

CAMBRIDGE, MASS. 02138

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"Please renew my NRC membership for a fourth
year. I couldr't possibly be without the NRC -
it's the best:" (Bob Hostettler)
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IN THIS ISSUE


Direct Coupled Loops - Dave Fischer Geomagnetic Measurements - Gray Scrimgeour Report from the Pacific - Richard Wood Verification Signers - Ernie Cooper Report from Thailand - Glenn Hauser

NEW MEMBERS!
*Dr. Harold E. Cox, 80 Virginia Terrace, Forty Fort, Pa. 18704
*Angel Garcia, 17 Fort George Hill, New York, N.Y. 10040
*Bill Stone, Box 97, Claremont, Ontario (Rejoins - welcome back)
*Jack Widner, 4818 Farrington Ave., Indianapolis, Ind. 46201
Welcome to the $\dot{N} R C$, gentlemen, we hope to be reading your contributions often here in the pages of DX NEWS. Your new member kits are being mailed out now; please allow a couple of weeks for delivery.

CONGRATULATIONS:
To Wes and Shirley Boyd on the birth of a daughter, Shelia Marie, born January 10th...

## CLARENCE BURNHAM STRICKEN

According to a letter from his sister-in-law, Clarence is presently quite ill in a. Connecticut hospital; why not drop a get-well card to this veteran member of the NRC? His Post Office Box is now closed but you can get a card or note to him through his sister-inlaw; the address is 99 Maplewood Park, Gloucester, Mass. 01930. We all wish Clarence a speedy recovery:

## 2

NEW PUBLICATIONS FOR THE DX'ER
The 1970 Edition of the World Radio TV Handbook is now available; this latest issue continues the tradition for excellence that long ago made WRTVH the most important single reference book that a DX'er can get. The 24 th Edition is 360 pages long; the North American MW listing was of course prepared by the NRC. Available from Gilfer Associates, Box 239, Park Ridge, N.J. 07656. Price is $\$ 6.95$ Associates, postpaid; for the special low rate of $\$ 8.95$ you can get both the postpaid; for the special low rate of $\$ 8.95$ you can get both the year. We've also recently gotten a copy of Richard Wood's excellent year. We've also recently gotten a copy of Richard wood s excelient
new book, SHORTWAVE VOICES OF THE WORLD. This is a very interesting guide to shortwave broadcast listening, written with typical Wood expertise and filled with excellent photographs. While not intended for MW DX'ers per se, we're sure that many of our members will find considerable material of interest in it. This too is available from Gilfer; price is $\$ 3.95$ plus $25 \$$ for handling.

## free free free free

Pat Flanagen writes to inform us that he's recently gotten ahold of a hard-to-find album containing the NATIONAL ANTHEMS of 22 Latin American countries. /This album is on a foreign label (Montilla) and Pat offers to make a taped copy for NRC members... A11 he asks is that you supply him with blank tape; write him c/o WEND Radio, Box 237, Ebensburg, Pa. 15931. It might be a nice gesture to include return postage, too.

## ANNOUNCING THE NRC LATIN AMERICAN LOG:

We're pleased to announce that HOWARD FOUNTAIN has volunteered to undertake a project that's long been a topic of discussion here at HQ - a complete and comprehensive listing of all MW stations in Latin America, including addresses, slogans, etc. Howard has already begun to compile the NRC Latin American Log by sifting through all available information sources and lists; it'll be a big job but the final publication will fill a badly needed gap in the hobby. The NRC Latin American Log will be published offset by the NRC - perhaps as a special edition of DX NEWS; it's too early to tell yet. Watch for further information on this project in future issues of DX NEWS.

## TRANSATLANTIC LIStening TEST DATA

We're now finishing the preparation of the results of last fall's TALT for computer analysis. Over 700 TA receptions were reported by North American DX'ers for the TALT period; after very careful filtering of the data to remove uncertain and tentative loggings, more than 400 rock-solid receptions will be subjected to analysis To this will be added several hundred receptions reported by European DX'ers; the final TALT should contain data on more than 500 TA receptions made during the 9 -hour TALT period - this is certainly the largest body of MW DX data ever gathered! The TALT was a remarkable success and the results will provide data for was a remarkable success and the results will provide data for
scientific analysis for a long time; we plan to make duplicate data decks for use by other individuals and groups. But I still have nightmares about what would have happened if we'd held it a few days later...

SPECIALS $\mathrm{Kc} / \mathrm{s}$
A.M TET T Mon. Fcb. 2 C B AF 1300 Moncton, New Brunswick 5,000 $1: 00-\mathrm{kc}$. Info:

Mon. Feb.
Sun. Feb.
Mon. Feb.
Mon. Feb.
2 K P I N 1260 Casa Grande, Arizona
W C I R 1070 Beckicy, West Virginia 10,000
9 W C V R 1320 Randolph, Vermont 1,000
9 K OFO 1220 Ottawa, Kansas
S NO 1450 Barre, Kansas
1,000
250
WH B C 1480 Cantón, Ohio
Canton, Ohio
Randolph, Vermont
Randolph, Vermont
Sweet Hone, Oregon 2:00-3:00 IRCA 3:00- N R C 1:00-2:00 N R C 1:00-3:00 N R C 1:00- NNTRC 1:00- NNRC 2:00- NNRC 1:00-2:00 N R C 3:30-5:30 IRCA Moncton, New Brunswick, and. NOT to CBAF. No info on procramming.

KPIN-1260. Reports go to Mr. George Tunning, Chief Engineer. They' 11 play MoR music with frequent IDs on this test. Info, Don Erickson, IRCA.

WCIR-1070. Reports go to Mr. Roger I. Fox, Chief Enginner. We don't know how Ropor the TEST vill lest, so tune in at 3 a.m.! Address is WCIR, 119를 Main Street, Bcx 1063, Beckley, W. Va. 25801.

## CONGRATULATIONS.

To Mr. and Mrs. RONALD MSSCO of Windsor, Connecticut, who became the parents of a son on January Gth! Ron says he's guaranteed to become a future DXer! We wish all three the verj best of everything, 8lways.

AIV Situation - ON - 910 - KRRV Sherman, Texas, AN-6 (off MM).
850 - KOA Denver, begins HI AN- 6 on MM $2 / 2$ or Tues. $2 / 3$.
As we so to press, INRCC reports DX TESTS from
Mon. Feb. 16 NKRC 550 Cincinnati, Ohio 5,000 2:00- NNRC Mon. Fib. 9 WS N 0 1450 Barre, Vermont 1,000 1:00-2:30 NNRC
(apparcntly a change from Sun. $2 / 15$ as listed above)
ERIEST R. COOPEP - 438 East 21 Street - Brookijn, New York - 11226
Veries, no l:iddinc!: WCTR-1070 WKAJ-900 WTAI-1560 WKXR-1540.
 off e $4: 55 \mathrm{~W} /$ Lord.'s Prayer, probebly WIMS, but no ID caught. Then, WCFI took over. Unn WFW-990 on top © $5: 25 \mathrm{pm}$. WHOO atop 5:30-5:4 when announcer said there would be a pause "for technical adjustment". Quite a pause, too - they were never heard again! SM 1/4-WTAI-1560 on ET i-1:16 s/off; reported w/PP as thej hain't answered an October RS SM report @ 6-6:15am. MM 1/5-UnID TT800 1:52-1:55. Portugueser on 880 (e3 3:02-3:03 with Ave Maria \& prayer, then on cane Foxworth's baby, and pfft - there went the Brazilian. ET/TT/OC-1190 3:11-3:10, no IDs heard. 1/7- I'm home w/a badccold, \& at 3:15, tuning around. I happili discovered WKXR-1540 way atop everything on that spot for a half hour \& a dancu report: This is one I've been arter for many man twilights: 1/8-WIAM-900 atop C 5:13pm, unn. Sat. 1/10-UnID TTer-1450 1:02-1:15 off, wha's WIAM-S00 atop E 5:13pm, unn. Sat. 1/10- UnID TTer-1450 1:02-1:15 off, who's
this $5 / \mathrm{c}-\mathrm{er}$ ? WCCR-1580 heard weakish on $\mathrm{r} / \mathrm{c}-\mathrm{TT}$, only ID heard was at the end. this $/$ /c-er? HCCR-1580 heard weakish on $r / c-T T$, only ID heard was at the end.
1.1: $1 / 12-$ TT u/CKIM-1570 12:16-12:24, no IDs noted. Iow TT on 1260 , $1: 43-1: 49$. $1 P 1 / 12-T T$ u/CKIM-1570 12:16-12:24, no IDs noted. Iow TT on 1260, 1:43-1:1
More TT on 1530 2-2:04, and TT on 1520 , at same time. Bad M , nothing new. 1/15-1. $F=\mathrm{FC}-1340$ on top much of the time 6:21-6:45, but still I can't swing an İ out oi this oiseau (bird, hi). MM I/23- WYMB-1410 on r/c-1T 12:52-12:59 off, u/WIIVG/KOV, both w/talk shows. TI on 1360 but I doubt it was WISV - I expect thej showed. up one day 1ater when their $f / \mathrm{c}$ is sked. TTer on $7401: 38-2 \mathrm{w}$ riv. also, turned out to be unn WKIS. WOR-710 off, \& a station Eling and IDing as "Storer Broadcasting Co." e Pam, whossis? At 3:01 I noted a Portuguese spealer o/the two Reloj Colombiens \& began to log it when e 3:04 on popped WKYC to test its ANR - about as welcome as Athlete's Foot in July, hi. C UNT.

## MUSINGS of the Members

Ernest R. Cooper 438 Eost 21 st Brookliy, N.Y. 11226

JOTN DALLER - 433 East 83 Street - Apt. 3C - New York, New York - 10029 Greetings! I an alive and well at the above address in N.Y.C ST. LWuw was wreat; for that matter, so was BOSTON. Lotta fun seeing old and new friends but I missed regular Convention-goers Rugg, Seaver, Hansen \& Krchesski. Varne Heinen - start practicing now for this year's head-on chan lenfe! DXing for me has been sjight - consisting of time during EAS Emergency Broadcast ty, Mich. 2. WDEE-15 0 (ex-WJEi) Detroit New calls- WIID-1090 (ex-WIAK) Garden Ci a format chance also. (The "Eyes of Detroit?") While home for \&ill will have told Frank Merrill that I heard WDEE on their first ile home for Christmas, I \& he said he heard them on the first SFCOND of their div of broadcasting, 12/25, tipped off in advence! Would someone who has seen the picture, having been LOUS 169 " lend me a copy, please? That stuff doesn't pentire of me from "ST. tions, does it? Since last Musing. That stuff doesn't really $\%$ on at Conventions, docs it? Since last Musing, I have founc imCA to have its good points
also. Pay attention: In $11 / 68$ they had a cont also. Pay attention: In $11 / 68$ they had a contest to guess exactiv how mants records they would pley durins "Much More Music" month. Firxt prize was second \& third were $\$ 57$, for earliest-postmarked correct entries. On $11 / 2 / 68$ I entered 1,149 postcards at the $5 \phi$ rate. That 's over $\$ 57$ for postcards? On $12 / 6$
they announced me as wimer of the $\$ 570$ I they announced me as wimer of the $\$ 570$ plus all 80 singles played that month: John Javctski helped by lending his tape recorder! DJ Dave Prince says WCAR has Ken Mraper es consultant-in-residency for their switch to rr. Tom Clay, ex-WJBK CKIW KDAY etc. can be reached 9:30-1:30am at WCBS-FM-rr e 212-765-4321, Ext. an fun. $73 \&$ Rest in Peace, Relphie.
9233 West Stayman Drive - Ellicott City, Maryland - 21043
the world? This month begins my sixth year in the greatest DX organization in meeting Hant: Holbrook just before the happy Yuletide \& I especially enjoyed meetins han: Holbrook just before the holidays. I'Il only include $D X$ since Curistmas \& new stetions: $12 / 29$ - I heard the WRYT \& Wk $D$ mesis w/the latter I'vinc full account of the DX hobby \& the NRC. This MM was the best for TA loge heard in three $y$ ears so I spent most of the time zoing after Europe. Also
logged were HJDK-750 and HJM- 660 fis lozged were HJDK-750 and HJJM-660 for Colombians f 423 \& 24 . These were heard at
$1: 30-2 a m$ 1:30-2am w/fair signals. $1 / 6 \mathrm{I}$ had KAAY-1090 u/local NBAL © 6:10pm. $1 / 7-$ WGIG-
1440 covered the frequenc. ID o/CNBC. TT on 1/10 IDed @ 2am 30 (or was in 1964) speaker of the as unn CBL but report sent as the owner is report on that stationary of the Ky . House of Represemtatives \& verified a if. C. I would like to see 1,200 before the the station's. Total heard now is 1,182 \& bring all of us good DX.

RODDY FREMAN
9029 Meadow Heights Road - Randallstown, Maryland - 21133 Rick Marr is Bob Binau. Beginnins my dayt I was introduced to NRC in $12 / 68$ by 2apm; :SVA-550 w/WX following "Noon Almanac" © $12.319-$ WLNV-540 Md. w/MoR @ 12: pm; a resular in this area durinc dartime hours; (e 12:35; WFIL-560 Pa. w/rre e 12:39 by PSA. C 12:45pm; WHP-580 Pa. w/ads a time hours; WMS -570 Ma. w/ci me followed. splattor. Iocal WCKO-600 Ma. W/ads \& MOR e 12:47; 590 nil because of heavy WCAO more, WYT has dropped CSS \&. W/NX © 1:5p5pm; WIP- 610 Pa . w/ID © 2 pm . In Beltiiate M ABC/E stations, joined Ae Net. This leaves theccity w/no CBS affilte. WVI Arlintontions, as local c/w outlet WISZ Glen Burnic, Mdo is also an Hell Tr-onl- hours, Va. is joining the Mutual Network, mainly for use also an Well, that ${ }^{\prime}$ g hours at nicit. This gives the D.C. area three for use during hope iou will, Roddy, end now - I hope to Muse onten in the future. (Ve also


GEORGE C. GREENE - 1527 Sunset Avenue - Akrom, Chio - 44301 1ately, w/the fol11. DX has been somewhat decent here 1at e 1:27am lowing new ones: $12 / 14$ gave me WEAM- 1390 finaliy W/Draxe-sty ie ris uptempt MoR); 12/18 new WLRO-1380 Intorain was loged WIOT-1000 noted e 3:46pm on $12 / 22$. 120 .
 on 12/28. 12/29-The WRXT TEST was easily loged 10/31- UnTD station on 1560 -1500 for a new call (for WJBK, format is $c / \%$ wa in eastern $\mathrm{F}_{\mathrm{i}}$. on for energency flooding CX in that area. Stat have been in Southern $W$. Va. or western Ve. ) Unn WRIC also mer cency WX info at the same time (2am). XELO-300 w/Recording of the New Year CKIW nulled, WINZ-940 w/taik \& MOR w/CJGX nulled; first logging of the New afteron $1 / 1$ was KRRI- $1460 \mathrm{w} / \mathrm{an}$ ET/rr © $2: 45 \mathrm{am}$. $1 / 6$ gave me WKWK -1400 in earlis in, noon, s/a similar time for the logging of WBRJ-910 on $1 / 7$. No new $\operatorname{TEST}$, \& a f/up though, unfortunately, hi. Re 20 ht has gone out WSCR-1320 © 5 am on 12/29; WVOJto WKBA-1550. Other loggings of note are these:/31. It was interesting to be 1320 e 1:25am on 12/31; KFYR-550 © 1:45am on lis along w/good. reception of Seuth-
 ern WIIZ, MNOJ stations at the same tion NOP 690 noted at NOON on $1 / 2$ for a $\mathrm{NB} A \mathrm{M}-740 \mathrm{w} / \mathrm{mr}$ \& taking phone dedications; WAP res surprise! In locel news, WHIO- 640 will be moving their XR from the $N$ to real surprise: In local nis will cause their one null (to protect CFCO) to go o er the $v$ side of Cleveland, instead of through the heart of the city, thereby givins them better coverage of Cleveland. Any one $\mathrm{w} / \mathrm{CMs}$ to trade, please write.

