5: 30 \mathrm{~s} / \mathrm{off}$, WLOR-730 Ca. © 5:45pm, WNOE-1060 La. o/ KYW e 5:54. 11/30-WOIO-1060 0. © 4:40pm, WFLT-1070 Tenn, e 5:02, WPTF-680 o/WINR © midnight. $12 / 1-$ WQIZ-810 S.C. © $5: 13 \mathrm{pm} s / o f f .12 / 2-$ WRNL-910 Va. © 4pm, WSIC790 Va . © 4:08, WKYB-1000 S.C. @ 4:56, surprise in WGGH-1150 I11. e 5:35Pm, WSAO1550 © 5:45, WTVN-610 0. very good © O (maybe still on day pattern by mistake, but a welcome log here anyway). 12/3- WOKO-1460 N.Y. © $1: 31 \mathrm{pm}$ o/u WAXC on daytime skywaves while local WTKO-1470 vas running taped shows with low modulation and no highs; hence, no splatter. WOKO calls it self OK Country, and apparently IDe with call letters only on hour and half hour. I had to wiit about 45 minutes for that ID, as I missed the one on the top of the hour due to WTKO splatter (running live NX or something). WGPA-1100 Pa. © 4:25pm, WJSM-1110 Pa. e $4: 28$ s/off, WTBQ1110 N.Y. s/off a couple minutes late @4:32 doing quite well agrinst WBI for 250w. WRAR-1000 Va. © $4: 45 \mathrm{~s} / \mathrm{off}$, WIO0-1000 $4: 45 \mathrm{~s} /$ off also, for Pa. $\$ 34$, WRNC-890 N.C. © $4: 59 \mathrm{pm}$, WFMO-860 N.C. © $5: 17 \mathrm{~s} /$ off. $12 / 4-$ WGNG- 550 R .I. in nicely on longwire © 1: ĺam, SSS, WOWW-1380 Conn. © $3: 59 \mathrm{pm}$, WDMV-540 Md. @ 4:25, WIIX-540 N.Y. @ 4:28pm for N.Y. \#99, WBBO-780 N.C. © 5:11, KFAB-1110 Neb. © 5:49 very nicely w/100p. 12/5- I sm listening to RX w/longwire as I type this \& nust logged CFRS-1550 ont. (e) $1: 35 \mathrm{pm}$ mostly u/WQXR, but they faded up with promo for turley giveaway for clear ID. Much to my chagrin, WADD-1560 is yet unlogged here, D-1 © only 90 miles. (I think they're D-3, Curis -ERC) (Protecting WQXR I'd guess) Total loggings now at 560. There are so many to hear it's hard to choose a frequency to listen to while DXing. The $11 / 25 \mathrm{DX}$ NEWS arrived here five days late, \& apparently there was no 11/18 issue. What happened? For new DXers interested in a good low-cost rig, let me say I've had the $\mathrm{I}_{\mathrm{a}}$ fayette $\mathrm{HE}-30$ for $9 \frac{2}{2}$ years nov \& find it very adequate for domestic DX . It has been replaced by an all-transistor model, which I believe is equally good, and sells for about $\$ 100$. 73 .
(No name, single-spaced) - 276́́ Iyle Street - Sarasota, Florida (no Zip)
CX here are better. I DX nostly during the daylight
hours. I have added to my DX den a new loop. I built a frame out of lin doweling \& $\frac{1}{2}$-inch plywood. It strads over o' tall and is 48" from each corner, diagonally. (It's a diamond loop). (How man carats?? -ERC) I also devised a clever base by cutting a sheet of plywood to $24^{\prime \prime} \times 24^{\prime \prime}$, put a small caster on each corner, and find a section of pipe about $18^{\prime \prime}$ long \& a matching flange. The flange is bolted to the loase and the pipe is screwed in, when the main shaft is dropped dowr the pipe, 115 uuf disc 115 unf disc capacitor. ilso, since it is an imductive couplec loop I have two turns for coupling to the RX. I don't have an anp on the loop, but one will be adoes the job well. The a two conductor shielded brondcast microphone cabley and does the job well. The loop also has popsicle sticks wound in the tank a la NRC Loop. This is the first loop I've ever had, and after eight years, I can say

- Realistic Patrolman ZB hi lo band monitor Loops are Boss:" I have also bought a iff's office) all the time. Veries for Novemit is tuned to our local S.0. (sher-KCxs-740 980 Fla. 111
- for Kathi (my wire) and myself. 73s. for Kathi (my wile) and myself. 73 s .

WE BELIEVE THERE WILL RE 1 WELK's HIITUS AFTER THIS ISSUE FOR CHKISTMAS. IT IS INCLUDE YOUP DX DAY BY DAY, AND DOUBLE SPACE, AND STICK TO DX SUBE RGCULARLY in '73?

ISAMC BAVA - 10113 Pillot street - Houston, Texas - 77029
For the most part, CX have been good. However, last MM 12/4 an appronchirs cold front pumpre the atmosphere full of static. In spite of it, 3100 ar KCFY-1530 Choyenne, Wir. was taken © 2:4ber. Two entries in the logbonk from the Houston adress lately are dLIL-730 Icnoir City Term. © 'fam just bercre the


 teriorsed a the musical ofrerings was a vocal nopropriatoly entitled reliz Nawidad. We enjoyed a week wation at the lake, durine which I get in one fruitful MM session
 usinj the $\mathrm{M}-1$ to null Denver; 2 nerm Monsermte, Colombia-650 3 3:27, inderrupted by Wiming krok-1000 Oklahom City e $5: 15 a m \&$ WNOX- 990 Knoxville © 5:2lar. Dther DXing highlights: 11/28- A Mexican on 760 IDing as XBDGO, R. Capjtal, e 7: 56pm w/WJR underneath, a new state in WH:BC-660 N.Y. © 11:08pm, \& a good sicnal from
 an unusual Through the making it so: KLOV-1570 Loveland, Col. on 11/11 e 9:28am L\&C. I have monitored 770 , WBM-780 770, WBEN-780, WGN-720, WIN-700, WMAQ-670, WNAD-640, XERX- 10 can all be heard here days. The $\mathrm{SM}-1$ generfily furrishes a stronger sigral but also pumpe in more noise than the Beverage. Much metal in the radio shack must be considered, however, See you again through the Musings section soon.

