"By the way, since I've been a member of the NRC for almost a year now, it's about time that I rate it. I give DX NEWS an 83 'cause it's got a good beat and you can dance to it. "

(Dave Christensen, Seattle)



A great 10 page IDXD - Bob Foxworth
Why is a Country? - Page Taylor and Russ Edmunds
LA Info - via César Objío
Important message from CPC - Jerry Starr
The long -awaited final installment of Captain Glotz - Crater Schlotz
Another SPR-4 review - Robert Fischer
BBC Info - via Pete Taylor
Tips for Hot-Roding Receivers - Ray Moore
Tripping with RFS - Ron Schatz
Portuguese for DX'ers (who know some Spanish) - Ron Schatz
Announcing the Thanksgiving New Jersey Get-Together - Russ Edmund
MEMBERS THIS WEEK. . .
Lloyd Roupe, 2147 Darlington Rd., Beaver Falls, Pa. 15010
Dick Centorino, 112 Cypress St., Watertown, Ma. 02172
NEW HQ PHONE NUMBER...
Tired of playing telephone roulette with the various $H Q$ numbers on the back page? Well then Bunky, your problems are solved! The Official HQ phone number forever and ever is: 617-926-0965 All previous numbers are obsolete!

IF YOU NOTICED LAST WEEK...
... there was no DX NEWS, this was because the Editors had trouble shifting their mailing dates to meet the current weekly schedule. The issue will be made up for sometime during the year. But gang, the NRC now hands you only the second 60 page DX NEWS ever printed in History!

## OOPS i

1 BLEW IT ! My file containine letters from new OPC rolunteers has been lost, I ion't know hov, but it's zone. If you volunteered for information sheets by the time you please drop me a postcard and I'll ret it ali out to you a.s.a.p. Thanks.


Younestown, Ohio 44505
p.e. If you raven't received the stuff because you didn't volunteer yet, tren YOU ELE:" IT. why not volunteer to wort for jour inRC CTC TCUIY. Trank you. Tris has been a recording.
a
ANNOUNCING:


THE THANKSGIVING NORTHERN N.J. GETOGETHER!!!

DX'ers EXPECTED FROM MASS. , OHIO, LONG ISLAND, MD, VA., AND POSSIBLY FLORIDA!!!

To be held from Friday noon to Sunday noon, November 24, 25, and 26. LOCATION: The Mountain Moter Imn on Rt. 46 in Rockaway, New Jersey.

Location is as name implies, on top of mountain, electrical noise has been checked and is essentially zero. Events will be DXing, rapping, drinking etc. plus a wine \& cheese party. The general format will be quite informal, but a business meeting and tech. session are planned.

PRICES: $\$ 5.00$ a head to cover the meeting room. Members wishing to stay at the motel should make their own arrangements, but be sure to mention you're with the NRC and you will get a slight discount on your room. \$14. for a single (with double-bed) is the price-range. Contact Russ Edmunds if your coming

## D.R.C. Y.A. <br> 

edited by Page Taylor \& Puss Edmunds.
The most comprehensive listing of trans-Atlantic stations ever published requiring no cross-indexin. F b the reader. All data in one listing. Kany requiring no cross-indexin.? by the reader. All data in one listing. Man
international DXIers who now have a copy have praised its usefulness. This is the last chance to purchase a copy of this log. Covers Europe, Africa, Mid-East on split channels. Lists all stations over 1000 watts, Order now from R. J. Edmands, Box 946, Wayne, N.J. 07470. Cost for this Order now from R. J. Edirands, Box 946 , Wayne, N. J . All checks or M.0.'s should be made payable to "R. J. Ed-Tunds". Please allow $2-3$ weeks for should be made payabery. Part of a sample pase appears below.


|  |  |  |  | Power | $\begin{aligned} & \text { A.M. , E.S.T. } \\ & 5: 00-5: 30 \end{aligned}$ | $\begin{aligned} & \text { Info: } \\ & \text { I R C A } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mon. Oct. 23 | NCSH | 970 | Portland, Maine | 5,000 U-2 |  | I RCA |
| Sun. Oct. 29 | WJVA | 1580 | South Bend, Ind. | 1,000 d-1 | 5:30-5:45 | $\begin{aligned} & \mathrm{N} \\ & \mathrm{~N} R \end{aligned}$ |
| 29 | WSPA | 950 | Spartanburg, S.C. | 1,000 U-1 | $1: 15=$ | IRCA |
| Mon. Oct. 30 | WS J M WT W B | 1400 1570 | St. Joseph, Mich. Auburnda le, Fla. | 5,000 D-1 | 12:01-1:00 | IRCA |
| 30 | WTW ${ }_{\text {W }}$ K S | 1570 1490 | Los Alamos, N. M. | , $250 \mathrm{U}-1$ | All Night | I R C A |
| Sun. Nov. 26 | W JVA | 1580 | South Bend, Ind. | 1,000 D-1 | 12: |  |
| Mon. Nov. 27 | K D W B | 630 | St. Paul, Minn. | 5,000 D-4 $5,000 \mathrm{D-1}$ | 3:30-4:00 | IRCA |
| Mon. Dec. $\begin{array}{r}27 \\ 11\end{array}$ | WAVN | 1220 | Stilluater, Minn. Paducah, Ky . | 1,000 U-1 | 4:30-5:00 | N NRC |
| Man. Dec. ${ }^{11}$ Man. Dec. 18 | WEK | 1240 | Fayettevilie, Tenn | 1,000 U-1 | 3:30 - | NNRC NTRC |
| Sum. Jan. 14 | WJDX | 620 | Jackson, Miss. | 5,000 U-2 | $1: 30-4: 00$ $2: 00-$ | NNRC |
| Mon. Feb. 12 | K WH N | 1320 | Ft. Smith, Ark | 10,000 U-4 | 2:00 ~ | N N RC |
| Man Apr. 2 | W RAN | 1510 | Dover, N. J. | 10,000 U-4 | 2:00 - | NNRC |

mey will sign on a half-hour before their normal signoon time with this a will include masic with frequent station IDS, and also, (the IFCA. Reports go to Mr. Herbert W. Crosby, Sta frequent WCSH, 579 Congress St., Portland, Maine 04101.

S JM - Reports to Noel Moss, C.E., WSJM, 414 State St., St. Joseph, Mich. 49085.
W S PA - Feports to the Chief Engineer. Music and many IDs.

W JVA - Feportscto Chris Cross, DoE, BNI 179, South Bend, Ind. 46624.
Kore details the last four mentioned above in the next issue of DX NEWS.

## GOOD LWCK, MUKE! GOOD LUCK, MIKE!

We wish the very best to two NRC lads who are going into the Service - our salutations to MKKE HARDESTER (Mavy) and MIKE SCHEEL (Marines)!
ERNEST R. COOPER - 438 East 21 St. - Carrier Route 56-Brook lyn, New York - 11226 Recent DX here: 9/19-After an SSB s/off on 1230 © 11:02, an FFC took over this channel, but I couldn't get an ID. 9/20-I heard just the an nouncer's mame as brand new WMVI-1170 s/off @ 7, seconds after WWLE had done the same. Then log on FFC CFML-1170 till 7:15 s/off, rr. SM9/24-AM IRCA tip led me to get up and try for WFTN-1240 on their DX TEST - and they did right smart here o/u semi-local WGBB, nulled, and other rrs in the background, WrIN $\mathrm{w} / 1 \mathrm{~F}$ \& IDs every flve minutes, for a welcome logging. M 9/25- Aloha to KORL, as Emisoras Mantserrat, Barranquilla, Colombia, is on the AN shift, and LouD, too. Unn here. I noted a happy situation on 1540 - all ANs off - WPTR/KXFI/ZNS! CPC, there's a golden disl spot for you - and us! HIJB-830 was AN \& batting WCOO, and another Dominican on 860 , I believe, with EE rr among their music. That PM, I got a log an brand new WBTX-1470, Brosdway/Timberville, Va., on a phoned tip from Wes Boyd. $9 / 28=$ thile looting for UT00-1000, I heard nev WRAR-1000, Tappahannock, Va. rr, on to 7.17 s on top tion CFRB S-9 but w/an SS uunder him, but I couldn't ID I couldn't ID him, drat. No sign of WMMM-1090, even though a shot them a card ing them to concentrate on $10 / 2$, a MM, 2:30-3. Wratz $-\quad$ wim-130 on AN again, brasging about being the only one with Gospel music all night. (I guess he's nevef heard of $\mathrm{FM}, \mathrm{hi}$ ). What SS on 1100 AN MMs IDs with a cuckoo cail? Intermaciona $1^{\prime \prime}$ Ins on $610 \% / \mathrm{u}$ WIP seemed to be HIKL. 770 was dominated by a solid SS too, a Venezuelan, I think - I didn't spend much time with him. I thought I had a nice musical 10 g on IRCA's WIZM-1410-DX, only to hear the unwanted ID © 3 , CFML, Mon treal." I still have the Chinese Crud (on the radio, hi). C UNT.

Sun. Oct. 29 W J VA 1580 Mon 29 W S PA Mon. Oct. 3
Sat. Nov 30 W S J M 2400 Sat. Nov. 4 K R S N 1490 Mon. Nov. Sun. Nov. Mon. Dec. Mon. Dec. Mon. Dec. 6
4
WEIVA
WEAR $W M W M$
$W P A D$ KNOE 18 WEKB
Mon. Dec. 2 Mon. Jan. Sun. Jan. 1 Mon. Feb. 1 Mon. Feb. 12 Dover, New Jersey 10000/500 U-4 2:00-

W S J M - 1400 it. Joseph, Michigan $49085-414$ State Street. IRN's card says 1:15 ELT for the Sept. 24 TEST and 1:15 EST for the Oct. 39 TEST - but Michigan never was on Daylight time, so we're quite confused! Try 12:15 as well as 1:12. The first 45 minutes will be on 250 watts, and then 1 kilowatt through the end of the test. There will be rock \& underground music, tones, and DKer phone calls, to 616-983-3992. Noel Moss, C.E.

Dave Faulkner, IRCA
4 5 PA - 950 Spartanburg, S.C. 29301-224 East Main Street. Chief Engineer (whose name we don't have) generally runs tests on Sunday mormings just before sign-on. This 15 minute period will consist of music and many IDs. A rather crowded channel, but do give them a try. Possibly they may use their daytime nor-directional antenm - then they'll be a little easier! Our thanks to the Chief Encineer.

WES BOYD.
WT W B -1570 Auburndale, Florida, 33823 - Bcx 7. Send reports to Mr. Charles G Davenport, Ciief Encineer. They will accept prepaid calls but they do nat give us the phine number. There will be numerous IDe, and quate a bit of interference from XERF, CKIM, \& CHUB. (Larry V. Flerle, IRCA)
$W J V A=1580$ South Berci, Indiam, $4662_{4}$. This is a monthly TETM and frequency check. We do not lnow that sort of modulation they'll use, but it'11 most likely be cycle tones and IDc. Send reports to Mr. Chris Cross, ven onfincerind. Dope-here it is - march music and tones, and even open carrier. They'll verify with a printed card (v/q).
KBRX-1350. Box 350, Clicill, Nebraska - 68763 - Charles P. Nathis, C. E Details next week. (SIIP DABEISTEIN)

ENNESTR. COOPER - 438 E. 21 St. - Carrier Route 56 - Brooklyn, N. Y. - 11226 1052 up to $1376 \mathrm{kc} / \mathrm{s}$, with this latter channel the columbus Day. TAs were in from best. A lor taken on crowbrum-1088, in thk the strongest, \& 1. me-1214 next an EE commentary which I ar "tar 1330 weakiec, led by


 om the sed an FFC, must ve been ChRC as CJAD is EE. A report sent to bKYC-1100 an the strean er the harnine they 11 soun become VCAV - this is m; third try for a verie from then, by gar. Unn ifr!C-940 was :Tine all Af, extre-loud, so muct
 MEMBEFG' LOGGIMGS AND BCTIVITIES
\#18-10940 83 strect - Edmonton, Alberta - T5H - 1 MI
Yes, Virginia, there really is an INCREDIBLE Pattern Book. I've res, $9 R-59 D$ to my collection of junk sets, but this one is sensiadded a trio-Kenwood 9R-59D tive. CX \& static are terrible, 912- KORL KI Kind mo aign of KJAN-1220, just XEB/CKMA/CJOC (off MM I caught the KCRL TAST wi wom but no sign of 3-7am). CX just too poor to test the new ser I've just received tje OK to throw a phane freaks: 403-424-755 (till an whe snowed up there $9 / q 0$ \& it has already longwire on the apartment roof, but it snowed up there $9 / q 0$ \& it has already nnowe twice up here. Summer was on a Tuesday this year. Alberts ends it first
 CFFS- 1240 \& CFKC-1340 (uses both) use MST. Thd NE part of B.C. Will raxa in on WFN: CJDC-1350 CFNL/CKNL 590/560. More tripe: The latest craze out here is to see which station can owm the most relays, or a twin in every town. Ch, the
figts that go on: CJOC vs. CKEX. WJOC won 1490 Coleman. CHAT vs. CJDN for 1340
 1400 , Princeton, B.C. CHNL won, but the CRTC let the loser, Barkman, buy out OK Padio. Barkman has the biggest B.C. family: CHWK-1270 CFVR-1240 CKGO-1490 (the new baby) plus mother station CKOK-800 \& her family of triplets: CKO0-1240 CKGF1340, \& another new arrival, CXSP-1450. John Skelly is the father of five: CFNL560 CKNL 590 CHNL- 610 CJNL 1230 \& the new kid, CJNL-1-1400 Princeton. Seriosuly, there certainly is a need for such twins in mountainous B.C., but operations such there CKSH/CJSN 1400/1490; CFSJ-1190/CJSL-1280; \& CFAM-950/CRSM-1250 are siliy. The DOC \& CRTC can easily find regional channels to replace this mess, as well as CFRG/CFGR 710d/1230m. There's lots of room on the dial on these prairies. A CFRG/CFGR $714 \mathrm{~d} / 1230 \mathrm{~m}$. There $s$ lots of room on the dial on these prair CBSQ. Some Priend B.C. plus all local atur IPRT, except per 540 is a regular telephone pole (ask wy dog) tupe longwire CBC IPRT, except perhaps that the poles are pushed into a gravel-filled salt water bed, about 15 fro the flshing boats, in U-Clue-Let Inlet, B.C. It seems to be directional S. It has been heard in California. A ham says it's a constant $S-9$ at Tofino ( 30 miles N) all year. The CBC LPRI, Tofino 630 is strung between poles in three backyards (a garden station?), but only carties eight miles $S$ on my car radio. I've just


MIKE SCHERL - 4.126 Nobis Drive - Davenport, Iowa - 52804
9/25. Well, the Pattern Book arrived. It was everything I thought it was going to be, and more! TV/FM DXing during the Summer was the main idea for me this year. NX DK didn't take a back seat, though static-free nights were rare. $5 / 29-\mathrm{WNR}=1360$ e $3: 45 \mathrm{w} / \mathrm{rr} \&$ ID. CHAM-1280 © $4: 19 \mathrm{w} / \mathrm{rr}$. Though it is only 63
 -910 a 4.36 a ican Fedio-TV Guide \& Comercial World list it has 1 kw while the Pattern Book looks like higher power. on $9 / 6$ 10:44am, WSGW-790 faded to the top for the 500 th looks like higher power. an 9/6 10 10:44am, WSGW-790 faded to the top for the gooth
tretation heard in the Quad-Cities Log. The QC Log will close out $9 / 28$ while I go *etation heard in the Quad-Cities Log.' The QC Log will close out $9 / 28$ while I go
to San Diego, Cal. for recruit training in the Marines. I'm in for four years and to San Diego, Cal. for recruit training in the Marines. I 1 in for four years a
Electronics. Final total for Davenport, $504 / 41$ stations, $445 / 36$ domestic, $35 / 5$ Electronics. Final total for Daveaport, $504 / 41$ stations, $445 / 36$ domestic, $35 / 5$
foreign, $42 / 28$ states, $7 / 3$ countries. Most by states: The most: Illinois, 61 , foreign, $42 / 28$ states, $7 / 3$ countries. Most by states: The most: Illinois, 61 ,
least, Delaware, Me. D.C., N.D. N.V. (?3 -ERC) \& Arizom with aNB. I keep my med least, Delaware, Me. D.C., N.D. N.V. (?3 -ERC) \& Arlzoma with aNB. I keep my mem-
bership up but you wouldn't hear mich from me, a giant. 73 to anyone. (The best bership up but you wouldn't hear much
of success in the Marines. Mike -ERC)
YEP - IT'S THAT TIME OF YEAR AGAIN! N.R.C. HAS RETURNED TO ITS WEEKLY DX NEWSES: THIS MEANS WE NEED SQNE CO-OPERATION FRCM YOU MEMBERS, IN SENDING IH NOT CNLY MUSINGS, BUT INFO FOR THE GIEFH SECTIONS AS WELL. PLEASE DOUBLE-SPACE - THESE OLD EMES AREN'T WHAT THEY ONCE WERE, SO PLEASE MAKE IT A LITTLE EASIER. THANK YOU