SCOTT BROCKWAY - 112 North Crescent Drive - Rome, New York - 13440
This Free Acadeny Hish School \& began looking for DX about two years a Junior in Rome Free Academ ago. Then I go to college nex Jear, ion here. Im hindered by having to get to nor in German. Now to the DK situation here. In fir usubed eari. on Sun-Thurs. nights, but on vecations \& Fri. Sim nigo an SW listen11. Le to $3: 30$ or later. Ni, best DX catches on M.W. (Im also an SWCO er) are: KSL on $1 / 1 \mathrm{w} / \mathrm{a}$ great sicmal, WFAA on $12 / 19$ also $\mathrm{w} / \mathrm{a}$ good. signal \& WCCO
 on $12 / 13 \mathrm{in} / \mathrm{a}$ fair signal. $\frac{f}{\text { ve an }}$ an time signal in Hawaii (WWVH) \& Col. (WWV) \& re' ort. I also have $V$ /gs from an swant my best Canadians are CaS in Winnipeg \& Cal. (KGEI). In the foreign department my best Canade a v/q from XEB Mexico City the SW outlet of CFCN (CFVP) in Calcary. I also have a vou an idea of what I can \& am expectins a $v / q$ from R. Rebelde in Cuba. To give couper antenna, the folpick up on :.j Hallicrafters S-120A rig w/a lowing are cormonly heard in the Winter: CJKL-560 WCCO-830 WHAS-840 CKVLm 850 WIN-700 CKAC- 730 CBI- 740 WSB- 750 WBBM-70 1010 WTM 1050 WBT- 1110 WWVA- 1170 WXYZ-CJBC-360 NCBS-330 CTRL-910 CPM-940 CFRB- 1010 CHM 1270 CJOs-1290 WSIR-1350 WIRE-1430 WHSL-1490 WHE 1590, WRT-1600. There are mand more, but the $;$ are even more con heard so until next time, 73 \& good luck in your DX. (Welcome to the NRC \& Musings, Scott - and lieep those Musings coming to 438 E. 21! -ERC)
JEFF KADET - Box 732 - Er ston Hell - U. of Maryland - College Park, Md. 20742 It's been a lond time since I've last appeared in Musings although I've been keepins up w/whet's been Going on. time for DXine as Id like these das. We the WKOG ET \& WCVR TMEST. Then from berore Christmas vacation, thougn, a hear tham Trat \& KATR FT. These are Bethesda durint vacation 1 heard WhD han Wha from momom as my records are at home. Fron the form $I$ am us a from memors as the antenna \& it seems to do a good job but $w / a$ bit of line noise in our room as the antena I plan to leep the RX up permanentiy next semester. I enjoyed a weekend I plan to keep the RX up here permancong w/Steve Russell, \& also often see the DX-fest at Hank Holbrooks in Sherman, Rick Marr. My roomate \& I are planning a University's answer to Bobby sherman, Ret that far I'll look some of you up. 73 jaunt to NYC o/seme
R. J. [mfutbs - Box 946 - Wayne, New Jersej - 07470
'Hi Eang; once ajain, it's time to recap December's DX. When last weel:'s procram came to a close we found ourselves musing over DX through 12/18, so here's 12/19: WUST-1120 © :07pm, WKIX-1210@ $4: 11$; QHNC-890 u/WIS © $4: 22$, WRRZ -380 w/WCBS $100 p e d$ C $4: 25$, WAVA/WCKB-780 u/WBBA $4: 28$; KMAY-1090 u/VBAL 4:40; WCPS-760 u/WJR 4:44; Oran-548 E 5; Norte-719 (e) 5:07; BBC-908 for a first (as all these are) 5:29; WCPC--040 5:32, reported; ORTF-944 Toulouse; Madrid-989 5:41; Synchronized Spanish Camon Wave on 1394: e 6:21 (hereaiter referred to

Sp. SCW: Finally Saar-1421 (6) 6:13, Polend-1304 © 6:27pm. 12/20-Sp SCW-1475 (e 4:52. 12/21-CBK-540 e 12:10am; WGIO on test 12:45; WINZ-94+O 1:22. 12/22CKAJ (ex-CKJL per Mark Katz) heard but calls missed 12:02an s/off; WJWLm900 TEST e 12:15; HREM-1000 testing whilst looking for KXRB TEST in vain 1: 27 em . $12 / 28$, e 12:15; WREM-1000 testing whist looking for KXRB TEST in vain 1:27em. $12 / 28$,
after Christmas break: Luons 602 12:20em, KWKH-1130 u/WNEN's 10kw. AXR, 1:15.
 $-950 \mathrm{C} 1: 17$, then WRYM TEST s/on © $1: 19 \mathrm{w} / \mathrm{a}$ IEST I 'd loved to have listened to all IM, but there were other RESTs, so WKND-1480 © 2em, TIRS-975 Atenea in San Jose format similar to TIOS-825 e 2: 46 ; KIRA-1010 u/CFRB \&: WITX OC, a real surprise 3:30; XFG-1050 © 3:32; WHOT-1330 ( Hi Jerry) w/Big A1 © 3:44, VMINT-1330 TEST brier 1 3:48 to $3: 53$ WPON s/on, dernit; WNSD-1090 TEST in weak $u / L A$ het e 4, HIMS-5\%0 w/an ID way u/TMCA \& Cuba (I thinl) e 4:09; then WBAA-920 TEST 4:15; then WRSJ-1500 $4: 45 \mathrm{am} .12 / 30-$ WUFO-1080 u/WTIC w/latter $100 p e d .12: 06 \mathrm{pm}$, then WOWF-1300 u/FINK C 12:34, a real rarity that anything gets $u / W B N X$ days; then WBZA-1410 e 12:43. 12/31-M, not eve, as even I don't DX New Year's Eve; I drink instead. (only more than every other night) (ERBA lives!): WRIC-540 on w th flood alert all AM, heard e 4:09; WDAF-610 in 12:24; Portugal-665 in 12:29 for a newie; unID GSQ-1240 s/aff 1, CJCS? Then CBOF-1250 GSQ s/off 1:04, then just RH Beezeville, WBZY-1140 u/WRVA w/latter looped. (and ne not looped yet) @ 4:32;
 next Muse will cover the bulk of the $1 / 70$ stuff, of which there ain't as much, hi. WCPC $v / q$ in so the first half of the season finds vy verie percentase (2) 100 .

CESAR OBJIO - Caile B.F.Rojes 46 - Apt. 5-Santo Dominso, Dominican Republic
Hello friends. I am sorm to report that R. Cristal TEST procram could not be presented on the assigned date $\&$ time, but this will be done later. Main rceion was due to technical problems as the station is being prepared. to operate 24 hours. What's more, we thought that by $12 / 29$ this was to be already in effect. The test program was taped on Saturday afternoon $12 / 27 \mathrm{w} / \mathrm{many}$ Dominican musical selections, also marf IDs. Although I mention in the prozram Radio Cristal Post Office box I wish all reports to be sent to my have address. The new date vill be amounced later. I have been ill again now with this Hong kond FIu since $12 / 13$ up to now $12 / 30$ when $I$ am not feeling completely well.
Dominicans are also ill, I hope this won't last long. Due to this I haven't been able to $X \mathbb{K}$ do something to add stations in Fish FDXC, I hope to continue as soon as possible. My best to all of you in the New Year. (We hope ylu're feelad fine once acain, Cesar, and let's know that new date for Cristal-570. -FRC)
RONALD J. MUSCO - 18 Chextnus Drive - Windsor, Connecticut - 05095
News here is of a mornine noise maker - 71b. 140z. boy born 1/6. DX has been limited to MA w/the following additions: 12/29- WND-1480 TEST in w/excellent TEST. Thanks Emie! Although five miles away I've never verified them. CKKN-1320 from 3:01-3:23am at $S-9$ plus 10. Is power reali\% 1lw? Report
 port on both UPON s/on e 3:54, so no to - insufricient data. WBAA-920 TEST from $4: 03-1: 19 \mathrm{am} 5-\mathrm{u}$ /stron CKCY. Finally for the morming: CJET-630 e S-3 o/WPRO 4:59-5:02 for a report. $1 / 5-1$ tuned to 1330 again $\widehat{3}$ 3:03am \& took a good log on HOM $\varepsilon$ Ir F . 37 th state 10 ged, 36 verified. Anybody have a good tip for hear-

Arlansaz here in IN.E.? Veries: v/gs from woko \& CJET. Wown rate card. v/q. Priendi: v/ls from WNTY \& Weriv.


ROGER W. WINSOR - 718 North Fremont Road - Valparaiso, Indiana - 46383 Happy ' 70 to a11. DX stable, not much on SSS, but CX are pretty cood most of the time. 12/25-KLVI-560 Tex. in well o/10cal WIND 9:56$10: 12$ for a good logging. 1/3-WIIY-1210 III. for another try at verifying this thing 3:30-4 w/rany spots on RS. Oddity noting YVOZ, R. Tiempo, 1200, (© 5:10 on SSS, but no real Aurora CX noted. 1/5- WPIB-1380 OK 12-12:15 w/f/c; WGHN-1370 12:15-12:30 u/strong WSPD. Is Austria-1475 on © 12:50 w/GG? Iisted. 150kw. per FBIS, but bad GRM from WMBD. (Yes -ERC) KDIM-1340 r/c-IT 1-1:10, also KCJB-910 12-12:15 on $\mathrm{r} / \mathrm{c}$. $\mathrm{C} / \mathrm{w} \mathrm{mx}$ on 910 turned out to be WGBI Pa. to $2 \mathrm{~s} /$ off-SSB for a muchiv-desired logging. CFAC-960 Alta. in nicely o/KOOL 2:27-2:45. 1/12-WDEE logged. w/PSA programs 12:14-12:35 fade to KSTP, now c/w w/new calls from Detroit. I was reall: surprized to bag WCOV-1170 Ala. on RS 12:46-12:59 s/off w/KVOO nulled, nice sicnal at times for only 1 kN . TT on 1310 turned out to be KIKS Ia. on $\mathrm{r} / \mathrm{c} 7.1 .15 \mathrm{w} / \mathrm{IDs}$ every three minutes. WJAG-780 noted 1:05-3:30, 10gged up WBEM OC $1 \cdot 20-1 \cdot 30 \& 3: 14-3: 30 \mathrm{~s} / \mathrm{Off}$, the latter in the clear w/YVOD QRM at times. BST/ (ooped. KTOK direcbut unn antway. Honder who was TTind all morning on 1000? Looped. KTOK direction, so maybe off their NSP sked. 1/13-WPUV-1580 r/c-IT 12:15-12:30 strong. FTR-1450 Va. on $r / c$ 12:45-1 $W /$ ID every minute at 50 seconcs, Th on at the minute. I called them \& they were very pleased to know they were getting out so
weli. WREI-1450 Va. also logged $1-1: 12$ fade $\mathrm{W} / \mathrm{ID}$ every three minutes as $W R E L$, We11. WREI-1450 Va. also logged $1-1: 12$ fade w/ID every three minutes as "WREL, Lexington, Va." \& nothing more. Also somebody else on © $1: 15$ on 1450 which I logged until $2 \mathrm{w} / \mathrm{various}$ tones, 0 C , etc. He IDed © 1:15, but I was talking on the phome \& missed it. It looped NNE/SSW, but I have no iden who it would be. KRCB-2560 Ia. on for EI W/TT \& mx 1-1:09 $\frac{1}{2} \mathrm{~s} / \mathrm{off}$. Add KKMF-1470 to the Wor1d Tomorrow List, heard $2: 30-3$, then WKMF Impact News. Veries from these: $v / c-$ KCBS v/rate card KFIN. v/PP- WRPM. v/1- KTRG, KLVI, WKND, WAGG, one of the pretti est received. v/q- KWTO. v/f- WHHO WPAC WCRA. Now at 917. 73 \& good DX to al1. I hope to see severa? more TESTs before this season ends.

WAIT BREYIILE - 912 C Coral Drive - St. Louis, Missouri - 63123
It's high time for me to Muse again. I am writing with pen, sorry Ernie, but my kid orother borrowed the typewriter \& he's bigger than me. DX since last Muse: 1/13-WKAR-870 E. Lansing, Mich. very.good e 5pm, no WWL. WXIN-1000 Miss. E:05-6:14pm, KPER-1j70 Terrell, Tex. 6:37pm s/off. MM 1/12- DX Specials WJAG \& WNXT both in well, KUOL-1380 Ken, concluding ET © $2: 55 \mathrm{~mm}$, CKLC1380, Kinustom, Ont. 5:01am s/on. 1/11- WHBC-1480 0. in very good 8:50-9:10am 1/1-Rich Eccie, Charles Wehking \& I had an all-night DX session at Charlie's house to welcome the New Year. I accomplished nothing but some blanks filled out on mir second FDXC form. It was a good time had though, thanks again, Charlie. December, as usual, was a bad month here because of long overtime hours put in at the Post Office, resulting in missing of two big happenings: The Dec. 22 DX Marathon, and Tiny Tim's wedding. On $12 / 29$ just two of all the Specials made it here: WEAA-920 i. WWSD-1090, and CJRN-1600 Niagara Falls, which sur prised me durins our DX session on the car radio at the St. Louis Convention. I finallj made it to Coral Drive © 5:36am this morn. 12/12- I found WRIZ-1550 Coral Gables, I\&C © 7 am . No veries lately, but I just recentiy sent a bunch of reports out. Paul Hart's corsments about reciprocal reception between N.J. \& Tex. I round very interesting. I think he had a location in N.J. where terrain and other quirks of his local area resulted in abnormally strong reception to the S.H. Then Dave Carlson lived just seven miles $W$ of me, he regulariv received numerous stations from Tex., Cal. \& points $W$ \& SW. That I very seldom or never have heard to this day yet, even though ave used a $5^{\prime} 10$ ngwire \& five-tube $R X$, While I had $\mathbb{y}$ 11-tube $\operatorname{sx-122}$ and the advantage of a loop antenna! On the other hand, I have better reception to the S \& S.E. than other local DXers. 73.

DAN PFILIIIPS - X-2 Seminary Village - Louisville, Kentucky - 40207 Verie received from WCVR for a new saate. Totals now $48 / 44 \& I$ still need N.H. \& Alaska. Only success on $12 / 22$ was logging of $\mathrm{WCHB}-1440 \mathrm{AN}$ © WZIP-1050 © 5:20pm \& finaliy 1/13, WRNG-680 s/off e 5:45pm w/good signal. I tried in vain to los them in Aiabama, hi! I just renewed to begin my leth year in NRC, hoon ay! This $W X$ is beginning to be ridiculous - it has snowed nine in NBC, hoorm. Times in the past three weeks \& has been below zero several times. I guess I need one of Stan Morss' snownobiles! If you would drink more Dr. Pepper's, Stan, you could catch them, hi! 73 s till next time.
G. harley delaturere - Box 233-E1k Garden, West Virginia - 26717

DX has been next to nothing lately. I spent 17 days in the Hoosier State $\mathrm{w} / \mathrm{my}$ rolks in Hobart at Christmas. It was very very cold; therefore I just decided to stay under the covers at night \& let the rest of you ant all the good DX. While in Indiana, I had the honor to meet members Richard Evans of Glen Perk \& Roger Winsor of South Haven. Both locations are a hop, skip \& a jump from Hobart. These two bous are really dxing well. Both have heard. Alaska \& Hawaii, \& I haven't. I reckon I'm just a penny-ante operator. I must say though that on $1 / 12$ I heard R. Belize- 830 for the first time in years Their signal was great for almost an hour. Since I don't have it confirmed, I sent a report by rezistered mail. I don't want to miss out on this one. Recent veries include WMCR-1600, ex-WONG, Oneida, N.Y. 13421; WGMF-1500 Watkins Glen, N.Y. 14891; CJRP-1060 Quebec, 1300 Avenue Laurier; WIXZ-1360 Pittsbureh, Pa., Gatewai Center, 15222), WSCR-1320, Scrant on Pa. 18504; WFIR-960, ex-WIBJ, RoaGatewar Center, 15222), WSCR-1320, Scrant on Pa. 18504; WFIR-960, ex-WDBJ, Roanoke, Va. (Reports to Mr. Willie A. Carr, WA4RDV, 1145 Kerns Avenue S.W., Roanoke Va. 24015); CKVM-710 Ville-Marie, Que.; wHO-1320, Horne11, N.Y. 14843; \& WCIR-1070, ex-1060, Beckley, W.Va. 25801. In closing, WCIR will have a DX TES Mon. Feb. 2 © 3am. Reports go to Mr. Roger Io Fox, CE, WCIR, Box 1063.

## RICK EVANS - Box 1988 - Cary, Indiana - 46409

Ernie, are you referring to me by any chance $u$ /the coment about "Musings Typewriter?" I d.o that so you know what it's for. (I really dion't know, Rick - I put all reports in a box \& discard the envelopes immediately but one or two come in without name on the envelope, which can foul up the postman, particularly if a sub is on -ERC) 1/9-WSEL-1440 Miss. r/c 2:30-2:45. 1/12- WCMP-1500 N.Y. f/c 12-12:08 heard; WATS-960 r/c toor u/WSBT 60 miles E of here \& u/WEII 12:20-12:35; WCOV-1170 Ala. 12:50-1 s off excellent; KTKS-1310 Ta r/c 1:05-1:15; WJAG-780 Neb. on Special weak u/WBBM OC 1:20-1:30; WJET-1400 AN w/ID about 1:45 while chasing UIS (UnID Testing Station); WNXT-1260 0. 2:01-2:15 w/very invoived IDs, poor u/WWDC; KFRE-940 Cal. 2:30 w/CBS Capital Cloakroom; KONN-910 Mont. r/c w/Morse Code IDs 2:45-3. 1/13-WPUV-1580 VE. r/c 12:15-12:30 thanks to Roger who called me at workinailed them on a portable; WAAC-1300 Ind. 3-3:15 r/c-TM per IRCA list. 1/14-WDEN-1500 Ga. ET AN heard 3:30-4. 1/15-WRKH-580 Tenn. r/c 4:15-4:30 w/IDs every two minutes. v/1- KOEL WGEA KXEO KMJ $934 / 347$, halr ill times above, AM.
BIIL RACzKo - Box 6 - Toledo, ohio - 43601
Note new mailing address. 3015 East Lincolnshire can still be used however. New DX: 12/29- WRYT-950 TEST 1:59am, CFOX-1470 $2: 10 \mathrm{am}$, WKND-1480 TEST 2:12, RIE-683 2:23am, WDEE-1500 (ex-WJBK) 2:59am, WALE-1400 testing w/continuous dit lieve -TRC) 1/12- WNXT-1260 NEST © 2am, WLIL-730 5:41pm. Veries: zSVI-780 and Rome- 245 (Countries 43 \& 44 verified). I'm still debatins whether to write for any more veries or not. It is mind of nice to show veries from 44 countries instead of jist a log, but why spend, say, an hour, trying to get details from a TA just so $i$ in can eet a verie? During that hour, on a good night, many other new Ths could Dossibiv be heard. Anvone from this area who wants to go on a weekPeace. Cost collectors, (Iowa, S.D., M.D., Beb., etc.) in early June, please write. vevour is mictors, plense
EVERYOE IS IINITED TO THE 1970 MRC CONVNIIGA IN HASBROUCK HEIGHTS SEPT. 4-7:

## Geomagnetic Measurements During the Past $41 / 2$ Years

## by K. G. Scrimgeour

Two years ago, I wrote an article on the relation I had observed between The index and medium wave $D X$ reception on east-west paths (IRCA-DXWW, Jan 13, 1968). This, and extensive theoretical work by Gordon Neison, has how , ent for the east.

