"Watch for the anmal April

* Fool's Day issue of DXN..." (NJPC)
ON THE INSIDE $\qquad$
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Nelson

## NEW MEMBERS

* Carl Moore, Box 237, Brattleboro, VT 05301
* E. M. "Butch" Shank, 3344 Mentone Ave., Apt. 2, Los Angeles, CA 90034
* Larry E. Addison, 9 Lh 88th Lane, Coon Rapids, MN 55433 (re-joins)


## RENEWALS

Grubbs, Conrad....

## NOTES \&c FROM NJPC

We've noticed a bit of confusion regarding our listing on REPRINT \# A-17, in the recent list. A-17-a is the FIRST 9 PAGES ONLY of the whole article, thus excluding the abstruse mathematics. $A-17-b$ is the ENTIRE 40 PAGES, INCLUDING the 9 pages listed as A-17-a, so if you order both, you're duplicating, and we'll only have to waste our time refunding you the difference !

TO OUR CANADIAN MEMBERS: We don't know how things are up there, but here in Northern New Jersey, we cannot negotiate Canadian currency. For this reason, we find it logical to refuse to accept payment in Canadian currency, because we can't cash it this side of New York, or so it seems. Once again, we ask our Canadian mertbers to PLFASE REFRAIN from sending currency. USE POSTAL or BANK INTERNATIONAL MONEY ORDERS for all transactions with HQ. We are sorry, but we really can't help it, hi.

The Glenn Hauser MEXIGLENN LIST of Mexican MW stations which has appeared in IRCA's DX MONITOR periodically over the past two months WILL APPEAR here in DX NEWS. Glemn also sent us the pages of the log as he completed them, however due to the differences in publication format, we decided to run the entire log in one bulletin. For this reason, Glenn asked us to ship the copy back to him for a complete up-date. As soon as we receive the updated copy, we will min it in the subsequent issue. We also have several Mexican station patterns on hand, supplied by Wes Boyd. We will run those in an issue after the MEXIGLENN LIST is published.

Several of our members have commented upon the paucity of articles of both a technical and feature nature appearing in DX NEWS this season. As many of you know, a majority of the articles which have appeared in DX NEWS during past seasons was authored by Gordon Nelson, RJE and PT. These same three of us have accounted for a majority of this year's total. Page and I are quite busy with running the club, and cannot therefore do as many articles as we had previously. We understand that GPN has several articles in the research stages, and also that Bob Foxworth has more material coming shortiy. BUT WHAT ABOUT THE REST OF YOU ?? Surely other members have special equipment or techniques to explain to the membershipllf LET'S HEAR FROM YOU $1!1$

## NATHAN RECALSS PEACESSHP DAYS

alls Them 'Beautiful' and Seeks Contributions

By Pail. L. MONTGOMERY Abie Nathan sat in the commercial hotel off Times Square and smiled as he remembered
the brief career of his Peace Ship in the Middle East last Ship
year.
"Wh
"When I look back, it was a beautiful thing," said the ebulient advocate of love and moderation, talking of the loating radio station that
broadcast to Arabs and Jews last summer and fall, and through the Yom Kippur war. "Every night at sunset we Nathan said laughing softly at the thought of it. "We'd tell verybody to stop what they were doing and look at the sun and the sky and the sea. It's the greatest sh
it's all free."
Friday nights there was rock


Abie Nathan
music for the young people of
both sides of the conflict. "We found out the Arab and the Jewish kids litke the same musis,", Mr. Nathan said
'We got requests for the Moody
. "We got requests for the Moody
Blues from cairo, and we got requests for the Moody Blues
from Tel Avy"

Frem The New York Times, 3/10/74

Seekirig Funds Again

| Seekirig Funds Again |  |
| :---: | :---: |
| . Nathan, one of the mo |  |
|  |  |
| 25 years of Arab-Israeli fighting, is back in the United States |  |
| seeking contributions to keep |  |
| the Peace Ship afloat and | Broadcast 3,000 Hours |
| broadcasting He spent nearly | The Peace Ship, with a volun- |
| four years here painstakingly | g |
| raising the $\$ 300,000$ to refit the 180-foot coastal freighter for | he Mediterranean last Ma |
|  | Mr. Nathan estimates that |
| broadcasting, and now fears he might have to give up his dream. | 50,000-watt transmitter |
|  | reach 30 million Arabs and |
| "Il's incredible how little we need for what we can accom- | Jews. The station was on |
|  |  |
| plish," he said. "For \$120,000, we can keep the ship running for a year. That's less than | ney ran qut last Nove |
|  | The station pirated news |
|  | from the international services |
| per cent of the cost of ennefighter plane." | and stations like the B.B.C. for |
|  | re-broadcast with interspersed |
| Mr. Nathan is a 46 -year-old | comments. Dur |
| 1sraeli who was a fighter pilot for the British in World War | Nathan said, |
|  | lessen the tension by broad- |
| iI, than had careers in Israel as | casting funny items or news |
|  | about Elizabeth Taylor or Prin- |
| a restaurateur and art dealer before turning to peace. He first won attention in 1966 by | cess Anne instead of concen- |
|  |  |
| flying alone in an ancient bi- | en the money ran o |
|  | Nathan and the crew took the |
| plane from lisrael to Egypt to try to convince the leaders and talk. | ship to Marseilles, where it is |
|  | still berthed. He said he spent |
|  | a month there trying to raise more money, and collected \$11. |
| Devoted to the Cause | ds in the peace move- |
| Since then, he has devoted | or his ticket to the |
| all of his time and much of his fortune to the cause. His view is that hard-liners on both sides | United States and for his stay |
|  | He said his immediate aim was |
| of the conflict have been al- | to find $\$ 25,000$ to return the |
| lowed to put forth their views on war and confrontation with | ship to the Mediterranean, |
|  | where he hopes he can sell |
| out permitting attempts at mutual understanding. |  |
| Broadcasting in Israel and in | said, $\$ 2,000$ has come into the |
| the Arab countries is controiled |  |
|  |  |

Phone 703 - 354 - 2135 Before 2200 EDT *All Times GMT * Deadlines Are Saturday A slim column again this week. Apparently conditions continue to be worse than bad or everyone's got writers cramp. Here is what littIe' I have.

620 -DOMINICAN REPUBLIC HISD Santo Domingo, 2/10 1049-1100 w/"informas" "Padio Television Dominicana" and "Radio Nacional". (Schiller) -UNID Think XENK $3 / 30620-0659 \mathrm{~s} /$ off. Old style mx, like Benny Goodman, some old IA instrumentals, and a few band versions of current IIX, applause after every song. S/off had rooster crow at end. Anyone heard XFNK recently? (Gleason)
650 -HAWAII KORL Honolulu all alone w/telephone talk show $0650 \mathrm{MM} \mathrm{3/11}$. Hawailian heard. (Pejza)
675 -COSTA RICA TIJC San Jose, "Sonora" s/on 1100-1131, TCs GMT -6, frequent Sonora IDs, TCs and I Ded a couple of songs. (Schiller)
110 -VFNEZUEIA YVKY Radio Capital, Caracas $3 / 11 \mathrm{w} /$ monster signal $\mathrm{t} / \mathrm{in} 0450 \mathrm{w} / \mathrm{mx}$, long s/off anmt and NA 0455-0458, leaving CKVM in FF w/0500 ID dominating channel. WOR off. YVKY completely wiping out any signs of normal cuban jarmers here. New. (Sundstrom)
730 -DOMINICAN REPUBLIC HIZ Santo Domingo, 2/26 1027-1041 w/news, ads, and chimes. Strong over another SS. (Schiller)
735 -ECUADOR HCGB1 Radio Melodia, Quito $3 / 10$ s/on 1056-1107 fadeout, w/ID in SS and EE (!) at s/on. (Schiller)
790 -MEXICO XFFE Nuevo Laredo, Tamps. 3/12 0145-0200 w/program called neecuerdo ...con la voz inolvidable de Augustin" and old Augustin Lara songs. ID as "FE, campeona en auditorio". (Gleason)
920 -MEXICO XFOK Monterrey, N.L. $3 / 11$ 1306-1332 w/ranchera mX and ads for a cosmetic mail order firm. (Gleason)
1010 -DOMTNICAN REPUBLIC HIJP Santo Domingo, 2/25 1028-1043, "1nforman" and frequent TCs. (Schiller)
015 -EL SALVADOR YSC San Salvador 2/27 1118-1132 w/ranchera mx and madio Inte rnacional" Ds. (Schiller)
1090 -UNID Under XPQR for quite a while MM 3/11 0729-0805. Faded up about every 8 minutes or so for about 30 seconds. Mostly talk; one apparent ID at 0729 had "...Internacional F de M (?)... Ia Radio de Colombia (?)" followed by apparent mention of "Benco de Colombia" but not definite. Format sounds like Radio dèl Plata reported by Gene Martin and others, but no definite ID yet. (Pejza) There is also a HJ AN here, Father Jack. Best reception of LS10 occurs when the HJ is off. (ED)
1180 -VENEZLEIA YVNV RAdio Petrolera, Ciudad Ojeda 3/10 w/"Radio Petrolera" ID 0850 in between records, in and out of noise level (may have been WHAM OC supressing signal), noted while looking for chile. Have been munning a tape here after Brazil $S R$, for past couple of months, looking for Chile, but no luck yet. YVNV new. (Sundstrom)
1260 -MEXICO XFOG Ojinga, Chih. Radio Ranchito heard $3 / 12$ s/off giving sked as 1300-0300. (Gleason)
210 -UNID XE 3/11 1340-1350 station $W / M S T$ TCs, nortena mx, and ID as "Radio Frontera", so suspect XEMN name change from R. Exitos. (Gleason)
340 -MEXICO XEJK Ciudad Delicias, Chih. $2 / 25$ and $26 \mathrm{w} /$ boxing.match on 25 th , romantic standards in SS next night 0150-0300 best. ID w/jingle as Radio Amistad. (Cleason)
1345 -ECURDOR ?? Signs on between 1000 and 1010 daily, fair signals, thought I heard "Bien" in the ID on $2 / 28$ so maybe Ambato. (Schiller)
1390 -VENEZUETA YV?? Still frequent $1000 \mathrm{e} / \mathrm{on}$, think the D is Falcon (province) where coro is located. (Schiller)
1510 -MEXICO XFNC Celaya, Gto. $2 / 290150-0159 \mathrm{w} /$ regional mx on "Ia Hora Mexicana" Show asking for letters to Apartado 101. (Gleason)

Thats whats been heard. A few veries and other material on following page.

