## 

## STATIC FROM HQ

Was great once again to see everyone in St. Louis (or whereever it was they really had us staying!) and for those who didn't make it, you missed a good time, but we hope to see you next year in Los Angeles! On other matters, those who did not buy them at the auction, can still get a taped copy of the special report about WFAT/WCPR that was on National Public Radio awhile back. Carl Mann says he'll be glad to send you a dub of the tape he has, if you will send him a cassette or reel and return postage. The address is c/o KCRG, Cedar Rapids, Iowa 52401 .... Don Erickson has more info on the 1980 WRTVH inside...For those of you looking in this issue for a convention report--keep looking in your mailbox instead for the next issue (0ct. 8), as the report and a report of the business meeting will be in the next issue. Some Convention photos are inside, so look at them and laugh, hi! If you were in St. Wherever and have some photos you want included in the next issues, please send them to HQ immediately and we'll credit you! Finally, our best wishes to Norm Maguire who we understand is on the road to recovery from an emergency eye operation that canceled his plans to be in St. Louis! Now, on with the show...

## CPC TESTS

Members getting DX News on Sat. may be able to use the first two tests, which arrived too late for last issue. Special thanks to Bruce Portzer for sending us the three IRCA tests! Also, we are searching for a CPC Chairman, to take over December 1st. If interested, contact HQ! Now the tests.

> 9/24 KSRA-960 Salmon, Idaho 0300-0330 ELT, 1 kw non-directional. Prepaid Mon. calls to 208/756-2216. No other details avail. Arr: McMillan/IRCA
> 9/24 KPRK-1340 Livingston, Mont. 0600-0700 ELT. Will use 1000 cycle tone, Mon. IDs every $5-10$ minutes. Prepaid calls to 406/222-2841. Reports to: Kent L. Colby, Box 691, Livingston 59047. Arr: McMillan/IRCA
> 10/1 WYFA-1580 Patchogue, N.Y. 0100-0300 with 10 kw . Test to include music, Mon. tones, voice IDs, Prepaid calls to 516/475-1580. Reports to: Gene Healy, CE, WYFA, 45 Pennsylvania Ave., Medford, NY 11763. Arr: Steve Ehrbar and Ian Meyers/IRCA
> $12 / 2$ WVLC -1170 Orleans, Mass. $0400-0530$ ELT, $1 \mathrm{kw} \mathrm{D}-3$. Will be NRC and Sun. PoP test during WWVA's silent period. More details later. Arr: Ernie Cooper/NRC

## LOOK INSIDE

We end the year with another big issue. Look for the same next time as we start a new season off right!!!
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Well, they said it couldn't be done, but John Clements did it. Did what, you ask? Managed to get enough support for a west coast convention, which is our way of saying that we'll have to pull up the anchor on Noah's Ark
and sail er west to Los Angeles, which will be the site of the 1980 NRC convention! For those of you interested in statistics, the last time NRC was out west was 1971, when we (or rather you guys) met in West Sacramento, California. Before that, we were in Eugene, Oregon in 1967, which means that a western convention is a rare bird, and we hope that many of you

Since NRC's largest single state membership is in California, with something over 75 members, the potential is there for us to have not only the first western convention in almost a decade, but the largest convention the club has ever had!
Though it is a bit early to forecast all of what we'll be doing, according to John Clements bid, convention activities will include tours of NBC, a Disneyland DXpedition (somehow that seems appropriate, hi!), and a should be a great time, and even though Los Angeles is somewhat further west than we've been in years, we hope that you'll start saving the pennies now and join us. Afterall, there are even some possibilities that DXers in an area could get a group charter plane, or something like that, so call your friends and start planning!
For those who were wondering, the other bid for the 1980 convention came from Russ Edmunds, who sent in his bid for the 1980 meeting on tape. We hope that Russ and the rest of the folks up east will join us in LA and $32-22$, so we'll see you in Los Angeles next Labour Day!

Before we go on totally to next year, though, we do owe a special thanks to the folks who hosted this year's St. Louis convention--Lou Buehler and his family, especially his wife and son Mike, who deserves a real special NRC thanks and will get it when and if he remembers to send those photos
he took of the girl lifeguard at the hotel pool to HQ, hi!

Also, there are some photos elsewhere in this week's DX News from the convention, but we hope to have more, along with a complete convention early is that a great time was had by all, and as usual Don Erickson was taken to K Mart for a suitcase!

Had a nice visit from Chris Hansen and Neil Kazaross the afternoon of $9 / 8$. A hearty welcome goes out to Craig Cook, Ed Mitkus and J. Hunter. Deadilnes are Saturdays. Now let's get to the business at hand.....

## SPECIAL

540 WGTO FL
1570 WYHI FL

1580 WGTW FL
CYPRESS GARDENS - $9 / 2$ thru $9 / 4$ on after SS \& AN w/day pattern due to hurricane. (EM-FL) (KAZ-RI) (ERS-NJ) (RA-MA)
OMAHA - 9/1 EX-KOWH, Christian Radio in Omaha,
MIAMI - $9 / 2-9 / 3$ running thru evening and AN $w / 50 \mathrm{KW}$ day pattern due to David. (EM-FL) (RA-MA)
--- $9 / 4$ 1955-2145 w/SOUL mx, hurricane info, barely audible most of time w/QRM from WBBM/SS station, maybe NC or ZBVI? (BC-RI) LAKB PLACID - 8/16 0036 ET/TT w/WJAR off, ID testing for possible 24 hr . operation during Winter Olympics w/302W. (BC-RI)
by Hurricane Dayidt around 1400 w/WICE knocked out
ALBIA - $9 / 4$ on the air w/OC, ID@ 1702 ments. ET, no
RS date given. (DB-IA)
ADAMSVILLE - 8/22 2045 very clear ID s/off, this is
a new station now on the air. (SEM-TN)
FERNANDINA - $9 / 32100$ on after SS $\mathrm{w} / \mathrm{nx}$ \& emergency reports due to hurricane. (EM-FL)
MT. DORA $-9 / 32100$ aIso on late $w /$ /emergency broadcast
mixing $w /$ SSRP due to hurricane. (EM-FL)
SUNSET TO MIDNIGHT
750 WPDX WV CLARKSBURG - 8/15 $2004 \mathrm{w} / \mathrm{C} \& \mathrm{~W} \mathrm{mx}$, ID, temperature
730 WPIT PA Peading by male DJ, good signal. (WPT-DC) PITTSBURGH - 8/15 good w/REL to $2015 \mathrm{~s} /$ off, new. (BC-RI) $^{\text {new }}$ $8 / 232015$ s/off noted $u / C K A C$, no SSB. (BR-NY) Out of order...sorry gang! (RA-MA)
790 WTAR VA N
800 WCHA PA CHAMBERSBURG - $8 / 212005$ fair $u / C J B Q / C J A D ~ w / n x$.
860 WTEL PA PHILADELPHIA - $8 / 15 \mathrm{~m} /$ SS Show. (BR-NY) bollowed by $2000 \mathrm{~s} /$ off
mixing w/CJBC, new. (BC-RI)
920 WMEL FL MELBOURNE - 9/3 2030 very update info. (EM-FL)
960 WHYL PA CARLISLE - $6 / 202046 \mathrm{~s} /$ off noted atop CKWS/WRAV/WELI. (BR-NY)
970
1070
1070
WILLIAMSPORT - $6 / 152045 \mathrm{~s} / \mathrm{off} \mathrm{u} / \mathrm{WHN}$, no SSB. ${ }^{(B R}$ (BR-NY) LYNCHBURG - $6 / 152046$ noted $\mathrm{s} / \mathrm{off}$ (WHN, no SSB. (BR-NY) PLATTSBURGH - ? w/Prank Reyme 2030 fa
1080 WVCG FL
1110 WTBQ NY
180 Vair w/WBT, new (BC-RI) 2018 w/local spots, s/o1f 2030 ,
1180 VOA FL MARATHON KEY ${ }^{\text {new }}$ - $8 / 301958$ xlnt $w / \mathrm{EE} \mathrm{s} /$ on $\mathrm{w} / \mathrm{IDs}$,
1220 CJSS ON Mankee Doodre etc. into SS program@2001. (KAZ-RI)
1230 WBME ME CORNWALL-8/22 $2055 \mathrm{w} /$ concert promo, phone 938-1220,
nother - $9 / 11930 \mathrm{w} /$ "Radio 1-2-3" ID, good signal. guess they s/off as authorized by their "specified hours" certification. (BC-ME)


NORTH $-8 / 271818$ in good $w / m x$ \& ID. (SEM-TN)
WNNB MA NORTH ADAMS - $6 / 30$ 2300 fair $w /$ ID \& $w x$. (BR-NY)
WTIV PA TITUSVILLE - $7 / 10000$ poor $\mathrm{F} / \mathrm{off} \mathrm{w} / \mathrm{SSB}$. (BR-NY)
WCBT NC ROANOKE RAPIDS - 8/20 2019 spot for Labor Day Auto

| 300 | WEZQ | AL | WINFIELD - 8/28 1959 strong " 5000 watts, WEZQ, Winfield" ID, into mx . (SEM-TN) |
| :---: | :---: | :---: | :---: |
| 20 | WNAE | PA | WARREN - $6 / 15$ good e $2100 \mathrm{~s} / \mathrm{off} \mathrm{W} / \mathrm{FM}$ promo. (BR-NY) |
| 1330 | WF | FL | FT. PIERCE - $9 / 32130 \mathrm{w} / 500 \mathrm{w}$ \& hurricane $n \mathrm{x}$, weak, 1st time heard. (EM-FL) |
| 1340 | CJLS | NS |  |
|  |  |  | surprised not to hear any ME GYers here. (BC-ME) |
| 1500 | WBFN | MS | QUITMAN - 8/22 2032 clear signal w/political spot then ID. (SEM-TN) |
| 1510 | WITS | MA | BOSTON - $9 / 1$ noted $w / x \ln t$ signal by day, but almost totally wiped out by Canada e night. (BC-ME) |
|  | WJI | NJ | SALEM - 8/16 1814 fair w/mx, ID. (WS-NJ) |
| 1520 | WTGR | SC | MYRTLE BEACH - 8/24 ID 1930, Pop mx, promos o/u WKBW, my best SSS catch this summert (BC-RI) |
| 1530 | WOBR | NC | WANCHESE - 9/3 1913 weak but steady w/ID, probably groundwave as I'me coastal QTH \& WOBR gets to |
| 1550 | LPRT |  | Cape Cod u/WDJZ. (KAZ-RI) |
|  |  |  | $w / f a i r / p o o r$ signal in fades, looped NE so I suspect one of CBGA relays as NS loops NE. (KAZ-RI) |
| 1570 | WPGM | PA | DANVILLE - 8/23 $2010 \mathrm{~s} / \mathrm{off}$ by 0M w/ments. of 96.7 FM |
|  |  |  | then choral SSB, fair/poor, \#21 on 1570. (WPT-DC) |
| 1580 | WYPA | NY | PATCHOGUE - 8/23 1938 in strong w/Suffolk Cty, wx. (BC-RI) |
|  | WPGC | MD | MORNINGSIDE - 8/23 $2000 \mathrm{~s} /$ off $\mathrm{w} / \mathrm{FM}$ Stereo 95 ments. no SSB, new. (BC-RI) <br> (BC-ME) |
| 1590 | WQQW | CT | WATERBURY - 9/1 $2200 \mathrm{w} / \mathrm{MQ}$ Q Q Radio 16" ID u/WSMN, fair. |
|  | H |  | OASIS |
| 570 | WKBN | OH | YOUNGSTOWN - 8/30 0358 fair $w / C \& W m x$, into local $n x$ w/WIND splatter. (CC-WI) |
| 580 | UNID |  | 8/13 OC/TT from 0215-0310+ who wuzit? (BR-NY) |
| 590 | WKZO | MI | KALAMAZOO - $8 / 300115 \mathrm{~s} /$ off noted W/NA, good signal. (CC-WI) |
|  | WRTH | IL | WOOD RIVER - 8/30 $0359 \mathrm{~m} / \mathrm{MoR} m x$ then PSA, good signal w/Cuban way under. (CC-WI) |
|  | WOW | NE | OMAHA - very good $8 / 30$ e $0440 \mathrm{w} /$ Rock \& ID. (CC-WI) $8 / 240125$ strong $w / m x$, ID. (SEM-TN) |
| 610 | WTVN | OH | COLUMBUS $-8 / 30$ ending $n x$ e 0405 then ID/ $j x$, then Disco mx, good signal. (CC-WI) |
|  | WIOD | FL | MIAMI - 9/3 0030 way atop w/hurricane info. (KAZ-RI) |
| 710 | UNID |  | --.-- - 8/27 0207-0307 fair u/WOR w/TT/OC, no ID. (R -NY) |
| 730 | CHIR | ON | LEAMINGTON - 8/30 0121 fair/poor in fades w/ID, local wx, then Rock mx. (CC-WI) |
| 740 | CBL | ON | TORONTO - 8/27 0104-0110 clear to s/off w/detailed wx rpts, program notes \& ID. (SEM-TN) |
| 790 | WTAR | VA | NORPOLK - 8/30 0445 fair/good w/slight WBBM splash w/jx, MoR mx. (CC-WI) |
| 850 | Wrat | FL | WEST PALM BRACH - $9 / 3$ noted $w /$ phone in show because of hurricane David $0125 \mathrm{w} / \mathrm{HJKC}$ \& WKIX. (KAZ-RI) |
| 860 | UNID |  | ------ $8 / 270435 \mathrm{good} \mathrm{w} / \mathrm{TT}$ til 0545 , no IDs. (BR-NY) |
| 920 | CFLS | $P Q$ | LEVIS - 8/16 0040 FFC w/good signal, WJAR off. (BC-RI) |
| 940 | WYLD | LA | NEW ORLEANS - 8/30 0030 in good $w / m x$, then ID. (SEM-TN) |
| 960 | WSBT | IN | SOUTH BEND - $8 / 300135$ good w/contest promo, TC, ID. (CC-WI) |
| 990 | v28D | PA | PHILADELPHIA - $7 / 290032$ fair w/R\&B mx, new. (SM-MA) |
|  | SHIM | TX | WICHITA FALLS - 8/30 0106 strong w/TC/ID/mx. (SEM-TN) |
| 1050 | WHIT | IY | NEW YORK - $9 / 3$ noted off in passing 0332 leaving $O C$ CHUM. (RA-MA) |
| 1060 | WHOE | LA | NEW ORLRANS - 8/30 0140 heard very well in KYW null w/theatre promo, jx ID, Rock mx. (CC-WI) |
|  | CJRP | PQ | QUEBEC - ? $/ 290045$ fair mixing w/KYW. (SM-MA) |
| 1070 | CHOK | ON | SARNIA - 7/29 xint w/mx, ID 0100. (SM-MA) |
| 1240 | KA | KS | WICHITA - 8/27 0130 very good w/ID, mx. (SEM-TN) |
|  | KVRC | AR | ARKADRLPHIA - $8 / 270805$ very good w/end of ARN Nx, TC/ID. (SEM-TN) |
|  | MIPA | IS | ABERDREN - 8/27 $0842 \mathrm{w} / \mathrm{ID}$, spot for Western Auto. |
| 1260 | WNDR | NY | SYRACUSB - 7/30 0212 fair/good w/mx, ID. (SM-MA) |
| 1270 | WHBF | IL | ROCK ISLAND - 8/25 0207-0215 fair/good w/C\&W mx, "Country Sunshine Radio WHBP" IDs. (JH-GA) |
| 1280 | WGBF | IN | EVANSVILLE - 8/30 $0145 \mathrm{w} / \mathrm{mx}$ \& "Tri-State Wx , good signal even tho slight QRM from UNID SS station. (CC-WI) That UNID SS just may have been WADO New York City, Craig. (RA-MA) |
| 1290 | WHIO | OH | DAYTON - 8/25 0208-0210 fair/poor w/ID then gone. (JH-GA) |
| 1310 | WCAM | NJ | CAMDEN - ? $/ 300232$ caught very weak ID. (SM-MA) |
|  | WTTL | KY | MADISONVILLE - 8/31 0301 a surprise, in fair w/nx, ID. (WS-NJ) |
| 1320 | WILS | MI | LANSING - 8/30 ID@ 0200, CBS Nx, good signal. (CC-WI) |

1330 WFBC SC GREENVILLE - 9/1 0200 good w/ID for \#2 SC in two days. (WS
WASA MD HAVRE DE GRACE-6/22 0005-0029 poor on ET/TT/IDs, (BR-NY)
1340 WALL NY MIDDLETOWN -8/13 0515 fair w/complete ID. (BR-NY)
1360 WSAI OH CINCINNATI - 8/30 0205 end of Mutual Nx, ID, C\&W mx.
fair w/fading © times. (CC-WI)
NEW YORK - 7723 0214 noted fair w/ID. (SM-MA)
1380 WBNX NY NEW YORK -1390 WCSC SC CHARLESTON -8/31 0149 good W/many IDs, mx, no sign of WFBL. (WS-NJ)
WEAM VA ARLINGTON - 8/31 0200 w/ID \& nx, no WFBL. (WS-NJ)
1430 UNID --
1450 WFTR VA FRONT ROYAL - $6 / 200506$ all alone w/ID briefly. (BR-NY)
1460 WSNO VT BARRE - 8/5 0255 heard briefly w/ID ments. in promo. (KAz-RI)
1460 WRRN MI BIG RAPIDS - $8 / 300610$ fair/poor in strong KSO
1470 WRGA GA ROME - 8/29 0751 good w/spot, ID \& mx. (SEM-TN)
1480 WABB AL MOBILE - 8/30 0717 in good $w / m x$, ID. (SEM-TN)
1490 KBIX OK MUSKOGEE - 8/19 0059 s/off very clear w/IDs. (SEM-TN)
1500 WVSM AL JOHNSTOWN - 8/31 0231 good $w / m x$. ID in WBCB null. (WS-MJ
RAINSVILLE $-8 / 240759$ strong w/bank spot, ID. (SKM-TN)
DETROIT - $8 / 300600$ fair w/llocal spots DETROIT $-8 / 300600$ fair $w / 10 c a l$ spots, $n x$ etop of
hr , then faded into mess. (CC-WI) hr , then faded into mess. (CC-WI)
maybe WDER? (BR-NY) SHENANDOAH - ?/2 0053* xint on ET W/WCKY off, VIDs,
1530 WMBT PA TT/Pop mx. (BR-NY)
1560 KDDA AR DUMAS - 8/25 0729 good $w / m x /$ ID. (SEM-TN)
WPAD KY PADUCAH - 8/30 0545 good s/on despite lightning/static crashes. (CC-WI)
MONTREAL - $8 / 300505 \mathrm{w} / \mathrm{FF}$ anncr playing US Rock mx .
1570 CKLM PQ several jx, good signal $w / f a i n t ~ S S$ station way under.(CC several jx, good signal W/faint SS station way und
$8 / 250301-0307$ good in $\mathrm{FF} \mathrm{w} / \mathrm{male}$ anner, IDs in FF . CFOR QRM. (JH-GA)
1580 WYFA NY PATCHOGUE - 8/13 0158-0205* good on ET/TT/IDs "Where
1590 WETT MD OCEAN CITY - $8 / 25$ 0257-0259 very poor w/500W w/ments 。 of Oc an City, and gave address. (JH-GA) 7/30 0254 fair w/ID, but QSBing, (SM-MA)
WCBG PA CHAMBERSBURG - 7/30 0257 poor but audible mixing with WETT. (SM-MA)
I got my bottle of "white-out" so I guess I'm ready to take on another season editing this column, hil Reports have been of excellent quality. please use kli whe the sky recently... and much wanted WKGX-1080 NC. See you all next time. 73....


