

The Magazine of the National Radio Club


NUMBER 11
"Please renew my membership for another year. The Club keeps getting better and the Pattern Book helps immensely in tracking down those elusive signals." (John Basehore)

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NEW MEMBERS THIS WEEK...
*John Weber, Rt. \#3, Sheboygan Falls, Wis. 53085
*P. C. Bergen, 131 Union Blvd., Kitchener, Ontario N2M 2S3
*Brian Pitman, 11 Regent St., Kingston, Ontaria K7L 4J6
*Henry Kauf, Jr., 486 Brock St. , Kingston, Ontario 7KL 1T7
*Bill Gannaway, 1711 McGuire Ave., Monroe, La. 71201

*Roger Burket, 1213 24th Ave., Altoona, Pa. 16601 (Rejoins)
*Howard Montgomery, 6922 Seminole Blvd., Seminole, Fla. 33542
*Mark Bauer, 9302 N. Park, Indianapolis, Ind. 46240
*Emily Singh, 728 Geer St., Turlock, Ca. 95380
*Robert Linday, Jr., Riverside Dr., Old Forge, N. Y. 13420
Welcome to our Club, ladies and gentlemen, we hope to be reading of your DX'ing activities often here in DX NEWS. Why not send a note into Musings and introduce yourselves to the membership?

A VERY SPECIAL TEST BROADCAST FOR THE NRC...
Long-time NRC member Dave Gleason, now Program Director for WERC in Birmingham, will conduct two tests for the NRC. They'll be aired on January 29 and February 5th and will last two hours from 0300-0500 EST. A selection of adult contemporary vocal music will be presented and several collect calls will be accepted. A prize of $\$ 20$ will be given to the most distant listener during the test! WERC operates on 960 kHz and will be running 5 kw into a two-tower directional antenna protecting KMA and WFIR. Address reports to Box 10904 , Birmingham, Ala., 35202, in care of Dave. According to the Pattern Book this will be a real roughie along the Eastern seaboard but should still get out over a wide area.

## SCHEDULE FOR DX NEWS...

We now resume weekly publication of DX NEWS and will continue on a weekly schedule until the middle of spring. We are making a slight adjustment in the timing of DX NEWS production, necessitated by the fact that Page Taylor can only work on IDXD on Sunday. We will complete composition of DX NEWS when Page's section arrives on Tuesday or Wednesday; copy goes to the printer the same day. This means the other editors have an additional day to get copy to HQ each week. Editors should continue to mail sections to $H Q$ via Special Delivery.

## MECHANICAL FILTERS, FINALLY!

Kokusai has modified the distribution procedure for their excellent miniature mechanical filters (described at length in past articles in DX NEWS) and we will now be able to obtain them directly from a state-side representative without having to go through all of the delay and red-tape we've experienced in the past when we've dealt directly with Japan. The price is even lower this way, too! HQ is now purchasing a batch of these excellent 2.1 kHz units (for receivers with 455 kHz IF frequency only) for resale at cost to the membership. Price is \$15.00 per filter, please specify if for vacuum tube or transistor receiver. The first batch will probably be at $H Q$ by the time you read this; we will fill orders the same day they are received.

## REPORT FORMS AND STATIONERY, TOO.

Reception report forms are now available to NRC members; more details will be found elsewhere this issue. We also now have stationery in stock; two color printing with the NRC emblem. Price is $\$ 2.35$ for 100 sheets, postpaid.

DAYTIME DX INFO REQUESTED...
As we'd hoped, our recent articles on the limits of midday DX have stirred up some interest in this interesting but neglected area. Professor Ray Bell of the Physics Department at Penn State has sent along a copy of a technical paper he'd published in 1937 in which he'd measured daytime signal strengths in an attempt to verify the groundwave equations. He naturally observed midday skywaves but apparently none further away than expected on the basis of the mechanisms described in GPN's recent article. He's checking his old records further for useful data. Bengt Ericson in Sweden has checked midday reception there and a report will appear soon. We would like to ask our membership - especially the old-timers who listened in the good old days before the RF pollution really hit - to check their logs for long distance midday receptions. Remember, by midday we mean the period from 10:00 AM through 2:00 PM local time at the midpoint of the signal path. Please send whatever data you can find to GPN at $H Q$ and he'll include it in a future article.

NEW MEMBER KITS...
The last remaining problem from the fire which destroyed much of HQ last year is New Member Kits; the stocks on hand were lost and we've been slow in replacing them due to the pressure of publication workload, production of the Pattern Book and Domestic Log, etc. We're still working on NMK's - the recent abbreviation list appearing here in DXN is part of that effort. Any typing volunteers with carbon ribbon typewriters willing to help us out?
*GPN, BGK, CDP

## Pattern Book Corrector

The following are all of the corrections and additions to the NRC Night Pattern Book so far reported by both our membership and other DX'ers. In some cases the corrections themselves appear to have been in error; in the event of contradictory information we have used the master copy for the upcoming new NRC Domestic Log as the final reference. We will continue to welcome further additions or corrections and Pattern Book updaters will appear on an irregular basis here in DX NEWS.

550 2. City is Trois-Rivieres. All French Canadian names consisting of more than one word are hypenated. (RW)
10. Call is CHNO. (CA)
15. City is Bismarck. (RW)

560 21. Call is KBLU. (CA, KS)
23. Call is KCMX, (CA, KS)

590 2. City is Jonquiere. (RW) 27. City is San Bernardino. (R.W)

610 11. City is St. Catharines. (RW) 22. Call is KONA. (CA, KS)

680 17. Call is KKYX (RE)
720/730 2. Call is KIQX. (CA)
3. City is Gander. (CA)
7. Call is CKDM. (CA, KS)
10. Call is WMEL. (CA)
19. City is Faribault. (CA)
2. Call is CKNB. (CA)

960 23. KLAD does not operate at night; pattern is for CP which station does not plan to activate. (KS)

970 13. Call is WREO. (CA) 26. Call is KCHV. (CA)

980 13. Call is KSGM. (CA)
990 6. City is Mayaguez. (CA)

1100/1110 8. KBND, 10 kw , is now active. (CA, KS)
1050/1060 9. Call is WRMF. (CA)
1070 16. Is KHMO, Hannibal, DA-2. (KS, RF, RE)
17. Is WTSO, Madison, DA-2. (KS, RF, RE)

1150 10. Call is WCRK. (CA) 17. City is Mt. Pleasant. (RW)

1220 2. Call is CKSM. (CA)
1280 21. Call is KTLK. (KS)
29. Call is KFYN. (CA, KS) "

1290 23. Is KUMA, Portland, DA-N. (KS)

1300 23. Call is KPTL. (CA, KS)
1310 22. Call is KEIN, city is Great Falls. (CA)
23. City is Greeley. (RW)

1320 15. City is Lansing. (CA)
1330 12. City is Campbell. (KS) 13. Call is WRIE. (CA)

1350 2. CFOM CP is defunct. (RW)
1370 13. City is Fairmont. (CA)
1380 4. Call is WBBX. (CA)
26. City is Brownwood. (CA)
32. Call is KTOM. (CA, KS)
 Mon. Jan. 15 W T X 1470 Broadway, Virginia $5,000 \mathrm{D}-1 \mathrm{NRC}$ Se be Mon. Jan 15 B 1090 bee below Thu. Jan. 29 KT G D 1090 Dioga, North pakota 250 D-1 Nre 3:00-3:30 Thu. Feb. 8 NPCF 1430 Panara City, Florlda 5,000 U-4 NNRC 2:00-3:00 Mon. Feb. 12 K OTA 1380. Rapid City, South Dak. S, Tue. Feb. 13 KWHN 1320 Fort Smith, Arkansas Tue. Feb. 13 K G H L 790 Bilines, Montara
 $\begin{array}{llllll}\text { Sat. Feb. } 24 & \text { K L C L } 1470 & \text { Lake Charles, Louisiana }, 000 \mathrm{U}-2 & \text { NRRC 3:00-3:15 } \\ \text { Mon. Feb. } 26 & \text { 3: }\end{array}$ Mon. Apr. 2 U 1510 Wilmington, Delaware $5,000 \mathrm{U}-2$

W J D X. Tones and frequent IDs. He will use 5,000 \& 1,000 watt transmitters. Reports to Floy Jinard, Chief Engineer, Box 2171, WJDX, Jackson, Misso
39205. G. Vonderembse

W B T X. Time asked for was 2:00-3:00 a.m., but the Chief meineer has to sicn the station on that ayem, and suggested instead 12-1 a.m. We then suggested 3:30-4:30 with his resting at the station till their $6 \mathrm{a} . \mathrm{m}$. s /on, so we don't know what hour this TEST will take place. $12-1$ finds the channe ctill very crowded. mey 11 play iop 40 country-western instrumentals, and sone big band music, maybe some poikas, too. Various pitched cycle tones will be used, and hopefully, Morse Code call letter IDs. There oill be voice IDs, local weather, phone numbers, and perhaps some calle on two air. Trite Mr. Keitil Vollnogle, C. E., WBTX, 1470, BCX 337 , Bron

WWRL uas off MM 12/18, but did not notify us, so the TESTs planned were not aired on tint cate. They are:
WCPK, Chesapeake, Va. 2:30-3:00; KLEB, Golden Meadow, La., 3:00-3:30, and WLNG fas Farbor, II.Y., 3:30-4, this last one doubtful now as no word has come from Paul

 received here (3rooklyn) on Friday, Dec. 15 from IRCA's Dove Fquikner.

Everthing is in received through 12/27/72 except one single-spaced, small-written-in-pencil report. Anc a Happy New Year to all.

## MANAGU, NICARAGUA

Jveryone qrieved over thic tmgedy, but perhaps us foreign DXers did even more so, as this friendly city had mny friendly mdio stations and people. We hope they all survived this great tragedy and our hearts go out to everyone there.

RPNESTR. CCOPER - 438 iast 21 Street - Brooklym, H.Y. 112Z - Carrier Route 50 A v/9 from BBC-1083, but daesn't specify location of the $X R$ or its power, or anything. I count it, 'cus I know what it's for, hi. MR1 12/18- WHN1050 ofi \& Colombian noted on 1055 € $3: 21$, weak, \& killed e $3: 47$ by writ's oc retum. Stan Morss exys it we In Voz de Centro; Espinol. Wenk sis on 1110, unId, at, and one even weaker on 1345 , $4: 18$, too much in the mud to get any detail at a11, even language, but I'11 bet cot on SS, hi. SS $\% / \mathrm{U}$ KSI-11CO $64: 31$, too. On the after noon of $12 / 24$ © 2:35, I noted $F F$ CHRS-1090 like lo tons in the clear. The $3 S$ on 615 wan't YM, but R. Tricolor, Cali, Colombia, honra e $12: 20-12: 330 m$. On 540, R. Perija, Venezuela, $a$ R. Horizonte, Colombia in, out all nM, botp strong. XEVIP-1560 AN in EE w/occasional GS IDs \& Christmas mx, IDins in EL as V.I.P. Radio and in $5 S$ as Radio Veep. Hew were R. Cimo-1548, mostly talk of the Maman traceLi but sme m, AH, \& R. Columbiz-1325, Likoria, Costa Rica, also fil. Looking for recorc, Sas Palo, Bmzil, C $2: 20-2: 2 J$, for umpteenth report to this torbe a




CAFL W. DABELSTETN - 3300 North 56 Street - Lincoin, Nebraska - 68507 DX has been slow at this site lately - mostly tuning in $\mathrm{f} / \mathrm{cs}$. $11 / 17$ brought $r / c-T T$ from WBEK-1260 Blakely, Ga. © 1. The $s / o n-S S B$ from WHLD-127 Niagara Falls heard © 7. All-new KLidj-850 katerloo, Ia. now a daytime regular (ev en $W / \mathrm{KOA}$ ), first heard on 11/19. KWAD-920 Wadena logged w/c/v @ $7: 15$ on $11 / 20$. 11/21 brought r/c-TT from WEAS-900 Savannah @ 2. KPAR-1190 Albuquerque r/c heard (e) 3:05 on 11/22. KRSP-1060 (Crisp Radio) $s / 0$ ff heard 11/24 @ 7:17. This completes Salt Iake City for me. WSWG-1530 Greenwood, Miss, heard @ $7: 25$ on $11 / \nsim \mathrm{w} / \mathrm{relig}$ ious $m x$. The $\mathrm{r} / \mathrm{c}$ from WFIN-900 Philly heard $11 / 25$ © 5:25. KAMA-1060, the rela tively newie in El Paso was heard on $11 / 28 \mathrm{w} / \mathrm{SS}$ programing e $6: 50$. Then at 7 , they s/off in $\operatorname{Si}$ \& were gone. I thought that U.S. stations that carried other languages still were required to ID in $E E$. Does that new role waive this requirement? KKIM-1000 Albuquerque heard $5 /$ off-SSE © $\mathrm{E}: 57$ on 11/29. KVSL-1450 Show Low, Ariz. heard 12/4 (e2 2:35 w/TT. 12/6 brought r/c-TI from KaNE-1240 New Iberia La. (2) 4:15 Latest veries are: CHLO KNBO WAMI KBRE WVOL WPCF WEIC XERV XEW KDJI KSXX KPAR YNX XEFB, a $11 \mathrm{v} / 1 \mathrm{~s}$. XETM KFMB KMPL SEOY WFLN WJW c/qs. CFGO KRED, v/fs. WBBK KCCIJ KWAD, v/rs. Totals now are 1,504 logged \& 1,327 verified. I received a letter from $C$. Marhis, $C E$ of $K B R X$, \& he sais they received $A T G H T$ verifiable reports for their TEST. Included were ontario \& Caliromia. He was pleased with the reports but disappointed there weren't more. I noticed in DX NEWS \& DX Monitor several others reporting hearing the TEST, but didn't report as they had heard them before. Might I suggest in the future tha jif you hear a DX TEST from a station you have already verified, at least have the courtesy to drop them a postcard. This would take only a minute \& I'm surethe $C_{s}$ who took time to conduct the TisT sure would! Iast Sat. the Iincoin clan chanced our 3200' Beverage to an 1800' one. They had to move cattle into one of the fields we used. This is constructed at the $U$. of Neb. field laboratory near Mead, Neb. The Beverage is great but is kind of inconvenient having to drive 35 miles to use it. We do plan another sN session there soon. 73.

RICH RDIIE - 152 West Rose - St. Louis, Missouri - 63119
Hi fellow members of NRC. Long time no Muse. Some local notes: KMOX -1120 doesn't seem to harve a regular SP, a lso neither does the new (as of 7/10/72) WESL-1490 Fast St. Louis, Ill. And bad news, KATZ-;600 is now AN7-NSP. So far I've gotten five DX TEST's out of 35 or so, hi. Biggest news is I logred Country f 19 in the form of zok-1100 St. Johns, Antigua - also makes Country \#13 verified. The KYMN-1080 TDST made it in on both 1 kw \& PSA of 4.2 w . Another of my better cat ches, KCHY-1530 Wyo. for another state capital. MM $12 / 11 \mathrm{KRGO}-1550$ Salt Lake City heard on ET tune-in 2:40 to $2: 50 \mathrm{~s} / 0 \mathrm{ff}^{2}$. KRCB-1500 Council Bluffs brief ET 2:342:40, DX-TZST WMWM-1090 tune-in 3:04 to 3:20 tune-out weak, XPPRS ZRM. And WMYY1390 Albany, Ky. 4:17-4:30 on r/c. Totals now at 1,062/623 47/46 6/5 19/13. I hope to have more $D X$ next time. The NRC Nichttime Pattern Book is really great! I can't wait until the day pattern bcok comes out. Welcome to all new memiors \& anyone living in the St. Louis aren feel free to correspond. So until next time, Mer ry Christmas \& Happy New Year to all! Good DK \& 73:!