BILL FEIDI - 8708 Contee Road - Apt. 14 - Laurel, Mary land - 20810 most enjoyable. Thanks to Ron Schatz and Cesar Objio for the fine job they did in orgaizing the affair! Not too many new logs have been made since my last report, obut here's a summary: 8/6-WBLC-1360 Tenn. was clear atop at their 8:29pm s/off Then R. Cima-1550, Ciudad quesada, Costa Fica from 8:47-8:55 o/u Portena, 8/11-WGIG-1440 Ca. was all alone during Auroral disturbance w/At lanta BB. 8/21 brought WSOQ-1220 NY. nicely atop $\mathrm{w} / \mathrm{s} /$ orf announcement e 8:10-8:12pm; does promo for FM on 100.9 \& uses SSB. I added a total of three new tapes during September, but not one was a new log; twas a very disappointing month for TAs. Then on $10 / 1$ we got WREO-GTO. © $6: 34 \mathrm{pm}$ W/Cleveland Indian promo \& ID, brierly above WWSW/WAMD. $10 / 4$ brought WCSW-940 Shell Lake, Wis. E 6: $59 \frac{1}{2}-7 \mathrm{am} \mathrm{w} / \mathrm{s} / \mathrm{on}-$ SSB; CBM was nicely nulled and old friend KSWM was noted weakly in the background w/their s/on. Then in the evening, we netted WSFW-1110 N.Y. noted w/s/off @ 6:45pm w/call \& slogan "Keeping the Finger Lakes at your Finger Tips. 10/9 was an excellent TA morning with very strong signals just about everywhere. I had a very weak signal around 844 e tam which may have been larawa. 1 also noted a strong signal on 1196 from 2:50 to 3 am with 1940 s type NA $m x$ and talk by man in what I think was Porturuese; may have been CSA213 © Lkw, but really didn't get enough to be sure; did anyone ID this one? on the mure definite side: Genca-1578 was noted e 1 a.m. w/six pips to the hour, hora seis"rC, and into talk in Italian by oal and soft mex formet; very strong signal. ("Hora seis" is Suanish, no? -ERC) ECS11-1385 Madrid e 2:0lam s/on w/OC w/brief spurts of wild mx; then "R. Centro" ID by man and into lively mx; fantastic level. WPRM-1380 3:05-3:25am w/TEST. KCMC-740 Tex. w/MOR to ID AM \& FM. XEBG-1550 Tijuma, B.C. w/rr, ID in SS \& spots in EE from 4:10-4:16; I really didn't want to $\log 4 G D$ anyway, hi. 73. (What would you do for an encore?
CHRTS LUCaS - 407 Elmwood Avenue - Ithaca, New York - 14850
Much of the Summer was spent DKing FM \& TV, but now I'm getting back to the BCB, \& I guess it's about time for a Musing. Neing a fourth year graduate student at Cornell University doesn't leave too much time for DX, but I'm doing some, at least sporadicaliy. I concentrate mostly on the graveyards now, as I find this very fascinating. I am armed with a Laflayette HE-30 rx (nine years old now), a short long wire about $60^{\circ}$ long, and about $10^{\prime}$ above ground, running $E, \&$ the old $4^{\prime}$ NRC Loop. DX in past month or so: $9 / 7-$ WCKL-560 ground, running E, \& pm , WHYN-560 @ 6:30pm. 9/10-WKDE-1000 Alta Vista, Va. © $6: 28 \mathrm{pm}$. 9/i1- WH © $5: 32$ pm, WHYN-560 @
@ 12:033m. 9/12- WVSC-990 @ 6:29pm. 9/13me graveyard DXing, as I locged Wica-1400 savanna this night that really started we graveyard DXing, as I logged WiGA-1400 Savannah, Ca. © 11:59pm, and WKMY-1400 1400 Columbia, S.c. was heard. After this, WSGA damim, 9/14, ש 12: 12am, WCOGclear simmal at times, although the actual signal dominated with a fantastically suppose this at times, althelgh the actual signal strength was relatively weak. The next night wica was heard arain, but with mucho interference, and that ince. The next night wacA was heard arain, but with mucho interference, and that was the 13st time they ve been heard here. Continuing with DX: 9/18- WEST-1400 Enston, Pa. @ 6:05pm. 9/19-WWPA-1340 Williamsport, Pa. © 10:3lam, WNHC-1340 New Fiz ven, 5:26pm, WHMP-1400 Northamt $n$, Mass. 5:44pm. 9/21-WULC-1400 vz. © 2:1t, WICC600, Conn. finally e 9pm, CF E-550 N. B. E 9:33pm. 9/22-WBRK-1340 Hess . © 4:30pm. 9/24-WALL-1340 N.Y. @ 4:03pm, WBAX-1240 Pa. © $6: 10 \mathrm{pm}$, WSNY-12 40 N.Y. E $6: 21$, WWCO -1240 Conn. @ $6: 29$, WHMM-1240 F. e 6:30pm. 9/25-WELX-1230 Pa. e 6:17pm, WMDD-
 10/8-WHLM-550 Pa. © 3pm, WBZY-1140 Pa. e 3:52pa. 10/9-WWIN-1400 Md. © $1: 35 \mathrm{pm}$, WDUZ-1400 Wis. © 1:47, WIKZ-1360 (a 7pm. 10/10-WUSJ-1340 N.Y. © 12:30am, CFRA-580 © 1:18am. Total heard now is 419 . CX seemed really good $10 / 10$, as $\mathrm{KSL}=1160 \mathrm{was}$ in well. KNX dominated 1070 on the LW. Signals everywhere were strong. bueal WTKO-1470 has been fulltime since Jyly w/s/off e 2, basically Top 40 , but they find that doern't work at night so they're more progressive then. They beam NNW a lone Cayuga Ial:e from four tall $5 / 8$ wavelenrth towers $S$ of the city. 73 .
"AN" SITUATAN - UFF:
$\begin{array}{lll}1070 & \text { CHOK } \\ 1380 & \text { WBN X }\end{array}$
(r.it on this wh; was AN
one $\mathbb{M}$ only ( $10 / 2 / 72$ )

HEARD SINCE Livis ISSUE
850 kMA G Es- 860 , temporary $1,000 \mathrm{D}-1$ WHN R Ex-HJMR (old rry $1,000 \mathrm{D}$ -$I$




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${ }^{8}$ JAMES E. CRITCIEMT - 1504 Glenwood Drive - San Diego, California - 92103 Frow $9 / 21$ to $10 / 2$ reception reports bave been sent to WQXR150 for s/on \& programs from 6 EIT on $9 / 29 \& 9 / 30$ and to KDEN- 1490 Dillon, Mont for special $\mathrm{f} / \mathrm{c}$ heard from $3: 40$ to $3: 46 \mathrm{MM} 10 / 2$. The only verificatica m . KRVN-880 for reception report sent $3 / 12$, $Q$ also. Had I read Ernest behinly glad of the SPR-4 before I bought it, I wight not have done SO. that I did not read it. Any receiver The dial spacing for each ten kiloHertz is ex pest XBQG-1550 cannot be all a ctly wat is meed 4 , 40pm Sun. Sept. 17. At 9:30 heard an ID (not just gueasing the call 4264 ; all from San Mego, Southwestern am Mon. Oct. 2 KIDD- 30 in Manterey WB WBC WAC WCRS WQXR WGY $\&$ WHAM have been U.S.A. WBZ Boston is the farthest NE; WABC WABC W from Va. To the Ware KORL heard from H.Y. State; WCAU \& KNA IOr Pa. \& WHA From tavi, \& JOUB-770 \& JOBB-830 KIMI KGU KHW KPUA KHVH \& KIEI have been heard IDed. PJB-800 of course. I am igfrom Japan, with others posifible, but not yet Ined. fith this one. Beat wishes to nomnt of the inaides of a radio; b
all in DXing and verle-collecting.
BRJCE HACKwORIH - Box 61-Marion fall-305 Waverly Avenue - Syracuse, N.Y. 13210 This is wy first Masing since joining last veek in fanuary I'm now attending the College of Forestry at Syracuse miversity, so Im suffering from the effects of a building that's poor for nXing (lots of buzz - any suggesfrom the end the Syracuse ANs. I'm plaming on buying a new KX plus a new antenna I'd apprectate advice on which of the antennas is best. I am still waiting for I my New Ner urrent NX is a . a lack of real DX here. 28 stateg, three provinces, and Cuba, Mexico, and Bonare. ary, are 176 stations, 28 states, three provinces, and KKA, WMI -all nonHM. ADY Best catches include: KSO KOA XEWO WPrIF KNX KNH WC ( $r / \mathrm{c}$ is a Regular manthly freother S.U. DXers? I'd like to hear from you. Mu.

RCN MUSCO - 16 Chestnut Avenue - Windsor, Connecticut $=06095$
Some more meager Dx: 9/4-WUSJ-1340 noted AN for Jerry Lewis Telethon 12:35-1 a.m., strong for 250w. Veries says will be going to 1,000w by end of October. 9/15- EIT from WPIK-730 1:07-1:15 with TP plining the S-meter. 9/17 WTON-1570 Md. much-wanted heard weakly beneath CKIM @ 6:02 s/on and bits and pieces till 6:30am. 9/25- With WPOP-1410 off and WING nulled CFMB Kontreal in with bi-lingual IDe $2: 32-2: 45$ am with few if ary spots, mostly music. Veries in: PP from WMLP-1380, WTRI-1520, WTTC-1550, WCBG-1590, all for Agnes reports, original reports produced nothing. V/f= WBAB-1440, WUSJ-1350 and V/1, WBPZ-1230. Non-ver flers this past season for me: WKSK-1000 USYB-1380 wNBH-1z40, WKOL-1570. Nane of the Flash Alert tests were heard here - darn. 73,

ANDY FNGG - Lebel-sur-quevilion, Quebec
Hi. I have no DX to report. M receiver broke down. Before I git it fixed, I was re-located, temporarily, to this pulp mill town in NW quebec. All can hear here is CKVD-900, and an IPRI on about 1230k. See you in Novenber! T3-
"AN SITUATION"
ONS: $\begin{array}{rrrr}580 & \text { K C M X } & \text { SPU } \\ 1230 & \text { C J N L } & \text { SPU }\end{array}$

1340 W I Z E SPY (rr)
1530 K C H Y NSP around so I might as vell get right into it. Reports sent out to: WSTX $2 B V I$ WHOA WBMJ WHIT WILX WESR WPVA WWDC WFAX WGMS WPIK WA BC WPAP WJDY WICO WBMD WYFE WPTX WDDY WLPM WTOP WCPK WVEC WINT WFAR WNNA WNCT PJB WIBG CFOR WPOP WPMH WBAL WLS CKLW Verifications received from these recently: WGLI $v / 1$; WGBB $v / 1-C A ; W B O C v / q$, a very big one; WANN v/l-CM; WOBR v/1; WVAB v/c; WBT v/q; WMALv/q; WCBM v/q; WSUX v/l. Mg present totals are total stations: $523 / 63$, states $43 / 26$, provinces $3 / 1$, countries 18/4. As far as $D X$ is concenned some of the better DX here includes: 9/25-1:15am WIAE-1250 w/ID, WX \& MOR. 1:17-WJAS-1230 (1320, no: -ERC) w/ID, sports, notes, promos. $1: 20$, CFOR- $1570 \mathrm{w} / \mathrm{ID} \& \mathrm{rr} .1: 45$, WIBG-990 w/ET, $1: 59 \mathrm{WPEN}-970 \mathrm{w} / \mathrm{s} /$ off announcement. on 9/26 the following was noted: 8:13pm - KWKH-1130 o/u WNEW w/rr明ve address. 8:25, WFBR-1300 w/ID, then rr . $8: 45$, WPOP $-1410 \mathrm{w} / \mathrm{ID}$, then rr . 10: 59 pm , WWSW-970 w/ID then $N X$ o/u WWDI. $11: 25$, WBAP $-820 \mathrm{w} / \mathrm{c} / \mathrm{w}$, WX \& ID. $9 / 28-$ lam, WHEN 620 rr , ID, then NX. $1: 40$, WJAX 930 , just caught ID, then back into the soup. 1:45, WSOC-930 W/ID \& PSA, then it went into the soup. $1: 58$, WSBA -910 w/ID \& details on contest o/u WRNL. 2am, CHML-900 w/ID for AM \& FM, NX o/u XEW. $2: 06$, WGBB-1240 W/ID for Padio Long Is land, then rr. $2: 24$, WFBC- $2330 \mathrm{w} / \mathrm{ID}$ even w/WHOT.
$2: 25$, WHOT-1330 - I thoucht I 2:25, WHOT-1330 - I thought I'd never hear them w/ID mentioning 24 hours a day, ecch! 2: 30 \& WEVD-1330 w/ID \& EL mx, non-dominate on 1330 . $3 a \mathrm{~m}$ \& KQV-14 $10 \mathrm{w} / \mathrm{ID}$, then rr. Well, so much for DK. A lot of good day DX done but too numerous to mention. I hope you enjoyed Miami. Sorry I couldn't make. All you members be sure to write \& let me hear from you. Till next time, 73 , good DX and remember, c .
Glotz is watching. C UN7.

ROGER A - GIANINNI - Llll Forest Hills Drive - Belleville, Illinois - 62221
that they were 1 found an interesting discovery $w / W C C O-830$ on $M / 9 / 11$, in level wey were off at 12:10am - first time I ever noted an SP for them but static , I have been noting TAs for the first time ever in aptember. tas heard were 1586155414661214 (Fadio One) 12051034944836 . a $9 / 7$ I found a het mixed w/umID audio on 1043 . I checked it out on the R. 388 and found the het was on 1043. I believe this will be R. Dresden. Time was aroitnd R. Dres. I have been noting HOJW off norma frequency of 1045, on 1047. ERC, is am. YSCF-1155 reported in the Midwest (No -ERC) CKUC-1200 w/FF good @ $12: 12$ Fast St. Louis poor @ 12:27. 818 het noted against WBAP-820 pest. WESL-1490 in is 24 hours but $I$ don't know about if the in August. Format is rkB and jazz. Sked is 24 hours but I don't know about if they have an SP. Iast several weeks have been semi-Aurora but nothing exciting luresed. I found CMCA-830 500 cycles off fre quency and giving WCCO fits. Lroks like it's coing to be a cood season. I am starting my fifth season in the NIC. ERC, pleace if at all possible see that iucc Edmunds gete my sugeestion in prejamticn for the NRC Log. I would like to see easily heard Latins such as CMHC-30 CM -640 CMKP- 670 CMBC- 690 CMGN- 720 XEX- 730 XE L) -800 TWR CMCA 830 XEW-900 XEQ-940 XET-990 XERCN-1110 XEB-1220 XERH-1500 XERF1570. The top four should be included without question qre CMi-640 TWR-800 XEN$900 \mathrm{XERF-1570}$. Please have पy request seriously considered. 73.
MIKE HARDESTER - 401 Birchwood Ccurt - Modesto, California - 95350
DX has been quite slow here and only three recent veries: $\mathrm{v} / \mathrm{c}$ WDKR-1560 after a year wait and f/up; v/1-KKGF-1310 after almost two years - letter sajs my report was found in soue back files and hence the late reply; and last, but not least, the 1 mogawaited KRVN- 880 switch; that is, a $v / 1, v / f, C M$, de Fish. He says my report was the \#liks report. I calcht them at s/on their first day; phoned, \& sent a report. Mil cracias, Fish. On other subjects, by the time this is in print, I ll be beginning a rour-year hitch in the Navy starting in ion Diego. begin travelling, unless I'm staticned State-side. BPC: Am ide up for it once I begin travelling, unless I'm staticned State-side. BPC: Any idea when the wire Sorry about Musing on IRCA stat icnery, ERC, but at Check has returned, but no wire. ins: about Musing on IRCA stationery, ERC, but at least I triple-spaced this Musinc. (That makes up for the one which SINGLE-spaced, hi -i"C) 73 and best of DX doesn't look that way. Best of luck in the Navy! -ERC) hope so, Mike, but it

It looks like a good season is in the making, all right, if $10 / 9$ was any indicator...a dynamite morning, here and everywhere to judge by the flood of reports in here. All areas were good - TA's, Latins, West Coast. Here's what's on
200 England. BBC-2 was in again, even better than previously, solid from 0440 t / in to past 0600 with a sort-of pop show, 6 pips on the hour, slightly upbeat ancr. Nice steady signal. The RTTY station I mentioned last report on 197 is apparently on only sporadically, as not heard this morning, which was Tue 10/10. (This is not the Nantucket beacon "IUK" on 194 wich is extremely trons, and always on. This station not hrd at all on ck $10 / 12$ at same time strong, and always ought to be instructive to monitor them closely, strength-wise. I am winding a $L F$ loop for this freq range; plan to build a tuner to let me go down to 150 khz also. (Foxworth, N.Y.)
254 Algeria. New superpower station here at Tipaza, hrd to 2400 in Sweden and is apparently // 890. Not noted here. Beacon "CAT" (Chatham, NJ) covers. (Foxworth)
527 Switzerland. Beromuenster noted with weak but clear signals on $10 / 9$ at 2350 to $0000 \mathrm{~s} / \mathrm{fff}$, playing funeral music, one brief anmt by a man in German just before the s/off. (Merriman, Va.)
533 Algeria. Ain Beida at good level at 2320 on 10/9, typical chants. (Merriman)
(e) Ain Beida good level $10 / 4$ at 2330 tunein in Arabic and Arabic mx; s/off at 2400 with anthem. Was // 548, excellent level. This one is at the very bottom of the dial on the H $\&-180$. (Grant, Mass.)
Some DXers may find their rx's don't go down much below 540. Adjustment of the
slug in the Band 1 osciliator coil will be necessary to allow tuning this range. (Don't turn the trimmer capacitor! - that sets the HIGH end). It may be necessary to adjust the band 1 mixer coil, too, or strength may be poor, that is, sensitiv ity"will be poor. As a guide, here in the Northeast, the following stan (Upland heard regulerly: 517 - Beacon "WP" (loc. unknown); 525 - Beacon "UP" (Uplands, Ottaws, Ont.); 530-Beacon "NB" (North Bay, Ont.) and in the quiet hours of the morning, on 534 - beacon "FH" (Clearwater, N.S.). All of them ID in code, very slowly, giving call letters ("UP" does it twice) with a long 10 second dash, using MCW. The 525 and 530 jobs are the strongest here, and are heard in midevenings. TT you can hear these beacons, THEN you may reasonably try for the brosdesat DK News in late 1970. Incidentally, last year several DXers logged the Costa Rical Radio Rical Radio Rumbo on the TI here, myself but am still looking. Don't know if they're still on.-ed.
539 Eire. Proposed operation here, and on 1484 not yet active, as of mid-August, 1972. (Taylor (Page), in Wales)

548 USSR Leningrad noteu with potent signal; news in Russian by a woman from 0000 - nonexistant prior to this time indicates either a s/on or a favorable pattern change. (Page Taylor, Scotland)
548 Ale man, Va) (I question whether 533 was on at s/on, when I hrd 548 last week; mat if so, was not heard here. Same wiss? -ed.)
555 St Kitt for TA's. (Merriman, Va.)
57 Paio Veronica Int Waters. Hrd here with ID (gave freq as 560a -ed.) as: Dit is Radio Veronica mit der nieuws 1300 10/2. (Greenhill, Engl. via IRCA) - Radio veronica is now here, from $9 / 30$. Much weaker and more disturbed than on 1562. Have better reception after local midnight. (Bengt Ericson, Swe, ARC)
625 unID. Is IIIRICA Back? Fairly strong Spanish stn here on $10 / 10$ at ( much WMAL slop for decent copy. Apparently signed off at 0000. (Merriman)