## ＊＊VERIFICATIONS＊＊

04
540－COLOMBIA HJKA Bogota，＂Horizonte＂v／1 from Humberto Pieschacon Carreno， Gerente Administrativo，（Schiller）
620－XEBU， $920-$ XEDD and $850-X E M$ v／$/$ from Roberto Boone Menchaca，Gerente，Apartado 220，Chihuahua．（Gleason）
650，1275， 1375 and 1463 COSTA RICA Mounmental Net，long friendly $v / 1$ back in 2 weeks from Mario deValle G．，Dept．Technico for $2 / 4$ ER report．（Schiller）
675－COSTA RICA TIJC Sonora，San Jose $v / 1$ in 9 days airmail from Hernan Alvarado R．， Adm．Cen．＂Cadena Musicaln．（Schiller，also next）
Adm．Cen．＂Cadena Masical＂．（Schiller，also next） 8 ／a from the QSL secy． 855－NETHERIANDS ANTILJES PJC2 Curacao standard cactus v／q from the QSL secy．
1160 －DOMINICAN REPUBLIC HIBG Sentiago，v／ 1 and colorful station card，＂Radiolandia＂ from Cesar Peguero S．，Dir－Adm．（Schiller）
180－BRAZIL ZTD65 Rio，v／q back in 3 weeks，\＃1 from Brazil，country 78．（Schiller） 300－MEXICO XEP v／1 on f／up from Esteban Parra，Gerente，Apartado 89．（Gleason） 1560－MEXICO XBSE Champoton，Camp．v／1 from station group HQ at Calle 12 No．112， Campeche，Camp．saying equipment recently improved．V／s illegible．（Gleason）

The reporters for this issue ．．．
Dave GIFASON－Scottsdale，Arizona RB90A，Sanserino loop Father Jack PENZA－San Diego，California SPR－4，Sanserino loop Ron SCHILLER－Lighthouse Pojnt，Florida HQ－180A，longwire IOm SUNDSTROM－Willingboro，New Jersey HQ－150 w／SB620 and SM2，HQ－14OX and DX－150A， longwire．

Some info from Bengt A．Ericson in Sweden ．．．
INTERNATIONAL NKTES A new pirate is on the air on 1331 kiloHertz，IDing as Radio itlantis．Proadcasting in Dutch and English，with English starting at 1800 GMT． itlantis．Proadcasting in Dutch and English，with English starting at 1800 GMM．
Address is P．O．Box 385 ，Dostburg，Holland．Bengt says extremely strong in Sweden and estimates power as at least 50 kw 。
SNWDN All of the low powered MN transmitters in Sweden have been closed．The only w stations still operating are the 6 high powered stations．They all carry Program 1 and are sked as per WRTH．Horby－1178 also carries some Foreign Service programs．

| Falun | $1223 \mathrm{kHz}, 100 \mathrm{kw}$ |
| :--- | ---: |
| Goteborg | $980 \mathrm{kHz}, 150 \mathrm{kw}$ |
| Horby | $1178 \mathrm{kHz}, 100 \mathrm{kw}$ |
| Stockholm | $773 \mathrm{kHz}, 150 \mathrm{kw}$ |
| Sundsvall | $593 \mathrm{kHz}, 150 \mathrm{kw}$ |
| Ostersund | $719 \mathrm{kHz}, 150 \mathrm{kw}$ |

For you longwave fans，the Swedish station at Motala on 191 kHz is on the air 24 lours a day with 600 kw ，non－directional antenna．Bengt says this station puts out a atrong skywave，and should be possible in the US．

The clipping that appeared in DX News \＃17，stating that Swedish Broadcasting was igning off at $9: 45$ F．M．applied to TV only．The radio remained on full schedule． II is now back to a full schedule，signing off at midnight．

Thats it．Next week is a skip，so will see you in 14．If you hear anything， slease report．Your support is needed． 73 －DX－ 820 ．

## editpr．．Ves Eoyd

## ө日O W．ILiberty

 Girard，Ohio 44480Wes Boyd 216－545－4543
Dr．Starr 216－534－1394
Hello
Looks like the noise has taken it＇s toll a bit early this year．Geoff Fox came down MM 3／11 and what a lousy morning it was．Between the loop \＆ my 550 ft 。 semi－beveridge nothing much was heard．Only new log was at 0500 W／Chattanooga u／WSPD 1370 ．

And as proof of the loasy conditions，this weeks DDXD thang．。

## ro＇s

Feb：：
4th．Ved．KCOG 1400－TGGEA 1150 （KDF）
March：
1st．MM．WEED 1390 （ELK）KFSA 950 （DS）
1st．Tu．W．JDY 1470 （ELK）
In future reports of $f / c$ stuff I＇d like to request more info on the test itself．I＇m sure more info would be more useful to all of us．How about an estimate of the frequency tone on these tests？How often do they ID？How long is the actual test？？And other such stuff．．Thankz gang－－
ohanges
580 CKAP ON Now NSP．Is automated MOR 2300－0600 EST．During these times IDs only as Kapuskasing，Canada＂（BV－per recent verie）
910 WGBI PA S／off time（w／SSB）is 0206 （ELK）
970 KDAY ND S／on time is 0557 （KDF）
$1240-\mathrm{CP}-\mathrm{MB}$ The Pas．．grant for EE station here，power unknown（CRTC）
1330 TRIE PA Has a MM SP per TRS．
1340 CKNR ON Approved use of 1,000 watts days（CRTC）
1380 WAMS DE Sked now 0530－0030 7 days a week（DS）
1460 WCMB PA Sked now 0500－0000（TRS）
1570 CKLM PQ Now operates during listed Sun．SP：，NSP ？？（TRS）
And as usual I left one out．．．
1370 KDAN MN address 3092 Military Rd．（PO Box 159）Newport，Mn． 55055
（this per recent verie of $B V$ ）
And the CRTC approved a network consisting of CFRN 1260 \＆CJOK 1230
to broadcast Edmonton Oilers WHA games．