THE BIG 13

| DB-IA | Doug Beard, Springville, IA Transoceanic, RCA, LIW |
| :---: | :---: |
| BC-RI | Bruce Conti, West West Warwick, RI Heathkit SW-717, SM2 |
| BC-ME | Camden, ME Heathkit GR-151B Portable |
| CC-WI | Craig Cook, Milwaukee, WI Revr? Antenna? |
| JH-GA | J. Hunter, Rossyille, GA TRF, 150 |
| KAZ-RI | Neil Kazaross, Narragansett, RI HQ-180A, Sanserino Loop |
| SEM-TN | Sidney E. Marshall, Millington, TN RF-2200, SM2 |
| SM-MA | Steven Miller, Boston, MA TRF |
| EM-FL | Ed Mitkus, Tampa, FL TRF, ICF-5900 |
| BR-NY | Bill Regan, Syracuse, NY S40-B, LW |
| WS-NJ | Walt Sharp, Cinnaminson, NJ TRF, Loop |
| ERS-NJ | Elliot R. Straus, West Orange, NJ R-390A $\mathrm{m} / \mathrm{brand}$ new set of tubes |
| WPT-DC | William P. Townshend, Washington, $\quad$ DC $\quad$ \& dial lights |
| RA-MA | Raymond J. Johnson, Jr.... "Well now you can call me Ray, or you can call me $J$, or you can call me sonny, or you can call me junior............................ |

GRENADA Radio Free Grenada very poor to poor with disco mx at 107 on 8／17．（Stover）
ExICO XEWA San Luis Potosi good with＂La Hora liacional＂pgn
VENEZUELA YVOV Villa del Rosario fair w／two Perija mentions 0715 8／30．（Kazaross）
ALGERIA Oran still on old channel，some AA violin mx heard－mostly just a het on powerhouse CFNB 550， $04418 / 17$ ． 531 noted as just carrier in storm २RN．（Connelly）
CUBA G：AN Pinar del Rio atop the jumble w／SS talk about Nicar－ agua $/ / 600,0456$ 8／16．（Connelly）
ST．KITTS ZIZ Sasseterre fair at 0014 with EE $n x$ 9／5．（Stover） oted w／strong carrier 0445 8／17．（Connelly）
COSTA RICA TIRN San Jose loud w／cl march mx 0458 8／16．（Connelly） Reloj＂，then ads 0501 8／16．（Connelly）
VENEZUELA ：：aracaibo YW．J here w／lively $m x$ and Naracaibo mentions u／WTAG 0320 9／4．This was soon lost to WliA？which looped more easterly and had usual $n x$ ．（Kazaross）
CUBA GAKV San German loud o／WEEI w／man in SS；CNYV about 40 Hz off channel，yielding a bone rattling growl 0503 8／16．（Connelly） COLABIBIA HJHJ Barranquilla noted w／R．Libertad o／another LA w／ Guba nulled；the Cuban，by the way，has found its way back on to $600,05058 / 16$ ．（Connelly）

6 Port of Spain fair w／accented EE talk 0010 8／31． ross
OROCCO Sebaa－Aioun poor－fair w／chanting and big het on WIOD by Nantur het in too．（Kazaross）Poor w／AA chanting，choppe up by Nantucket Loran－C harmonic＂ticks＂， 0453 8／17．（Connelly） on 5980 closing at same time．Is heard on 5980 with EE 1030－1110 when CC－EE language lessons start．）（Crawford）
UNID SS heard $u / W V N J$ in null of WPRO slop $01159 / 1$ ．（Kazaross） CUBA CGHQ Santa Clara steamrolling WPRO w／usual SS political ambling 0509 8／16．（Connelly）
CUBA／UNID G：i in w／usual talk o／unid LA which played a lot of may have been Guatemala as it looped in the same direction as Cuba（thus ruling out YV and HJ）；reception at $05158 / 16$ ．（Con GUADELUPE Arnouville xint on tape in FF way o／Surinam 0013 on S／31，country $\ddagger=68$ ．WPRO slop nulled．（Kazaross）
DO：INICAN REPUBLIC HIAT S Santo Domingo good w／disco velrsion of ＂Light My Fire＂w／lots of＂boop and beep＂electronic sounds， then SS talk and R．Universal ID 0520 8／16．（Connelly） PORIUGAL Lisboa poor in slop 0456 8／17．（Connelly）
CLBA GikP
then
woman
in VENEZUELA YVLL Caracas heard w／Rumbos de Veve
hind the Cuban 0457 8／17．（Connelly）de Vevenuela ID，well be－ $\frac{\text { PUERTO }}{\text { ing PR }} \frac{\text { RICO WAPA San Juan（tentative）}}{0610} 9 / 3$ ．（Kazaross） ） CUSA Ca／BC La habana loud／totally dominant w／light jazz and SS talk
$1 / 67005238 / 16$ ．（Connelly） Continued next page

## MORE ON THE 1980 WRTVH

The $\$ 11$ pre－publication price for the WRTVH 1980 will expire on October 20 After that date，the price will be $\$ 13$ ．A number of copies of the 1979 after Nov．1，1979．will be closed out at $\$ 9$ each postpaid，first come，firs served．All orders should contain a SASE for confirmation after shipment has oeen made and should be mailed to：Don Erickson． 6059 Essex St．，Riverside， SA 92504 ．Delivery of the 1980 edition，to be air freignted from the London printers and re－shipped UPS from Riverside，CA，is expected between Narch and
Nay 1980；all profits will be turned over to the Handicapped Aid Program．

VENEZUELA YVifi iiaracaibo fair／fadey but totally dominant w／R． popular ID 0050 8／17．（Connelly）
ST．VINCENT Kingstown presumed w／OC $05248 / 16$ and 0503 8／17．（Con） CUBA C：GN Colon totally atop w／SS vocal $m x$ during short skip LA opening；WGN audible barely in null of Cuba along with Portugal 719 het 0533 8／16．（Connelly）
SURINAM SRS noted at 0125 in language，calypso type mx $9 / 6$ ． （Stover）Paramaraibo very good w／female vocal version of the eatles＇hit＂Yesterday 83 8／17．（Connelly）
ColdisIA iJJCU Bogota noted w／R．Nelodia ID and Bogota mention other SS LA＇s plus FF CKAC 0513 8／17．（Connelly）
EXICO XEX Kexico DF strong w／＂La Hora Vacional＂ 0420 9／2．（Maxwell） COLOVBIA／UNID Valledupar HJNS surfaced o／ratpack w／R．Guatapuri and Todelar net ID＇s，after that another stn w／ID sounding lik R．Nicaragua came to to the fore briefly $05208 / 17$ ．（Connelly） PUZRTO RICO WIAC San Juan suspected here per loop w／SS talk on tape from 0755－0820 8／30．G：T－4 TC＇s．Possibly this was AN for hurricane warnings．MoR SS mx w／occasional US song．（Kaz） ／second LA and WS5 $05408 / 16$ ．Loud w／Donna Summer segued into another disco song，overdubbed Caracas ID given $05248 / 17$ ．（Con） nothing in on 8／17，with SS news and ads for a bank and a iocal disco at 0102．（Stover）
COLO：SIA H．JAJ Barranquilla clearly dominant w／ad for firm in Sogota，then LA disco mx 0541 8／16．（Connelly）
IiLD TA（probably Spain）carrier w／SAH about equal in strength to TI： 775,0530 8／17．（Connelly）
BRITISH VIRGIN ISLANDS Roadtown ZBV1 fair W／Cuba nulled；Wolf－ man Jack $\frac{1}{\text { style }} \frac{1}{\text { announcer heard at } 00398 / 17 \text { ．（Connelly）}}$ CUBA GiJN Camaguey killing WB翌，＂Guantanamera＂instrumental followed by woman in SS 05448116 ．（Connelly）
ORTUEAL Porto poor W／YL in PP in WEAN null 2327 9／6．（Kazaross） OLO：BIA／VEiYEZUELA two SS ers，HJDC Medellin and YVKC Caracas $\because E T H E R L A N D S$ ANTILLES PJB loud／alone on channel w／man in SS 0108 ETHERLANDS ANTI
PALiAMA（tentative）Chitre Ho？？poor－fair w／LA mx 0605－0620 9／1． Cerrible noise prevented ID but loop said Panama or HJ．（Kazaross） ATHA：AS Freeport Zlis3 was very good Mi $9 / 3 \mathrm{w} / \mathrm{WGY}$ off．R．Ba－ hamas ID 0516．Catch this one early if you live in the NE＇cause IGY usually tests at 0530．（Kazaross）
MOROCCO Rabat very poor w／AA mx just barely making it thru het nd iNAP 0602 8／28．This may s／on at 0600 today as was not oticed before 0600 when 864 was in．（Kazaross）Poor to fair in 8／17．（Connelly）
VENEZUELA YVSH Upata fair and separable by loop from HJED w／＂en Upata＂mention 0305 and＂Amigos en Upata＂0308 $\frac{1}{2}$ 9／1．（Kazaross） COSIA RICA TIOS San Jose fair w／disco 0552 8／16．（Connelly） OROCCO Oujda crushing WNYC w／het， mx heard at 2320 ．FF at 2331. ousy modulation on this one．Other usual lowband TA＇s were in but only 765 was good enough for audio，9／6．（Kazaross） AITI 4 VEH Cap Haitien nicely atop channel at 0025 in presumed
 ion 0230 ．．．．． due to David．（Vazaross）
录等 0.0530 Lima w／audio（finally）and mx garbled by WHDH OC $0440-05309 / 3$ ．A weak 855 het was also noticed．Country $1 \geqslant 73$. （i．azaross）There is（or was until recently）another LA on 854. ifthout an ID I would never count this－CH SKAZIL 3io de Janeiro to good peaks，dominating the channel： LS disco mx at 0555 ，several Nundial ID＇s by man in PP at 0600 more disco at 0602 8／16．（Connelly）ZYD68 poor w／Mundial ID in C：JY null． $05508 / 28$ ．This was better in early July．（Kazaross） in severe int．Any ideas？（laross）Yes Panama and w／Cuba， OROCCO Khar－es－Souk weal w／mazors 0550 ，Panama and Colombia－C LRGFITINA LRA1 Euenos Aires－I thought I heard a R ．Nacional ID $5 / 31$ here during what appeared to be nx at 0034 ．By 0040 this was pretty well buried by YV．：P and FJLA（both ID＇ed），but I
stayed on the frequency and at 0100 after a static crash I
( 870 , continued) caught four of what are supposedly the six LRA pips w/the last pip prolonged to clinch this catch. Country

69 lobged thants to ....OA bein Enocked off by Kurricane Javid. uch
5/2ठ. (inazaross) Spiritus OO. TSERRAT ZJB Plymouth fair in some WCBS slop w/Caribbean mx 0035 911. (Nazaross)
COLO:BIA HJCE Bogota good w/LV de sogota ID, then romantic LA mx. Atop another LA and :LS 0607 8/16. (Connelly)

DO:I.ICAN $\frac{\text { REPUSLIC }}{6 / 31 . \text { (Nazaross) }}$ HIJP Santo Domingo good w/RTVD ID o/YVLW 0031 8/31. (Nazaross)
HIII 4VS Gonaives fair W/Island mx 0033 8/31. (Kazaross)
$\frac{\text { BAR3ADOS }}{0004-0008}$ Bridgetown good w/recgae mx and accented $a$ : anncr $0004-0008$ when SS 2NH: showed up, 8/31. (Nazaross)
COLO:BLA FJEY Cali suspected here mentioning Colombia way u/ C:N:L at 0408 9/4. (Nazaross)
SI.ZZUELA YV:D Naracaibo fair o/mess w/ID 0028 8/31. (Kazaross) ENELUELA YVRQ aiquetia o/u domestics; brassy LA mx noted at SURIMM Nieuw Hickeri
VENZZUELA YVLI laracay suspected here w/lively LA mx $01578 / 31$ u/Wint and :TPA:. (Nazaross)
CUBA Reloj outlet w/usual pom o/FJG3 and a mishmash of other $\Lambda^{\prime}$ 's-low rumble present 0608 8/16. (Connelly)
EiICO äs :.:exico DF fair w/"La Hora" pgm 0420 9/2. (!axwell SUERTO RICO UIPR San Juan suspected here poor-fair w/ RR: w/cl $0 \times 0820-08508 / 30$. iloted again in mess next evening. Naybe this was Ai; for hurricane. (Kazaross)
EXICO unid La Hora pgm fading in and out. Any ideas on the stns? 0420 9/2. (Vaxwell) X $\operatorname{BEYJ}$ easily the most likely-CH taped "Zed-F-B Nusic Radio Bermuda" ID at $23349 / 1$ and logged for country $i 72$. In mess W/YVSR and u/HJHi W/ID 0352 9/4. (Kazaross) VEIEZUELA YVSR San Cristobal fair w/San Cristobal, Venezuela
mention 0404 shortly after :iJHik s/off. This must be AV as I elieve all of the new liundial net is. (Kazaross)
TUiHISIA Tunis w/good carrier and AA mx at poor level in slop t 0022 9/6. Newly acquired p -multiplier helped a bit. (Kazaross) UNID SS noticed in growl way u/two domestics $00268 / 31$. I had no uck w/this one during the next days of AU cx. ( $\mathrm{K}_{\mathrm{n}}$ zaross) CLCADOR KCAW2 Guayaquil (zentative) weaker than 995 but along ame bearing w/LA mx in slop 0205 9/4. (i.azaross)
S/off annct had slogan heard and sioff at 0600 with a fair signal. splash from the $: 1 Z^{\prime}$ er on 980 . Heard $7 / 9$. (Crawford) EXICO unid "La Hora" pgn on top of channel, no ID กn 9/2. (kaxwel1)
ECUADOR HCEIV2 Guayaquil noted in 3 kHz bandpass at $0202 \mathrm{~g} / 4$ during great HJ-HC cxx. (Iazaross)
spot for "The Top of the Reef" at 2318 fair signal. I taped ight club in St. VMM and CFLP at 2320. Than s to early Seardearlier Lost
 COLA:BIA/VENEZUELA at $01299 / 4$ a SS w/very lively mx was here $\mathrm{u} / \mathrm{W} I \mathrm{NS}$ GW (?? CH). This was not $/ / 4770$ SW so not YV noticed At 0132 HJOP Barranquilla //960 faded up. I checked at 0355 and heard lively LA mx way u/a stronger wINS. At 0359 the YV anthem was heard so this must be YVPC Cagua unless somebody else is here. (Kazaross)
VENEZUELA YVRS La Ascuncion in the clear w/equal strength KDKA nulled; Mundial Margarita ID, LA mx good at $0444 \mathrm{\delta} / 16$. (Connelly) MEXICO XE२R Mexico DF w/"La fora", strong and steady 0420 9/2. PORTUGAL Porto Alto fair w/s/on taped 0556-0601 9/3 w/WBZ off. At 0600 4 pips then pause then i pip covered by Radiodifusao portuguesa ID. (Kazaross)
COLOCBIA HJAI Barranquilla atop jumble w/soft mx then CARACOL
WWHN ; strong signal $0420 \mathrm{~g} / 2$, but audio is distorted and fuzzy; somebody should sell them a modulation meter. (Naxwell)
UNID SS in WriN fade $00079 / 1$. Any ideas-Caracas?? (Kazaross)

COLO:BIA HJFJ Kanizales heard during fair opening during KYW CUBA CMKG Baracoa poor-fair (tentative) w/a speech 0102-0104 9/4. (Kazaross)
AUSTRALIA 4 TI Thursday Island (between Queensland and Papua New Euinea) heard at 1300 with news. Has a s/off time of 1400 and power of 2 kw . Not long on the air. Verified in a week from $A B C$ in Queensland for first report they received. Is mixed here with HLKQ South Korea. (Crawford) Would this possibly count as new country using the ARRL definitions? CH
FREliCh GUYANA Cayenne noticed poor to fair w/OM in FF at $2313 \frac{13}{2}$ and by 2315 I had the tape running and a $Y L$ anncr was speaking inoly strong low het at 2318 9/3. Back again poorly from 2319 . 2321. This was in again though weak u/domestic QRM w/QM and YL just barely recognizable as FF at 2313 9/5. Country \#74. (Kaz) PUERTO RICO WiIA Arecibo fair w/ "Radio Arecibo" ID and PR mention looping a bit west of French Guyana 2327-23289/3. (Kaz) VENEZUELA YYMA Naracaibo good w/R. Mundial Zulia ID o/u CBA $0 C$ and HJAG 1071 het 0426 8/16. (Connelly)
COLOMBIA HJAG Barranquilla loud w/ID as R. Atlantico, then festive SS mx; whipping fierce het on 10700425 8/16. (Connelly) OLQMBIA HJBC Cucuta xlnt w/"Esta es La Voz de Cucuta, 1090 chiz, Cucuta, Colombia, CARACOL" $02529 / 4 \mathrm{o} / 2$ SS'es. (Kazaross) VENEZUELA YVSZ Caracas good w/screaming "Exi
BRAZIL Sao Paulo ZYK64 fair to good w/definite PP looping east chribbean. 2326-2329 fade, then briefly at 2333 then mostly $9 / 2$. This was in again w/fair sigs $23209 / 5$. Sao Paulo was mentioned at $2321 \frac{1}{2}$ soon before the HJ faded in. This is a wide open frequency at sunset as $9 / 5$ was only semi-auroral. WRTH ists this as having different powers but I feel this is 50 kw ince Globo is much stronger. (Kazaross) 50 kw is correct-CH COLA:BIA (HJCN or HJAT) R. Reloj ID good 0413 8/16. (Connelly) COLQMBIA HJAT Barranquilla good w/R. Reloj IB followed by a ara'BIA unid IA mx and ID's as R. Reloj. Mentioned Colombia COLa: BIA unid LA mx and ID's as R. Reloj. Mentioned
on a newscast after WWWE s/off, $04209 / 2$. (Maxwell)
UEXICO XERED "La Hora" pgm after WBT s/off 0420 9/2. (Maxwell) VENEZUELA YVQT Carupano good w/many ID's 2345 8/31. Rumbos chimes also heard. (Kazaross) Likely the Venezuelan here w/ Venezuelan iiA at s/off heard $u /$ WBT 0358 8/16. (Connelly) VENEZUELA YVZX liaturin suspected looping eastern Venezuela /31. At 010 recheck this was somewhat separable from stronge ViF by loop. HICN was off because of David. (Kazaross) COLABIA Em. Rio-Mar, Barranquilla at $06307 / 1$ with Todelar of twenty minutes it was in the clear. (Crawford) most part $\omega /$ SS talk, several mentions of Barranquilla $05398 / 17$ (Con) VENEZUELA YV:I: Punto Fijo u/WHUE bfl mx 2358 8/31. This is sometimes heard in AU Cx. Dominica was not heard, probably cause of storm damage. (Kazaross) I was listening to the ham hurricane net on 14329 as David passed over Dominica. The prime minister said all radio was off the air-no towers survived-CH COLO.BIA HJBL Barranquilla dominant o/bad growl; SS ballad, eropuerto ID, then uptempo LA mx $03438 / 16$. (Connelly A/FTIGUA St. John's CRL good w/EE preaching 0127 8/17. (Connelly) 0150 found it booming in $9 / 5$. (Stover) 0 good, a recheck at INS Is a de pinos (Stover)
dclock ticks TC good W/WHA: nulled; usual Reloj pgm (SS talk EIEZUELA Maturin YVOR fair w/several H'aturin" SID's by Yi $23428 / 31$ before YViNJ fade-in. There was no trace of HIBE or any other DR stations on this and several following nights due to the hurricane. (Kazaross)
CUSA Yaguajuay G:?? briefly $/ / 1180 \mathrm{w} / \mathrm{slow}$ LA mx 0247 8/30. (Kaz) CAL:A:: ISLAKDS Georqetown poor to fair w/woman in EE o/feeble low pitched het (about 200 Hz ), chewed up by WCAU slop 0321 (Connelly)

DURAS HRTR Danli noticed fair w/SS mx 0053 9/2. (Kazaross) OLO:BIA F.JBO Earranquilla heard w/R. Piloto ID U/WFEA fade in uroral cx. Time was $0238 \frac{1}{2} \mathrm{w} / 1 \mathrm{ively}$ anncr. (Kazaross) ST. PIERRE ET R:IQUELON good w/viol in mx 0040-0045 9/6 then it aded some, shortly after 0145 recheck a strong $O C$ was noted they wer cut at 0201. I feel the OC was from a stronger Xmar They are scheduled for a more powerful xmtr soon-Ch
FRANCE Lille poor-fair at s/on 0500 8/28 w/"Ici Radio France y YL and into $n x$ by af. Soon faded. (Kazaross) Fair w/OC 0341 8/17. (Connelly)
1380 VENEZUELA YVJD Puerto Cabello poor w/"Ondas del Mar" ID heard VEiNEZUELA YVJD Puerto Cabello poor w/ "Ondas del Nar"
1385 HAITI 4VARH Port-de-Paix in $\mathrm{w} / \mathrm{mx}$ in slop $01349 / 2$. (Kazaross)