STAN MORSS - Route 3 - Broadford, Massachusetts - 01830
$12 / 2-$ WPUV- 1580 Pulaski, Va. in already @ 3:40pm yet while looking for WSUF. WCEC-810 Bpcky MOunt, N.C. s/off @ 5 Pm , then needed WQIZ St. Georges, S . c. to 5:08 when WMS Murphreesboro Tenn. took over. Veries, XEPRS, WARR. $12 / 4$ CIQT-1110 Admonton AIta. 2am, plenty of KFAB QRM \& some SS, probably YVRX. WEZE off \& a Dolly Holiday tape show on 1260 giving temperature as $1^{\circ}$ below in the Capital City, what capital city? (Reykjavik?? -ERC) WGZR off \& CJOC s/off © 3, no sign of CHSC, evidently not AN any more. CHQR-810 in clear e 3:15. WHDH on 790 as well as 850 @ 3:46-not earlier, though? YVOV-540 Maracaibo easy e 4:12am. Verie, card \& penmant from HJAQ, still listing 680 on penmant, also an HJAR pennant. This was an error I cuess, as it's been several years sunce I heard that one - same owner - also owner of 1 Ia Voz de Barranquil1a-760, 10kw, per stationery. $12 / 7 \mathrm{FM}-$ WPIC-1470 Plymouth, N.C. over most, but not needed, looking for WBIX. Looking aca in for WSVP, I found WIMM on top @ 5:30. WAXC-1460 Rochester u/WOKO \& about equal to WBET/WCMB e 6:25pm for a new one. TAs strong this PM - I worked on EE on 1546 but too week \& too much WPTR.

RON MUSCO - 16 Chestnut Drive - Windsor, Connecticut - 06095
Overtime at work has shifted DXing from SM to MM, 12-3:30am. Thanksgiving AM I noted the new WTRR-1060 at $\mathrm{S}-5 \mathrm{w} / \mathrm{high}$ school FB 10:59-11:30am. 11/24, DXing 1380. Possible WFSR s/on 5:27; WBBX s/on $5: 30$ but I couldn't hold it. (I doubt WFSR, Ron - they can't s/on till 6 -FRC) IT on 1450 @ 5:34am, and possible WRDO-1400 @ 5:42 with Bumper Sticker Contest, but not $100 \%$ sure twaw they. That night WFNC-940 way on top, 4:30-4:45pm. v/1 says now on 50kw days. 11/20-WTEL860 4:30-4:45 way on top with Polish program, womn announcer. 11/27-Per ERC's tip I heard WGOE-1590 w/ET 12:45-1:O6am and aga in e 3:05, way over everything with weird mx \& cuts. WGBB-1240 finally w/WBAX nowhere in sight 1:21-1:40am w/no spots \& rr. Aurore this night? WKQQ-580 on top 2:11-2:32an w/EE ID @ 2:11, then SS IDS and "Mes Musica." 12/4-Beaucoup TT all over the dial with rary an ID. 600 had one 1:25-1:30 and beyohd, who? TT noted on 740970950 1050, all between 1:30 and 2:30am. CKWS-960 s/off e 2am. TT here © 2:34 and an unk w/HI of Georeia spot. WOKY-920 ET, ID © 2:06. Very tentative $\mathrm{f} / \mathrm{c}$ from KGHL-790 2:45-3 w/tester beneath them till past 3:07. 12/11- WORC-1310 w/ET, ID © 12:20am for Mass. A+9. 600 TTer here asa in 12:51-1:04am w/no IDS. WPTX-920 1:10-1:25 ID with ET. A call to them that night said chance of modulator tubes and testing with 5 kw . The CE sais he tests MMs and will be instalinn new audio panel and may come on with the 5 kw again Watch this one MM around midnight. WINA-1420 TEST heard here 1:35-1:50 w/WHK/WBSM QRM. WJET-1400 unn © $2 \mathrm{w} /$ tester beneath. 1460 had TT, then brief DT, then gone © 2:33. WMM-1090 TEST L\&C 2:56-3:07 when WTTC started up the mx and killed it. V/I- WGBI CHLO WFNC WKAQ, \& v/q, WHLO, courtesy Wes Boud. Merry Christmas and a Happy New Year to all.

BRIAN VERNG - Apt. 917-75 Thomsliffe Park Drive - Toronto 17, Ontario
Having been in HRC for 14 monthe without Musing, I'm discusted with myself - here's a brief intro. I'm 25, an electrician, haven't been DXing for the past 12 monthe now, but I'm back with my little 15 transistor 14 diode radia \& cassette recorder. Last year in Levack, Ont. I mamged to get veries from all the U.S. clear channel Class it stations. I was very lucky to get veries from KFI \& KSL. Total vuries, 94; 18́ heard, new veries: WFBR-1300 $\mathrm{HKST}-1280$. Veries out to WWRL WOHO WJAC WJIS WSAI WXYZ WERE \& new call, WWE. I just the Night Pattern Book which is just incredible and indispensable. I would like to thank Wes Boyd for pointing out all the advantaces of joi:ing NRC, \& everyone who helped orgnize a IEST from WSIF $2 / 71$, hich is when I started this wonderful hobby. I look forward to Husing agaim. The best to all this Christmas. 73s. (Welcome to the Musings Section, Brian - better late than never, and better yet, OFTEN! -ERC)

CERIS LUCAS - 407 Elmwood Avenue - Ithaca, New York - 14850
clude: $12 / 5-\mathrm{WKDR}-1070 \mathrm{~N} . \mathrm{Y}^{2}$. © $4: 05 \mathrm{pm}$, WNTY-990 Conn. © $4: 16$. Several attempts cluce: WIKW-900 have been unsucis $^{12}$. © $4: 05 \mathrm{pm}$, WNTY-990 Conn. © $4: 16$. Several attempts at WIKW-900 have been unsuccessful; back in Fairfield, Conn., WLKW used to be very WHYL-960 Pa. © $4: 35$, WELI- 960 Conn. © 5 . $12 / 7-$ wNTN -1550 SSS. WING- 1410 @ $4: 30 \mathrm{pm}$, WHYL-960 Pa. @ 4:35, WELI-960 Conn. © 5. 12/7-WNTN-1550 Mass. © 4:17pm s/off,

## 8

WIAN-1390 Pa. A $4: 36$, WEEN-850 Pa. © $4: 45 \mathrm{pm}$. $12 / 8-$ WHDH- 850 Mass ., WRYT -950 Mass . © 4:12, $\mathrm{HMB}-1420 \mathrm{Tenn}$. © 4:27, WREO-970 0 . $4: 49$, WRC-980 D.C. © 5:09pm "Top 40 HFPM-1260 Ind. © 5:14. 12/9- WANV-970 Va. © 3:46pm, Quebec-1060 © 3:53pm, sounded like call was CJFA instad of GJTR, FF. WKCN-1420 Va. © 4:3BDm, CKCV-1280 Quebec © 5:08pm, FF. 12/10-CP WCWW-1140 testing w/OC, ID © 1 pm , WVPO-840 © $3: 30-\mathrm{m}$ as I discovered they make it here weakiy on daytime ground wave, when my WICU image on about 832 is nulled. This WHCU- 832 imaze is similar to the WCSS-850 imaje $\frac{I}{}$ get in Connecticut. WIDI-910 \%. E $4: 32 \mathrm{pm}$, WAVA 780 Va. © $4: 37$, NX-Radio, WCKB-780 N.C. © $4: 59 \mathrm{~s} / \mathrm{off}$, CHRL-910 Que. © 5:30pm, FF. 12/11- WMMM-1090 TFST noted quite well e 3:06am, WHKY-1290 N.C. @ 4:17pm, looking through my logs I noted I had never logged semi-local WKOP-1360, so I logged them © 4:29pm. WIRE-1430 Ind. © 6pm. 12/12-
 1330 Md . © $4: 45 \mathrm{pm}$ sioff inc, wres. $12 / 15-$ WKBR- 1250 N . H. a bit or a surprise © 5 tern change a couple minutes later. $12 / 15$ - WKBR-1250 N. H . a bit or a surprise e
pm as this frequency is usualiy was's stronghold. 12/16- WGCE-1590 Va. e $4: 59 \mathrm{pm}$ pm as this frequency is usualiy waEs stronghold. s /off. Total Ithaca loggings is 597 . Iried calbrating my S -meter with the loop antenna being used by calculating the field strengths of various stations with the use of FCC urves. It was hard to get accurate results, but it appears the s-meter on my Lafayette $\mathrm{HE}-30$ registers a 3 db change in signal for each atcual 1 db . $\mathrm{s}-9$ corresponds to about $40 \mathrm{uv} / \mathrm{m}$, with the meter pinned (plus 54 db ) at a little less than $400 \mathrm{uv} / \mathrm{m}$. At the low end of the dial, there seems to be a loss of thre or four db . 73 \& good dx to all in the new year.
dQucias D. WHite - Spence Apt. \#8-d - Metroplos, Illinois
Ey way of intro - I am 23, have a degree in Math, and now an doing grad work at Southern Illinois $U$. Though a member of NRC for almost a year, this is my first Muse. 900k has been good to me lately. Besides logging KcLw-900 \& $\mathrm{KMCO}-900$ to give me all four Texans on that frequency, the following have been heard: Barbados-900 on 12/11 © 7PM EST; CKBI-900 12/11, time unnoticed, but about 7:05-7:10pm w/WX for Saskatchewan and Manitoba; CVVI-900 on 12/15 © 4:30am announc ing as "The Sound of Victoris", then into an instrumental version of "Alone Again Naturally", woderate interference from pest "La Voz de Cali." who was the strong YFC on 900 12/11 1-2am3 Lots of call jingles given, but alas, I couldn't decipher \& I have no tape recorder. Re Fr. Pejza's R. Mexicana"-580 in $12 / 7$ IDXD, this is Chihuchua. I beoieve I remember Fr. Fejza mentioning that Cd. Moreios was a suburb of Mexicali. Actually, it's half way between Yuma, Ariz. and san Luis, sonora, for of Mexicali. Actualiy, it s half way between Yum, Ariz. and San Luis, Sonora, for Remerber - NRC is the best thing to happen to Medium Wave DXing since the radio! Remember - NRC is the best thing to happen to Medium Wave DXing since the radio
(Welcome to the Musings, Dduglas! Please drop in to our section OFTEN! -ERC)
FTWARD C. TAFEL - 413 Seymour Street - Syracuse, New York - 13204
Hi. I am a recent member of NRC, \& it seems it would be a pleasure being a pert of this great Club! Well, I have been DXing for seven years, mostly on Utilities, until the BCB interested me. I have been DXing international this last year, with a Hammarlund $\mathrm{HQ}-200$, and a Hallicrafters $\mathrm{S}-108 \mathrm{i}$ I recently purchased an SM-1 - That works GREMT! I have veries from WRON WMBO WFBR, \& radio Belize-834. It seems they are being heard with fair-to-good signals lately (adio Belize, that is). Recent card noted they have extended broadcast to 0500. (I think they go off around $1 \mathrm{a} \cdot \mathrm{m} .$, Edward - about 2 Christmas AM -ERC) Recently I have heard WPOP WAPE WFIR CKWW ( $500^{\circ}$ ) WGBI \& CMW-CMHI. Oh by the may, I have about 33 states (I gope WAPE comes through), seven provinces, out of the 231 stations heard. Most of the stations have come through, yet WFEA still refuses. I hope you all have a good Holiday! If you like to write, please drop a line. $73 \mathrm{~s} \&$ best of DX . (And a hearty welcome to you also, Edward! Pleas Muse regularly! -ERC)

ROGER N. WINSOR - 718 North Fremont Rood - Valparaiso, Indiana - 46383
I am still alive \& well, but doing nothing in DX. The AN situation is too from everybody else and "pluc in" as ry wife used to call it. I have many fond memories with the ten-year association wi/the NRC but I have to call it quits. So to
you, liRC, you, finc, food-bye and may you have continued succezs in DX NEwS and also with gov-
eming body. 73 to all. (Likewise, we'li miss you, Roger! -

MIKE LEVITTOU - 12213 Village Square Ferrace 4401 - Rockville, Maryland - 20852 In way of an introduction, I ve been a member of the Nec since 1969 but rarely contributed in the past, so this Musing will be somewhat long. I have lived in Montzomery County, Ma., except for five years in califrnis, when I went to the University of Cal. at Berkeley. I couldn't get a decent job out there so I'm bak here again. I work for U.S. Labor Department. I DXed extensively out in 1 from 1066 to 1971, using an Ho-180 except for a short stint with an old NC193D wich with we Kulk of the URCA, and most of this stuff was reported under his rame in res bule or In adastion these (wich included about ton hil grevethe IRCA bulletins. In adaction to these (hirch incluacd (bipht mitern) wrave yarders) "solo" DXing produced WKAQ-580 WMBA-850 WFDF-910 (jight pattern), WTIC 1080, WINK-1240, WEZY-1350, Virsin Islands-1000, WWOM-1380, WSAR-1480 CHYM-1490, WAFI/WKOG/WTODof the better cal. catches. Im currently using a Drake shn in a several type of loops - an SM-1, a Sans-rino loop, \& an NRC FET Allazimuth loop using GPN's oricinal FET preamp rather than the design given in the nitazimuth loop plans. as to reactions to the controversial Drake SPROH, it is the best $R X$ by far used to date. The rost obvious advantages are the highly accurate frequency readout \& excellent audio quality, the latter especially valuable in trying to make sense of a weak freign broadcast. Sensitivity is very good but the RX needs an antenra properly matched to the mather unusual unbalanced antenna input. The Sanserino toop works poorly, but the SM-1 works fairly well, since the SM-1's output, like the SPR-4"s input, is unbalanced. Selectivity - the 4.8 k filter is best for ordingry even-frequency DX but the 2.4 k filter is best for splits and DX close to strong locals. Even with the 4.8 k filter, splits of 1 k or less (sich as the 1269-plus Cuban) have been heard w/readable audio w/proper use of the notch filter. A properly aligned R -3904 RX might work better under some circumstances but it is so bulky and mintemnce so complex (the SPR-4 weichs 12 lbs .!) that these factor bulky by
 il lectrical no sise保 SSB. The notch filter \& SSB limits undesired sidebands wella \& the SPR=4 ${ }^{\text {s }}$ fine tuning is very hekpful in properliv tunine for zero bant. v75329. Good DX .