## munset \＆evening

730 WPIK VA $3 / 10$ Noted $w /$ s／off 1916 （MK）
WMNA VA 3／10 Hrd．w／＂Mystery Sound＂contest 1921 （MK）
WPAL SC $3 / 10$ This one w／s／off u／WMNA at 1930 （MK）
740 WMBL NC $3 / 10$ S／off without SSB at 1915 （MK）
760 WCPS NC $3 / 10 \mathrm{Hrd}$ ．s／off at 1915 after local wx report（MK）
810 WCFC NC 3／10 W／news from＂N．C．News Network＂1858－1900（MK）
940 KTON TX $2 / 28$ Hrd． $2009 \mathrm{w} /$ many ads to $2015 \mathrm{~s} / \mathrm{off}$ \＆FM promo（KDF）
1110 WSF NY 3／9 S／off atop freq．in WBT null 1914－no SSB（TRS）
WBIB AL $2 / 26$ Fair signal at s／off o／u WBT 1930 （JF）
WKRA MS 2／26 Good signal w／local nx 1935 （JF）
1140 KLPR OK 2／28 Fair w／OK nx 2005 then C\＆W mx（KDF） 831
1420 TRMB TN $3 / 3$ Hrd．very weak at $1930 \mathrm{~g} /$ off（JF）
1560 PTAI FL 3／9＂Great American Country＂s／off 1930 without SSB 1930。 Was atop in WoXR null this time and again 3／10－Rat your heart－RjE out RJE（TRS）Now dat ain＇t very nice．．．HWB－－804＊＊fird this last yr NY $3 / 8$ Hrd．right after WCPK s／off 1915 in s／off $\mathbf{w} / \mathrm{FM}$ mention and no SSB，no sign of WWRL（TRS）Hey Tom，can you ship a bit of that＂no WURL＂out here？？HWB
At this time $I$＇d lise to thank $\mathbb{T R S} \varepsilon M K$ ．Reports from these two came
in just in time to make llie sunset section possible（or is it necessary？ ror this editione Sure woinde Fonked silly $\% /$ only four reportso emel
midnight to munrice
540 THLO WI 2/25 DX tent:: Signal S-9+ the entire test (RTE)
580 WTAG M $3 / 1$ Finally heard w/ MOR 0815 in THP null (DS)
KMJ CA $2 / 25 \mathrm{Hrd}$. o/u WIBW w/ the "24th。 hour progran" 0203-0236 (RTE)
710 CKVM PQ $3 / 11$. FF ID 0100 on top after $0058 \mathrm{~s} /$ Off $\mathrm{YVKY} \&$ WOR off (TRS)
IOR NY 3/11 Noted off air 0235-That gives? (MK) Also noted here 7 / CJRN alone \& strong-(HIFB) Maybe they was off to change batteries
+910 WGBI PA $3 / 4$ On top $\pi /$ CBS nx 0206 then $8 /$ off \& SSB till 0208 (ELK)
940 TINE CT $3 / 4$ Strong on ET 0156-0202 W/ TT (ELK) $3 / 4$ On ET $\quad$ // RR 0220, ID 0228, \& off 0232. 0/ WINZ (DS)
KGRL OR 3/4 Tried for $1 / \mathrm{c}$ but heard nothing w/ KIOA. Strong OC/TT came on 0319, looped SW. Hope nobody thought this was KarL (KDF)
UNid 3/4 Dnknown station west of here running on/off TT 0300-0400 Was mostly in noise while looking for KGRL f/c. HELP ! ! (TRS)
950 KPSA AR 3/4 Noted completing $1 / \mathrm{C}$ W/ TT 0152. Per list but was just
960 CFAC AB $2 / 23 \mathrm{~d} /$ CKMS 0250-0257 w/ local ads, then RR (JF) Is you sure it was RR? Been definate Cew when hrd. here! Hiw
970 T0AY ND $2 / 26$ Fair signal at s/on $0557 \mathrm{w} /$ SSB (KDF)
990 RNRY VA $3 / 3$ Strong OC/TT sounding like a POP 0116-0150+. Was of mox and WIBG, IDed at 0148 (DS)
WIBG PA $3 / 4$ Had ET/TT o/ WNOX 0331-0336 (ELK) 824
1050 WLON NC $2 / 26$ Hrd. s/on 0603 W/ SSB, very weak (KDF)
 from past? (DS) who can be sure, but you?? Betcha it was (Hirb)
 WEBK NH 2/25 DX test: Good w/ CESC 0042-0105. Many CW IDs (JF) Only hrd. CTIDs 0046 \& 0100 thru WGAR OC (MK)
KOFO KS 2/25 DX test: Noted in passing 0150, Unn. (RTE) Excellent on teat $\mathrm{F} / \mathrm{many} \mathrm{IDs}$,\& Ex by Carpenters. This was strongest of the 1220 tests ( JF ) Was the strongest of the 4 hrd . here, hi.- HWB
*1290 WCOw wI $2 / 27$ Had TT here 0ll4-0130 during listed $1 / \mathrm{c}$. No IDs but DF was OK. Tenative sent (KDF)
CJBK ON $3 / 3$ In well o/ whio $0216 \mathrm{~m} / \mathrm{RR}$, Rare-(DS) Is well done here +1330 WRIE PA 3/4 Yust have a MM SP as noted $\overline{1} / \mathrm{B} /$ on 0500. Lost at 0505 to PMBC s/on (ELK) You tryin' to rub it in or sumphin'??--HWB
1380 UNid $3 / 3$ weak TT 0110, off 0114. WANS ET took care of it, but KCII $3 / 3$ Weak TT 0110, off 0114. WAMS ET took care. of
/e listed, is this it (DS) Ask GF, don't ask me.。HWB
1390 WERD NC $3 / 4$ OC/ET 0031-0045+ I/ IDs every minute, u/ WFBL (DS) 3/4 ET-TT-OC, ID at 0025 (TRS) Thought this was the $1 / \mathrm{c}$. $\mathrm{H}_{\mathrm{HB}}$
TRAM TA $3 / 4$ ET/TT/OC $\pi /$ D 0026 right after mRED ID (TRS)
1440 CFHO ON 2/28 Poor signal, but hrd. an ID 0019 (KDF)
1450 KNPM KO $3 / 4$ DX test: $\quad$ / Cil 10 s 0115 \& 0116 thru jumble \& nothing else. Called 0140 \& they said only other call from PKH (TRS) Very weak $\mathfrak{u} / \mathrm{strong}$ WOON. CT IDs 0125 \& 0128 w/ 1K TT between. (KDF)
1460 WFM AL 3/4 ET/TT $\quad$ / IDs for AM-FM, 0103-0120+ (DS) Arrgghhh-HWB + WCMB PA $3 / 11$ Noted s/off 0000 \& annct. $3 /$ on 0500. Change $\log$ (TRS) Is $0000 \mathrm{~s} / \mathrm{off} 7$ days, or what? Log sez 0100 weekdays-HwB 1470 WJDY $403 / 5 \mathrm{~F} / \mathrm{c}$ W/TT OO18-0027. Poor $\mathbf{W} /$ heavy WMBD QRM (ELK) 1520 коми ок $3 / 11$ Hrd. 0202 thru unid TT (MK)

Fare of 3/11 On ET at 0109 (MK) Was KB off or sumphin' 3 ?-HWB
1560 Fary Ii $3 / 11$ DI test: NO SHOW (HWB-GF) If on, not hrd. 0100-0130 (TRS) $+1570 \mathrm{C} \quad \mathrm{M} \mathrm{PQ} 3 / 10$ Sisperpest on 0300-0600 in listed SP. Was running tape in hopes of possible Ers in the listed SP. NSP now?? (TRS)
1580 WFVR IL $3 / 4$ Very strong on ET w/ me 0300-0315 (RSLK)
1590 WAKR OH $3 / 4$ Noted off 0300, only VETT there (DS)
THE CRE THIS TIME:
JF Jeff Falconer Clinton, On. Kenwood 9R59DS \& SMI
KDF Karl 4th. Villa Park, Ill. HQ160, SM1, 100 ft . Lit
ELK Farl Krengi Middleburg Heightz, Oh. HQ18O \& looped
MK Mark Catz Brookline, MA HQ180 \& 4' AA loop HS Gringo Schaidt New Caskle, De HQ180 \& SM2
TRS Tom Sundstrom millingboro, NJ HOL5O SM2, HQ140,DX15O \& LI
py Prian Vernon Leaf Rapids, Mo Equiptment unknown.

WHAT IS A FREQUENCY CHECK?
Page Taylor

Frequency checks have been confused and mistaken for equipment tests and even heterodynes from adjacent-frequency foreign stations. How can we distinguish between a real FC and something that isn't?
Although it is no longer required by FCC regulations for AM stations to monitor their frequencies through a monthly measurement, many still do so, and the format of the frequency check may be as varied as regular-schedule formats. Most often, however, you will tune to a frequency and hear a steady 500 or 1000 -cycle tone, interrupted by an ID either in voice or code (if you're extremely lucky, hi! The normal duration of a frequency check is fifteen minutes -- if you're tuned to a tone for a period significantly longer than fifteen minutes, chances are, you're hearing an equipment test. Some stations, particularly those in the southeastern part of the United States, test with a telephone dial tone, pitched considerably lower than the usual tone. Several stations still ID in morse code, helping the monitoring company and the DX'er ID the station on a crowded frequency.

Several years ago, it was considerably easier to pick out an ID on a frequency check -- unfortunately, this is no longer the case. The usual period of station identification is right at the beginning of the test, and at the conclusion. A few stations still break in the middle of the test period for ID, but these are few in number, and seem to be decreasing rapidly. It is wise to consult the Inter-Club Frequency Check List for the period during which you intend to listen, and tune to the frequency of the desired station several minutes before the test is due to begin, in the hopes that you will catch the station coming on with an ID.

On the other hand, you'll hear pretty nearly everything and anything imaginable on an equipment test: music of all kinds, from classical to hard rock (some lovely stations play an entire side of an LP album, then flip to the other side and play it as well, all without one single ID!); endless open carriers (vis a vis WBZ/KDKA on a Monday morning); tones of various pitches ("London blitzkrieg" tones); station promos ("WDEN is everywhere"); fun and frolics at the transmitter site ("Hi, all you kiddies out in radio-land! Can you hear me? Ha, ha, ha"). As we can see, some of these practises are outlandish at best to illegal at worst, but these are the things that can be heard on pretty nearly any MM "experimental period" time slot. The duration of an ET can be anything from a few minutes ("Good morning! WKER Pompton Lakes testing. Good night!") to all morning long ("WKBA Vinton... we'll be here with you for the next four hours while we adjust our transmitter, so why not stay with us awhile...").

DX'ers on the east coast have a problem DXIing frequency checks which is not only confusing and time-wasting, but annoying. Frequencies such as 1440 and 1240 which have checks listed for a certain time will almost always yield the proper 1000 -cycle tone (during winter months), but not nocessarily because the desired station has showed up. If the tone refuses to break after fifteen minutes of monitoring, and is still present an hour or so later, chances are you've got nothing more than a heterodyne from Radio Luxembourg on 1439 or France on 1241!

As for the art of verifying frequency checks, it is imperative that all times of tone-on and tone-off be given, plus exact wording of station IDs if possible If no IDs are heard, it is not advisable to request verification from a "suspected" catch, as there is no verifiable information. Such tenuous loggins of tones could have been any one of a myriad of stations testing, particularly if on a graveyard channel. For further detailled information, see the Frequency Check List, available in NRC Reprint \#L2 ( $64 \varnothing$ pp to Members, $80 \notin$ to non-members from NRC HQ).