SRAZIL ZYJ458 Rio de Janeiro xlnt w/PP taped 0015-0020 9/3. int again $2344 \mathrm{w} /$ two $\alpha$ : anncrs for a soccer match. ::any "clobo" ID's and Brazil mention on tape 2358-2401 9/5. While this was in I noticed a SAF (about 100 per minute) on 1280 looping the same direction. I suspect this was from Tupi but I couldn't pull any audio (PP) out from under three domestics. Does this have an unfavorable DA like 1040? (Nazaross) No idea-CH CUSA C:GY Perico fair o/GY'ish LA mess w/ID after slow mx Cuban type SS. (Tiazaross)
EXICO XEB Vexico DF, ID as Radゅo Cuatro and SS talk strong EXICO
like a
local 0.420
$9 / 2$ . (V:axwell)
VEVEZZUELA (tentative) YSGF Cariputo, this is listed here. I heard SS through the low het $00209 / 2$. (iazaross) COLOiBIA HJOK Barranquilla suspected here w/3 Todelar chimes (not Rumbos ding-dong) 0058 9/3. (Kazaross)
COLa:3IA E.JCA Dogota fair u/CBGA w/R. Capital en Bogota ID 0402 文 973 . (liazaross)
VEXEZUELA YVPZ Puerto Ordaz suspected here W/ivKBR. The typical Rumbos ding-dong chimes were heard 0350-0355 here and on 1180 , I believe they use this ding-dong between $n x$ items. (Kazaross) devezUela caracas YVEN: fair in growl w/screaming R. Impacto this is everybody's unid noted last winter hetween 1260.5 an 1260.8. Format bearing are the same (very lively mx ) and nothing is noted several hundred Hertz high anymore. (Vazaross) ST. KITTS R. Paradise loud w/fire and brimstone preacher 0254 ठों 6 . (Connelly)
COLGIBIA FJAQ weak w/R. Iiramar ID 0315 w/GiJG 8/31. ivas better $00309 / 1$ w/another non-Cuban SS underneath. (Lazaross)
Cold.SIA HJL: Bogota at 0123 9/1 I heard "en Bogota, la hora, la hora" (the SS in New Zork was nulled). Somebody w/siren 3 times was heard nnderneath. I taped some 'Tiusical" ID's here on $9 / 2$ at 0006. Is this siren a Colombian network ID? (Kaz) I don't know. I heard this siren thing on a couple of freqs last year (including 1400) but no one has been able to tell e whit
(probably BV) like many other YV's one here w/a sporting event vas lost to 1 JKis who I)'ed ar YV's at the time, 0122976. This as the previous days. The strongest domestics on 1280 were looped. (Kazaross)
COLONBIA/ VENEZUELA YVNS Naracaibo battling w/HJOG Cartagena in null of weak domestic w/radio theater $0338-03488 / 31$. YVNs was nx, FJOG was lively mx and ID "LV de las Antilles". (Yazaross) SENEGAL poor-fair w/African mx and FF talk 0635-0640 in some slop. (Kazaross)
COLOCBIA HJAL noted weakly $u$ /domestics w/lively annct and Barranquilla mention 0148 9/2. ID as "LV de la Patria". (iaz) Vision ID 0225974 during $A \mathrm{U} \mathrm{cx}$ and the best cx to Colombia ever mentioned. (1azaross)
$\frac{D a: I: I C A N}{3} \frac{2 B P U S L I C}{}$ HITAV Sani noted in passing fair w/SS mx in 3 kHiz bandpass $02448 / 31$. (iazaross)
U..ID SS in growl $03538 / 31$, frequency is no good until semilocal WARA s/off at 0300. (i:azaross)
U..ID Iively SS noted 2356 9/2. Any ideas? (Kazaross) LV de las uerzas Armadas, DR and R. Visia, Colombia likely-CF
ITALY Rome poor w/YL in II and then mx 04249 NiD het and carrier fairly strong but I couldn't get audio CCLA:5IA Cartagena (or whoever is here-hi) fair-good w/little Vivid het here $0430 \quad 8 / 28$. (iazaross)
ALRITA:IA iouakchott w/strange mx in slop w/big het $0632 \mathrm{~s} / 31$. VEN:EZUELA YVTG noticed here often vocal mX and 2 . Vision $1 D^{\prime} \mathrm{s}$. There's anoth w/slow LA mostly ID $0058 \mathrm{9} / 3$. (iazaross) How did you knother SS under sometimes not one of the other 2 . Visions on the freq-CH Cumerebo and V B, ZZUUELA YVTI liaracaibo fair in ivDRC null w/"Catumbo" mention 2: $04038 / 31$. I thinl: they are Al. (iazaross)

1390
1400

14
1455 XE ID's. Some days it is mixed with Universal in Colombia. (Grawford) GUINEA Conakry here (not 1403); potent w/instrumental guitar mx reminiscent of Segovia 0248' 8/16. (Connelly) In briefly a 0045 at fair level with vernacular talks by $\mathrm{C}_{\mathrm{i}}$ and YL , overtaken by QRA: at 0050 8/18. (Stover) Apparently off the air /11-not heard at all from 0330-0625. France was left but the signal was absolutely lousy. (Hutton)
Da: INICAN REPUBLIC HIAE Santo Domingo (tentative) per loop w/ low LA ballad type mx (mostly vocal) like of ten hrd on HICN 120. This was way $u / W P O P^{\prime}$ 's Radio Theater $0215-0235$ 8/30. (Kaz) UIIID SS w/lively mx 0052 9/4. (Kazaross)
$06258 / 31 \mathrm{u}$ /WBS Sirens were heard think this is the SS here EENEZUELA YVZO Maracaibo fair in growl in WBSM mull whfull ID $348 \frac{1}{2} 9 / 1$. (Kazaross)
UNID but Thule, Greenland suspected; carrier and bits of talk $8 / 16$. Lost to noise hy 0243 - poor in storm QRN Looped N-S axis w/MW1 loop. (Connelly)
CUBA Moron Cir? suspected here $00409 / 2 \mathrm{w} / \mathrm{not}$ lively type uban anncr. (Kazaross) Heard with LV de Cuba and Radio Habana ID's 0730 on $7 / 17 \ldots$ Good signal. (Crawford)

UNID SS noted way u/domestics $01309 / 6$. (Kazaross)
NID SS noticed way u/WFTQ in growl 0105 9/2. (Kazaross) is tha cally thing listed here. A beverage would wave done the job. This shows how good the cx was. 972. (Kazaross)
COLABIA Radio Narino heard 0515 with fair signal and some splash from the IIZ'er on 1458. Big RCN ID at 0545 and some arino ID's at times. Heard 7/1. (Crawford) UNID SS here $02258 / 31$ and a few more times during next AU days. (Kazaross)
DQ:IKICAN Frequency is approximate as measured w/vernier. (Kazaross) Frequency is approximate as measured w/vernier. (Kazaross)
MO:ACO lionte Carlo fair w/OC and occasional TTing prior to Oormal programming 0418 8/17. (Connelly)
UNID SS noticed in growl 0208 8/31. (Kazaross)
UVID TA carrier noted 0549 9/10. I hung around but it didn't. (CH)
Oops, Horocco and Ivory Coast are both still here-CH UKID SS audio thru loud growl w/WTOP $01209 / 2$, I think this 400. Any ideas here? (Tazaross) R. Tigre, Colombia most often heard-CR.
AiGUILLA The Valley taped w/an unbelievably loud signal 0057 $01029 / 2$ when it faded into some slop. (Kazaross) KID carrier and het on 1510 here 043 8/28. Is Belgium on w/400 the operational date for Becent 1 CH
PUERTO RICO TRAI $S_{a n}$ Juan good from 2340-2350 9/3. No ID hut this Iooped same as other PR's. (Kazaross)
SAUDI ARABIA really zood het against $M: B / N$ and decent audio de tectable on peaks, first noticed $00258 / 13$, obviously on late sked for Ramadan. Vas definitely able to parallel piercing flute mx at 0052 against SW 15060 which is listed in MASWA as a Domestic Service relay. However the audio between 1521 and
15060 while definitely established as identical, varied from
(1521, continued) from 1 to 2 seconds out of sync with 1521 anead, so probably playing tapes at each site (much too bis a 1521 renains as het against M:BW. Peak reception of liv occured around 0130 and no other easterly signals were heard with just 1539 and 1593 BFO'able. Hoped for Sharjah on 1575 but not even a BFO, if on at all. (Foxworth) I remember from somewhere that Shar an noticed a round 0520 interesting one. Wicked het on 1520 first noticed around $05209 / 11$; pops pierced thrpugh at times. Way too late for the Czech or Arab. I wonder who in the world this COSTA RICA TIJJS
COST Woman in SS, Turrialba pesuned at poor to fair level w/man and woman in SS, slopped by WKBN 0235 8/16. (Connelly) Suspected PUERTO RICO HUPR Utuado very good w/several ID's and Popeye Sailor $\frac{\text { Rin }}{\text { Single 0010-0015 994. ID sounds like Rrad-yoo-BURR; }}$ during AU and fantastic cx . (Vazaross)
$\frac{\text { U:ID }}{W}$ noted $w /$ soft orchestral $m x$ thru CBE slop 0358-0359 when WTR cranked up its modulation after its 0355 nx , thus wiping it out before 0400 ID 8/30. (Kazaross)
GABON Libreville noted $04259 / 1 \mathrm{w} /$ carrier and garbled audio heard a few minutes later in heavy splash. 1493 , 1305,1349 were in later. Country ${ }^{2} 70$. (Nazaross) I'd be very hesitant on a frequency plus garbled audio-CH of lis supposed presence CAM: AN ISLADS George Town xlnt w/EE CAM. A. ISLALiDS George Town xlnt w/EE religious discussion pgm further information $02278 / 116$. (Connelly)
MaLTA Cyclops fair w/clear Deutsche Welle IS's alternating w/ mushy audio anncts 0358 -then time tone at 0400 followed by man in AA on 8/17. (Connelly) Raising the roof and keeping neighbors awake with tremendous signal $04119 / 11$ during AA pgm. (Hutton) TUKISIA Sfaxx poor w/apparent female chanting in heavy CIIM
Slop $04508 / 16$. (Connelly) The leading TA on the band 9/11 Slop $04508 / 16$. (Connelly) The leading TA on the band 9/11
from 0415 tune-in until faded out at LSR. Last year they were not signing on until 0430. This has been the loudest TA here since coming on the air; not as reliable as Guinea however. (cम) ITALY very nice with light mx pgm 9/11 around 0445 and in CUBA Cadena Agramonte outlet apparently the stn here poor to fair w/festive LA $m x 0231$ 8/16. (Connelly) Yep it's them-CH PORIUGAL the best of the rest after Europe had mostly gaded out 0613 9/11. Not a bad signal at all with man in non-atop PP talk, destroying 1580 with the het. (CH)
UiiID carrier detected weakly 0505. I heard the Spanish IS here at 0600 last winter so this is probably not from Spain. Wuch better cx will be required to get audio out of this, $8 / 28$. (Kazaross)
$\triangle$ FILLION U1:IDS noted here $9 / 11$ from 0502 until I finally gave up and out at 0633 . Shorlly after 0500 three carriers were drifting around some. One of the 2 on channel faded up severa times in the next half hour producing audio which I think tapes will confirm is AA. Naturally no good AA prospects listed. Soth of the other 2 stns seemed to be SS-one certainly was and prohably the other also but chasing the carriers with a fusion. At 0600 these three were joined by created some confusion. At 0600 these three were joined by a hatful of others, With the resultant of six identical pips. Oh well.... (C:i) nothing, plus a set of six identical pips. Oh well.... (CE.) in G3 but badly rarbled by severe auroral flutter-fading 0409 /17. (Conthelly)
N.:ID het and carrier $04009 / 6$. Usual highbanders in but none even fair. (ǐazaross)
COLQ:3IA HJKi : ionteria xlnt w/"LV de Sinu" is 0510 8/28. (1:az) PO.TUGAL do由n fair-poor $9 / 11$ at $0604 \mathrm{w} / \mathrm{pan}$ in PF. .odulation not up to par. Poor AכP is havin! their troubles.... (Cii)

## ON THE TRAIL OF DAVID

césar obj́io
While some of you were at the St. Louis Convention, we in the Dominican Republic had to withstand the tremendous force of Hurricane David. We worked till Thursday noon in order to be prepared for the announced arrival of David Friday morning. Dominican stations were already part of a network under the direction of Civil Defense in order to keep the people informed of the situation. I preferred to listen to Puerto Rico's stations as they were ahead of us in the hurricane path. During Thursday afternoon WKJB-710-Mayaguez was the only P.R. station heard on the air as they were operating with their casualties. 930-Montserrat, was not heard in the afternoon. During the evening WKJB-710 was QRNed by Caracas station R. Capital, on the same frequency. Santo Domingo stations started to s/off and on Thursday evening only RTVD-620 R. Guarachita-690, R. Clarín-860 and R. Continental-890 were on the air. Then I heard R. Guayana -1590 on the air in the evening with news about the damage of the hurricane in their area. I kept tuned to them for the postiton of the hurricane. I went to bed around midnight.
Early Friday morning I tuned again to WKJB-710 for more news. New P.R. station on the air was WPAB-550-Ponce with news and announcing also to be on the air with their own generators as still there was no electricity in the island Electricity was cut off at about noon and only RTVD-620 and R. Clarin-860 were on the air, at this time the hurricane was announced to be about only 100 kms south of Santo Domingo. When the strongest force of Hurricane David was could not withstand the mighty force of gales at 240 kms an hour and fell down Their transmitter went off and only R. Clarin- 860 remained on the air. At this time I think Hurrican David was entering the island some 40 kms S.W. of Santo Domingo. I lost track of the hurricane as P.R. stations did not give any position as there was no immediate danger for their island and Dominican stations did not mention it. Violent gusts of wind hit the city for some two hours, meanwhile R. Clarín kept repeating the same warnings all the time. The darkest night fell over the city as there was no electric light anywhere and a curfew was decreed by the President to avoid disorders. P.R. stations 550 and 710 were still on the air, then electricity, candles, flashlights and gas lanterns were used instead. Rain was still falling on the roof so I went to bed early this time.
Saturday morning brought the clear light of disaster. Trees, telephone and electric wires as welf as big transformers were all over the streets and roofs the first news of the hurricane in the morning program and the position was out in the sea but on the northern side of the island. So the hurricane had crossed the Dominican Republic right through. Still 550-WPAB-Once, 710-WKJB Mayagüez and new 580 -WKAQ-San Juan were heard. R. Clarín-860 was still the only Santo Domingo station on the air, later on RTVD-620 was heard but weaker than usual as they seemed to be operating with a transmitter of lower power and a different antenna. R. Santa María-590-La Vega and Radiolandia-1160Santiago were new stations heard. Saturday afternoon added in Santo Domingo their antenna towers destroyed were 790-La Voz del Trópico, 830-HIJB both AM and FM, 1180-R. Mil, 690-R. Guarachita, 650-R. Universal, 1220-HIN. Other FM station antenna towers destroyed were R. HIGO, R. Cima and HILX as well as some others. Also TV towers destroyed were Rahintel-Ch. 7, Telesistema Ch. 11 Teleinde Ch. 13, Colorvision Ch. 9, the highest TV antenna in Santo Domingo as it was situated on top of a 12 -story building named "La Torre" (The Tower). Rahintel Ch. ? studio-transmitter link tower situated at their studios also came down. The only antenna tower still standing after the hurricane was the newest, Tele Antillas Ch. 2. They were to be on the air September 3, then they had the best signal I had ever watched on TV in Santo Domingo. The above is only part of the damages known, not everything is described here. But the radio brought the news of still a new hurricane in the Eastern Carribean: Frederick.
During the following week everybodu started to clean up the streets, picking up treesm branches, wires, etc. Electricity was still off in about $90 \%$ of the capital and almost $100 \%$ of the rest of the country. In the meantime "Civ Defense Network" was kept in operation with only RTVD-620, still weak and R. Clarin-860. Then something happened that aroused public indignation. After $t$ RTVD transmitter was put back on the air during the hurricane, Telecomunicac-
iones ordered R. Clarin off the air because they had failed to pay some dues for the relays installed at Alto Bandera high on the mountains. President


In a recent Musing，I commented that WQII has instituted a policy of not answering the majority of DX reports，Of course，this remark generated a number of responses fr NRC members，questioning my logic and sanity．In the process of analyzing the subject，I decided that a number of points generally ignored by DXers should be brought into open discussion as part of the current questioning of the

With few exceptions，the radio stations in the Western Hemisphere are private，commercial enterprises．Their United States，radio stations in all except the largest markets are small businesses．The average local McDonalds has a greater sales volume than the average local radio station．And a significantly high percentage of all U．S．
radio stations are unprofitable or very marginally viable．

In a recent issue of Business Week，an analysis was made In a recent issue of business week，and and cost of the business letter（and a verification is a business letter）．Counting supplies，filing，secre－ the average letter costs in excess of $\$ 10$ to send．

Many of the less successful stations simply do not have the manpower to answer reception reports．Others，in a better financial environment，may correctly assume that the results of answering reports do not justify the related expenses．In either case，the end result is a station hich does not verify．
urther，in an age where radio is a highly local medium （as opposed to the pre－television era when radio was a simultaneous，national medium），the value of a DX report get pretty wrapped up in a discussion of WQII＇s signal over he western section of Bayamon．But I（and this is still DXer speaking）can not become excited over some guy＇s report from Norway．The report is of no practical value．

These are some of the facts．My own feeling is that the age of the Medium Wave verification is ending．The thrill like．The＂teception is not shared by DXer and station roof of＂tape verification＂is a good alternative，if $s$ that the verification in written form from the station will become an increasingly hard item to secure in the future．

## Continued from preceeding page

Guzmán ordered the station to be back on the air，payment or not，as they were only helping and advising the citizens to take care with proper instruct－ ions．As time passed every started to complain and ask the Civil Defense Network to end as the emergency was already over，but the government wouldn＇t hear the requests and complaints have increased．As of this date，Sept．9， the Network is still on with stations RTVD－620，HIZ－730，R．Clarin－860 and La Voz de las Fuerzas Armadas－980．News is scarce and you have to read papers in order to be informed．Only messag well as government relatives are aire the time orchestra music is heard．
Note from HQ：We are very pleased to learn that César is safe．The death and destruction caused by Hurricane the Dominican people well as they struggle to overcome adversity．

|  | NAME AND | HEARD |  |  |
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| STD | general area | TDH | SH |  |
|  | KARL FORTH，vic Chicago，Ill． | 1771 | $48+$ | 10 |
| 62 | RUSSELL J ．EDMUNDS，nc N．J． | 461 | 47＋ |  |
| 73 | WAYNE D．MURPHY，Louisville，Kentucky | 7 | 47＋ |  |
| 39 | DENNIS PIMPER，ne Nebr \＆nr S．l．c．，Uta | 1914 | 47 |  |
| 68 | dennis PIMPER，nr Salt Lake City，Utah | 137 | 45 |  |
| 78 | RICHARD W．Kenneally，Cincinnati，Ohio | 81 | 38＋ |  |
| 69 | BILL WHitacre，Lansing，Michigan | 800 | 49 |  |
| 70 | LOU buEhler，$n$ n Saint Louis，Missouri | 589 | 40＋ |  |
| 75 | THOMAS H．BULL，Washington，d．C． | 76 | 43＋ |  |
| 57 | CARL MANN，Cedar Rapids，Iowa | 450 E | 45 |  |
| 57 | ROBERT FOXWORTH，vic New York City | 1000 | $49+$ | 0 |
| 61 | JOSEPH FELA，c N．J． | 86 | 49＋ | 10 |
| 74 | ROGER A．MORBY，vic Albany，N． | 716 | 38＋ |  |
| 75 | paul swearingen，se Kansas | 582 | 40＋ |  |
| 70 | harry J．hayes，ne Pa． | 950 | 41＋ |  |
| 64 | bruce portzer，Seattle，Washington | 1233 | 44 |  |
| 73 | brett hanavan，vic San Diego，Calif． | 663 | 39 |  |
|  | bob walker，nr Louisville，Kentucky | 503 | 35＋ |  |
| 30 | Frank wheeler，nw Pa． | 2694 | 50＋ |  |
| 69 | bob karchevski，nr San Francisco，Ca | 249 | 36 |  |
| 73 | paul r．Mount，ne n．J． | 486 | $36+$ |  |
| 72 | dick truax，Louisville，Kentucky | 935 | 46＋ |  |
| 73 | MIKE ANDERSON，Louisville，Kentucky | 600 | 38＋ |  |
| 74 | Sharon waterman，w Mass． | 721 | 39＋ |  |
| 59 | LINDA BRODSKY，vic New York City | 374 | $35+$ |  |
| 62 | GARY ATKINS，Louisville，Kentucky | 1360 | 49＋ |  |
| 72 | ERIC FADER，New York City | 800 E | 38＋ |  |
| 62 | RON MUSCO，vic Hartford，Conn． | 1110 | $46+$ |  |
| 78 | Paul r．Mount，se Ohio | 3 | $36+$ |  |
| 62 | JERRY BOND，Rochester，N．Y． | 785 | 43＋ |  |
| 60 | andy rugg，Montreal，P．Q． | 323 | 47＋ | 0 |
| 72 | MARK STRICKERT，Chicago，Ill． | 37 | $35+$ |  |
| 66 | Gary SIEGEL，Toledo，Ohio | 22 | $49+$ | 0 |
| 76 | DAVE KORINEK， nr San Diego，Calif． | 385 |  |  |
| 63 | ED GEHRINGER，West Lafayette，Ind． | 300 E |  |  |
|  | dave yocis，Bridgeport，Conn． | 428 | 38 |  |
| 76 | brian bursack，Columbus，Ohio | 19 | 33＋ |  |
| 75 | tex Stout，vic Louisville，Kentucky | 77 | 32 |  |
| 66 | KEN ONYSCHUK，ne 111. | 69 | 43＋ |  |
|  | STEPHEN PONDER，Fort Worth，Texas | 396 | 35 |  |
| 76 | DON DAVIS，Macon，Ga． | 580 | 39＋ |  |
| 75 | MICHAEL GOOD，Boston，Mass． | 334 |  |  |
| 70 | GEORGE KESTEVEN，Calgary，Alberta | 212 | 33 |  |
| 69 | richard allen，nc Oklahoma | 35 | 38 |  |
| 75 | John Clemmer，Peoria，Ill． | 334 | 36 |  |
|  | Joe brauner，wc Pa． | 55 | 50＋ | 10 |
|  | ERNEST R．COOPER，tip of Cape Cod，Mass． |  |  |  |
| 23 | gene allen，vic San Francisco，Calif． | 3013 | 49 |  |
| 24 | Steve bezilla，c Pa． | 3000E | 48 |  |
| 35 | NORMAN MAGUIRE，Albuquerque，N．M．\＆Conn． |  |  |  |
| 50 | ED KREJIY，vic Cleveland，Ohio | 2456 | $49+$ | 0 |
| 58 | bill Coleman，e N．C． | 2105 | 46 | 2 |
| 58 | ERNIE J．Wesolowski，e Nebr． | 2050 | 49＋ |  |
| 58 | WARren brown，se R．I． | 2000E | 47 |  |
| 70 | Stephen francis，e Tenn． | 1942 | $46+$ |  |
| 45 | KEN CHATTERTON， n New York | 1845 | 50＋ | 0 |
| 31 | PETER CLARIUS，nr Elizabeth，N．J． | 1819 | 48 | 10 |
| 47 | PETER TAYLOR，San Francisco，Calif | 1700E | 50＋ | 0 |
| 76 | John Kromka，vic New York City | 1256 | 44 |  |
| 67 | RICH EDDIE，St．Louis，Missouri | 1253 | 49＋ |  |
| 21 | ROSS HANSCH，s Wisc． | 1247 | 50 | 0 |
| 69 | Karl Jeter，atlanta，Ga． | 1231 | 40＋ |  |
| 63 | ray arruda，nr Boston，Mass． | 1183 | 47 |  |
| 64 | elliot straus，vic New York City | 1126 | 44＋ |  |
|  | NEIL G．zANK，Lincoln，Nebraska | 1100 | 46 |  | TAPED TDT