NRC + IDXD Monitor Reports
640 Guatemala. TGW was noted here with a fairly good signal $10 / 5$ along about 0700 - 0730. CMQ was apparently of'f, al tho VdC pgmg was hrd with normal sig on // 630. Pem was segued romantic instrumental American-style mx; leading me to think perhaps CBN was on, until anmts came in Spanish. Think s/off about 0730 , signal was $\bar{c}$ wn then. KFI popped in and out with a basketball game and was quite clear at times, only several cycles difference between the 2 signals. I don't know why the Cuban was off; have noted before occ'y (he 2 64 England. Daventry rorj stione with folk mx, anmts in Eng 10/9 at 0543. (Merriman Colombia. Emisuras Monsil rate, BoEvta noted AN on 10/9. Had instr mx, anuts by a man. (Merriman, la.)
650 Mexico. XETNT, Los Mochis, Son. Hra a strong OC $1057 \mathrm{MM} 10 / 25$ (?-ed.); re-
check at 1110 had them in strong so s/on apparently at 1100 . (Pejza, Ca.)
655 MM . Korea. Pyongyang hasn been its old self this year; girl in Korean 1101 MM 10/25 (9/25, no?-ed), man in Korean Illl 10/2. (Pejza)
683 Spain. RNE Sevilla has been a powerhouse all week with their AN pog, hrd // 584 and 737. (Merriman, Va.)
692 East Germany. Suhl/Wachenbrunn finally logged here despite the ease everyone clairs for it, under Cuha-600 splash. Was $/ / 782$ Eurg 0520 10/9. (Edmunds, NJ) 719 Portuga. Norte had a 10 i signal at 2340 on 10/9, was quite abit stronger than 665. Was even bettry it $6600 \mathrm{~s} / \mathrm{on}$ on $10 / 10$. (Merriman)
720 Cuba. Nuted with MoR rix, on top for 5 ninutes, then fade out, 0345-0400 $10 / 5$. Was // 690. New pgng? (Ldwards, N.J.) (Pejza, 725 item
725 No. Krea. Kim Chaek ( E (so known as Songjin acc atias-fjp) faint $111710 / 2$ East Germany. Schwerin huted at times between 0345 and $041510 / 9$ with mx and rale aner. Never very : trone and only audible for short periods. (Merriman)
(e) Lonik was on 24 noted with strung carrier but litt:e audio 0543 10/9 (Merriman) Lopik was on $24 \mathrm{~h} 9 / 6$ and T ; $2345-0130$ with solid talk by man in Dutch, pos-
sibly for Olympic Massacre. (Taylor, NJ)
750 Alaska. KFQD hrd for the first time from San Diego with news, TCs, sports, weather ( 260 F. ) MM $10 / 90601$. KXL OC and TT from 0807 killed it. Spanish underneath thought to be HJDK. (Pejza, Cal.)
(0) KFQD Hrd 0811-0817 for GOAT Seg. IV (actually hrd 0739-0819). Simal strength 2 of 5; readability 3 of 5 . Heavy lucal noise (TVI:-rk) and some static. At 0811, pop mx. O813- tin, this is lave Shaffer at Fadio seven fifty. Weather fry Curdova and Valcez. A. fir Jesus Christ Siperstar. Emercency messare for Jesent Green. Music. I. it nhilway closinu. Nore rex. (Yorcheveki, Cal.)
755 Portural. Voic of the $\because$ a in Guran at rood level rim/o et 234l. (lffriman
755 Romania. Timisoara at fait vel $1 \mathrm{C} / 70300$ s/or with tews in Fumanian folo by local folk music. (Grait, llass.)
 streneth 1 of 5; readelility of 5 with bad QRI frob WTF (kFra) tosts and local noise source, + sluljc lursts. 1053 - woman tajkir.: (sreech-type voic) and very distorted. At ane orchestra mx, her to incar in the noise. Then at 1100 , 5 pips of sum 800 hz folo by one (ifon haz All pips about 500 ms in lencth with alrut. 2 seconds between cach. 1107: Woman talkin: again then a man talke as siknal faces. 1105: fades in with woman talking again. (Karchevski, Cuif.) (iuu taik, just like a telephone engineer, Bob -e:.) casicral static burst. Ctrenth 1 of 5; readability 1 under and an occasicnal static burst. Ctren th 1 of 5; readability $\frac{1}{*}$ of 5 . These 6 minutes
 Senegal. Dakar presume (stwok nkt: Economics?-ry) (harchevski, SFO Calif) Senegal. Lakar presume, Fi noh-ljke talk 0650 10/9. (Hauser, Texes)
764 Switzerland. Now that weal WABC has started going off IUN's a ain, finally logged this one with uf terpo German mx, likely a dance try number 0128 10/9. (Edmunds, New Jersey) (They scem off sporajically $\mathbb{D}^{\prime}$ '? - kili thy to finlout) 770 Panama. Checkins; channe: C4 $10 / 5$ I found the Panata City stn here at $s-5$ with ID as Fadio Libertz : ari giving PO Bux adar. Constanty mentionine "re volutionario" and kinired wirds. (Edwards, NJ)
770 Colombia. Falio Tequ-ncama, HITJX excellent nn in/L with In et nTnn. WARC off as they were for rost $\mathrm{f}^{\prime}$ thr week, for some reason. (Merriman, Va.)

NRC - IDXD Monitor Reports
To Colombia. (ctd.) Radio Tequendama, Bogota, 10/2 with IDs folo each record, noted 0520 and on w/WABC © 0500. (Sundstrom, NJ)
(9) Ioudest starion under SAH here was Radio Tequendama with ID consisting of a 3 -note gong. WABC was off; 0330 10/5. Sounded like the ancr said "Tequengama (Edwards, NJ) (Your times are in EDI, no? -ed.)
3 This stn the only detectable audio noted both $10 / 4$ and 5 here, with WABC off evidently 1 to 5 AM local time (0500-0900) and were off again 10/9 and 10/11 at least. 770 here is just a monstrous het with HJJX occasionally atop. (Foxwh) Japan. JOUB Axita with English lessons 1032 MM 9/25, much better at 1120. Nopan. hrd 10/2. (Pejza)
@ Akita hrd O854-0901 (GOAT Seg. IV) at times, like a local. Strength 5 of 5 (1) Akita and readability 4 of 5 . WABC was faint in the background, also some statl $0854-2$ men and a woman with German lessons; same format as the English
lessons. 0859 - Celeste music (an ISI) 0900 - NHK2 pips, then music. Then, lessons. 0859 - Celeste music (an ISI) 0900 - NHK2 pips, then music. Then, a woman in Japanese. (Karchevski) Akita heard lo44-1050, again, for 5 . Only segment $V$, with a good signal. Strength and readability both 4 of 5 . Only
QRM was from an unTD local noise source. IO44. English lessons. Woman says, QRM was from an unTD local noise source. 1044. English lessons. Woman say "Kisses sweeter than wine" in English with guitar. Then, more English phrases with Japanese comments. (Karchevski, Calif.)
TT3 Spain. RNE San Sebastian strong at 0534 on $10 / 9$ with Spanish mx. WABC off, as they had been for most of the week. This station really puts in a signal for only 20 kw . (Merriman, Va.)
782 Portugal. Radio Clube Portugues has as good a signal as WBRM at 2343 on $10 / 9$ with light pop $m x$, male and female ancrs. (Merriman)
782 Syria. Tartus at fair level $10 / 100205$ tunein to after 0300 with Arabic chantin chanting, often buried among other stations on the frcquency. (Grant, Mass)
818 Poland. Warsaw finally hrd for one of my most-wanteds, with the usual IVI nonexistant. Runnins typical Poliam and 1304 apparenty unistakable. about the Polish language, the
Hrd $10 / 9$ at 0410 . (Edmunds, N.I)
(128 Morocco. Rabat RIM first noted $8 / 310040$ with continuous chanting in Arabic, short Arabic talking every half hour; location determined by fadeout shortly after 0700 the same date. Consistent ever since, with louder sigs as the season progresses; now audible on various household portables, indicating its strength. Has to be a major power increase; listed 1 kw . (Taylor, N.J.) Andorra. Sud Radio had strong signal when checked at 0547 on 10/9; FF(Merrif)
-5 unid. Weak 2n. noted on thia on 825. Possibly as they have been noted here in the past, and it loops westerly of Titania. (Merriman, Va.)
824.5 Costa Bica. TIOS presumed the strong station here $100510 / 2$; still there but much weaker at 1105. (Pejza, Cal.)
827 Bulgaria. Unn. but extremely good in Arabic svce with chanting and Arabic talk 10/9 0015. Thought at first it was Morocco but loop cured that. (Edmundr) talk 10/9 $\mathrm{Hawai1}$. KTKI with rock under WCCO 10/2 0917. (Pejza)
830 Japan. JOBB, pips, YL in Japanese, one minute fade, then back with a man in Japan. JOBB, pips, YL in Japanese,
Japanese $1100-1105$ 10/2. (Pejza)
Japanese 1100-1105 10/2. (Pejza)
Osaka hrd 1053-1101 (GOAT Seg. 2) over WCCO and heavy static QRN. Loop null to NE/SW. At about 1055 a 600 hz tone fades up and remains dominant on 830 for almost an hour. Signal strength about $20-40 \%$, readability about $25 \%$. Eng lessons: Man in Japanese, then a woman with 5 English sentences, each
numbered. Then man again in Japanese. At 1100 heard harp mx folo by NHK pips numbered. Then man again in Japanese. At 1100 heard harp mx folo by NHK pips
and then woman says "Nippon Hoso Kyokai", then man in Japanese. (Karchevskj) and then woman says "Nippon Hoso Kyokai", then man in Japanese. (Karchevs JOBB hrd $1317-1326$ during GOAT segment mix and KGO slop. JOBB strength $30 \%$ and readability lo\%. Loop nuil soys,
(to null KGO ). At 1317 a man in Japanese. At 1320 , a different man says, "...JOBB" then woman says "Nippon Hoso Kyokai..." then another man in JJcherski Lebanon. Beirut a fairlevel $10 / 100145$ under fairly strong carrier with Arabic chanting. (Grant, Mass.)

NRC $=$ IDXD Monitor Reports
836 USSR. Kharkov/Vinnitsa feir to good level $10 / 100305$ in Russian. overall band cx and the signal level suggest that this one is more than 20 kw . This may also have been the carrier on the frequency earlier. (Grant, Mass.)
836 France. Nancy strong at 0535 with cl mx on $10 / 9$. (Nerriman, Va.)
836 Canary Is. EAKK3, Radio Popular de Las Falmas had to be the very weak Spanish stn here on 10/9 at 0705. Completely gone by 0715. This had to be very close to their sunrise, or just after. Dccasional words audible, but no ID hrd. There was a very weak carrier on 953 at the same time. (Merriman, Va.) (This wignt suggest the opening was not so good in this was to the higher latitudes. At about that time I was parke on 620 hoping for a trace of RNE Tenerife - too much Junk on that channel nowadays - can't even hear WSUN anymore, in fact - and no go here. So, guess skip poor to that area then -ed.)
840 unID. Hrd 1400-1407 (GOAT Seg. 3) with. 100p null NW/SE to null out local QRM. (Same loop bearing on 830 gets JOBB best at this time.) Heavy QRN with static bursts. Sig strength about $10 \%$, readability about $2 \%$. At 1400 hrd an IS, though nothing like the one Art Peterson described) of 2450 hz staccato pips, a 900 hz bell or chime, one 450 hz (or two) pips, another 900 hz chime then maybe two more quick bells - all in noise! Then a man says, "This is Radio (Peking ???)" and at 1403, a woman talking. 1407 opera mx. (Karchevski) 44 Gilbert \& Elilice Is. Hrd poor;y from 0857-0905 (GOAT. Segment 1) with a woman talking. At 0859 I hrd 3 minutes of ukuleles or guitars. Then, a woman talking again. At 0904 $\frac{1}{2}$ a man started talking, sounded English but did not recognize any of the words. After a few sentences, the woman started talking again. Signal strength about $20 \%$ and readability 3\%. Heavy static bursts, a la the East Coast. (Karchevski, Calif.)
(e) Tarawa had carrier, patches of audio at s-4 10/1 at 0645 fadein. First IP reception since last year, at same time. Was afraid they had moved frequency but guess not, hi. (Taylor, NJ)
(C) Tarawa more a carrier than anything else, but faint snatches of audio also 0920-0925 10/2. (Pejza, Cal.)
(e) Tarawa probably the very weak carrier detectable here/around $073010 / 9$ as it would fade in for a half-minute at a time. Far too weak to hope to recover any audio. Definite 844 and not 845; will keep watching this. (Foxworth, NY)
845 Italy. Rome's all night show strong $10 / 7$ at $0030-0115$ GMT with American orchestral mx , and apparent news in lang on the hour, folo by talk until 0108, th ${ }^{\prime \prime \prime}$ then non-stop mood mx. A good signal. (Edwards, NJ)
854 Spain. RNE Murcia good at 0536 on 10/9 // 773 . (Merriman)
855 Curaçao. Radia Curom with soft el mx to 0300 10/2 (missed the ID at 0230) and the last half hour was almost all solo piano. Man in lang at 0300, who mentioned "Curom" then music sounding like an anthem at 0303; carrier off about 30 sec . later. (Edwards, NJ)
863 France. Paris had a strong carrier at 0537 on $10 / 9$ but very little audio. They were not // 836. (Merriman, Va.)
877.5 North Korea. Wonsan has been the best North Korean this season. Man in Korean 1105 9/25; also man in Korean 1106 10/2, folo by orchestral mx. Was not // 655. Slop from KRVN. (Pejza, Cal.)
881 Hales. BEC4 noted with news in Gaelic 0630-0645 daily. The xmtr location at Washford Cross, Somerset (to the south, across from Cardiff and Swansea-ed) in England delivers a pitiful signal into North and Central Wales in the daytime. (Taylor, in Wales)
887 unID. A weak UFO here with deep fades 1313-1401 10/1. Strong enough at times to determine that the male ancr was speaking in an Oriental lang other than CC, JJ or KK. Some of the mx hrd had a Latin beat, although the lyrics were Oriental. My guess is that this is Bangkrabue, Thailand, reported by GH as varying around 888 khz . (AI Jehr, Livermore Calif., IRCA via FJP)
908 England. One of the BBC stations strong here at 0538 on 10/9. Some type of interview or diccussion pgm. (Merriman, Va.)
908 unID station testing with tone $10 / 9$ between 0330 and 0400. A fairly strong signal, and I suspect the BBC here. (Merriman, Va.) Ukraine. Lvov believed to be the station or Arabic. (Merriman, Va.)
8. Ivov at fair level $10 / 90300 \mathrm{~s} / \mathrm{on}$ with NA, news in Russian and light cl mx. This and location on the Polish border. (Grant, Mass.)
Frim at 0608 on $10 / 10$ with man in French. (Merriman) Mance. OSR Kishinev a fair to good level 10/9 0355 in Russian pgm, however was buried under splash from WCFL. (Grant, Mass.)
Colom lastins 5 or 6 minutes. Mostly gives RCN IDs but did catch one Radio Miramar lastins 5 or 6 minutes. Mostlike a Deep SA, and audio very brassy. (Merriman) 4 North Korea. Hamhung; only a carrier so far this year. 1107 9/25 and 1124 on $10 / 2$. (Pejza)
Spain. RNE Malaga 9/6 at 0100 with uptempo mx with male ancr between selections, tuned in at 0053 with news. Very loud. (Page Taylor, NJ) Holland. Lopik strong at 0540 on $10 / 9$ with woman in Dutch. A strong carrier but, like 746 , weak audio. They must have been having problems as the carrier left the air twice in the minute I listened. (Merriman)
Lopik, oc noted 0556, IS 0558-0600 then a fade but back up with man in Dutch 0604, $10 / 9$ (DeIorenzo, F1a.) (Merriman, maybe your weak audio was no audio,hi) W. Germany. Mainz weak-fair with Dizieland jazz 0550-0555 10/9. (DeLorenzo) SHF Pheinsender was strong 0422 10/9 with YL DJ and German mx. (Merriman) Portugal CSB2 10/9 with Portuguese pop mx 0445, a strong het from 1035 and Porthen so had to null that. Fancy ID with echo 0448; gone think haitio (Sundstrom, NJ)
Italy. RAT Milan hrd well $9 / 80400 \mathrm{~s} / 0 \mathrm{n}$, then news, way over the Portuguese for the first time ever. This one seems to be infrequently heard at best,so perhaps a pattern change. Still no RAIs on 1016, 1097, 1313 or 818. (Taylor) and Radio Dresden? Het and weak aud of HOJ2 on 1045, slight WHO splash. according to dial on R-388. No sign of HoJ?
(Giannini, Ill.) (Date? Was in Sept. -ed.) thumb with an excellent signal at tunein 0440. Just a trace at 0520. (Sundstrc England. BBC strong at 0542 on 10/9, // 908 . (Merriman, Va.)
Roman with discussion pent conditions, this station has not been heard during the past week. Wonder if this station is off, or if they are using a directional antenna? (Merriman, Va.)
 patchin Bearing the date of the my conjecture of most-wanted Kalundborg. But in the (Swedish DXers might kn
(e) unID. Het hrd with krw splash here all night 10/4. Only time hrd, looped abt 420; fadeout time 0445. This was the night after the plebiscite in Denmark on the Common Market, so chances are that that isy have been long-sought Kalundborg, as bearing and E-20 time also agree. (Edmunds, NJ) catch with 6 pips ( 5 short, 1 long) and into news by a man. (Taylar, NJ)

Horway, Stavanger noted $10 / 10455-0500 \mathrm{~s} / \mathrm{on}$; IS on some unknown instrument which is much lower-pitched than a piano or celeste, folo by short ID at 0500. Noted on several occasions and should indicate a good season. (Taylor) 9 Mauritania. Nouakchott on $9 / 4$ with $0700 \mathrm{~s} /$ on at amazing level; very brief accented French ID by man on the hour and folo immediately by Arabic chanInt. Waters 10/2 tunein 0535 with pop $m x$, ID and mC 0537 tbru 0555 with Int. Hate IDs. Excellent sig, best ever, a s-7 or more. (Sundstrom, NJ) poland. Bialystok hrd here under Noordzee $O C$ with girl ancr in lengthy talk then Polish mx, // 818 and 1304 (or, owing to re-tune time between freqs, then Polish mx, 818 and 1304 (or, owi
seemingly so.) o446 $10 / 9$. (Edmunds, NT) St. Plerre et Miquelon. ORTF had a good signal on $10 / 10$ to $0100 \mathrm{~s} / \mathrm{off}$. Had some type of drama just before s/off. Some music at times. Sign off was with the French Anthem. (Merriman, Va.)
France. Lille strong when checked at 0520 10/9. (Merriman)
Ifile was testing on $9 / 6$ with $O C$ and TT. (Taylor, NJ ) unt1l $r$ akne. Vimitsa at a good level 10/9 030 , with NA. Audible until wile pats their carrier on. (Grant, Mass) A het here, looping about $50^{\circ}$ at a very late hour - 0445 or so, $10 / 4$ hougain on 10/9. Kaunas and Greece would have long since faded by this Spain. ECS-11 Madrid noted at magnificent level on $10 / 9$ at $0601 \mathrm{~s} / \mathrm{on}$; they have $O C$ with brif a man and then into a lively musical format. (Feidt, Md.) almosia. Has been fairly regular of late, was almost never heard. Perhe
0452 10/9. (Edmunds, NJ)
1457 unTD. Something here daily at 0400 in an East European lang by a woman under a potent $0 C$; fadeout on 10/2 at 0445. Could be either Tirana or the Romania stn. All this wile looking in vain for the new Radio London. (Taylor, NJ) get any audio. This might be the Peking Relay in Albania that is being heard in Europe. Is probably directional toward Moscow. (Merriman, Va.)
1462.6 Costa Rica? Hrd with apparent sports coverage in Spanish, but lost ID on
the half hour, 0520 10/1. AFter the break, speaking was slower. (Edwards,
1475 Austria. Wien was strong at 0511 10/9. Typical Austrian music with happy sounding male and female announcers. (Merriman, Va.)
1484 Senegal. St. Louis finally hrd with decent audio 9/4, 0605 in French ending talking and into quiet mx, similar to 1538 , which was 20 over 9 with Iatinflavored MoR at the same time. Did not appear to be / however. (Taylor) is " Leningrad has a relay of Radio Moscow There is approx. 5 minutes of sile silence in the medium waves, 1322 khz ." Indeed, at 2200 , 1322 appeared // 1493 and its bearing was Murmansk, not Leipzig. (Taylor, from Yorkshire, Eng.) USSR. uiID, possibly Ukraine noted with Moscow IS right over the top of Leningrad in English at 2130; a better signal than Leningrad. (Taylor, scotld Poland. Warsaw foreign svee good at 0453 on 10/9. Man and woman in Italian. (Merriman, Va.)
1502 Spain. Assumed the source of the 3 or 4 carriers here, all within 100 hz or 80, $0600-062010 / 7$. Fascinating to listen to them with BFO on, as one, then another slightly higher or lower, fade in and dominate and out again. Also a good demonstration of how selective skip can be, geographically. Each cara good demonstration of how selective skip can er, in freq; the Spanish rier should be slightly different from the others, in freq;
"common-waes" seem to fill the bill here, hi. (Foxworth, NY) East Germany. RBI, Berlin noted with English daily 2200-2215; IS at 2215, then Italian, dominating channel. Worth watching for on ECNA this season. (Taylor, Iondon) (When in Germany I would note this station, about this time of night, would nightly answer 5 or 6 letters from listeners in England writing out of political motivations, and not as DXers - (continued)