JOFI OLDFIELD - ${ }_{4} 181044083$ street - Edmontion, 11 berta - TYH M1
iberta gets four new stations: cJCK-1230 1,000/500- Ft. McMurray, which will progrem nuch ethnic (FF, EE, Indian, Ukranian); CJPC-1170 10,000/5,000
 ISP Drumheller), and CJCi-1490 Coleman *three hours live daily; otherwise //-CJOC -1220 MI-6 Lethbridge). EJCR is on the air, \& powerful CBXI acved to 1400 to avoid GJCR. More hockey network sturf: CJCi-930 CFGP-1050 \& CFIC-900 carry inla


 dult rr, now $n i-6$, off Mss 3-7:30 EST. They publish an SC too. CJOI-1440 (exNWP, mostly MoR tapes) is now mostly rr \& off an daily 3-8am EST. CH2T-1110 NSP is now "S yunds F...iliar" (no longhair - just uptempo \& flashbacks). Local CJCi930 , CFA $C-960$, CFCI-1060 \& CHAB-800 nre all to years young those writind for a CJCA verie should ask for their 50th year coin - nice. Has anyone else seen Britain's BBC ledio-TV postage stamps? Re last Musing: Phone Freak number is 424 -7555. Anvone who got a slightly fast cassette of mine, let me know. Glotz must have zilched the voltage. My voice isn't really that ireird. "Chicken Man" and "The Tooth Fairy" are sone, but local CHED- 630 proudly (?) presents "The Stoned Rancer" (na Toronto); a iso carried by CK62, Recim. (Mo's that? -ERC) Page should get the Glotz Amrd for "Why is a Country?" Simply brilliant! And now I can laujt at splitting the NWT, wisch is NOT as funn as the Countries of Scotland, Wales \& 1 laska, hi. I was frooled last month by CJVB-1470 ISP carrying Chinece. Vancouver has the second largest Chinese population in Na. I've never seen it in Irci orivic but all camdianc must play 30 ; mx written or sunc by a canadian. A11 lots must now record E ERY song to prove it to CRTC. If you hear a mre Canadian, sonf titles MY cet you a verie! Mermy christms or what you celebmte.

G11bert \& SLlioe Ialands. Taruwe, F32-1 0807-0918 12/11. 4 steady 39 axeept for one 40 geeand fade to 33 . IL taiked 0807-0816. Song $W /$ mañ and IL announcer to 0828 . Than and songe to $0859: 30,1 / \mathrm{by}$ Is and ID. KE longe like Roy Orbison. Blasta of terrible statio. Another engy one for Woers, but not here, as only 3 times last year. (oldfield, Alberta)埌. poss AFF $232,12 / 10$ wth venk audio, aadly separnble from Wh. (Giannint, Ili,)(whit wes sudio doing, olv-ed)
Herico. xKor ( $\mathrm{R}, \mathrm{Mi1}$ ) $075912 / 11 \mathrm{w} / \mathrm{s}$ good Bignsi o/Kror with talk and sone fast mx. (avaninins, Ill,)
eloof Yetherlands. Lepik/liliversun han progran II frome/on to 1900; then progran III Iron 1900-0000, (DSW0I) (Kight help in //to Third then progran 1 II irogran on $1594-$ d)
1030 Solomon Islands. Honiara, VQO at 0830, 12/11 Polyneaina $E x$, poor, x/bitg of EEQR. Hy and log of this long-aought miraole. (01drlold, Alte) (Axen, and nioe oetoh! $=$ ed
1040 Golobbis. WWAI, Barranquilla w/uptenpo mx 0630, 12/17. Eap1d Tropionl
 Monday-Fr1day $0915-1130 ; 1500-0730 ; 2030-0115$. Ssturdsy: 0915-1130; 1500-0200, Bundsy: 1000-0115. (DSWOI)
1100 Ooloabia. HJCF, H. Reloj 0015, $12 / 11$ mentioning Hogota, and playing slow 98 bonge, WWG popped on 00 and helped reception imensely st 0615. (61annin1, 111.)
-1155.247 Gosts Elos. Unid noted here $0300,12 / 22$ on high side of $\mathrm{TB}=$
斯 7 (feylor, HJ)
 (Betohs Your $88-600$ it'n per Dominionn, "Radiolkndian bi, bod)
-1169 ifara * Ianan. DJ1bout1 gKED: 0300-0615; 0900-1030; 1530-2000, veekdayn. Sundays: 0500-1000; 1530-2000, (DSTMI)
1170 oolonbia, I must point out et considersble length thet the "R. Ambalin hrd on 2340 (but no longer) 18 pronounced 88 follows:
 venlas ( 74., Glemnt-ed)
1214 11benls, F1rans 0330, 0430 on $12 / 8,12 / 9,12 / 10,12 / 11.111$ in 14, daminsted H. One through O555 on $12 / 1185$ laet oheok, $H$. One only a het oonsidering the srachaix level of $12 / 9$, when they were noted between $0500-0715 \mathrm{w} / 21$ ght mx . Only moderete inlop fron VGAU. (Giannini, Ill.) (axoellent report-ed)

+ 1265 St, Kitta, Mew $50-\mathrm{kN}_{\text {, outlet planned here operated by ownern of }}$ PND2-1295; sane fornit planned. Schoduled aix date pet at $1 / 2 / 73$. (DSWCI)
el265 3t, Y1t18. "Padio Paradiee" noted teating 0322 12/22 oonoluding announced $E 7$ w/Xnes mir $30 / \mathrm{sy}$ Eignal vith super-modulation P. O, Box on st. Kitta given as nailing qRA, but will need to ropiny tape to get box number. Qomplete ID by announcer with ts Southern aceent, (Taylor, HJ)
*1295 St. Warten. PJD2 will cione down whan new 1265 taken to the biri faelilties vill be assunsed by a now oomanreini outlet. (DSMDI) Guatemala. TGYJ Guatemale 01ty "Onion R. ${ }^{\circ} 053212 / 15 \mathrm{v} / \mathrm{L} \mathrm{mx}$, f/by ID on top brierly. (Biminds, HJ)
* 1330 sicaragun. Gonflrming Vab listing of H. 15 de Septiembre, Eatelf, move fron 1210 is my reception on $2660,12 / 160144 \mathrm{w} /$ " Oanal $1,330^{\text {n }}$
 ID), diatorted dedications;0259 tapk, ofoff, wh. hots from 2-wiy GBM; poor (Glenn Hauser, Texss)


Albania/Togo. Mrane excellent 0500, 12/9 in GG, 0530 pause hrd sudio presumed to be Iome but not strong enough, however. FIrana has been good here 2300 in SS from 12/8-11. Mod WFIFr-1390 slop at times. (Giannini, Ill.)
$1399.75 x$ rexico. XEIH, loaponeta, layarit, first time hrd on 2798.5
1399. 2306 w/ranchera mx, ID, MST TC, *** omplacencias musicales...todos los dias..."; 2-way hets but fair. Heplar of or those who may need Neyarit on Hauser, Teras). (Het noted precisely here $12 / 23,0200$, bearing correct, are they still here, Glenn?-ed
1420 Vestam Samoa. 2Ap, Apia (or KCCN, Havail) 0835-0850 12/11 poor poly wr. Tould have been both. Ohecked all Hawailan freqs all ing, Gat mone noted. (Oldfield, Alberte) Neen iand mule AFB $0710-0735,12 / 11$ solid rock at 56 (Oldfield) uatris. Tianna 2255, 22/8 with light mx, poor. First time logged $\because$ os sountry $\# 50$, but some slop from KMBD-1470. (Giannini, Ill.)
1525 Nan sopie s Republic. Urumchi taped again 2134-2203 12/14 until जnemout - at 215j, "Govorit Pekin" ID by woman, then anthem 3ast a Red?9-rmi (Da-ed) and carrier cut $2155: 30$ - very weak arneer left on rreq - at $2159: 30$ carrier back on but mach weaker ani at 2200:30 chimes and into standard format but too weak to ang moices. (Ray Moore, Yasa) (Tnx excellent report, Ray-ed) isare Issas. Djibouti SKED: weekdays, 0300-0600, 0900-2000: mundajs: 0500-2000. SH 4780 kHz on late for Ramadan this year. SSMOI)
1565 foiombia. HJZT definitely on 3130, $12 / 17$ as early as 2320 W/uptempo six; wery mak; 0400 brief $s$ /off mentioned a freq in the 15 , , but Tonceadable; il and off. RFS says R. Sensacion, yanizales, is on -565. (Hauser, Peras)
1586 r. Germany. Langenberg 0030-0500 on 12/9 armehair copy. Rarliest ogring of WDR came on $12 / 11$ at $2245 \mathrm{w} / \mathrm{symphony} m x$ and fair lvl. (G1annins, Ill.)

1590 Noxico XRVOz, Merico, DF, finally dipinite R. Voz ID 2301 on 12/17, fiving phone number for mx pgin: usual het from XEPT (2nd harmonic Geceptions) (Hauser, Texas)

- 1594 Greece. 1 PRes Athens, 1 kW . SKPD: 0400-2300; news hourly 0400-2200. (Nthens Jews, il/ $28 / 72$; Iaylor, NJ via brother pat vacationing in Greece.)
"Rarely do I mention any radio publications in this column, although some gems have crossed my desk. By policy, I do not 'plug' any dxaid, log, book or device. But in the constant stream of dx material, an occasional superlative piece of work is so outstanding as to warrent special attention. The nighttime pattern book of the NRC is such a publication..."
(Matt Zahner, BCB Editor, in the bulletin of the Newark News
Radio Club) the bulletin of the Newark News
Radio Club) -

Deadine: Fridays of each week.
D Phone: 201-838 of each week. Receptions:
527.4 Costa Rica. R. Rumbo, Cartago msd. here $12 / 27,0050$ (Schatz, FL) 533.000 Unid. msd. here 12/27. 0052. (Schatz) (poss. Algeria. -ed.) 534.994 Grenada. R. Grenada msd. here 12/27, 0054. (Schatz)
$555.008 \mathrm{St}$. Kitts. 212 meanured this frequency 12/27, 0055 (Schatz)
570 Colombia. HJND, Bogota noted AN $12 / 25$ with Xmas programming (JMP)
606.002 Oosta Rica. TIAV measured here 1227 , 0105 (Schatz)
615.012 Unid. IA msd. here 12 27, 0057. (Schatz)

629 Iiberia. ELBC, Monrovia proposes increase to 50 kw . (Schats)
650 Dominican Republic. HIAT, R. Universal, Santo Doninge on $12 / 25$, loud over HJJX w non-Kmas programming (typical IA stuff). 654 , Harry L. Helms, North Carolina
660 . 51 Salvador. YSS measured here $12 / 27$ at 0101. (Schatz)
Unid. Thought it was an Indian langarce here 1225 at 1056 , but probably was a mixture of Naori (or related) and PF, as
"Joyeux Noel hrd after GE chorale arrangement of
Go Teil it on the Mountain". Sounded 1ike EE nx 1105, followed by Polynesian mx. Slow, deep fading. 2YC with mx for the natives (Pete Taylor N. Korea. MM 12-18 at 1051 in KK, but Vy high $N L$ prevented much from getting through. (pejza, Oalif.) (is this a new outlet? eed) und. 12-25, 0910 in SS doing a job on WLH, but on top only
715 Unid. IA here 12-18, il55 with singing, faint signal. Honduran only one here whioh has been reported, but their s-on listed 1200. (Pejza, Calif.) (probably they a bit early;slogan now "R.Cariben-ed
724.971 Surinam. SRS measured here 12-27, 0107. (Schatz

735 unid. noted $12-31,0600$ s-aff with Ecuadorian enthem. (Taylor, NJ)
745 S. Korea. HLKH (not HLKG as rptd in DXN some time ago) Kwangju tentatively the one hrd 12-18 at 1150; music and male vocal, too raint to be sure of language. (pejza, Calis.
750 Nicaragua. INX, Managua on 12-25, 0920-0955 w-emergency program. Names of persons and families w-info on condition. Various spkrs, ometimes would be interrupted at mike and would hold conferences on the air, background sounds of chairs moving, and chatter. Vy poignant speaker 0925 kept repeating "Managua está destruido" over and over; carrier left air several times. Several Americans listed as being safe---places like Brooklyn, San Francisco, Miami hrd. WSB off, heavy QRM from another SS, lost to them at 0955. No other IN either SW or Mir noted during several checks this morning. Most saddening to hear something iike this on Christmas morning. (Helms, No) (agreed-ed) Colombia. Medellin, HJDK 12-18, 0810 bombing in; Colombians good this AM. (Pejza, Calif.)
750 Cuba. OMOI, Havana noted 12-18, 0806 with Reloj Nacional format along with WJR and KGJ. (Pejza, Calif.)
*760.604 Venezuela. YVQQ, Puerto la Cruz measured hr 12-27, 0109 (Schatz) 764.988 El Selvador. YSKI msd here 12-27, 0110. (Schatz)

770 PSKL probably the one $12-18$, 1148 with music, but faint. ( $F$ JP)
770 signal: (Pete Taylor, dalif.) Colombia. HJJX, R. Tequendama 12-18, 0844, in very well with rock instrumental and ID. (Pejza, Calif.)
*771.1 Costa Rica. TIH, R. City measured here 12-27, 0112. (Sohatz, FL)
-805 Unid. Feidt's "R. Gero Hombre" also hrd here, 12-25, 0256 with "E1 Dond or Pasa", 0258: R. Similar to above by YI, then EE mx; fade in and out. (Glenn Hauser, Texas.) *ovid. measured 804.985 12-27, 0113. (Schatz, Florida)

810 Colombia. HJOY, $\mathrm{R}_{0}$ Sutatanza 12-18, 0924, all alone on the
channel after KGO's carrier went off, with tropical music. (FJP) 824.981 Costa Rica. TIOS, "Titania" measured here l2-27, 0208 (RFS 834.044 Belize. "R. Belizen measured 12-27, 0115. (Schatz, Florida) 840 Panama. HOI80, "R. Itbertad" 12-18, 0928; first definite ID with SID. 111 alone. (Pejza, dalif.)
e"R. Inbertad" ID with Glenn Milier type mx popped in obtrusively during very slow quiet piano mx 12-25, 0903. I tuned in egn 0917 and heard. "Back to the Bible" in EEE and some cl $\mathrm{mX}_{\mathrm{n}}$ ami for rest of morning couldn't ID either. HHAS 00 on 0935, IT 0937, 90n 1003. One set of time pips hrd at 0900 and two of them at 1100 but just couldn't get IDs. Pop IA $m x$ after 1030 over and under WHAS. (Pete (can anyone confirm my suspicions that it might have been St. Iucia, ${ }^{*}$ R. Oaribbean ${ }^{\prime \prime}$ ? -ed.)
844 G11bert \& Ellice Islands. VSZ-1, Tarawa noted 12-11, 0822 with Yoman talking, mx 0825, more mx 0837. (Foxworth, NY) (Welcome, Bob: h1) Crarawa 12-18, 0923 with familiar gal talking. (Pejza, calif; Rrarawa 12-31, 0742 fade-in with woman talking, peaks to S7 (Faylor, NJ) frarawa noted late December, mentioned on phone. (Schatz, FI)
850 Oolombia. HJKO, Bogota hrd 12-25, 1008 with CARACOL ID easily under KOL $\infty$. (Pete Taylor, Calif.)
850 Guatemala. TGX 12-18, 1142 in quite well with mx, spots with mentions of Guatemala. Forgot to report $1 t$, but also heard with ID as "R. Giros" a couple of weeks ago. (Pejza, dalif")
855.151 Netherlands Antilles. PJC2, duraço "Ourom", measured QRG here 85.151 12-27, 0116. (Schatz, Florida)