JCHN A. CALIARMAN - 1122 Maple Street - Mount V.rnon, Illinois - 62864
A little DXIng is being done, as I start a new log. A recently purchased reconditioned HQ - 100 and a 160 (longwire into a degenerate loop tune for instructions a few verrs ago from Fish (who apparently believes there are enough wouen in the nation) makes up my new den. I ve cried twice to build an Alta loop antena, and though the directions are simple, I can't seem to make it work. What 's Joe Worcester's address? (DX Stamp Service is now run by George N. Robertson, w2ad, Kus-11 o/wLest, which used to be dominant daytimes, on 9/24. I also logged my daytime dominant on 810, WMS. On 10/3, I heard WKAR-870 from 6:47 to 6:59 s/off, o/ WWL. Night of 10/4 I round WETE excellent atop 620 8:19-8:34; KFAL-900 logged 10/5 :10-5:20pm; kHOZ-noted there signing off e 7:29, followed by WDDT © 7:30. On 11/9, KXJK-950 dominated channel to $5: 57$ s/off, call definitely KXJK, not KNKJ as had been previously reported. A Texan on g 40 to 6:14 s/off $\mathrm{w} / 1,000 \mathrm{w}$ must have been Khl to whos-800 heard w/s/off in prozress 11/11 © 5:44; WSHO then dominated to $5: 58 \mathrm{~s} / \mathrm{off}$, and any chance of further logs on this chamel pone then, w/PJB's s/on. 11/13-WSLI domimated 930 e $5: 55$ with indio 93 million-Follar mx. MMOB-840 heard to s/off SpM u/WIAS, but poor. on $12 / 3$, routine three for collection taken $5: 30$ 促 WFTW-1390 \& WMIX-940 December s/offs are $5: 45,15$ off $5: 45$. Incidentally, WFTM-1390 \& WMLX - 40 December s/offs are $5: 45$, 15 minutes beyond the Wesolowski , mill license matches the mape in 22 of 24 dases - good job - an thanks to Don Erickson, I've replaced my lost maps. I've decided (for various reasons) to join the non-verifiers, and get my hobby kicks from logsing, taping, \&
majbe an occsiomi club report. Best. (Welcome back, John! Nu e often, eh? -ERC)
DAVID KABLR - 29247 baldensa - Wickliffe, Ch: - - 44092
The last few nights I've noticed how choppy 740 is, unlike usual CBI740 in crystal-clear, so on 12,4 0:25pm there was a severe squeal on that freque Cy, so I tuned it in, \& about 738 , there is a $C$ ban! I wan't sure at first, but are off frequency, or is it the came ghostly ID that ond gives! Do they know they med up. I am cnl, or is it tryine to jam 740? The clear channels are getting jamfew seconds it sounced like a ravevard!


PJE's nower, their sloman "The ing inctu woulcn't be questioned! it leact 640 is


ortal ponor: Please note $\mathbb{V}$ new mon business this time, hi. There is not much portal wer. in the $11 / 10-$ WHVLDX $t$ ) report in the way of new catches, but ox have 12 . $1 \mathrm{M} 11 / 20-\mathrm{cood} \mathrm{E} / \mathrm{W}$ recep100 , on wherm well under such conaitions (actually my ealed set is a sears model inand, level with WBBr-950, but was unn here. KOA-850 had
 remendous $2: 15 \mathrm{~m}$ ? It wo vak and did not stay in for leng. 11/26- I did not try Con first semi-decent DX catches,
 beck in 53. 10 m , 73 ,

JFFF FALCONER - Box 63 - Clinton, ontarin
Hi! DX lately has been wonderful and isstill picking up. Here ${ }^{\text {s }}$



 Cx a flemon ur 1e, At $2: 14 \mathrm{pm}$, wriv- $1500 \mathrm{w} /$ spot for a supermarket in Musvegon alons w/wnd. at $2: 35 \mathrm{pm}$ . 30mTOFF 1550 . 3pm Widi-1550 IDed completely in the clear. wMP-1470 w/IDe 3:17, imaly sit Whukesha State Bank. That was some of the best daytime DX I've done in a long time. $12 / 4$, at 5: 15 pn , WMAX-1480 s/off fair w/ HBC \& @ $5: 25 \mathrm{KWAY}-1470 \mathrm{~W} / \mathrm{c} / \mathrm{W} \mathrm{W} /$ WOUP Recent veries: v/q- WISN WAMY WGAC WMC WLOR \& CJIC. v/1- WNA WANB WEDO KOLM WTSO WSML FBEO. Until next time, $73 \mathrm{~s} \&$ best of DX . Do you know anything about the How Member Kit? I've been a member almost a year \& haven't received it

CHRIS HANS用 - 1312 B Carman - Columbia U. - New York, N. Y. - 10027
Greetines to the membership - especially to the silent majority who do not Nuse - let's hear frou you! I would like to add a PS to my last Musing about carrier current ccllege stations. I have been talking to the CE of WKCR-590 here at Columbia, and there are some very strange things which happen when you let electacil aizzind locse on equipacn. Cnce in a whila tink the the on purpose or nou loposerble to prove, inerac the por cays the dast ine that hippene her they would be interested in receiving reports, unlikely as it ray be that they will be received. The address is: CE, WKCR-AM - Ferris Booth Hall, Columbia University; N.Y. N.Y. 100\%. They brodeast 5pm to 2am EST. This station is very important to Columbia since the FN outlet is brondenst downtom, and the GM Buildine blocks
aror hers in a cinder block tullding. I hape none of you is in a cinder block building. It is very frustratinc. If an'one has any subsestions for improving reception, please write. Thanki a lot, \& $73 \mathrm{~s} \&$ best DX .

- Robert M. Gribas - 3908 cheru Avenue - Decatur, Georgia - 3003!

Just a note to let you know I'm atill alive; it's the dxing that's dead. With a growing family, job, $\&$ poor hoalth $f$ can't seen to find any tinc. I note the Atlanta Flames (not Falcons) hockey outlet is the $11 / 25 \mathrm{DX}$ HEWS was unknown. It is WGST-920. 73s. (Sorry you're not feeling your best, Bob, but we all hope it'll be very coon that ycu will ba! -zRc)

11/24-A great day for daytime DX. 12:40pm, WKBN-1520 N.Y. very strong at times. WTOP-1500 D.C. fair @ 12:44. 12:50, WRRW-1170 fair, WKBN localstrong at tines. WKCY-1300, Harrisonburg, Va. w/c/w. $4: 05$, wPVA-1290, Petersburg, Va. w/c/w. $4: 45$, WMCR-1500, Oneida, N.Y. weak on s/orf. $11: 45 \mathrm{pm}$, strong hets on $7801040 \& 1160$. 11/29-4:58pm, WYAL-1280 N.C. on s/off. 11:10pm, UnID-760 u/WUR in SS giving time every minute $\mathrm{w} / \mathrm{a}$ device that ticks off seconds like WWV, faded 11:22. A real mystery! Conversation was carried on through minute, unlike wWV. (That's "The Cuban Minute Man", Jim - AN-NSP -ERC) $11: 33 \mathrm{pm}$, strong het against 740. 12/2- WLET-1420 Ga. © $4: 40 \mathrm{w} / \mathrm{c} / \mathrm{w}$, dent for verie. $12 / 3$ - inter-1ike CX are back when 540 becomes active. $4: 23$ pa, WLIX- 540 N.Y. $4: 33$, WPIK-730 Va. in strong. 5:04, WBSC-1550 S.C., not heard since last December, a 1 so a very cordial verifier. $5: 22$, WSRF-1580 Fla. very weak. 12/4-4:52pm, WEET-1320 Richmond $\mathrm{w} / \mathrm{c} / \mathrm{w}$ in strong. 5: WA $B Q-1540$ Cleveland heard on s/off. I was looking for WRGM-1540, but no luck yet. I received my Night Pattern Book and it really explains a lot of mysteries. Maybe I have some kind of complex but it seems that most stations have their nulls toward the wilkes-Barre/Scranton area. I hope to get a Day Pattern Book when that cones out