NRC - IDXD Monitor Reports
and the inference was that RBI had enough of a signal, in England, for non-DX types to tune in and listen. Either that, or else 1511 relayed SW, but then how many people SW DX? So, anyway 1511 does have a good Westerly signal. RBI used to be good on 1430, also, back then (this was 1965)-ed.)
1520 Czechoslovakia. A real surprise, in and out with HJLQ 10/9 0450-0505 with female and male ancrs, light mx. Hrd IS for 2nd pgm 0500, and what appeared to be an ID after, bothered by HJIQ's ID. Logsed per PT tip with pest WKBW off. Wi after IS/ID. Taped. (Edmunds, NJ) (No KOMA?-ed)
1525 USSR. A station whose bearing peaks right at Moscow s/on daily at 2130 o/u several other weak hets; Peking noted coming on at $2200 \mathrm{o} / \mathrm{u}$ this Russian. This could be several DXers unIDs from last season, and bears watching. (Taylor, Scotland)
1525 unID. There is a strange happening on 1525 and 1529 at sunset these days and will report when I can get further details. Looks like a Soviet Far East so far, but perseverance will tell. (Taylor, N.J.O
1525 Asiatic RSFSR. Regarding the Russian here, (rptd as Khabarovsk, with Majak -ed.) This one must beam everything straight inland, because no one on the West Coast has reported hearing it - there was one tentative report but nothing definite last season.
Asiatic RSSSR. (rptd as Vladivostok, Ryden ARC 9/13-ed) really bombing in 1126-1132 10/2, man in Chinese, orchestral theme at 1128 , one minute of 0 C , Kremlin Bells at ll30, then girl and man in Chinese. Lots of local
Note to NYC arca DXers wanting to try for a sunset reception here. The bearing from NYC to either Khabarovsk or Vladivostok is virtually identical, at appx 341 and $\frac{1}{2}$ degrees. The two places are maybe $\frac{1}{2}$ degree different, at most. Distance to Khab is 6000 miles, and 6400 to Vlad, from New York. The signal path passes over the Arctic Ocean, Banks Is. and Victoria Is. in the Canadian Far North, and over western Hudson Bay. As best I know there has never been an auhentic reception of a Far East Asiatic on ECNA during ECNA evening, theugh in winter the path appears viable.
1546 Ukraine. Vinnitza in well $9 / 50110$ with woman in Russian, peaking to
40 over s-9. Continuous talking, very occasional short musical excerpt.
@ (Taylor, NJ) Vinnitsa a good level $10 / 822402$ fade in with English lang service of Radio Moscow. S/off with NA at 2258. This may be the African service listed in WRTVH. (Grant, Mass.)
1546 unID. A lot of signals fighting it out here $10 / 2$ at 0400 on. One seemed a foreign lang version of Goráon Lightfoot, mixed with a signal with a male vocal in Port. or $\mathrm{S}_{\mathrm{F}}$. and a weak het from a stn apparently on 1548 for which I have no listinf. Help? (Hatt Edwards, NJ)
1550 Mexico. XEBG noted oE10-0816 $10 / 9$ with rock, Sp. ID and spots in Eng. on an apparent AN show - farewell all hope for $4 Q \mathrm{D}$. (Feiat, lia.)
1554 France. Nice its usual strong self all week. Have spent time here looking for Vilnius but nil noted behind Nice yet. (Merriman)
1562 Int. Waters. RNI noten ur here, fading in and out, 0600 10/1. (Valdes, N.S.)
1562 Switzerland. SBC, Bermuenster' $9 / 25$ tunein 0520 with semi-cl mx and light pon mx , seemingly nonstop, brief ID 0530, but fade out by 0545. At peak, it was a good signal wipins out the het and Cuban on 1561. (Sundstrom, NJ)

1578 Italy. Genoa 10/9 0500-0504 at great strength with oc and six pips to the hour, "hora seis" TC and into talk in Italian by fal then a soft music format.
1602 W. Germany. Munich with goo. sienal 10/9 0455-0505. End cl mx pmolis9, ID by man in German, gons on the hour folo by news, lirally enough to report this one.
Well... would you believe therc was more? That's a summary of the highlights, hi. I'll ret the rest next week. Your ed. had the pleasure of meeting Mr. Philip Birch who usti to be with Racic honion ( 1137 thz) ard is now helping get indepenient radio organized ir England. About which, a clirrine elsewhere.

Existing stations, applications: KGMB Honolulu - seeks mod. of CP to change trans. site to 111 Ahui St., Honolulu; to share existing ant. facilities with KGU, KKUA and KKAI (typo, KHAI?-ed.). Ann. 9/25.
Mod. of CP. KTAK, Fairbanks, Alaska. - Broadcast Bureau granted mod. of CP to make changes in ant. system, increase tower height to 230 feet and change main studio location to 543 Second Ave., Fairbanks, and operate trans. by remote control from main studio location. Action $8 / 30$.
New AM stations, actions on motions. Hearing Examiner Nash in Fajardo, P.R.- Fre deriksted, V.I. proceeding...dismissed Fajardo application and retained LopezLay (V.I.) application...(fulltext on P. 47 Broadcasting 8/21/72)
Call Letter Action. WLTO Miami, Fla. Seeks WCMQ. (!! - ed.)
+H+H+H+HHH
Veries.
540 Colombia. HJKA Bogota sent inspecific letter for taped report on 6/19. V/ was Julio Hernan Arango Uribe which is the DJ from 0500 to 0900 EST. He wants me to send him a radio. (Merriman, Va. (Better make it a nice radio Alan; a lot of us still need this verie. hi -ed.)
Back of the file

No report from me in eons due to various factors - vacation in Britain, return to work, etc. Although some items may be a bit aged by the time they see print, I'11 go back to August and report all reportable catches up to the present. I've beome could afford to do so, one of the best ways to bebecome come familiar with TA DXing is on home g
Some pertinent notes about DXing abroad:

1) Except for many Germans, the band is relatively clear of QRM from 0000 local Except for many Germans
time Greenwich to 0600 .
2) Daytime reception over distances of 400 to 500 miles in mid-Summer appears to be commonplace.
3) When one listens to stations like Luxembourg-1439, Noordzee-1367, Veronica1562 and Saar-1421, one occasionally remarks, "What happens to all that audio when it gets to the other side!" And, of course, WDR-1586 is unreal - all the way from 1560 to 1600 with rcvr pointed that way. That familiar "beep-beep-boop-boop" of sidebands is unrivalled, even by WABC at 5 miles. (Ed. note-by the time the signal gets over here, it may well be 6 to 10 db above the local noise level, in terms of the carrier; this can put the sidebands well into the noise leve1. The relatively wide IF passband needed to recover listenable audio can degrade the signal/noise ratio badly. A 200 hz bandwidth on the other hand can provide a good definite carrier, but audio is lost.)
4) Reverse TA DXing is, of course, a very late night pursuit. Hets start appearing in the first week of August around 0100 Z . Noted were: patches of audio from in the first week of August around (bombed by Berlin-881) and tentative WBZ-1030. Many TAs turn on their OC a half-hour before commencing sked, TT 10 to 15 minutes ahead of s/on. Likewise, a great number of them also leave their carminutes on for as much as a half hour (after s/off).
5) Conditions over there are just as unpredictable as over here, e.g. some nights were "four-star" for Russians and Scandinavians without a trace of the Mediterannean and Iberian stations. Then, some nights were top-drawer for the Med/ Iberians and nil for Russians. A few pertinent examples: One one given night 1259 would yield only the Spaniard, another night, just Poland. Or, Algeria on 1304 as against Poland and AFN there.
6) A conspicuous absence: Nothing readable on 557 khz - no wonder this is such a waterloo for ECNA DXers. Monte Ceneri's pattern must be directed at the summit of the Matterhorn or the bottom of Lake Lugano. (Ed. note - I recall, from 1958 or ' 59 or so, a story that Monte Ceneri stayed on AN Xmas eve, i.e. the evening of $12 / 24$ over here, every year; and that they were heard over here once. Can someone in Europe check and let us know if this is true nowadays? Equipment used- Realistic TRF, Sony reel-to-reel and everything taped for reference

IDXD = Back of the File
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- I would appreciate it very much if members could send me their nomination for one hundred easy to $\log$ TAs. This is for an article I'd like to write about TA reception and try and have it published (in the popular electronics press) and mention NRC in the process and possibly get more members through the article. There must be a lot of SWLS who would sure get a big thrill out of hearing TAs when being so used to hearing standard SWL DX. What TAs have been heard on common and uncommon rx's, etc. -Roger Giannini, 1111 Forest Hills Drive, Belleville, Illinois 62221
- This report really should have been longer as conditions were truly outstanding the morning of $10 / 9$; of course we had scads of unneeded TAs, and many more unIDs. Also may have had a trace of audio out of Tarawa around 0800 that morning - sure hope the sun stays quiet a bit longer. - Bill Feidt, Maryland.
- After very dull cx in September, things really picked up this past week. TAs started to get good on $10 / 2$ and really peaked this $\mathbb{M}, 10 / 9$. Stations were audible on many frequencies, many of them with fantastic signals. Included is a sample of what was heard. (Alan's sample ran 2 pages, tightly spaced, hi -ed.)
- This location (Rockaway, NJ 07866) is much better than Staten Island. Of course, the R-390 helps, too. This set is clear y superior to both the Collins 5lJ-4 (a R-388 with mechanical filters) and the Hammarlund SP-600, though the SP-600 seems to have a bit more gain, but I'm not sure. The R-390 has an internal RF gain control which is not turned all the way up. - Matt Edwards, N.J.
- Conditions are getting back to normal after a long dry spell. No definite Asians hrd here yet (as of first week Oct,-ed) Just bits of audio on 1525 and weak carriers from the mid-East stations. A few Russians have been hrd, as seen by my report. Again, I have a few tentatives on additional frequencies, such as Baku on 1295. Bill Bailey in Holden, Mass - 8 miles from here - believes he has heard this one. (10/10/72) It appears Ramadan must have started. (News item 10/12 says yes to this -ed.) Lebanon-836, Syria-782, Egypt-818 and Morocco (209, 593 and 935) were on all evening local time, 10/9. A good thing I heard the Russian on 935 the previous evening, as they could not have gotten through Morocco, there, last night. USSR on 836 was a strange one, as conditions did not seem that good. Therefore, I feel this station is more than 20 kw . Also, thought I heard Russian on 764 but not very sure. - Bill Grant, Mass.
- I'll squeeze in a few words here. Getting the house meant bye-bye to Convention plans - maybe next year, with a closer location, I hope? Our address is this: 147 Marcellus Rd., Mineola, New York and this is about a half mile south of Jericho Tpk. (Rt. 25), a major east-west artery on Long Island; and about 4 miles south of the Long Island Expressway, taking exit 37 (Willis Ave). Any and all DXers are invited out to visit Kathy and myself. Address, though, for club mail will remain Box 2111 as I find I generally get as much as a day advance on delivery thusly. I've got the GPR-90 RXD and the HQ-150 set up; am up every MM nowadays. Phone is 516-248-4394, as before. I'll be buying Rick Heald's HQ-129X; he's returning to California but is still actively interested in DX and hopes to rejoin NRC in a few months after getting relocated. DX was great here, too, on 10/9. - Bob Foxworth


WRTH Bulletin 1972/3

Here are the official wavelength changes for medium-wave stations in Great Britain as provided to us by the BBC via NRC'er Pete Taylor.

## (The text is word for word from the BBC)

"The following note has been prepared to assist those who will be affected by the changes on September 2 and in particular those who will need to explain them to th public.

The reasons for the changes are: firstly, to prepare for the introduction of commercial local radio; secondly, to enable the BBC local stations to broadcast on medium waves and, thirdly, to release an additional medium wavelength for use by the BBC's External Services.

The changes affect Radio 3 medium wave, Radio 4 medium wave and Local Radio only. Other services, including all the vhf services are not affected.

## RADIO 3

Of the eleven low-power transmitters at present radiating Radio 3 on 1546 kHz six will be closed down and five will be frequency-changed to 647 kHz .

## Stations to be closed down on 1546 kHz

Brighton, Fareham, Leeds, Liverpool (closed 7/31/72) Preston, Stockton
Stations to be frequency-changed to 647 kHz :
Belfast, Exeter, Plymouth, Redruth, Swansea.
In both cases listeners should be advised to retune to 647 kHz or to vhf. In the ca of the first group (Brighton etc.) listeners will probably suffer some drop in sign strength. The two transmitters at present using 1594 kHz serving Dundee and Bournemouth will continue as before.

## RADIO 4

For Radio 4 in England there will be only four wavelengths instead of the present seven and all Radio 4 medium-wave transmitters in England will have to radiate the same programme at all times (with the temporary exception of the North-East mentioned below).

The new allocation of Radio 4 wavelengths in England is as follows:

| 692 kHz | 908 kHz | 1052 kHz | 1151 kHz |
| :---: | :---: | :---: | :---: |
| Moorside Edge | Brookmans Park | Start Point | Stagshaw |
| Whitehaven | Clevedon | Droitwich | Scarborough |
| Cromer | Redruth | Bexhill |  |
| Barnstable |  | Folkestone |  |
| Bartley |  | Postwick |  |
| Ramsgate |  | Barrow |  |

* The Swindon transmitter is a temporary one, which will provide only very local coverage.

The use of 1151 kHz by Stagshaw and Scarborough is temporary and these transmitters will be changed to 908 kHz some time in 1973.

## LOCAL RADIO

Of the twenty BBC local radio stations it is expected that fourteen will be ready to start on medium waves on September 2 ; these are

| London | 1457 kHz | $(10 \mathrm{kw})$ | Stoke-on-Trent | 1502 |
| :--- | :--- | :--- | :--- | :--- |
| Medway | 1034 | $(2 \mathrm{kw})$ | Humberside | 1484 |
| Brighton | 1484 |  | Leeds | 1106 |
| Solent | 998 |  | Sheffield | 1034 |
| Bristol | 1546 |  | Blackburn | $\underline{854!!!-B P C}$ |
| Birmingham 1457 |  | Newcastle | 1457 |  |
| Leicester 1594 |  | Teesside | 1546 |  |

The remaining five stations will start on medium waves as soon as the necessary transmitter installations have been completed. The wavelengths, as far as is known, will be as follows:

| Oxford | 1484 (due to start 9/20) | Manchester | 1457 |
| :--- | :--- | :--- | :--- |
| Derby | 1484 | Merseyside | 1484 |
| Nottingham | 1484 | Carlisle | $1484^{\prime \prime}$ |

These 6 transmitters didn't start on time (9/2) because of RF problems relating to the use of existing TV towers. - Pete Taylor)

## MORE INFO FROM THE BBC

"As most DX-ers know, a QSL Card from the $B B C$ is a great rarity. But n November this year, when the $B B C$ celebrates its 50 th Anniverasary, there will e a chance for listeners to the BBC World Service programme, World Radio Club o possess one of these rarities - a Genuine BBC QSL (golly gee - BGK), verifying reception of the Club's 50th Anniversary Edition.

World Radio Club is broadcast on Thursdays at 1245 ( 1330 from 5 th October, 1972), Fridays at 2345 and Sundays at 0815 GMT in the World Service, and anyone who reports accurately on reception of the Anniversary Edition on Nov. 9th, 10 th or 12 th, will receive this special QSL. ADDRESS: Joy Boatman, World Radio Club, BBC, Bush House, London.

NRC'ers should try for medium-wave relays of those programs from stations like Cyprus (638), Perim Island (701), Malta (1511).
why is a country??

## comment, if mita tajur \& pus ebmints

One wonders where it all started. In the early days of $\overline{\text { IX }}$, a Ilstener had either hoand all the countries on the air or he hadn't. How many didn't really matter. In those days a DX'er could actually expect to hear all the countries on the air given a bit of luck and some perseverance. By the early 1930's, however, the DX hobby was hit cept of DI clubs for matual aid and whatever-else-have-you. This was the beginnin By this time, it was no longer an easy thing to hear every country due to more stations, nore powerful stations, and longer schedules. Then the idea of keeping country totals and qualifioations for definition of countries for DX purposes becams the rule. The country quest got its greatest inpetas prom the ham operator who frequently staged DX-peditions to areas where there were no operators to get nore "countries" heard. The ham definition of countries is, of course, a far cry from, for instance, that of the United Nations. There are hams who can make a reasonable justification for having worked 380 auch "countries".

This points out one obvious problem immediately, namely, the number of countries one has heard depends in great respect on what country list he uses. A DXer who belong to three or four DX clubs may well have a wide variety of total "countries heard over a range which may well exceed ten from highest to lowest total. Itis 1 most a shame the Leazue of Nations never made it big in 1919 or maybe the It 1111 b biness of DX countiles mould be roverned by the acceptability stan dands sif that and alack that is not the case, with the dards of that arian result being that the whole idea of DX countries is a sionsing to boil over into a troveray, eonfusion

To explore the whys and hows of this phenomenon, let us irvestigate the most commonlyaccepted ( and yet most differentif-interpreted ) criteria promulgated by the various DI clubs concerned with Medium Wave DX for the delineation of DX countries. Basically, thesd criteria come under four major headings, so we will deal with them accordingly. One such is political sovereignty. As one would ax pect, that nebulous term means many things to many people. By chance, the DX enthosiasts of some prior decade decided that the United Kingdom would be divided into the countries of England, Wales, Scotland, Northern Ireland and the Isle of Man; and that the Union of Soviet Socialist Republics really exists as the name inplies, as a series of individual republics. These same people chose to consider the U.S. as only one country, and Canada as only one. True the distinction is a metter of degree, but why should it be ?? For a hobby which boasts of verifications of reception as its hallmarks, the imprecision of the foregoing is indeed strange. By the same token, these lolks chose to count the Netherlands Antilles (Bonaire, Curacao, Aruba, and Sint Maarten) as one, while counting the British West Indies as seperate entities ( $i$ e. Grenada, Anguilla, Antigus, British Viroin Islands St political realities of the two groups are quite similar .o the autonomy granted the individual islands is not particularny large.