Time for another NAC PB updater, Were still waltiag on meveral aew or changed patterna and hopefully wedil have these woon. Opee thay arrive and sre properiy acaled for sae in the FB asother updater will be published,
550 \#NaC OH New night pattern--add to PB--300 mw/m.
KOI AZ nondirectional----add to $P B$
610 CJOX NF new lokm night DA--add to PB--000 $m=1 / \mathrm{m}$,
CIrril MB nondiroctional-----add to PB
680 MSS NC new night pattern--add to $\mathrm{Fin}-300 \mathrm{mv} / \mathrm{m}$.
600 KPICT TX nondirectional-----add to Pll
810 CBOA AB new 50 Mr night DA--add to $\mathrm{PB}-700 \mathrm{mv} / \mathrm{a}$, 330 CJos NF new 25 HF night DA-add to 1 R- $200 \mathrm{mv} / \mathrm{m}$, 390 KEVP NM nondirectional--.-add to PI 1070 nase TX new 5 m night DA--add to PH--300 $m / \mathrm{m}$, 1270 IETC IL new 500 t . night---add to PB--300 $\mathrm{wN} / \mathrm{m}$, 1200 scuil AZ nondirnetional…...add to Pill
1300 kTop CA nondirectional-...-add to PB
 1390 unod MS new 5 lim night DA--add to P3--300 mi/n, 1410 שort NY new llikr wizht DA--add to PB--300 min/ 1460 mF OH new 500 wt . night--add to $\mathrm{PB}-300 \mathrm{mv} / \mathrm{m}$, 1470 Chell MB new lokm night DA--add to PB- $200 \mathrm{mw} / \mathrm{m}$, WTO NY new llim night DA--add to Pll--300 $\mathrm{mr} / \mathrm{m}$, 1000 UNOP FL nondirectional-----add to Pll
and delete the following patierna
710 CJOX NF now on 10
960 -CP- no word on this for several years--think was dropped ITAD CE Drop pattern shown, but has re-applied to operate nightin. 1360 woes Fh Drop pattern show, was initial decision only.
1380 -CP- Nil Think this was dropped..
1390 wion $N Y$ Drop pattern shom-application dropped
All additicas/corrections, and general $\operatorname{lnfo}$ whasld be went to me at 900 W. Liberty St.-Girard, Ohio - 44420




PAOPAGATION $\qquad$

The following two pages are a reprint of an article which appeared in DX NEWS on February 19, 1972. In keeping with some of the comments made in our last feature on propagation, we are presenting this item again, as it ties in with many of our comments. Similar studies on this side of the Pond are discussed brieny in who may have detailled records of what Irans-Atlantic stations were audible on rum would be interested in hearing from anyone out these who might be interested in organising some Simultaneous Listening Contests for next season with these factors in mind, and selecting several likely frequencies and several unlikely ones for monitoring.

*     *         *             *                 *                     *                         *                             *                                 *                                     *                                         *                                             *                                                 *                                                     *                                                         *                                                             *                                                                 *                                                                     *                                                                         *                                                                             *                                                                                 *                                                                                     *                                                                                         *                                                                                             *                                                                                                 *                                                                                                     * ABOUT THOSE MYSTERIOUS CHARACTERS WHLCH APPEARED ON SEVERAL ISSUES EARLIER THIS SEASON..... they were ancient Egyptian Hieroglyphs. Without going into too much unnecessary detail, these characters are primarily alphabetic (the ones we used) although hieroglyphs as a whole comprise alphabetic, phonetic and ideographic characters. In a rather rudimentary way, we attempted to take the anglicised Arabic phrase used for ID purposes by Cairo Radio, namely "Hana al Qahira", or, "This is Cairo". (For the sake of simplicity, the translations used here are not entirely strict in nature). In H1eroglyph, vowels are predominantily absent, as they are in Arabic, which presented some problems, however, we persevered despite them. For these reasons, we found it expedient to omit the "a" sound of the "al" and likewise the very short "i" sound in "Qahira". This left us with the letters needed to conver phonetically, the gist of the "message", or Wi th the letters needed to convey phonetically, the gist of the message", or Hieroglyphs was that used by Sir E. A. Wallis Budge, noted English Egyptologist, whose system closely parallels that of the original translator of the Hieroglyphs, the Frenchman, Champollion. Thas, we arrived at the symbols which appeared on the front page for several weeks. We took one liberty in the use of the same glyph for the letters "R" and "L", which, although entirely permissible under the Budge system, is quite confusing, but my inability to accurately draw the reclining lion which also represents "L", I took the easy way out, hi. But, enough of this trivia. -RjE(c)

$\square$ $8<$ N

Page 14 shows a sample of a new Broadcast Sertice which is available to Industry or individuals who may be interested in obtaining a written history of a given station. The service is called "Broadcast Proffile", and further information as well as a catalogue may be obtained by writing to BROADCAST PRO-FILE, BOX 982, HOLLYWOOD, CA 90028. We requested two samples of these pro-files", and, in lieu of trying to describe just what is contained, we have decided to ran one here in its entirety as a sample. Standard rates are $\$ 5.00$ for AM Pro-files such as we have obtained for WSJS-600, Winston-Salem, NC; $\$ 2.50$ for FM Pro-files; and $\$ 10.00$ for Custom Pro-files (stations not in the catalogue). Many of the stations listed are non-existant stations which have become deleted in one way or another. For those of you in college broadcasting curriculums, these might be a most useful resource for papers on early broadcurriculums, these might be a most useful resource for papers on early broadcasting, which is a most comm paper topic (I know, I went thru that a few years back, hi -RjF). We also have a list from Broadcast Pro-file which shows by Xerox copy to members at standard reprint rates.

## कCar才lon *etion

In the concluding aegment of af our articie Medium Ways Sigal Pathe wo Introduced the notion of the Miduinter Anomaly te explain certain obesrwed


 reseption pattermin noted by the author and others simes the lant munapot mintmum.

Daplint the period of the last manspot minimum (anT 1962-19f4). TA i puatitinns bngan far recover from the effects of eumaner late in Augant and improw quite stmaitly menth after math mintil they roselint thelr peah turlmis the darlonel
 through doylight ragiens of the globe, it anamed itorieus that eondiliens thould regularly peak aqpund Devembiry 20ch when the number at derkawse hou e ovar the North Allanife raaches its imaximum. Hack in the Teart of manspot alniznum thit tndend evermed to the the kntt. A the feern font by fend me tern= to



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 s well-known lonoapheric fdiowyicracy of unkndwn origit calied the Mitwater Asnmaly cauld be rispoasithle for the pattera wes'd been obserrinis. While the MwA hal naver hefore buen suggested as a foctor in Mw fang-distance prop.
 good Th conditimes which her become all forfamitias duriag the pint fow reara, lanospherle research asitig a varisty of terliniques has showe that the MwA is

 knawes of the MFAA through technigues guch os rochets, sounders, riometers and the IIhn. the following disgramie should roughly ahov the differene between


Dueling manepat mimimuan shen the Mwh is slosknt, ennditione should Improve
 bogin to fall off. Hest conditinns should definiloly ofeut dirping miflwinter. In
 the liegiening of Novemher whan the Annmaly benles to appanpi by the midille of winter ce shautil be theroughly "anumalind" after whlth they should then lingia to improvs. Thue wh enpeci a douhle-hump in the quality of everese FA ex in the yeara of aunipot sannimum, and a single peah at midefater at the boltom of the numepat cyslin. Mesp lo mled that we sre ipeaking in ferme of ayerages and are noglecting auroral/geomagnatic effects.

EEL.OWi Napeeied paite rne in quality of MW TA DK racapilion fer aumpot minimum and sunspot matrmumi Pletalt Montlly average of the number of North Ameriona stations heard per nijht in Finisnd as tabulated by membera of the Fimalah DX Club SDXK. While the effects of ifararat at iturbancei protuce sime iccasional "dips" in the graphe at add times, it'e jretty clear that the sexpecten ainale peak io \#ouble pean dauble pe

mpectad pithern
if TA mec |ptina
iftirg sum pot
 1.20.

Expected pattern in yesr of high sumepot totluttyr ein tmpiviv until shout Nov, Ints than fall ulf stan tu MwA...


## BROADCAST PRO-FILE

HELL YNOOD. CALIF aFMIA क्याइ
STATION

The Winston-Salem Journal-Sentinel Company of Winston-Salem, North Carolina, recieved authorization to construct and operate a new broadcast station in August, 1929. Call letters assigned were WJDZ. WJDZ was assigned 1310 kilocycles with a power of 100 watts and was installed in the licensee's newspaper building (built in 1927) at 416-420 North Marshall Street, Winston-Salem. On October 2, 1929, before going on the air, WJCZ recieved authorization from the Federal Radio Commission to change call letters to WSJS, signifying the publishing company's two newspapers, "The Winston-Salem Journal" and the 'Twin City Sentinel". On Thursday, April 17, 1930, WSJS made it's debut on the airwaves, using an RCA 100 watt transmitter atop the Journal Building

Station Manager by September 1931 was Norris L. O'Neil. By 1933, the stations slogan, used both on the air and off, was "The Journal-Sentinel Station". By 1935, WSJS became an affillate of the Columbia Broadcasting System network.

The Winsten-Salem Journal Company, as well as it's WSJS, were sold on July 30, 1937 to the Piedmont Publishing Company. The sale of WSJS was approved by the Federal Communications Commission on May 1, 1937. Publication of the two newspapers, under President of the Piedmont Publishing Company in late 1938; concurrently Norris L. O'Nei was appointed General Manager of WSJS

Power of the station was increased from 100 to 250 watts in 1939. Also in 1939, WSJS switched affiliation from CBS to the NBC-Red Network. By 1940, the station installed a new 375 foot Lehigh vertical radiator at it's transmitter site at 420 North to 600 kilocycles, and to Wsis was granted permisston thange requency March 1941. WSJS switched to the 600 ki locycle dial position. Power was increased to 5,000 watt's (in lieu of the previously authorized 1,000 watts) in 1941. WSJS, concurrent with the power increase, moved to a new transmitter site near Winston-Salem, and moved studios from 416-418-420 North Marshall Street to new quarters at 419 North Spruce Street.