877 Korea. Womsan 12-18, 0950, kind of faint with man in EX. (FJP)
884.999 Yontserrat. Plymouth msd 12-27 0118. (RFS)

930 Micaragua. YN:, "R. Mundia1", Managua on 12-18, 0901. A new one for me; finaliy, KHJ's SP and my listening coincided. (congrats-ed) Fropical mx, interspersed with announcements in SS. KHJ back on at 0953 recheck. (Pejza, Calif.)
964.943 Micaragua. YNLT, "R. Managua" msd. here 12-27, 0211. (RFS)

967 S. Torea. Seoul. 12-18, 0955, another new one with man in KI; faded across the hour (naturally); but think I heard one chime. (FJP)
995.561 Bcuador. HOEW2, Guayaquil msd. here l2-27, Ol23. (Schatz, FL)

1007 1. Korea. 12-18, 1003 fair with man in Kk. Horth Koreans not up
07 to their usual strength this morning. (Pejza, Galif.) (Hamhung moved?-ed to their usual strength Painama. HoJ2, Ias rablas measured here 12-27, 0127. (RFS)
-1100 Nicaragua. ITO Ia, Mder presumed earthquake victin as no longer hrd - 1100 Nicaragua. 12-24 at 0422 on 2200 kHz . harmonic. (Hauser, Texas)

1100 ntigua. "Zed $-D-K^{\prime \prime}$ with special Ohristmas program AN 12-25. Noted at 0824 tune-in and left all clear over HJCN after Whrl $\Delta X R$ off 0830. "Merry Xmas from the Big 11", etc. and much traditional Xmas Should have been easy anywhere in Korth America. (Helms, NO)
1124.769 costa Rica. "R. Capital de C.R." msd. here 12-27 0137. (RPS)

1140 Philippines. 12m18, 1157. Vo\&, Poro; ske "Ror s-on and "Jingle Bells". od saunding mx, foll (not sure if it was VOA); ID at 1159, Ienkee Doodle Is at 1200, followed by $C O$ talk from man and woman. Somebody a little bit off followed (Father Jack Pejza, San Diego) frequency here, with a low rumble, (Father Jack Pejza, San
*1201.5 Unid. 4 . *1246.06 Haiti. 4KM, Rdf. Eaitiennen, Port-au-Pra)

1265 St. Kitts, R. Paradise signal; 0059 , end of test xmsn wists would resume tests $12-28 \mathrm{PM}$ and begin RS early
 12-29 AM. Another 10 kHz . Shot. (Alisauskas, NJ) (Helcome, Billimed) @12-30, 0300 ID, organ 000 idied in via land-line. (Carl Junker, Ohio)

1265 " Paradise" l2-27, Ol00 with ID, s-off with complete details; ADD: Box 423, Basseterre, St. Kitta. (Jim Poterba, Penna. phoned) ©"Paradise" here 12-26 2345 with Gospel mx, weaker here than up north. (Schatz, PL via phone)
""Paradise" 12-26, 2235 with Gospel mx. (Joe Fela, NJ) (Welcome!-ad) elt $^{\prime \prime}$ Paradise", 12425 Q0019 with good signal ( $\mathrm{s}-8$ on meter) continuous Xmas mx 'til ID 00039 with EE announcer. More Xmas mx to 0100 with another ID, "R. Paradise, 50,000 watts from the island of St. Kitts." Then Bible reading afterwards. Not iisted WRTVH. Call?. (Richard Preho, DC) (Welcome, Richard!-ed)
Wl280 Haiti. Port-au-Prince; new outlet: $\mathrm{K}_{\mathrm{F}}$. MEtropale. Noted smoff 0130. Tip via phone. (Ron Schatz, Miami, Florida.
1294.995 St. Maarten. PJD2 measured here, still on 12-27 0148 (RFS)
*1295 Guinee. Previous African mystery noted here this past summer possibly newly listed Conakry outlet with $10 \mathrm{kw}$. . same pattern as 1402.7 (47 227 ${ }^{\circ}$. (Schatz)
1308.105 duba. CMHK now measured here; 12-27, 0223. (RPS)
1315.014 oolombia. Onid HJe, possibly more than one; 12-27, 0150 (RFS) *1331.659 Cuba. ONJS, "Reloj Nacional" measured here, ex-1330; 12-27 at O155. (Schatz, Fla.)
*1332 Ouba. CMJS "Heloj Nacional" good 12-25 0720. Ciego do Ávila from 1330 (Hauser, Texas.) (Looks that way, Glenn. See above. eed)

* 1335 Unid. IA 12-25 0721 in SS talk; cf. RFS' unID last season in IROA Foreign Iog. (Hauser, Texas)
*1349 Mauritania. Nouakchott reportedly increased power to 100 kw . (PPE 1350 Hawai1. KIVM, Lihue 12-25, 0840 good with commercials and mse. (IVI) 1380 unID. IA $12-25,0845$ in the clear; sounded like an XE With pop
1384.989 mx. (Pete Taylor, calif.) (sounds muchly like (RFS)
1403.852 Cube. Most likely oMJI msd. 12-27, 0155. (Ron Schatz, FL)

1435 mid. Carrier 12-18, 1118. I'd iike to think it was the cambodian tentatively reported by Art Peterson to IRCA, which he hrd 12401305 12-11. He also just got the carrier. Either time is too late for Saba or "Kelkhoom". (Pejza, Calif.)
1435.002 Saba. PJFI noted in EF 12-27, 0157 while measuring. (RFS)
*1445 Oolombia. HJGM, R. Sogomoso 12-25, 0723 on AN: EST TC, ID. Again 0953; also hrd 12-23, a stn on this freq at 0418 in Ss mentioning Huasteca; 0425 CST TO, so maybe something else. (Hauser, TX)
1445 unID. IA $12-25,1030$ in SS with mx and talk. (pete Taylor,oi) (prob. Sogomoso, Pete: note Glenn's report above.-ed.)
1445.198 Colombia. HJGM, Sogomoso msd. here 12-27 0227. (RFS)

* 1449 Guatemala. TGMS, R. Nacional, Ie Voz de Mazatenango 12-19 on second harmonic; 1156 KA , 1158 , poetic s-on; then program, "Buenos Dias, Campesinos." (Glenn Hauser, Texas)
" 1454.5 Ficaragua. YNTJ, "Ecos de Las Brumas" is stronger this year than last, reflecting $\mathrm{HRB}-\mathrm{reported}$ power increase to 5 kW ; hrd on second harmonic $12-24,0054$ ending relay of national net on earthquake relief; ID. (Hauser, Texas)
o 12-25. 0756, "El Mundo de la música": 0809 ID in verse; Nominal 1460. (Hauser, Texas)
*1465.264 unID. IA noted here 12-27, 0159 during measurements. (RFS)
*1475.093 Haiti. This one noted on AN lately, poss for Holidays. (RPS)
 NA carols, $3-\mathrm{min}$ fast TC (CSI), 0801 wrapup, then song. 0805 check, was off. Yo mention hrd of R. Columbia affiliation. (Heuser) 1500; 0805 still 0.. Turrialba?. (Hauser, Von Ormy, Texas) R. Columbia, Turriaiba tentatively the one very faint with mx 12-18, 1115. HOMI (?) s-on 1116 killed it. (Pejza, Calif.) Costa Rica. "R. Cima", TIOCR, 12-25, 0830, with sermon and soft pretty mx; "Elisabeth Serenade" by James Iast at 0835. Stil quite good at 1015 and 1120. (Pete Taylor, Oalif.) Puerto Rico. WKFE, "R. Cafe", on 12-25 at 0900 with normal pgms., no Christmas mix but fingles did use HFeliz Navidad by Feliciano as YiD-675 did iast year. (Harry I. Helme, North Carolina) 1555 unID. IA 12-25, 1020 fair to weak in SS with Andean type mx. (PVT) Maxico. XeVIP, 12-25 from 0815 tune-in good all AM through about 1130. Automated Ohristmas mr, "Radio V-ImP" IDs in EE. SS ID hrd 0834. (Pete Taylor, calif.,
1561.141 Dominican Republic. "Radio Pedernalean mad. here 12-27 0203 (RPS)
1561.141 Dominican Republice "Radio Pedernalea" mad, here 12-27 020
1565 Oolombia. "R. Sensacion", Manizales 12-25, 0400 with, "la

1580 Irecuencia Súper $\because$." Reception on harmonc. (Hauser, IX
1580 Thailand. VoA 12-18, 1203. Switched over quickly after getting Tol-1140 to get one faint "Yankee Doodie strain alter. Eetixing spur here from XFPRS and KOGO bad me fooled earlier in the ovening. (Pejza, dalif.) (Hice catch:-ed)
Why all those funny-looking question-marks this week (like this one)? It appears that this typewriter is inheriting the characteristios of that of ERC - the question-mark and slash-mark key is discombobulated. That explains why the new formet for dates: "Necessity is the mother of invention, ${ }^{n}$ es my father-fin-jaw is fond of saying..... don't know yet what he's trying to get at, hi. Many, many thanks to all this week for improved support. special thenks to those who phoned, and to Ron Schatz for those 40 some-odd frequency measurements, all dictated over the land-line. 1 most happy and prosperous Mew Year to all.... pt.

DAVE SCHMIDT - 8 Valley Terrace - Apt. 9 - Wilmington, Delavare - 19802 MM 12/4 was a washout here. The WSPR DX TEST showed up well, but it was verified about 1966. WBIR didn't show. I doubt if they were on. Only other goodie noted was KWWL-1330 o/WHOT till their am s/off. on $12 / 6$, first time I tried any SSs DX in about two years, netted nothint, but e 5:45pm, a good tape \& info on WINE-1290 5:45-6pm. I just about fell over, though. They had Santa Claus on the air accepting ordere from kids via the landline, hi! (Did you call, Dave? -ERC) A few more veries in, $v / m$ WCHL -1360 nX, nice $v / L$ from CHLO-1570, \& a/v/"thank-ugram" from WRPM-1530. In case anyone is interested, the phone number here is 302-$762-2852$ but it's hard to catch me in: I've got a few gCs I've got some old traders I used to keep when I was collecting SCs , so if anyone wante any, send me a large SASE \& I'll stuff it. That's about all from this end so 73 for now.

Monitoring Report for Radio Station $\qquad$ on $\qquad$ kHz .

Date $\qquad$ Monitoring period $\qquad$ to

It was my pleasure to monitor transmissions from your station during the above period. As proof of reception I offer this log of items heard:

This is the new NRC domestic report form-carefully designed by Jerry Starr of the NRC CPC and NRC HQ to produce the optimum domestic returns: short enough to keep the station personnel interested without becoming bored yet long enough to constitute a meaningful report. These report forms are printed on heavy bond paper by dark and clear offset printing. If you can't take the time to send a personal letter, do the next best thing - send an NRC domestic report form! Available immediately from NRC. HQ for $\$ 1.50$ for 75 sheets (so priced to minimize pontul custe).

On the basis of the above details, I wish to request a brief letter confirming the fact that I have received your station's signals. I collect these letters as a hobby and would be most pleased to add your confirmation to my collection. For your convenience in replying I have enclosed return postage. Thank you for your time and consideration. I hope this report has been of interest to you.

Sincerely,

## Technical Information

Receiving equipment:
Interfering stations:
Reception conditions:
Other stations confirmed in your area:

## mitninht 10 sunrise

## OMEsIIC

## EDitis:

Greetings and solutions. As of this writing (12/31) the NRC log copy has been rec'd in Boston during the past week. All three DX stations from me this time on not on $m$ usurl $\mathrm{HQ}-150$, but the set I originally started serious DXing with: Fisher AM-FM Sterso Tuner (Vintage 1960), which I'm resurrecting for possible ale (along $w /$ accompenying power amp) or use as a backup rx until I can scare a the for 150 or other communications $r x$. If anyone is interested up the $\$ \$$ for another 150 or other conmanications in the neighborhood of $\$ 175-200$ for both. All tuner-preamp functions ok. Will work over power amp soon, but no
 a man thru its paces to check it out when this stuff hrd. Iatest item of 3 also on 150 .

## sunsel evening

540 WKLO-WI


1000 WSPF-NC
WBZY-PA
WKCY-VA
WMTN-TN o/nally hrd this one thru WRVA - several IDs 1645 12/22 (JMP) Alomst alone in WFBR null ( (what null, hi -RjE)) no WAVZ U/ nx, spansored by Morristown Lincoln-Mercury 1700-05 12/22 (JMP) ** Nice - RjE
WOOD-MI
1480 WMAX-MI
1520 WDGL GA
WXPQ-GA
1570 WGSR-GA
1580 KTUF-AZ to get TD ( 730 y the last one on the EC $w /$ this, but finally hrd jus
 Unless they've changed call to KNIX on AM within the last week, their IDs are illegal. My most-wanted domestic. (RjE)
KPIK-CO
1590 WLUH-PI and cern $1820-2312 / 31$ clean and cow 1820-23 12/31 (RJE) $170012 / 31$. (RjE)
WACA-SC Fnd of s/off thru clearly 1715 12/16, WQQW surprisingly weak WVNA-AL Hrd o/WQQW w/ patt. chg. annct, inviting fringe area listen Hrd o/WQQN w/ patt. chgo annct, inviting fringe ares listen
ers to tune $100.3 \mathrm{FM} @ 174712 / 20$ (JMP) ** Very nice -RjE

## Elanjet

+600 WICC-CT Regular SP now SM 0400-0500 (MC
+1470 CFRW-MB CF: 10000 U2
+1140 CP -BC Rogers.Pass, $4040 \mathrm{U} 1 / / \mathrm{CBU}-690$. /WMIN by 1710, spot for bycycle dealer in Grand Rapids, 12/22 (JMP) ** Also nice - RjE Just a brief ID from this one, $u / W H B C 170012 / 19$, vy poor signal (JMP)
of noted o/WXPR-WKBW W/ good sig 1726 12/16 (JMP) Noted vy strong 1715-30 12/16, many spots for Eatonton \& S/off noted 1730 12/13 we neoded several replaye of tape get ID. (JMP)

Hrd vy well 0055-0200 s/off w/nx, jazz pgm 12/11 (MC) Finally $015912 / 18$ s/off SSB (Wes Boyd, Youngstown, Ohio)
Fair to good on $12 / 15$ TEST. (Boyd) Fair to good on 12/15 TEST. (Boyd)
W/ Scott Ross show 0250-0330+ $12 / 18 \mathrm{w} / \mathrm{Jamaica}$ in null (Boyd) Good o/WIND in WQAM null all AM $12 / 13$ (Boyd) MoR then ID, followed by mdt nx. WKBN off, unID $O C$ looped E-W required use of single-sideband to improve readability W/good sig $020912 / 11 \mathrm{w} / \mathrm{MoR} \&$ talk. OC looped but traces of KVI and a weak unlD noted also . No sign of CFCB. (Mike Levintow, Rockville, Md. - also previous item) *恨ek unid would've been CFCB or WWNC, methinks - RjE 11, 0410 (JMP) Bombed in in WICC