A sacond axplo is that such things as protectorates, territories and dependencies of a given country shall be counted separately for DX purposes, assuming that they are not adjacent geograhically to the parent country. This one is the only one to which glaring contradictions are not immediately evident. It could get fantastically interesting when the Antarctic is opened up a bit more.

A third criterion is geograhic separation. A country (politically speaking) may count for two or more if one part of it is separated from the rest (or the
others ) by a body of water measuring not less than fifty miles in distance 25 by land on all sides which is (again, politically) an entirely different country. by land on all sides which is (again, politically) an entirely dieferent country This one boasts the only inown specific restriction in country lists -- namely the Hawaiian island of Kauai. That is one very glaring inconsistency. This allow
West Berlin, Guantanamo Naval Ease, Kaliningrad, etc, to qualify as countries and ostensibly allows, the Netherlands Antilles to be separated also. This is part of how the Isle of Man and forthern Ireland could really be counted as two separate countries justifiably. A myriad of Pacific island groups would have to be dealt with by exception ( the Kauai way ) assuming that they were to sport W stations.

The fourth major delineation is one which has no great number of applications, and that is that when a country occupies space on two continents, it shall count as two countries -- Asiatic and Buropean Russia, separated by the Urals. But what about the small area of Egypt which is East of the Suez ?? And where should the division between Asia and Ocearia (which isn't a continent anyway) be drawn ??

Well, it also hap,ens that circumstances crop up which don't quite fall neatly in place as above. For instance, what about the areas of Israeli occupation in the mid-East ?? And we cannot forget the unending confusion surrounding the various emirates, amirates and trucial states in the Persian Gulf area. All of these, however, pale in comparison to the bigzest fly in the ointment - International Waters. Many DX'ers count a neidlous "International Waters" as a country. This would presunably be fine if all of the stations in international waters were cated in the sarne general part of th. world, or even in the same ocean. But what possible justification can be made for including R. Veronica, R. Caroline, R. Huaraki (New Zealand) and the proposed station off the California coast as one country ?? Or on the other hand, how can you justify or possibly divide the large bodies of water in the worId into different areas so that one can count the pirate stations located there to be counted as several separate countries when in fact none exist ??

The whole subject becomes prozressively sillier by the day. There appears to be no easy answer, becalse DX is still to a great derree an individual hobby, and is in many cases governed not only by criteria arbitrarily set by DX clubs, but on the individual DY'ers own particular codes or beliefs. Many DX'ers who have jotten to the point of having to really work to hear new countries can sympathize with the recent corments of one international DX'er who declared that he didn't care about countries, or totals of any kind any longer. I'is log was sufficiently large that the prospects for growth were not at all great, so he came to a decision to confine his DX activity to notin; and reporting changes in stations and data for his particular geographical area. Several other veteran DX'ers, whose accomplishments are well known have unofficially and individually gravitated toward DX'ing in a manner which is useful in promoting new developments in equipment design or scientific studies of various physical phenomena. Perhaps these are the only answers. Perhans the veteran DX'er must of necessity in this day and age become a totally altruistic listener, devoting his time to helping others to log what to him is "old hat".

Naybe, though -- just maybe -- there is another answer which can be universally accepted by DX'ers for measurin; achievement. Even now, it is of ten more telling to judge an accomplished DX'er's authenticity by what others have heard which he hasn't assuming essentially similar circumstances. Or better still, DX might possibly reach the point where comparisons and competition between individual DX'ers would mean less than we take it to now. Let each one "do his thing" and not try to compare it with others unless their outlook is exactly the same. Eut even then, how can we be completely certain that radio waves exist at all \%?? The mind bozzles.

## ${ }^{25}$ Portuguese for DX'ers <br> (who know some Spanish)

## Ron Schatz

With geomagnetic activity declining the chances for hearing Brazil are steadily increasing. During the last minimum the author heard no fewer than two dozen Brazilian stations, including some of only 100 watts! Brazilians, however, speak Portuguese, not Spanish. Fortunately Portuguese, especially the Brazilian dialect, is so similar to Spanish in vocabulary and syntax that anyone who can understand spoken Spanish heard over the air can do the same with Portuguese - just by following a few simple rules. Results are not guaranteed, of course, but success is likely if you put an ret for the rest of you, class has begun:

First of all, you should become familiar with the sound of Brazilian-Portuguese. Here are the two best sources:

| Rádio Trans-Mundial 800 kHz | $0030-0115 \& 0745-0900 \mathrm{GMT}$ |  |
| :--- | :--- | :--- |
| A Voz da América | SW | $2300-0100 \& 1000-1100 \mathrm{GMT}$ |

When listening to the above broadcasts, note the following differences from Spanish:

1) Portuguese final unstressed "0" is pronounced "oo": "lado" LAH-doo), "rádio" (RAH-dyoo), "sábado" (SAH-bah-doo), todo (TOH-doo), "latino" (lah-TEE-noo), "frio" (FREE-oo), etc.
2) Portuguese final unstressed "E" is pronounced "ee": "carne" (CAH-nee), "classe" (CLAH-see), "entre" (AINg-tree), "grande (GRUNg-dgee), "parte (PAH-chee), "sôbre" (SO-bree), etc.
3) All vowels coming before $M$ or $N$ are nasalised, something lik in French. There are 5 nasal sounds, compared to only 4 in rench Nasalised "A" sounds like English U in "sung".
"antes" (UNO-tchees) "banco" (BUNG-coo), "cama" (CUM-mah) antes" (UNg-tchees), "banco" (BUNG-coo), "lindo" (LEENg-doo), "mundo" (MOONg-doo) "grande" (GRUNg-dgee), "lindo" (LEENg-doo), "sento" (PROHNg-too), "setenta" (say-TENg-tah), etc.
4) Portuguese is missing $I$ and $N$ in many words: "maçã" (mahSUN:) SUNg) Sp. "manzana", "irmao" (eeh-MUNG-00) Sp. "hermano "tor" "pôr" (POHR) Sp. "poner", "sair" (sah-EER) Sp. "sa
(TAIR) Sp. "tener", "vir" (VEER), Sp. "venir", etc.
5) All Spanish words with IE and UE ("siempre", "Iuego") appear in Portuguese as E and O respectively: "certo" (SEHR-too), "escola" (ees-CAW-lah), "govêmo" (go-VEHR-noo), "logo" (LAW-goo), "nove" (NAW-vee), "sete" (SEH-tchee), "dez" (DESS) "porta" (PAWR (KATNg-tchee) Sp. "caliente", et
) Portuguese final $L$ sounds almost like English $W$; the $I$ is dropped in the plural: "local" (lo-COW), Pl: "locais" (10dropped in the plural: "local" (pore), "Portugal" (pohr-too-GOW), "BrasiI" (brah-ZIW).
) Words with -CION and -CIONES in Spanish have -CAO and -ÇOES in Portuguese: "nação" (nah-SUNg-00), P1: "naçoes" (nah-SOHng-ees).

Certain high-frequency words differ considerably from Spanish The definite article is 0, A, OS, AS (note rule 4 above): "A República do Brasil", "A Voz da América", "o senhor". The 0 is pronounced "oo". Note the following contractions
de + art. $=$ do, da, dos, das
em + art. = no, na, nos, nas
$a+a r t .=a o, \grave{a}, a o s$, às por + art. = pelo, pela, pelos, pelas
"Bom, boa, bons, boas" is the opposite of "mau, mà, maus, màs". The adverb "bem" is the opposite of "mal" (Sp. "bien"and "mai"). A Brazilian station will leave the air with: "Muito boa noite".

The personal pronouns are: eu, êle/ela \& nós, êles/elas in the nominative case. Direct objects are: me, o/a\& nos, os/as. Indirect objects: me, lhe \& nos, lhes. The word for "you" as used on the air is "você", or "vocês" in the plural. They correspond to "tú" and "ustedes" in American Spanish, so that there is no "second person" form used in Brazil.

Possessive pronouns are: meu/minha, seu/sua \& nosso/nossa, seu/sua. Add "s" to form the plurals. Portuguese generally uses the definite article with these forms: "O meu amigo".

The Portuguese verb is very similar to the Spanish verb in conjugation and use, but there are added features:

1) There is a future-subjunctive tense, archaic in Spanish, used mostly after "if" clauses (where Spanish uses the present indicative): "se vocês puderem", Sp: "si ustedes pueden".
2) There is a "personal infinitive" (formerly the Latin imperfect subjunctive) that is conjugated!: "nos irmos", Eng: "our going".
3) The compound tenses are generally formed using "ter" (Sp: "tener"), more commonly than they are with "haver": "eu tenho comido", Sp: "yo he comido".
4) Some irregular verbs are so different from their Spanish forms that they deserve special attention:
SER: sou, é, somos, são. Pret: fui, foi, fomos, foram.
IR: vou, vai, vamos, vão. Pret: fui, foi, fomos, foram
TER: tenho, tem, temos, têm. Pret: tive, teve, tivemos, tiveram VIR: venho, vem, vimos, vêm. Pret: vim, veio, viemos, vieram. POR: ponho, põe, pomos, põem. Pret: pus, pôs, pusemos, puseram. PODER: posso, pode, podemos, podem. Pret: pude, pôde, etc. Haver: hei, há, havemos, hão. Pret: houve, houve, etc.
Haver: hei, ha, havemos, hao, pret: houve, dizo dize, dizemos, dizeram. Pret: disse, disse, etc. DIZER: digo, diz, dizemos, dizeram. Pret: disse, disse, etc.
FAZER: faç, faz, fazemos, fazeram. Pret: fiz, fez, etc. (HACER) FAZER: faço, faz, fazemos, fazeram. Pret: fiz, fez, etc.
QUERER: quero, quer, queremos, querem. Pret: quis, quis, etc, QUERER: quero, quer, queremos, querem. Pret: quis, quis, etc,
TRAZER: trago, traz, etc. Pret: trouxe, trouxe, etc. (TRAER)

The numerals are also similar to Spanish, except that the word for Sp. "dos" has a separate masculine and feminine form: "dois homens" \& "duas mulheres".

So much for the differences between Portuguese and Spanish; most everything else is the same. So practise on the VOA and PJB, then work those Brasilians!
-30-

All persons and organizations mentioned in the Captain Glotz cartoon strip are totally fictitious and in no way are connected to people and things in the Real World.

Yes, APTNN GLOTZ, THAT INTREPID NRC DO-GOODER, IS BACK! you may recall THat glotz's latest Asskndment win to spy ON RENEGADE MEMBER STAN M. CRAMER II. STAN WhS PLOTING THE EVENTUAL OVERTHROW OF TITE TWO MATSR MW DX QUBS, GROTZ'S MISSION: FIND OUT HOW CRAMER, NO LONGER AN NRC MEMBER, STILL GETS DX NEWG, AND HOW HE PGRPETRATES THE HOAX, THAT HE IS THE HOBOY'S ONLY "PREOFESSIONAL DX'ER."

JIN GLOIZ NOW, LOCKED N CRAMER'S DUNGEDN AS WE SEEK THE ANSWER TO:
"THE FLING TRANSMITEER MYSTERY"
(CONCLUSION)


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ITHNKK NOT cramer, I'D HOPED TO Avord Tils, BUT...

WHAT - WHATI' THAT YOU'VE GOT?


GLOTZ BREAKS INTO CRAMER'S hankar and stehls a plane!
GLOTE TO BOSSTOWN... COME IN,


GOBGK HERE, GLOTE YOU LEREN
TO FIX ADORESSOGRAPHS YEE?
NOTME FOR THAT! CRAMEP IS
AFTER ME AND HES FPOTHNNG!
SOH, ARE YOU SNLL OUT THERE?
YOU CAN POMET ABONT
WHAT? WIY?
IHE LOST TIIE IRCA* ECCTION.
HS POWER PAY FELL THOUGH. AS Soonl as he kind out, he pronay will DO SOMETHNO DESPGRATE. = OOH, SOWNNO... BLOW UPAHL OF CRAMBEKOY BENAK OR Somenthnor. ULI..IS Your INSURANCE ALL PMDO UP?
AW QUIT CCOWWING,
PEOKGE. PESDGE?
Imanamey enoro cus e


another

## SPR-4 test

1. SENSITIVITY.

Two SPR4 receivers, serial numbers 1443 and 201, were compared with a 1970 model H-180 AC and a realigned National NG—183D. Both tube receivers were known to be in peak operating condition. Antennas used were a 100 foot long wire and the SM-2. The two SPR4's proved to be just as sensitive as the tube receivers. \#1443 had slightly greater sensitivity and slightly lower internal noise than did \#201. John had some trouble with noisy mixer transistors in \#201 shortly after the warranty expired. The manufacturer made the repairs and paid shipping charges....at no cost to dohn. He said the company was most cooperative.

A Canadian DX'er reports that the very expensive Coliins 5iS1 and 651S1 receivers are no more sensitive on the BCB than the $\mathrm{HQ}-180$ (and therefore, no more sensitive than the SPR4). (Refer to IRCA DX Monitor, p. 13, Aug. 12, 1972 issue) Receiver specifications on BCB sensitivity were given as:

Receiver $10 \mathrm{~dB} \mathrm{~S}+\mathrm{N} / \mathrm{N}(\mathrm{AM})$ for

Collins 51 S1 with preselector
Codins 651S1
HQ 180A
Drake SPR-4 (manufacturer's specs)

In my opinion, the two SPR-4's reviewed easily meet the manufacturer's specifications. I mient add that the receivers were compared on the SW bands as well as on the BCB.

To get good long wave reception with the $\mathrm{SPR}-4$, the antenna impedance must be matched exactiy to the receiver input using an electrical pi network device.
2. SELECTIVITY

Using the 1000 kHz calibration signal, plots of the receiver selectivity were made by first caliorating the receiver to exactly 1000 kHz , then switching the receiver to the AMf, Ch, USB and LSB modes and taking S-meter readings at 200 Hz intervals. This receiver has a crystal filter in the 5645 kijz 1st IF and an LU fiiter in the 2 nd $\operatorname{IF}$ ( 50 kHz ). The results are shown in the four graphs. In terms of selectivity, the most significant finding was the very steep slopes of the SSB and AM fiaters, giving the receiver excelient deep skirt selectivity even though the filter was 4.9 kc wide on the top for the AM function. The shape factor of the AM rister was 1.4 which is nearly as good as a mechanicai filter. The slope oi the selectivit: curve is considerably sharper than that for the correspondirg 6 dis selectivity in the $H_{i}-1808$ receiver.

## 2．SELECTIVITY（continued）

The graphs shown are for SPR4 \＃1443．Briefly，the receiver＇s deep skirt selectivity was found to be much better than the manufacturer＇s specifications．

| MODE | ManuFact at 6 dB | SPECS－BANDWIDTH at 60 dB | $\begin{aligned} & \text { SPR-4 } \frac{41443}{\text { at } 6 \mathrm{~dB}} \end{aligned}$ | ACTUAL SEIECTIVITY at 60 dB |
| :---: | :---: | :---: | :---: | :---: |
| AM | 4.8 kHz | 10.0 kHz | 4.9 kHz | 6.8 kHz |
| USB | 2.4 kHz | 7.2 kHz | 2.5 kHz | 4.5 kHz |
| LS8 | 2.4 kHz | 7.2 kHz | 2.7 kHz | 4.9 kHz |
| CW | 0.4 kHz | 2.7 kHz | 0.6 kHz | 1.7 kHz |

Of course，one should realize that AM signals on the BCB are much sloppler than the one generated by the crystal calibrator，which puts out about a $15-20 \mathrm{~dB}$ over $\mathrm{S}-9$ signal on most bends．

In brief，the AM filter is quite broad at the top but it has steep slopes．Double peaks were noted on both \＃201 and \＃1443．On \＃201 the variation was about 2 dB ，and on 1443 it was about 4 dB ． The peaks have no significance in actual receiver operation．

## 3．DIAL ACCURACI

Calibration is accomplished by switching the receiver to SSB or CW mode and tuning for zero beat on the 100 kHz harmonics．The dial can be slipped so that the receiver can be calibrated exactly．
On set \＃201，the dial accuracy was within 200 Hz when calibrated at the nearest 100 kHz harmonic．Maximum error over the 500 kHz band was 1 kHz without resetting the calibration．

On SPR4．\＃1443，the VFO was almost perfectly linear．Dial accuracy was within 100 Hz （and typically zero，or 50 Hz ）when calibrated at the nearest 100 kHz harmonic．Maximum error over the 500 kHz was only 100 Hz withcut having to reset the calibration．I doubt if a receiver could be calibrated much better than this！

The two relative maxima in the crystal filter do not interfere with calibration or determining the exact irequency（to 100 Hz or less） of an unknown station．I might add that all crystal filters
of an unknown station．I might add that all crystal filters
In switching from 1 band to another，the maximum change in
calibration（ 1.1 kHz ） W s on the 11.5 MHz band．The drift for the
other bands was： $9.5 \mathrm{MHz}: 800 \mathrm{~Hz}$ 。 $6 \mathrm{MHz}: 400 \mathrm{~Hz}$ 。 $15 \mathrm{MHz}: 200 \mathrm{~Hz}$ 。
$17.5 \mathrm{MHz}: 200 \mathrm{~Hz}$ 。 $0.2,0.5,1.0,1.5$ ，and 21.5 kHz ：Zero。 $7 \mathrm{MHz}: 100 \mathrm{~Hz}$ ．

## 4．S HETEK

The meter works weil．It produces a noticeable deflection on a weak signal but does not pin except on extremeiy strong signals．Meter needle defiection is roughly a function oi the logarithm of signa strength．（the meter has a wide dynamic range）It gives very true indications of reiative strensth of signals．On many receivers， including the $H(Q-180$ and the $D X-150$ ，almost any substantial signal will pin the meter．I cio not consider this to be very useful after all the function of an $S$ meter should be to measure signal strength！

## 5．IMAGE REJECTIUN

The SPR－4 is free from images．No cross modulation was observed when tuning to a 50,000 watt station 4 miles from John＇s home near Philacielphia using a 100 foot long wire or the Space magnet．

## 6．BIRDIES

The SPR－4 does have some．They are not operavionaily significant．On \＃1443，only 3 major birdies were found on the $0.2,0.5,1.0,1.5,6.0$ ， $7.0,9.5,11.5,15.0,17.5$ ，and 21.5 MHz bands．（the only bands I have The 9963 kHz birdie These birdies were at 9698,9963 ，and 15334 kHz ． The 9963 kHz birdie measured out at $5-9$ on SSB and S－8 on AM．The other 2 birdies did not produce an $S$ Meter reading．Besides these a few other very weak spurs were found．Only the nominal 500 kHz ranges，plus or minus 50 kHz on the ends of each band，was considered． John reports there are some birdies on the 4.5 and 5.0 MHz bands，with one on 4973 kHg being very strong．The birdies tune out sharply and I do not consider them to be a handicap to reception．
7．NOLGL LIMITEA
Each noise bianker must be aligned to match the receiver it is insta＋led in．This is not a difficuit process．John a＋igned the noise blanker in his set and discovereci that LORAN impulse type noise was reduced by as much as 40 dB 。

8．WUTCH FIITGR
The filter must be tuned carefuliy because of the very sharp nuli． Null depth ranged from 38 to $68+\mathrm{dB}$ on SSB and CW，and was typicaliy 65 dB or more on the $A M$ function．John reports that the $H Q-180 \mathrm{~A}$ notch filter is slightly more effective but the SPR－4 filter seems to be able to get the job done．
9. AGC RESPONSE TIME

Without the noise blanker operating, a strong noise pulse may cut out the audio for $1 / 2$ to 1 second, because of the slow $A G C$ response time in the AM mode. When the noise blanker is operating properly, the AGC should be affected only by a received signal and not by the noise pulses. I have not had the adjustments made in the blanker in my set, so I cannot comment on this at the present time.
10. AUDIO

The audio cuality was judged to be good. The MS-4 speaker yielded somewhat better low frecuency response than the one built into the set, on a cualitative judgement.