Harold Essex, with WSJS since 1939, was appointed General Manager in 1942, but, in 1946 became Vice President and Managing Director of the station. In the mid-forties, WSJS installed a new directional antenna system, and began operation with two different patterns for day and night use. Studios by 1951 were located at 419-421 North Spruce Street. Chief Owner Gordon Gray was replaced as President of licensee Piedmont Publishing Company by W. K. Hoyt in 1957, but, in 1958, once again became President of WSJS's

On May 1, 1967, WSJS was transfered to the Triangle Broadcasting Corporation, a On May 1,1967 , WSJS was transfered to the Triangle Broadcasting Corporation, a
wholly owned subsidiary of the Piedmont Publishing Company. Upon completion of this transfer, Harold Essex became President and General Manager of WSJS. In 1968, studios were moved from $419-421$ North Spruce Street to a new radio-television structure dubbed "Broadcast House", which was located at 700 Coliseum Drive, Winston-Salem.

Multimedia, Inc. acquired WSJS in October of 1972. This sale (along with WSJS's FM and TV adjuncts) gained FCC approval on September 7, 1972. On April 11, 1973, William Harold Essex, known at the station as 'Preacher', died at age 68. He was President of WsJs's earlier owner, Triangle Broadcasting Corporation, and General Manager of WSJS.

Today, WSJS, North Carolina's seventh oldest continiously licensed broadcast station, operates on 600 khz with 5,000 watts (separate directional antenna patterns for day and night operation), from studios at "Broadcast House", 700 Coliseum Drive, Winston-Salem, North Carolina, and continues as an NBC Radio Network affillate. Licensee is Multimedia, Inc.

Nu 570 590
600 600
630

## W. Smith, CE

 HPI A Preazeale, TD H. C.$\begin{array}{llll}70 & \text { W AqB C W. R. Loyy, CE } \\ 80 & 2 \text { B V I } & \text { L. N. Milis, M }\end{array}$
780 Z B V I L. N. Milis, M
790 K UfL F N. N. Sartain, CE C

## 800 840 850

W. Ashley, CE
L. C. Blizzard, VP C
R. G. Sevell, C E G
R. A. Schlottman, CE B
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Sch 11 le
Reyrold

1370


W S W R. Martin, PD
KTWW R. J. Bodden,

## WASB-AM

# WASB-RM 70.898c|m 

103 HARDING ROAD GLEN ROCK, NEW JERSEY 07452

AMERICAN STANDARD BROADCASTING 201-444-2204

Mr. R. J. Edmunds
P.O. Box 291

Hawthorne, N.J. 07587

Dear Mr. Edmunds:
Many thanks for your telephone call on July 24,1969.
Because of your interest we were able to correct the
problems under which you received our transmission.

Immediately after our conversation, transmissions were ceased and a careful engineering check of our transmitter was made. It revealed an electrical short between the final plate and the $B+$ power supply, thus an increased power factor of 20 to 30 percent was experienced. Also
a direct connection to the grounding surface was discovered
allowing extra radiation. As of this writing, both are being corrected.

Enclosed please find a technical sheet of station data.

Once again, many thanks for your interest. Hoping to be
in contact with you soon, I remain,

Sincerely yours,


Chief Engineer, WASB radio
"Serving The Quad Cities"

103 HARDING ROAD
1200 KCS .
American standard broadcasting
P.O. Box 291

Hawthorne, N.J. 07507

Dear Mr. Edmunds
This letter will serve as verification of your reception
report of Radio WASB. Checking with our logs, your information
has been found to accurate, with our program schedule.
We are therefore pleased to confirm your hearing us on
Thursday, July 24,1969 between the time of 1830 and 2015 EST.
Below you will find technical station data that might interest
you.
WASB TECHNICAL INFORMATION
TRANSMITTER: LAFAYETTE KT-195
AUX. TRANSMITTER: LAFAYETTE KT-195
ANTENNA SYSTEM: TEN (10) foot length of \#20 wire 17 feet above average terrain. ANTENNA IS END FEED FROM XTRM. POWER OUTPUT: BELOW 100 MILLIWATTS
POWER INPUT TO FINAL PLATE: 100 MILIIWATTS
PREQUENCY: 1200 kilocyc les ; CRYSTAL CONTROLED
STUDIO FACILITIES: TWO STUDIOS; ONE MAIN PROGRAM STUDIO,
EQUIPMENT COMPLIMENT: TWO GENERAL ELECTRIC BROADCAST TURNTABLES, EQUIPED WITH PICKERING P/AC-1 CARTRIDGES. TAPE RECORDERS: 1 - Roberts Model 720

1 - Concord Model 99
ONE LAFAYETTE BROADCAST MONITOR -MOdel LR-300
ONE CUSTOM BUILT AUDIO CONSOLE, EMPLOYING:
2 - Transistorized pre-amp/mixer
units- LAFAYETTE Model 99t4535
1 - Power amplifier- Heathkit Model AP-24
MICROPHONES: 1 - LAFAYETTE Model 77
2 - ROBERTS Model F-7d
4 - CONCORD Model WM 2010 H

## musings of the members

BILL ANDRES - 351 Union Street - Springfield, Massachusetts - 01105 Old floor model radio turns out to be a Bendix 1525-U, AM-FM, w/a 10" speaker - on the floor. Hard to listen to, so it's relegated back to just 1510-1600. Sat. AM 3/2, I got home from work, spun the dial superficially, and spent a ha if hour listening to the most enjoyable SS DJ I can recall, R. Clarin, With the jock talking up records. so tight that, in the words of Boss Bill Ross, "You couldn't stick a pin in them." Sunday SSS I was surprised to hear WFIN o/ all on 900 , just as loud as in NYC. MM $3 / 4$, the Zenith lost its virginity and received its first split, R. Paradise-1265. This'n must have boomer in on better sets. Tape sent of 12:25-12:50am. WEED testing on 1390, ID @ 1:17. Mystery, station on 1330 (FF?) plahing cl mx, o/a11, \& I thought it was WEVD, but apparently s/off @ 1:03, after playing two logos with a 'Yellow Bird" melody. No discrenable anthem. Who, please? I ws listening t, a CBS editorial on 1390 when boom! "Tais is WFMJ, Youngstown, Chio". No warning, no tone, just the ID © 2. SS on 540, in louder ater I reversed the loop and used the eight turns for the ant enna. Jock (and even the jingles) said (and sseng) "Or-iz-ontay. IDXD lists "R: Horizonte" HJKA. Same one, huh? One other SS mystery: 620 , s/off © 11:58pm, mentioned Santo Domingo. Totals now 179. 34 s .
CHARLES REH - 34 Garrison Avenue - Leamington, Ontario-N8H aP2
Since last report: $2 / 4-$ WMJJ-1190 P.R. W/R. Rock IDs \& J.S. Top 40, 1:07am, mixing w/HJCV; KGRL-940 Ore. r/c-TT 3:20am u/KIOA. 2/11- KNIE-1530 Wyo. logged for ca 11 change o/4 KFBK asm. 2/13- WSMD-1560 Ma. W/ $\mathrm{KI} / \mathrm{mx} / \mathrm{OC}$ ending @ 3:33am. 2/18= WCJW-1140 N.Y. ET/TM/OC 12:32am; Anguilla-1505 DK starting © 2:30am, bothered by 1500 and 1510 TMs . 2/25-WKBK-1220 N.H. TEST 12:49am with only the CW IDs making it; WOWL-1240 Ala. 2:47am w/rr; KCLS 600 Ariz. s/off 3:07 w/s/off announcement AFTER SSB; KPOF-910 Colo. w/'Mx through the Night" (religious mxy 4:23am in the clear. 2/26-CBQ-800 Ont. s/off 1:08am EST, CKIH off until 3:15. $3 / 2=\mathrm{KZEY}-690 \mathrm{Tex} . \mathrm{EF} / \mathrm{ma} / \mathrm{TT} / \mathrm{OC} 5: 18 \mathrm{am} \mathrm{w} / \mathrm{CMBC}$ nulied and o/WTTX, no sign of XAIRA; WDDY-1420 Va. r/c-TT u/WHK 5:32m. 3/3- CBKI-1110 ont. w/CBC NX //. listed is XFJ. KWPM-1450 TNST not hearional noted on 930 @ $12: 23 a m$, only one listed is XEN. KWPM-1450 TEST not heard and WSAI went off e 2 when their DX was supposed to start. CBLo-1570 is off AN; s/on is Gam, s/off is lam Mon--Thu., $2 a m$ Fri. \& Saty. Not sure of Sumay s/off time. CHLO times are EST. 73.
IAVE SCHMIDT - 42 Chelwynne Road - Castle Hills - New Castle, Delaware - 19720 And away we go with a can of Dr. Pepper in one hand! DX: $2 / 25$ WERT-1220-TEST weak u/WGAR OC/CHSC/SS 12:08-12:18am w/al1 kinds of stuff. KCMM 1\$50 2:40-2:53:35am w/ET-rr, strong, but fading deeply. I missed WKBK; I thought they were on 20 minutes earlier, blah. $2 / 26-\mathrm{WVAB}-15506: 14-6: 31 \mathrm{w} / \mathrm{assorted}$ things, daytime regular hear. 2/27-WIAN-1390 1:15-1:30pm w/ittle WAMS splash. Past reports to them have gone unanswered, "twas another try and it worked. $3 / 3$ brought WNRV 9900 ET w/TT of WNOX/WIBG etc. $1: 16-1: 50 \mathrm{am}$, doing nicely. $3 / 4$ - WEED 1390 1:31-1:42 w/OC ET * IDs every minute or so, WFMH-1460 EM/TT 1:02-1:18am, and another try at WINE-940, bagged on ET W/rr 2:24-2:32:15am. Funny thing about FW, fellow that just hired on the railroad and who is working with me went to college at Cullman, and was quite shocked when I told him I got it here. He said you couldn't hear them ten miles out of town. V/is back from WCNX-1150 \& WLAN-1390, both quite friendy. WIAN verie, when I mentioned past reports had gone unanswered, brought the comment that it could have been due to "inept secretaries of that great American rip-off, the Post Office." Remember, the $10 \%$ you use helps pay the wages of the IDXD editor, hi! A11 the rest of the stuff to Homer. Is Bob Fischer still around since his move from the area? That should do it for now, so 73 s .