JAMES E. CRITCHETT - 1504 Glenwood D-ive - San Diego, California - 92103
From 10/24 to 12/11 reception reports have gone to kTCM-1380, Salinas, Cal. for their morning program from 9:48 to $10: 05 \mathrm{Sam}$ EST $11 / 18$; to KRKT990, Albany, Ore. for ETs from $3: 56$ to $5 a m$ on $12 / 1$, and to $4 Q D-1550$ mmerald, Gsid Australia, for programs heard from $4: 30$ to 6:05am MM 12/11. Verifications have been received from KFQD-750 Anchorage, KWSR-810, Rifle, Colo., KHA I-1090 Honolulu for f/up of $6 / 12$ receiton; from KKOw-1420 Iot Springs, Ark., also a f/u, for $6 / 21$ ET. Since $9 / 17$ on my Drake SPR-4 I have heard 462 stations ID. This indicates a good RX, to me. 4 QD is my farthese one. N weakest one is a Low Power Relay Trensmitter (LPRT) on 540. At s/off CBU is mentioned. Is this CEXQ, Ucuelet, Bo C. or the new ine in Coe 1 Harbour, B.C. 3 Very weak, u/KNOE/HJKA. The other new one here is KBES-1540, Bellevue, wash., ANJ-SPU with young lady announcer 12/11. Best wishes for a Happy Holiday Season to all in the NRC.
Cesar F. Objio - Calle 34, Casa \#30, Cristo Rey, Zona 5, Republic I have just received uy copy of Issue \#6, 11/25. I also received a copy of Issue \#32, $9 / 23 / 72$, courteously sent by HQ! Thank you, gent lemen! I had not received that copy. This Musing is only to make a correction to Ernie Cooper about my address. Please see as it is written above, it is Cristo REY, not bay, as he wrote in my last Musing. Rey means King, and B:y means Bahia. Please make this correction as I don t want my mail from friends to get lost. $C$ U later. (Sorry Cesar - my mistake! The eyes are getting OLDER \& OLDER! -ERC)

Ernest R. Cooper - 438 East 21 Street - Carrier Route 56 - Brook1yn, N.Y. 11226 all wrapped up in Mice $12 / 11$. Unn WINA-1420 TEST on, but only about even w/WBSM \& o/WHK. No sign of WSUF-2580 © 1:45am rise-time. By golly, Stan Morss is right as usual. There ARE two FFCs ANing on 1230 MMs ! I haven't IDed either one yet, but I have seperate logs on them - one has a basso-voiced announcer. I hit 1090 e 2:40, and found WMMM already on, and I hit 1090 again © 4:35am, and found them still on! I would hope they were heard coast-to-coast, $57-8$ here with quite a fade, for a welcome new logging. R. Punto Fijo- 940 , YVNN, as usual the two weeks before Christmas, s/on by 3am, and in the clear except for slopover of WPAT-930. I didn't get a log this week - but I gotta do it $12 / 18$ or wait another year, hi. I did take a 1 log on another enrly Venezuela Advent $s / o n$, in Ia Voz del Taccinira. I had them $4: 00 \mathrm{~B} 4: 32$ with no sign of XEOY, but mucho s 10 pover from viss-1010. Other channels aited oith early $s$ /ons from Venezuela vere 1080-1110-1020-740. think the 1110 is R.dio Mia, and not R. Carupano, the one usually heard evening I'll let you know next Musing - that is, if I find out, hi. So, we'11 CUEE in two weeks, and I hope it is a very wonderful Holiday Season for everybody, DX-wise and otherwise. Please ressurrect this colum sron the abyss in which it has fallen by supporting our effcme ama desires to mke more or an effort, by iUSIIIC!

LImitations in the use of the a index FOR MEDIUM WAVE DX PURPOSES - PART I

## *Gordon P. Nelson

The fact that high latitude MW signals become weaker during periods of geomagnetic/auroral disturbance has been known for many years ${ }^{1}$ although a detailed explanation had to await recent research insights. ${ }^{2,3}$

The state of the Earth's magnetic field - quiet or disturbed - has been measured on a regular basis at magnetic observatories throughout the world for centuries. Because of this long history, a bewildering variety of ways to quantify the disturbance in the magnetic field have been devised and used. There's the $K$ index, the $A$ index, the $C$ index, the $K_{p}$ index, the $Q$ index, and many more... Some measure the degree of disturbance on an hourly basis, some refer to 3-hour periods, and some of these indices give the average magnetic disturbance over an entire day; some refer to the disturbance as measured at one particular site while others combine data from many sites to produce a world-wide disturbance index. Each type of magnetic index has its own advantages and disadvantages depending upon the application; the plethora of indices in use or proposed suggests just how difficult it is to measure something as complex as the state of the Earth's magnetic field with a single number! ${ }^{4}$

Because of past articles here in DX NEWS, the indices used by most DX'ers to predict high latitude MW conditions and to anticipate the onset of "auroral conditions" featuring enhanced reception to the south are the $A_{B O}$ value transmitted over WWV at 18 minutes past the hour and the $A_{F R}$ value given here in DX NEWS almost every issue. These are the easiest-to- obtain indices but not necessarily the best for the MW DX'er; over the past decade the author has experienced fine Transatlantic reception on days with $A_{F R}$ values in excess of 50 - not because of any particular odd. quirk of propagation, necessarily, but due to the oddity of the $A$ index described in this article...

The A index is a daily index which measures the average geomagnetic disturbance for the GMT day (beginning at 7:00 PM EST). Consider now the following hypothetical but realistic situation. The geomagnetic field has been quiet for several consecutive days and absorption in the auroral oval is low. During the evening hours here on the East Coast (after 1900 EST) the TA's are booming in and reception is fine from West Africa to Sweden and Norway. At noon (EST) the next day we're suddenly hit with a violent geomagnetic/auroral disturbance and the band is wiped out totally for several days...

Since the A index is averaged over the entire GMT day, the A for that day will be quite high due to the disturbance which began late in the (GMT) day; the fact that high latitude conditions were excellent before the onset of the disturbance will be masked - by the storm-induced elevation of the A index. Unfortunately the A index is quite sensitive to this sort of effect; even a brief and inconsequential period of upset in the geomagnetic field during the course of a day will tend to elevate the $A$ index in spite of the fact that the field may have been quiet during the first 23 hours of the day...