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PETER TAYLDR, San Francisco, Ca
76 JOHN KROMKA, vic New York city
67 RICH EDDIE, St. Lisc.
69 KARL JETER, Atlanta, Ga
64 elliot straus, vic New York City
61 NEIL G. ZANK, Lincoln, Nebraska

YR NAME AND
STD GENERAL AREA
70 KARL FORTH，Vic Chicago，Ill
RUSSELL $J$ ．EDMUNDS，nC N．J．
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70 LOU BUEHLER，nr Saint Louis，Missouri
75 THOMAS H．BULL，Washington，D．C．
fi Carl mann，Cedar Rapids，Iowa
61 ROBERT FOXWORTH，vic
74 ROGER A．MORBY，vic Albany，N．Y．
75 Paul Swearingen，se Kansas
64 BRUCE PORTZER，Seattle，Washington
73 BRETT HANAVAN，vic San Diego，Calif．
30 FRANK WHEELER，nw Pa．
BOB KARCHEVSKI，nr San Francisco，Calif
72 PICK R．MOUNT，ne N．J．
73 MIKE ANDEPSON Louisville，Kentucky
74 SHARON WATERMAN，w Mass．
59 LINDA BRODSKY，vic New York City
72 ERIC FADER，New York City
62 RON MUSCO，vic Hartford，Conn．
78 PAUL R．MOUNT，se Ohio
62 JERRY BOND，Rochester，N． 60 ANDY RUGG，Montreal，P．Q．
72 MARK STRICKERT，Chicago，Il
76 DAVE KORINEK， nr San Diego，Calif．
63 ED GEHRINGER，West Lafayette，I
76 BRIAN BURSACK，Columbus，Ohio
66 KEN ONYSCHUK，ne Ill．
75 STEPHEN PONDER，Fort Worth，Texas
75 MICHAEL GOOD Boston．
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69 RICHARD ALLEN，nc Oklahoma
26 JOE BRAUNER，wc Pa．
32 ERNEST R．COOPER，tip of Cape Cod，Mass． 23 GENE ALLEN，VIC San 24 STEVE BEZILLA，c Pa．
35 NORMAN MAGUIRE，Albuquerque，N．M．\＆Conn． 50 ED KRETNY，vic Cleveland，Ohio 58 BILL COLEMAN，e N．C．
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69 KARL JETER，Atlanta，Ga

61 NEIL G．ZANK，Lincoln，Nebraska
$\qquad$


YR STARTED - Year Started TDH - Total Domestic Heard SH - States Heard
PH - Provinces Heard TDT - Total Domestic Taped ST-States Taped PT - Provinces Taped TDV - Total Domestic Verified SV - States Verified PV - Provinces Verified + indicates that, in addition to the number of states listed, District of Columbia
has been heard, taped, or verified. vic - vicinity nr - near c - central has been heard, taped, or verified. vic - vicinity $n r-n e a r ~ c-c e n t r a l$ etc. nc - north central $\mathrm{nr} / \mathrm{vic} /$ metro were used somewhat interchangeably This edition of DDXA is dedicated to Paul R. Mount whose encouragement pro typing despite rather dismal show of interest and whose suggestion of arrangement by taped totals was used. What do you think of using two-letter state abbreviations to permit re-arranging format somewhat? If there are no objections or the majority concurs, this will be done and there will be two one-digit columns to indicate the total number of locations from which DXing has been done and the number of those locations represented by that line's entry. You may send combined totals for all $E$ is used to represent any Estimated figure. - is used if information is not available or if a count is not kept. 0 is used to represent zero. Please send all updates for the next listing by October 1, 1979. DDXA reporting form available for self-adaressed envelope. Thanks to all those who did contribute information. -Don Erickson, 6059 Essex Street, Riverside, CA 92504 (714-687-5910)

# TERMINATOR TRANSIT MECHANIX 

## RON SCHATZ

## Part III - The Theory Behind TXM

Terminator Transit Mechanix (TXM) is the study of how sunrise and sunset affect ioncspheric radio propagation. the information derived from the study can be invaluable aid to the DX'er, who can use it late the location in range of unknown or clandestine sienals, and (hopefully) predict long-terif fading on inter-continertal signal paths (TA's, TP's, etc.). TXM calculations are very simple; and anyone with a world globe, this series of articles, and some common sense can perform them quickly and accurately. Only range calculations require a strip-chert recorder, suck as the rustrak-88 or Heathkit IR-18M, the an attempt back in 1965 by another DX'er to predict dawn fade-out times an atrans-Atlartic sienels; they are not the same thing. The two will be comrared in a future article.

The above paragraph rightfully belongs in Part I of this series where we introduced TXM and its parameters but failed to define it at least not to the satisfaction of the "reprints" editor. Now that we finally know what IXM is, we can go on.

The purpose of this article is to introduce the propagation theory that explains how IXM works. Standard magneto-ionic propagation theory, the one that radio amateurs and SWL's take as gospel, apparent-
ly only works for frequencies above 1500 kHz . MW DX'ers have long held the subconscious suspicion that MW propagetion does not exactly behave according to the "books", but they just couldn't put a handle on it. Now the matter is settled, thanks to the chart recorder: It now seems that there are two separate mechanisms which operete to return skywave signals, one above - one below 1500 kHz , with some overlapping in the transition area that proves them to be truely separate and not just in

Standard magneto-ionic thecry, for frequencies between 1.5 and 30 MHZ , states that solar ultraviolet radiation ionises the upper atmosphere by breaking up ges molecules into electrons and positive ions, thus forming a plasma. The ions, being far too heavy to have any appreciable effect on radic signals, are ignored by radio-physicists, who consider only the free electrons, measured in terms of
electron dersity $(\mathbb{N})$. These electrons aligr themselves with the in coming wavefront as well as with the earth's megnetic field. In this environment the electrons circle, spin, and spiral at the signal frequency, thereby acting as infinitessimal antennas that retransmit the signel. The net effect is that the signal energy vector is directed away from ionospheric regions of higher electron dersities. If the density gradiert is large encugh, the signal will be returned to earth. As the electrons easily align themselves with the signal wavefront due
to their low mess, the signal energy follows a parabolic curve through to their low mes

We should be cautious here in stating that theorists use so-called "Chapman layers", or an ideally smocth, regular model of the ionosphere for their explanations. Such perfect ioncspheres are never found in the real world, so parabolic signal paths are far from geometrically perfect. Normally the path is split into several wandering sections paralleling the deal route, the major cause of the rapid fading typ-
ical of short-wave reception (Figure 1).


In the lower regions of the ionosphere, the density of air molecules is so great that the electrons have little rocm to maneuver. As the signal frequency is lowered, they must "dance" about a larger area in order to keep in step with it. Soon they wind up knocking against non-deviative abscrption that precludes daytime skywave props is the $\frac{n o n-d e v i a t i v e ~ a b s c r p t i o n ~ t h a t ~ p r e c l u d e s ~ d a y t i m e ~ s k y w a v e ~ p r o p a g a t i o n ~ o f ~}{\text { signals belt }}$ lectrons require less room to dance about, so less "accidents" occur and those siknals get through.

Non-deviative absorption cccurs in the $D$ and E regions of the loer ionosphere. While the D region effectively exists only in daylight the E layer continues on efter derk. For this reason, "textbook" prop-
agation rarely occurs on MW frequercies!

If that propagation mechanism were the only one available, BCB DX would resemble FM and TV DX; there would be no skywave reception except be more widely and commonly heard than PJB-800

To introduce the mechanism that makes skywave propagation possible on MW and IW frequercies, as well as to lend it some credibility, we can compare sunset fade-ups of two stations, one on MW, the other in the
$60-m \in t e r ~ S W ~ b a n d . ~$


Figure 2 is the 60 -meter fade-up. Note the shape of the curve as well as the time required for the signal increase. The MW fade-up (Figure 3) demonstrates a far different curve; the process taking at least how both curves superimposed on each other.

This new mechanism is identical in function to standard magneto -ionic theory, except that the positive molecular ions, rather than the free electrons, are the signal carriers. The major behavioral difference, except for the reversal of polarities and spin directions, is that these ions are worlds heavier than electrons, so they are subject to "dynamo" winds as well as other grossly physical effects, in adaition to being far to sluggish to respond well to the earth's magnetic field helium nuclei, etc.) to align with the wavefront means that they dance, like the gorilla, anyway they want to. The overall result is chaos, each ion refracting the signal in its own way. The signel winds up not following a parabolic curve but diffused ell over the sky!

As we understand it, NASA scientists are also "on" to this new theory; they are calling it "ionospheric transfer propagation", and they are supposed to have a paper out on it scon. The term is preferred to cies. "Transfer" is an appropriate term, since traditional "ray tracing" is worthless where diffusion is involved; i.e., there can be no clear signal path to follow when the ionosphere "mixes it up" beyond recognition before sending it back to eerth. The transmitted signal is simply "delivered" to the ionosphere, which then "transfers" the betch to the receiver. In more realistic terms, the transmitter "lights up" the ionospheric ceiling, and Eny receiver that can "see" it will receive the signal.

## this

Again, ray tracing is useles with^form of ionospheric propagation. What we use instead is a concept borrowed from Fresnel, which we call transfer zones. Figure $\begin{aligned} & \text { rour } \\ & \text { de } \\ & \text { their } \\ & \text { average maximum. E-lajer coverage of about } 1000 \text { miles }\end{aligned}$ Where the two coverage areas intersect is the transferring area of the ionosphere that will effect propagation from $T$ to $R$; the outside areas are literally beyond the horizon for each station respectively.

The ionospheric transfer zone should not be regarded as a unifor mirror; due to the fact that the transfer process involves an infinite number of signal paths of widely divergent lergths, not all of the sle tions of the at the same phase and strength at the recenver, the maximum potential signal strength is not realised. The average received signal is only $70.71 \%$ of this potential maximum, the so-called "rms" value.

The geometry of the transfer structure causes the transfer zone to be proportioned into concentric interference zones, analogous to Fresnel zones, each succeeding zone returning signal that is out of zone, which we shall cell the primary transfer zone (PTZ), is responsitle for returning about $2 / 3$ 'rds of the total sienal. Of course, the maximum extention of the zones is limited by the mutual ionospheric horizon.


Figme 5
As Figure 5 suggests, the diameter of the PMZ is the signal path distance between transmitter and receiver; the width of the outer centroids is mation inal torial summation of multiple integrals, a subject that, mercifully, we will not go into this time!

Now that we have defined the transfer zone let us see what happers when it is eclipsed, or slowly covered up or exposed by the advancing region at the time of terminator transit: Figure 6 shows a transfer area marked off by lines representing the sunset terminaor in an E-W orientation.


At "A" the terminator has reached the second (negative) transfer zone just outside the PTZ; some reception, normally weak, may occur at and regative signal energy cels out. § As the terminator arrives half-way through the PTZ ("C") the signal level shows a corresponding semi-linear increase in strength § the opposite border of the PTZ is reached at "D", and the signal level rounds off as negative energy is reintroduced'from the 2'nd $^{\prime}$ transer zone. \& At "E" the mutual ionospheric horizon is normally reached by the terminator on E-W paths, and the fade-in process is complete.

At surrise these events occur in reverse order, meaning that a slight improvement in the signal ("D") forewarns its subsequent demise.

Referring back to Figure 5, note that the ionospheric transfer ares normally has the shape of an eye. In our previous example of an sulting fade-up curve (Figure 6) turned out to be rather simp; the remost of the outer interference zones were hit at once during the crossing. What happens, however, when the terminator crosses the transfer area lengthwise, as when sunset occurs at both the transmitter and receiver at the same time? In that cese each of the outer zones will be eclipsed one at a time - first negative, then positive, then negafive, etc. 'the fade-up curve for such a north-south path would reflect this, as shown in figure 7:


Such signals that parallel the terminator front (e.g., N-S paths in March and September) often fade in with weak to moderate signals curring at dawn. Note, however, that not all terminator-parallel signal paths yield the curve in Figure 7; the Figure-6 curve will often appear in its place, especially in tropical areas.

Our model of an ionospheric transfer area was necessarily extremely simplified. The real transfer area is a tri-dimensional structure with complex vertical, as well as horizontal, interference zones. I, myself, oy be gleamed from the following TXM theorems

1) The equivalent height of the $E$ layer is that where sunrise or sunset respectively leads or lags ground sunrise or sunset by one PTZ radius.
2) The equivalent height of the F2 layer . . . . (ditto) . . . . . by one PTZ diameter.
3) The diameter of the PTZ at 5 MHz is exactly one-half that at MW frequencies.
4) The maximum distance permitting predominantly single-hop ionospheric propagation is about 1600 kilometers via the $E$ and 3200
kilometers via the F2 layer, varying with latitude and season.

For most TXM work only the PTZ is considered; the rest of the eye-shaped transfer area may be ignored. Again, the PTZ is a circular area pictorially defined in Figure 8:

(From here on we will be using the parametric symbols previously given in Part I of this series on TXM; please review them if necessary). terminator first contacts the PTZ at sunset or last touches it at sunrise - or - this is when the signal starts to fade up at sunset and finishes fading out at sunrise. Time $F$ is the same thing, but the F2 layer is the propagation medium. When the terminator reaches the opposite side of the PTZ, that's time P - or - the end of the evening fade-up or the start of the dawn fade-out.

It is obvious from what we have seen so far that we must view MW signal paths from a new perspective. Many are in the habit of asbouncing off a small spot in the ionosphere at the half-way point.

While this assumption is rejected by standard magneto-ionic theory, let alone TXM, DX'ers with insufficient knowledge of propagation continue to hold this oversimplified view of things, some even going so far as to come up with "TXM" formulas of their own using this inaccurate premise (For an example cf. How to Listen to the World - $7^{\prime}$ th Edition, page lll). This is not to say that such systems won't work part of the time, since temporal parameter E does give a powerful impression that there could easily be a midway "reflection point" in operation, but the Besides, anyone who has ever flown an airline at dawn or dusk knows that sunrise and sunset do not occur in the ionosphere and on the ground at the same time; that alone kills the "half-way" theory.

Nor do radio signals travel in narrow pencil-like beams, even in a parabolic curve. Diagrammes such as the one back in Iigure 1 represent vectors or the center of the signal path, not the path itself. I'ransfer theory assumes that the entire sky within the aforementioned eye-shaped enclosure is the propagation medium for most signals belo visualising circles on the map or globe rather than straight lines,

Practical ionospheric signal paths are seldom of the simple textbook variety; on long- and medium-wave frequencies they are quite complex: A single-hop signal; e.g., normally cmsists of $1,2,3,4,5$, etc., hops, each progressively weaker than the preceding one. the famous Austin-Cohen equations are based on this fact. For low-number hops the secondary paths are relatively too weak to be considered most of the time, but trans-oceanic paths are a different case, as we shall see.

Our empirical evidence indicates that multi-hop signal paths may be represented by PTZ's placed end-to-end on a great-circle route (Figure 9). According to the rules of TXM, reception should not occur unless all of the PTZ's are in complete or partial darkness, mesning that time $E$ will not occur until the terminator has reached the eastern edge of the most westerly PTZ on the path. For trans-Atlantic signals reception is generally terminated once the PTZ touching the


More practical paths are shown below: Figure 10 is a single-hop path showing the double-hop secondary; compare the size of the PTZ's for each. Figure 11 is a 2 and 3 hopper; again compare the PTZ's.


In Figure 10, the single hop overwhelms the double hop while the a 5 and $\epsilon$ hopper typical of trans-oceanic paths:


Figure 12
Figure 12 indicates how differences in the number of hops may become confused as the number of hops increase on long signal paths. Not
only are signal strengths almost equal, but accurate strip-charting is a must. the chart! Fortunately (?) long hauls like that are seldom experierced these days in North America!

Another case involves north-south multi-hop paths: What happens when all or most of the PTZ's are eclipsed simultaneously? Frankly, these complex terminator-parallel paths are too rare to worry about. While the calculation of temporsi parameter $P$ becomes difficult, parameter $E$ is figured as usual - the most westerly PTZ at dusk and the most
easterly at dawn.

Finally, there are those paths that lie near the poles: How does one consider'Murmansk-657 in December when the sun never rises? This special case will be covered in a future article.

This presentation of ionospheric transfer propagation theory brings us to Part IV of this TXM series, which will show how to calculate temporal parameters Er, Es, and Pe, extremely useful devices for anyone who works sunrise and surset skip (SRS and SSS) as well as early-morning (Tracking the Terminator) as a prerequisite, also have a $\frac{1}{}$ world plobe and kilometrage (mileage) tape at hand. Part IV-A, entitled TXM vs. E20, will appear subsequently.

Comments and questions re this series of articles on TXM are requested and should be posted to the author's current address.
-30-

## ANTENNAS FOR A.M. BROADCASTING

Steve Kennedy - NFC

The antenna is probably one of the most important components of any radio system. A MW DXer uses an efficient antenna for the DX receiver...loop, bever oren a longwire with a tuner. A good antenns is no less important for the station.

In the early days of AM broadcasting, up to the late 1920s; many stations used antennas unlike those in use today. Most stations where using transmitter powers of $100-200$ watts...even the big city stations. Often the antenna was a simple wire strung between 2 masts on top of the building where the station was located. Almost anything that was tall and offered good support was used to hang the antenna on...even a weter tower!

Most of these longwire antennas where in reality several wires errected so that it looked like a clothes line.... 6 wires parallel to to each other with a wooden spreader. The antenna was often fed at the center with a single lead which connected to the transmitter. Possibly the reader has seen old pictures of this type of antenna; here is a sketch of what one might have looked like.


The horizonal parallel wires tended to act as a capacitor, which helped to 'load' the antenna for a better match into the Xnitter. How well did this type of antenna work? For skywave radiation it worke would not radiate a deceat signal to overcome dead spots from larze buildings ard overtead ut!lity wires.

More on Pg. 27.
A. Our airport arrivals may have thought they had too many in-flight drinks when greeted by the motel courtesy car:

B. In St. Charles we found a lot of bull---bull elephant that is!

C. Our Sat. tour group prepares to enter a college FM station.

D. As always the motel pool was a popular attraction. Don Erickson has a ball!

E. Lou Buehler starts the banquet off.

F. A break in the auction action--part of the group is out seeking relief from Bavarian Club!


H. Bill Block read DX News while Bruce Portzer posed for Ted.


The esrly engineers of most of these small ststions where great experimenters; and often tried almost everything to jet a strong, In fact, by 1922 or 23 , many stations installed an additional wiro whict ran below the radiating antonna called a counter-poise which was actually part of the ground circuit of the transmitter-antenna. The counterpoise wire telped improve the efficency of the antenna, but untill someone finally put in a radial ground which really made a big difference.