LET'S SEE MORE MUSINGS FRCM MORE MAMBERS! DOUBLE IPACE, PLEASE! MUSE!

BILK ANDRES - 351 Union Street - Springfield, Messachusetts - 01105 If reception this past MM $2 / 25$ on the auxiliary floor model FX is any indication of its impense potential, I may bounce the Ze ith down the steps again to improve its reception. And then leave it there. The floor model gets all sorts of splits like 1190860 and 1260 (splits? 2 -ERC) which the Zenith doesn't get because WSPR's sticks are about 30 ' away. Sunday eve $2 / 24$, marming up for WGAR to go awah, WCHE o/WKBN, easy log 6:15-6:28. Iater on, YVOZ-1200 W/ WCAI, 11:38-11:58. WGAR s/off © 11:59:20. I tried for WERT, but I can ${ }^{\circ}$. count ' m , even if it was they with code IDs © 12:06:45, etc. WKBK's TEST wes in, lot of Beatles ma \& code TDs after every song. It took me till 1:03 to ID them. They come in here better by day! They were buried by CKCW, CKSM \& WGAR's outThey come in bursts. Later an 120 , a WGAR IDed testing @ 3:03, then, right on its heels, I heard a test 10 with MLam mentioned. Drool. I hope they were approached by the cPC. I couldn chase them further, because WGAR spilled its 1 k TT all over the channel. I also calug SS w/"Mexico" on 1220 @ 3:02. AllI have in the way of a foreign log is elght IDXDs. Iatest one shows XFB, Radio Mill, on 1000 - who are they? I heard XEXR
-1030 , R. Centro, $1: 50 \mathrm{am}$. Mystery here - I heard CBS NX on 1560 , YL, then a gry -1030, R. Centro, 1:50am. Aystery here © Ioff © 2:07, no SSB. Said back on at 6. No CBS listed on 1560 - help? Totals rise to staggering 158. (XEVIP is the 1560 CBS , Bill! -ERC)

BILL FAIT - 346 Wa lworth Frive - Cleveland, Onio - 44132
I was just reading •"Sun, Farth and Radio" by J. A. Ratciliffe. It's a good book for answering everything you always wanted to know about propagation, but were afraid to ask. Now I'Il list my DK: Ca 2/2II. nulled WFBL for WNUS$1390 \mathrm{~W} / \mathrm{PSA}$ and local NX © 12:30em. I had a strong opening to the S on $2 / 23 \mathrm{with}$ Cubans all over the band incluaing a paralell broadcast kiling WMAQ- 670 and CBF690. CEMmg40 was getting ruined by XFQ. On MM $2 / 25$ on 1220 WGAR had an on/off OC $\mathrm{w} / \mathrm{voice}$ announcements every little while. Under them I hard CHSC long enough for report $\mathrm{w} / \mathrm{c} / \mathrm{w}$ until $1: 58$ when KOFO went over them, giving adaress in Tansas and requesting DX reports. At 2:40am I got an excellent sigma 1 from KGMO1550 which was off/on w/rr, IT \& jingles, enough for report. Why dan't some of you propagation experts out there write an article on why shorter skywave reception (around 200 miles ) is so often mmulable? 73. (Thanks for the kind. words, Bill! -ERC)

CHRIS IUCAS - 89 Bound Hill Road - Fairfield, Connecticut - 06430
This will be my last Musing for a while as I have a few months of months of active duty coming up with the Army Signal Corps at Fort Gordon, Ga. February DX: 2/1- WPEL verie received. WWRL-1600 was off this AM allowing new logging KAIZ-1600 Mo. (3) 4:Olam. There was QRM from unn WKEN ET \& an unID. I thought this unID had IPI NX, which someone in DX NEWS recently said KATZ had. MM 2/18- WTIV-1290 Pa. TEST
 2:46am. MM 2/25- No WFPT TFST noted here, much too much QRM. CKSM-1220 Que. logged in FF @ 12:07am, dominating frequency. Unn WKBK TEST was very difficult I heard very littie besides code IDs. Verie recelved. CJSS-1220 (unn) noted. w/ EE rr programing, s/off 1:03. CKSM went off a bit later, leaving CHSC-1220 $\mathrm{c} / \mathrm{w}$ EE \& XEB-1220 SS, plus intermittqnt WGAR EF. I forgot $2 / 21$ SSS - WFRB -560 Md . o/a11 © 6:30pm, s/off 6:45. CFCS-560 0nt. © 6:36pm briefly. CFCS heard day earlier at same time much better but no ID heard that first day. $2 / 27-$ SSS WBJC= $1460 \mathrm{~W} . \mathrm{Va}$. easy @ $7 \mathrm{~s} / \mathrm{off}$, after I noted WSLW-1310 doing well @ s/off. Digging on 1000 hoping to find WRYZ Fls. I came up instead w/WREM Ky. e 7:15 s/off. © I didn't even know they existed, hi. $2 / 28$ SSS-Very good, w/strong signa is from EC Fla: WOBS-1360 Fla. w/screamin' soul @ 6:4 4 pm on top. W/strong signals from EC Fla: WOBS-1360 Fla. w/screamin soul @ 6:44pm on top. WFMF-1060 upmMoR @ $7: 11$
pm o/KYW u/het w/mention of Fortune Fone Contest. Unns WWK-1260 WFUN-790 WLCY$\mathrm{pm} \circ / \mathrm{KYW}$ u/het w/mention of Fortune Fone Contest. Unns WWCK-1260 WFUN-790 WLCY-
1380 were all quite dominant on their frequencies. MM $3 / 4$ saw nothing new here, 1380 were a11 quite dominant on their frequencies. MM $3 / 4$ saw nothing new here,
WNO 1230 . Fla. was on top, \& it's been quite a while since they've made it hat WINO-1230. Fla. was on top, \& it's been quite a while since they ve made it
through the QRM here. Cuba -630 seemed off this $A M$, WPRO on top \& unID EE $u /$ them through the QRM here. Cuba-630 seemed off this AM, WPRO on top \& unID EPE u/them
likely WMSL. Cuba -640 wes I\&C. 73. (The best in the Service, Chris and we WII morely miss your kusings, which have been among the VERY BEST in this section for quite some time! -ERC)
PLFASE BE SO KIND, STLENT ONES, AS TO BEGIN TD MAKE SOME NOTSE HERE IN THTS RLASE BE SO KIND, SILENP ONES, AS TO BEGIN TD MAKE SOME NOISE HERE IN

20
Hank Wilkinson Jr. - 6620 Beeman Avenue - North Hollywood, California I retired from Gemeral Motors on $2 / 28$ after $25 \frac{1}{2}$ years. expect to resume foreign MW DX fulltime within a few days. I haven't been at the dia 1 s very often in the past two years. I have added only 57 foreign veries to my group since 1965 . I am maring the HQ-180 checked over $100 \%$ this week. I will pick it up before the weekend. I hope to add a collins 390A or 51J to my den this season. The newer recelvers just don't have the 'stuff' for good foreign MW DX. Most recent verle is from "R. Colosal-1005, Neiva, Colombia, and most recent report is out to ZYD65-1180, Rio de Janeiro. Now that I have the time I would like to offer uy services to the NRC for some activity that they feel I could or would handle. Please feel free to contact me. Also you oldtime foreign DXers - 1et's hear from you again. 73.

MIKE COLHINS - Apt. 506-600 Asylum Avenue - Hartford, Connecticut = 06105 Hello all. WWDJ-970 Hackensack, N.J. has become the latest station to cease ${ }^{4} 4$ hour broadcasting. WWDJ now operates 5 am to lam weekdays and 6 to 1 Sat. \& Sun. As WIth WPEN \& WICC, the reas on WWDJ has shortened its hours is economics, not the energy crisis. I note someone has applied for 890 k at Saint George in extreme SW Utah, proppsing $50 \mathrm{kw} / 10 \mathrm{kw} \mathrm{D} / \mathrm{N}$. This is the last of the Class II-A channels which was available. All the other channels were taken back In the 60 s when the Class I-As were first broken down, \& all the others are now in operation. For some reason, no one applied for 890 for almost ten years after it was assigned to Utah. The bis news in badeball \& radio this year is that the Los Angeles Dodgers are no longer with KFI-640 and are switching to KABC=790 as their new flagship. Also, the Texas Rangers are switching from KRLD-1080 to WBAP-820 this year. Not too much DX lately, except to note Sunday $2 / 24$ around 8 pm KOMA ws tearing up WKBN here in Conn., \& at times was completwly on top. When ram switched to its DA, it was still noticable underneath. I guess it shows that the extreme directiogal patterns WKBW \& KOMA and other Class I-B stations use at night are needed. For some reason, WWRL-1600 N.Y.C. seems substantia 11 louder in Conn. at night, both in Hartiord \& along the coast. Maybe they have sltered their night pattern. Today (1/8) (3? -ERC) the new owners assumed con trol of the WIIC stations in Hartford, which have been sold by the frevelers In surance Company. WTIC-1080 \& WTIC-FM were sold to a group headed by WTIC CNT Ieonard Patricello, for $\$ 6,000,000$. WTIC-TV becomes WFSB $-I V$ \& is now owned by the Washington Post (WTOP, WCKY, et al). Sales price for WFSB-3 was a stagger ing $\$ 34,000,000$, a lot of money for a TV station in a city of 150,000. 73s.