Reception during the fall of 1969 was much improved over the previous year th many excellent catches being reported. This suggests that the reception f good east-west $D X$ should gradually increase now that the maximum of sunspot for has been passed for this cycle (i.e., DX openings should be more fre activity has The graphs in DX News of daily $A_{\text {fr }}$ values with quent, and of better qualicy). to bear out the correlation between Frextended periods eception qual of 10 w A and decent Things seem to be getting better.

With 1969's A records now completed, I've gone through the geomagnetic data of the past $4 \mathrm{l} / 2^{\text {Fry }}$ years to see if there has been a trend in activity that parallels the $D X$ conditions observed during the peak of sunspot activity. I ve summarized a thet dare disturbed as far as BCB DX goes, and that davs of $A$ or less are low in geomagnetic activity and hence conducive to good BCB DX.

| $\begin{array}{r} 1 / 2 \\ \text { Year } \end{array}$ | Average length of undisturbed periods | Number of <br> low days | Number of high days | $\begin{gathered} \boldsymbol{\Delta} \\ \text { (Low - High) } \end{gathered}$ | ```Longest period continuously below A = 15``` |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1965b | 16.6 days | 61 | 14 | 47 | 49 days |
| 1965a | 17.0 | 37 | 14 | 43 | 58 |
| 19666 | 7.3 | 33 | 37 | -4 | 31 |
| 1967\% | 8.6 | 47 | 33 | 14 | 29 |
| 15676 | 7.3 | 29 | 31 | $-2$ | 18 |
| 196 Br | 5.0 | 16 | 46 | -28 | 30 |
| 19686 | 8.7 | 32 | 35 | -3 | 42 |
| 1969a. | 9.0 | 24 | 30 | -6 | 42 |
| 1969\% | 12.8 | 64 | 15 | 28 | 26 |

a first 6 months; $b=$ second 6 months. Low $=3$ or less; high $=15$ or above

To me, the most indicative figures are those in column 1 , the number of days (on the average) that continuously had A values of 14 or less. (Please notice that even in the poorest reception years there were individual long periods of continuous low activity, such as the spell of 30 days during the first 6 months of 1968). The data of column 1 seem to me to be a good measure of useful geomagnetic data - they seem to coincide with better chances of good DX during the end of low sunspot activity and during the past fall. If indeed the average length of undisturbed periods is of value as a measure of DX probability, then it would appear that we are well on the way toward a recovery phase in the sunspot cycle and can look forward to more frequent decent reception conditions. The number of days of high activity increased during the peak of sunspot activity, and similarly the number of low days decreased (the rapid deterioration during late and similarly the number of 10 days decreased (the rapid deterioration during la
1966 is most easily seen in column 4, as is the recovery in 1969). As I said 2 1966 is most easily seen in column 4 , as is the recovery in 1969). As I said 2
years ago, I feel that the examination of geomagnetic index as a physical measure that can be related to BCB DX potential seems worthwhile, and worthy of much more study.

Russ Edmunds recently gave some details on the propagation forecasts given on WWV and WWVH every 5 minutes (NRC DX News, Dec. 6, 1969). Randy Seaver and I kept track of these forecasts for several years during the low sunspot activity, and unfortunately did not find them to be at all useful for BCB DX. These forecasts are intended for SW transmission and reception, and seldom reflected the conditions of the broadcast band when we listened. For this reason, it would be to our advantage (and probably to the advantage of users of others bands) to have current values of geomagnetic activity itself broadcast over wWV. This service would not just indicate to us the occurrence of 'auroral' conditions, but also allow more scientific measurements, and perhaps successful studies on many phenomena of propagation to be examined by DXers with their relatively unsophisticated (GPN excepted!) equipment. Perhaps an explanation of the mid-winter anomaly, variation in its effect during the sunspot cycle, more details on seasonal openings in general, and predictions of excellent reception periods a few weeks or days ahead of time could eventually be achieved.

Propagotion a Features Gordon Nelson, 19 Irmo ave Wotertown, Mass. 02172

* EXYPT. The widely heard Arabic station on 1106 is a new Cairo superpower unit; * perhaps the 5 megawatt unit that's been mentioned as being in the works? This * one is carrying Cairo Arab service; see previous editions of IDXD for detailed * schedules. Sorry about that, fellow Ceuta-hunters... (Ed)

BAHRAIN ISLAND. A new unlisted station is the Awali Broadcasting Service, belleved to be operated by the Bahrain Petroleum Company on 1230; no further information available at the moment. (SCDX)
ABU DHABI. The new station on 809 operated by the Abu Dhabi government is now signing on at 2130 with readings from the Koran; programming is exclusively in Arabic. A possible ECNA catch on a good Mideast night. (Ed)

* SPAIN. There are two new stations in operation that're likely to be heard in * North America: RNE, testing on 998 fram Bilbeo, and Radio Peninsular on Campo * de Gibraltar now on 728. Latter is in Spain, a few miles from The Rock.
(Ericson, Canary I.)
CANARY ISLANDS. Bengt Ericson, currently vacationing in the Canaries, reports that L.V. Valle de la Orotava on 1480 does not exist; EAK83, R. Popular de Guimar is now operating on 1502; and EAK104. R. Popular de Tenerife on 1133 is currently signing off at 1830 EST.
ENGLAND? A station calling itself "Radio $2-0-5$ was heard in Scandinavia on $1 / 7$ on 1466; address is 1 , Harley Street, London, W. 1 ; verie signer is Geoffrey Bass. (ARC) Now wholll be the first to get a TA bootlegger? (Bd)

TURKEY. According to the UPI, Radio Free Europe is planning to move its transmitters from West Germany to Turkey; can anyone confirm this report? (ARC) AUSTRALIA. Three new Netional stations will be established at Julia Creek, Hughenden and Mossman in Queensland and Leigh Creek in South Australia. The station at Julia Creek will be high powered and will provide a primary service coverage for Concurry, Julia Creek, Mary Kathleen, and Pichmond. (ARDXC)

The "Malaysian Liberation Army", e clandestine station located in China (believe they said Yunnan) began about a month ago... The Kuala Lumpur government has decreed that anjone disseminating the broadcasts (tapes, transcripts, or playing in a public place) is now subject to arrest and imprisonment for 3 years without a warrent, or even loss of citizenship. No indication if SW or MW, or just what frequencies, but $I$ am inquiring. (Radio Australia, monitored and paraphrased by Glenn Hauser). [Enquire no further - they first came on the air on November 25 th on 9590 and 7305 in Chinese (Malaiya ko-ming chi-sheng kuang-po tien-tai) and Malay (Suara revolusi Malaya); schedule announced as 1700-1815 and 0600-0715. There doesn't seem to be a MW outlet but we can always hope, for your sake... Ed]

According to an item in Newsweek, there's an active anti-American campaign going on in Libya - to the point of all signs in English being torn down. Those awaiting QSL's for Eeyda-1124 better not hold their breaths... (Bd)

## REPORT from the PACIFIC

conditione in Hovait poovaber 14- Jamary 8.
 enernl: ture joriol aity ininly froo Borth haerical a period between Chriatans and Farage to good reception, aninly and conld not listee, and a Yek Tear's period Hew Ienr's wher I vis on vacatica and ind interesting opentings to rany areas.
 12/14-21: Average or sow inils and Wid-yest. Fair to avirage siemula froa Alsush, Bust Coasi, Ylorids and kid-vest, thar is typteal of vinter ex bore.
12/22: Yell ebove avereen \& a pood openiz\% into the Sonth Fsoific, Ausaien noted an hide frequencles, Filj1-1470(bat not 890) and other h.f. operinge. A1snica
 pore distant dation noted. $12 / 25$ wan ointlar with slight falling off of ex . 12/24-50r I vas unatia to liaten, being on vnoation.
$12 / 31$ : Fircellent to all areak, Alpaks and wil parte of Loin ineludiay the Modie
 sev bochlad-9ne, ete, etc.
1970. 1/1 + Contiazed very good ox. to many areas.

1/21 kast Coant smi-local, VEC, KIFA, viBC, eto. H.f. opening to Auntralin.
$1 / 3$ i in ofitunaling nifft! My firut logging of Anica to coeplete roception of al1 luhablited continante. Conakry-1405 in quite well silthouch uarepartasle. Un. ereelient, ay firat Mo. grwveyarder, and sev logetige froe Coloalisa, etc.
1/4: Contimoed excellent, Alanden doainant over B.G.(EPRI over C.JVI), vifle E.C. in furn doodnent over Calif. (COMN over KNB). in olvious arise twing place, swiy froa the fant coast and towarla the southy good openingo into Colowbia, Fij1, Fhilippinent Aruba-925 new. hoin in exrly. Cuba-670 doainant, and B.C.

1/Si dlanke very good(regularn plue K.TIP, KICY) \& E.C. still holding up, Chil very pood, Ilf, opening to Auntrulin.
$1 / 6 \neq$ hight beok to the Dast Cosnt, KYY almont Ievel CFCll, CKIN very pood, WGY Jevel got ingot Doeided wedmene of lecal stations; Honolalu loosla fadine sarkediy, other Homiliann quite wenk. 3 nev Jexnns, sill 1 kK , poted on $\mathrm{f} / \mathrm{e}$. A nioe openiny into Ecuador/Pery Ahortly after lonal sidniedt; EFs: totally domisans over COVI un 900.

 und B.C. dondanit over Celif. to all spprorriate chamnels, e+E., BNX over ExCN-1460, kEla on 14\%, Lac0 on 2150(no sien of KaYo-tho Senttle atations vere

 nhould te ruewaberef, is probably the 2nit, moat oconistent, loudeat J.S. menn-
 mood, ste. dals in narly, tut larecly confined to Par Eant, othervise only
 whil noted.
 up for theif ahemene.

Hicherd E. Yood


## IDXD Monitor Reports

Members' Loggings
Bob foxw h, GPO Box 2III
New York, N.Y. 10001
Telephone Tip No: 212-582-0844. All Times are Eastern Standard. Nicaragua. Radio Corporacion noted weakly at 0604 s/on 555 Nicaragua. YNS, Chinandega. Good.

Nicaragua. SNS, Chinnndega. Good signal but lots of domestic slop. S/off around 2352 both $1 / 2$ and $1 / 3$
575 Costarica. TIJC, Cadena Musical w/ID $2326 \mathrm{i} 2 / 13$ and ersily separable Prom Whica. (Edmunds, NJ alias RjE)
610 Trinidad. Rpdio Guardian hrd w/religious mx pgm at $04401 / 5$ followed by East Indian mx pgm at 0445. Signal was good but local illoD put their carrier on and off around 0445 and then had s/on at 0456. I enjoyed the East Indian mx pgm. Thanks to Richard Clark and Richard Wood for tips. (Brubaker, Fla.) Guatemala. Had hrd unid here 12/3 to apparent s/opf 0102 and, $\operatorname{tnx}$ to IDXD, got ID as TGW. KFI QRN was very bad but the signal was noticeably weaker than YND thet evening.
640 Cuba. Very ioud $03171 / 5$ and much better than 660 Cuba. Had u/XERYM 0209 l/l2, call unk. (RjE) (the "RFS list" says CmHg Santa clara; incidentally there are two "seventh editions" of this list - June 68 and again, April 68 so use caution if referring to it by edition -Ed.)
Alaska. Weak stn 0415-0500 1/5. To 0430 with English pop or s/on o501. (This is the for Fairbanks. Killed by YVNA at s/on 050l. (This is the Santa Monica version of "KPAR rolling * 600 in that everpbody else reports;) (Kenney, Cal.) (Oh, yeah?) New York. Regarding the WNBC NSP metter that has been of interest to DXers, e reliable source in a position to know the situation has informed vour Editor, due to the recent change in personnel at the stotion, "the decision (to go NSP) was put aside for further study" pnd Mgmt ollegedy does not think means it is not imminent would justify its being invoked; this definite. If they do go NSP kindly. However, this is not
675 Nicaragua. YND signed off at $000012 / 3$ using this call, pronounced slowly. When carrier cut, het censed and onother proPrequiet mx was then audible. No ID hrd and deep fades.
720 New Zealend. Two wale is their call? (Freeman, Cal.) (IIJC tion of Dunedin and welle voices, talking about sports, with mention of Dunedin and Wellington 0426 and $04281 / 12$ when they were in well enough to overcome QRM. Loop confirmed 4YZ,
725 Invercargill. (Jay Murley, Newport Beach, Calif.)
Surinam. Carrier on 0330 and good DF for surinam; no rudio noted until 0402 when faded up with talk in unknown lang, it
740 Shan not Spanish. This on $1 / 3$. New s/on time? (Kenney, Cal.) performed by Korg, Teegu. 1/8 0340 ancient violin solos
764 Senégal. Guess I'm the WJR on reciprocal bearing, it takes a total WABC, but with
 they ever been partially silent, hi-Ed) and a bad night for NJR so Was hrd $1 / 12$ ul29 w/Fnench, bell-type mx with horns,
etc.
(YjE) etc. ( RjE ) (yes...cest album from "Hair" is big in Africa, hi)