The first real significant improvement in AM antennas was in the late 20 s , sometime about the time of the start of the Depression, when the idea came of using a vertical tower. Some of the earliest vertical antennas where tall wooden masts with a simple wire ran up the tower! These early antennas resembled ofl derricks!

As the years of the Depression wore on into the Administration of FDR, steel towers where built. Probably one of the most famous is wh have a QSL from the mid-60s of WLW, can see the Blaw-Knox tower with it's damous diamond shape and the letters W-L-W across it's 40 foot wide middle! This huge affair weighs over 200 tons with all the weight supported on a glass insulator which is $\underline{6}$ fest high!

Almost every l-A clear channel station had a tall half-wave tower to put out a powerful groundwave signal. It should be interesting to one of quarter wave. But a quarter wave has a highor angle of depature for a better skywave. No wonder class IV graveyard stations are heard so well!

Almost all modern AM stations use a vertical antenna. There are a few loft who errected a vertical tower on top of a building many years ago. This type of antenna is not officent, but because of ccon

Let us look into modern AM antennas now, and see how much a good antenna can affect a station's coverage. A large majority of most stations use quarter-wave or half-wave towers. There are a fow which employ five-eights-wave (.625) hights.

The actual hight of an AM tower is dictated the class of station which will use it. For example, a 1 KW class IV graveyard station is required to have a minimum signal of $150 \mathrm{mv} / \mathrm{m}$ at 1 mile . FCC this requirement. At 1230 Khz , a $190^{\prime}$ tower would be needed to have a. 25 -wave antenna. However, a 25 -wave antenna is quite afficent abjut $182 \mathrm{mv} / \mathrm{m}$ at $i \mathrm{mile}$ with 1 K $\mathrm{KN}^{2}$ of power. This is actually more signa? that is needed to satisfy the $150 \mathrm{mv} / \mathrm{m}$ requirment. The FCC intentually imposed the shorter antenna requirement to restrict the groundwave coverage of class IVs. So in reality, most class IV stations are using antennas shorter than . 25 wave to permit more class Vg to be allocated to the graveyard channels. An interesting fact is In areas where class IVs are close spaced; many will use the short stick and actually radiate a potent skywave signal. There are several IVs out. A fine example is WSPB- 1450 in Sarasota, Fla which has a 285 foot tower...not quite .5 wave...but still radiates an excellent signal

Class III stations must have a minimum of $175 \mathrm{mv} / \mathrm{m}$ at $i \mathrm{mile}$, and usuily employ .25 wave towers in smaller stations, or if a directional array is used. . 25-wave towers require less space to orrect, and much asier to phase properly with spacing of .5 to . 25 -wave. Some N.D. class IIIs use .j-wave towers.

Like class With tower hights. A number of daytime-only class II-Ds use . 25 Wave towers...especially when on a low dial position. Some mid-dial
II-Ds use. 5 -wave towers, but a majority of them use. 25 -wave setups.

The largest users of the tall. 5 wave and a few use .625 wavers are the class l-As and l-Bs. The .625 wave tower is the most effieent verticel antenna design. When coupled with an excellent ground system A.: transmitter. The power 'lobe of a .625 -wave antenna is kept close to zrjund level...and will produce a very potent ground wave at $540^{\circ} \mathrm{Kr} . \mathrm{z}$, a .625 -wave tower is 1082.5 feet tall!

Antennas for A: broadcasting come in several designs. The 2 most popular types are insulated base-fed series fed towers; and the grounded shunt fed types. See sketch below.


The insulated base-fed series fed tower is the most common type in use. The antenna impedence or resistance will very from anywhere
from a low 20 ohms to as high as $80-90$ ohms. Most are simple to from a low och ohm to as high as oorial 50 ohm line, by using a simple $L$ or $T$ tuner at the tower base. This type of tower is RF bot at the base with high current.

The shunt type is usuily a grounded type of tower often used when the station has both AM and FM facillities at the same site, and wish to use the same tower for both stations. It has a high impedence, about. 25 or up to. 35 the hight of the tower. The slant wire may be conected to a tuner...or in some instances directiy to the transmitter tank circuit. This type of antenna takes more care in design than the simple base fed tower because the feed point for the slant wire is quite critical; and is often a 'cut-and-try' proposition. There are few slant-wire systems being errected today. It is used in cases when more common series fed towers are impractical.

There are a few other interesting antenna designs which are used in AM stations. Ons of the most unusual is the 'voltage fed monopole' ...which is one of the most interesting.
. 25 wave wire up
sice of tower


The Voltage Fed Monopole is a simple grounded quarter-wave tower with a wire which runs to the top and is connected to the tower. The parallel wire is usuily a cable which is insulatec from the tower itsolf with standoff insulators. Although only. 25 wave high....this
antenna acts like a .5 wave antenna.
> (this is somewhat ex-
> aggerated to show
> dotail. In reality
> top-hat is usuily $6^{\prime}$ in diametor in most towar instellations.)

Some AN towers have a small metel projection at the top which looks like an old wagon wheel. This is a capacity hat which is sometimes a of the FM antenna at the top.

Finally, an important consideration for any AM broadcast tower is it's ground system. Not only does the ground drain off static from lightning, and offers protection from a direct strike. But the ground offers the other half of the antenna circuit for the transmitter. A good ground is so important, that without it, the signal of the station may be reduced back to nearly half of what could be expected with a good ground. Most AM antennas use about 120 quarter-wave radials, spaced about every $3^{\circ}$ like the spokes of a wheel, with the tower in the center. could be just about the best when WOF-710 built it's new plant several jears ago in the marshlends of the New Jersey shore across from NYC

The ultimate AM site is directly on top of sea-water. The European 'pop' pirates of the mid '60s really knew what sea water could do with an AM signal. A 10 KW rig in the middle of the English Channel could get out as well as a 100 KW rig on land
WRHC- 1550 Miami has it's AM transmitter offshore about 3 miles from the studio. It has one of the most potent ground wave signals of any station on the high end of the dial. WGAM-560 Miami has only groundwave is heard clearly all the way to Cape Hatteras, NC! WWI-870 booms into the writer's home at midday...thanks to the Gulf of Mexico. Until Radio Guama took over 1030, KCTA was heard daily at noon in Sarasota, Fla.

If the reader is interested in more information about AM antennas and AM station signal strength; it is reccomended to study the charts and graphs in the FCC rules pertaining to AM stations. There are instructions included to permit the reader to use the charts for signal prediction for almost any type of antenna used in AM radio.

Like the antenne on your receiver, the modern AM station needs an officent antenna to cover it's primary and secondary coverage area ...and to become you next $D X$ catch!

## THEY JOINED

We have several batches of new members this time. First off I misplaced Hank Schwartz's join notice back in August. So, b
Hank Schwartz, WA6UWB, KXOA, P.O. Box 1677, Sacramento, CA 95808 John J. Knab, 6 Brighton Lane, Gaithersburg, MD 20760
Robert Kramer, 3406 West Pierce, Chicago, IL 60651 Hugh Montgomery, Jr., 1502 Highwood Drive, Arlington, VA 22207 Raymond J. Nemec, 1424 Heatherton Drive, Naperville, IL 60540 Harold Ringgenberg, 11495 Village Brooke Ct., \#618, Cincinnati, OH 45242 Kjell Norman, PI 8026, S-941 00, PITEȦ, Sweden
Kjell Arne Olsen, Box 180, N-2381 BRUMUNDDAL, Norway
Edward F. Rebennack, WASEID, 4100 Academy Drive, Metairie, LA 70003 Peter Tworow, 21 Roseview Drive, Calgary, Alberta T2K 1N8

Recent renewals: Paul Wardell, Wayne Murphy, Michael Worst, Madalyn Boley Recent renewals: John Clemmer, Richard Allen, Darryl Belanger, John Houghton, Michael Good, Jim Wallace, Richard Harrison, Kathy \& Bill Phillipson, James Hoke, Tom Sundstrom, Gordon Anderson, W:R. Ritayik, Leonard Jozwiak, Al Jones, David Peters, Sr., Clayton Woodward, Tim Kerfoot, Gary Atkins, Robert Fischer, David Lewis, Bo Nensen, Robert Karchevski, Roger Giannini, Tom Parmerie, Phil Sullivan, Roger Anderson, Sam Dellit, Bryan Griffiths, John Parillo, Robt. Larsen Thomas Holmes, Ron Musco, John Buehler, Gregory Carrington, Russ Edmunds, A Merriman, Richard Mozlack, Glen Thompson, Ken Lyon, Jim Gangler, Ethel \& Norman Parsons, John Sampson, Randy Tomer, Peter G. Campbell, Frank Aden, Jr. hardt, Sol Rundbaken, Bill Bergadano, Neil Kazaross, Morris Sorensen Elliot Pollock, G. Paul Crowder, Terry Krueger, Brett Hanavan and a little late, th is if my check didn't bounc , your typist, Pat Hartlage.


The sunspots are coming, and for users of a good portion of the civil-
ian, commercial, and military radio ian, commercial, and military radio
bands that means communicating in another way or learning to work with different frequencies.
Actually, there are always sunspots, and they intensify periodically. The profound influence these
dark areas in the sun's photosphere have on the earth's communication systems makes it significant that the National Occanic and Atmospheric Administration predicts major dis-
ruptions in early 1980. The activity, most of it in the 3 -to-30-megaherz range, is expected to peak in March. range, is expected to peak in March.
The disruptions in communications will benefit some and hinder others. The more than 350,000 amateur radio operators in the U.S.
for example, will be able to make extremely consistent, long-distance
ex contact frequently and with relativeIy low power, says H. H. Sargent III
of NOAA's Space Environment Laboof NOAA's Space Environment Laboratory in Boulder, Colo. But opera-
tors confined by law to specific frequencies may find them more heavily congested than usual. Such
reduced efficiency often accompanies increased solar activity, he adds. Worse yet, if the cycle, the 21st
since 1755 , is as severe as Sargent and his colleagues - using a sophisticated statistical procedure called multiple regression analysis-pre dict, then related geophysical disturbances such as solar flares and ionos-
pheric storms will occur. These will disrupt radio communications in both the 3 -to- 30 - and $30-$ to $-300-\mathrm{MHz}$ bands for periods of time ranging from minutes to days. Second worst. If the prediction is
accurate, the 1979-80 cycle will be equal to the second most severe cycle observed over the past century. This disturbance, the 18th since 1755 occurred in 1947. Because of their
serious effects many investigators have studied all available records of sunspot cycles, which average around 11 years each, in an effort to predict the impact of the phenome-
non. However, the predictions by no non. However, the predictions by no
means agree, and the lack of a reliable, long-term data base using modern measurement technology contributes to the disparity

The present sunspot disturbance is in part responsible for the untimely
demise of the Skylab satellite, as it demise of the Skylab satellite, as
caused molecules in the earth atmosphere to rise, creating increased drag on the spacecraft. If opinions on the severity of sunspo activity had not varied so widely, i
might have been possible to pinpoint Skylab's reentry more accurately. As it was, the National Aeronautics and Space Administration's estimates suggested less disruption than thos made by the NOAA group. work of a Russian physicist, A. I Ohl, who predicts an extremely severe cycle ahead. Sargent's co league, Joseph Hirman, thinks tha
Ohl's method of calculation should be taken seriously because it takes new factors into consideration, rely ing "not only on past sunspot cycles, but adding magnetic disturbances ocarth caused by sunspots as a source
of additional information. Statistically, this is very important because it takes into account something be sides the sunspots themselves."

## GRAVEYARD DX ACHIEVEMENTS

## VOL. 47 COLUMN RULES

1. Only current NRC members may participate.

That member submitting the most distant logging of each station on any of
. Only those stations operating (or have as the current record-holder.
to "graveyard channels" will be listed. These frequencies are: 1230; 1340; 1400; 1450; 1490 khz .
4. Power limitations are $1000 / 250$ watts.
5. The stations may be located anywhere in the world, so long as they meet the
6. requirements set forth in rules 3 and 4 .
. Your IX location must be in the United States, a U.S. Possession, Canada, Mexico, The Bahamas, The West Indies, Cuba, or on a ship or boat registered to one of these, operating in the territorial waters of same. All U.S. Navy
and Coast Guard vessels are accepted no matter where they are.
. Loggings before January 1, 1960 will be listed separately.
please specify whether loggings were achieved before, or on or reporting, If this information is not included, the data will automatically be placed in the listings for Jan 1, 1960 or after.
8. The Graveyard DX Achievements column is scheduled to be published in the first issue each month. Therefore, new data must be received by your by LPC by LPC for the publishing session.

## FOOTBALL STATION LIST

Compiled and edited by Bill Hardy, 2301 Pacific Ave., Aberdeen, WA, 98520. Any and all additions/corrections/etc. are most welcome. Format change for this column: At the request of NRC HQ, we will be using of license will be omitted but the two-letter state/province abbreviations will be used; on each frequency, the stations are listed in NRC Log order so that you may look up the cities if you wish. This is the same format I used in the "IRCA Almanac," so it should be less confusing. Besides, it takes up only $\frac{1}{2}$ the space. Abbreviations and symbols used throughout these lists:

* Daytime-only station
* Daytited Time" station

Daytime station with CP
\# Specified Hours station
\% Share Time station
NATIONAL NETWORK COVERAGE:
CBS Radio. All regular-season NFL games that are not played on Sunday afternoon will be carried on the CBS Radio Network. This includes 16
Monday-night games $(9 / 3$ thru $12 / 17$, at 2100 EIT), four other nighttime Monday-night games ( $9 / 3$ thru $12 / 11$, at 2100 ELT), four other nighttime games (three on Thursdays $9 / 610 / 25 \& 11 / 29$, plus Sun. $10 / 14$ ), and three daytime doubleheaders (manksgiving Day $11 / 22$ and Saturdays $12 / 8$ \& $12 / 15$ ) Jack Buck and hank games, Sun. nite 10/14 game. Lindsey Nelson and Jim Kelly will do the other half of the doubleheaders.
CBS will also cover all post-season playoffs, including the Super Bowl and Pro Bowl. Buck/Stram and Nelson/Kelly will be the announcer crews.
Brent Musburger will do a half-time show on all CBS games.
Mutual Radio. Sunday afternoon games, $9 / 2$ thru $12 / 16$. If Mutual repeats its 1978 coverage, games will start at 1600 ELT each Sunday.
ATLANTA FALCONS Bob Neal, Harmon Wages
 altimore colts ... no 1979 info available yet BUFFALO BILLS Van Miller, Stan Barron

950 WBBF-NY 1320 WHHO-NY* 1560 WHDL-NY 1590 WWBK-NY 1
1230 WENY-NY 1410 WDOE-NY
WWBK, Brockport NY, is currently daytime-only on 1560 kHz , but has a
permit to go fulltime on 1590 kHz soon. permit to go fulltime on 1590 kHz soon.
CHICAGO BEARS Joe McConnell, Brad Palmer, Virg Carter
780 WBBM-IL (no regional network
cincinnati Bengals... WLW-700 will be flagship; no other info yet
1420 WHK--OH (plus a regional network to be announced later)
Dallas Cowboys ... KRLD -1080 plus the Mutual Southwest Radio Network; station lineup to be announced later $\frac{\text { DENVER BRONCOS }}{550 \text { KRAT-CO }}$ Bob Martin, Larry Zimmer

| 550 KRAI-CO | 1230 | KBRR-CO | 1340 | KSID-NE | 1410 | KCOL-CO |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 580 KUBC-CO |  | KBCR-CO | 1360 | KRKK-WY |  | KAHL-NE |
| 610 KRKE-NM |  | KSTC-CO | 1390 | KENN-NM | 1450 | KGIW-CO |
| 850 KOA --C0 | 1240 | KRDO-C0 | 1400 | KRLN-CO | 1490 | KgUC-CO\# |
| 920 KLMR-CO |  | KFBC-WY |  | KFTM-CO |  | KGOS-WY |
| 1030 KTWO-WY |  | KEVA-WY |  | KBZZ-CO | 1550 | KRGO-UT |
| 1060 KLMO-CO* | 1290 | KOWB-WY |  | KTRC-NM |  |  |
| 1100 KREX-CO | 1310 | KFKA-CO* |  |  |  | FM' |

Detroit Lions ... no 1979 info available yet
Green Bay Packers ... WTMJ-620 will be flagship; no other info yet
While I've got a little room, I'll toss out the usual caution: Sometimes stations drop off the net, or join up late, between the time this is printed and the time the season actually starts. So, please don't assume that you

HOUSTON OILERS Ron Stone, Ron Franklin

| "Texas690740 | State |  | . NFL lin |  | follows: | 1490 | KBST-TX |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | KPET-TX | 1090 | KKYN-TX\& | 1340 | WAML-MS |  |  |
|  | KRMG-OK | 1130 | KBGH-TX* |  | KWKC-TX |  | KNET-TX |
|  | KTRH-TX | 1200 | WOAI-TX |  | KLBK-TX |  | KSAM-TX |
| 800 | KDDD-TX* | 1220 | KVLL-TX* |  | KTEO-TX | 1500 | KTXO-TX* |
| 840 | WMOB-AL* | 1230 | KLVT-TX | 1390 | KULP-TX*+ | 1510 | KMND-TX* |
| 910 | KNAF-TX* |  | KGRO-TX | 1400 | KIUN-TX | 1530 | KGTN-TX* |
|  | KRIO-TX | 1240 | KXYL-TX |  | KDWT-TX\# | 1540 | KGBC-TX |
| 920 | KYXX-TX | 1250 | KPAC-TX | 1440 | KETX-TX* | 1550 | KWBC-TX* |
| 930 | WKY--OK | 1260 | KPSO-TX* | 1450 | KNBL-TX | 1580 | KTLU-TX* |
|  | KDET-TX* | 1270 | KFJZ-TX |  | KNHT-TX | 1590 | WACA-SC* |
| 980 | KFRD-TX* | 1280 | KTTX-TX*+ |  | KNET-TX |  | KGAS-TX* |
| 1010 | KKIK-TX\& |  | KLUE-TX* |  | KSNY-TX |  | KERC-TX* |
| 1050 | KPXE-TX* | 1290 | KIVY-TX* | 1470 | WWQT-FL*+ | 1600 | KEWS-TX* |
| 1060 | KCLT-TX* | 1330 | KVKM-TX |  |  |  |  |

Kansas City Chiefs ... KCMO-810 will be flagship; no other info yet $\frac{\text { LOS ANGELES RAMS }}{570 \text { (Note 1) }}$ Al Wisk, Dick Bass, Steve Bailey

| $\begin{aligned} & 570(\text { Note } 1) \\ & 710 \mathrm{KMPC-CA} \\ & 1010 \overline{\mathrm{KCMJ}-\mathrm{CA}} \end{aligned}$ | 1230 | KGAM-CA ${ }^{2}$ | 1340 | $\begin{aligned} & \mathrm{KFBR}-\mathrm{AZ} \\ & \mathrm{KDOL}-\mathrm{CA}+ \end{aligned}$ | 1440 | KPRO-CA |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | KWTC-CA |  |  |  | KO | DW |
|  |  | KXO--CA |  | KSFE-CA |  |  |  |
|  |  | KPRL-CA | 1400 | KTUC-AZ | (p) | s |  |
|  | 1240 | KSMA-CA |  | KAAP-CA |  | s |  |

1. The pre-season game $8 / 18$ was heard in Los Angeles over KLAC- 570 rather than KMPC-710, because KMPC needed to carry live Angels baseball.
2. Formerly KGEE, Bakersfield CA.
3. Formerly KFYV, Arroyo Grande CA.