The RF gain switch, when set at zero, caused the $S$ meter reading to jump to 60 dB over S-9. This is due to circuitry design. S meters on some Collins receivers behave similarly. I don't consider this important because when I listen I do not set the RF gain to Zero, and I don't think anybody else would either.

The volume control, when set at the minimum volume setting, does not shut off the audio completely. Again, I have no oualms about this.
11. FINAL COMMENTS

In light of our experiences with these two receivers, we believe the SPR-4 is an excellent receiver and probably the best receiver available in it's price range. The SPR 4 reviewed by Mr. Eehr undoubtedly does not measure up to other SPR-4's. It is unfortunate that a few "lemons" did escape the factory. One could hope for a narrow AM filter, but, even without this, the SPR-4 does ouite well. Of course, reception of splits very close to strong comestic stations may be difficult.
The SFR's strong points are, in review, excellent freouency stability, very accurate dial calibration and frecuency determination, high sensitivity, excellent signal handling capability and image rejection, and a good $S$ metering system, as well as excollent deep skirt selectivit. The only improvements that might be made on this receiver might be the addition of a narrow AM filter, and a choice of AGC response times for a given reception mode. Perhaps the noise blanker could be included as standard eouipment and adjusted at the factory during the manufacturing process.

I might add that I observed no freouency shift in the SPR-4 when changing from AM to CW or SSB. The apparent shift is due to the shape of the filter selectivity curve. By tuning the sign: I to zero beat you notice no freouency shift.



DEVIATIOA FRO: RECEIVED TEST SIGNiL ( kHz )
Zero represents the center of the carrier freduency, in this plot the upper sideband is suppressed.

DEVIATIO: FROM RE $\oint E I V E D$ SECT SIGNAL ( kHz )
Zero depresents the center of the carrier freauency.
Just as the teen ager can modify an automobile to outperform the most expensive factory built car for a specific purposessuch as drag racing, so can the interested DXer modify a receiver to utperiorm the lactory built set for a specific purpose, such as GB Doing. For such interested Dxers here are some notes and observations.

## The Detection Process

The detector is really a mixer in which two frequencies beat against each other to produce a new frequency. In AM reception the carrier beats against the sidebands and the difference frequency is in the audio range. The original and sum frequencies, which are also present at the output of the detector, are filtered out with $R / C$ elements.

An important characteristic of a detector is that it is controlled by the strongest irequency present. If the strongest irequency at the detector is the desired carrier erery thing else will be demodulated against it and we have a readable signal. If the trongest frequency is a sideband component from another station the output of the detector will be unintelligible.

The carrier of a properly modulated AM signal is from 6 to 20 dB or more stronger than any individual sideband component. Whis insures the proper relationship at the detector in the absence of interference.

What can we do to present more desired signal and less inter ference to the detector and thus recover more usable audio? There are three basic things to do

1. Use steep sided, narrow IF filters so that only the band of frequencies that contains the desired carrier and one set of sidebands is accepted.
2. Limit all signals, except the desired carrier, to the level of the desired sidebands.
3. Exalt the carrier within the receiver by increasing its level in relation to the desired sidebands and interference.

## IF Filtering

Nelson's article ${ }^{(1)}$ thoroughly covers the use of mechanical filters in the IF strip and is a must for anyone interested in DX receivers. Here are some observations based on much practical experience with mechanical filters.

Use of more than two mechanical filters in an IF strip is a futile exercise because of the limited dynamic range of existing front ends. Ordinary receiver front ends cannot simultaneously handle two signals that differ in strength by more than 50 to 100
dB without blocking, cross modulation or intermodulation. The average receiver will be closer to the 50 dB end, only special military receivers reach 100 dB . Two cascaded mechanical filters, properly shielded and filtered, will have an ultimate rejection between 120 and 140 dB , much more than can be used in practice. A third filter can, at best, make a small improvement in shape factor at the expense of a decrease in the already borderline bandwidth, and increased complexity.

Cascaded mechanical filters should be separated by amplifier stages rather than connected end-to-end. One of the filters should be placed directly at the input to the IF strip to knock down the undesired signals a few notches before they hit the amplifiers. The other filter can be located one or two stagez further along. (Figure l) If the two filters were placed back-to-back at the input to the IP strip your receiver front end would be looking into a unit with a noise figure of 20 dB or more. hany front ends are not quiet enough and have insufficient gain to overcome such a handicap. Secondly, if the filters are separated by amplifier stages you will have less stringent interfilter shielding requirements. Third, if the filters are lumped at the input to the IF strip the three following amplifier stages can generate considerable wideband noise. $(7,8)$

The center frequencies of cascaded filters must be matched within a few hertz since any mismatch will reduce the combined bandwidth which is already near the minimum that can be used for intelligible audio. The effective bandwidth of a given filter is much greater for SSB than for AM since the carrier is placed at a point 20 or 30 dB down the side of the filter response for SSB. This adds perhaps 500 Hz to the upper audio frequency that is passed compared to that which can be passed for AM where the carrier must be within the passband of the filter.

Don't spend too much time trying to flatten out the passband of your IF strip. Experience has shown that peaks and valleys in the passband or rounding off of the edges, up to 5 or 10 dB , has littie effect on the intelligibility of the signal if the exalted carrier technique is used. Even when it isn't, passband ripple is hardly noticed but rounding of the edges (as in Fig. 3A) can be annoying.

An instrument for $\begin{aligned} \text { isually displaying the response curve is }\end{aligned}$ helpful in working with IF strips. One of the best and least expensive instruments is the Heath SB-620 Spectmam Analyzer. Set the SB-620 at its minimum sweep width position which will be about 0.7 kHz per division and manually sweep a steady signal across your IF passband, either with a signal generator or by tuning your receiver back and forth across a local BC station. The result is a nice picture of your IF passband down to more than 40 dB. See Figure 3 .

## Exalting The Carrier

There are a number of ways to exalt the carrier of an AM signal. Jome don't work well when the carrier is obscured by noise and $Q R M$ and others are very complex. The best and the simplest of the methods which have been tried for BCB DX is to use a \& Multiplier to peak the carrier frequency relative to the other frequencies in the passband. The peak can be moved from one side of the passband to the other so that either the upper or lower


Figure I - Ideal IF strip for receiving weak AM signals thre heavy interference.


Figure 2 - Peaking type $Q$ multiplier for exalted carrier reception. R2 can vary down to 500 ohms and may have to be determined experimentally. Inset shows R3, discussed in text.

The use of the Q multiplier for exalted carrier reception was explaned in some detail in the original article in Electhe subject.

One of the little known advantages of exalted carrier reception is that it adds perhaps 200 to 300 Hz to the usable bandwidth of a given IF strip because the carrier can be placed somewhat down the side of the passband and then brought back up with what down the side
carrier exaltation.

Exalted carrier reception is useful in receivers not equipped with mechanical filters. It provides the usual exalted carrier advantages and, in addition, steepens the side of the passband which has the most QRN. The HQ-150, which has a built-in $Q$ multiplier and a crystal filter, can also provide exalted carrier reception by placing the crystal filter in the medium position, tuning so that the carrier is down the side of the crystal selectivity curve by about 6 dB (one "S" point) and then tuning the $Q$ multiplier peak to the carrier.

AM reception on the $S S B$ positions of modern receivers is seldom satisfactory because the locally generated carrier is not phase locked to the original carrier. The carrier of an SSB signal is down about 70 dB at the detector, 50 dB at the transmitter and 20 dB in the receiver, thus there is no reaction between the original suppressed carrier and the local carrier.

How much carrier exaltation is desirable? The carrier should be exalted at least 15 to 20 dB relative to the rest of the passband, based on experiment. This coincides well with the SSB reccomendation that the local carrier be 14 to 28 dB greater than the signal. Less exaltation does not achieve the characteristic clarity of exalted carrier reception.

## The Q Multiplier

There are no $Q$ multipliers on the market today. You will either have to purchase a used one or build your own. luch of the circuitry can be eliminated if the $Q$ multiplier is for exalted carrier reception. The circuit in Figure 2 provides excellent performance. Q1 can be an HEP-801 or HEP-802 or most any general purpose $N$-channel FET. LI can be a BCB loopstick or antenna coil (Miller $A-5495-A$, for example) with primaries and other extraneous windings removed. The coil winding should be positioned so that it is a couple of inches from any other objects. The unit can be buil into a mini-box large enough to give the proper coil clearance. The lead connecting the Q multiplier to the receiver should be coax not more than $10^{\prime \prime}$ to $18^{\prime \prime}$ long. Retune the transtormer to which the connection is made. A switch in the supply voltage lead will turn the unit off and on.

The Q multiplier will superimpose a peak on the receiver passband if the decoupling resistor, R3, shown in the inset in Figure 2, is added. Curve B in Figure 3 results when a 22 K resistor is used and $C$ was taken with a loK resistor. The larger the resistor the narrower the peak and the less its amplitude. iith the 22 K resistor the peak is so narrow as to make tuning very difficult and it is not high enough to give sufficient carrier

(c)

Figure 3 - IF passbands as displayed on SB-620 Spectrum AnaIyzer. (A) Ir strip consisting of three amplifier stages and two Kokusai mechanical filters and two IF transformers. (B) Same IF strip with $Q$ multiplier set for exalted carrier reception, R3 of $22 K$. (C) Same except $R 3$ is loK.
exaltation. The loK resistor is much better. In practice the straight $Q$ multiplier without the resistor does a good job and allows more carrier exaltation. The Heath QF-1 and GD-125 Q multipliers have a 27 K decoupling resistor in their broad positions.

Where should the $Q$ multiplier be connected into the IF strip when it is intended for carrier exaltation? The best point is just before the second detector. Figure 4. If your receiver has a diode detector it will either be necessary to change it to the infinite impedance type or move the $Q$ multiplier to the primary of the last IF transformer. The reason for placing the $Q$ multi-

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plier at the end rather than at the beginning of the IF strip is that it is protected from strong, off frequency signals by the mechanical filters and because it must come after the IF limiting which which must be done late in the IF strip.

## How To Tune The Exalted Carrier Receiver

Tune to the desired station with the $Q$ multiplier off and determine which sideband has the least interference. Then tune so that the desired sideband is in the receiver passband with the carrier at the extreme edge as evidenced by a 6 to 12 dB (1 or 2 carrier at the extreme edge as evidenced by a to 12 ab ( or correct point is easily found audibly. The $Q$ multiplier is then switched in and peaked on the carrier. The $Q$ multiplier feedback control should be advanced nearly to the point of oscillation. mhen properly tuned there is a pronounced sharpening of the clarity of both the background and the desired signal.

When the desired station is very weak it is sometimes better to perform the above set-up on a nearby, stronger station and then tune back to the desired station and peak it with the receiver tuning. leaving the $Q$ multiplier alone.

A slow tuning rate is required when using a large amount of carrier exaltation. Many receivers are deficient here and need some help. Either a mechanical or electronic bandspread capacitor across the oscillator tuning capacitor will do the job.

Receiver drift must be low otherwise you will be chasing the signal across the band. Once set up, the retuning to maintain the carrier on the peak snould be done with the receiver tuning rather than the Q multiplier tuning otherwise the position of the peak in relation to the passband will change.

## IF Iimiting

After we have narrowed the bandwidth to only that required for one sideband and have exalted the carrier we can reduce the amplitude of QRM and QRN to a level equalling that of the desired sideband by limiting. This will insure that the desired carrier will be the strongest component at the detector. The type of limiter described here is particularly effective against short, sharp bursts of sideband energy from a nearby station. It is also effect ive against short individual static crashes. It will not improve readability in the presence of continuous QRM or QRN although it may save your ears.

The simplest and best IF limiter tried to date is a pair of silicon diodes across the last IF transformer. (Figure 4) The diodes appear as a short across the transformer to any RF voltages above the diode threshold, about 0.6 volts. Below that point the diodes are an open circuit. The 6-60 pF capacitor is a mica trimmer to tune the transformer when the diodes are cut out. The diodes, trimmer and switch should be mounted as compactly as possibile around the bottom of the IF transformer.

Tune-up consists of switching the diodes into the circuit and peaking the transformer, T. Then switch the diodes out and peak again with the $6-60 \mathrm{pF}$ trimmer. Operation of the limiter is peak again with the $6-60 \mathrm{pF}$ trimmer. Operation of the limite clipping occurs, as deterrined audibly, and then the AF gain con-


Figure 4 - IF noise limiter connected across last IF transcommended.
trol is adjusted for a comfortable listening level.
Audio clippers and limiters are of little value to the $A M D X$ listener. The IF limiter is much superior because

1. the limiter should be ahead of the carrier exaltation point so that noise and QRM can be cut down to the level of the desired sidebands
not attenuated anead will produce in-band IM products if they are not attenuated ahead of the detector.
2. the IF filter in the detector circuit will stretch and integrate noise pulses if not previously attenuated 4. distortion products of audio clipping and liniting will be largely in-band.
3. distortion products of $I F^{3}$ limiting are largely out-ofband.

IF limiting is the least explored of the methods of improving AM DX reception. Much experimenting remains to be done. The use of biasing on the diodes to adjust the threshold as an alternative to the above method, which fixes the threshold and adjusts the signal level, should be investigated. Pappenfuss (3) suggests that the limiter would be much more effective if FLl (FIg. l) were a. Gaussian type filter (two or three IF transformers in series) and the limiter placed just ahead of FL2. Ferhaps there are suitable germanium diodes. They have a lower threshold roltage and could be placed nearer the front of the receiver. See Ref. 5.

Receivar Gain and Gain Control Requirements
The $Q$ multiplier operates, not by peaking the desired frequency, but by attenuating all frequencies except the desired one. Therefore, when the $Q$ multiplier is used for exalted carrier re-
ception the sidebands are attenuated up to 20 dB . Add to this the attenuation of a couple of mechanical filters , an IF lisiter and an audio filter and you have perhaps 40 dB of attenuation in the signal path of the receiver. Many commercial receivers do not have the reserve gain to handle such a situation. In a homebuilt receiver I have found that a minimum of three IF and three AF stages are required. An RF stage will help but at the expense of signal handilig performance.

The receiver should have a manual gain control for each section in order to provide optimum gain distribution for various receiring conditions. If, as is usual, the $R \mathbb{R}$ and IF are controlled by a single control they sheald be separated and a separate control installed for the RF stage. Better yet, remove the RF etage fron both the manual and automatic gain controls and install a 2 potentioneter across the primary of the antenna transforeer to act as RF gain control. This controls the strength of signals without degrading the RF tube signal handling abibity as you do when you change its operating point. Fvery dB of attenuation ahead of the receiver reduces cross-modulation by 2 dB and In products by 3 dB . while reducing the desired signal by only one dB.

## Andio Pilters

A low pass filter has limited usefulness in a receiver with adequate IF selectivity unless the filters are lumped at the input to the IF strip in which case the amplifiers can produce a fideband noise that produces a hiss in the receiver output. Some detectors may generate distortion which can be reduced with a LPP.
-
A high pass audio filter, on the other hand, Will sometimes make a marked improvement in the intelligibility of signals which have passed through a narrow filter by eliminating the boominess and maffled sound characteristic of such signals. It has been shown that when the higher audio frequencies have been removed from speech (by the Ip filter) that some of the lower frequencies should also be removed to maintain speech naturalness and intelligibility. (4) If the upper frequencies are cut off around 2000 $\mathrm{H}_{\mathbf{z}}$, as they are with a mechanical filter, the lower frequencies below 300 Hz should also be attenuated.

Figure 5 shows a simple method of reducing the low frequency response of a receiver. Experiment with the value of cl to get the most effective value for your personal hearing characteristics.

## Bi-aural Reception

A Ittle known technique is bi-aural reception in which the two sidebands are separated and one sideband is sent to the left earpiece and the other to the right earpiece of a set of phones. earpiece and the other to the rired signal information is identical on each sideband but The desired signal information is identical on each sise is different on each and the ears and brain separate the signal from the noise so that the signal stands out There is a sort of stereo effect and you can concentrate on the signal and ignore the noise much as you listen to a conversation in a noisy room.

One way to achieve bi-aural reception is to use two receivers each capable of exalted carrier reception. One receiver is tuned to the upper sideband and the other to the lower and the outputs


Pigure 5.- Simple high-pass audio filter sometimes will make specen crisper and more readable. Cl is added to existing circuit and can be between 200 and 1000 pr.


Pigure 6-Switching arrangement feeding either speaker or stereo headphones from two receivers and a tape recorder. Position 2 of SWl is for binaural reception, one receiver to each ear.

50
are fed to stereo headphones. I have used an HQ-150 for one sideband and my homebuilt receiver for the other and had really good bi-aural reception. One of the switch positions in Figure 6 is for bi-aural reception.

## Headphones

Lany DXers believe that the low impedance stereo headphones are the best and most comfortable for DXing. The two earpieces can be paralleled either by rewiring the plug or in an external adaptor. Lost modern receivers have low impedance headphone outputs which will accomodate the stereo headphones but older receivers may have a high impedance headphone jack in which case you can wire a headphone jack in parallel with the speaker output terminals.

## Putting It All Together

The serious foreign DXer interested in maximum performance needs a second receiver and a tape recorder. He will also want to be able to use either headphones or a speaker. The second receiver is used for checking wWV, listening for SW parallels and general band scanning during lulis in taping or logging the primary station.

Figure 6 is a switching arrangement that allows very flexible use of the equipment. SWl switches in either a speaker or stereo headphones. Position 1 of $S W 1$ is for listening to receiver l. Position 2 places receiver 1 on one earpiece and receiver 2 on the other earpiece of the stereo headphones. Position 3 is for receiver 2. Position 4 is for the tape recorder. The switches, jacks and wiring can often be placed in the speaker cabinet.