Spein. New thanks to WABC SP, $02371 / 12$ but not strong. (RjE unID. SS, bearing far to North of usual la stns, apter CKOK s/off $0308 \mathrm{l} / 5$. I'm fairly sure this is not PJB which seemed to come on around 0315. Most probable location would be NE Caribbean or possibly a domestic in Florida or Deep South. (Kenney, Calif.) (Ali domestics, except KINY are daytimers and don't think they would be on the pir then. Incidentally, (and to answer your recent question, John Hoogerheide, SRDS carries a listing of Stations Regularly Scheduling Foreign Language Prgms. This of no help in 1Ding, tho. The list apperss on pp. 20-2i of the December 1, 1969 issue ( Standard Rate ond Data Service' Spot Radio Rates. -Ed.) Guate TGTO Pair $23201 / 5$ with Eaglish rock mx and RaGuatemala. TGTO fair 23́s músican IDs. Het 825. (Kenney, Cal) GILBERT and ELLICE ISLANDS. On a telephone tip from Larry Godwin, "I know what I'm hearing but I don't believe it" found Tarawa in lingo 0300-0405 $1 / 12$, some English at 0329 , found mosty pacific and Larry got GMT + 12 TC in EE before he called tral Pacifich the time, nearly as loud as KIKI on peaks. Good sig much of the time, ner more. (Kenney, Cal. viapircard Suspect power boost, 10 kw or more. (Kenney, Cal 0345 1/12, +First firm ID here was "sikungaleo a Tarawa at having missed one at 330 due 0400 as talk was now interdifferent, also ad-libbed ID at 0400 as talk whs notitian spersed with Polvnesian chants and an occasibed in WRTVH (one, and Samonn cut. The four-gong IS as described in WRTVH one, pause, three more) hrd ot 0415 after full Ellice ID and the English nthis is the voice of Tarawn" with language switch to English. Eng lang lesson "please listen to what I speak" followed, male anncr, definite British clipped accent almost the proverbial "colonipl office" in the movies) and an mos fromen armality, s-5 to 6 throughout, no assist plutter. Used old nbudget receiver" so whole Vest fading or flutter. Used old budget receiver so whole reloying should be able to hepr this (Jay murley, Calif.)
tip. Looped correctiy. hay $1 / 150255-0305$ and on $1 / 14$ Prom +Gilbert and Ellice Is; hrd 1/1s 0255-0305 and on $1 / 14$ from 0247-0308; both days continued in hater 0248 on the 14th with earlier, at 0100. Lang was English at 0248 on the 14 th Fi apparent news; heavy thunderstorm and K0A spiash made it rough. Deep fading but nice peaks. Lang after other times was not Eng. Must be the new kw stn; not the slightest trace of a carrier ever noted before. Below average Pacific cx at this time; due to flu didn t stick with it this time. (Freeman, Cal who spotted it independently) Gilbert \& Ellice Is. Br. Serv., VSZ-1, Tarawa, on $1 / 9$ at tol25 remarkable, up to s-9 at best with local mx, BBC-produCed English lesson, full ID in English, western pops etc.㲘 In very nicely fir evening on a fine night since ond looks the worid. Coundil be a like this one will be a regular here. One report of 2 kN and one of 10, may well be the latter; (Wood, Hawnii, who appears to be the first to note them.) This island is remembered as the site of one of the worst battles of World War II; it seems to be obscure otherwise. It's approximate location is $2^{\circ}$ North, $173^{\circ}$ East. This of course Will be one of the major DX tips of 1970; should be widely hrd. It is interesting to note that they obviously have a new xmtr yet are on the same freq as before when only 50 watts.
unli TA. On $1 / 5$ with Athlone-566 in s-6 and German, Belgium and Holland in well, had this unID on 818 at 2320. I am satisfied it was not Cairo and investigation shows it was not Andorra. Loop bearing was $70-75^{\circ}$ and language seemed to be non-European; could have been a Slavic lang. I have a IS on tape and it is definitely not Poland, which would be closer to $40^{\circ}$ than $75^{\circ}$ anyway. Signal was s-6 at one point but feded out completely by 2340. After the IS there was a female anncr; just not possible to make out her identification. WRH lists nothing of consequence except Italy and it was nit Italy either. Any ideas? (Bob Hoffman, NJ) (Bearing You indicate includes Azores, morocco, Algerio and Sudan. If there was just the one carrier, no double audio, no SAH here then we can assume the bearing is true. If there wos a 2nd carrier, the bearing would be "pulled" toward it somewhat and your null would lie between the 2 signals, angularly speaking. The l kW Moroccan here turns up regularly in the European monitor reports, so it is active here. Usually is reported somewhere between 30 and 50 Hz on the high side. Likely vou had them; absence of a het would indicate ther were no other TAs active on 818 at that hour. Does that fit?Ed placed on previous page so as to include all on one sheet unID. Carrier DF $340^{\circ}$ deep fades, some Asiatics in but was not an outstanding $T P$ morning. If not a spur from a domestic then would seem to be in Central Asia, Irkutsk area. Noted $1 / 9$ at 0750 , nothing listed. (Kepney, Cal.) (Wood,Hauser....) Peru. OAX4A Lima best ever heard with news and clear IDs 2330-2335 1/5 despite XEm0, "Radio Nacional del Peru" (Kenney) Peru. Radio Union, Lima first hrd $11 / 300045$ while on the freeway headed for the Thanksgiving gettogether at Don Kaskey ERBA, Inc. With $3 / 015$ anct at 0055 , anthem ended at 0058 and they had been atop TGJ who signed off 3 minutes later. Since then I have hrd them from home, occasionally atop TGJ. (Clarence Freeman, Auburn Calif.)
Panama. Stn in Colon hrd here $12 / 8$ with "Radio Fabulosa" ID at 0150, gospel prgm at 0200 in English giving address and phone no. in Colon. I assume this is HON-33. I have not seen this slogan listed for them, nor do 1 know power. (Freeman, Cal) Montserrat. Plymouth hrd 0505-052l on $1 / 5$ with religious $m x$ pgm, voice modulation poor, otherwise fair. (Brubaker, Miami) music à la TIOS l2/12 0003 ( RjE ) (finally got to use the à, hi) France. oRTF Toulouse // other outlets $173812 / 19$,s9 (RjE) unID. Looped $190^{\circ}$ SS, must be CA hrd $224212 / 11$ but is it Honcuras or Nicaragua? (RjE) (or is it Ifesa, Ecuador-946 -Ed) unID. SS, bearing $180^{\circ}$ maybe Peru? $00131 / 12$ (RjE) Spain. hidrid here :nd surprisingly easy to separate from mess on 990 tho a s-7 signal helped, 1741 12/ls (RjEdmunds) Colombia. Redio Colosal is the unID I've been hearing here, runs AN and is Todeler affiliate. Previously I thought their ID was Radio Curaçao; hrd consistently w/grod signals (Brubaker) unID. Latin language, few snatches of audio, could not loop but could have been Portugal as it was date and time of best TA receptian ever. 1/6 and 7. (Marley, Colif) Carrier noted here עec. $17,23,29$ and $1 / 6$ sometimes strong enough to cause audible het with 1035, DF is usually more toward Tallinn than lisbon. Also weak carrier 10430159 1/7, European. (Kenney,Ca) unID. Carrifr here very strong at times, couldn't make out lang, looped $165^{\circ} 0020 \mathrm{l} / 12$, Venez. or Caribbean? (RjE)

1 1060 Mexico. XEDP Mexico City very weak u/CJRP 0240 1/12 (RjE)
1)70 Venezuela. Radio Cumbia hrd $1 / 5$ with fair-good signals on crowded freq, mx \& nx pgm hrd, typical of many Colombiacrowded freq, mx \& nx pgm hrd, typical of many colombia-
Venezuela pgmg in mornings. Hrd $0410-0416$ with mx, chimes IDs as "Radio Cumbia informa" then news. (Brubeker, Fla) Colombia. HJAT, Radio Reloj good at $06001 / 5$ with "Radio Reloj emisora CARACOL en Barranquille." (Don Kenney) (two S's, as emissora, is Portuguese, hi -pinicky Ed.) het 2255 12/11. (RjE) Thailand. Thai TV Radio, Rangkok l/ll Thai vocals 0620 (Wood) 100.5 Cuba. Propaganda \& stuff $0157 \mathrm{l} / \mathrm{l} 2$. . (RjE)

1190 So. Korea. HLKX Inchon $1 / 11$ EE sermon 0600 very gond. (Tood)
1200 Puerto Rico. AFCN is probably the unID stn w/rock mx hrd NM $1 / 5$. Continuous US mx hrd 0305-0335 */ancts noted between, however the modulation of voice was too shallow to understand Signal peaked during a song at 032L and was quite loud; (Bill Brubaker, Miami Beach, Fla)
Venezuela. IVOZ noted 0532 with Radio Tiempo ID, TC between songs. (Kenney, Santa honica, Calif) verv weak talk ol45 $12 / 23$ and some garbled audio from ORTF France 0000-0021 $12 / 18$ and 0047-0248 1/7, the latter two w/ good DF for France. Deep fades at 2 to 4 minute intervals and a rapid cyclic fade every second or so similar to the auroral plutter observed on SW signals passing through the auroral zone. (Kenney, Cal.)
Colombia. HJBE Radio Internacional hrd 0103 12/17 quite separable Prom WCAU with indigengus mx. (RjE) ng abl weak carrier able albeit with great difficulty $0047 \mathrm{l} / 7$ with male ancr in English and into mx. Best TA carrier on the band that night. Noted from time to time until 0245 with fades of $20-30 \mathrm{db}$ every 2 or 3 minutes. (Kenney, Calif.) Thanks to tip from Don Kenne $y$, TA, $1 D$ so strong $P$ rom BBC nere that earphones unneeded 0100 ID $1 / 7$. Slight flutter chopped many words; varying periods of fading for the $N C-25^{\prime \prime} s$ audibility levels. Nix was clearly identifiable and loud, no WCAU problems, my cleanest TA to date. (Murley, Calif.)
unID. LA with usual $S S$ pgmg noted here from time to time DFing Ecuador/southern Colombia. Noted as late as 2345 on 12/d8 never very strong and never noted past 0200 (Kenney) St. Maarten. PJD2 had an exceptionally clear signal $1 / 5$ with local dedication pgm, sounded like a local stn 0419. (Brubaker, Fla.)
1360 Ryukyu Is. KSBU Okinawa, Far East B/C Co. 1/11 0600 relig, ious in Shanghainese; familiar US hỳmns. Quite good, some QRM Prom NHK. (Hood, Haweii)
Portugal. Porto IDed here as one bugging me, mostly talking 1832 12/19. (RjE)

North Korea. New Freq $1 / 110500$ tice signal, news in Korean and // many others. (Hood, Hawaii) (as a word of explanation to some newer DXers, the symbol : // means that two stetions on different freas fre in parallel; i.e. carrying the same pgms. It doesn't mean 2 stns have equal strengths. I thought there may be some confusion, so am mentioning it here -Ed.) Western Samoa. 2AP, Apia $1 / 110500$ Samoan chanting, of at 0502, must be Saturday night sign-off time; not enough citd.
to report between KCCV s/off 0500 end $2 A^{\prime \prime}$ s at 0502. Country 「o. 76. (符ood, Hawaii)
1421. Germany. Saar finally logged 1817 12/19 weak uncior domestic slop. Has teen most wanted TA since an image of their SW outlet appeared here (this freq) back in Gien Rock last spring. Actuglly readable for a time, too. ( $R j E$ ) (Kenney) Asiatic iiSFSR. Fozeign Service IS quite good $08301 / 6$, ${ }^{*}$ Fuerto Rico. WhDD Fajardo in under WADR f/c, other domestic on channel, quite solid for a while 0027 12/17. (RjE) Colombia. The Barranquilla stn hrd here $1 / E$ with good sigs many spots and p little mx. Completely in the clear and it sounded more like 10 kW than 1 kW . Hrd from 0424 to 0440. (Brubaker, Flf.)
Spain. Sync commonwave in well u/WTOP splash with no sign of Foland 1903 12:18, lisht mx . (Edmunds, $\mathrm{NJ}=\mathrm{RjE}$ )
+Although I didn't expect to hear them again after their $D X$ program 12/22 I've hrd them twice since. First noted agein on $1 / 5$ from 0535-J545 with Hawaiian guitar $m x$ and ID, fair signal. Hrd again on $1 / 8$ with what was epparently a s/ofe anct at 2100 with ID by TL anncr followed by Brahm's Lullaby anc? signal not hre af ter this song. (Brubaker, fla) +Weak carrier noted 12/22 0425. Good DF for Anguilla. Was too weak for gudio, even if I didn't have a 10 kW local on 1500. (Kenney, Cal.)

1525 China? Some audio here 0830-0930 on $1 / 6$ and 7. Deep fades and a broad, poorly defined null around $330^{\circ}$ and there seems to be of barely perceptible change in BFO pitch while tuning (rotating) through the null, acding to the impression that there may be two signals coming thru here. Incirientally, $330^{\circ}$ passes through E-stern Sinkiang along the Inner mongolian border. Only one of the 12 bearings taken was far enough liest to be consistent with a transmitter location of Urumchi in extreme tiestern Sinkiang. If there is a Russian mixed in here (as seems likely) and the superpower Chincse is in rumchi, the Russian(s) must be well to the East of Urumchi. (kenney) (I would think the xmtr would not necessarily have to be in downtown Urumchi. It is more likely near to the electricity source as I'd imagine this thing uses more juice than the rest ${ }^{\circ} \mathrm{f}$ the country combined, hi-Ed) Everywhere. On MM's $12 / 22,12 / 29$ and $1 / 5$ from 0300 until CBE s/on at 0500 were a mixture of Latins from both SoAmer and Caribbean, $4 Q D$ and the Russian, all fading in and out. The Russkiy was noted with tone test at 0420 12/22 and so s/on for this one may be 0430. (Kenney, Cal) (here in the East, we hear "everywhere" on all freqs, hi -Ed.)

Verifications: Preeman has Khar-590, Jerry Starr has one from ORTF Pointe-à-Pitre, Guadeloupe-640 and we have a few more on hand. Also, a couple of letters at hand; sentiment seems to be with continuing to count stations by studio location/location of license, rather than xmtr location. We, of course, will continue to be guitrd accor! ingly inasmuch as our reporting of DX information is concerned. Incividuals can still use their own criteria for recordskeeping, as DXing is still an indivicualistic hohby. We will excerpt some of them next week. Also, veries then.

## Report from Thailand

Dec 30: ...Am getting a bit discouraged with NBC delivery...nec 13 issue still the last one here, altho have received 2 IicA's since. Perhans things will improve after christmas backloz is cleared up. This week, I'd say TA cx were definitely down, there were a few signs of the usual ones in the 1500 range but a higher than usual noise level made any cony impossible, I am taking inminent steps to acquire an off-base shack... (January 6, 1970)...DK condiminent durin the past thre? days (in car ): Jan 3 surnrised me, as I got off work tions during the past thres days (in cair): Jan 3 surmrised me, as
arome 2315 and discovered highband fermans booming in better than ever. The nort mining, $1 / 4$ I got my first Aussie, and by sunrise the Europeans were ncain zood. And on $1 / 5$, my allnioht session, Europe and the lid-East tiere very Donr until a similar, but, much poorer, Europan opening around sunrise. Nonetheless, I did nake a number of intrresting loggings of closer stations. I may 7roll be missing ont on some rood openings to the SE and FE during the evenings but with all the Qiwi, QRit and TVI, I seldom try much before local 2300....the I?/?O issue finally arrived. Surprised but glad to see that NRC will join me on Radio Nederland.... Good muess on CCI (I had summised Chi Com Interierenceon lit its co-channel. Interference, a handy term usel urtil now almost exclusively by TV DXers. It's in the AiAich abbreviation list, which I recommend hijchly. And when you read the credits, youlll know how it got there, hi. (To wich I can only blusi as to not having had seen the list-Ed.) Therels a USIS olfice in Korat, so I'll stert there to track down exact $\Omega T 4$ of 843 and 1580 cutrs. If no soap, may wangle phone line to Bangkok, or go.... (Jan. 13):... Having locatod what seemed as good as any place in the city for DX, I moved my receiver there for a fer deys...and discovered a horrendous noise level that must bo heard to be believed. (And it isn't even bouncing off the Cherles Eiver, hi-Ed.) filtho in the shatow of locals, I had hoped the noise problem would be less than in the barracks. To boot, somebody stole half ay copper longrire the first dayd low, back in the bareacks, Im thankful for small favor:s. $1 / 13$ sem some marginal Euronean rccention, but certainly not up to par. Hotiling more from below the equator and on beginning to wonder if southerm Africe exists. Incidontally we (and here, glenn moans the "editorial" wo, hiE.c.) may all hope and pray that VIH DX, which I ambeginning to catch, wiji reduce the size of future livi renorts. (It'll only hapre n when you have everything already logeged, hi-Ed.) Specifically, have hrd Kota Kinabalu 97.5, some 7750 miles, by Es (sporadic-F). No luck in getting off the midnieht shift, either.....

Receptions (all from Korat, Thailand) (all time EST)
539 Hungary? Anything else unlikely for this low-level madulated carrier suffering AFVN-540 splash, bit of $m \times 16551 / 12$ and still there at 1714.
 EE ancts, altho mx was US style, this along with poor TA CX would seem to rule out CFNB. Also had something on 1270 for awhile, no clue as to whether Korea or not. Will keep after. China. Pe Mao over AFVN $14451 / 4$ but at 1447 a carrier with tones overrode it.
566 Syria. Homs, no doubt, noted agn in Arabic 1513 1/5.
575 unID. Good carrier, 2.0 Hz SAH w/slight audio $14551 / 12$, EBU list no help. Around this time there were TA carriers on almost every TA channel below 1304.