Happily there is a simple way around this artifactual problem for those DX'ers seriously interested in auroral research. The technique to be described will permit the MW DX'er to obtain an equivalent A index for any 3-hour time period or collection of 3 -hour periods. With this technique the MW DX'er would have been able to compute
the equivalent $A$ index for the initial fraction of the GMT day preceeding the onset of the disturbance at noon. This will yield a much lower value of A consistent with the quiet conditions during the preceeding evening and effectively eliminate the irrelevant elevation in the $A$ value due to the storm. Of all the magnetic indices the $A$ is especially designed to permit meaningful comparisons of geomagnetic/auroral disturbances between reception periods of differing duration.

> DEFINTION, The equivalent $A$ index, $A_{E}$, for any 3 hour period or collection of periods, $\{T \mathrm{~T}\}$, has the same value as would the regular daily A index if the geomagnetic disturbance level during $\left\{T_{A}\right\}$ remained the same for the full 24 hour period.

To get the equivalent $A_{E}$ we make use of the 3 -hour $K$ indices supplied by the Fredericksburg magnetic observatory. Each of the eight 3-hour periods of the GMT day has a $K$ index value which is a measure of the geomagnetic activity during that 3 -hour time block. A typical sequence of $K$ values for a particular GMT day might be 1-1-0-1-0-5-8-9; the first number is the $K$ value for the 0000-0300 period, the second digit is the next block ( $0300-0600$ ), etc. $K$ values range from 0 for a very quiet and undisturbed 3 -hour period to 9 for a major disturbance. The following table is used to convert from a batch of $K$ indices to a 3 -hour index called the $A_{k}$ and then to the equivalent $A$ index, the $A_{E}$.

| 3 -hour K index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{~A}_{\mathrm{k}}$ value | 0 | 3 | 7 | 15 | 27 | 48 | 80 | 140 | 240 | 400 |

For the $K$ value in each 3 -hour time period simply look up the corresponding $A_{k}$ value, add them all up, and divide the total by the number of 3 -hour blocks; this will give the equivalent A, AE. Fredericksburg does this for the entire 8 K values for the GMT day and the
resulting equivalent $A$ index is the familiar $A_{F R}$ index.
Consider for example our hypothetical day which was very quiet until a major storm hit at noon (EST); a typical Fredericksburg $K$ set would be 1-1-0-1-0-5-8-9. The disturbance begins to show in the $K$ of 5 for the $1500-1800$ GMT ( $=1000-1500$ EST) time block. The $A_{F R}$ for the entire day, including the storm onset, would be:

Time Block
0000-0300
0300-0600
0600-0900
0900-1200
1200-1500
1500-1800
800-2100
800-2100
2100-2400 9
$697+8$ blocks $=A_{F R}=87$

Total:
The equivalent index for the first half of the GMT day when things were quiet and the TA receptions possible would be calculated in a similiar fashion:

```
3+3+0+3=9 and 9+4=2
```

which is the equivalent index, the $A_{E}$ for the first half of the day before the storm.

Thus instead of the seemingly remarkable occurrence of TA reception on a day with an $A_{F R}$ of 87 , we find that the $A$ index for the day actually would have been only 2 if the $\quad$ storm had not begun at noon and conditions had remained as quiet as they were during the first part of the day. researcher who simply seeks a correlation between published $A$ indices and past MW receptions on particular days. Without a thorough understanding of the origins and properties of the various magnetic indices it's quite easy to draw misleading conclusions about the degree of correlation between high latitude reception and the state of the auroral oval.

## REFERENCES

1. "A radio transmission anomaly; cooperative observations between the United States and Argentina', J.H. Dellinger \& $A_{0}$ T. Cosentino, Proceedings of the IRE, October, 1940.
2. "Geornagnetic Measurements during the past 4-1/2 years", K. G. Scrimgeour, DX NEWS, 1/24/70.
3. "MW signal paths, parts I-IV", G. P. Nelson, DX NEWS, 3/8/69, 2/28/70, 3/21/70, 4/25/70.
4. "Geomagnetism", Chapman \& Bartels, Oxford University Press, 1962.
5. The Fredericksburg $K$ indices are published weekly in the Preliminary Report and Forecast of Solar Geophysical Data; available free upon request from the Space Environment Services Center, Space Environment Laboratory, ERL, NOAA, Boulder, Co. 80302.

## NONTRIVIAL FILLEA FROM HQ...

Father Jack Pejza (one of the NRC's dozen-odd physicists) has questioned one of the equations in GPN's recent Daytime DX article - the equation for the maximum skip distance in Footnote \#22. The equations is correct; the seeming problem is due to the fact that we expressed the inverse cosine function in radian degrees instead of degrees of arc. All of these problems inionospheric geometry are simplified by the use of radian angular measurement instead of the more familiar " 360 degree" unit... One radian degree is equal to $360 /(2 \pi)$ conventional degrees; in the future we'll try to be more careful about making the angular units we use more explicit. *** From England comes word that NRC'er Geoff Trower has identified the Paraguayan station on 645 kH that's stumped our best North American experts; he's ZP19, Radio Caaguazu, 5 kw , located in Coronel Oveido. The latest WRTVH shows his nominal frequency as 640 and gives the address as Ruta Mcal Estigarribia Klm6 1/2, Coronel Oviedo. That's about 72 miles SE of Asuncion way out in the boondocks... The next problem is getting a QSL past experience has shown that getting a verie from Paraguay is about as easy as extracting Martin Borman... By all means send stamps from the DX Stamp Service half a $\$ 10$ bill might help too. . (remainder upon receipt of QSL). *** Bill Bailey point out that the WWV ABO index is transmitted at about 18 minutes and 20 seconds past the hour and not at 19 minutes as we have recently stated numerous times. That may well explain why we usually miss the index when we've tuned in at 19 minutes, hi!

NDITOR：Page Taylor
P．O．Box 282
Butier，HJ O 405
Deadines for IDXD reporters：Fridays，12／22， $12 / 29,1 / 5,1 / 12$ Tast minute tips by phone to：201－838－5721（no collect calls，pse） Reports：

540 Fenezuela．Hosario，（Kdo．Zulia），＂Radio Perija＂now on this new ireq．and 15 w／native mx．Way over＂Horizonte＂ （HRC IA Iog lists IVOY， 5 lo．Sohatz，Miami，FI）••＊
colombia．Barranquilla，HJHN，＂M．Libertad has been begging listeners for reception reports on its new 50－kng signal promising a＂gallardete＂（triangular pennant－rfs）for the trouble．（Schatz，FL；Oollins R－388／URR，LSCA