WPDQ-FL Hrd well w/WICC off $12 / 15 \mathrm{H} /$ heavy album rock 0230-45
WM -IA Hrd
WCAOMD Hrd atop channel w/ standard MoR \& nx ard 0300 12/15 (MC)
WWNR-WV Mixing w/WS -WHEN W/WV nx ix and mes in 0 ; assume (JMP)
CKCK-SA Only thing in WSUN null 0315-30+ $12 / 18$ (Bowd)
930 WKY -OK Good w/WB N-WJAX-WPAT a -ent most of AM 12/13 (Boyd)
940 CJGX-SA AN c\&iw w/KIOA absent 0205-25+ 12/9 (Boyd)
1070 CHOK-ON On past reg. s/off for ER $12 / 5$ (Boyd)
1090 WMMM-OH TEST 12/11 hrd fairly well here w/ c\&w mx around 0200 (MC) WWM-OH TEST $12 / 17$ hrd fairly well here w/ c\&w mx around 0200 (MC)
Unbelieveable on TEST s9+ the whole time. 0300-30,12/11 (JMP) Unbelieveable on TEST S9+ the whole time. 0300-30,
Hrd fair-to-poor $\mathrm{L} / \mathrm{WBT} O C$
$0100 \mathrm{i} / 11 \mathrm{w} / \mathrm{nx}$, wx, TC and ID as "Radio 1110, Edmonton" then talk and fade. KFAB, which was + $20 / 59$ at time, was nulled. Not noted ard $0330 \mathrm{w} / \mathrm{WBT}$ off completely. Again, Single-sideband was helpful. (ML)
1150 WRUN-NY
ET w/ $1 \mathrm{k}, \mathrm{TT} 0208-45+12 / 15$ (Boyd)
1190 KLIF-TX Finally hrd thru WOWO OC $043012 / 11 \mathrm{w} /$ slow anx and ID (JMP)
Equal to WBPZ all AM 12/16 w/ MoR ish and jazz stuff. (Boyd) Wisconsin on ET w/TT 0210-16 12/15. ID down in mud. Think was WOMT, but not sure. (Boyd)
WWNS-GA On ET w/ Big Band mx 0120-0130 12/18 (Boyd)
strong, seemingly alone w/ "Remember Member" contest promo 0552 12/10 (JMP)
$12 t 0 \mathrm{CFFH}-\mathrm{AB}$ Noted o/WEZE-WIXY w/ sx 0142. Superpest local WWDC was off on this good NW opening. (ML)
1290 KOIL-NE
(Boyd)
1310 WCAM-NJ Noted (3) s/on $045812 / 18$ anncg, " 1300 kHz .". (Brian Vernon, Toranto, ont.) ** welcome to DDXD, Brien. $-\mathrm{Rj} \dot{\mathrm{E}}$
ON Hrd to 0102 s/off // CKAR per ID $12 / 18$ (Stan Morss, Bradford, Ma.)
1400 WMCS-ME
$1420 \quad \mathrm{C} \quad-\mathrm{PQ}$
Broke thru ance 0008 on TEST w/ mentions of NRC, then a jingle 12/16 (JMP)
Plessisville, has been on since OCTOBER, but I've as yet to hear a call (Morss)
1440 WJAB-ME
\%/everyone w/apparent ET w/ c\&w, fx 12/22 0009 (JMP)
** 1460 WHHY-AL
1460 KDON

7/6's

1530 WOBR-NC Finally hard this one in WCKY semi-null, s/on 0700 12/22 then into Xmas max, good until WCKY ended ix and started max then into Xmas max, good until WCKY ended ix and started max
(JP)
SP: 0148 to 0600 per s/off last 2 weeks. Much ET abt 0400 .
$\begin{array}{llll}1540 \text { KXEL-IA } & \text { SP: } 0148 \text { to } 0600 \text { per s/off last } 2 \text { weeks. Much ET abs } 0400 \\ 1550 \text { WNTN-MA } & \text { EMs. (Boyd) on } 12 / 20 \text { 0130-45+ (Boyd) } \\ \text { (ML) }\end{array}$
1550 WNTN-MA ET-TT on 12/20 G130-45+ (Boyd)
1560 KRCB-IA W/good signal on ET W/ID 0335 12/11, no QRM, tho' CM noted.
1580. KTCR-MO In cIr w/ET ID 0338 12/11 then SID \& rr. Never hard on SSS due to overmodulated pest WINX-1600 splash. (ML)
W5UF-NI TEST 12/11 not on. (MC)
1600 WCWO-WI Test 12/18 hard here $u / W W R L$ 'til WWRL off 0210 then in clear w/KATZ $u /$. Fair sig on nitepattern (MC)
On DX 12/18 poor on day att., tremendous on nite part. 0245 $w / W W R L$ off.'(Morss)
Ny strong on TEST, no QRM on day mat., nite much weaker \& mixing w/KATZ. $0200-0337 \mathrm{~s} / \mathrm{off} 12 / 18$ (JP)
KATZ-M0 Bar to good on 12/18 test. All but Kail seem off. (Boyd or Became extremely strong when switched to day pattern 0310 or so, Apparently running ET while WCWC on nite pattern 12/18 $0245+$ strong at times, then drops of 3 s-umits in a very systematic fashion. (JMP)
$\operatorname{un} I D=\quad \mathrm{RR}$ way $\mathrm{u} / \mathrm{KATZ}$ after $0330 \mathrm{w} / \mathrm{KATZ}$ also quite wk on nite pattern. (ME) ** WETT, WISZ, of the following? -RyE
KLAK-CO Atop channel w/ID O200 $12 / 18$ just prior to WCWC start, quick fade up then lost. (JMP)
WKEN-DE ET 0513-18 w/ OC, TT, \& 2 IDs o/WGIV and still WWRL off. Al so an SS. WLUZ?? (Mores) ** Or WKWF.... -RyE

Thessit for this trip, so well be back next week. 73, RyE


## by Steve Bohac, 97 Shaler Ave., Fairview, N.J. 07022:

1) UTC \# LML-500 Iow-pass audio filter, 500 Hz . cutoff, impedance 600 oms Brand new $=\$ 30.00$
2) Drake \# 2 CQ speaker / Q-Whtiplier $\$ 15.00$
3) Ameco model PCL-P Nuvisotr preselector for shortwave $1.8-54 \mathrm{mHz}$. $\$ 20.00$
4) Millen 710039 Vernier dial w/ 6 tuning ranges, 8:1 tuning ratio. New. $\$ 3.50$
5) Lafayette transistor mike mixer \# PA-292 . New. \$4.00
6) Shurite \# 83332 s-meter $\$ 2.50$
7) Stancor \# C-1215 filter choke - 9.0 henries @ 50 ma (new) $\$ 2.50$
8) Robins "Gibson Girl" Stereo-4 tape splicer (new) $\$ 3.50$
9) Lafayette tape head demagnetizer (new) $\$ 2.00$
10) Quai \# 69A3 speaker - 6x9 "; 3.2 ohms. (new) $\$ 4.00$
11) Hallicrafters 5 -meter for $5 X-133$ (new) $\$ 5.00$
12) Harmarlund MC-325 Linear tuning variable capacitors (current list $\$ 13.25$ ) $\$ 9.75$ each. (This is the standard specified tuning cap. for the NRC loop)

## by R. J. Edmunds, Box 946, Wayne, N.J. 07470

1) Heathkit QF-10 Q-Multiplier for direct connection to rx . Requires power from within rx or extal power source. Assembled \& functional - $\$ 15.00$
2) Ameco converter - converts AM auto radio to cover CB. Hardly used, work ar well. List when bought - $\$ 29.95$. Selling for $\$ 17.50$
3) $8 \mathrm{n} \mathrm{Hi} \mathrm{Fi} /$ Stereo speakers w/ enclosures - wood grain. 25 watts each, Jensen spars. EACH: $\$ 20.00$. Both for $\$ 35.00$.
4) Longwire antenna tuner - inductance-capacitance dual tuned circuit w/ ninibox enclosure - $\$ 5.00$
5) DuKane 50-ruatt audio PA system - tube type. 5 mic. inputs w/ controls, 1 , phon input, master tone, volume controls. 3-chassis units - mixers/preamps, power amp. and power supply. Inter-connections between chassis pieces must be rewired, schematic available. When re-kired is in working condition. North several hundred dollars. If interested, make offer.

Greetings from the football capital of the world. I hope you will pardon the long absence of DX'tras:EAST, things have gotten entirely tations listed in formats under , not even ennugh time to DX. The during an excursion down south that I made a, few, and almost all the material which I have is not time has lost too much authenticity by the Iong it everyone has had a Happy Holidays, print it will probably be time to wish everyone a Happy Valentiac Day. So much for the B.S.

Ne Collins, Stratford, Conn.
I. Formats

1/73


Abbreviations: rr-Rock, MoR-Middle-of-the-Road, cw-Country(western) Tk-Talk, Rel-Religious, Cl-Classical, rb-Rhythm \& Blues, J-Jazz
II. Acronyms

| 550 | WDEV-Vt. | Radio Vermont | (MC) |
| :--- | :--- | :--- | :--- |
| 580 | CFRA-Ont | Radio Fifty Eight | (FT) |
| 590 | WARI-Pa | Warm | (MC) |
| 600 | WICC-Conn | Service Six | (MC) |
| 690 | WADS-Conn | Voice of the Valley | (MC) |
| 750 | WBMD-Md | Music Country |  |

750 WBMI-Md Music Country

III. Mike Collins sent along the following Call letter etymologies:

| 540 | WDMV-Md | Delmarva peninsula ( $\mathrm{Del}, \mathrm{Md}, \mathrm{Va}$ ) |
| :---: | :---: | :---: |
| 600 | WICC-Conn | Industrial Capital of Conn. (Bridgeport's nickname) |
| 610 | WIOD-Fla | Wonderful Isle of Dreams |
| 650 | WSM-Tenn | State Mutual Insurance |
| -690 | WADS-Conn | Ansonia-Derby-Shelton |
| 720 | WGN-I11 | World's Greatest Newspaper(Owner:Chicago Tribune) |
| 890 | WLS-III | World's Largest Store(Former Owner: Sears) |
| 990 | WI BG-Fa | I Believe in God (Formerly church owned) |
| 1000 | WCFL-Ill | Chicago Federation of Labor |
| 1010 | WINS-NY | International News Svc. (formerly owned by owners of INS, a now defunct wire service) |
| 1080 | WTIC-Conn | Travelers Insurance Co. |
| 1130 | KWKH-La | W. K. Henderson-founder of the station |
| 1170 | KVOO-Okla | Vouce of Oklahoma |
| 1240 | KPFC-Cal | Pasedena Presbyterian |
| 1330 | WEVD-NY | Eugene V. Debs <br> Do |
| 1360 | WDEC-Conn | Doolittle Radio Co. (Original owner) \& ¢ |



Oh well, looks like the typographer screwed up again. What we really meant to say is that the NRC's great Flash Alert Service is in it's second great year What is Flash Alert, you may ask? Well, friends, you can believe me when I tell you that it's a great help to the DX TEST listener. Why, it's become an American standard since its inception. Here's how it works: if a DX TEST is scheduled too ate for information about it to reach DX NEWS readers, the person who arranged the test calls our trusty Flash Alert Man, Carl "Flash" Junker, who resides in that little known but widely heralded town of Kettering, suburb of Dayton, Ohio (the club decided that Carl would be the best man to run Flash Alert because of his nickname) When Carl receives the info, with the speed of a fast approaching auroral disturbanc he then sends out postcards (stamped, self addressed ones which he receives from nembers like you) on which are written the vital test info, and sometimes, when Carl's in the mood, 6 or 7 characters of the Japanese alphabet. So now, you may be asking yourself, how do I get in on this great service? Well bunko itts easy To receive info, just send 9 or 10 stamped self addressed postcards to Carl $1 F 1$ Junker, NRC Flash Alert, 1920 Malcom Drive, Kettering Ohio 45429 A chance you have any late DX TEST info, call Carl at 513-254-9936 But do it quickly, because.

## Selectivity Devices

AND HOW TO USE THEM
Ronald F. Schatz

S
electivity - without it your receiver would pick up every station on the band at the same time, and that wouldn't be nice. When we speak of selectivity we mean a receiver's capacity to pick up only the station you want to hear - and no others. Toward this end both standard and special circuits are employed in receivers.

One may not think of it in such a manner, but the basic selectivity device found in all receivers is the RESONANT CIRCUIT, and without it radio as we know it today would be an impossibility. The resonant circuit is nothing more than a coil and a capacitor connected together. When connected in series (Figure 1) only one particular frequency can pass through them; when connected in parallel (Figure 2) only one frequency cannot get through the circuit - just the opposite effect. Here is how it works:
-mm

## Figure I



Figure 2
Most readers know that the purpose of that colour-banded device known as a RESISTOR is to impede the flow of current through it; the oher the resistance, the more "open" the circuit is. Coils and capacitors have a similar effect on current flow - as follows:

A COIL is so constructed in order to concentrate a magnetic field in its area. This magnetic iield is slow to change, so that it permits DC to pass through the coil with no problems but not AC, since the latter changes so many times per second. The higher the frequency of the current, the more "resistance" the coil offers to it. This type of "resistance" in coils is called INDUCTIVE REACTANCE. Like resistance, it is measured in OHMS (symbol $=j \Omega$ ).

A CAPACITOR consists of two metal plates insulated from each other but still close enough together to permit the existance of a trong electrostatic charge between them. In this case it is the DC hat can't pass through the capacitor, while AC can. The higher the AC frequency, the easier time it has crossing the electrostatic field This property is called CAPACITIVE REACTANCE, also measured in OHMS (symbol $=-j \Omega$ ).

As can be determined by their respective symbols, inductive reatance and capacitive reactance are similar but opposite in nature. ctance and capacitive reactance are similar but opposite in natu In a circuit, one value subtracts from the other, so that if both ceactances happen to be equal (and opposite), the result is no reactance at all. In the case of Figure 1 above, the only frequency that can pass through the circuit is the one for which the reactances of both the coil and the capacitor are equa

Frequencies very close to the particular frequency of a resonent circuit also pass through, since the reactance, though present, is
very low. The further removed the "off" frequency is from the resonant frequency of the circuit, the more reactance it faces. A RESONANCE CURVE is a graphic illustration of what frequencies pass throug a given resonant circuit and how well they do so (Figure 3).


Figure 3


Figure 4

It is now obvious to many readers that the quality of a resonant circuit is to be judged by its ability to reject those "off" frequencies and their unwanted signals, so that a curve like that shown in Figure 4 is preferable to the one in Figure 3. This "quality" is recognised in electronics, where it is abbreviated "Q". Correct Q as in "Q-Multiplier"!

Low selectivity in a resonant circuit is due to the presence of RESISTANCE, which dampens the circuit's ability to resonate, or "ring: at the resonant frequency. $Q$ then becomes the ratio of reactance over resistance present in a circuit $(Q=X / R)$, so that high $Q$ turns out to be a desirable thing.

Selectivity can be improved by passing a signal through more than one resonant circuit or by sending it through the same circuit again. Receivers of earlier days were limited by component size in the amount of resonant circuits they could contain, so their selec tivity left much to be desired (E.g., a super-local taking up much of the band). The "regenerative" receiver tried to overcome the pro blem by returning the signal for a "recycling job" through the same circuits again. Today smaller and better-quality components give high values of selectivity to the cheapest receivers, so that manufacturers now must avoid designs that are too selective for general use.