Miami DOWN-1450 is on both the Los Angeles and San Diego NFL networks. Miami Dolphins ... WIOD-610 will be flagship; no other info yet Minnesota Vikings ... no 1979 info available
$\frac{\text { NEW ENGLAND PATRIOTS }}{1030 \text { WBZ--MA (plus a regional network to be announced later) }}$

```
\(\frac{\text { NEW ORLEANS SAINTS }}{710 \text { WKRG-AL }} \quad \begin{array}{ll}\text { Wayne Mack, Danny Abramowicz } \\ 1270 \text { KVCL-LA* } & 1420 \text { WIGG-MS }\end{array}\)
```

| 710 WKRG-AL | 1270 | KVCL-LA | 1420 | -MS* | 15 | KQXL-LA* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 730 WARB-LA* |  | WMLC-MS* | 1430 | KMRC-LA* | 1510 | KAGY-LA* |
| 1050 KLPL-LA* | 1280 | WGSO-LA | 1440 | KMLB-LA | 1520 | KXKW-LA |
| 1110 KPAL-LA* | 1360 | WFPF-MS* | 1450 | WNAT-MS | 1570 | KMAR-LA* |
| 1230 WHSY-MS | 1400 | WFPR-LA | 1470 | WCHJ-MS* |  | WHII-MS* |
| 1250 WHNY-MS |  | KAOK-LA | 1490 | WIKC |  |  | 1250 WHNY-MS

us a mystery,
lus a mystery: "WVIL, Hernando MS." I WLOX-MS
(plus 13 FM's) MS, Wld or, Hernando MS. NEW YORK GIANTS Jim Gordon, Dick Lynch
NEW YORK JNEW-NY (no regional network Spencer Ross, Sam DeLuca, Ed Ingles
880 WCBS-NY
(no regional network)
OAKLAND RATDERS Bill King, Monty Stickles
810 KGO-CA (plus a regional network to be announced later)
$\frac{\text { PHILADELPHIA EAGLES Merrill Reese, Jim Barniak }}{500 \text { WARM-PA }} 1100$ WGPA-PA* 1400 WOND-

| 590 WARM-PA | 1 |
| :--- | :--- |
| 610 |  |
| 850 |  |
| WIP--PA | 1 |
| 910 WSEU-PA | 1 |
| 940 WVLV-PA | 1 |
| WASA | 1 |

1260 WNRK-DE*
1280 WBRX-PA*
1330 WASA-MDD ${ }^{1}$
1350 WHWH-NW
1440 WMVB-NJ*
1450 WTLM-DE
WPAM-PA
WSHP-PA*
1510 WJIC-NJ*

1350 WHWH-NJ

910 WSBA-PA

1. WASA-1330 and WC
ITTSBURGH STEELERS
$\frac{\text { ITTSBURGH STEELERS }}{850 \mathrm{WJAC}-\mathrm{PA}}$
860 WOAY-WV*
920 WMMN-WV
1050 WBUT-PA*
1110 WKEG-PA*
1230 WBVP-PA

Jack Fleming, Myron Cope
1250 WLEM-PA*
1250 WLEM-PA*
12

1430 WVAM-
1280
1340

1430 Cope
$\begin{array}{lr}1280 \text { WKST-PA } & 1440 \text { WHHH-O } \\ 1340 \text { WCVI-PA } & \text { WAJR-W } \\ \text { WOYL-PA\% } & 1450 \text { WWGO-P } \\ 1400 \text { WBBN-WV } & \text { WFRA-P } \\ \text { WKWK-WV } & \end{array}$
1420 WKWK-WV WDAD-PA
1420 WCED-PA WPAR-WV
.. no 1979 info available yet
... no 1979 info available yet. M
the CONVENTION can come up with a listing for us! ! SAN DIEGO CHARGERS Tom Kelly, John DeMott
$\begin{array}{lll}1300 \mathrm{KROP}-\mathrm{CA} & 1370 \mathrm{KWRM-CA} & 1450 \mathrm{KOWN}-\mathrm{CA}^{1} \\ 1320 \mathrm{KUDE}-\mathrm{CA} & 1400 \mathrm{KVOY}\end{array}$
$1130 \mathrm{KSDO-CA}, 1320 \mathrm{KUDE-CA}$ Angeles NFI -AZ (plus one FM)
SAN FRANCISCO 49 ers Lon Simmons, Wayne Walker



1. WASA-1330 and WCTR-1530 are also on the Philadelphia NFL network.

## 1979 COLLEGE FOOTBAL

es, Louisville $H Q$ suggested that we list college football coverage this year. We don't have much on hand so far, but we'll give you what we have, SOUTHWEST CONFERENCE FOOTBALL: The entire 63-game SWC schedule will be covered by the Mutual Southwest Radio Network. The 23 largest markets in Texas will get four simultaneous feeds to allow all games to be covered. Elsewhere in Texas, and in the rest of its coverage area, Mutual Southwest feeds a "game of the week. Brown, Bill Burnett, Bob Dahleren, Jack Dale, Frank Fallon, Steve Fallon, Stan McKenzie, Bill Mercer, Bob Nash, Brad Sham, Dave South, and Dave Woodman. The nine teams in the Southwest Conference are these:

## Arkansas Razorbacks ${ }^{1}$

Baylor Bears
Houston Cougars
Rice Owls
Texas Longhorns

Southern Methodist Mustangs
In Arkansas, KAAY-1090 and the Arkansas Radio Network have rights to In Arkansas, KAAY- Mutual Southwest has rights outside Arkansas.
NOTRE DAME \& NCAA WIIDCARDS: The Mutual Network will carry all Notre Dame games this year, plus eight major intersectional contests.
Arizona State Sun Devils Tom Dillon. 960 KARZ-AZ (and a network).
Callornia Golden Bears $810 \mathrm{KGO}-\mathrm{CA}$
$\frac{\text { Colorado Buffaloes }}{550 \text { KRAI-CO }} \quad 1100$ KREX

$\frac{\text { New Mexico State Aggies }}{\text { Feed A: David Glass, Russell Letz }}$
570 KGRT-NM*+ 1350 KABQ-NM (perhaps others as well?)
Feed B: Jack Nixon, road games only. 1450 KOBE-NM
Texas-El Paso Miners Gary Gallup. 690 KHEY-TX
UCLA Bruins
(actual network is probably very similar others)
Well, it's a start. All you have to do is read your newspaper (sports page and ads), check with your nearby colleges, and make notes as you tune around Saturdays. The info we need is as follows (if you can get it all):

1. Name of the school \& team
. Flagship station
2. List of the stationsires (if known)
3. Play-by-play announcers network (FM too; I send on to WTFDA) Send directly to Bill Hardy, or mention it in a Musing. This info is being

8/15/75
to haar, L\&C Last issue, I was descritirg some of the rare \& exotic stations Narcy \& I managed to haar, Lec of course, on our car radic while vacaticring in Nontana raceritly. I'll continLe this tire witi: our rethrn trip. $8 / 2$ we wert to Grand Teton Natioral Park, \& noticed a TIS sackson \& isri't ever. mentacred on Southtound siers. It ${ }^{\prime} \varepsilon$ the only TIS in that park, contrasting with 18 low-power TIS outlets in Yeliowstove Park to the N. ESGT-1340, Jackson gave a 4pm ID as "Jackecr Hole", but all the hourly IDs 5-8pa were "Jackson, Fyoming." The town is bnown by toth names so I guess ESGT switches back \& forth. Autcrated format sems to use two pop sorgs (ofter a few years cld) to one c/w song. We atay ed in Yellowatore Fark again that night. $8 / 3$, hoading into Idako via West Yellows tore, Montana, home of michwanted EFYS -920 , wo listered to their c/w format ard APR NX on the hour. KIGC-1400 St. Anthony IJaho now has Nitual \& is still $\mathrm{c} / \mathrm{w}$, while KRXK-1230 Rupert is now ie \& is either POF or T $\rightarrow-4$ KERV-7SO Soda Springs has UPI NX. We spent the night in Pocatelio, where KISU-1æ90 has "U$13^{n} \&$ "The Adult AN" 8 lcgans \& AFR NX. $8 / 4$, heading $W$ via Boise, gattirig into more fomiliar stations, although seldok-heard KYMs-740 seems to have charged fomat to a mixture of jezE \& with a poj-roligicus nuniber occasionally. They tape-delay Mutuel's "Infornarionn feed at :5 for playtack just past the hour, \& calls. itself "Tne Sound of the New Life." The last notios for flatack Just past the hour, \& calls ittelf The format soers to be Mok \& Nutyel NX, but frat idaho were for Sat. $6-9 \mathrm{pm}$ ELT they hai SS programs, then early s/off without NA, 9pru. If you re try ing for EMEI at surset, forget it, hi. The SS show was back SM also by $11: 4$ fam. We canpei near Ontario, Ore. iust one alile from tae MLT/FLT dividing line. 8/5- KBKR-i490, Bakar, Ore. bas late $8 / 0$ S Sundeys, 11 am ELT, \& very low-kyy mx (Nancini, etc.) while KLBla- 1450 LaGrarde was loing T-40 hits. On to Yaicima, whore EVGb-930 (ox-KCOT) is "very good music", "Center Aisi 93 N , Mutual net, MoR or stardards format. $8 / 6$-Mt. Ranier again, \& $8 / 7$ home. I hope you found this vacation narrative interssting - 'twas fun! $73 \&$ good DX!

EICHTY-EIGHT PBRCKNT RETUKN ON TP VERIES:
iden Lara - Santa Rosa, California - 95405
 for country \#75), 2KY, 22D, "E. Sineapors" (for country \$76), 2YA, "K. Fivi" on 558 \& 711 kH OCR, $6 \mathbb{F A}$, \& 2FC. I subait ted 51 reception reports last season \& received 45 veries (so far) for an sed raply fercantage. To me this zeans that laf Foreign DX \& veries are not doad. I've got to admit that I spent a lot of time at the dials last season but none of the atove would bave been possible without the fine performance of the Hascariund SP-600 and the $f$ ine Sanserine Looj that Ealph made for me acout oight to nire years ago. The past monthe of July \& August wers quite good for "Down-Under" DX on seven to oight occasions. The mornings
of July 2gth, August $4,5,6$ were especially good. Thare must be other Nic Kest Coast PXers other than RANLY TONEP Ard EFIAN VEFNON - WLD are hearing these TP stalicns. I wouli like to ses nore centributors on this phase of DX in DX NBF . Ans speaing of ontritutors often worder why more NFC members don't contribute to NCHM MAGUIFF's column. Write to Nom \& lat hin know you are interested
 ai. Rewecter hi garg! Lorg tine, no Misa. Oh well, I keep puttirg it off, but here 1580 \& WRDR - 104 . 4 ? in Hemiton, N.J. I talked to one of our part tine engineers at FEL the furthest raport he remeritars is from Iowa, when someone forgot to sign off the AM station at surset. I'll be takineto him more about possinly settarg up a TEST ir. the upcoming season. As for now, rejorts car te sert to the station in care of ree, as I will assume the you want a faster reply, you car. write to me at ry home addrese, please enclose return post. age as radio is a terrible faying busirec, hi . Aleo note ary corrert phona numiter avove. In the April 2 isalue it was incorrect. On to DX, 1 turned the rid on a few $t$ mes over the Summer, so here goes: 6/18- WFLI-1070 Tern, tes ting 2:13 am, VIEC-1070 Ind, w/t.x \& if e 12: 16 am, WPDX-750 W. Va. $3: 55 \mathrm{am}$, WCHS-580 W.Va, $4: 18 \mathrm{am}$. $8 / 25$ WPTF-68C N.C. s $1: 5 \mathrm{~F}$ am, WiDE
 a good recording \& enough dotails for a report. got a reply in eigat days, now that's ser
vice! I've been trying for thece for over a year to get enough for a verie. Alsc on $8 / 25$, vice: time around 3erl, I heard some aulic u/WSM-650, it las ted a couple of mirates, then was cone. I won't oven try to guess who this was, knowirg what stations ars surposed to be was
 $6: 2 \mathrm{sam}$. That's all for row, 1 is ten to 1580 ! $73 \&$ good DX

* ANMS TO QRGANISE DX-PRDITICN*

MABK CONNELLI - 30 Willian Road - Billerica, Massachusetts - 01821 8/23/79 time for some Fast Coset DXpedition activity. This desire is spurred on by accounts about time for by BRUCE PORTZBR and othors in tho Pacific Northwest. Not since the New Hampshir e Beverage days of Gordon Nels on has there been any serious DXpeditioning in the Northeast having the logging of overseas stations the major thrust of operations. Dtd be willing to get in This would include Mo., N.H., Masso, R.I., Comn., L.I. \& (maybo) Eastern N.J. The sito chosen should be a coastal one with water to the NE, E, \& SE for Buropean, African, \& Eastorn South American reception. Thore should be surficiont land to pormit orection or at leas t one beverage 1200 or longer to be pointed $60^{\circ} \mathrm{g}$ of N to hanil in qais; a second beverage or III could be used for LA's. The ideal site would be a beach cottage: the "Ta-beve" would be trung from the cottage to the edge of the water. The location chosen should be reasonably froe from strong local statione, powerline noise, \& TVI. If someone can ouse up with a arage wire, phasing unit for twowire operation, tape recording gear, tapes, roforemce boola aps, hoedphones, and other accessories. If a cottage is not aveilable, a wellesquipped van sould be used to house the operation. A good DXpedition would consist of four to six experienced DXers operating three or more stations: ond receiver (R390A or EQ180A) coupled to TA beverage (or phased beverage array), a second receiver on an Lh beverage, and a thi rd receiver on a loop for goneral parpose bandscanning. Sunset would be the most active time fourth station (The or car RX) could be preseed into serrice is a realiy ripping Aurora developed \& LA's covered the dial. During such an AJ, the TA position would be used fo atching rare Africans of the type heard by Mike Dunn in Nova Scotia a few seasons back. Come on, EC DXers - let's try to get samething together this Winter in the DXpedition dopet.

## NB ADDRESS NEAKS BETTTER DX

 elophone mamber. Iquipment here includes a Radio West modified FRG-7, Sanserino Loop/3M-2 and casestte deck. Although my DX time has beon reduced temporarily since 4/10/79, I plan to contime contributing regularly after the ST. LOUI Convention. I an looking foxward to ome SSS DX now that I haw mown hcme. Ho more apartment-type TVI! (Vy new location has caused me to sacrifice $1500-1600 \mathrm{kHz}$ until one mile distant wToD signs of $f$. On the other and my equipment is performing bettar than it did at the west side location. Much deoper解
 rom 1/1/79 by regularly DXing MMs and listening for the shod $\mathrm{f} / \mathrm{C}$ per the 118 t poblished the $46 / 21$ is sue. I am going to Frenont, Ohio tomorrow on business, and am plaming my firs approach to their WFRO-900 about a possiblo TEST. This will be my first attompt at arranging a TEsT, so I'm not promising anything. I am prasently listening to the CBS Radio $\mathbf{H} / \mathrm{s}$ fory Theatre on TTARm790. This is one of ay favorite network prograns. The fading and tatic onhance the program"s alraady graat procuction. The commordi als are as much a pain-in-the-ear as telovision, howevor. l'il have wot wary of you by the time this is published. I'm looking forward to that. Until noxt time. (Whore WEFE you, John? ERB)

## DXING NOT EVEN FAIR AT THE FAIR

UI EUDLMMER - 1314 \$1 city View - Kugono, Oregon - 9740
DXing has been slow here, but improving steadily as the sun goes down oarlier $-s$ torys \& certain. ortunately, these noises seem to subside with sundown, so sll is not lost. on $8 / 27$ ( $\mathrm{mangr}^{23} \mathrm{rd}$ irthday 1) my girlifiend \& I took a weekend trup to Zastern/Contral Oragon ( F of the Cascado countains) to check out the crook County Fair in Prinovilio. (Thatis andther one of my hobies - Visiting noighboring country fairs during the Summer). Prineville happens to be a amall cattle town of 5000 people, a is the largest town in Crook county). I onjoyed aryels much that 1 decided to go back the following weekend. This time wo laft at $5: 00$ on Friday
 range of mountains from my home. However, several factors camo into play that I had not counted on: Cur room was located right on Bry, 97, which is the main artory into and ont town. The traffic noise was mot conducive to excellent DXing. Secondly, our mon was right nter a metal carport - again, not conducive to good DXing. Finally, and most importantly the $n$ norescent lights were no more than $100^{\circ}$ from our room \& we all know what that does to DX ons equently, my DX consisted of a catch of KODL-1440 in The Dalles during sunrise on the ollewing day. Everything olse I heard was the same stuff I alromdy logged from Bagone. am looking forward to my next visit to Central Oregon, \& this time 1 will definitely get a room away from carports \& fluorescent lights. As a matter of fact, I am listaning to ERCO in that particular weakend was paying $\$ 1.06$ for gas in Portland - it ls only 919 hore in er (I went to Portland after going to Prineville in order to attend a party a to px in magone. location. However, after a couple of six-pachan of "The Bull" all I could $\&$ to DX from anothe What's that "") I hope to have more substantial DX information noxt time. Till then, 73

LOS SOTE JWHICAYB DAVID DX AFTKA CONVENTION
MARK STRICKERT - 5900 North Washtenaw - Chicago,
Fresh back from excursions to peorie and ST. LOUIS, settling back into the same old routine callod enployment. Both conventions were great! Only disappointment at station stickers these days. A really big thrili was hearing my old second-favorite station in Miami, WCBS-710 ( WIOD was \$1) on ewargency 50 Cow ND due to Hurricane David, at the Noah's Ark parking $20 t$ and at Whir brevilus's nice rotreat place 45 milem due "of the arch. It ovon came in on my "splattorbox" portable stereol. This on $9 / 2$ from 21 pm until past 3 am . Back in Chi-town late on 9/3, I hoard WGT0-540, WAPE-690 ("Great Apo") and WKBX-630 in Savannah, Ga. all on emorgency also. I stopped at several stations along the way - ESD-550, Where RICHAED PISTEX, KEN OMYSCHUK \& family, \& I got stickers from the TV station; WCVS-1450,
dropping in on Nows Director MARTY WRIGHT for a while; WPRC-1370, probably the worst-sounddropping in on wow ing automated station Ive over heard, and whoo AM station goes of f 7pm in Septembor (lil HALS mentions in his $9 / 3$ mise, WCFL-1000 is now Nows-Talk, using "Mutual "CFL" and "Lifostylo ion (sic), an CMGN-720 was doing a number on WGN down in St. Louis, but not here ( $a t$ leest for the moment). The city of Angels (Ciuded de Angeles? Buzzzz) will be the nezt victim of the relentless NRC Convention asseult. I don't know if I can make it yot, but I $s$ till have 50 woaks to scrape together the cash. I proforred that pick over North Jorsey only slightly, mostly because I've not been that far down the West Coast before. As usual, I will have my mind made up by Aug. 31. 731 z \& CUN14. (Bettor get your mind mad up before that, Mark, 'cuz the Convention will start on Aug. 30 - buszzt! -ERR)

## GRADUATED FROM S. $L_{2} \mathrm{H}_{2}$

URI PORRH - 2714 North LeClaire - Chicago, Illinois - 60639
Grestings! Almont no DX since Jamuary fue to my last samestor at SIU \& grad uetion in lay, and subsequent move from Vills Park. Right now $I^{1} \mathrm{~m}$ working in a factory of July (one less thing to move, hi) but the repairmon, bota old wavy hands fandiar with Hamarlunds, were unable to correct the problemb becsus o they said the proper adjus tments could not be made without a functioning S-meter, which they also coulintt fix. Any information on whore I might be able to find an S -mater that would work in the $\mathrm{HQ}-160$ would be appreciated, 1 w tried several that shoull have worked but didn't. Sven with the probleas; the BR-160 still worka well onough to use for the upcoming soason, which will be my firtt full season since 1976-77. This localon is about 15 miles from the old Vills Park place, WIIT bat heavior OPM from WVOM, WTDC \& WSBC. WSBCIs XB is only four blocks way but they are only on for one hour during the night. On the local front now wxol-1450 came on in August, sharing time with WFry until the other new atation comes on. WxoL's format consists of mostly blues and soul, and is of course liconsed to Cicero. Back with some DX next
 my wifo is oven looking forward to 1980 in LOS ANGELSS. I hope my children cavied no lems, but they will stay home noxt yoar. It was a pleasure to meet jolly ERNRST BOSS COOPRR. gols a great guy \& I loved thoee fancy T-shirts he wore. Anyway, wo loft St. Louis at 2 \& got home at 10:20pm - the long way. We stopped in Springfiold for some ice cream and at I heard the 4:55pm NX with MARTY WRIGHT on WCVS, about the same time MABX STRICKERT and RICBARD PISTET were there. I hope Marty's back gots better and gets more air personnel there. Then on to Lincoin a WPRC-1370. I had a briof talk with announcer Carol Beth Crane, just four days on the job. Sho said WPRC was "Ee Play Records Constantly" though it's got an
changod to $\mathrm{c} / \mathrm{w}$ now. Shols from Caldwell, Idaho, also home of WLS' Larry Lajack. We got changed to $\mathrm{c} / \mathrm{w}$ now. She's from Caldwoll, Idaho, also home of Wis' Larry Lajack. We got an ashtray \& lottorhead before we left for clinton \& WHOW, on $1520 \mathrm{kc} / \mathrm{s}$. It's in a mini-mansionlike building three miles 9 of town. I got to talk to Jerry Krueger, who's from Madison, lar and then mon-s top home, $7: 30-10: 20 \mathrm{pm}$. All tho locals were carrying Monday night FB and

 daring tholr Labor Dey festivitios, Miss Texas won. Bnough for that. Ironically onough, whon I Eot howe Monday night, thore was the curront DX NEWS in the mail! Othorwise, curren
 They eo off pormanently on Oct. 1 , then WCBV goos on. Per a phone call, the WMPP-147J sale is peming for only 81,306 . It's the only cheapo Black station naar ma. Again thanks, ospecially to LOU HURHLER, BICH KDDIE, WALT BREVILLE, \& ERNIS COOPRR for a won ierful tims. I hope to see many others next yoar if I can. 73s.