580 Philippines．I assume（hope）none of the oovt stns in other countries here would be carrying Back to the Bible；suppose this to be listed DZBB，Malabon，Rizal，over／under China w／ $\frac{1}{2} \mathrm{~Hz}$ SAH at 1717 1／12．Incidentally， 580 is one of the few even channels＂clear＂here around sunrise（checked $1 / 12$ at 1825－1830），any hints on which NE USA or Canada stns mipht reach here under optimum TP cx？Other clears here are 670， 750,1120 and 1150 only．
585 China，Changchon（listed），the unmistakable Chicom tune，at 1508 1／5．
588 Saudi Arabia．Riyadh seemed，rough1y，a little closer to this freq than listed 587．5088，but I wouldn＇t swear to it．Arabic talk hrd at 1501 12／29 for Cou $\# 32,3633$ miles．
610 So．Vietnam．Saigon，strong，soft spoken girl as EE DJ w／US standards $1730 \mathrm{l} / 5$ ，hut she said goodbye a：d Vietnamese foll＇d at 1742.
625 No．Korea．Haeju，2nd pgm，girl in Koreanat 1520 1／5，choral 1523．Many NK＇s hrd before，first one logged．Cou \＃39．
630 West Pakistan．APL1，Lahore I，ME mx 1355 1／5， 1359 ID（Urdu perhaps），tone，maybe feedback；anthem and off．Country \＃38， 2093 miles．
640 So．Korea．HLRC，Tong Yang，Seou1，Korean version of western tune $15221 / 5$ ，Peking－645 splash on it． 2184 miles．
655 No．Korea．This one was hrd better in the states，always have CCI（co－channel interf．）here．Logged for the record at 1523 1／5 with Korean talk not／／ 625.
670 India．（？）Calcutta／Nagpur，MidEast vocal mx at $12121 / 12$ ，till 1214 there was a SAH of some 2 Hz ，weak mod．，similar to or parallel 809.5 Delhi．
674 unID．Either Qatar or Libya，news in Arabic with items about Roma，Panama at 1237 12／29．Fade at 1248，return with Arabic mx so may have missed ID．This is past WRTH－69 sked s／off for Doha，Qatar．
685 Thailand．Distorted，unlisted，Back to the Bible in EE 1843 1／5，must write Grand Rapids（or is it Lincdn，）find out who． （Listed 685 in June＇ 67 FBIS，Thai Army（Cavalry center），Sara－ buri， 20 kW ；don＇t have latest here to check at moment．－Ed．）
690 East Pakistan．APD2，Dacca II，news in Bengali（intonation resembling English）about Pakistan，Nigeria，1205 1／12．Ra－ dio Pakistan ID 1210 and seemed to list MW freqs，max 1211. Country $⿰ ⿰ 三 丨 ⿰ 丨 三 42$ at 970 miles．Still need Cambodia，Macau，Ceylon， Sarawak，Sikkim，Bhutan（Rotsa Ruck on those last 2，hi）and Nepal，hi．
700 Malaysia．Radio Malaysia，Kota Bahru news in Malay 0731 1／11．
701 unID．Either Muscat and Oman or Istanbul，ME lang 1422 1／4． （Pls continue checking；if the former，will be first instance reception has been reported．）
765 Malaysia．RM，Kuala Trengganu，muezzin 1740 1／11，always hrd．
770 Japan．JOUB，NHK2，Akita，only one 1isted，NHK melody under AFVN 1527 12／29．

780 So．Vietnam．Vo Tuyen Viet－Nam（see last September IDXD－Ed．）， Ba Xuyen（xmtr Soc Trang），man in Vietnamese over China for a change， 1747 1／5．
800 Jordan．Amman must be the Arabic here，talk， $14121 / 4$ at 4288 miles，Cou \＃36．
$802^{-}$China．CJKT，Peking，Chinese talk $15201 / 3$ ，1isted 803.
804.5 Thailand．（cf previous report）EE teacher explaining words， goodbye at $15271 / 12$ then Thai ancmt，vibraphone（？）mx，hymn （？），modulation a little rough，overmodulated，relaying SW talk at 1730.
809 Yugoslavia／England．SAH of $70 / \mathrm{min}$ ，or $1.7 \mathrm{~Hz}(70 / \mathrm{min}$ would be $1.165 \mathrm{~Hz} ; 1.7 \mathrm{~Hz}$ would be $102 /$ minute，no？－Ed．）at $15221 / 12$ ， a bit of audio．Although，relying on EBU readings published in NRC recently，Yugoslavia is a certainty，I am not counting this，or other SAH＇s yet．（Was listed 808.9983 in EBU report 11／29 DX News－Ed．）
809．5 India．Het long noted here，supposed it was this．AIR，Delhi $11451 / 11$ Indian mx， 1159 TS， 1200 ID and news in Eng．Strong at 1846 mi ．
818 Egypt．Batra，Arabic ID in passing 1410 1／4，Polka mx（！）\＆ I think this is prettyregular here but during the later mor－ ning $1 / 5$ it disappeared．
830 Japan．JOBB Osaka，NHK2，one of the few stns also hrd in USA， a cinch at 2476 miles，w／NHK melody at 1528 12／29．
836 Finland／Lebanon or France？Audio too weak to identify，but a pronounced SAH measuring $82 / \mathrm{min}(1.366 \mathrm{~Hz}$ ，per my K\＆E，hi－Ed．） noted $140812 / 29$ ．EBU lists France on the nose，Finland 1.3 Hz high and Lebanon another 1.2 Hz up．
840 Japan．JOQK，NHK1，Niigata（xmtr Akatsuka）NHK melody（sur－ prise）but soon covered by RTTY sidebands of China＇s 835 and $845,14571 / 4.25$ th freq on which a Jap hrd．（Interesting note， it would seem the Chinese must be sending teletype by＂multi－ plexing＂it onto BC carriers；it seems thus．If so，has been non－publicised until now．Can you determine if this is in fact what they are doing？－Ed．）
＊＊ 862 Thailand．HSK28，Public Relations Dept．，Bangkok，seems to prefer this to their nominal 856，where hrd when I first ar－ rived，and for several weeks．In late December，to 862；for a week in early Jan＇y went back to 856，and now（as of 1820 1／ 11）back here，on 862 ，with Thai songs．
＊＊ 880 Malaysia．RM，6－pip TS 1830 1／10，nx in EE， 1840 man and wo－ man alternating items in Malay lang lesson for Eng－speakers and／／1140；low het and other CCI．Probably Kuala Lumpur ex－ 885，where never hrd．（Can state that $K-L$ was on 880 in 1964 as so hrd；believe move to 885 was rather recent and of a temporary nature．Seem to recall they used to be on 875 many years ago，had been reported WCNA there，can＇t recall any other details，this was when I began DXing in 1957．Ed．）
880 Ryukyu Is．KSBK Naha logged again for report（time running out for K－prefix stns there） $130512 / 29$ so appears to be AN， contrary to WRTH－69．Had American deejay talking about his
＂loaded newsman＂，rock； 1308 ＂Bob Murray DJ show＂，promo for basketball game，tickets at KSBK on Hwy 1 in Naha， 1312 ad for Club－－－，BKB promo，KSBK Good Guys vs some coeds ．．．
890 Saudi Arabia．（？）Believe Damman（this is Damam；is next to Dhahran－Ed．）in Arabic $13581 / 4$ but soon covered by next：
890 Ukraine SSR．Radio Moscow IS over Saudi， 1400 1／4，Uzhgorod listed，Creek sked，my first definite Ukrainian so Cou．$\ddagger$ 35．
895 Brunei．Radio Brunei is only 1112 miles away but traces of it before never developed into readability．Barely did so at $18061 / 5$ ，Eng1ish news，sounded like BBC．at 1809 a YL took over，perhaps pgm summary．A het was perhaps Canary Is．on 894，hi．（Hi yourself，hi－Ed．）it 1814 JD，TC for a quarter past 7，ID again：＂This is Radio Brunei＂（pronounced＂nigh＂） then some LA－type mx．Is this Rerakas or Kuala Belait？（You are asking ME？？？－hi，Ed．）Later，noticed a 6 Hz SAH 1／11 at 1730 ，bits of audio，also on A2（tone－modulated CW－Ed．） a beacon，maybe harmonic from LW，giving ID＂KP＂twice be－ tween pauses，same as 1223 one．SAH between this and Iran．
908 Iraq．Thourah，seemed closer to here than 907 （huh？－Ed．），Arab mx 1320 12／29， 1330 into dialog，but un－Arabic，at 1414 definite Arabic，probably news．Country 非31．
910 Japan．JOCB，NHK2，Nagoya（xmtr Okehazama）NHK melody 1527 1／5，Jap \＃27．
917 USSR．Makhach－Kala，on Caspian Sea coast（see p．24，DX News， $1 / 10 / 70$ ，hi．At bottom．－Ed．）for those of you who have never hrd of it，either， 1559 1／12＂Midnight in Moscow＂（Mayak）IS， 6 －pip TS，Moskofskiy Vremya．SAH about 10 Hz （near the limit of my needlequiver counting capability－gh）（Aw shucks，I had visions of you using a Beckman counter，if not a Hewlett－Pack－ ard，checked out from Base Supply，hi－Ed．）anyway，we digress， SAH probably from Yugoslavia．
926 Turkey．TAZ，Izmir，Turkish talk 1526 1／12，fair strength．
940 Thailand．Believe Camp Vayama is the only SEA possibility for AFRTS，had game carried by AFTN，but also by AFNT，AFVN，AFPN， and AFRT－Okinawa，but not FEN－Japan．Has been noted before． Nominal 50 watts．Under Chinese 1323 1／4．
940 China．Hofei，Anhwei（only listed） 1321 1／12 powerful with that mx， 1323 YL discoursing in Chinese．
944 France／RSFSR．Toulouse and Rostov－na－Donu（Rostov－on－Don），cl mx of fair strength at $15521 / 12$ ，don＇t know which but both were in， 1.7 Hz apart， 1553 Strauss waltz．
955 Burma．BBS，Rangoon，excellent at only 415 miles for Cou 非 4 and not hrd before since is on only slightly after my local on 950）， $10551 / 10$ evening $\mathrm{mx}, 1058 \mathrm{EE}$ long list of titles， brief s／off anct，anthem 1059 and off．Hard to believe there are only 2 MW stns in Burma．（Not so hard if you consider the Ne Win government；the Burmese economy is practically stagnant， the population dispirited，visitors not welcomed in Burma， the rare reports from privileged people who have been able to get in for longer than 24 －hours（length of a transit visa） or even for just a day make it out to be a pretty grim place．
－Ed．）

960 Japan．Another quick spin across the dial during NHK＇s melody time produced this commonwave of 5 NHKl stns， 5 kW max，at 1458 12／29；will eventually dig deeper for individual IDs．
965 unID．A mystery， $14201 / 5$ had US mood mx，followed by ancmt in unID lang．（Hey，Cuttack supposed to be here，maybe you had them in regional dialect，whatever they speak there，hi－Ed．）
968.5 Thailand．Strong，EE love songs $13451 / 12$ ，Thai ancmts， （TT means Tone test here hi－ed．）and maybe the 965 above？
970 Taiwan？1／5 1630 American girl talking on Nat1 Park Svce， Tenn Valley Auth．，，slowly，perhaps an English lesson，until 1700 ＂that will be all for now．Tune in again next time．＂and GSTQ（or whatever Americans call it）（ATB？－Ed）and into lang． Rather frustrating after listening to clear EE for a half hour and not have any hint of what or where it was．．． unID．Arabic or similar，group sing，fair strength $14281 / 4 .$. ． perhaps Cairo with 5 kW ，or increase？
985 Iran．Kermanshah，definitely Arabic，as per sked， 1345 1／5．
1000 Japan．NHK commonwave（max 1 kW ）NHK melody $1457 \mathrm{I} / 5$.
1007 European．3－or 4－way SAH，dominated by $400 / \mathrm{min}$ ，or just un－ der $7 \mathrm{~Hz} .$. Greece／Holland／Yugoslavia／Spain， 1340 1／5．
1010 North Vietnam．A local，logged for the record，Tieng Noi Viet－Nam，Hanoi，girl in Viet talk $18471 / 5,489 \mathrm{mi}$ ．
1016 W．Germany／Azerbaijan（？） $14401 / 12,70 / \mathrm{min}$ or 1.7 Hz （same as 809 ，one or other－Ed．）
1025 Israel／Austria（？） $136 / \mathrm{min}$ ，or 2.263 Hz ，approx（hi）SAH against Soviet here $14081 / 4$ ．Had Israel $16051 / 1270 / \mathrm{min}$ SAH（lots of those，no？）vs USSR，at 1607 Soviet faded and other dominated briefly in Arabic（matches sked）；Cou．非 43 at about 4350 miles to Tel Aviv．
1040 China．Radio Peking dominates channel when it＇s on，logged 1535 1／5 with Chinese opera（？）and later in morning in Jap．
1040 So．Vietnam．Surprised to hear a familiar Australian voice here，Keith Glover，talking at $17511 / 12$ mostly under China， but some phrases caught during pauses by the Chink and by tu－ ting to LSB，around 1038．At 1753，clear IS as＂Radio Austra－ 1ia＂then mx．ID in passing again at 1758，then＂The Girl that I love＂as song title，played it，but TS mixed with Chinese one and one from 3rd station interfering．At 1800，TC for 9 hours，AET（Eastern Australia）so 1 ive shortwave relay，then news．By then，China had singing so little copied．Abruptly at 1809 China cut to weaker strength，but＇Aussie＇was fading， and no more hrd．I think this must be the new Australian Forces stn somewhere（where is it？）in South Vietnam，previous－ ly reported in NRC，but freq then unknown．Unless，it may be a superpoewr relay at Darwin，beaming westward，that we know nothing about．（How about a report to ABC $H Q$ to check on the latter possibility？Though，it seems remote possibility－Ed．） $07401 / 11$ ，good strength．
1048 Thailand．Wor Por Thor 1，Bangkok，consistently back here ex－ 1043，noted Thai talk 1828 1／11．

1061 Turkey, Diyarbakir, $1 / 4$ tontative at 1456 with gypsy mx , and earlier, Turkish-Hungarian sounding language, next day $1 / 5$ at 1335 it was definitely Turkish, w/drama: Several voices, bits of mx , and at 1337 thought I hrd the phrase "milion dolar" several times...country 非32, and Diyarbakir is the antipode of anywhere, per AF acquaintances. (no comment from me, hi-Ed.)
1070 Japan. Only one NHK1 listed here, Hiroshima, JOFK (xmtr at Hara) exc at $145812 / 29$ with NHK melody.
1070 Philippines. DZWS, Associated B/C, Manila, typical Filipino pgmg, ad for Marvel in EE (and maybe some Tagalog) $16111 / 12$; US mx. Hets squeezed it on both sides.
RSFSR As. Kyzyl $14301 / 5$ Peace and Progress IS, IDs not in Mandarin (Peking dialect listed). Any cause for giving any of these ASSR's country status, hi? (Just as soon as we find it)
1080 Japan. NHK2 commonwave, 1 kW max, NHK melody u/Korea 1528 1/12.
North Korea. Kaesong, pgm II, in Spanish at $15401 / 5$, evidently a (Castro?) speech about Corea, but soon voice-overed for Korean translation.
1088 RSFSR Eu. Perm, evidently, at $14321 / 4$, altho sounded more like Ukrainian.
1106 Egypt (?) None 1isted, good signal at 1357 1/12 w/ME lively mx, 1401 YL Arabic anct,mentioned "...Arabiya...Muttahida," (so, UAR, right?) dominated jamming from 1100 and 1105 and a Chinese or some such on high side. Arabic hrd for several hours at sporadic rechecks.
1115 Italy? $14351 / 4$ strong and heavy $130 / \mathrm{min}(2.165 \mathrm{~Hz}) \mathrm{SAH}$, what little audio there seemed to be seemed an opera on one of them.
Taiwan. Cf. // 1260. I am counting both synchros listed here BEP26 Kaohsiung and BEP 25 Hsinchu, Provincial Police, since they were fading independently and audio was out of phase, WRTH-69 has sked s/off 1100 but hrd 1315 and AN.
Libya. Bayda, a regular, nice signal at $14351 / 12$, clear Arabic conversation ment Libya, some chines in BG (background probably from the SAH of $76 / \mathrm{min}(1.267 \mathrm{~Hz})$...GPN, What's the latest freq for Bayda?
1130 Philippines. DZHP, Manila, $1 / 41405$ news, presented by Nescafe, in the clear, contrary to evenings when Calcutta is joined by a (new) Thai to QRM. However, DZHP was hrd the evening before and later that AM on unlisted 2420.
1140 Philippines. VoA, Poro, Vietnamese $11051 / 6$, logged for record. Is far from free of $Q R M$ evenings, despite megawatt.
1140 Malaysia. RM, Kuantan, my clearest morning EE channel, fivers ( 5 by 5, or, $s-9$ ) $18181 / 6 \mathrm{mx}, \mathrm{EE}$, no VoA or anything else to QRM.
Thai TV, drift from 1146 , Thai songs $11041 / 6$, is usually on past local midnight.
1150 Japan. NHK2 melody at $152912 / 29,210 \mathrm{~kW}$ 's 1 isted, JORB Kochi and JOPC Kushiro.

1155 Egypt. Holy Koran station, Cairo (Beni Suwayf) chants 1355 $1 / 12$, ID per FBIS, altho EBU says unID Egyptian, 1154.200v, but I'd say it was closer to 1155. 4566 Miles to Cairo. Malaysia. RM, Malacca, routine relog, $11031 / 6$, Nx in Eng, QRM from Sweet Caroline. (Does she DX, too?-ERC) listed, likely source for American spkr $14081 / 12$ Taiwan. Chungyang Kwang Po Tien Tai, BED50, Taipei, or Taibei, M\&W a1t, $1 / 51557$ o/jamming, 1600, 3-pip TS, with last one a full tone, ID, nx-march, nx. I hope WRTH-' 70 has more details on BCC HS stns. Israel. Akko, listed EBU 1205.005 , checks for 5 Hz SAH w/ eiyter Poland or France, 1 isted 1205.000;slight audio 1430. unID. Carrier here may have been a TA, or belonging to a beacon on A2, "KP", ID twice in Morse between pauses, was exactly like $895,16301 / 12$, weak. 895 and this have no common LW fundamentals, except extremely low trivial cases. China. Changsha, Hunan (listed) YL talk // 1220 at 1820 $1 / 6$, Thai QRM. by an audio oscillation of some $400 / \mathrm{min}$, centered on 1258 , but inaudible on low side. Something new? Egypt? Later, was good in Arabic 1307 1/12; ERP mast be considerably above 150 kW in this direction. Dominated the jammer on 1258 which is now making grinding sound,
1260 Taiwan. BEP22, Sheng Ching Cha Kwang Po Tien Tai, Taibei, provincial police, L\&C at 1444 mi , dance mx $13121 / 12$, CC ancts 1313, and is AN. ID by checking // with 1120, already mentiond. Easily separable from VoA-1259 with mech filter. and Kanghwa Is., per Foxy apt to be closed, w/conversation in Korean $15501 / 5$ including vocalized pauses, // 710 but not heard on listed // 600. (Glenn refers to info, recently sent him, appearing in the press stating that it has been recommended this station be closed down as part of the economy drive now edident in various US Gov't operations. -Ed.) Taiwan. Probably? But, which? Eng lang lesson 1620 1/5 "I watch-ed television often" with Chinese commentary.