Too selective? Yes, since the sidebands that carry a signal's voice and music are, themselves, "off" frequencies. The higher the pitch of the modulating sound, the further removed are the sidebands from the resonant (carrier) frequency, so that too much selectivity will cut out the higher frequencies, leaving audio that sounds muffled and bassy. Perfect selectivity would permit only the carrier to come through the receiver and none of the audio - and no ID for to come through the receiver and

So the dilemma is one of the soldier throwing a grenade; if it lands to close he too will get the shrapnel. A compromise is to be found that will eliminate as much of the interfering signal as possible without hurting the intelligibility of the desired signal. The rule to follow is this:

USE NO MORE SELECTIVITY THAN IS NECESSARY FOR CLEAR AND PLEASANT COPY OF A SIGNAL.

Many inexperienced DX'ers habitually keep their crystal filters on position 4 and their Q-Multipliers near the point of oscillation at all times, deeply affected by the charisma of selectivity, they
almost ignore the fact that they can't make out the audio they need for logging the signals they receive.

Now we are ready to discuss selectivity devices other than simole resonant circuits. These devices can be divided into two major classifications: The first group eliminates all signals except the desired one and its audio. Included here are the Q-Multiplier (peaking type), crystal filter, mechanical filter, and ceramic filter.

The second group of selectivity devices pass everything except he one interfering siemal it is desired to eliminate. These are the作 nulling Q-Multiplier and the various notch finters of better audio ential circulity than those in group one, but they are often helpless when quality than those is more than one interfering signal present.


The Q-Multiplier is little more than a glorified resonant circuit. It is a parallel circuit that grounds everything in the normal signal path of the receiver except for that pare its particular resonance curve, the cat be controlled over a wide range the speaker. The $Q$ of the circuit can be controlied over a to determine just how much of the band is to be diverted away the latter stages of the receiver and short-circuited

In Figure 5 the resonant circuit consists of the coil (L) and the combined effect of all the capacitors in the circuit (this includes the interelectrode capacitance the frequency several kHz on iable capacitor (C) permits shifting the freq the receiver. $C$ is a either side of a center requencJ front-panel control, generally marked frequency 'alignment. The povaried, but is left alone except during recelver alignenualy labeled tentiometer marked "R" is also a frontin (S) is always present in "selectivity (sharp-broad)". A DP switch (S) is always present some form for the purpose of turning the Q-Multiplier on or off

The arrows show the feedback (recycling) path in the circuit. the This regeneration is respons $R$ controls the electron flow in the device use tube, and that literally controls the tube and, therefore, in the present between the little resistance, howresonant con convert the ever, will permit the Q-Multiplier into a porrier" apselectivity control lis pears on the scene. strong shato oscillation if the sel-Q-Multiplier can also cause it to break into $\frac{\text { is }}{}$ set near the critical point.
ectivity control is set near the critical point.
In summary, the Q-Multiplier functions by removing everything
from the receiver except for what falls within the resonance curve of the device. Its high $Q$ is the result of regenerative feedback

Most DX'ers like to leave the Q-Multiplier frequency control in mid position at all times, but better audio for a given amount of posite to that of the interfering sigmal control off to the side opposite to that of the interfering signal.

## THE CRYSTAL FTTTER

A crystal is a high-Q resonant circuit combined into a small piece of quartz rock. So high is the $Q$ of this rock that crystal-fil ter circuits must be provided with resistors to dampen its effects.


Figure 6
Figure 6 is a typical crystal-filter circuit, such as found in many Collins receivers. This one has 5 positions, marked $0,1,2,3$, and 4. Position 0 bypasses the filter completely, thus eliminating the crystal from the signal path. Position 1 has infinite resistance no connexion, giving the widest possible selectivity with the crystal. Positions 2, 3, and 4 have resistors of look $\Omega$, $22 \mathrm{k} \Omega$, and $4.7 \mathrm{k} \Omega$ each respectively, and respectively sharper selectivity down the line. A short circuit across the resistance path would result in the sharpest selectivity, but it would be much too sharp to have practical use.

The purpose of capacitor "C" in Figure 5 is to neutralise the capacitance of the crystal holder (Y). It is called a "phasing capacitor".

Better crystal filters employ two or more crystals differing slightly in resonance frequency to give a combined resonance curve (bandpass) with a flat top and steep sides. Today this arrangement has largely been replaced by mechanical filters.

## THE MECHANICAL FITER

This is not a circuit but a component. A typical mechanical filter consists of, say, 7 cylindrical discs tightly suspended be tween two TRANSDUCERS (devices which convert electrical energy to mechanical energy and vice versa). Each metal disc resonates at an ultrasonic frequency near that of the receiver IF in a manner that all the discs cover the desired bandpass. For example: If we desire a 7-element filter to have a bandpass 2.1 kHz wide centered on 455 kHz , we would want seven discs to resonate respectively on the frequencies of $454.1,454.4,454.7,455.0,455.3,455.6$, and 455.9 kHz . As each disc has a very high' $Q$ the resulting "curve" would ap proach the rectangular shape that offers the best possible selectivity/intelligibility ratio. This is how a mechanical filter can offer excellent selectivity without "muffling" the audio.

## M-AOMAHOMA <br> Figure 7



Figure 8


Figure 9
Figure 7 is a sketch of a mechanical filter with its cover removed. Figure 8 is the ideal hi-Q bandpass. Figure 9 is the band pass of a 7-element mechanical filter; note how it approaches the ideal bandpass in shape.

The shape of the mechanical filter output can be improved by placing several in series, although their high cost tends to discou rage this practice.

When one tunes a receiver equipped with mechanical filters stations do not fade up to a peak then fade out, rather they appear sharply, remain steady as one tunes, then suddenly disappear off the opposite end. This "sharp edge" can be used to advantage (as illustrated in Figure 10) by placing the carrier of the desired signal just within it - so that the interfering signal falls on the "wrong side". For all practical purposes this tantamount to single-sideband reception!


Figure 10
Comprehensive literature on mechanical filters is available from the National Radio Club in the form of reprints

## THE CERAMIC FIUTER

This is a little red component measuring a centimeter square and costing about 47 eUS each. It uses a small piece of china as a resonating element. As china has less $Q$ than metal this device has a rather wide, "unselective" resonance curve

Ceramic filters are not supposed to be sharply selective items; they are meant chiefly to replace IF transformers in solid-state receivers with the advantages of lower cost and simpler alignment. So if you read about ceramic filters in a receiver advertisement, don't jump for joy.

## NOTCH FILTERS

These devices take a "slice" out of the bandpass in order to remove an interfering signal, heterodyne, etc. Figure ll illustrates notch falling in a typical bandpass. When not in use the notch is "stored" outside the bandpass rather than turned off. In some receivers, such as Hammarlund's, the notch is known as a "slot".


Figure 11

There are two common methods of forming the notch. A modifiwith a sharp hole in place of the usual receiver a "negative" passband ged "T"s and other balanced of the usual sharp, selective peak. Bridphase comparison and cancellation.


Figure 12
The circuit in Figure 12 resembles the one in Figure 5, but this time the resonant circuit is series rather than parallel. Where the normal Q-Multiplier takes everything else but a sharp peak from the leaving the rest. Potentiometer "pposite - stealing the peak and trol, which is adjusted to give thow becomes a "notch depth" connal - usually a superlocal the on a sigtor "C" is to move the null - then is left alone. The job of capaciinterfering carrier. When thround the passband, placing it over any ency" control is turned to side of the bandpass until side of the bandpass until it is needed again.

## PHASE-DIFFERENTIAL NOTCH FILTERS

These devices form the notch by varying the differing phases of two otherwise identical signals so that they "destroy" each other at a given frequency in the passband. There are many possible circuit combinations that can accomplish this; the one illustrated is from one of the Collins receivers


Figure 13
Perhaps an explanation of the term "phase" is in order: Picture two pendulums side by side. If both pendulums swing from the left, to the right, to the left together - in unison - then they are said o the riphase. If one swings to the left while the other swings AC signals can be compared in this manner. of phase. wo or more phase" will reinforce each other: manner: Two signals that are "in will subtract, possibly cancelling each other out. out of phase" occurs in the presence of reactance: in a is $90^{\circ}$, but resistance reduces the amount pur between $0^{\circ}$ and $90^{\circ}$. The direction any value whether the reactance is inductive or capacitive phift depends upon

Capacitor
dwo stators; it port citor receives two signals off of transformer "n巾.". ther". This capin strength, of the same IF frequency, but are go\% out of phase.
capacitor and the lower half of $T$ form one side of a balanced circuit, with crystal "Y" and its adjacent circuitry forming the other.

Before we go on, we must mention that a crystal in its holder possesses two resonant frequencies, there being a series resonant frequency slightly higher than a parallel frequency. The erystal holder in itself is a capacitor thus it possesses reactance and everythinc that goes with it. Furthermore either crystal frequency is variable within close limits, so that one may be shifted relative to the other.

A notch filter of this particular design is invariably an integral part of a crystal filter. In the case of Figure 13 the sharp notch is moved around the bandpass by varying the crystal's parallel resonant frequency and phase by rotating capacitor $C$. This is the "phasing" control found on many better receivers.

This type of notch filter, often termed the "T" notch for the shape of its circuitry, actualiy has two notches, one on each side of the center frequency. When not in use the phasing control is kept at center position, which stores the two notches at the far ends of the bandpass. Rotating the control either to the right or to the left moves one of the respective notches toward the center - to be placed over the interfering signal.

Most DX'ers prefer the T-notch filter to the Q-Multiplier notch filter for its simplicity, stability, and ease of use.

Notch filters are extremely useful devices, especially for DX'ers working "splits". Not only will the notch remove an unwanted heterodyne but, by removing the carrier of an interfering station, it will render the audio from that station unintelligible. It also has an indirect tendancy to exault the carrier of the wanted station, giving dominance to a normally relatively weak signal lost in the shadows of powerful sideband splash. Unfortunately the notch can only act on one frequency at a time, so it may not help much if there is more than one interfering signal present.

There are other selectivity devices available to the DX'er, but the more common ones were mentioned in this article. Learn to use the device in your receiver - correctly. Above all, don toveruse it!

RICHARD NOEL ALLEN - BI11ings, Oklahoma - 74630
First, I must apolgize to ERC for using the 24-hour system instead of AM \& PM in my last Musing. XELiO is now XEROK, "t o world's most power ful rock station", with an AN Ir format. DX continues to be good here. The following DX was heard on a Pioneer SX-300T RX w/a $2^{1}$ altazimuth: 12/5-XEMO-860 heard 4am W/EE \& gospel oxx. CBF-690 w/FF NX, WX \& sports @ 6:02am / /XETRA/KBOS. CBR= 1010 @ Bam s/onm CBC ITX \& WX, o/XEHL. 12/8-CJBC-860 W/FF ta 1 k u/KOAM © $11: 10 \mathrm{pm}$. $12 / 10-$ CBX -740 @ 3 mm s/opew/On Cana da \& GSQ u/KCBS. CFRN-1250 w/rr @ 3:19am w/unID QRM. HJII-1040, R. Tripica1, w/SS \& IA mx e 4:44am o/GMKG. KKYW-680, ex-KBAT, ha d w/c/w @ 5:45am w/weak signa 1. 12/11- CBA-1070 @ sam s/on w/Ch Canada, NX/wX, u/KIX. WISO-1070 © 5:30am w/IRCA Special o/u KNX. The latter two received \& recorded while I was asleep, thanks to a recently acquired timer switch. I was try in for CBA \& was surprised to catch them, \& WISO ead a bonus. Only verie was a v/ 1 from CI of CKOC. I usually verify only Canadians \& occasionally report others. Totals: 332 stations, seven provinces, 34 states, 15 countries. I will s/off for now. 73 in 1973.
LET 'S HEAR FROM LOTS MORE OF YOU GUYS WHO ARE DXING - MUSE US YOUR DX DOINGS: -TRC

32 BILL FEIDT - 8708 Contee Rosd - Apt. 14 - Laurel, Mary land - 20810
The season has, been kinda crumby here so far, with the exception of a couple of good Auroral openings \& SSS mapenings. Anyway, catching up, DX is as follows: $11 / 10-\mathrm{WHOS}-800 \mathrm{Ala}$. $5: 32-5: 44 \mathrm{pm} \mathrm{w} / \mathrm{Ae} \mathrm{NX}$ \& local NX; many items for De-catur-Huntsville ares; CJLW/PJB got the better of them before s/off, so no tape. 11/14- Lisbon-755 5:10-5:180m cracking right through the TV radiation w/FF program. 11/16- WCRL-1470 Ala. 5:43-5:45pm way atop w/NX \& s/off; promo for WKLD-97.7; WTQX1570 at same time much weaker, \& only WCNA left after these two were gone. 11/19-WJLE-1480 Tenn. 5:31pm o/u QRM s/off-SSB. WWGM-1560 Tenn. 5:45 only fair u/WQXR $\mathrm{w} / \mathrm{s} /$ off, no anthem. $11 / 21-\mathrm{WRCH}-910 \mathrm{Conn}$. $5: 30-5: 35 \mathrm{pm}$ surprisingly atop $\mathrm{W} / \mathrm{WX}$ \& ID, "This is RICH, serving the Greater Hartford Area." $11 / 22-$ WQMA -1520 Miss. 5:556:01pm w/state NX w/very long pauses between items; call mentioned at $6: 01$ \& then killed b KOMA, WKBW missing, thanks, Aurora. 11/28- WBLT-1350 5:12-5:15pm w/end of MoR \& s/off, no anthem. 12/9 found me in Hampton, Va. visiting a friend, \& not ing an astounding SSS TA opening on his $H Q-180$ and longwire. Strong signals just about everywhere, but perhaps most notable, Vatican-1529 from 4:45pm at excellent level. This one never heard here, \& still not heard here - I wish I'd been home, because I sure would have liked to log that oneg $\frac{\xi}{g} 12 / 13$ - YMM - 1210 Coro $5: 50-5: 55 \mathrm{pm}$ cutting through WCAU w/"R. Coro" IS \& into mx, very Auroral PM. 12/15-WKRK-1320 N.C. $515-5: 28 \mathrm{pm}$ mostly u/mess, but good e $5: 20 \mathrm{w} / \mathrm{Murphy}$ Drug Store spot \& into the "WKRK Community Bulletin Board." WLCK-1250 KV. 5:30pm very weak w/s/off. 12/16WKRK Community Bulletin Baard. WLCK-1250 Ky. 5:30pm very weak w/s/off, $12 / 16-$
WMMB-1410 S.C. $5: 14 \mathrm{pm} \mathrm{s} / \mathrm{off}$ by ga 1 GM ; fair level. WHLN-1410 Ky. $5: 15$ weak w/s/off WIMB-1410 S.C. 5:14pm s/off by gal GM; fair level. WHIN-1410 Ky. $5: 15$ weak w/s/
until WPCC s/off started. WPCC-1410 S.c. $5: 15$ apparently coming off $0 C \mathrm{w} / \mathrm{very}$ strong s/off. WUNI-1410 Ala. $5: 29-5: 31 \mathrm{w} / \mathrm{NX} / \mathrm{WX}$ for Mobile \& promo for WUNI NX-tip line. WBYE-1370 A1a. 5:44 s/off-SSB. WVSA-1380 Ala. w/s/off at fair level, uses SSB. Aurora brought veritable pipeline into Alabama on this SSS. The morning of $12 / 17$ brought tapes on old WINZ \& YVNN-940, the latter w/complete s/on ID; also HJKC-850 @ 5:25-5:36am w/Caracol network program. 73 .
MORRIS SORENSEN - God's Narrows, Manitoba - ROb OmO
DX has been good here since the arrival of my $\mathrm{HQ}-150$ - a far better RX than anything I've ever used in the past. 11/14- R. Belize-834 @ 8:56pm. 11/15-WHBF-1270 I11. e 9:08pm; XERPM-660 Mexico City @ 11:53pm. 11/17-KVBR-1340 Minn. 1:02am s/off. 11/18-WWWE-1100 0. (ex-WKYC) for the record e 11:58pm. 11/25 - KLMO-1060 Colo. @ 6:45pm s/off - too late for details; KKJO-1550 Mo. @ 6:51pm w/ no trace of usual CBE. KCHY-1530 Wyo battling WCKY @ 7. 12/2- KVGB-1590 Kans. W/usual WAKR @ 12:35am; CMHQ-630 surprisingly o/super-pest CKRC @ 12:37am. 12/8YSS El Salvador @ 8:59pm w/R. Nacional ID; YNX-750 La Equis Nicaragua highly of
WSB @ $9: 26 p m, ~ C K A C-730 ~ Q u e . ~ b r i e f l y ~ a t o p ~$
730
mess @ $9: 34$ pu. Verifications received CFCN-1060 Alta., KTOE-1420 Minn., WEBC-560 Minn., KLIZ-1380 Minn., CJRJ-710 Ont. \& CJBK-1290 ont. (ex-CJOE). I would appreciate help in locating a manual for the He 150 as some of the controls are unfamiliar to me. I sent a letter of inguiry to Hammarlund but they returned it with not available" scribbled in pencil at the bottom. Temperature here yesterday (12/7) was $29^{\circ}$ below, so I guess Winter is here, hi. 73. (Late Autumn is here, and Winter drawers on! -ERC)