Reference 6 has some good ideas on the receiving end of $D X$ station design.

1. "Single Sideband Reception on the Broadcast Band with Bechanical Filters," Nelson, NRC DX News, Aug 19, 1967
2. "Flexible Selectivity For Communications Receivers," Villard and Rorden, Electronics, April 1952
3. Single Sideband Principles and Circuits, Pappenfuss, et al, ficGraw-Hill, pp 303-304
4. "Cut-Off Frequencies and Audio Quality," Neil, 2ST, Not 1950
5. "Noise Limiter For Mobile VHF," Bishop, Electronics, June 153
6. "Station Design For DX," Part III, Rockwell, 2ST, Nov 1966
7. "Plagiarize and Hybridize," Pt I, hartin, Radio Communications, hiarch 1971
8. "The Solid State Receiver," Sabin, QST, July 1970
$\underbrace{\infty}_{0}$
EDITOR:
P.j. edmunds
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wayne. П.J. 07478
(201) $335 \cdot 6397$

Well, folks, we!re back weekly again. We would like to take this opportunity to remind you of a few of the groundrules for $D D X D$. Fisst, be sure to weed out routine loggings from your submissions. We look primarily for items of major interest: changes, unusual receptions, in other, words, the good DX. All items submitted should be separated into the various subsections of DDXD if at all possible and then ordered by frequency. This saves vast amounts of editing time. If there is some compelling reason why you cannot separate into Day, SSS, Night, Changes, \& r/cis, then please order your stuff by frequency at the very least. osyry pit iso not necin in or initials after each item unless Jou're copy-sheeting for another club. It doesn't get in my way, but may take up your time. So much for that. Now on to DX:

## changes

- 920 WTTM-NJ SCH: 0600(0700Su)-0000 (Tom Sundstrom, Willingboro, N.J.)
+ 960 WERC-AL ex-WBRC
* 1090 KAAT-co Indications from Broadcasting are that this is on. Is it??
+1260 WBUD-NJ SCH: 0530 ( 0730 Su ) - 0005 ( 0100 )
*** 1520 WLUV-IL Last issue's comments re this were meant for the following
*** 1550 WLUX-LA OLTiN
repeated violations of FCC rules.
+680 KKYX-TX ex-KBAT
$\mathrm{SCH}:$ delete NSP-AN.
call apulications
$\begin{array}{lll}1100 & \text { WKYC-OH } & \text { req. WWNE } \\ 1230 & \text { WTAP-WV } & \text { req. WKYG } \\ 1580 & \text { WKKD-IL } & \text { req. WFVR }\end{array}$

DX TESTS NOT HRD OF LATE (per TRS, PT, RJE) include:
9/18: KJAN, $9 / 25$ : WHLI, KGHO, $9 / 24$ : WJVA ; $10 / 1$ : WMWM ; 10/2: WMWM, WIZM: 10/9: KWOA, WVOV.

## P/C's

AUGUST: 1st TU: $\operatorname{RDDD}-800$; 2nd MM: WGMF-1500; 2nd WM: WAMI-860; 3rd TH: WHII 1570; $3 \mathrm{rd} \mathrm{SA}: \mathrm{KEYJ}-14 \mathrm{MO}$; 4 th TH: WJFC -1480 , WHIY -1530 ; 4 th FM: KPOS $1370(\overline{0220-0235)}$; 4th MM: KIKN-1590.

SEPT. : 2nd MM: WCBL-1290; 2nd FM: WWBZ-1360; 3rd MM: WDIC-1430, WCON-1450; 3rd TU: WGTN-1400, WVOP-970, WKOC-1560 (0010-0030), WGUS-1380 (0107$0120+$; 3rd SA: KI ZZ-1150; 4 th VM: WCBG-1590, WTOP-1500, WHAT-1340,
WFEC-1400; 4 th TU: WOHN-1140, WROP-1540
OCT. : 1st :M: KGRL-790; 1st SU: KCII-1380; 2nd :M1: WELI-960
A couple more notes here: 1) It would be more helpful if more of you $\mathrm{f} / \mathrm{c} D \mathrm{X}^{\prime} \mathrm{ers}$
would report. 2) All reporters please try to list rx , ant., etc. so we can in-
clude this info clude this info as space permits.


[^5]-


[^6]


## sunsel \＆evening

1270 NUKK－D Hrd $10 / 41735 \mathrm{w} /$ local nx （Leo Alster，Rahway，N．J．）
1290 WKNE－NH Hrd 10／3 1910 w／CBS nx（LA）
1300 WKCY－VA $10 / 131830 \mathrm{w} / \mathrm{wx}$ ，c\＆w \＆events at $U$ ．of Va．S／off 1845 （LA）
1310 WLOB－IE 10／2 $1957 \mathrm{w} / \mathrm{sx}$ ，nx，区x．（LA）
NIBA－NI Hrd 10／2 1930－45 w／wx，rr，and reminder about motor vehicle inspections．（LA）
1390 WOD－VA Hrd 10／2 $1840 \mathrm{w} /$ talk，弓ood ID＇s．（LA）
1550 WKBA－VA S／off $9 / 171930$ after $\frac{1}{2}$ hr reli．s．pSm．（IRS）
W． $100-A L$ 9／22 alone o／CBE © 195E s／off，SSB．Good sis．（ZaS）
1580 WLIJ－TN Hrd $9 / 16$ fairly clr 2000 s／off SSB o／CBJ（TRS）

## midnight 10 sunrise

WPIK－VA Annaunced ET 0107－15 9／15 w／TT（Ron Kusco，Windsor，Ct．） WKIS－FL Noted 10／2 atop din W／ID，TC 0115，weak，following CBL s／off 0107 （TRS）
790 KCEE－AZ
KGis really clean ID copied $030010 / 2$ at termination of Kart r／c．This freq．is a mess．（Paul K．Hart，Ft．Worth，Tx．） Hrd $02589 / 17$ w／ID，reliz．messaze \＆quick s／off SSB 0300 thru WHEN．（TRS）

0／2 a surprise o／NLNF w／wPEN off．Had AN tele－talk 0230 ID，later a promo o／an unid cl mx stn， 0240 （TRS）
KSDX－TX Hrd 9／11 w／イoR，nX on hour \＆$\frac{1}{2} \mathrm{hr}$ ．Good sig 0425－0502．itad one FM promo．（John Tull，Kansas City，Mo．）
970 KMOK－TX Local testing from and 0300 10／2 w／OC，mx．（PKH）
＋ 980 WSIX－Ti S／on copied 0600 9／11，noted off ajain 10／2，must have at least II SP ajain now．（PXII）
＊ 990 WNOX－TH Very muchin evidence even after 0200 10／2．NSP？？（PKH）$\not \approx$ Yes they have been for some time now $-R j E$
1010 WHOX－IS 9／16 0708－0729 W／cicw，many local spots，TC＇s after every record and many ID＇s（Tull）
1060 KBUG－MO Hrd 9／23 0750－0812 w／MoR，nx，wx．Sig．just above the noise level．New station．（Tull）
1080 WTIC－CT Hrd OL28－0447 9／25 w／Mor，nx，wx，one PSA．Sl－3 level w／
1130 VEEO－PA Quite good on PoP－test here 0020－0055＋9／78（Wes Boyd，Young－ KRLD off for state \＃37．（Tull） stown，Ohio）Hrd 0000－0105 w／mostly TT．Modulation on voice ID＇s weak，one clear one 0103．Talked to CE OOI5． 1 kHz TT really tore Wi．w up．（TRS）Hrd TT only，no ID＇s here．Called CE 0020 ，asked for cw ID＇s w／ 1 kHz ．IT \＆ $100 \%$ modulation，but CE 0020 ，as＇ked for cW ID＇s w／Ikiz．TT \＆ $100 \%$ modulation，
daid no could do．No way the mearre voice ID＇s could cut said no could
w．IEN．（RJE）
1150 CÄSJ－NB Hrd 10／2 w／ID，TC 0347．C7w mx o／CKOc nulled．（TRS）
1220 CJRL－ON Hrd 9／15 w／ID，TC 2325 u／WGAR w／WCAU nulled．Difficult at best to follow programing．（TRS）
1230 WNOR－VA Hrd $9 / 17 \mathrm{w} / \mathrm{ID}$ ，TC in rr 0243．Hard to follow in din，but mostly dominant．（TRS）
1260 WPHB－PA Hrd ending $m x$ 10／8 0700 ID into $n x$ w／WBUD off \＆VEZE nulled． First time hrd，despite bein；so close．（TRS）
TSEEETLA
1290 KD：1S－AF
1310 WRR－TX
WIBA－${ }^{\text {WI }}$ ET $\mathrm{W} / \mathrm{mx}, \mathrm{OC}$ ．ID copied $030610 / 2$ ，tremendous S／off time is erratic．Off by $010510 / 2$（DKH）
Very nice ID conied after mx 0135 10／2，then only $001 t$ theJ pulled sitch on ET．（PKH）
1340 WUSJ－NY Hrd 9／23 anncg．ET 0125，27，apparently the one w／000115．In to mx 0030．Surprisinjly no sizn of NSE NAT．（TVS）
A！！for＇erry Lewis Teletion 9／4．Stronz for 250 watts．CP to be on by end of Oct．per verie；（RM）
1380 NPH：1－I DX TEST 10／9 alnost over b4 two phonetic ID＇s hrd 0325 2． 27 buried u／WB：X which is very hard to null．（mPS）
axx 1360 WIXZ－PA Noted s／on SSB $04589 / 24_{1}$ ．A Sun．SP too ？（Boyd）
H， 00 KLIN－NE Copied weak ard 0130 10／3．First time here，and had to punch through a lot of garbase．（Hart） Hrd ending $n \times 04509 / 18 \mathrm{w} /$ several ID＇s，TC，into mx（TRS）
1．8（Boyd）
$=\quad$ WCIN ET W／much high freq．TT 0155－0230＋9／19（Boyd）
1490 WNY－KI On possible PoP 9／26 0112－0205＋u／WHBC－WRDW－WLEE－WHOM－etc．（Boyd） WXIT－W In RS rr 0105－0125＋so is on to at least 0200 MM ．Only WOTF
1510 WLAC－TN S／off SSB $02309 / 18$ leaving WMEX so SP still exists（Boyd）
1550 KKHI－CA Copied nice ID＇s 0257 10／2，not new，but very rare this early
in season so shows improving cx．（Hart）
＊ 1560 WDXR－KY Noted $9 / 26$ s／off 0200，so another new sked here．（Boyd）
unID Anyone get ID on stn．w／OC $9 / 17$ noted 0230－0315 w／no ID？（TRS）
1570 WTOW－MD Hrd s／on 9／17 0602 wk u．（CKLM（RM）
1580 WAMY＝MS IO／6 DX TEST hrd 0430－0510＋dominating freq，mostly DT \＆beep or．Frequent ID＇s．（TRS）
WTKO－OH On ET－TT 0022－0029＋9／19（Boyd）
1600 WKEAT－DE
On annced．＂Freq．Deviation Tests＂$=0019-0117+$ ．9／26．Good O／WWRL－WAAM－WAPX－unID MOR－unID OC．（Boyd）
WUNR－MA Hrd w／s／off 9／23 o／WNRL 0000．New．a surprise，as WRL hard to loop here．（TRS）
WAAM－FII 9／22 w／ID 2315，another 2330 u／WWRL，WINX．Believe this was the one w／a FB game in progress．Hard to follo programming．（TRS）
XELO－Mex．Not domestic or regular recepiton，but．．．（ - RJE） As reported last season，2nd harmonic here strong enuf to dominate after 0200 MM＇s．（Hart）

AND MORE LATE CHANGES．．．．．．
＋ 610 WSLC－VA ex－WSLS
1000 KKIM－NM Has r／c 0220－0230 4th or last MM．（Hart）
+1070 KNX －CA CP is on．Now U1
+1230 KATO－AZ Will stay here 1000／250 U1．Delete move to 1380 ．
－ 1250 WQDE－GA ex－WLYB
+1380 KATO－AZ vide 1230
+1460 WPVL $=0 \mathrm{H} \mathrm{CP}$ is on．
+1470 WTKO $-N Y$ CP is on．
＋ 1490 WJNL－PA ex－WARD
+1520 CP －MA Greenfield－DELETE
$+1590 \mathrm{CP}-\mathrm{NC}$ Clayton，27520；5000 D3（8／9）$*$ Not sure if this is initial decision or grant－RJE
also note ajain that several CPs listed in $8 / 29$ issue including Canadians maj only be initial decisions．The brand new＂AM Applications Pending＂list shows all kinds of things which are either on or granted or deleted already．One suspects that maybe many of the grants listed are pending a minor change or an extension of completion date．This may also hold for others，but at any rate， short of an exarination of the FCC files，we＇ll have no reallly accurate info．
$\qquad$ fr


## Ron Schatz

Between September 1969 and March 1970 I took a "luxury" cruise around the Pacific, compliments of the U.S. Navy. DX was via a Hitachi AM/FM-stereo portable until I bought a Sony TR-1300 in Hong Kong. As best as I can remember them here are my observations:
HAWAII. Most DX, what there was of it, was from Pearl Harbor:
Locals are so super and numerous that I heard nothing outside the islands until I had the chance to visit with Richard Wood one night in Kailua, and there he showed me Papaété-1400 and other goodies. Strongest station to ECNA from Oahu should be KLEI-1130, not counting the obvious QRM on the channel. The other Honolulu stations would put in powerful signals to ECNA were it not for impeding mountains that block low-angle skip. Honolulu stations, unheard nights enroute from San Diego, dominated the dial almost to Samoa. AM. SAMOA. The locals pronounce it "SAH-moa", and the capital, Pago Pago, is "PONG-go-PONG-go". The locai word for "Aloha" is "Talofa". This is a true South-Seas paradise, unlike bustling Honolulu, and the native influence is dominant. The local station is WVUV-1120, which had few ID's and carried a lot of AFRTS material. Across the way, $2 A P-1420$ in Apia ("a-PEE-ah") had more local announcements and plenty of commercials - sounding very much like ZNS1-1540 back home. The semi-local was ZCO-1020, never heard in English, otherwise the daytime dial was dead. All three stations carried mostly vernacular, and that unenticing native music - similar to a community sing.
INEW ZEALAND. Visited Auckland, Gisbourne, Taurange and Rotorua in that order. In Gisbourne I co-hosted Graham Bolton's "Ko-90" rock programme one afternoon for two hours by reading spots, runrock programe one afternoon for two hours by readng spots, cunlocals; this over $2 Z G-1060$. On my way to Rotorua I passed by the locals; this over $22 G-1060$. on my way to Rotorua passed by the tower of $120-1000$ in a hamlet called e puke (te is Haori for the , hi - notning unusual about it. before private radio was legalised. Radio fauraki was rocking on the high seas, and "The Bie 'i'" was working with rented NZBC fac ilities in Auckland. NZBC fare was: "National Programme" with distinctly separate programmes and no commercials and few local ID's and announcements. "Commercial Programme", locally origina-
ting with spots and plenty of rock. "YC Programme" with all clas_ ting with spots and plenty of rock "YC Programme" with all classical music. Music stations, the "ZM's", with standards, located only in the 4 main centres. There is but one TV channei, and no FM. PHILIPPINES. We sailed through the San Bernardino straits and
narked in Olongapo, vice capital of the world. The local station was DZYP-540, whose hammic on 1080 was just as strong! The lingua franca of the Philippines is English, if one cares to honour the local vulgar dialect with such a titie. Tagalog is being spread as a national var dialect with such a title fage, but is not vet the liaison lancuage ike as a national language, but is not yet the liaison language like english is in andso casting is in English and Tagalog, and the two tongues aren't nee single spot! Except on the better stations the English has a heavy

Philipino accent; in fact, it's almost unintelligible at worst. Otherwise the accent is American. Stations that can proudly announce their network affiliation: "A member of the Bayanihan radio network!", e.g. Most of the music is rock, the beautiful native music is rarely heard on the air. The impression of broadcasting in the Philippines is one of Colombia, etc., speaking English!
JAPAN. We visited Nagasaki from our base in Sasebo. Japan has a standard of living comparable to ours - colour TV and Toyotas everywhere! The NHK has two AM networks (the second being more cultural and educational), one stereo FM, and two TV networks - all colour. The Far East Network is the local AFRS, ID'ing locally as "15-70 on your dial, Far East Network, Sasebo:", all FEN stations ID similarly. DX from Sasebo found Shanghai-io40 coming in like a local, also some Korean stations. Naturally, I was too busy to do much DX'ing, Japan being such a fascinating country.
HONG KONG. This place deserves all the charming publicity it has gotten, but we won't go into that. Local radio was exactly as per 1972 WRTH, with the chinese outlets heavily jammed. Red China was all over the dial with "The East is Red" every half hour and "Mao -ze-Doong" every other word. I found Macau-735 in Cantonese and some Portuguese music, but I could not find the Portuguese-language service. Taiwan was also noted days with rock instead of Mao.
VIET-NAM. We anchored in the harbour at Da-Nang and shot our guns. The language sounds like Chinese, and the name of the country is "Viêt-Nam-Cong-Hoa". The south has the VTVN, distinguishable from the TNVN of the North by more Western music and less propaganda. We were there Christmas day 1969, and Hanoi Hanna, via 1240 kHz , had a special "Don't you wish you were home with your family" programme for us. But the American Forces Vietnam Network dominated the dial with professional Drake programming, including singing jingles!
GUAM. We stopped here on our way back to San Diego. KUAM-670 in Agaña ID'ed as the "Voice of the Western Pacific" and sounded like a typical MoR station back home. A local AFRS station was also noted, but I don't recall the frequency. KJQR-1350 in Saipan had a good signal east of Guam.

And that was my luxury cruise - a long-overdue report. Next report should be from San Andrés (Isla), Colombia, this spring.