JON E. PEARKINS - 6137 Service Street - Burnaby, British Columbia - V5H IV7 Hi! I just got ny WRrH and noted two errors at first glance: KVN is CFON and there is no longer any Pacific Thme Zone in NWT. The Yukon/ wiorder divides Yakon Standard THme (GMT-9) and Mountain Standard/Daylight savings Time (GMT-7/GMT-6). This was changed around 197. The reas on is because Edmonton supplies most media (e.g. - the $N$ rthern Service is fed from Edmonton CBC) and being on the same time zone makes life easier - saving special lipe delay systems. Put things look really screwy in Mid-Summer when places sun effect (trying to set, but not quite making it) occurs around $3 a m$ local time.

JAMFS V. HAGAN - 896 Port Malabar Boulevard - Palm Bay, Florida - 32901
I stayed up. MM 2/18 for the Valley DX Test. I quickly discovered it didn't start on time as 1505 was completely clear without excessive side band splash. I tuned for other TFSTs that morning but no luc, se kept returmin to 1505. Finally @ 2:44 The valley was heard with surprisingly good signal got a good tape and 45 minutes of 10 g on them. I didn't notice the low anaio mentioned by RJE. I even heard them w/my Phillips portable in forrite rada enne. on $2 / 25$, 11 stening on 1220 w /WAR supposediy off an ent. It looks like WGAP useless most of the time. (. I could rear $R$ conince to test making the channel caupht CW ID for WKBK e 1:07 on THST. Nothing else. 260 (1) 10:35, R, TOTVEfor @Sc-1200 R





3:35am, down to 540 for WYLO TEST. This one heard good \& got 25 minutes' 1ng on them. - I tried to call but found out later I had the wrong number. on $3 /$ (e) 9pm I copied WIBS -55 St . Georges, Grenada briefly W/BBC Worla Service having heavy sideband slop from 540. On $3 / 6$ I tried for them aga in @ SSS about 8 pm when I thought 540 slop would be less. All I could hear was carrier but I got tentative logging of Algeria-533 w/an more. I am working on my FEN AA Loop I will have to stick with and for winding wire now. It is exactly same as the per NRC plans. It is ready for winding wire now. plans except for method of mounting which 1

ON B. SCHILLER - 1951 N.E. 28 Court - Ifghthouse Poimt - Fiorida - 33064 Veries: WRED-1430 CM , WVCF-1480 v/i, WALG -1590 returned $\mathrm{f} / \mathrm{up}$ with my stamp, WFIV-1080 v/1,CM, bumper sticker, etc. \& said on 50 watts! when I heard 'em!, TIJC $675 \mathrm{v} / 1$, HJKA $-540 \mathrm{v} / 1$, \& WNEN- $1130 \mathrm{v} / \mathrm{q}$, \#7 out of eight reports to N.Y.C. stations and all v/gs! 2/25-RJR-720 strong @6:25 but unn. HIJP1010 very strong 6:28-6:43. $2 / 26$, unn RJR-550 dominant © 6 . HIz-730 6:27-6:41 W/"informes", strong over another SS. TIJC-675 "Sonora" s/on 7-7:31, v/1 back in nine days! $2 / 27-Y S C-10157: 18-7: 32$ "R. Internacional" fair \& clear, WFIV1080 7:41-7:53 o/u WKLO/KFUD but no sign of local WVCG on their might pattern. $2 / 20$, the 1345 SS that is orten heera $s /$ on e 6, meybethe Ecumdorian. 1135 had the TG station circa $6: 30$ but very weak. Unn WSUZ- 800 booming in © $7.13 / 1-$ HJRY-900 atope 4:30. UnID SS on 975. 3/2, I took a log on WNEN-1130 when I discovered I'a never verified them, 7:21-7:35, 3/3, after many tries, wNYC-830 s/on © 7 \& copied for a couple of minutes way o/wCCO/HJIB (thanks ERC for info). $3 / 4-7$ a blank, due to being in Houston asain. 3/8, unn WBAR-1460 atop 6:15, first time heerd since the 50 s beck in N.J. when I heard 'em on an early faster 3/On WFSO-570 6:56-7:10 w/the Cuban off, \& o/WFAA. Cuban EMed for a
 monent but obviously wes having XR trouble. 3/10-NCR1-73. 7:26-7:44 w/ilght in s/gn (1). (I'm with beverages on this
you, Ron: $-E R C$ )

KARL JETER - 109 West White Street - Carrollton, Georgia - 30117 Greetings, there! Iooks like Spring is here to stay - with the heat, flowe $s$, and streqkers around here, I d say that s very true. Also, time has been limited and not good anywa, so I have been busying myself with some daytime $D X$, and with some f/ups, both with good results. Firist, though, DX since $2 / 25: \quad 2 / 27-\mathrm{K} M \mathrm{MT}-540 \mathrm{w} / \mathrm{exceli}$ ent sicnal $@ 7: 42-7: 45 \mathrm{w} / \mathrm{c} / \mathrm{w} \& \mathrm{~s} / \mathrm{off}$. $1 / 3$, I sent report to WOKF-910 even thougt I have $v / q$ from old WCOC-910. I was busy 3/4 with some SRS, when 1510 opened up \& I got three new ones u/WLAC: KAGY © 8:59 gm w/c/w, WBLB poor e 9:36 \& WEAL © 9:40 w/Black mx. 3/6- WFMH-1460 @ WXCK-1460 fichting it out © 7:20pm, also I heard an FF, CJBC-860 for taped report, as uy FF is bad anyway, hi. Fina 11y, 3/10-11 I used my AM-FM RX \& got whMA $\mathbf{- 1 3 9 0}$ which I had never heard on the $D X=120$. Anyway, back to the $f / u p s I$ mentioned: WIII 580 KMX-1070, KHOH-630 \& WMOM-1480 (w/new address, Box 2098, Memphis, Tenn. 38101) a 11 greceived. I am still waiting on WRRJ-910, GTO-540, KRNN-880, WHIE-1320, KFH-1330. Other veries received: $\mathrm{v} / \mathrm{c}-\mathrm{WOTX}-1570$ WFIN-1010, WEAC-1500, KXOL-1360. ( $\mathrm{V} / \mathrm{q}, \mathrm{nO}$ : - FRC) $\mathrm{V} / 1-\mathrm{WHB}-710$ KYAL-1600 WIPH-1480 WCHI- 1360 for TEST $2 / 11$, WIHIi480 \& nice $v / 1$ from WYLO-540-TEST. I will be re-entering West Ca. College $3 / 25$ so I imerine DX time will be more $1 \mathrm{imit} e d .73 \mathrm{~s}$ until next time.

TOM McCORMAGK - 275 Littleton Street - West Lefayette, Indiama $=47906$
HI gang! Recent veries in here from: v/q-CJRP-1060 KOMA-1520 CJRS-1510 XERF-1570 XEROK-800 \& XEG-1050. v/f- CKAC-730 \& KGMO-1550. v/1-KAK-1600 CHNO-900 (old repor ) \& WVAM-1430 (very nice). Reports off to: WPTI KOWH KIXZ KCIU KTUI KMAC KYAL CHWO WSAM WILK WQIW WDAR WDQN KI
KHEY WJJT WIXC (Tenn. \#118 here) WSSA KLEX KTIQ WYNK WMGO WSJS (in e gam EDT on GW!) (GW?? George Washington's birthday?? -ERC) And $50 \mathrm{f} / \mathrm{ups}$, too. Best of DX to a11-things hav been disma here. 73 s .

WE WANT MCRE OF YOU TO PARTICIPATE IN THIS SECTION: COME ON - LET THE REST OF US KNOW WHAT YOU ARE HFARTNG AND WHEN YOU ARE HEARTNG IT, DAY BY DAY, HOUR BY HOUR! DEADITNES HFRE ARE THURSDAYS. THE RULES ARE SIMPLE, TRY TO STICK TO 20 LINES, AND DOUBLE SPACE, AND DON'T INCDUDE VERIE SIGNEPS' NAMES IN THE MUSINGS!

RON MEEDEN - 7 BIueberry Hill - Groveland, Massachusetts - 01834
Hello! It has been quite a long time since I last wrote to Musings. Up until last Thanksgiving I was attending school down in W. Va. For the months of Dec. Jan. \& Feb. I was studying over in Austria which turned out to be a great experience. I listened to quite a bit of radio over there and had the pleasure of visiting at least two radio stations. I was impressed with the ORF studio in Salzburg, Austria. I toured the station and was treated to the best of treatment. They plahed tapes for me fromall of the three salzburg stations. I also got up to Luxembourg and visited their station. I was glad to come home to veries from the new call WWEL in Medford, Mass. on 1430. WGTR promptly verified for 1060, the new station in Natick, Mass. WWRL-1600 in Woodside, N.Y. finally came through with a verie from 2/72. WOAY-980, Dak Hill, W. Va, also verified. did not verify stations while in Austria for lack of time and a radio that was half decent. While down in W. Va. at school, of course 1 wrote to all of the local stations plus new ones but the verification fate way only about 50\%. F/up epp in houla lake care of some of those. 11 be heading out to salt lake City in the middle of March to live out there for a while and possibly look into some schools. While at gome here for the break I've been working for Stan Morss so he has been keeping me up on all of the radio news. I was glad to make at least one day of the Convention in Boston, but school stopped me from making any more. I had a fine time while I was there though. see you in COORS coumtry.