Ohongjin listed per IRCA Forelgn Iog－pt）
655 F．Korea．Pyongyang excellent 1005 12／9；still the most consistent and durable．$N o$ sign of the Russian up through 1115．（Pote Taylor，P1ll Valley，California）
＊W60．4 Unid．耳o audio hrd，but something is clamoring around here at various times 12／9 1000－1100．（Pete Taylor，OA）（noted
here also，but no clues as to identity－pt
Thid．IA O／WHAS 1005 l2／9 but not for long．Sounded like a Brazilian．（Pete Taylor，CA）．（EJBI often rptd here，Pete； pRH9 a possibility，though．－pt
844 Gilbert \＆Ellice Islands．Tarawa OK at 0930 12／9，but experiences deep and erratic fades－not even a BFO at times． （Pete Taylor，QA）
877 I．Korea．Nonsan， 3 low pips，and one high one at 1000 time signal．Inot／／655．Very loud，2nd best to 655；unaffected by ERVN 001025 12／9．（Pete Taylor，CA）
Jnid．Is w／old time piano 1023 l2／9．KRVN 00 on 1025 so I lost perspective；could have gone into Id mx wich was still heard w／WOBS after KRVN OC．（Pete Taylor， CA ）．（sounds like widelymard new Ouban，oMar，Pinar del Rio，according to RFS＇ report in DXas，12／7－pt）
1035 H．Korea．Fair to good 1025 12／9 not／／655 or 877．（Taylor，ca）
1210 China PRC．Sounded Iike anthem 1043 12／9；then man／woman talk then another soft march．Has Ryden＇s hum（IDXD 12／7）but this way be caused by het iron out 00 ．Nuly there euen during audio fades beat arainat roud varios there so somethlus in there is arlfting．acellent at times，and ${ }_{3}$ appeared to be in IR ．（Pete Taylor，CA）
1329.3 in well every night 80 far without fail for a while before E20 0830．Strong， clear audio w／bubbly DJ，hi－pitched spots and native sambas． Good bet for a rare geographical area．（Schatz，FI）（Call listed ZYR25，10Kw．，nom． 1330 per NRC IA Log－pt）
1340 Guantanamo Bay．is still on EDST，but not the rest of Ouba； HWEE－1d＂，as they say in Boston．（Schatz，FL）．（Perhaps AST8－pt） 1435 Saba，Jetherlands Antilles．＂Voice of Saba＂still noted on top of＂Kelkboom＂w／2－Hz het．$c / d$（close－down－pt）varies 0145－0200 daily，which is quite early．（Schatz，FI）
＊＊1475 期iti．Port－au－Prince，＂Ie Voix du Peuple＂noted aN SM $12 / 10$ ， possibly for the Holiday season．Sounds like a West African－ very exotic．Normal $c / d$ is 0600 ．（Schatz，$F L$ ）

Please send those reports，ladies and gentlemen！Paucity of reports this week dictates brevity of section．．．73，pt

EOITOR：

Greetinzs a ain folk，Looks like a good－sized section this time．Next issue will be in two weeks as the holiday skio has materialized．Cx tumed abruptly auroral again 12／10－11 after a week of good high－latitude cx．As the week progressed，the aurora jot worse，$A_{b o}$ of 29 ：A $12 / 18$ per WHV．Yecch．

## call applicatians


$\begin{array}{lll}1540 & C D & -O H \\ \text { req．} \operatorname{TNRE} \\ 1580 & K B=0-T X & \text { req．} \mathrm{KR} 2 \mathrm{I}\end{array}$
chanpas
$\because 530 \quad$ K22XUB
（Calif）Los Anzeles Airport stns noted several months back to run by cable and radiate＇to cover cars on roads approach－ to run by cable and radiate＇to cover cars（Call sign per Jauser ing IPCA DXY）
$G P$ is on per $\nabla / 1$ ．（Ron Musco，Windsor，Ct．）
$\mathrm{CP}: 1000 / 250 \mathrm{Ul}$
ANT：U（ex－SH）
$C P$ is on．
ex－HKKD

## mioning to sunrize

＊ 570 Wस्N－017
Noted off AN $\operatorname{IM} 12 / 11$ ．Have been off several MMs in addition to reg．Tu AM SP．OC on \＆off $12 / 11$ whilest working on their new antenna farm．（Jerry Starr，Youngstown，Ohio）$* *$ Welcome
$5 \pi 1$＝ial
back，Jerry－RjE Tentative，looping NW w／contemp．mx，vy wk，abt S3，crushed by YVLX s／on $035312 / 4$（Jim Poterba，Yardley，Pa．） Copied s／on nice 0730 11／25．Cuban gone，KTBC not yet on daytime power．（Paul K．Hart，Ft，Worth，Tx．） Tester noted 12／11 0051－0104 $\mathrm{m} / \mathrm{ET}$ ，no IDs，may have been same one noted $12 / 40125-30$ ，who ？？（FM）
Hrd $042012 / 3 \mathrm{w} / \mathrm{rT}$ o／unTD 3 RI （Richard N．Allen，Billings， Ok ） ＊Nelcome to DNXD，Richard－format of submission is fine－RjE Hrd $050012 / 3 \mathrm{w} / \mathrm{mx}$ u／CXCE（RNA）
Strong w／W＇AL nulled fizhting it out w／KXOK．－ $19^{\circ}$ temp．Fisrt time hrd here $12 / 90230$（J．P）
U／C：TPC most of time，surfaced above ard $024012 / 9$ ，several IDs clear．（ $\mathrm{J}_{1} P$ ）
At Oó02 $12 / 5 \mathrm{w} / \mathrm{GF} \mathrm{nx} \mathrm{u} / \mathrm{STRA} \& \mathrm{KEOS}$（RNA）
S／on hrd 064． $512 / 5$（RNA）
People Station hrd $033011 / 1 / \mathrm{w} / \mathrm{mx}, \mathrm{nx} 60$ the FF hrd $u / C H T R ~ 01251211$（RNA） ＂Dolly Holiday＂to 0530 72／then＂The World Tomormow＂，of C：DD H ，HJCU．（RNA）
$15612 / 7 \mathrm{w} / \mathrm{rr}$ o／9HrD \＆HJCIJ（RNa）
／off w／Oh Canada \＆GSQ 0300 12／10 o／KCBS．Last time hrd was $8 \% 28 / 51$ on lolok．（RNA）
（PRH） D copied nice © © 0103 11／2？for lst los just after KTPH s／off These two alone here battling it out most of $A$ i： $11 / 27$ ，
strongest ever hrd herc，alternating atop channel（Prin）


790 KGHLITT Tentatively hrd w／f／c C245－57 o／u another tester．（ai）
790 Kanleyt
 e
860 12：9－24
300 CJVI－BC
CJVI－BC $W / \mathrm{mx} 0238 \mathrm{l}$ ？ 1 ．Nx，wx 0300 o／nRT．（Riva
 s．KaLS splash．（RUA）
WS：N - FL Trd 12／11 0010 $-W / T T$ pulsing at rate of a telephone busy signal and complete ID thru CHiL，a surprise here，fair sis．（TPS）
920 WOKY－江 $052012 / 3 \mathrm{w} / \mathrm{rr}$ o／unTD 2PI．（PIMA
Noted w／TT $12 / 40206 \mathrm{w} / \mathrm{IL}, \mathrm{T}$ ？（ m ）
WPTX－：D Fioted w／ET 12／11 0110－0125 ID w／Tn．Call to stn．said testing