WE WELCONE A NE YOUNG MENBER INTO THE N.B.C. FAMILY
 DXing since the middio of Jan. '79, Ny radio is a TEF with an extornal antenna, I have verthe codes (Domestic DX Digest \& Musinga). Well, that's all for now. Good DXing. (Your New Menber Kit will explain all, Tony! - JiC) est Warwick on August 11 R.I. DIer ith Comecticut's BRYAN LEE ware hore for plenty of DX chat tor. R.I.' 3 NEII KAZABOSS and Couldn't make it. Noil was at a backgammon tourney, \& Burton was on his way IW Orleans. SSS DX has contimed to be the strongholi of the Summer season. 8/15 DX: TEL- 860 becomes a new logging $w / a n$. 8 pm /off aftar an SS program which includad SS versio f popular American disco mx. XPIT-730 was caught w/an $8: 15 \mathrm{~s} / \mathrm{off}$ after a religious progren rom Cal. WHOA-870 Puerto Rico was founi overpower ing in WWL's mull $10: 30 \mathrm{pm}$ w/an FI style EZL format in ZS, a report was sent. 8/16- Via a tip from WJAR enginear CRAIG HEALY, I caught WIRD-920 Lake Placid, N.Y. at the tail ond of a test $12: 36 a m$ w/WJAR off tho air. IRD wants to broadoas t 24 hours during the Winter Olympice at Lake Placid w/302 watts, \& wa testing in cooperation with WJAR. CFIS-920 was also caught bombing in that morning, or at loast that's the Way I heard the FFC calls. DAVE SCHMDD reportad hoar in chis on recont XDXD of $5 / 11 / 79$. What is this? (I dontt like to "take sides" Bruce but CFLS has been on 20, ex-1240, for mre than a year -ERC) 8/21-WUPE-1110 is back now that the WHIM s/off is ariliar in the evening; "Radio One" WUPE was hoard w/EZL format bofore 8pmesoff. Then it as WSFM-1110 on tine channol until $3: 15 \mathrm{pm}$ s/off. WTBQ-1110 became a newio fa the log with late s/off $8: 30 \mathrm{w} /$ Amorica; , the Besuatiful." Warwick, N.Y. meets Warwick, R.I., hi! Then it was WBT thereafter, \& a rport was sont to WTBQ. 8/22- GJSs-1220 was finally loggod e9pm
 on 1240. An unID-1240 was heard w/an ID $99: 30 \mathrm{pm}$ broadcauting a game from the Yankee BB not, nay be WWWD. $8 / 23-$ WLDM- 1570 was making it through WPSPts mull $97: 30 \mathrm{pm}$. WIFA-1580 was in strong w/Suffolk Co. WX 7:38pm. Bocal WARV-1590 s/off was noted 7:45pm. WPGC-158 0 was a nawio w/s/off 8 w/an invitation to continue listening on WPGC-FK-S,toreo 95, no SSB. WCLB$1550 \mathrm{~s} / 0 \mathrm{ff}$ was caught by the tail 8 8:01. Regular WXVA-1550 was thon heard w/WX. 8/24- The corled DD FEB started taiding over before the TTGR $\mathrm{s} / \mathrm{off}$ a 8 ; a roport was mailed. A nice verie casp in from WHAA-870. Elsowhere in radio activity: Rumors still fly that WJAR-920 is thinking about selling their atation \& buying FRLN-FM. If so, then WHDM-1110 wants to bay JAR \& soll their station to a minority group. Mearwhile, the WICB-1290 ratinge contime to sliie downward $w /$ their now $\mathrm{c} / \mathrm{w}$ format. The owner has given up after sponding owr $\$ 100,000$ in an advertising compaign, \& WICR is once again up for sale. 73.

## BILL'R GETEING SONR GOOD SUMGR $\mathrm{DX}, 700$

BLhe REGAN - 110 Craddock Streat - Syracuse, Hew York - 13207 8/26/79 received was WKOK-1070 on $5 / 28$. But I have just sent out reports to WHK-1420 \& WGNT-930 logging are up to 661 and states veried hold at 42. The latest loggings are: WLYC-105
 with good signal. WNRB-1230 Mass. fair w/ID following mx 11 jzm on $6 / 30$. WMBT-1530 Pa. 7/2 12:53am w/ET/ID/TT/mx. This station had a great signal, seeing that WCKY was off. MM 3/13 brought only one new logging, WIFA-1580 Patchogue, N. Y. from $1: 58-2: 05 \mathrm{am}$ w/mim/VID/JX. now have received 19 on 1580. 1550 is the leader with 22 . The most veries for a frequency is oight on $1070 \mathrm{kc} / \mathrm{s}$. For JOHN CLFWNER, I $I^{1} \mathrm{~s}$ still in the process of gotting bumper tickers and charts from the locals. One more note from $8 / 13 \mathrm{MM}$, WBC was off from $1: 30-$ $4: 30$ and there was no trace of KOB, but there was an SS atation on the frequency and plenty

## AND MOES GOOD SUMEATME DX


 10:20pm u/CBE with faint signal ani mention of "Winner's Circle". 7/10 TOOD-1300u/WIRI 10:21pm w/ID \& rr mx, \& CJBK \& WBBF ilighting it out on 1290 in spite of sovere interforence fram local CJJD-1280. 7/26- MABD-1470 a surprise catch u/CHO \& woro e 10:02pm w/ID. 8/11Unexpected WICC-600 recoived for the first time e $9: 32 \mathrm{pm}$ with a fair, interforence-free sig nal mentioning WICC, Conn's first music station". 8/12- WMBS-590 snared e 9:40-pmin CKIg null with fair signal. 8/25-KSCJ-1360, ano thor goodie and Iowa f4, heard o $10: 12 \mathrm{pm}$ with regional westhercast. I finally received a veris from NNBC With no f/up. Other veries from WLAC, WHHH, WOHO, CBJ (2), and nemerous regional stations. By the way, does ayyone have wajo new address, as my report to NRC log adiress was returned of window etickers from CHOM-1050 which $I^{\prime} 11$ alaily send as long as the supply lasts for a stamped solf -adiressei onvelope. 73 s

LA DX FAIR BUT VERIES ARE BARE
BAY CRAWFORD - 57 Newbie Street - Invercargill, Now Zealand $8 / 38 / 79$ as our Sumer comes around. Lhs have been fair only this Winter w/a fow now will improve The frequency changes have given us a lot more 'clear' channels but cX haven't been being heara The frequency changes have given us a lot more 'clear' channe wh but CX haven't been as good as a fow years ago when some very good signals from Sa a Were heard. A look at the repl fears showei $50 \%$ but it dropped off to $38 \%, 23 \%$, \& to $22 \%$ so far this year. They are a challenge if notning else

SIDNTX E. MAPSHMLL - 7224 Pm Drive - Millington, Tennessee - $\mathbf{3 8 0 5 3}$
Nuse *2 and it might get to be a habit! (We hope so! -ERC) CX have been a little on the rough side juring August, but I did manage to 10 g 35 adilitional stations during tinis period. Several of these wors GYors, i.e.: WCMA, KVRC, KAKE, WMPA, and got back into the DX noboy. The bulk of my catchas during the past month have been aither got bacik into the DX noboy. The bulk of ry catchos during the past month have boen elther tion is now on the air as I heari WLIC-1540, s/off $33: 45 \mathrm{pm}$ on $8 / 22$. Jackson, Nisse, WYIG, is now using their now WCCL call sign as I heard them at 10 pm on $9 / 1$. In addition to my DX interest $I^{\prime \prime} m$ also an old-timo railo fan and do quite a bit of reading on this subject. If snyone knows where I might purchase a copy of "The Great Radio Heroesn by Jim Harmon, I would appreciate ther writing to me. That's it for now, so 73 s \& good DXing.

ASES ABOUT OLDIES! FOBMATS ON CLEABS
valcom Maxighl - $i^{2} 41$ Tumin Strest - Apt. A-Athanta, Georgia ofdies at night. Tis list is srall so far, but it keeps growing. If anybody has any yor to adi, ITd like to near tnem; but hero goes, all times EDT. WNOE-1080 from 3 to 7 am wooic
 listen those hours). Also it is plannei that every Friday at $2: 30$ on Xeraf-1570 will be old les for one hour. Changing subjects, WHII, Bay Springs, Miss, has been coniucting TTs on 1570 from about $1: 30$ on on Tmursiay nights, usually the tniri or fourth weeis in tne month. Has the CPC leanred of thist Has anyone found a solution to the problem of grounded motal siding on a house? It seems to be a great shielif for ry loop antenna, no noiso, no signals One more itam: Let's have the next edition of hie Domestic log liet station phone number it's an easy way to get a QSL, and
believe you. $73^{\prime} \mathrm{s}$ till next time.

CARL JETER - 3590-c Clubhouse Circle East - Decatur, Gecrgia
YuPS PRDOCE SEVERAL RAFE VECRES
 The "J-4" worked mediocre on the "By-the-Way" antenna, much better on the "Radio West", hi. New faces not seen in years - Dr. RICHARD WOOD \& MIIE NORTBMM. DX at WALT RREVILLE's glamourous estate: Bcuador on $735 \& 995$, not bad. QRM from FGBS -710 \& $W G 10-540$ on daytime rigu for hurricane coverage, apparently quito a thrill to the attondees - and an informative ro11 of to me, wondering what I'd be coming back to. As it turned out, South Florida was hardDomingo by phone to find out how charar \& femily are doing; letts pray hets or. I do if $I^{\prime} 11$ make it to L.A. next year; it's too ear 2 y yet. Nore definit he is Cubs this Decombin a party of four NRCers so far is joining me (seven days at a beach-aide villa, all meale includod, RT air from Miami is $\$ 299$ - dates $12 / 24-31$, '79. Panemh \& San Andrds noxt Summer. FEBD-1470 is now fulltime as of $9 / 1$; it's only three miles fromme, demmit! Therics, IOUIS BUEHTER \& son, for over-accomodating wo at the Convention, whore many friendly faces were soon. Man, speaking of first impressions, BRUCS PORTRER is somothing slee! And a friendy group out of Chicago, whore I haven't beon in 12 years! Well, now that I've got a now rig, it looks like I'll have to get active again. 73 de KFS

STEPPREN B EONDER - Box 1712 - MOING VERY VERIE WELL
$\begin{array}{llll}\text { STEPBEN B. PONDER - Box } 1712 \text { - Mat thews, North Carolina - } 20105 & 8 / 27 / 7 \\ \text { Greatings to all again from sunny and huid Metrolina! Mot too much to }\end{array}$ say $D X$-wise since all my time has been devoted to keeping a youth program alive during the the time to do things with the kids, hi. Anyway, to the DX: Vories received include: WKSC-1300, WMMT-1220, WQOX-1440, WCGC-1270, WORD-910, WKBC-810, WLBG-860, WGAC-580, WRKB 1460, WSSC-560, WLON-1050, MOOX-1010, KLIC-1230 (from a Louisiana holdout of almost a year) TYNK- 1380 (from a Louisiana holdout of over two years), CTNV-1600, WYDE-850, WOIX-910, WTAP790 and WCOG-1320. All of those oxoept WESC WROT WRKB WYDK WTAR \& WCOG Were PP/c's. My N.C lotals thas far (aftor approximatoly six months) are 84 hoard, 70 varifiod, bringing my allI guess. Oh woll, I guess that's all for now - good DX and 73 .

2D MITXUS - 8001 Landmark Circle ${ }^{\text {*DXING BURBICANE DAVID* }}$
Im za, work ano this is my first lising since joining in June, a little bit is in orde will most likey the time this Muse sees print, the ST. LOUIS bash will be histoty. Since I putting on this ove unable to attend, I hope veryone has a good time there. Ani to the guy as not been totally good luck - you hl noed it (I shouin know, hil) waile this summer time has been spent trying to work on verifying old hold -outs from the past season, with very good results. Here is a listing of the holi-outs I've succeeded in verifying this Summer, 1isted from longest time (approximatoly) to shortest: (All ars V/PP/Cre) - nine monthe: WMP
 1580 (1); WSHF-1290 (1); WVOH-920 (1). Other veries received this Sumer are: WAJF-1490 $\mathrm{v} / 1$, WESY- $1580 \mathrm{~V} / \mathrm{PP} / \mathrm{c}$ \& WBBA-1580, $\mathrm{V} / \mathrm{i}$. Now on to some skimpy DX fran Down South way: Way back on $7 / 7$, WBAA-1580 Pittsfield, Ill. heard fair-poor e $9: 29$ s/off time. Then on 7/ 9 , unn (except for a report) WhJF-1490 bombing in nicely $38: 49 \mathrm{pm} w / \mathrm{rr}$; WESY-1580 hoard aga in $\mathbf{w} / \mathrm{s} / \mathrm{off} 99: 15 \mathrm{pm}$, \& a new roport sant to them. On to $7 / 23$ for noxt $D X$, betweon $9: 33-10 \mathrm{pm}$ heard FF \& mx on 1580 , so a tentative raport w/tape to CBJ (best Summer catch, in). During the CES reception, scmeono on $9: 54 \mathrm{pm} w / 11 l$ egal $T T \& O C$, but no ID, natch. Most recont $D X$, $8 / 21$ while home sick: I noard WRFH for first time on RS 38 am, w/chilitren's health PSA, ID, \& state NX. On the 20 cal scene, no sign of the 1050 in Conyers, Ga. yet, \& WRNG vas heard sevMURPHY during the Summer, who was here for several weeks on business. 73s for now,

GLENN HAUSER - University Radio WUOT - Knoxvilic, Tennes see - 37916 Drio to approaching Hurricane David, WGES, Mieai Fla. SOlow itation nomally with deap mill inland, was oporating with daytine facilities AN 3/9; daytime patterr. is also directional, and judging from strength here, favors this airection. WGBS is oriinariby inaudible, or just barely u/WOR which iominates this channel, but this night, no sign of NOR, be nice if just ONE Florida starion had the cloar-chanr.el covarage clout of mary, many NE \& Mid-Westorn stations, at times other than emergencies. WGBS had hourly checks on the position of David, and the customary evacuation ant emergency announcements, mixed in with inane music and DJ chatter which I will charitably ascribe to a deliberate tuctic to minimize panic. WGBS was heard Sopt. 3 midnight to $6: 15 \mathrm{am}$ BOT. Noxt night apparantely back to DA $-\mathbb{N}$ pattern.

RONALD F. SCHAZL - $5651 \frac{\text { ENJOYDD }}{\text { S.W. }}$ 2nd $\frac{\text { THE }}{\text { Court }}$ CONVENTION IN SPITE OF DAV ID
out at the 1 F20 mond tor from Hurricane Duvid noarly canceling Convention in St. Charles, the impending disas The 179 convention must go down as one of the best, with an easy schadule, excellent culisine at the restaurant \& banquet, \& a frultful bevera, party. The SLAD (3) crew has much to oe proud of for this one! Well, they had me down on the programe twice factechnical sessions \&, would you beliseve, some actuelly atterided. I hope the presentstions were OX; I was ex-
havs ted to the bone throughout the weekerd due to rushing \& lack of slosp, so I had to strain to keop my ayes \& mouth opon for it. Be it known to all those present tnat I owe the NBC
 kopt their day patterns and powers on all night, ( 50 ow). WCBS was coming in at local strength 200 miles alay. WGTO played three hours of the Amerioan Country Countdown till midnight. On Monday, $9 / 3$, the storm was on the mid gast Coast. WGT0, Cypress Gardons, and many coasta JWT IOCKHOOD at the airport, fresh from the Conventiont He was rind powis ag of goodies, and thres hours of tape. Jeff indicated thet WGBS was coming in ing back a at local strength. The stom made DXing miserable 9 (Wo hereby welcome Ed into the NRC fold and hope holll Muse regulart y! -ERC)

20M MAKI - 4106 Glads tone Strest - Duluth, Minnesota - 558 O
coure this Summer, but not playing golf. I I Lalase! I spont a lot of time on the golf couree this Summer, but not playing golf. I got a summer job as a "sand trap technician." I saved up and bought a Sony ICF-6700. What a difference compared to my old Ballicrafters
sX-z8 receiver! Digital roadout on the Sony is about 1 kHz off on the BCB, whereas the SX-sX-zs receivert Digital readout on the Sony io about 1 ldfz off on the BCB, whersae the SX-20 Sonaitivity of the Sony is good on the BCB and great on sw. Selectivity on the BCB is slightly better than the SX-28 was. Veries total now stands at 29 . $8 / 13-1$ heard two new States w/KOMO-1000 for Wash. and MOM-610 in Havre, Mont. for my 32 nd $s$ tate logged. Ae for STEVEN PARADIES' search for WDin's address, I received a $v / q$ from them last month with add rese is ted as Suite 700, 3 East Fourth Street, Cincinnmeti, Ohio $452 \propto 2$
BRIAN VERMON - General Dolivery - Dise, Tutoon Ferritory
$8 / 12 / 79$
of the 1
broadcast band fcording $525-1706 \mathrm{kHz}$. It is magazine canade will ask for oxpans in of the parentiy would mean eithor rebuiliding or modifications to existing directional antonna arrays at substantial cost, and may also affoct MM stereo. These viows will bo put forward at the MARC Corference on Sept. 12th. The U.8. epparently wants expansion from 525 to 1805 kHz "1th soms gape at the top ond". Noither oountry groposes broadcast stations on 2805 kHz short sighted viow in my opinion. B.N.V. "Broadcas t News Report" network type nows service is catching on in B.c. during the oarly mornings hours - stations: CFGP-1050, CEST-1070, CJIB-940, WKCQ-920 \& not, CKPG-550 \& net, have been noted carrying it between $5: 00$ \& $5: 04: 20$ $3 / 5$; this sorvice has no broaks for PSA's or comercials when carried live. TP DX has beon great hore since mid-July. Last year at this time I didn't hoar a thing from Down Under.

- Cornor

UP-CONING MUS INGS DEADLINES AFE: SATURDAY, NCTOBER 6; MONDAY, OCTOERR 22, and then weak2y, very Monday. Please douole space, and please tell us what DX you've beon hearing and how All Musings received will bo used, and wo look forward to teading your DX doings.

AVE FOX - 333 Douglase Street - RAVID DXES DAVID $\frac{\text { Ravid DXPS DAVID }}{\text { Reading, Pernsylvania }-19601}$

9/5/79 Soveral South Florida wastions were noted on the possibilitios caused by Hurricane David. $w / c / w m x$ \& hurricang info from 12:05-12:15. WGBS-710 was heard mixing with WOR \& they may have beon on daytime pattern at $12: 20$ when noted with $W X$ info. WQM was noted on after 1 a.m. s/of f time. WINZ-940 \& WKAT- 1360 were both on regular schedule, out with much harricane talk. Only othar logging was unn WVMH-1430 on with loud TTing and ID e 1:27. On $9 / 3$ during the evening hours several more Florida stations wore noted. WFIV-1080 was hoard poor to fair mixing with WIC \& an unld Latin. Mary Fla, not wX reports wore heard and
school closinge in Osceola County. WGTV-1580 was doing likewiso for Lake County. Aleo school closinge in Osceola county. WGTw-1580 was doing likewise for Lake county, Also CKIM/CTOR. WGIO-5A0 was noted on for the second night in a row. All the aboveloggings wore made between 8 \& 10:30pme BicT. Only new logging in the group is WYHI-1570 ( $1,200 \mathrm{th}$ call logged). Sumer veriee were monexistent as reporta to WPNC-1470, WIST-1280 \& WIES1380 went unanewored. Total verified remains at 785. Tape recozdor is in the shop for repair and it is strange to DX again with a pad and pencil! Years ago it soened so easy. Raina from Hurricane David have reached 83 Pa. this ovening and forecast callod far anywhore from three to six inches or rain in this arse. Hurricane Agnes of 1972 is still in the minds of many around here and I, for one, an rooting for my namesake to tale a hike real
quick. I hope ST. LOUIS was a success and more importantly that wo are in for a good DX quick. hope ST. P8-9/5-8:30-9:30. gospel mx with eergoncy programing as a result of the flood threat in the poanole Valley

## STILL ANOTEER NBCER LSE S TGNO-540

GABEX J. FATES - Star Route - Box 226c - Gouldsboro, Ponnaylvania - 18424
Timp for an introcuctory kusing from a long silent one. I am 26, single, and work for a printing outfit in Wilkes-Barre, Pa. called Llewellyn Brother, Inc, as an artist, designer, paste-ag porson or whatovar else thay desire to call mo. I am looking forward to anothor seseson of sunset DXing. It soems that Fall is the best time for ssi ing so that is why such silemce the second part of last season. CX were just terrible in my opinion. Oniy DX was my hearing WG10-540 Cypres a Gardons Fla, on amorgoncy on the ovening $39 / 2$ With lurricane David advisories. I do n't intend to raelly start productive DXing
 pot Auroras should really meice for some once-in-a-lifotime catches on these channele. 73.