JoHW, Hokkaido Hoso, Obihiro, $12471 / 12$ US swing mx, ancts in unID lang, but // 1290 and 6 Hz SAH. Faded independently from 1290. than 1280. 1309 $1 / 5$ recent US hits, YL Jap DJ, listened till 1320. Jap 非26. Again, $1 / 12$ at 1247 , much better by 1300 , again with girl in JJ .
Azerbaijan? and ?. Eastern type vocal classical mx 1422 1/12 and $160 / \mathrm{min}$ SAH ( 2.665 Hz if you're fussy enough, hi-Ed.) EBU has no fits, but BBC/Yugoslavia $=3.3 \mathrm{~Hz}$.
Philippines. AFRTS game // AFTN-1450 here, 1303 1/4, believe P.I. is only SE Asia AFRTS here, several outlets listed. Turkey? Albania? OC 1417 1/12 and brief TTs.

1312 RSFSR Asia. No, not Simferopol, I agree, for had Peace and Progress show in Peking dialect (presumably spoken around Peking) // 1079 at $14351 / 5$. Vladivostok is in some 1 ists as 1313...I won't swear to 1312 , since my calibration is poor in that region. Also $1 / 4$ at 1401 with ID as "Mos Cow Bor Deen Toy" or some such.
1320 Australia. Was wondering if any DU's would ever show up, and my first turns out to be a $2-\mathrm{kW}$ job! 3BA (not an ITU callsign, so should be in quotes) with ID in passing 1343 1/4, 1345 AET TC, "Information station, radio 1320", max by Hirt, Campbell, etc., fair strength in the 4500 -mile range, gone before 1400 . Country $\$ 34$, reported.
1340 Japan. NHKl graveyard, all are 50 w or 100 w , adding up to good reception, $15031 / 12$ with talk, NHK ID 1504, was // to 610, had that "multiple sound". (Sort of like BBC-1214 is sometimes hrd over here, or maybe 1400 when the President speaks to the Nation in the evening, all stns w/same audio) 1367 Kazakh SSR. Petropavlovsk, 1712 1/12, Chinese but with a $\frac{1}{2} \mathrm{~Hz} \mathrm{SAH}$, who this?
$1402.5^{2}$ China. Chinese $17101 / 12$, perhaps Wuhsi, only one 1 isted as 1400 v by FBIS, or perhaps Conakry now relaying Chinks. Hi
1420a China. Chengchou, Hunan (only listed) 1/7 1837 typical Chinese talking, het on high side, path along terminator.
1421 W . Germany. $1 / 3$ it was tentative at $1834 \mathrm{w} / \mathrm{mx}$, anct in unID lang, and old US rock, but $1 / 4$ it was definitely German at 1836, so logged Europawelle, Heusweiler (Saar) and did not make it thru the QRN on $1 / 5$.
1439 Luxembourg. Tentative. Some mx here $1 / 3$ at 1831 while Germans being hrd higher up, however on $1 / 5$ at this time there appeared to be a SE Asia stn here.
1450 Thailand. Local AFTN Korat (altho never IDing by base or city...just AFTN-1450) logged for record at $09371 / 7$ with Tonight show, extremely strong signal at 300 feet distant. It is not on 1360! I do hourly $n x$ 1300-1800 daily (that's in EST as are all else in this section)daily exc. Mon. China/USSR. Some question has been raised about my conflicting loggings here...no Soviet is known on 1460, and China is in Russian...my second logging 12/13 at 1156 with Internatinnale and off, was reported as USSR but was likely Huhehot. However, the night before, at 1124, my log clearly shows: "Govorit' Moskva"; having hrd that ID so many times, I do not recall this specific instance; I do recall, however, noting it was not on 1457 but on 1460 . Shall check further.
1484 European. Some more hash, 1616 1/3...if I were a Wood or a Millar I'd probably sit here and ignore the rest, but not yet.
1493 RSFSR. A bit of Russian again here $18351 / 6$, by YL, into mx , so Leningrad, Gomel sked to be off. Also signs of 1421 , 1484 and 1511 this date and time. Had Leningrad carrier on $1 / 3$ at 1815, 8 -note IS at 1829 and Ressian anct.
1490 Japan. Radio Sanyo, Okayama, Yl giving call JOYR thrice, flutish mx, 1516 12/29. (out of sequence, sri, ed.)
1507.5 Visions of a Maldive Is. ET disappeared at 1820 when TT monitored here, probably ex -1512 , w/same rough carrier hrd earlier, open at 1650 , at 1705 it was up to 1508 .
1511 East Germany. RBI, Koepenick. In nicely 1/3 after sunrise. At 1842 GG man talking about DDR, 1843 YL "das war.." and ID "Hier ist Radio Berlin International, Deutsches Programm fur Europa..." listing xmsns with MEZ (mitteleuropazeit) \& meterbands, incl 198m MW; 1843 8-note IS twice, mx, anct by YL, light mx, and then beginning to fade. 5345 miles to Berlin, cou. \#33, reported. Again $1 / 4$ at 1835 with German comment about Red Congo. On $1 / 5$ at 1833 was German but badly squeezed by 1510 and a Thai on 1512.
1520 unID. "Broadcast to Africa" in Eng was all I could catch at $17121 / 5$. Thought might be new 200 kW Zambia, being installed by ChiComs; NRC IDXD p. $91 / 3 / 70$ says not yet being built so was perhaps next item.
1520 Philippines. DZEM, Rizal, $17001 / 12$ s/on in EE giving CL. (call letters) and mentioning Radio Control Office (Phil'p $=$ to FCC) "Swinging Safari" mx w/ Tagalog talkover, QRM rather severe.
China. ( 3 stns listed for 1520) M\&W in Chinese 1645 1/12 CJKT // 645 and 660 but not // 635, noted rapid frequency flutter when monitored with BFO. (Again, perhaps, a form of telemetry or coded information transmission? -Ed.)
1525 China. Urumchi, clear of QRM for a change, $18551 / 5$ with Internationale, 1856 off. (Should be audible ECNA under optimum cx, who's going after it??? -Ed.)
1538 W . Germany. $1 / 3$ tremendous signal as was 1586 , at $1815 \mathrm{w} /$ YL GG anct, 1828 piano, on $1 / 51832 \mathrm{cl} \mathrm{mx}$, gradually overcoming the viet on 1537.
1560 Taiwan? or, more exotic? American-type stn hrd here until $\frac{1}{2}-\mathrm{hr}$ after LSR here and 90 min after Taibei LSR, at 1444 mi , 5 kW , would not expect such a daylight path (yes, midwinter, but sun is higher here, now, than midsummer in states!) First noted $1 / 10$ at 1852 giving out phone numbers, etc, perhaps "bulletin board", at 1900 CBS news with Neil Strauser (that's Strawser -Ed.) could be AFRTS relay, low het QRM, tried to check // 7215 but not hrd. Any chance for a USA CBS? (no domestic 10 g here, hi) or XEVIP, hi? Tried 3 mornings since, no luck. Usually noise is in and Taipei is out by 1815 or so. Another possibility is a SE Asia AFRTS stn, not in Thailand, that I don't know about.
1562 European. Mess here 1817 1/3, not hrd the 4 th or 5 th.
1580 Taiwan. Last of the AFNT trio, Taichung, strong at 1332 1/4 with AFRTS Broncos/Vikings game // 1560 and 1590.
1586 W. Germany. Exceptionally strong, rivaling many nearby stns. 1/3 at 1815, 1852 fading but still good, 1900 3-pip TS, wx, just a disappearing carrier at 1910; not bad considering our LSR was at 1838: Reported. $1 / 4$ almost as good 1820, slight QRM from USSR; $1 / 5$ only fair at 1804 . Peaked as well as before at 1829 however, all out by 1850 . No sign of 1602 on these 3 days. USSR dominated $1 / 6$ at 1832 S 5 but HNL on 1/ in not even a carrier on 1586 at 1815 and 1850 . That s alit.

The usual loop is one that is inductively coupled (ICL) and has the following schematic diagram:
 where $T$ is the feedline connecting the loop to the receiver and can be made from two-wire twisted cable (of the homebrew type) to coaxial cable or shielded two-wire cable. $\mathrm{L}_{1}$ is the inductive coupling which is usually one turn and almost never more than three turns. $L_{2}$ is the main loop winding usually containing 5 to 15 turns of wire--the number of turns depend upon the geometry of the frame-crossarm structure that is used, upon the spacing between the wires and the variable capacitor $(\mathrm{s})$ $C_{A}$ and $C_{B}$ used as well as a few miscellaneous parameters of relatively small significance. The switch $S$ is used to connect $C_{B}$ in the circuit to achieve resonance (signal peak) on the low end of the BCB. In almost every $B C B$ loop, $C_{A}$ and $C_{B}$ are actually two separate variable capacitors, but are mounted on the same frame and have a common rotating shaft--indeed, loop builders commonly use or consider for use only one type of variable-- the popular "standard broadeast" 2 -section 365-10 picafarad variable used by almost all radio manufacturers in the "All American Five" table radio as well as most other $A M$ radios. The antenna is $L_{2}, C_{A}-C_{B}$ and can be called in EE-parlance: a parallel tuned tank circuit. Radio waves paseing through $L_{2}$ induce a voltage causing current to flow and by adjusting $C_{A}-C_{B}$ the parallel tank is adjusted to achieve resonance--a condition in which the siganl in the antenna "peaks". $L_{1}$ 'looks" into $L_{2}$ by magnetic coupling since current flowing in $L_{2}$ causes current to flow in $L_{1}$ and this induced current-voltage is what is carried to the receiver by $\mathrm{T}_{1}$. Now the interesting thing is that the antenna circuit $L_{2}, C_{A}-C_{B}$ is extremely inefficient and actually "intercepts" very very very minute amounts of energy from the passing radio wave. Further, the coupling between $L_{1}$ and $L_{2}$ is at most "fair" so that an even maller amount of signal in carried to the receiverthe figures are almost unbelieveably small compared to the energy of the pasing radio wave. In fact, looking at a loop theoretically on paper, it would appear to be a totally useless antenna. In practice things are even worse than paper calculations, but as we all know--loops work!!! One can only try to increase the efficiency of a loop by getting the best variable capacitor available and then design $L_{2}$ to have optimum properties and to improve upon the 'sampling probe" $\mathrm{L}_{1}$---exactly what Gordon Nelson has beautifully accomplished in the state-of-the-art loop, the FET-Altazimuth.

The purpose of this writing is to discuss the latter condition-a way in which $L_{1}$ can be eliminated and a direct connection to the antenna $L_{2}, C_{A}-C_{B}$ made which gives a very significant improvement in siganls felivered to the receiver---the DCL, direct coupled loop, an arrangement in which the line $T$ is tapped to $L_{2}$ directly or by means of a FET preamplifier. The problem is that no superior or proper circuitry is easily accessible to exactly "match" $L_{1}$ to $L_{2}=0$ that maximum energy is transferred to the receiver. So, what is the next best alternative is to voltage feed $L_{2}$ and we want to bring this voltage right to the receiver so it can be utilize the loop signal to a much greater degree. But it is extremely important that
this "voltage sampler" does not appear to $L_{2}$ 2: a low value of "resistance" Examine the following circuit diagram:


The line $T$ and what it connects to in the receiver can be viewed as a "resistor" hooked across the ends $E_{1}$ and $E_{2}$ of $L_{2}$. If $T$ has a very low "resistance", then the voltage induced by the passing radio wave across the ends $E_{1}$ and $E_{2}$ of $L_{2}$ is severely reduced and things are worse than beforel Hence, to preserve the maximum (or very nearly so) voltage across Ly, T must have the highest "resiatance" (impedance) positible. In practice if $T$ is at least one megohm (one million ohms), results are good. So suppose you take that loop you are now using, remove $L_{1}$ and connect $T$ acrose $L_{2}$ (same as connecting it acroas $\mathrm{C}_{\mathrm{A}}$ ):

If you then attach $T$ to your receiver as before, you get nothing because in the conventional receiver you have this circuit ( $T$ connects to $A_{1}, A_{2}$ ):


But $L_{4}$ is just a few turns of wire wound a round one end of $L_{3}$ and it simply "short circuits" $\mathrm{L}_{3}$--result: TILT!! So, connect $T$ to $V_{1}$, the RF stage as follows, removing $C_{1}, L_{3}, L_{4}$ :

Then voltage $V$ in the loop is delivered to the control grid, pin " P ", of $V_{1}$, the first $R F$ stage and Tas a "resistance" is very high-likely something on the order of a megohm. Further, the varying voltage $V$ applied to $p$ is exactly what "makes $V_{1}$ operate". Now
you have A ${ }^{\text {a }}$ very ignificant amount of the antenna voltage delivered to the receiver. But, as life goes, so goes the law of nature: You cannot have your cake and eat it tool! $T$ also has capacitance associated with it and it appears acrose the circuit as $C_{T}$ below:
The result is that your loop which previously $L S$ tuned to 1600 khz does no longer! The larger $C_{T}$ the lower the higheat "peakable" frequency will be. The first remedy is to
 remove turne from $L_{2}$, but this reduces $L_{2}$ signal pickup--undesirable but the result in some canes will still result in a significant improvement in aignal strength. The value of $\mathrm{C}_{\mathrm{T}}$ for a given type of line T depends on the length of $T$, the longer $T$, the larger $C_{T}$ and the geeater the reduction in top end frequency peak. Suppose for inatance $T$ is RG-58/U coax, then if $T$ is $L$ feet long, $C_{T} \doteq 30 \mathrm{~L}$ picafarade. Now $C_{A}-C_{B}$ reach 365 picafarade or so to tune the loop at 540 khz . About 10 feet of RG- $58 / \mathrm{U}$ will then lower the highest frequency peak attainable to the very low end of the BCB and to compensate too many turne (if not all?) of $\mathrm{L}_{2}$ would have to be removed. The lowest valued line in capacitance per foot commonly available is 300 ohm TV twinlead which runs about 5 to 7 picafarade per foot. Thus 10 feet of $T V$ twinlead gives $C_{T}$ a value of $50-70$ picafarads, not ai severe. Also, reducing the value of $\mathrm{C}_{2}$ will compensate to some

If $T$ were almost of zero length, then $V_{1}$ would be mounted at the antenna itself and this can be accomplished by installing a high-impedance to low-impedance "transformer" with lots of gain (better known as a FET preamp) right at the antenna. In fact, this is exactly the situation in the FET-Altazimuth loop when used with the FET's--it is a DCL! In this case no receiver modification need be made, $T$ connects to the output of the FET and connects to the receiver in the normal manner. T can be made of a nominal length of cable and in addition even more gain in siganl is obtained. Gordon Nelson bas published two FET preamp circuits which are applicable here--one is a single-ended unbalanced input unit, the other is that FET preamp used in the FET-Altazimuth loop which is a balanced input/output push-pull unit having extremely high input impedance and superior high frequency atability. Information on these units can be obtained from Gordon at NRC headquarters. Since most loop are used in the unbalanced feed arrangement, the ingle-ended FET can be connected as follow: to your present loop under DCL conditions:
and wires "x" should be as short as possible. Some care must be taken in this case to maintain light end

the effort is well worth it since $\mathrm{L}_{2}$ is relatively "undisturbed" so the voltage drop in the antenna is kept at a minimum. The FET preamp of the FET-Altazimuth loop connecte to $L_{2}$ as follows:


Again, wires "x" and "y" should be very short! Connection "y" on $\mathrm{L}_{2}$ is at the exact middle of the $L_{2}$ winding. Mounting this FET preamp much like it is described in the FET-Altazimuth loop is to be reccommended. In all these cases, a little patience and reflection upon the proplems that can arise will give you the necessary steps to take to eliminate them. The end result is a loop antenna, the DCL, which will prove to be a most significant antenna over the customary IC L-something a serious BCB DXer can now discard as inferiorl You can start by removing $L_{1}$ from your ICL and employing the above techniques to suit your needs. Of course, the FET-Altazimuth loop is a further improvement in that $L_{2}$ has been optimized to have the desirable properties necessary for BCB DXing. In conclusion-- DCL, the only way to fly the BCB!!!