DAVID KABLE - 29247 Wa 1densa - Wickliffe, Ohio - 44092
Renewal time for me is coming up at the end of January, and I have some "gripes." I neyey got a New Member Kit, nor did I get my $\$ 3$ back from the orders of the 1971 NRC Domestic Log." Can I put this $\$ 3$ toward my renewa 1 ? And I N.M.K. 3 Let's have some action on this - please! Other than that, I am very glad I joined the NRC. It's really been great receiving the DX NEWS through the year! Today I changed my $75^{\circ}$ wire antenna that went $N / S$ to $N E / S E$, at a $45^{\circ}$ anzle, going down a ravine! Reception changed very slightly. I guess that soon I will be con structing some type of Beverage antenna. It probably will have to probably go into the ravine also! And, possibly I might use a two mile long, 24 year old golf course fence! I wonder how that will work! All for now -73 , and this year, Christmas Eve and New Year's Bve are both Sunday nights, so two MMs to DX! 73 .
Refund has been applied to your dues. Dave, and we're working on NMK's now; see P. 2. Most NMK material - COF List, EBU List, Reprint List, etc. , has already appeared innDXN during the year. HQ

RICK ENANS - Box 2048 - Cary, Indiana - 46409
Hello FRC \& prone else Itheven't Musa in over a year in列 back into this been nothing to report. Recently, I moved, and am starting to get W/KRYS KFJZ. 12/10-WERL-950 Wis. s/off 5:16pm poor, just seconds after local WGRT went off; KEHG-1480 Minn. s/off e $5: 30$ porr; WSEM-1500 Ga. 5:40pm w/religious program, no sign of usual KSTP; KFU0-850 Mo. for ten minutes of NX L\&C 6:02-6:12pm, faking me out as they sounded like a loca1. 12/11-WLNA-1420 N?Y. on TEST 1:33-2am off, very weak $u$ /dominant WHK, but definitely there as they peaked for the aam ID \& $s /$ off. WFBR-1300 Md. noted AN \& very dominant w/2:10am NX: WACO-1460 Tex. on AN for bad WX \& travelers' warmings - 460 \& freezing rain predicted (our forecast on $12 / 5$ was freezing rain, fog, severe thunderstorms, plus $2^{-4}{ }^{\prime \prime}$ of snow in NW suburbs. Wonder if they'11 trade places, hi). WMWM-1090 0. good on TEST 3:01-3:24am. I shoulda known they'd play some good $\mathrm{c} / \mathrm{w}$ w/old Emie arranging the TEST. (OLD Em ie?? -ERC) Thanks a million! (Ha, Rick - I asked'em for bend max \& TTs! -ERC) A question for the Admiral: It's well known that a mobile home is murder for $D X$ but how about aliminum siding on a house, since mobile homes are made out of aluminum? When I lived in Cary before, several years ago, I had no line noise to speak of. In mast Chicago for two years with aluminum siding, I had a horrible problem. Now, back in a basement pad, just five blocks from where I was, no probproms so far. Now i'm wondering! * Phone is 981-3232. I hope Edward Fox calls. I work evenings, live in Glen Fark. v/f- WCHL WINN (for $6 / 1 / 70$ report, received $11 /$ work evenings, live in Glen Park. v/f- WCHE WINN (for $6 / 1 / 70$ rep
$30 / 72$, day after I moved in here; good omen for the future? 73.

MIKE COLLINS - 2021 Main Street - Stratford, Connecticut - 06497
WIDB-1490 At lantic City has been ordered off the air on 12/29. The station lost its license for faling to notify the FCC about the death of its coowner Leroy Bremer last year, which constitutes a change in ownership. Ironically, Mr. Bremer got the license for the station in 1955, after he filed agsinst the At lantic City Press, owner of WBAB-1490 Atlantic City, which was sold (the paper, that is) \& they forgot to file the proper application with the FCC because the ownership of the station thereby changed also. WLDB alweys had a fantastic signal on the Conn. /R.I. \& L.I. shorelines, stronger than any other station there (WMID1340, WFPG-1450 \& WOND-1400). The station was operated by Leroy Bremer at his house and his wife was the sales manager. The calls stand for Ieroy and Dorothey Bremer. WICC-600 is seeking permission from the City of Bridgeport to dig up its grounding system and install an entirely new one. The present system was installed in 1932 \& there has been much corrosion \& deterioration. The new ground system should greatly improve WICC's signa. The job is expected to take at least ten days, and if permission is granted, it'll be done in March or April. It is hoped the work will produce many day \& nighttime silent periods for WICC. Meanwhile, the most likely time for SPs is SMs $3-6 a m$, especially 4-5am. (They 11 need FCC approval for a new ground system too, no? -ERC) \& new station was heard MM 12/11 the long-sought CBK-540, Regina, wanted for years, was coming in unbelievabiy foud w/an ID for CBW-FM Winnipeg @ lam, CBC NX, then a correct ID @ $1: 05$, a jazz program, \& sloff @ 2. That same morming the WMWM-1090 Wilminoton, 0. TEST was hear w/a fairly good sigmal w/c/w \& many IDs. The TEST from WSUF-1580 Patchogue, N.Y did not run, in case anyone is interested. Also heard on MM $12 / 11$ wass KOA $=8 \phi 50$ Denver, with a very strong signal © aam w/Billy Graham and an ID. On SSS, saint Lucia on 840 was heard w/an EE preacher $4: 45-5 \mathrm{pm}$, on $12 / 11$. At first I thought it wight be WMOB- 840 Mobile, which has never been heard here, but should not be a very difficult one to catch. The next night (12/12) an ID was heerd for WVSC-990 AM \& FM, Somerset, Pa. right after WIBG Philadelphia cut power @ 4:300m. 73 \& Fappy '73

No surprise, Rick. Large areas of conductor near loops are generally very bad news; pickup is greatly reduced (thus making the local noise level introduced by the AC power lines appear higher than usual) and the nulling ability of the loop can suffer greatly. Aluminum siding is bad, also aluminium-foil coated insulation. Power and phone lines can also interfere with proper loop operation; I once saw one case where two separate phone lines on opposite walls of the room had the effect of causing all stations to null in the same direction on the loop. (GPN)
${ }_{\text {ROGER }}^{4}$ GIMNIIVI - 1111 Forest Hills Drive - Belleville, Illinois - Co221 12/19, PM. 1586, 1554 fair, 5:50pm. 1538 fair w/no KXEL slop. 1394 good in SS. Armchair between 6 \& $11 \mathrm{~W} /$ some fades were 045121415541506. 1214 Tirara good in Arabic 10:30 \& 11:30. 1205 good 11:35. 1043 fair © 11:37. B. R. 1602 het noted aga inst $10 \mathrm{caz} 1 \mathrm{KATZ}-1600$, 11:50. 1376 fair w/slop from Iocal KWK-1380 11:55. 12/10 AM- I am noting 1484. het but nothing audiole © 12:06. 1554 \& 1586 still hanging in there at good level. 1196 fair w/IXX plus Agadir het, 1:03. Andorra-818 split off at fair level from WBAP. Algeria-533 noted © $1: 30 \mathrm{w} /$ chants ending \& male announcer. Signal strength indicates beam towards Libya and weak for 600 kw power. Moderate KSD-550 slop at times. My second Algerian and fifth African. 683 strong 1:40. 818 somewhat better $\mathrm{w} / \mathrm{FF}$ announcements. $12 / 10 \mathrm{PM}-\mathrm{TA}$ hets starting to appear © 5:30: 1034 1043 1061 12051214 1586. 1196 het strong ( $)$ $5: 37$. 1394 barely audible. What language is used at $5: 30-6 \mathrm{pm}$ period? $\csc 2-782$ het fair 5:45. 1052, Padio Four, weak w/man-woman tal 5:47. 683 fair 6:01. A real catch at 6:35 on 872, AFN, the one w/audio but not sure if its EE. Het easily seperable from whL which was giving a sports report at the time. $12 / 11$ AM- Sottens -754 fair $w / m \times$ © 12:20. 1214 Tirana is giving Radio One fits bu this I mean that on this particular day I can still hear Tiram past midnight when R. One is generally strong but not tonight. RNE-T73 L\&C w/vocal mx \& Euitar 12:42. 1043 poor at 1:04. 12/11 PM- the height finally reached of the current opening. 1586 good at $5: 45 \mathrm{w} / \mathrm{symphony}$ mx \& moderate WATK-1590 slop. 1554 fair w/man talking e 5:50, slight WDXR $=1560$ slop. UnID-1546 5:51. 1502 Warsaw what sounds like its EE Ser vice © $5: 53$ poor but easy separation on 1500. I checked it out to find a real surprise in WTOP w/non-stop HX, ID © 5:54. Never heara this early before! 1394 good 03, 1376 also in © 605 w /moderate KWK slop. 1178 het © $6: 15 \&$ I presume this will be RNE. 1088 Radio Four w/severe KAAY slop $6: 38$. 845 , 854 , at $6: 43$, fair. I have to wait until local $\mathrm{KFUO}-850 \mathrm{~s} / \mathrm{off}$. I had better but abrupt ly core to an end as I am at 30 but Merry Christmas and 73 in 1973.
KEITH BIRLINGMAIR - Route 1-Box 44P - Rockton, Illinois- 61072 Greetings, a11. Long tine no use. DX here has been terrible, due to lack of enercy. Only DXing since I last graced (sic) these pagee was Dec. 11, $16, \& 17$. That will follow. Attention: For those of you tho have heard wINN1240 Louisville, they have finally decided to verify. They sent my form letter last week, $\&$ a couple of IRCA members have received theirs also. Mine tock over a ear. Ha, where is my thousand reet of wire? It wss ordered in sugust, I believe. I am now using the Knight R-195, even though it won't go below 590k. The sameter does not work, and neither do the code and SSB functions. Sometime I'll cet around to tracing it down. Down (or up?) to DX: 12/110 KTOK-1000 OK, o/u R. Mil © 3am. 12/17-KVOC-1170 OK poor, ((??? - ERC) (OK, or poor?) o/u KSTT/WWVA w/c/W © 12:4har. WLCs-910 Is. poor w/MOR © 3:18. 12/16-Much-wanted WVOJ-1320 Fla. fina 1 iv heard © 4:05am w/c/w \& WX, very severe QAIf from WJAS, Pittsburgh. This station was first heard on car $R X$, in 10/70, while at old beloit address. That's all for now. See IDXD for some IA stations leard. 73s \& good DX.

PHIL O. SYBII - 1231 3renson strect - Los angeles, California - 90005
Reception has been great latelv. I received (FAS-790 caml Zone e KizV Honduras which completes Central America. Jumping Jay Murley dropped over for a super evening of DX . We heard something on 1214 , maybe China, with EE foreign service w/British accent, JOUB w/EE language lessons. Got some veries: KABP KPAS KBBQ KPFK. Read Dick Wood's latect article in the '73 Handbook. That's all for how, so 73 s \& 88s.

* Yours and at least one other box of wire appears to have been lost by the P. O. ither that or it's being routed via Patagonia... We've sent you a replacement ackage via insured Parcel Post and you will be receiving it shortly (we hope). Expect to hear from the P. O.; we've put a trace on the missing packages. How do you lose 24 pounds of wire? HQ

Curits D. Fatcrerc - 80 Concord Road - Wayland, Massachusetts - 01778 Although no great amount of listening has been done, the last six weeks have proauced ten $11 / 5$ - WMVI-1170 s/off caught @ 4:30pm. WOWW1570 pulled in on TEST e 120 at $5: 30$ WRTZ- $1550 \mathrm{~s} /$ off noted, unn. At 6pm HJDI1380 noted over SS pest WENX. At S.J Wince the S appeardd good, I 1170 dominant \& R. Landis-1160 rallively shofted to the lower parts on the dial the adjacent eesy ones (for others) that 1 d missed ber. channels enough to get clear ID © $6: 50 \mathrm{pm}$. Also $10 n g$-wanted PIA 1 ID. New WGTR-1060 logged clearly e 7pm. Also e 12:30am 11/6 $11 / 28-$ local logged e 4pm on 11/19. At 5pm wBLZ-140 Broadmay a ine of the best At 12:q5am TISRHB-1125 R. Capital ID heara. 12/2 sound 10 . SSS openings I've heard this Foll with chanting likely from (CBI Off $12 / 17$ - wricalearly on 773 \& 818. At $1: 45 \mathrm{am}$ on 12/10, KRMG-740 clear w/CBL off. 12/17- WNCA$1570 \mathrm{~s} / \mathrm{off}$ noted @ $5: 14 \mathrm{pm}$ and WBBR-1580 s/off noted © 5:17. 73.