960 NTRTC－AL $T$ Note new call BilA－RjE 100－0400s／on 11／27．Sometimes off completely，said was an azain $12 \Lambda$ ， 11. （KII）
$990 \mathrm{CBW}=\mathrm{BB} \mathrm{S} / \mathrm{on}$ On Janada 07 CO ，then CBC Info nadio $\mathrm{NX}, \mathrm{nx}, \mathrm{sx} 12 / 5$（RiFA）
$1010 \mathrm{CBR}-\mathrm{AB} \mathrm{S} / \mathrm{O} 080012 / 5$ ，then TBC Info Fadio $\mathrm{vx}, \mathrm{nx}, \mathrm{sx}$ o／XEHL（ Ol A ）
Assumed the one u／CrTB－WINS w／s／off $\therefore$ IS？© $30612 / 4$ ，weak， loopins west．（JitP）
1090 Vnrioh loted on 0156－0330 12／11 w／cicm on Ticir．Sisnal vy gd．（Dave Schmidt，Wilmington，DE）
Like a ton of bricks $0303+12 / 11 \mathrm{w} / \mathrm{c}_{i}^{i} \mathrm{w}$ mx on TEST．（JS） On early w／TSST 0145－0345 w／ofw mx almost non－ston．Exc．sis $+5 / \mathrm{s} 9$ completely dominatins freq．（TRS）
Early w／TEST 0256－0307＇til clobbered by WTC sidebands when they started playing mx．B4 that，ruvi was $+15 / 9$ w／ocw（RM） Copied well here 12／11 w／cow mx，few IDs（FKH）
KTGO－ND
KINA－NA TD 1l／27 not copied．Did it run ？？（ KH ）
1740 unID
KGE：ITD
$1000 \mathrm{~Hz} \mathrm{TT}, \mathrm{DT}$ ，OCs noted 0130－0235 at times o／mRV．Looped generally west．Hard to tell more due to janmers．12／9（t：3） $010312 / 2$ con red bj ．iva clo，caw nx $\theta 10$（ u／wna． ，oll7，atop w／ID ol20 ac killinj wTh T／cow（Bruce dink－ alman，xansas isity，KS）
1150 C．0C－$/$／rr inBB－iry loted 11／27 w／no sim ibay 01．01－30．RR w／no snots．（RA） KNJB－AZ（CP）Conied wk IDs 032́o， 0355 12／11，running test．Asking for calls．Very weair，sounded like 250 watts．（एri
KAKE－KS ET，IL copied again 0122 11／27．Tremendous，local－like sijnal as usual．They test a lot，but usually few IDs（Mar）
：NTM－KY Copied ID OLNO 12／11．Hrd weak bl，bit never sood enuf for tape．（IM）
 Is now $2 l_{\downarrow}$ hrs．SP IT！，ex SP TU XI （John Oldfield，Sdoonton， 13 Hrd 0531 12／2 w／TT o／unID TM1．（2N．
Semi local A：12／11 w／oldies．Jave hrd via Sraperine that this rill soon be $\because$ Sun，Mon AIIs only．（JS） IT a ain $020 \mathrm{C}-0207+12 \Lambda_{4}(\mathrm{PrH})$
Jaucht ID in s／on 0503 11／27（．．．．）
mosting ard $040012 / 4$ ，wy wh $\%$ in heavy static．（PYH）
Testin；irreg．Iis $11 / 27,12 \Lambda_{4}$ ，but IDs seem to get fewer and farther betsteen（־I）
（til $-2 x$ 3／off as per sked $11 / 27,12 / 4$ ，but A： $12 / 11$ tho＇sounded like an extended test session．（FKI） irst time ever noted here w／rr，jx，etc．u／NEL 12／11 031 nreq（TDS）midst
TIULVA on freq．（TPS First time this so probably wSp．lloted asain $12 / 110313 \mathrm{w} / \mathrm{r}$ ？irst time this sea
+1310 K2II－CO＇ist be AN Pr．Copied dominant most of $12 / 11$ AY（PKיt）
KHAP－N：S／off copied 020E 11／27（PVY）
1360 ISAI－OH Kiling TDRC w／ET w／rr 12／11 0130 （DS）
CIBC－NB S／on strong o／ADPC here，12／9 0500．Brief annct，then into
1300 WRT－IN nx roundup－zood siz．（J．P）

1320 remin wis W／top 10 ． V／top 40 at unreal level， $20 / \mathrm{s} 9$ local－like 0205 12／11（JS）
TT here 0205 12／2 t／in．ID 0208 in severe kTDL slop．（BNV）
KHOB－NM TT／TT 0 $430-4512 / 4$ ，vy strons even $\mathrm{w} / \mathrm{hvy}$ static，lousy cx
1400 KXIV－AZ S／off copied $0211 \mathrm{Il} / 27$（FKH）
WLLH－MA $12 / 11 \mathrm{t} / \mathrm{in} 0320 \% / \mathrm{TT}$ ，ID for TT 0331 ，then more TT．（TRS）
NPAY－OH LS：0220－35＋12／11 w／HII（JS） daily $01 C 0$ s／off．（FKH）
Kaill－ME Mestins asain from b4 0224 to $0251+12 / 11$（PKH）
＊KRIG－TX S／off comied $020012 / 8$ and 11 ，must be daily s／off．S／on time annc＇d as 07OC．（PKH）
：NZMFWI Copied to nice s／off OlO5 12／11 w／WNI－KWBB off，able to WLNA－NT override WING－KRIG．（PKH）
2h20 NLNA－NY Hrd w／TEST 12／11 w／WHK，WBSM 0139－58 w／IDs，TT（RM）
Hrd 12／11 TEST w／TT $0035+$ ．IDs hrd 0035，0040，etc．of all others，incl．another TTer，unID．（TRS）
TEST took quite a beating here，Noted $0133 \mathrm{w} / \mathrm{TT}$ ，mX，IDs roughly every 4 mins．Interference from WHK，WBSi \＆once even KTOE！！（DS）
1hl0 CFGO－ON Good signal e 0147 12／11 even without nulling local wIMM－ 1450．rr format，sounded like CKLN．（DS）
WHIIT－AL Gust be AI MM，copied AM show w／femme DJ，＂The Dutchess＂．In WCHB－II Hoted w／FT－OC 3 ID 0237＋12／II（JS）（PKH） ET／OC