## Hini:

fentil |, wint
111161
mijut, $1+1714$

Greatings and solutions, folk. Thol I'd have said Sunday it'd be a small colum, the mailbox this AM proved me wrong. This time, I've included some r/c's hrd reported in other parts of DXN in the past 2 weeks, all noted (NRC) for that reason.
PLEASE do not submit untD TT's unless you have something specific for someone to ID it by. If you have format, and a definite s/off or s/on time, or some other special circumstance, then OK, but otherwise, they'll not go.
A WORD about abbreviations. I've had some questions, so: Unn. denotes the word "unneeded", i.e., something hrd before (bl); abt denotes the word "about". Ard. denotes "around". Now, on to the DX:

## midnite 10 sanrise

540 CBT -Nf-Hrd on NNRC TEST 1/12 in well 0102 (Mark Katz, Arlington, Ma) Likewise hrd w/ CBK nulled for province \#9 0058-0130 (Jerry Starr, Youngstow, Ohighyo)
WDAF-Mo-Hrd w/ WIOD nulled OOLL5 w/ MOR (RJchard Clark, Ft. Lauderdale, Fla.) Welcome to $\mathrm{DDXD} .$. . -RJE . OH- that's 1/12-RJE

* 650 WSM -Tn-
Was AN MM 1/12. (Starr) But not AN w/ RS anyhoo $1 / 19$
WNBC-NI* 710 WOR - MY
CKMMOM - Hed in FF w/WOR, w/ CBC FF Net feed 2323 1/17 (Katz)
CHIR-On- In w/ III (Yecch) way o/ usually dominent CKAC 0255-0305 1/19
CKAC-Qu- Heak in FF O130 w/ qrm de Cuba, Hexico..(Clark)1/12) (RjE)
$740 \mathrm{CBL}-\mathrm{On}$
* 770 WABC-NT-
KOB - NM -
780 WJAG-Nb- Was off by 0100 1/19, but naught else there. (RJE) Had $1 / 190000-0030$, and TI/OC 0030-0130+. (NBa) In w/ III (Yecch) way o/ usually dominent CKAC 0255-0305 1/1 Heak in FF $0130 \mathrm{w} / \mathrm{qrm}$ de Cuba, Hexico..(Clark)1/12) (RJE) Hrd © $0105 \mathrm{~s} /$ off weak (Clatik) Off 0045 on $1 / 14$, and most of AM. Also off much of $1 / 15$ AM (Page Taylor, Butlier, NJ) And off by $01001 / 19$ (RJE) Finally hrd w/ WABC off totally w/ NEC nx 0104 1/19 (RjE) TEST hrd io/ WBBM 00/TT W/ ID's 0154, but v. wk. (Page)Copied 1/12 TEST, +20/a9 sigs, shallow audio (Paul K. Hart, Ft. Horth) W/TT \& taped ID every 2 mins. copied 0100-0130 w/ WBBM(Starr) Testing 0100 w reb, quite clear, $1 / 12$, thought I was back in Pgh at the time the way it came in (Clark) Pgh at the time the way it came in (Clark)
* 870 WLL -La
910 WRNL-Va-
* $=920$ WGST-GaWeak w/ CBS nx mention on Radio 91, 2320 1/11 (Katz) Hrd w/ rr 0305 1/12 o/ CKCY, apparently on for bad wr. (Bob Hostettler, Minnesota)
930 WSOC-MC-
940 kHOS-Az
950 WPEN-PaH. good level w/ cack $00301-03301 / 12$, tape \& report sent for Ariz. \#8. (Starr) Some guys have all the luck -RJE
960 WFIR-Ta-
970 WWSW-PaW. Va) Welcome to DDXD, Dick - RJE at 0530 w / nr headines (Hostettler) Hrd another hometown stn in this one, often u/ WJRZ, WAVE 1/12 0300 (clark) WJRZ makes it THERE?? -RJE
990 CBW -Ma1000 KOMO-Wa(hark) WJRZ makes it THMLH NJL (1t2) ( Only one there 0200, but couldn't get rid of it. (1/12) (Clark) Beautiful s/off $03001 / 5$ just after XBOI s/off (Truax) Aha, so the pest signs off, eh... KOMO, here I come -RJE

1000 KTRS－SD－Ilird on DX ，quite powerful，w／late s／on 01．7 $12 / 22 \mathrm{w} / \mathrm{ob}$ Tix．（Starr）
＊
1NOV－N1－
1010 CFHBEDI－
1050 0．510－Cln－
 T／soin las 0124－0131 1／11 of
enk a／TITs 0200 1／12．（Olaric）

 for $0100 \mathrm{~s} / \mathrm{on}_{\text {，}}$ and alroady well into pgr，（1HE）
＊11．0 ICDIO－llv－Per verie，all teats occur on Nis＇a（Start）
1250 WDE－F1－Hird way u／WTAE $00301 / 17 \mathrm{w} / \mathrm{DD}$（Taylor）it
Wras－Par Hird wig o／WDes $03001 / 12$ ，for lth Feht stn．（Glark）
WCO－DC－Weak E Clu00 $1 / 12 \mathrm{w} /$ Qfir da Ouba（Clark）
1260 M00－LC－ TiST hird poorly a／Iotna omu w／ID $0200^{\circ} \mathrm{s}$ ，then 3 thaen in gaccesston．（Pare）
Hated w／ox e $02301 / 22$ ，no Trobably NSP（Bostattler）＇T1s， per Geo．Sh ruan－RijE
per veo．sparently off $0233112 \mathrm{w} /$ KOIL Nlone（Hostettler） lioted pparentily off $0233112 \mathrm{k} /$ orf per $\mathrm{f} / \mathrm{e}$ 11nt $1 / \mathrm{S}$（Truax） IT w／ID＇s 0121,0126 ， 0131 s e／orf per
Hed bere w／ET－ux $02351 / 12$
$1 / 15$ 日／arf ol07， 398 （Hart）
$1 / 15$ e／orf ol07，Sse（linrt）
On AN $1 / 22$ ，was doninant w／kgoss 0200－0400（Hart）
Irenendeus $\operatorname{sij} \mathrm{jral}$ \＆ 51 D 0240 ，notone，and thds the only II （Hart）
In will w／ma，spots w／address an Hox 1520，Clc．Oy．Fird $01401 / 12$（Kats）
Had ET $1 / 17$ 0030＋．Cune on w／＂Stangers in The Hight＂（oi Voy，－jljs）than SID（sp were they all）．Later played a thing caller $\operatorname{MCD}$ Serenade＂whiah land eode in bicgd．Siga．$+20 / 9$ （Page）And what＇11 thay think of next？＂Skrangers in the



## suntise 4 daytime


 1310 CFTM－On－Noted off 1006－1033 12／30 leavint crot on top w／dis9，wera， a／it．（Morrls Sorenaion，Ensiale，Ont．） Hoted on 期 i 0605 1／5（Hare）
1330 IFIS－ 5 Ea－ 1590 ตร2

Fird firat tinn ever $1 / 81155$ malling wTBY，but w／wha splash all over．Pattern mast be off a bit an never had here th（Chris Lacas，Fairfledl，Ct）

## suasel a Byenim

WOVF－zK－3，off at $17451 / 4$ ，all vilune（\＃rusx）
CKMS－qu－W／FF ID 2300 12／31 even w／WOR（Truax）Hrs $2232 \mathrm{w} /$ Kaas rux 12／25（Cliff Peno，Meu Canaan，Ct）
 Ohioghyo）Xelnome to the fold，Tin－RJE
 （cas，Ealedon，HJ）Wolcome，ned ghbor－JIJI FF ID $1620 \mathrm{~L} / 4 \mathrm{o} / \mathrm{WH}$（Truax）
50 ckVI－Gu－
910 KLCK－K－

I 900 çVD－20－
1050 cres－24－ 2 ID＇s then IT $\mathrm{W} / \mathrm{WIIR}$ nullied $1940 \mathrm{I} / 6$（Truar）



1130 LEAR－M1－Ind on 335 a／Nane 1629 12／9（Heno）

Lird in for a monent quite strong $2 / 71751$（Devisaols）
Woy－11－thike a ton of hmicke e 1／7 $1755 \mathrm{~m} / \mathrm{IT}$ ，ads／＊（Davissoa） Fird $w /$ nention of M aister atn． $17401 / 5$ ，equal to MCDE （Darlaaon）

1220 WLXE－Ni－In ㅍ／WNVA $1739 \mathrm{I} / 5$（Davisaon）
I 1140 unID 1700 Dec，s／off w／ralgious
T 1120 wot－it
1340 ．
1580 相
1360 werc－Ct－
Th10 W5OP－0t
1510 WNKK－Vi－Fis Weld ofa $201 / 6$ o／kimp－KOV mens（Truax）
1540 CFITH－On－Wee $\mathrm{w} / 00$ os $163812 / 14$ ．（Feno）
 smasicas）

## changet

$+\quad 560 \mathrm{KLL2}$－Oo－Is NSP（JAC）
＊ 610 cBM－ad－Kexicops 1000 u2 Is on．（Tsylor）
Will renain $1000 / 250 \mathrm{~m}$ for at lesst snother month due to fire danage（Hostettiler）
+800 CJII－On－100：Thander Bey（3e0．Sherman，Minnomota）
I＋ 580 CKFR－On－LOC：Thander Bey（v）

+1230 CFPA－On－100：Thunder Bey（Sherman）
CSHL－BC－Merritt， $1000 / 250$ th．Is on．Presume this relaye cinc－ 610 （Taylor）

＋ 1290 KTRN－Ix－ 5 CH t 24 hrs ，off 1 M （Hart）
＊ 1310 CaOB－Ga－Granted CP to ehance loeatien to Le Pocatiare（Taylor）
+1310 ckny－ED＝Is call for Orand Forks．On．（Pavlor）

1360 MRCX－Ca－FCO Opheld notive of deletion．Effertive 1／3n．（题S）
+1380 k He Ho－Is off Misis．（KRC）
1／20 KFWF－Ka－ FCO upheld notioe of deletion．HPfootive 1／31．（IgIE）

+ 1．50 CKTi－A1－Jsmper， 100 m ，relive CJYR FF．（Trylor）
CP－ 12 － Jamper，Alshans，DKLSTE ULis 1ter，so 14 mes ry error， I oonfused the ${ }^{*} A 1, * w /$ the above when it appeared in Cooper－Trunt sahile back．（RE）
4I 1340 cKYZ－qu－Temimomingue， 250 in（Tagior）Is on．．．
1530 Wzih－ill－Tarset dete for pen tenta is $2 / 17$ ，wili be on w／ET＇m froas approx．2／1．（RJX）

＊WISE－VI－PCO irnnted request to delete nighttine operations．（EjE）


## F／C＇s







 WESB－14，00－Tny（by Page Taylor），Kay－1ino－Nt（by Bob Bostettlar）．

WCAZ-990-TI; :DVII-I310-Tn; KIJV-SD-1340; NJZM-IL00-Tn; KXFA-1490-Nn; KNBI-1530-Ka; KLPM-1390-ND; (by Paul Hart) KNOX-1310-ND (by Dick Truax)

ALSO: New $f / \mathrm{c}^{\prime} \mathrm{s}$ or $\mathrm{r} / \mathrm{c}^{\prime} \mathrm{s}$ (as per other lists) noted by NRG:



入
MOTTCE: $3 F F B+1200$ will TEST for inIRC/FRC as arranged by Pat Tsylor on February $23 \mathrm{w} / 0001-0700 \mathrm{EST} \mathrm{w} / \mathrm{nx}$, ID's \& 1000 Hz . tone. Hore info re mx type, etc. later as per stn.

REMTBER to consult the $O P$ list appearing last week and to check on those stns. you know of or are near jou and report answers to me.


## Gordon P. Nelson 19 Irma Avenue, Watertown, Mass. 02172

We had a bit of space left this time so I thought I'd comment on a few of the items in this issue. Eob Hoffman, your station on 818 is interesting; the most likely bet is Warsaw but that's an unusually large DF anomaly. That's a bad channel for DF, though; could be that there was anough TVI present to throw off the bearing without being audible. That channel is used by both Warsaw Home and Foreign Services and they use different interval signals; send up a copy and I'll check it with what I've got. Don Kenney: I've seen information to the effect that there are at least 4 separate Russian stations on or around 1525 ; it's likely that they've got enough transmitting power North and/or East of Sinkiang to pull the bearing a bit. My best DF from Massachusetts (made when I last hrd 1525 two years ago) gave a mean bearing which passed East of Urumchi, between there and Hami. I wouldn't be too surprised if the station is located in North Nothern Sinkiang near the Buluntuohai Lake region which is a likely site for the high capacity hydroelectric station that powers 1525. Foxy - the BBC on 701 was reportedly heard in N.Z.; see my section 1/11/69. Glenn Hauser: on 836. Beirut is now 2.5 cps high; USSR is 0.3 cps low, and the Finn is 1.3 cps high, relative to ORTF. Cm 895, Brunei is now Barakss I believe. The Australian FES outlet is in Ving Tau, S.E. of Saigon. Kyzyl in the Tuvinsaja ASSR (located N. of Mongclia; the old Tana Tuva, a prewar country known only through its postage stamps...) is too far down in the political-administrative hierarchy of the USSR to count as a separate country by our present standards. 1106 V is indeed an Egyptian; definitely ID'ed here a few days ago. I'll measure 1124 and let you know next week. No record of jamming on 1259 here. On 1295. Baku/Slav SAH is now average of 3.8 cps . Be a bit careful about using these average SAH freqs; except in the case of supersophisticated operations like the BBC, many wellrun stations vary by a fraction of a cycle normally; the poorer the country the greater the drift - I'd like to see a plot of frequency drift vs GNP for some of these countries with state operated broadcasting stations...

DAVID LONG - 66 Beattie Avemue - Lockport, New York - 14094
Greetings! The past few weeks have been very good to me. KORL650 noted w/a nice signal on $1 / 5$ \& again $1 / 12 @ 3: 30 a m$, good enough for a report. While tuning dam low, the Algerian and the Swiss on 529 came in $1 / 8 \& 1 / 9$, respectively. Both were sufficiently audible for tape recordings. SBC had a GG program w/a lot of alpine mx. QRM from the North Bay beacon wasn't as bad as I had suspected. it weuld. be. Other catches include KONO-860 $1 / 5$ © $1: 30 \mathrm{am}$, $\mathrm{KNOE}-$ 540 1/8 @ 6:15pr,WWVA testing w/5,000w on 1/5@1:40am, KSJB-600 1/12 @ 7:40pm, my first from N.D., and WJAG-780 TESTing w/bot h $500 \& 1,000 \mathrm{w}$ (Thanks, WBBM:) Today 1/13, I caught WCPC-9 10 © 6:15 s/off \& HIDV-1200 @ 7:20pm which equalled WOAI in strength. Dominican Republic is my 9th country. Fecent veries include KWMT-540, nice card byt absolutely no reference to confirmation; WIHM-1530 who returned $\mathrm{m} /$ re ${ }^{\frac{z}{2}} \mathrm{ort} \mathrm{w} / \mathrm{a}$ station stamp \& $\mathrm{v} / \mathrm{s}$. WMID $-1340 \mathrm{v} / \mathrm{l}$ \& a $C M$; and. best yet, KWYO-1410 who tested $12 / 19$ e 2am, $m$ first and probably last from Wyoming, hi! I got ry Hallicrfaters $S-76$ back from repair two weeks ago $\&$ it sure has improved reception. That's it from WUSJ-land, so best of DX \& au revoir:

RON CHRISTLN - 30 Lucille Drive - Cheektowaga, New York - 14225
1/11- WWSR-1420 s/on heard. © 6:01am for a nice Vermont catch, should be using 500w. PSA at this time, right? Report out. M 1/12- No sign of the DX Specials, or 650 Hawaii. Here's what did show up: HJER-1025 in @ 12:34a m. KOB-770 ID heard (e) 1:24am w/ID for first N.M., not enough for a report,


 1340 from $3: 56-3: 59$ fede, was very weak but readable, probably was the KPRK, Mont. test. AFRIS-790 Puerto Rico outlet heard w/NX anding e 4:05am \& ID as AFRS mentioning 24 hour operation. After II they either went under fast or bean pleying SS mx. PJD2-1295, for new logging © 4:19am. 780 again, strange IS w/several variations of the same basic melody heard 4:25-4:29am. To early for ZBVI, I have it on tape, any ideas? Last $1 / 12$ logging, of course on 780 , hi, was ZBVI © 5:45am w/religion. v/1 fram WKND, reports to WWSR WDSL. 73.

KEN LYCN - 9415 Goodrich Road - CJarence Center, New York - 14032
DX since last week: 1/3-WCRV-1580 en $4: 58 \mathrm{pm} \mathrm{w} / \mathrm{s} / \mathrm{off}$-hym, QRM fram CBJ; CJNR-730 in for real surprise e 11; 25pm o/u CKAC completely gane e 11:43pm. 1/4- WDEL- 150 e 12:16am W/MOR, NBC spot announcement, bad QRM from CKOC. 1/5-WGFN-1370 $\mathrm{f} / \mathrm{c}-\mathrm{TT}$ 12:19-12:28 u/WSPD, KNOX-1310 $\mathrm{f} / \mathrm{c}-\mathrm{TN}$ 1:17-1:31am, QRM from WIFE. $1 / 6-$ WVOV-1000 heard u/WCFL @ $5: 34 \mathrm{pm} t 111 \mathrm{~s} / \mathrm{off} @ 5: 59$, first heard here. $1 / 7-$ KSO0-1140 heard. © 6:03pm w/ABC NX u/WRVA. 1/8- WDSM-710 heard. © 5:3Cpm w/NBC report till pattern change e 5:47pm when they vanished. KUOM-770 e 5:56pm c1 mx s/offe e 5:59pm u/wABC, KWKH-1130@ 6:11pm w/NX till fade e 6:27 u/WNEW, CKRC-630 in very strons over all e 6:35pm. 1/9- WNMI-1360 heard e 5:16pm w/NX good till fade u/WSAI (2) 5:28pm. 1/10-WSIP-1490 $\mathrm{f} / \mathrm{c}-1 \mathrm{P}$ 4:02-4:15am, very tough but ID vaught © 4:14 am. One verie this week, WISN-1270 nice $\mathrm{v} / \mathrm{q}$ for $\mathrm{N} . \mathrm{H}$. \#l verified.