WES BOYD - WHOT = 401 North Blaine Avenue - Youngstown, Ohio - 44505 Gentlemen (sind BPC too), not too much lately, mostly chasing down $\mathrm{f} / \mathrm{c}$ and such. I did catch $\operatorname{ET}(8 / 24,12 ; 30 a m)$ from new WBTX-1470 Broadway/ Timberville, Va. with is 5,000 non-directional days w/500 watt PSA, Box 337, Broadway, Va. 22815. Net is Ae, phome 703-896-8933. I noted WHK off again on 8/ 28. Same date WPAT-930 AN, WYDE-850 off $1: 08$, WHBC on late (ditto WREO) W/Indians BB, WFEC f/c 12:31-12:46 (new time?). WCVR-1230 on IC/ET 1:15, only one ID given. ( 1320 , no 3 -ERC) BOC-1420 off $1: 35$ now. $8 / 15$ was strange $\mathrm{w} / \mathrm{WHAG}-1410$ on ET/TT $12: 45-1: 15$. Soon as he went off WOTT came on for ET. The WHAG OC © 1 left WPOP In to sneak through for tape claim (he's much harder than five years ago - before ID to sneak through for tape claim (he s much harder than five years ago - befor
KQV/W went NSP.) Both Beckley W. Va. stations now AN. The 560 is c/w while KQV/WING went NSP. Both Beckley W. Va. stations now AN. The 560 is c/w while
620 is rr . WZUU-1290 for call change on $8 / 18$ © lam, ET. (From what? - ERC) Verie from WSOO-1230 says $\mathrm{f} / \mathrm{c}$ is monthly (heard $8 / 1$, so first Tuesday, or first of month?) Time, $1-1: 15$ (I'm not sure - see Russ'thing). WCNX-1150 says $\mathrm{f} / \mathrm{c}$ is first MM (heard $11 / 1$ and verie dated 6/28) from $12: 15$ until ? ? ? ? Uses ik TT. The following stationd are now all running AN: WPON-1460 (c/w) WBPZ-1230 (c/w) WFAI1230 ( $\mathrm{c} / \mathrm{w}$ ) WFAR-1470 (rr), WFTR-1450 (rr) WINC-1400 (rr), WJS -560 (c/w) WWNR-620 (rr) WIZE-1340 (rr), WCHL-1360 (rr), KLIZ-1380 (c/w), WWSC-1450 (tele-talk). Totals now about 1,020 domestic heard; about 680 taped, and about 620 verified. A gain, domestic-only totals. I gotta add everything up some day but should be about 1,200 or more heard overa11. I hope some of you had a chance to catch WEEO1130 on the TEST 9/18. (What lise is (W)NEW, hi - ERC)

BILL KARSCH - 511 Drake Street = Libertyville, Illinois - 60048
I've been a member since August, but this is my first Musing. Heres a little intro: I'm 18 and will be attending Western Illinois University in a week. I plan to get into broadcasting (what else?). I've been DXing about $1 \frac{1}{2}$ years and have come up with the following results - logged 253 stations, 32 states flve provinces, and five countries. MM 9/4-WTRX-1330 Mich. testing © 12: 17 am u/ KFH Kansss; CKCK-620 Sask. w/c/w e 1:14-1:23 (local WTMJ off). 9/7-CKPR=580 Ont. w/MoR a 1:05-1:17am; CFGM-1310 Ont. w/c/w © 12:47. New veries - WFBC-1330 S.C., KTIK-1280 Co1., CJGX-940 Sask., KMBZ-980 Moo., KNX-1070 Ca1., WKCT-930 Ky. It looks like school will foul up any DXing for the next nine months. I've heard that an AM radic is next to useless in the dorms (it's almost impossible to pick up the local 1,000w station). It looks like FM for a while - yecch! I guess I'll have to DXAM on lreaks when I'm home. 73 s to all. (We lcome to the NRC \& to the Musings section, Bill! Let's hear what you get on those semester breaks! -ERC,
rICHARD E. WOOD - Dept. of Foreign Languages - La. State U. - Baton Rouge, La. 7080 Just back from Belgium where I taught a course at the University of Liege. I visited BRT/RTB Hq in Brussels. I wouldn't like to DX from the Common Market today: AN situation growing steadily worse (though Belgium is not an offender). The BBC, for instace, has just inaugurated an a ugment ed super-power four-frequency MW European Service ( $647,809,1088$, 12951. The 1973 Comunications Handbook is now in proof stage and should be out first week of November. NRC address will be listed therein twice. Should bring the club some new members, as be fore. Another project is a new trilingual ( $\mathrm{FE} / \mathrm{SS} / \mathrm{FF}$ ) report form to be published by Gilper this month. Then I Ill heve an MW article, and three others, in the 1973 issue of "How to Listen to the World", to appear before Christmas. I missed Coral Gables because my semester began early \& I returned from Belgium late. I can confirm and endorse every point made by Brnie Behr in his trenchant, hard-nitting review of the Drake SPR-4 (p. 10-11, DX NEWS, Vol. 39, \#31). In particular, points $1,2,3,4,5,6,7$, amd especially 11. I have modified my Drake to receive AM at the 2.4 k bandwidth (see Ryden's noto) but audio intelligibility is - of course even worse than at the standard 4.8, which is saying something. It's back to the old HQ-180A (recently retrieved from Hawaii) for most DXing for me. Mike Collins article on the nightime clears was factual and intensely readable.

WE'RE ABOUT TO RETURN TO OUR WEEKLY SCHEDULE, SO WE REMIND YOU THAT MUSINGS IS FILLEED WITH WHAT YOU HAVE BEEN HEARING. PLEASE DOUBLE SPACE US A MUSINGS REPORT, LINE LIMIT HERE TO BE 30 LINES, AND TELL US WHAT YOU'vE BEEN HEARING, DAY BY DAY AND FREQUENCY BY FREQUENCY. WE REPEAT ONCE AGAIN - NO VERIE SIGNERS' in MUSINGS!

RICHARD FRCHO - Na 1colm Grow - Box 2054 - Andrens AFB, D.C. - 20331 I went home (Cleveland) over Iabor Day weekend and fired up the $H Q-180 \mathrm{~A}$, but heard nothing worth noting. I think I heard $\mathrm{KING}=1090$ on $M \mathrm{M} 9 / 4$, but too much QRM from KAAY's TT and XRRB, to get an ID. The signal nulled towards Seattle, too. (That would eliminate the possibility of KING, no? -ERCI I have tried to get Oregon \& Washington for the past nine years, but no luck yet! I also tried again fír my closest unheard local, WFAH-1310 in Alliance 0., but too much QFM from WNIC, Mich. I can't use my SM-2 for this because they both null in almost the same plane. I'll have to wait for a WNIC SP, and get WFAH at s/on. I heard someone wants to buy WKYC from NBC. Let's hope the new owner doesn't want NSP! Here's best of recent DX back here in Washington, D. C.: KFBK-1530 8/28 @ 2:30am for needed Cal. HJHN-960 R. Sutatwnza, Colombia, 9/23 @ 9:23pm, for first Colombian. I heard WBT-1110 s/off 9/13 (a Wednesday morning) for XR maintenance (3) 12:01am. Is this regular for them? (Yes, they did it also on 9/20-ERC) I enjoyed the "Nighttime Listening" article in \#31 DX NwS. Many non-DXers I talk to ilsten to out-of-town stations with some regularity. To help cure some of the "sardine can" crowded CX on the BCB, couldn 't the FCC try extending the $B C B$ to a few channels above \& below it? $x$ There doesn't seem to be very many services usillg those frequencies, and moving them might not be a problem. I know there are international agreements to tackle, amd radio manufa turers would be required to intermational agreements to tack le, amd radio manufa turers would be required to (SSS is "Sunset Skip" or DXing at that time, \& SSB is Star-Spangled Banner -ERC)

BRUCE WINKETMAN - 4148 Booth P1 \#3 - Kansas City, Kansas - 66103
9/4. Greetings, etc. I really enjoyed ta lking via phone with Ron Schatz and ERC in Miami at the Convention the evening of $9 / 2$. It sounded like they were having a great time. One of these years I'll make it to a Convention. My congrats to everyone involved in the Pattern Book project. The mind boggles! Just one more reason the NRC has got to be the greatest organization for pxers in the world! And I'm really proud to be a member. DX has been almost nil this Summer but things have started to pick up. 8/11-WGM-1440 heard w/ID in promo @ $11: 17 \mathrm{pm}$. No sign of KEWI, only 60 miles to the W! 9/4-WWIC-1200 w/s/off-SSN @ $12: 58 \mathrm{am}$, announced:s/on of $6: 30 \mathrm{am}$. Is this a regular SP? WMRO-1280 $\mathrm{w} / \mathrm{s} /$ off-SSB (3) 1, announced Gam s/on. New apartment here is pretty good for DX . Most QRM is from TVI but living within $3 / 4$ mile of KMBZ's tower produces images, spurs, etc. I can really sympathize w/ERC and the rest of the FUN City DXers. I'd better s/ off so other Musings can get some space. Best of luck to all during the coming DX season. May you a 11 bag 50 TAs and hear Tarawa every DX session on the EC. 73 .

SAM WARING - Box 411 - Comanche, Texas - 76442
Greetings to a 11 NRCers! New member \#684,302 Musing, hi. By way of intro, I'm 15, a sophomore at Comanche High, have bean DXing for about nine months. Cnly problem is that my RX, best part of my logs, all veries, and some other stuff went up in smoke, literally. As a coneequence, I'm reduced to listening on an ancient RCA 56x3. However, the DXers alvays carries on. I have been listening as much as poor CX will let me. Not really too much to report, but here goes. $8 / 27$ produced a batch of oldies, WHO-1040, KSL-1160, WIBW-580, WLS -870 , KMOX-1120, WGN-720, and a couple of new ones, KGNC-710, Amarillo, and XEG-1050 Monterry. $8 / 30$ brought in KRNN-880, Lexington, Neb. and XEW-900, Mexico City. $9 / 9$ bounced a few odd ones with KSAI-1150 Salina, Kans., KFDI-1070 Witchita, Kans. making 123 heard. On same night I logged a real freak, 50kw KRLD-1080 faded just long enough to let me hear harmonic of WWV with bleep tones and announcer saying At the tone it will be five hours, 45 minutes Greenwich Mean Time." I was not able to hear tone as KRLD came back in. Explain that, you SWLs! Later I heard new KKYX -680 (formerly KBAT) $S_{a} n$ Antonio, which you'll want to mote in your little black books. Here's where I let my inexperience show. ERC, would it be possible to put in a list of abbreviations for some of us rookies that get lost trying to talk the jargon? When reading DX NEWS, I can understand about $1 \frac{1}{2}$ abbreviations out of four, and it gets dowaright discouraging! Sorry I conldn't make Coral Cables, but my bicycle cracked a rim, hi. Peace to all. (Welcome to the NRC, Sam, \& there IS such a list, in the New Member Kit, which is sent out of Boston. Have patience - you'll get it soon -ERC)

In fact, I can't remember better listening on the BCB. Of course, a new location helps. We're now about a mile from the Howard Johnson's in Hibernia, the site of last year $s N R C$ get-together, and there $s$ a new $R X$ in the shack: a Collings $R-390$
URR, replacing the $51-J-3$. Still here is the Collins $51-J-4$ and an $S P-600-J X-1$ HRR, replacing the IRCA Loop is having problems, since it now picks up 49 meter SW Hamarlund. The IRCA Loop is having problems, since it now picks up 49 meter SW
better than the $B C B$, so all DXing is being done with a $100^{\prime}$ longwire. New catche better than the BCB , so all DXing is being done with a $100^{\prime}$ longwire. New catches
here include $\mathrm{ZIZ}-554.65$, $10 / 102: 30-3: 02 \mathrm{CMT}(10 / 9,10: 30-11: 02 \mathrm{pm}$ EDT which we use here include ZIZ-554.65, 10/10 2:30-3:02 GMT (10/9, 10:30-11:02
in Musings - ERC) w/MoR plus a clear s/off; Tirana on 1214 at midnight $10 / 6 \mathrm{w} / \mathrm{Moh}$ \& definite ID, but two others were on channel; Holland was probable on 1367 @ 1:0 onwards $10 / 7$ as I heard much Dutch speaking \& several songs sung in Dutch (both my parents are from Amsterdam), so I've got my first Intermational Waters: I can t figure out the two carriers on 1325 \& 1325.5 which were hetting against each other, but I couldn't extract audio. Also, who is the SS on 1548? He's hetting abainst all the 1546 gang. Also recent new country is Panama-770 heard last Thurs day morning during a WABC SP, very strong. Has WABC changed its SP sked? The NRC TA Log is a tremendous help. Many thanks to Page \& Russ. I have detected a very weak het on 844 several nights running (but not $10 / 10$ or 10/11) and I'm hoping Tarawa will break through this year. 73s.

GRAY SCRIMGEOUR - 227 Hanna Road - Toronto 350, Ontario
Several tries for $D X$ lately, but nothing worth reporting until Thanksgiving morming, 10/9, for all listed below. TAs from Western Europe were quite good, with quaio at $S=6$ level or better from 158615541376136712951214 12051088854818773737 regulars at about 1 -zam. 1196 was audible, but seemed to have Auroral flutter. Sierra Leone's IS cut out France on 1205 @ $1: 56 a \mathrm{~m}$. 1313 had two stations © 1 a.m., with Spain presumably the weak audio on top (both unIDable). BBC-647 was quite weak, but appeared to be //-1088 station in GG until $2 a m$ EE NX an 1088 ( 647 long gone by then). I tried for audio on the new 1457 station, but could get only a variable-strength OC. CX to the W were quite good also, but nothing new. XEVIP-1560 was loud w/IDs @ 1:450m, someone was u/KOMA w/WKBW off @ 1:52 (SS), but not clear enough to ID. 950 had KIMN o/WPEN, w/a phone show from 2:20 tune-in, \& 960 was mostly CFAC w/ MNS weak, PLAYING NON-stop Anne Murray recording to the $3: 01$ ( $4: 01$ there) NX. Too many of the other frequencies were plugged with semi-focal non-IDing testers. My worst catch of the morning was a weak ID from a station on 1320, under another - turned out to be CKKW! I've been caught on it before, too. I don't know what my aims are for this year's season, caught on it before, too. I don't know what ny

## J. ALEX BOWAB - WKXI (FM) - Box 6689 - Jackson, Mississippi - 39212

WKXI pulled the \#1 rating (average $\frac{1}{4}$ hour shares) in city's latest Pulse. Our 19 topped WOKJ-1550's 17 share (we're both Soul out lets). Leading genera 1 market stati ons are WJDX-620 (13), WSLI-930 (11), WRBC-1300 (11). FM has come of age in Jackson! On AM: WMAG-860 Forest has for some time now been constructing a four-tower $10,000 \mathrm{D}-3$ for 850 . Vandalism damage has delayed completion Meantime they went ahead \& changed to $850 \mathrm{w} / 1,000 \mathrm{D}-1$. In New Orleans: WJMR-990 ddropped SS, went back to old calls WNNR \& rr oldies format - retains SS Sundays only. When last in New Orleans I drove down to tip of Mississippi River delta figure it's a fantastic Daytime DX location, since it juts far out into the Gulf $(70$ miles below N.O.) But the thunderstorm static was ferocious - listening was virtually impossible. I figure one could hear almost everything from Tampa Bay to Corpus Christi, plus Cubans and Yucatans. I will try again under (hopefully) bet ter CX. Compilation of stations heard there should be interesting. In Mobile WZAM-1270 (suburban Prichard) dropped $\mathrm{c} / \mathrm{w}$ \& now simulcasts its beautiful mx FM, WKSJ-94.9. My accolades - Pattern Book is priceless!

AS YOU CAN SEE, WE ARE BADLY, SADLY, IN NEED OF MORE MUSINGS. THIS IS THE NATIONA RADIO CLUB, BOYS - NOT THE EAST SQUEEDUNK RADIO CLUB! CERTAINLY WE CAN EXPECT MCRE, THAN JUST FOUR PAGES OF MUSINGS REPORTS FROM A MEMBERSHIP OF AROUND 600! LET 'S START STARTTNG TO MUSE! REMEMBER TO DOUBLE SPACE AND TO CONFINE YOURSELVES TO 30 LINES OF DX NEWS SPACE. USE ONLY OUR ABBREVIATIONS, AND FROM NOW ON, E.S.T

KEN ONYSCHUK - 12984 Page Court - Apt. 2 - Blue Island, Illinois - 60406 50 DX CX haven't improved since I moved to Blue Is land last month. I have been getting excellent readings of KCTA-1030 on my way to work between 7:15 \& 7:45 last : week just before 1 tune in on the local KX over WCGO-1600 at quarter of eight However tonight, $10 / 3$, their 50 kw are nowhere in sight as the BKB Celtics are playing an exhibition at 8. I heard a funnel cloud was sighted in So. Iowa tonight so I tuned the WX watch at $8: 05$ on WHO-1040 but nothing a larming reported. Fri. night 9/23 I caught good reception of the Dodger-Giant game on KFI-640 after midnight in the middle of a bowling alley. (It was so quiet he could hear a pin drop -ERC) Again I was frustrated in my efforts to catch XELO-800 s/off as rr pest CKIJ dominated. However as Sat. morn wore on I did catch interesting conversation on the 50 kW clear channel voice of Western America, KSL-1160, people calling in from all over. Thanks to the entire crew who put together the Pattern Book, a real treasure. Now to await the day pattern boo, where my main DX interest lies. However in the last week ray punch-out isn't till 6pm at work, so we'll see what goes. Sorry to miss out on all upcoming DX activities but I have limited time off from work. My one year at Century Steel is Oct/ 20 , but as of today I have no plans. I captured two stations all Summer, a real disgrace. I had a lit tle fun $9 / 30$ around 9pm on 1080. The Pangers on KRLD \& the Red Sox on wTHC with the Bostonians a bit stronger. I've got but five lines to go so I mioht as well close. I am looking forward to more frequent issues of DX NEWS in the mail. 73.

RICHARD NOEL ALLEN - Billings, Oklahoma - 74630
Although I have been a member of the NRC since last Autumn, only recently graduated from First, an introduction. I am 27 years old, single, and since 1961 , but only since 1067 on the BCB. I became int. while with the Air Force in England where the hobby is growing rapidly much easier to catch on that side of the Pond. My interests increased while are stationed at Beale AFB, California, where CX were oreat ments aren't too great, but I really enjoy there great for BCB DX. My accomplishan a technical monitor for Deutsche Welle \& R Noby. the Padio Canada SW Club. I use a Pioneer R. Nederland, as well as a member of frame aerial. The receiver has modent use a Heathkit SW-717; useless for BCB one TA \& I will be area where noise levelempting to work the BBCstations. My location is in a rural an early appearance of local thunderste good. This past DX season was marred by season is a great one. I must close season is a great one. I must close for now.
and please make ourself one of our regulars! (Welcome to MUSINGS, Richard,

AIAN MERRIMAN - Box 6 - Fairfax, Virginia - 2030
in Jersey I enjoyed the Convention \& am looking forward very much to November in Jersey. I just got a new RX, nrw H2-180A \& am in the process of building a new loop. I hope this season lives up to expectations but so far CX are not that good. A few Europeans noted $10 / 2$ but nothing exceptional. Only new one was the new BBC Foreign Service XR on 1u88. He had a good signal around amm. New domestic DX: 8/ 28- KAYQ-1190 w/ET/Mx, ID @ 3:02. 9/8-WLKR-1510 W/ET/TM/mx © 1:43, good signal on a crowded frequency. 9/9-WOGO-1550 ET/TT/mx @ 2:15, PoP, according to verie. 9/ (c) WPCF-1430 w/f/c-LT 2-2:15. 9/21-WESA-940 good $\mathrm{w} / \mathrm{ET} / \mathrm{mx}$ © 2. 9/28-I caught ID (e) 1:29 from WFWR-1090 during ET. 9/30-WAIK-1590 bombing WAKR w/ET/TT @ 1:50. 10/ 2" WKST-1280 good on AN © 2:58. CFGO-1440 logged for call change © 3:40. New veries have come from HJKA -540 KAYQ WPCF WOGO WEAC \& WESA. That's all from here. ver


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