KFGO－UT PTOC w／healthy siss，ID $024812 / 11$ as＂This is iEPFO，first ET／OC w／healthy siss，
Noted ET w／mx 12／11 0213 off then back on 0228－50．Two quick IDs given right in middle of records．Strons sig，but wk audio．
KAJO－$\%$
KRCB－IA Concluding ET－mx 0139 12／11（JS）
KPAC－CA $\mathrm{W} /$ ad for truck stop 0234 12／9，then $I D \mathrm{bl} \mathrm{c} \& \mathrm{ww}$ ，at a solid s3 W／no sizn of pest WDXR．（BW）$\forall * *$ NDXR is now off by then－RjE
CINB－BC also o／u 3 TTers．Freq．local mentions in game，commentary 01 nx 0150 ，finally in 0206 ．None of TTs TD ed in that Th ． （BW） ix 0150，finally id 0206．None of TTs ID ed in that lir．（BW） log．（TRS）＊＊ $000012 /$ while waitinj $h i=R j E$
VSUF－NY DX not hrd 12／11．Should have blown needle off meter here（TRS） Apparently not on，as I noted last week（ $\mathrm{R}, \mathrm{j} \mathrm{I}$ ）
Evidently not on．Checked 0120－30，only KLつU there 12／11（JS）
KLLU－LA $12 / 11 \mathrm{w} / \mathrm{rr} \mathrm{mx}$ request show，IDs $\because \mathrm{TCs}$ C225，021 3,0249 ．Good sígs on peaks w／WLLS off．（THS）
KDAY－CA Asain noted $0301 \mathrm{w} / \mathrm{LD}$ 気 into wall－to－irall tip 40 ，then f／out 12／11．（シ3）

## sunsti i Eletily

 10 12／20（115E）
WAL－36 Ind v／boal Tx，voice－over ID 1707 12／20（ IHj ）
770 N $2 \times 12$ 1：TVOM－3
 ant 1t in 128 mall $172.12 \wedge$ ，then tatos5－type nx，wowe bat Pr！ $10+17+(32)$
830 ：Boh－辺
 $4 / 10$ 1730 $12 / \mathrm{s}$ ，ID sfler Coks at 1730 （mit） W／LD 1731 12／4，than sas b／h0A b others．（Eit） CdBi－0I大标一112 स2In－10 140p w／eiv $1700-1715$ s／ott $12 / 28$（ 721 ） Whaver $275512 / 4$ ，praver 2750 ，vocal lord＇s Frivnr 1759 ，in／off arnes 15／31．Anned 0700 s／ov．（idi）
W／ry loul INAt w／ 6 or 0 3omsec，ppots $1656-59$ ，then atom $\mathrm{k} / \mathrm{nx}$ ，




（AK71－V3 Fopped up For It o／a07L 1750 12／11（2y：）
3010 ． $1731-7 \mathrm{~A}$
2010 งTMS－1\％T Strent diw ax，land u／atus $172512 / 21$（转）
 1710 22／3（むは）

3250 10232－ic


院d w／Loeal ada 1535 12／13 belefly atop ohunnel（EJE） Ird u／Isfotf ap of anl 1622 12／13（nit）
IV Iatest cloaest untred inomsed off w／w／oft wast st ter MPTh－ I250 s／o！\％raqued a\}or $12 / 21$ 16］0（1155）
but analtes 31 hete $10.012 / 5$ ．3ent tape，and they coaftm， but sad＇t flgure xty hod 90 kilx．10w．Sever ayy such grurs an

 Finallg har of $5 x$ ， $3 x$ 1627 22／11（EJE）


$1400-1.10-10$
2500 2172 $=10$
 annet to tons want in
 1540 Whazecil A1most alune if $3 /$ off，blaos forat $170012 / 9$ ，anathar lons－ ranted oce（2J）
THL－15
isI－1L
WMI－

 Atop brfarty E／silas Irsheqlasion mpot，then ow 1721 12／5， then
1570 103 $10-$ IL
 $17 / 17$ 12／5（MT）



 an additional Inaturt．．．．

## P／E：


 tha Ia not nonthly as Dot hrd nary tisen，kev be anmal of peri－annal）




```
* 950 KHMN-ID Ex-6.Am
+ 1390 CHOO-CH S[%% s/orf 0000 dally
```



Domestic lof eofy shlpeed to H2 $12 / 5$ additional c py sent w／this colurm，so sometine abruif febraary，s new log should be forth oning．Once kain，we requast all contrihutors to LDXD to edit out reoeptions of class l－A clear3，locals， semi－looala and regular recertions froy poar antinissions unles itana noted are data elvifea． cn ly expepticn to this is $\mathrm{f} / \mathrm{cs}$ ，which we want all of，whether or not they＇re hrd every month．UnIDs are weloone teo，but only if they hawe eruf prozan detailn to be idantified by so eone else．All submis iona not ounforming
 that the Ilew Year wlll be nother good III year for all，we＇l smy

## 73＇s until＇73 I

Attention serious Beverage antenna fraks！If you＇ve set up a Bewerage or are planining to to so in the near future please read on．．．Thers＇s at least a $50 / 50$ chanoe that your far end termination realator ta doing more harm than good．Whille condacting experiments on the HO $6600^{\prime}$ Beverage antenna in New Hampshire BGK and GPN have developel a aimple technique to determine just how well a Beverage antenna has been terminatei，If you＇re not completely aatiafied with the back lober aupression of your terminated Beverage antenna or want to know just how efteient your Beverage is rminatian ia．drop a note to $H 0$ ．We＇ve developed both a simple ermpirical technique and the full analytical justitication to determine just how well a Beverage ia terminated and our findinga will appear in DX NEWS within a few weeks．Since several groups are seriously concentrating on Transauraral receptions wits Northward－directerf Beverages during the wimet sulstice（12／21）period，we＇tl be happy to send them an advancte enpy of the article so they might take advantage of the technique immadiately． Just drop a pote to GPN at HQ．

## EDIIIN：

P．1．temunds 101 845
wiyne．I．I． 07470

1420 C．．．－PQ（Plessisville）：foR \＆FF vy strong $1710 \mathrm{w} /$ no ID $11 / 27$ ，but really couldn＇t be anything else．（PT）
$0 \mathrm{O}=\mathrm{BD}-\mathrm{PA}$
（20） Hrd w／ 02 kw ，ID 1631 12／7 u／0 iCOJ．（RJE）
Hrd w／efw o／u ：COJ，o／WCED ． 1638 12／7（RJE）
Hrd 12／2 1615－1700．Weak at first，but gained in intensity until vy good level 164山．Had cesw format．（JH）
Finally hrd wk $u$／WRAN then up after－whan Patt．／Pwr．chg．w／ s／off anncts \＆SSB 1629－31．Another closest unhrd．（RJE）
frd $11 / 241705 \mathrm{w} / \mathrm{SC}$ state mx alone on channel（PT）
Strong but w／some fades $12 / 15$ when hrd wk； $658 \mathrm{~s} /$ off after clew pgmg．（JH）
reetings again，folk．Due to tryin；to avoid the vagaries of holiday mail ser vice，this column goes out on Tuesday 12／12／72．Next column will likewise be run through on Tuesday．This one also contains a first for this season：Your editor has finally DX＇ed Domestically．．．．