FRED NORDQUIST - 302 Sandra Lane - North Syracuse, New York - 13212
Some new loggings made since last Muse, as follows: 12/18- WWIF
-1170 N.Y. w/MoR @ 10:46am. 1/5-WERE-1300 0. w/World Tomorrow, thnaks to Jay Murley's program sked in 1/5 DX NEWS, 10:59pm. WOC-1420 Ia. w/ses progrem @ 11:22pm. 1/6-WFIR-970 Va. new, c1 12:01am, s/off w/Iord.'s Prayer 12:08. 1/9-WCPC-940 bombing CBM, s/off w/Dixie 6:13pm, KOAM-860 Kan. w/NBC NX network ad $6: 25 \mathrm{pm}$. 1/10- CBT-540 Nfld. noted w/CBC NX, WX, c/w after KWN s,off $6: 15 \mathrm{pm}$, report sent. 1/12-WOLF-1490 N.Y. TTT/OC 12:30am, CBH-860 N.S. o/u CJBC W/NX, CBC program Theatre 10:30, 9:13-9:31pm, CBN-640 Nfld. w/NX, ID e 10:03pm, GHGB-1310 Que. W/FFC NX 10:35pm. 1/13- WFMD-930 Md. w/rr, very few IDs w/WBFN 1ooped $9: 58$ pm, CBK-540 Sask. finaliy w/CBC program, WX adviscry e 10:59pm. Report also sent to CBH. Statistics: Total logged: 412. States: 37 \& D.C. Provinces: 8, plus Ottawa. N.Y. 90 ; countries, 18. RS: SX-110, amt: $40^{\prime \prime}$ loop \& a $100^{\prime}$ 1ongwire $N / \mathrm{s}$

36C. DAVID PALL - 71 Hurubutt Street - Wilton, Connecticut - 05897
Greetings from the hame of the world's only carrier-current receiving antenna (I wish it worked that good, hi ). Of late, no chance to DX until today, $1 / 13$. I revised the antenaa system so that I am not onis using half of the town's power, ines, but two longwires also, one oriented $\mathbb{N} / \mathrm{S}$, the other $\mathrm{E} / \mathrm{W}$, plus a coil which eliminated many of the harmonic problems that I had (SW harmonics from 1200 on up without the coil). DXL 12/7- HJCI-810 R. Sutajenza, Bogota, e 7 Pm w/ID $\mathrm{u} / \mathrm{WGY}$ who un-modulated at just the right time. 12/13, I logged WNLE-1170 w/AI NX @ 1:59pm, puts in a good signal here. $1 / 13$ saw the new super antenna and al1-day DX. WPUT-1510 ID © 2:30pm ID, WMMH-1470 an unn until tode: w/spots for downtown Meriden stores \& ID-type jingle/announcer job. I also ncted WAIK-1370 much stroncer, WBAB also. WBEC-1420 noted w/rr @ 5:40pm whilst talling to Frank Waldron via landline, blso WCOJ-1420 in w/ID \& NX e 6. $1 / 13$ seems to be a rotten night - no Aurora, bed CX to West. Would you believe Mit-Ninter Anomely \#2? New jear's Resolution \#1- Eny a car. \#2- But a good PX. A note to MPC '70 setter-uppers - a tour of WRRA is a MSST, hi hi. And now, lacies \& fentlemen, T. X. Thrush. $7 \hat{F} \&$ the best for 1970 to all NRCers. now, acies \& centlemen, I. WERA does not exi"t! -ERC)

STEWART DRAKE - 2108 South Simpson Street - Philadelphia, Pennsylvania - 19142 The veries are coming in better than the new catches of I have now rece:ived a total of seven so far this year. V/1s from WCIR-1070 CHIC-530 in FF, but cerinitely a verie, KWPC-360, WIKE-1170, WCCR-1580, KRCB-1560\& KICX1360. I had sent out several PP/es \& whether that prodded the stations or not I had the $\mathrm{v} / 1 \mathrm{~s}$ arrive in a few dars. Has anyone heard from ZDVI in the way of a verie? The new DX heard was on 1/4-KICX-1350 r/c @ 1:47-2am. Then a possible KKAT-1430 II.M., I am not positive, as no IDs were noted, but they were listed as testinf 2-2:30 on first Sunday \& I had a definite TTer in there from 2:03 to 2:30 u/a couple others. Then on MMI/5 I was or $1500 \&$ a voice broke in with "Mis is WDEF, Detroit, Mich. conductinz frequency checks" \& not one thins more as I ctaved with it a while. Does ancone know ir WJBK switched call letters? on $1 / E$ YATI-1480 heard w/TT u/WDAS. This at 12:32-12:45am. Totals here now show $2,510 / 2,364 \& \mathrm{I} \mathrm{am}$ no at 997 counties verified. I might state here too that I ha word from Mrs. Franl: Meooly that Frank suffered a strone on Hew Year's Ce: She dia not se: if it was a massive one, or mild, bit I think the first as she did say Frank was paralysed on the right side. Anyone wishing to drop Franl: a carc can co so bu: addressing them to him at 102 S. Fifth Street, quakertom, Pa. 18951. Frank is about $76 \& I$ am sure a recovery will be a lons slow procese so I an sure carus would be welcome. That's it for now, sood DX \& 73 to all. (Frank is a prominent nember of the imRC-ERC)
STAMMOD R. MOSSS - Route 3 - Bracford, Massachusetts - 01830
1/13- WYSL ceright topping VICK, TT, etc. on 2400 © $4: 45 \mathrm{am}$, for Eirst time aince call change from WBNI. Fallout from Bruce Refnolds' article - for those who want to get good radio lozs from the 20s, plus DX records, plus pictures of stations, Radio Digest was the one - heve a real peek at radios history - rany picked up bj me from a dealer. Leroy Keyt, $30 x$ 208, Cleghorn, I6 51014. Incidentalli, a Ross Hansch is listed in the DX Recorcs column - NRC's?

AMN EDIIPD BRUCE REMOLDS - Box 2 E3T - CMR2 - Shepperã AES, Texas - 76311
Apparent $1 ;$ another ANer $i 0$ contend with - KPRV-910 was heare amouncing 24 hours on $1 / 10$. Not noted $M 1 / 12$, so hopefull $1 ;$ off Mis an wa. Heard total is up to $2!+7$, verie total at $1, \mathrm{w} /$ a verie from CBK. $D X:$


 cast e2 (state \#32). KT:m-790 wes still on © 2, so they may be NSP now. Sorrs.



OD! DAVISSOF: - 207 Winchester Road - Apt. 105 - Akron, Ohio - 44313 Heleme to nkron's newest NRCer, Robert Ligon! 1/1j-WZBIT1500 I1:. ${ }^{2}$, sai. DX: 1/7-WIBC-1340 Ind. topping channel briefly © 5:33pm; WAUK-1510 Wis. © : 3 Spm o/u WLAC; WCTY-1000 Ala. (e) 5:51pm in strong for a monent, then 10:w. WOV (non-verifier so far) in Northern Ala. came blasting in. I was pleased to note rare CKS0-790 Sudbury, @ 6:09pm. 1/15-WCLU-1320 K. e 6:59am W/much ©RM; MIRV-990 Va. © 7:50em w/WMIG underneath. Veries: v/1-WABJ WLBC (Six cajs:) v/f- KRCB WIL. v/q- IJWI (TEST barely heard - vocu for work ID, plus one soñ title), wryc. Totals: 1,184/432. Richard Wood, or anjone: Has KIEO verified yet? Rich Richran: v/s for WFII is unreadable. They sent me recent $i_{i}$ a $\mathrm{v} / \mathrm{g}$, but be careful of their address - Chattanooga, not Lookout Mountin. B ; the way, former IPRCer Demis Waters (F1a.) is a $\mathrm{DJ} / \mathrm{E}$ at WGON-1150 Tenn, Chattanoora's nowest rocker, $\operatorname{NSP}$, I believe. If's amazins the things I can hear on 1300 u 0 WERE (XR ten air miles N) but that's just a lot of tgly. III! A on $1300 u_{i} \circ$ Wire (xR ten air miles $N$ ) but that $s$ just a lot of thls. letter from tira 3arry, $V / \mathrm{c}$ at KRDS, says KIf will complete their 12-tower DA
soon, so try to loz KRDS s on if you don't have 'em -an easy new state. Reports muct be CORRECT w/at leest one IDable item. Good luck to those who want a WIIII verie. Tven registereci 2etters haven't produeed a veric. I have a v/1 from unar because I drove to the station \& had a hard time gettingthat. aM conlectors (02d or new) please write. I have many extras I'd like to unload. 73. (Is lon as If name is on the envelppe, Tim, it's OK - some have sent in Musings vithout that, and in a three-family house, it confuses the postmen -ERC)

RICIIPD RICTMAN - 14 Erst Cheshire Place - Staten Island, New York - 10301 c 40 , a frequency that was rapidiv becoming ar favorite for DKind as 19,9 went out, is proving to be just as gool this year. MM1/5 brought me KIOT-: 40 La. for the first time, although nothin ${ }^{5}$ verifiable. But on $1 / \mathrm{E}$, CSSS, KIIO in very nicelv, v/mx, ads, IDs, etc., $6: 15-6: 26 \mathrm{pm}$. Same afternoon found mPS -530 Tenn. $6: 0=-6: 11 \mathrm{w} / \mathrm{m}:$, ads, \& lots or talk about the bad. WX (school closincs, etc.) I\&C. A. Conn. catch that had long eluded me was netted 1/10. It was WhTR-1320 10zged w/much difficulty through WKAP/CKEC/WJIS, \& who knowe what else. C/in \& Mutual IXX heard 6:18-7:01pm. The top spot on the dial peia ons aciain 1/12. Heard was WARO-5ho, Pa. for Pa. \#f5 heard. Endine of
 CTRS WVCV. $V /$ pennant- MX, for country 49 verificd, \& first pennant. Special thanks to Jerrj Starr for the MIOF $v / \mathrm{q}, \mathrm{v} / \mathrm{I}$, CM \& SC. Two stations which I visitec, but have neber menifioned in these pages are KATI-1400, \& KOMJ-1010. MATI's studios are in the "backerd." of the Holiday Im of Ce per, wyo. where I staved overnicht in Juiv '67. (I hope ERC will forgive me). (That's an unt-forEivable SII, Rich:-ERC) Mr. Iarry Wakerield, \& the staff were very hospitable. I visitec. KC9S in, August 1968 in 1000 -plus WX. The afternoon iJ \& I had a lone \& inieresting talk between records, \& during the CBS NX \& Dimension features. Me had worked previously at KLAM, \& was on the air when the big 1964 eartheualic struck up there. I $\mathrm{m}_{\mathrm{m}}$ curious to know if any $\mathrm{c} / \mathrm{w}$ or MoR stations put out "'op 100" lists for 1969. WABC was off © 1am 1/14. 73s.
FRMMK WIDROI - 65 Lakeridge Drive - Matawan, Hew Jersey - 07747
Correct my lasi sentence in the $1 / 10$ Musins to "BBC-809 e 1:28 w/WCY O.F." As for CNA, he can be loceed on $240 / 740 / 1550$ etc. at about $1: 10$ every nicht alont w/his British counterpart, aSn. DX: 1/4- A bic surprise in hearine TIXX- 70 u/WMCA null \& o/u WKBri w/c/w, IXX WX \& s/off 12:50-1, SSB. CX were $-\infty$. to Midwest all 1 M . WDAJ-1490 unn $\mathrm{w} / \mathrm{r} / \mathrm{c}-\mathrm{TT}$ \& loud, 1:58 ID mentioned Comerciel Radio in Mo. Then WGSB-1480 II1. w/MOR song \& $\mathrm{E} / \mathrm{off} 1: 58 \frac{1}{2}$, atop. KMY-1930 In in mess 4:01 richt after WBNX s/off, then rr oldies interrupted, by an occasional jingle. MA $1 / 5-$ CHIC-580 formerly icmored, but now 10 ged $\mathrm{w} / \mathrm{FF}$ sports report \& mx 12:12-12:20. 12:30, BBC-1088 quite good w/ID, unn. 12:31, KPAB-1110 w/TK, WBr óf. An SS was looped. WSOK-1230 in/out w/Res, s/off-SSB 1:02 poor. UnM UJBC-1230 good w/TX 1:01. CFPL-980 e 2:16 mixed w/WONE/CKCM, w/ WPY oㄷ. 1/7-RAT-845 good w/II NX \& mx 1:35-1:45. ORIF-863 © $2: 25 \mathrm{w} / \mathrm{FF} \mathrm{man}$, 2. Lot stronger than : EMO-860. MPAQ-740 very strong w/EI/OC/mx 3:20. 1/10-


 AFRTS P.R., 1200 . AFRTS faded in something like ever; 15 minutes, NX heard © 2:01. TO WJIG. V/1-WPAQ-740 :KIP-1450 CFLV-1370 WKAL-14j0. v/a- WLTC-1370 CKBL-2250, a nice pic of TV XR site. v/£-KRTD-1560 CFPL-C30. v/DX ITENS-WRYT-950, the on 40 -page verie I've ever ter a jear $\mathrm{v} / \mathrm{v}_{1}^{\prime} \mathrm{r}$, form, $\mathrm{v} / \mathrm{q}, 105$ color booklet on Portland, SC, Bible promos, \& decals. The ever-expaniin The best of veried states include Iowa 10/10, Cal. $7 / 7$, Ial $10 / 9$, Ariz. $4 / 4$, Mrld. $4 \Lambda_{4}$, ont. $54 / 46$. 73 , and chew that bubilezum, kiddies, ans dan't forget all that suear, jam, \& jeily on :our jingle-jansle.
DICK CLARY - 4110 Beviewi Drive - Fort Launerikie, Floriva - 33308
Hi. First I want to explain about livine too close to UNSN's antenna $\varepsilon$ goins up to WPIT, The last two reports were from mid Pittsburgh adoress \& since florida is memain home I didn't chance it. Second, I've been doing a loi of travel from Pittsourgh to Florida. I'm try ine to move everjthing dom there. I guess I am one of the very few who lives in two cities. OK, ERC? Second on LH question, jiant I resj that $\quad$ jou wanted in reports if a lot or people irote in? fbout tiree DX NBNSes back. (Not in THIS section, Dick -ERC) Here's to report ircm Fia.: 1/12-12:30R. Jaraica-560 w/WวM mulled, w/horld Tomorrov procran, CBL-740 Toronio, wamo-860 Pitbsbureh testind e fam vezy good, Re3 my. CFRB-1010 Toronto weak ○ 2arn, CGW-990 Winnipes also made it @ 2am, KLNF1190 weal: © 2:30, WTEE-1250 Pittsbureh u/WDAE, must be a twin station, hi. XEDF
 think I'a still in P:ttsburch with all those northern stations. WraM-12c0 Indianapliis testiñ e $3: 30$, Reloj Hacional on 1250, WWDC-1260 e 4am, Reloj Hac:onal on 1270 \& last, HJCK-1ico Cienace, Cclombia. That's it, there is no more. 735 .

JIN MRIM - 193 Candiestick - Wenpori Deach, California
-ivo new cointrics on successive Mis $w /$ the cleanest $T A$ reception ever in tu:c radile, plus a Dedier reception for frosting waie thix quite a DXine week.

 D. Fi Pais (and the Cuian) for Fish's contest. Don Kenncy called on wesciay, reporting arme:air qualitü on BBC-1214, $\&$ it ves. When I pulled the earphones for the lam an wo the wire \& a friena nisten. Thej comp;ained about the stetic
 ifin the ocensional phrases of a Latin lansweye e 1024 provel frustrating. I couldn't use the tape \& coular't eet enounh to firmit ID the Portuguese vs, SS (Hicarauia) va/ atranje for:\% of French (Haiti). Hith the loop occupied, mi ancient RX proved its iurcet characuerisites by prolititing a 1034 vs. 1035 1006gint. But $1 \mathrm{M}=/ 12$ was the winner. Iarry re reportin Maraw on 844. (I callec Don ericleson, not darine to try Father Jack etc. En tie wee srall hours). Tarawa was solia armehair, givins rise of suspicion to a slight power increase, sa from Vow. to 50 kw . Another opening like that, 2 cverycoty in the West can loci albert \& Ellice Islands! Then a iosuable

 That morec Elil Berlyer's distinctive telephme talk chom from 12-1 to 10-2. The


 car. ron instance, another com. ciear that hed better remain nameless is con-
 IDXors, ita! One note re rot, the nes HI $w=11$ not pre-erpt any of their extenser (sit Pockets \& college) coveraze, for those using the sporis paces for a Dr arice.