## BILL ANDRES - 351 Union Street - Springfield, Massachusetts - 01105

M 3/11 was more aggravating than profitable, but it' 11 do. I
didn't hear the 1560 TEST because I made the mistake of tuning by 1370 , which spawns these marathon unID FTr. Sure enough, there was a TT that began (e 12:55, sailed right through WDEA/WFEA s/offs © 1:03 (we used to think that WDEA was a moth down in NiY.C.) andi $2 \frac{1}{2}$ pages of various tone logginga and almost an hour $\&$ a haif later, they IDed as WGOF, Grayson, Ky. I sat there for that time, because, in recent years, WOTRP. \& WJWS Va. were logged after these titanic struggles and tones that wost people only hear at the draft board. After a while it becwane a metter of pride. WJEV is Ae on 1240, log correction. Led Zeppein mxx on 1070 ® $3: 20$ o/everything. I had an idea this was WFLI, because the last time I hoard them, they tested with the Bob Seger System. What I was more concermed with was the AN TT show u/Led Zeppelin, which turns out to be WINA Va. I sure wish that when $I^{\prime}$ 'm in N.Y.c. they'd be AN $\mathrm{w} / \mathrm{TT}$ show out to be wina Va. I I sure SS. I don't even get WFLI. Question: Who ETed on 1320 o/WKTQ 2:25-2:30 with The test Tone Record? They cut power or something at $2: 30$ \& I I didn't hear them after that. Thye guy would come on (from the record) and say INow, 8,000 cycles an, sure enough, there was an 8,000 cycle tone. He announced thetones from 15,000 to 50 cycles. Who wes TTPer on 1250 o/civo e 2:50-3:02? Question: How far $\mathbb{N}$ has WDAE been heard? Totals now at 190/1-KHEY sent a verie. 34 s .

WIIIIAM M. BTAZEX - 2716 Bellbrook Street - Hillcrest Hieghts, Maryland - 20031 to go in wim to mid-Feb atches inciude: $2 / 12-\mathrm{K} / \mathrm{s}$ 依 -880 admittedly old DX ; of which, a few of the better tion of pattern change (e8pm. Not much © $7: 50 \mathrm{pm}$ w/Fa rm \& Fanch Forum and menafter WRFD s/off, see if there's anybody u/WCES, \& wait as the sum sinks slowly
 WMUS-1000 M1ch. testing @ 4:01am. $2 / 22-$ WEAQ-T90 Wis. In © $7: 18 \mathrm{pm} \mathrm{w} / \mathrm{ID}$, then gone. CPC TESTs heard on $2 / 25$ included WERT-1220 O. © 12:02am, WKRK-1220 N.H. © $1: 10$, whio-540 Wis. © 3:29am. Also heard was KAMA-1060 Tex. In-1ikem-10cal w/r/c 2-2:0sam. in $2 / 26$, for sone reabon I was sitting on E50; and lo, came
 Wior $X=1200$ wh tape recomer down, so no renomt. One of mi e $7: 30$. WPJK caught na with mir tape recorder down, so no remom, Se of my stufter mowes. All in all, Fab. wall a.s good a monts as I ve bod intely. uy renorts --m Spenking of reports, those who did reply recently include: $\mathrm{v} / \mathrm{r}$




SAM BinINerd - 900 Kirkwood Hishway - Apt. D-6 - Newark, Delaware - 19711
Hi! So much DX around here lately I'll have to leave a lot of it out. 2/4- XEWA-540 in strong © lam w/semi-ci mx \& mentions of Mexico. CKEY -590
 lam a lucky catch, KWWL, Waterloo, Ia. ID repeated nce, then NX \& fade, on 1330. 2/11- At 1:39 on 660, religion program "God's News Behind the News", ID @ 1:59 as XMO, the Voice of Inspiration, on the West Coast. 2/18-1:37, WPDX TSST w/instant sum swined unID SS w/SIDs \& as in turn wiped out by wSB © $1: 50$. I went stant wix swped ne next hour: WLFH-1230 ET, WGBB/WSSV-1240 w/rr. WWCO-1240 Gravegardint or $2 / 25$ - In WGAR SP: CHSC $\mathrm{w} / \mathrm{c} / \mathrm{w}$, WERT-TEST heard faint $1 \mathrm{y} \mathrm{w} / \mathrm{on}^{2}$ TD © 12:04. 12:40 saw WKBK in well $\mathrm{w} / \mathrm{rr}$ CE \& IDs. 1:30 I tried for WKZO DX, Dut heard WON NX instead on 590. 3/4-YVMX-1020 fighting unID SS © 12:39am. This one had slow, mostly IA mx, w/EST or CDT TC. ID, I think, was "Onda ---".
 Help: ANe T 1

 KCTA-1030 o/WBZ © 7:30am, w/ evancelical program. sho w/YL host, ideas? (Shame $3 / 10-22 \mathrm{~m}$, WERE/WRBC-1300 in SFBR SP, also a talk show w/YL host, ideas? (Shame
3/11- WKBN off! At 2:41, so KOMA heard. $2: 45$, KFBK-
 1530 w/CAS NX \& on $1550 \mathrm{w} / \mathrm{mx}$. My totals now (in Del.) $363,34,4$, \& 11 . These are heard; I still don't verify, aithough I tape avy DX now. By the wey, Bruce Boomer's unID-1220 in $1 / 28$ Muse is CHEC, for sure! 735.

ITN POTERBA - 449 queens Irive - Yardiey, Pennsylvania - 19067 Another brief Muse! Latest DX fairly sood, w/a couple of now ones adaed in the past two weeks. 2/27-wRHC-1550 logyed for call change at s/off; suspected WSIV-1140 s/off 7:5 pm on 3/2. an SM $3 / 3$, WYNG-1300 noted way u/car rier of local WWJ (wgo hadn't begun programine yet). And firally, MM 3/11, the WSHY-1560 TEST was noted with fair strength and CW IDs, with the WNYR $-680 \mathrm{r} / \mathrm{c}$ noted too. Quite a few veries have come back of late - Luxemboure-1439, CHRL $910 \mathrm{CXPT}-1420 \mathrm{WRHC}-1550$ (says that effective power of bey-located XR is about $40,000 \mathrm{w}$ : ) No winder they get up this vay so well! WTIV-1230 (for TEST, Pa \# \# 100 veried), WYLO-j40 TEST. The code IDs on low-power DX TESTs lately are real ly creat; neither WSHY now WYLO woula've been IDed without them. 73 till next.

ERNEST R. COOPER - 438 inst 21 Street - Carrier Route 56-Brooklyn, N.Y. 11226 Veries from MMOO-1550 (A1a. \#102) and WRHC-1550 (F1a. \#177), both $\mathrm{v} / 1 \mathrm{w} / \mathrm{CMs}$. Some more twilicht DX lately with the buzz from next door not so bad for some reason lately. 3/7- Unn "RuN-1150 like a local @ $6: 57 \mathrm{pm}$. $3 / 9$ I lowked for $\mathrm{r} / \mathrm{c}$ of WGRK-1550; not heard, 5:30-5:45. PM, 1150 a cain, this time unn CHSJ raring in © 6:04pm, almost in the clear like WRIN was two nights ago I was looking for WSKW, Me., not heard yet. Amazing CX for this late in the Winter at 10:11am, on 1550, lookine for WKOT, ex-WDAZ, Kingston, NoY., \& I fot two stations, one with a children's story beine told by a lady, and the other w/ Billy Graham. The former went unID, but the latter, seally floored me, as it was WXVA, Charies Tow, W.VA., unn though, but certainly interesting. Usually it's WEXT/WKOI in midday here. on 3 / 11 , extremely weak TTs, up \& down, on 1560, possibly the WSHY TTSST, but no IDs heard, CW cr otherwise. I tuned in 1:34 \& stayed till 1:58. They re gettin a tentative. on 1520 , no Nk , but KOMA (a carbon copy of the Buffalonian) and a TLer there. And wowwee, loads of ANT locals were off today! WCBS-380, WINS-1010, WYDJ-970, WHI-1050, a lso WCSU-1210. TYTers on 1060, 1330, 1090, 1400, much of AM. CJRP-1060 seemed bif too, and cl nix (Diano) heard there $3: 45 \mathrm{am}$, either Tis3 or a Castro Convertible. Looking for CKAY-1500 (oh you drearer, ERC) 'e 4:04, no luck, natch, but a TTer there. Then An rr on 1060 held my attention and it turned cut to be only $W N O E$. Two more T'T frequencies were 1190 (2 4:21, and 740 3 $3: 04$. I tried to get a log on Cucuta-1000 but they weren't strong enouch, and neither was I, hi. I looked hard on 880 for KNAS, whom but ney, they weren't there. 1310 , 1440 , 1450 , sound a lot better these MM maybe the crux has been reached, and the AMT situation is tapering off?? CUMT.
ARE YOU GETTUIG READY FOR TOLEDO: TOLEDO IS GEITING READY FOR YOU! IN FACT, WSPD EAS