## STAN MORSS - Route 3- Broadford, Massachusetts - 01830

12/8-Vinnitsa-1546 fair signs1 4:50pm for new country, tape \& letter sent so here's hoping for a verie. Verie from WQIZ on CM. 12/9-Annual RAI-1115 4:50-5:30pm on another good TA night. EE on 1546 but weak. $12 / 11$ NGrn 1500 in well e 12:50am for a report to new address supplied by Ernie wesolo 1457 had a Iatin-language plus Chinese or Oriental mx © 1:O7am \& an anthem e 1:25, then $O C$ to $1: 31 \phi$ chimes \& military intro \& into more items by man \& woman. Let ter \& tape to Timan requesting info. CKKr-1330 its usual strong signal e 1.5 y TMEE-1380 way over a 11 on channel this AN © 2. Two EES on 1546 but weak, 2:102:150m. WMM-1090 wilminaton, O. TEST 2:20am, still on after 4:30. CFRN-1260 ov er $2: 18$, w/ERE seemincly off MMs now till 3. CKIM on top of 980 © 3 w/WTRY
 12/13- I hit an AST station on 1340. I expected it would be CJIS - surprised to (2) hear long in lin get 'em some day. 12/16-- I cials, while I was -1880 aping the frequency e $3: 50 \mathrm{pm}$ to 4 i 05 for ax report. finally logged moll 1340 while lookstill 13 to gound Cat. to 1:02 s/off, tape sent, for a ing for whav. new one. probably was the tester. WCWC-1600 RipoIf Wis. in on DX, fabulous s:8 . WT\&M-1530 pattern \& poor days \& WWRL off all AM. WrJD-15, Iapeer EI © 3. WWSC-1 Ondas del Caribe, TVMV, Punto Fijo on top of 1150 e 3:40am. hKN- weakly \& SS, meyW/ET 5:13-5:19 s/off, OC, TT, etc \& still no WWRL - WGIV I think weakly \& SS, be WIUZ - tape may tell. Sure happy to see WWRL Off as hKEN was 1 ang hanted leaves two Delawares still needed - WNRK \&
third week in a row so I guess a regular SP.

WELDAN T. CHILDERS - Box 188 - Carbon Hill, Alabama - 35549
I am proun to be a new member of NRC. I enjoy DX NEWS. I haven't received my New Member Kit, so please overlook any foul-ups in abbreviations, etce To introduce ruself, I am a 38 -yearfold bachelor \& have been a math teacher in the local high school for the last 14 years. I was an avid DXer as a pre-teen and a teenager. I used an old Majestic table model then, and just became interested in domestic DXingaagain a few motns ago. - ve been using a ixne with Mr . Worcester's $S M-1$. Since beginning again, I've picked up 320 stations. Some that Im most prouc or are: Kisa-530 rex., Mo., WGY-810 N.Y., XEFW-810 Mexico, KOAM-860 Kan., CHML-500 ont., CBM-940 que., KIVOK-970 Tex., WITY-980 Ill., 4 VEC-1035 Haiti, KIXL-1040 Tex., CJIC-1050 Ont., KJX 1070 Ca1., WNNC-1240 N.C., WXCL-1350 I11., WOC-1420 Ia., wOHO-1470 0., KOTN--1490 Ark., ZNS1-1540 Bahamas, KTUI-1560 Mo., KwCO-1560 Okla., CFOR-1570 Ont., KPCA-1580 Ark., \& WGOE-1590 Va. CX have been great here. Good DX to all. (Welcome to you took Welaon, and we hope you'll be a regular contributor to our Musings! -ERC)

PLease double spact and muse often. deadiline returis to thursdays in brookimio

MIKE COLLTNS - 2021 Main street - Stratford, Connecticut - 06497
Two NSPers were of 1 in the past week, making DXing interesting. WICC-600 was off Fri. 12/15 from 2 till after 4 am. WIAC-COO dominated from 2:30 2:45; then WPDQ Jacksonville was o/u WIAC W/R\&B (WTAC is heavy rr). WPDQ was a new one. Around 3 WMT-600 dominated for a while with standard MoR \& NX. At $3: 1$ WCAO $=600$ took over for a while with many $r r$ oldies. WCAO had not been heard in several years here, except briefly for an ID earlier this season. Then around 3:30 an EE tele-talk show came in o/u WGO, but I never dia get an TD. It was sin ilar to the MMCA talk shows. Coula this have been WREC-600 Memphis? At $3: 45 \mathrm{an}$ unID SS took over. All these were heard $\mathrm{w} / \mathrm{R}^{\prime}$ Libertad in Colombia nulled. Again, unID SS took over. All these were heard $w / R^{\prime}$ Libertad in Colombia nulled. Again, R. Rumbos from Venezuela dominated 670 all evening, w/no sign of the Cuban. It appears the Cubans have changed the frequencies and/or powers of some of their stations. Also that evening, 12/16, CBZ-970 Frederickton, N. B. was heard very well with an opera \& then ID for both CBZ \& CBD St. John © 10pm. On MM 12/18 I tried 540 around $1: 45 \mathrm{am}$ \& there was a female DJ playing contemporary mx, but I didn't get an ID. At 2 there was too much interference from SSes to hear the KNOE-540 L DX; it was somewhat Auroral \& apparently Monroe is too far inland (near Arkansas) to make it under such CX, so the KNOE TEST was not heard. So I went to 1600 , with WWRL-1600 N.Y. signing off w/three bars of the SSB © 2:10am. This is the first time WWRL has ever been heard off here. Even w/WWRL still on, the WCWC, Ripon, Wis. TEST could be heard, but it came in very well after they went off. It was very interesting to listen to, with calls from many DXers put on the air. The Paul Veleke, gave an explanation of what DX is \& was very happy at the response. WCWC was very good on its day pattern and only fair on the night pattern 1600 u/WCWC. At 3:10 or so, KATZ went to its day pattern knocking WCWC out pletely for a time, then went back to its night pottern shorly before down @ 3:30. I stayed with KATZ until after 4. There der it $W / r r$, but I never got an TD. KATR has the er that WWRL was using last year at this tias the leaving Connecticut w/only two $/ \mathrm{c}$ ( Mers, WIOF. WVNJ-620 Newark N.J. was indeed on AN For bout mer rr oldies $1-5 a \mathrm{~m}$. The announcers plaved it not know the mx. At the time I wonder WVNJ, but the whole thing was aropped which has bee whole thing was dropped shortly after. At long last, WICC-600, which has been $N S P$, has a regular $S P, S M s 4-5 a m$. It's not MMs, but it's better
than nothing. 73 .

RICHARD NOEL ALLEN - Billings, Ok lahoma - 74630
I hope everyone had a Merry Christmas and that the New Year is being good to you. As of this writing, 12/19, the XELO/XEROK situation is a it confused, as they have not been heard the past three evenings. Iast week, they had returned to religious programmins and the XELO ID. Does anyone know what is going on S of the border? CKLy dominates 800 for the moment, booming in with good signal. IA DX has improved the last few days, but I haven't been in the mood o listen because of the language barrier. We are enjoying warm VX after a record breaking twc weeks of suz-feezing temperatures. The following DX was heard on a Pioneer SX-300T RX \& $2^{\prime}$ altazimuth 100p: $12 / 13-\mathrm{R}$. Mexicana, XEFI-580, heard 5:03am u/ IBN w/ranchero mx \& SS. 12/15- UnID, probably CFOR-1570, © 3 , 1000 W/Off in EE U/XERF. 12/16-KTUF-1580 s/off heard © 7:15pm. KBGO-1580 hat oldies U/XEDM © 11:04pm. 12/17-WCTS-1580 heard w/rr E 4150 m - 12
 heard in SS u/KTOE © 2:45am. WKL ( $-1080 \mathrm{w} / \mathrm{rr}$ © 4:07am \& no KRTD. CPE-1550 w
 /KNOE W/Oh Canads B Comprat from PJB (R. Nederland) CHTR CKLC MWw, the la returned the postare I sent. Many 73 s in '78. mailed fron Southfield, Mich. a - HEARD STNCE TASm
$\begin{array}{llllll}800 \text { X E R O K EX-XELO } & & 1060 \text { K A M A } & \text { El Paso, Texas (SS) } \\ 850 \text { K L E U } & \text { Waterloo, Iowa } \\ \text { gH0 W F N C } & \text { Now 50 }\end{array}$

GORDON NELSON: $48^{\prime} \mathrm{HA} \mathrm{R}^{\prime 2} \mathrm{Y}$ AY WATERTOWN MA GORDON NELSON: 48'HÁRDYAV., WATERTOWN, MA 02172 PROPAGATION \& FEATURES

## REPORTEDLY IN OPERATION.

SPANISH SAHARA. EAJ203, Radio Sahara, has begun answering reception report after a long period of non-response accoring to SWBC DX'ers in SPEEDX; signer is Federico Campos Alvarez; might be a good time for a follow-up report if your reports have gone unanswered. According to a recent SW QSL, the MW outlet is still running 50 kw on 656 kHz with a 5 kw auxillary. Schedule is $0755-2300 \mathrm{GMT}$. This one was heard fairly well in previous years but not a peep so far this season.

MALTA. The Malta Government ordered the BBC to close down their relay station due to complaints from Egypt regarding Arabic language transmissions. This was in November; no information yet on whether it did indeed go off. (MWN)

SWITZERLAND. Beromunster on 1562 kHz has been testing with Foreign Service programming including ID's in English and French. Beware! (MWN)

SPAIN. The Spanish station on 1097 kHz , La Voz de Guipuzcoa, transmits from Monte Ullia near the French border and is programmed in French daily 0600-0800 and 1115-1145 with the slogan "Atlantic 2000". Address for reports is Residence Panorama, 38 rue Labat, F-64100 Bayonne, France. The news for this station comes from the local paper Sud-Ouest at Bayonne. The French government regard this station as an undesirable pirate operation and has protested to Madrid. (SCDX)

ANTIGUA. ZDK on 1100 kHz has had trouble of unpaid electricity bills and the government cut power several times last fall. (MWN)

CZECHOSLOVAKIA. The Czech reported on 704 is a drifter up from the normal channel of 701; Prague is no longer active on 701. (MWN)

DOMINICA. WIBS, Dominica is reportedly now on 595 kHz , a move from the old 695 kHz spot. Can anyone confirm? (MWN)

PARAGUAY. One additional note on ZP-19 reported last issue on 645 kHz by Geoff Trower in England: he had to wait until Iran on 645 signed off before he could ID the Paraguayan... (MWN)

INTERNATIONAL WATERS. "Radio 1187 " on 1187 kHz noted testing in English and Dutch; address given as P.O. Box 2448, Haag, Holland. (ARC) Bill Bailey here in Massachusetts reported hearing a TA with Rock music and English announcements on 1186 the other night; probably the same one.

BULGARIA. Several new stations are now on the air; the following update the latest EBU: 701, Sylistra, 10 kw , nominally on 710 ; 1043, Petrich, 10 kw ; 1178, Goze Delchev, $10 \mathrm{kw} ; 1286$, Smolian, 30 kw ; and 1295, Kurdjali, 10 kw . (ARC)

MASIRAH ISLAND. The high powered BBC relay station currently operating on the hopeless for North American reception channels of 700 and 1410 kHz , is contemplat ing changing from 700 to 890 kHz and from 1410 to $1260 / 1290$. The former change just might be possible here in the Northeast if we can get past Algiers but the latter..! (Ken Brownless, England)

Since the BBC initiated Local Service stations last fall, we 've been receiving so much confusing and contradictory frequency and power information from various sources that we've given up trying to keep things straight for the time being... Many of us here on the East Coast have noted traces of some of these stations, especially on 1457 and 1546 kHz , but signal quality is usually so poor as to render positive ID impossible. One of the first tentative ID's on a Local Service station comes from Bill Bailey in Massachusetts who reports hearing a "Radio... Bristol" ID on 1546. Dispite listings of moderate powers, most of these stations must still be in the 500 watt and less range, judging from reception over here... Rather than continue to propagate the confusion, we ${ }^{1} 11$ hold off until some of the confusion is resolved. If you do manage to snag a positive ID from one of the Local BBC stations, here are addresses for reception reports:

Radio Birmingham. Manager, Pebble Mill Road, Birmingham B5-7SD. No tapes. Radio Brighton. Station Engineer, Marlborough Place, Brighton BNI-ITU.
Radio Bristol. Manager, 3 Tundalls Park Rd. , Bristol BS8-1PP.
Radio Blackburn. King St., Blackburn, Lancs. BB2-2EA.
Radio Derby. 56 St Helen's St., Derby DE1-3HY.
Radio Humberside. 9 Chapel St., Hull HU1 - 3NU.
Radio Leeds. Merrion Centre, Leeds LS2-8NJ.
Radio Leicester. Epic House, Charles St., Leicester LE1-3SH.
Radio Manchester, 33 Picadilly, Manchester M60-7BB.
Radio Merseyside. Commerce House, $13 / 17$ Sir Thomas St., Liverpool LI6-BS.
Radio Newcastle. Crestine Ahouse, Archbold Terrace, Newcastle-upon-Tyne
Radio Oxford. 242/254 Banbury Rd., Oxford OX2-7DW. NE2-1DZ.
Radio Nottingham. York House, Mansfield Rd. , Nottingham NGl-3JB.
Radio Sheffield. Ashdell Grove, 60 Westbourne Rd., Sheffield S10-2QU.
Radio Teesside. 91 Linthorp Rd., Middlesborough, Teesside TS1-5DG. (ARC)
The "Union internationale des télécommunications" in Genève
publishes occasional lists of world broadcasting stations. The following are notes on interesting entries for African stations:

629 IIBERTA, Monrovia is here from 650 kHz to comply with the African LW/MW agreement (C.A.R.) of 1966. PWr: now-10kw, soon - 50kw!

764 SENEGAL, Dakar has a DA pointing $90^{\circ}$ (due east), thus its weaker'signal in NA in recent years.
836 ZAIRE, Kinshasa. With the calls 9NRA, this lO-kw station will soon be 250 kw , if not already.
908 THE GAMBIA, Bathurst, is assigned l-kw here by the treaty. A good hi-A possibility - if it's active.
935 MAROC, Agadir also has a DA - major lobe $145^{\circ}$.
1295 GUINEA, Conakry (Kipe) is listed here w/lokw. Likely the compilor's mystery African of last season. Same DA as 1402.7 kHz .
1349 MAURITANIA, Nouakchott, noted power increase to lookw soon.
1403 GUINEA, Conakry (kipe) has a DA with major lokes $47^{\circ}$ and $277^{\circ}$. 1295 kHz above has the same pattern.
1502 SENEGAL, Tambacounda should now be on lokw as planned; was 1-kw.
$\stackrel{\infty}{\infty} \quad \infty$ This graph shows the daily values of $A$, the Fredericksburg index of geomagnetic/auroral disturbance
in the Earth's magnetic field. High
charged particles into the upper atmosphere as the result of certain types of solar disturbances. The
intense medium-wave signal absorption produced by one of these events is greatest in high latitude regions
and persists for several days following the disturbance. Values of A above about 20 are inevitably assoc-
iated with heavy signal absorption along TA and TP paths; very high values (above 40) are usually
accompanied by E-layer blanketing over North America and Europe; on such a night reception from stations
to the South will dominate. Extended periods of low geomagnetic/auroral activity are necessary but not
sufficient to guarantee excellent high latitude MW reception - other ionospheric effects such as sporadic
E and the Midwinter Anomaly may effectively ma sk what would otherwise be excellent reception on high
latitude paths during periods of extended geomagnetic/auroral quiet.