## sunsel \＆evening

Long odw schtick then stock $r$ lor，Butler，N．J．）（Also RjE） Hrd w／rr，several local spots \＆ID u／WFIL whilest looking in vain for lonj－sought WCKL．（RjE）
10RZ－IS Strong in a heretofore－nonexistant WNJ null w／State sx rpt 1721－30 12／8．Also an unID MoR u／both．（RjE）
R2 $1 \mathrm{l}-V_{1}$ Hrd atop channel $\mathrm{H} / \mathrm{ID} 1700$ in passing while searching TAs on 692，12／8（RjE）
WPAL－SC Potent，alone $11 / 24 \mathrm{w} / \mathrm{NN}$ format，$T C$ ，ID 1713．（PT）
；NSV－NI Hrd atop channel w／s／off SSB 12／9 16L5．（RJE）
WQIZ－SC Comm．for Harley＇s Radio \＆TV in Harleyville 1710 11／24 follo by stn promo for ：lonck＇s Corner appearances．（PT）
KClow Fair o／u WGY 12／4 17LO（Mike Collins，Bridgeport，Ct．）
mine－nt Vy strong w／osw 12／1 1645 to 1745 pwr cut．（（IC）
WEa7－II
Jp just for s／off and FM promo $12 / 1730$（ $\%$（ $)$
Hrd $12 / 51627 \mathrm{w} / \mathrm{s}$／off（ RjE ）
S／off only noted thru mess 1645 12／6（ $\mathrm{PT}, \mathrm{RjE}$ ） Hrd s／off 1626 12／5，but $164312 / 6$ ．What goes ？？？（ RjE ） Finally hrd w／s／off $162712 / 4$ ．One of my closest unheards（ $I_{2} j=$ ） Hrdw／TD o／u WBEN，CFBC w／iJPAT looped 1710 12／6（RjE）
Fird w／oiw，local ad u／NPAT 1655 12／7（ RjE ）
SID atop channel（i．e．CBrf，hi）briefly 1650 12／7（ajE）
Hrd w／s／off follo car comm＇l $1655-58$ 12／6（F．jE）
Hrd w／local ads，IL 1653 12／5（ RjE ）
Loud w／IDs，promo，s／off annct 1657 12／5 o／WESB s／off（RjE） Nx，wx，temp． 1734 11／29（PT）
ID follo sx $172411 / 24$ in mess（PT）
Bank ad 1610 12／5 vy strong（ FT ）Newie hrd w／ad for Ilamony Hut in Framingham 1611，then s／off $161512 / 5$（RJE）
$12 / 51635 \mathrm{w} /$ local ad．Appears to be Nr format（PT）
Hrd w／hard－rock，ID 1007 12／6 for one of closer unheards．（RjE） IJ／local HS sx 1650 atop NTEN 12／5（PT）
11／29 wx fest 1728 follo by Fil promo．（DT）
Promo，follo by hard rock，mazinjly aton channel lós3 11／2o（PT）



WTH－VA Hrd w／s／off，promo for Fif 104，u／wHLD 1543 12／4（RjE）
Wor－1 Hrd w／local ad and promo 1649 12 $\Lambda_{4}$（RjE）
Hed 11／29 $1700 \mathrm{~s} /$ off strons bu pulsatins signal．（Jim Hajes，

Wilkes－Barre，Pa．）$\# \#$ Welcome to $\mathrm{DEXD}, \mathrm{Jim}=\mathrm{Ij} \mathrm{jE}$ nilkes－Sarre， Pa ．
SC state nx alone on channel $1800 \mathrm{Il} / 29$（PT）

Simultaneous s／off $11 / 241800=$ to WXXR．（PT）
Local quality alone w／oww 1915 11／29 W／comm＇ls for Az ．land buys．（PT）
Hrd w／sx，ad，s／off 1745 12／4（RJE）

## sunfise 1 tiytint

1140 C．7TH－PY
Hrd 1310 12／5 s9 w／FF talk，Mor（PT）
1060 c．nIa－19
Frd w／FF rr 1315 12／5（PT）

## midnifint it sunpist

690 WFAA－TX
Nx ending 0240 follo by up－tempo MoR 12／4（PT）
CBU－BC Potent w／Halifax Symphony Orchestra concert follo by ID 0130 12／9．Taped w／Cuban on reduced pwr．（PT）
$610300=\mathrm{CA}$
Tentatively the one w／tele－talk u／KCMO w／WGY off 0050－0115
12／4．Poor sigs，but gotta be him．（Wes Boyd，Youngstom，Ohio） reat to s／off SSB 0205 daily，only WKIX Killing freg
＊ 950 WPEN－PA Noted s／off $015812 / 4$ giving s／on time as $0500 . \ldots$ ．（Boyd） WBBF－NY Fairly good \＆all alone MM $12 \Lambda_{4}$ ohll buried by unID TT OHl（MC） ETing $12 / 4 \mathrm{w} / \mathrm{TT}-\mathrm{rr}-00$ 0240－0305＋，few IDs（Boyd） Off？？？ $12 / 3$ Su AM 0500－30＋w／oniy KVOD，KSTT \＆
＊ 1220 WGAR－OH Off beyond $040012 \Lambda$ ，Also off $11 / 30$ past 0330 （Boyd）
＊CKCN－NB Poor u／CHSC d\＆w，but is AN now．Hrd 02L0－0335＋11／30．（Boyd） $\begin{array}{ll}\text { CKCN－NB } & \text { Poor u／CHSC C\＆W，but，is AN now．Hrd 0240－0335＋11／30．} \\ \text { WSPR－MA Fair on } 12 / 4 \text { TEST o／u KFJZ w／IDs every } 10 \text { mins．（Boyd）}\end{array}$

Noted still AN ofw 12／2－3（Boyd）
KPCR－ifO On ET－TT \＆C\＆W 0320－30＋12 $/ 4$ well o／KFBK（Boyd）
WIPV－KY Vy good $12 / 20215-0300 \mathrm{~W} / \mathrm{DS}$ ，oldies in ET（MC）（KC）
WSUF－NY
DX TEST arranged by me was apparently not on．Checked 0050 0105 12／11，but nothing of interest there－starting off this CPC season just like most of last season was－a series of no－ shows．．．（RjE）
KLOU－LA Now s／off 0300 MMs noted $12 / 4$ ，goodbye KDAY．（Boyd）

Some $\mathrm{f} / \mathrm{c}$ here，but will hold them for next ismse．Changes as follow：
600 WICC－CT Best times for SPs Sun AMs 0300－0600 or 0400－0500（MC） +910 CFCR－BC ex－CFJC（IRCA）


Thassit for now－this may be included w／ another IDX in one issue as the business of a Christmas skip is still nebulous，and better 2 in 1 issue than none in one，hi．