LOES STRONG $\triangle$ PAB ON 1566
CURTIS D. FNGEREG - 80 Concord Boad - Wayland, Massachuset ts - 01778
ailboxfull wish its been too long since I graced these pagos. Besides, Ernie needs . 12:10. The last ontry in wy $10 g$ was five months aso, in Temesese, June in Ohio, July in Wisconsin, and Auguat at home! Thon I warmed up the ot and odiately got a goodie. 8/4- $A^{t} 12: 08$ am I started down the dial and stoppod when I hit 1566 and heard the chants of Ramadan blasting in at a volume level I hesven't heard on I hit in about four seasons. It lasted for about 15 mimites and then jus $t$ dropped off like a in in about four sassons. It lasted for about 15 mimates and then just dropped off like a powor cut. at fust after midnight, PMN, the local (i) pirate was blasting in on 1620 . Then I tuned down, and there was the AA singing and mailing again, but not at the seme volume lovel. Howover this time 1557 had a stronger signal which appeared to be Indian or other Aolan aing
ing (not Mi). Anrone mow what type of progracming Prance has on at that hourt Oddly, my ing (not M1). Anyone mow what type of programming France has on at that hourt Oddly, ny est reception on both Irequencios camo with mo loop directed silghidy or in, hardiy a TA irection, yet thare is 11 title do ubt they were Mis. Cayman- 1555 showed proper directivity, but wes ench wealer than oither 1557 or 1566 .

I have just joined MRC, receiving the Mow Menber Guide, the $8 / 13$ is sue of DX
IDMs, a the gublications Anterna Reforence Marmal and Receiver Roforence Mamal. Now I' ve been around this radio world for three docades, 25 of those years as a han, but seldom have Isen a oollection of more worthwhile information than that which NRC filled my mailbox. The Now Merber Gulde is excellent as I will admit to a limited kowledge of lan BCB DXing, although I have 87 countri ea worlegd on 160 metors. And the article by CHUCK HUTTON on usa ble recoiver sansitivity, $8 / 23 \mathrm{DX}$ Niss, is one of the finast I have read anywhere including the so-called profeesional journale of which I receive many eech month in my communications profossion. The recoiver and antonna roforence marmals bolong in any radio buffis 11 brary and trust that somohow I too may make a contribution to tho NBC. (Tharik you, Bill! - BRC )

NOTE FROM HQ, Thanks to John Clements who, at St. Louis, donated a new typewriter to ERC. We in Louisville will get it serviced and cleaned up and send it on to Ernie as soon as possible. So we can look forward to more
readable Musings in the near future.

DX IN ITALY IS MOSTLY ON TE TM BAND
DARIO NONTERTNL - Via Davanzati $8-20158$ Milano, Italy
8/22/79 have found an incredible number of letters to reply and oven 12 cassettes taped by Scandanavian Dxors with some italian fir as able to arrive tion which is edited by Millecanalo Review, and first woek of August I have been occupied to control the list which will be printed out in next Music/Hi-Pi/ Broadcasting exhibition hich will be hore in Milano from $9 / 6-10$. You see, I have always sowething to do extra af tor my eight working houra, hi! The DX condition has becone really so bad I have tuirned out to let for one year period NRC - I hope you may understand the reason is only this and not surely the prices or others. I naturally interested to know what happoned during and after the ' 79 Convention. Concerning PEC's 612 kHz unid station heard on Nay 19, I mot ure but may be really the super-power from Saudi Arabia, beli ove me if 1 say the other wo roll saudi Araba on wwo locals! And the one over 900 kHz is right an the channel of Ral whano and you haudi Arabia. Some DX changes has come out in these monthe, for oxpmple, now Ti rana-1395s/off 23.55 Gar (instead of 23.25 GET ). Another change, 1415 kHz super power from Alger, new channel for Sahara Territory people in Arabic, late as 00.00 GMT . ( 7 jm , EsT -RC). If you have any kind of unID stations please let me know - I will try of my best to help you to lear it, I am of the opinion a real DXer is not only the co who is abla to DX 250 watts wa ecoption, but the one who holps the others to get a QSL or to iientify a local station, but tell me, how many "DXers" have done thi e service? I have had mary contacts with Scandanavian Dxers, thyy sent to me many cassettes with taped on tracks of Italian MM stations. You may imagine how it should be exciting for them to got ouch inforwation being they don't talk or understand a word of Italian language, yet in 1978 I was able to help throe Sciandamavian DXers to got some replies from Italian Mistations. 1394 (ex-1413) ID \& B/off 00.00 GMT (Tirana is s/off 33.55 ). So over 1413 idz now only ne station Spanish after 23.00 GMT, La Voz dol Guadalquivir, Sovilla. Now I an at 960 verifiod station (M,SW, MI), 105 from Italy, 108 from $\mathrm{Spmin}^{2}$. Super $73^{\prime}$ s \& up up up with QSLs. (Wo hope you'll soon rejoin us, Dario - wo will mise your great reports! -EFC)

## WHO/WHAT IS/WAS CAPTAIN GLOE Z. ASES DAVE

DAVE YOCIS - 85 Vesper Street - Fairfield, Connecticut - $06430 \quad 8 / 24 / 79$ NRCer for a lise about time for the annual re-intro: $\mathbf{I}^{\prime} \mathrm{m}$ 17, frosh at NSU, DXer since 1976 \& NRCer for a Iittle over a year. After a year in NRC, I've figured out all the oldtimers ine about herty Bloopor, etc., but The soason is aoout to start in full awing as a couple TA hots wore noted a couple of days ago, plus remarkably little static last night. fill, not much now as overything is falling into the "UnID TT", "Rare but Unn", or "Thy Didn't I Hear Them Beforet" categories. Recent DX: 8/19- Sligntly AU at SSS; wno hots 1070 on the low side? 190 $8 / 20$. WQxR-1560 s/on $5: 30$, not 6 , per s/off announcement. HJ's very loud, blasting domestics into oblivion. Eramplo: EJEJ-1040 botter than WBZ or WHN. Nowies: CIMJ -730 , CMJG-1270, WONE-980, WKIK-850 ET. 8/23- S8S, WUST-1120 s/off noted. WVAM-1430, WNNJ -1360 new . $8 / 24 \mathrm{AM:}$, Who dominates $1310 \mathrm{w} / \mathrm{RRL}$ after midnight? I can nover ID this rascal. HPCG-520 boacon loud. I have a sneaiky suspicion that this is a U.S., not Capadian, station, because it lacks the eight-second tone (I think it's called a range signal, but I' not sure) between IDs. Also the tour-letter N-call indicates U.S. Loop would tend to agree, though s. Ontario Noops ame Nicaraguan rovoluntionery tation using Corporacion's XR Can aryone confirmi UnID-1610 blocking TIS, OC \& IT mx, no IDs, loops NYC so it's probably the WCBX bootlegger.

## SDIS GETTING $\triangle$ FTM MEN ONES TOO

ED DRUNM - 50 Felicia Streat - Springiceld, Masachusetts - OL104 $9 / 4 / 79$ the NC-173 but without great results. Latest loggings are: $8 / 21-$ WRNJ -1000 e $8 \mathrm{pm} / / 0 \mathrm{ff}$. 8 , 27- WBNX $+1380 \mathrm{w} / \mathrm{good}$ ignal e $2: 30$ amm w/funoral home ad (I've been jy ing to 10 g this ong),

 finally CIHI-1265 poor w/SX © 5 and I hope to have more reports in the next is sue.
PHILIP BOERSMA - $c / 0$ WISISSED ST IOUIS BIN MADR PRORIA -49443
ugut issue of DX NBFS. Forgio who forgot to put hil name \& adires on tho Musing in the August issue of DX NBN. Yorgotfulness is bed onough, hut when you start forgetting who you IRCA-Peoria tha preceojiing weeciceni. It was nic e seoing ovaryoody again, incluaing Louisvill own WOL J . FLIWHREL \& GABY ATKINS. Station tours were interesting, too. Sorry I had to Wiss ST. iouls, pne of these years I'll make an NRC Convention, ni! Well, wita Winter ap proaching, keep the tubet in your BX warm, it may be all you have for heat. 73 s .
REMEMBER, MONDAY OCTOBER 8 IS A POSTAL HOLIDAY SO THE NEXT DEADLINE IS SATURDAY, OCTOBER 6!

STEIEN MILLER - Boston, Massachusetts
Hello overyone! How's DXP Bofore I go into the results of my no. inn $7 / 22$ to early $7 / 23$ na, I'd like to say wolcome bacic to the SHitor of this fine publication, TKD the cover of DX NGIS again! Now as I promised, the results of my all-nigit $7 / \not 2$ to early ?/23 DXing session. Here it is - the only DX neard on thoss above dates is another new one from "Tre Big Applen WBNX-1380 3:14 MM. I didn't touch the dial agein until $7 / 29$. The results from that day and the 30th of July are situated somewnore in "Rocket Ray's" oxcellont DDDD column this issure. Al though the haliday season is off for some months now, I thought I'd take a look at and lot you fellas in on what I expect to have frcen "St. Nici" come Chris tmas. The list goss as follows: A brand new DXing receiver, a new set of commun ications headphones, shotgan loop for TRF, a renowal in menbership in the NRC and rojoin IRCA, both excellont INI clubs. Questions: First, do es anyons imow the address of the IRCA' San Franciaco Publishing Staff's addross? (It's now publishod in Seattlo, Stoven - I don't appreciated. Thank you. If you know write meat 368 Quincy Street, Boston, Ness. Qeli25. once again thank you. Socond, why won't some of you silent menbers contribute to my at present feverite column, pay Appimi's Domestic DX Digest? I ask this question becausa after I joined the NRC, and after I received my second issue, Vol. $46 \$ 10$ I noted that NRC Mem-
 DX NLBS. I apologise for using Mr. Virtaicis name to strese my point. PLBASE! Support the NBC \& contribute to various columns and ramember your support and contributiona benefit all in the dub as well as yoursolf, and future nowcomers to the Club. Watch for the editors' deadlines each issue. Support the "Living NRC." Thank you for reading - ses you nest lssue.

DAN K. PRITLIPS $-835 \frac{\text { THE OOOD OLD DAYS \& TEK GOOD NEN DAYS }}{\text { Danton Lant - Birmingham, Alabams }}-35210$
 Hogging Best DX Morning: Logging soveral 1959. Proviously I had a Jamuary morning in 1964. Mont Unusual quoto: While trying to dig out an ID from a diffi cult IA, follow HBCor ALEX BOWIAB said, "You don't mind if I turn to XERP and liston to Wolf man Jack, do Jout" Vonder what evor happened to: LEN KRUSE, IV JOHNSO N, \& SID ROBENBA UM. Most distant Summor catch: SMP-1580 on ET in August from South Alabama. Weirdest catch: WVOX-1460 s/on © 6:30am (camplete daylight) in Sumer of 1966 from Alaboma. Most umpual DX lecation: PLBY BARTON's Troy, Ala. shack above the corpees in a funeral home. WOST Infenous Verie: Mibi-Nibi, hoard at NRC Convention in Indianapolis in 1962 . Wotes: It is nect regular broedcast band lope the same kind as an antenna in a $\$ 2.98$ zanart special conoutput of gm-1. Then plade this new 100 p beside antonns (Internal) on Superadio. Then turn SM-1. Amplified loop worke fine using this system. This mothod is ospecially usaful whon you want to use an SM-1 with a "choapio" radio. Drean of the future: Discovery of the Super Loop. A super loop will be able to receive stations in one direction only. It whil work like ISCA without the mesd for weird resistors. How to do 1 tp $I$ don't know, but I hage wondered what would happen if torelde wore used in place of forrite bar in SM-1, FLT-altasimath otc! Any experimenters out there? Latest DX: Sopt. 3 - WGBS AN for Hurri-9:31-9:50pm for flurricane Darid. WCCL-1590 Jackson, Miss. $10: 05 \mathrm{pm}$, for call change 3 ,

ANing with fairsignal now ones trickled in over the Spring and Sumner: MM 5/21- HJAZ-1180
 $6 / 20-$ WIDK-1480 I.C. fair a 6 mm s/on. MM $7 / 2$ WBIP-1400 Mis 3. fair at 12 i/off-8SB. MM
$7 / 30$. The new WACQ-1130 Ala. good at $6: 45 \mathrm{~s} / \mathrm{on-SSB}$. $7 / 31-$ HIJN-1530 fair/poor w/R. Accion

 for a rase SP, two new ones were begged on 980: WITY IIl. very poor e lam s/off; CKGM Mon-
 these. Cxcan's the 75th Canedian hers after a year of boing stuck at 74. 8/28- Iong-sough WDON-i 580 III . topping the frequency $88: 45 \mathrm{~s} / \mathrm{y} 1 \mathrm{ff} \mathrm{w} / \mathrm{plug}$ for MM . That's 460 here on the logendary 1580 , no call changesuency Still needed are FCNB, IWNT, KDOM, WEND, KGAP, KTLU, KBYP a IIYZ, the last-named embarras ment due to local WSKT being in the same s\%on s/off zones for all 12 months of the year. Somebody at the Convention sail WIYZ has alroady made the rove to $1490-$ good rildance, hi. I had a gooi time in ST. LOUIS, a big thanks to all who made it possible. I especially onjoyed the verie collections of JOHN CALTAPMAN and RICHARD WOOD, plus ERC's Missouri/Aricansas/Oklahome portion, Ernio, why do $n^{t} t$ you rent your own the past fow Mocs, so all five Knoxvilie fulltimers aro NSP - at least thore's nothing more to faar now, hi. The TRSTs from WRTL-1460, WVLC-1170 and unn WWM hoard, since they weren't on. Enough of this, 73, good DX in '79-180.

YES, NEXT YBAR IT WILL BE LOS ANGELES FOR THE NRC CONVENT ION! LET'S SEE A LOT $\sigma$ THE GUYS FROM THE CINTRAL AND EASTERN PART OF THE COUNTRY OUT THERE - YOUR CHANGE TO NAKE IT A REALLY
EXCITING VACATION AND CONVEMIION CQMBO! NAKE THOE E LONG RANGE PLANS NOW! FUN FCR ALL!

WARS from a kit, which came with a little wire antenna and 00 st about $\$ 20$. Bill lived in a private house in Auburndale, about two or three miles fro
one Winter day after school, at about 4pm, Bill fired up his goar for a DX test using, I think, a six-foot whip antema outside his window. After the "toet poriod I called him on the phone and said, "I tuned to 1620 , but all I could hear wase some guy talking French, and some woird song that sounded like Gordon Lightfoot." (I don't thinik it occurred to me that there shouldn't have been anyone speaking Fronoh, or auy into the phono, "Holy (bleop)!! Tnat waen't French, that was mo! I was trying to sound lasdbeok! And I played "If You Could Read My Mind"! I can't beliove you hoard met" And, at two or threse miles, I wes more than a little surprised mself, especially since sill had once tested and lost the signal after about two blocks!
Wo of ton joked abow, wo the FCC We ofton joked about the FCC who, we imagined, had portable direction-finding eqeipnent rosenbling bazookas. For exarple, maybe late one night Bill would sleopily look out of your Auburndalo Radio Sorvico - it's snowing lightly - thorols an FCC man pointing a basoole at my window - The FCC! OMIGOD!" and ho would rush to disconnect and hido all his quasisophisticated equipuent.
But alas, somothing in thasized comminity wide rame, FCC notorioty and a busy roquest lino. and fixing it. This the set soon came loose, and ho didn't know how to go about finding one dF, someone calculated that powerful wirs hed been hooting all of six milliwatts into that whip antenna. The tranmititer was subsequently sholved.


 not to have been able to attend. I did, however, make it up to Peoria for the Friday night of IRCA's bash. I mot soveral NBCors there, and as far as I oculd tell, overyome was having a good time. Thanks to JOHN CLEloigR for a good convention. I am looking formard to hoaring about the ST. LOUIS affair in DX NESS. A couple of DX notes: $9 / 5-$ I heard with some icint of call-in contest, at 8:40jm CDF, easy adult contemporary mx. I also heard IMPT-620 fading in/out at about 9 pm; a good ID on the hour. If anyone has accese to AJIOVOM and wuld 1 lise to chow the fat sometime, call me at $862-2883$. Or if aryors has acoess to a PLATO torminal ALLEN and expected soon from Norm Macuiry. Remembor, please include the mileages. Good DX!

 ticle on "Noise Levals and Useable Receiver Sonsitivity" by CHUCK HUYTOX, Also a thaniss to BILL WURTZEL for his warning to DXers who may got those strange phone aalls. Ons worthehile thing I have accomplishod this Sumcor was to install one of the solf adjus ting IF no ise lim iter circuits in my $甘 Q-200$. It works woll ( this type of nots. limiter? It's the seme circuit as in the Redio mateur's Handbook. Hore's wishing everyone the best of DX for the coming soas on. 73.

STILL TRYING WITHOUT MUCR SUCCISS
ERNEST $\mathrm{Ba}_{a}$ COOPSR - 5 Anthory Street - Provincetown, Massachusetts - 03657 617-437-9337 9/2 might expres: it, had ve attended the ST. LOUIS Convontion, whamorful, wannorfal, mungerful! If you woren't thore, ha ha ha and phoog on you hi. Wo all had funt px: $8 / 21$. Fhillien ia notgd on unn WBCB-1490 $91: 08$. TT-1450, 12:58-1:04-plus, but gono by $1: 10$. sM $8 / 12-$ WImbdiece shom to 2 is either off or finishes earli- wno they were off $s 1: 20$, \& overy SM since. 101 $8 / 13$ - WIFL-1580, ano ther EY today, hi, WYTI! At last, a now one, in CKO-1470 all-NX, apparently WSAI is now off Mis. I heard whooserels Pranklin" on Xiso-1050 this AM, or should it be GEX, hi. UnID TT-1190, 2:11-2:17. 8/16 A waik signal on 1610, but the audio just wouldn't males it, 2 am. The 600 Cuban is beck on ter get now, anihilating poor WICc. UnID $83-675$ e $1: 56$ w/WRKO' 50 km ont MM $8 / 20-$ WMCs- 1400 heard $\frac{1}{2}$ l:O6am w/f announcer. Unn WJLK-1310 strong $s 1: 23$, w/rr. WNBC \& WCBs were off. I heari WTAR-790 at 2an W/TLK, this is gonerally not hoard hore at all on night pattorn, but is in u/WEAN all day, Unn MLT-850 MAll Star Country Radio" $2: 52$. $8 / 21$ - UnID FTRR on 1580
 TGVE-1570 was in W/GKL. Thanks to these NRC gonts for thot ir appreciated phone calls: GAFw w/ID $32: 49$ \& Off, LVVEGREN, BILL, \& thon MoR male vocals on 1550 Tues. AM $9 / 11$ olalk, disco, $1: 30-2 \mathrm{~mm}$ ? A.0.8.: Who hed


F - Non-weamber Bill Stone
DXing fram Locust Hil Ont. nsar Toronto

Sary Houlex - Fryy.e Iteine - Viorman liaguiro - Steve ponior $F$ - Eon Eychal
$G$ - Dave Fox


Jerry Dee, FD
no eigner
John C. Golien III, CE Robert Hanicin, GN Del Stasd, CE
Greg Jarnos, Leon Lasiey, ast DoIS
fotty Dasan, Prog.Co-OrAr
H. C. Dean

Nichaol E. Prow, CR Judy Thomas, Prog.Dop't
John Gunninghar, PD
u/u, CE
John Faniola, CE
V. T. Swisher

Kay Potter, PD
Richari Wood, PN
Claudine Hufford
Cdyio C. Fritts, CE
stophon Fodiy, FD
Stophon Rodiy, PD
Tony Coloff,
Kilton Jones, CE
Dan Dunnigan, CE
Pub. Fel. Dop't.
Norgan Choat, CB
Darwin $G$. Fitzgorald,
$C B$
S. B. White, M, CE

Kike Samford,
$\mathrm{pl}_{1} \mathrm{u} / \mathrm{u}, \mathrm{CE}$
H. F. Ridgway, CE

1490 EYNN 12 Percyzeigler
Thomas Allen, PD
Larry Henthorn
Everett Lawson, CE
Rel ph Wayne PD
Reter Burk, CE
Anthony Bonzin
Karen Greeno 8
Julian J. Milens
Cathering King, OM
William L. NGZissick, GM Pat Fodgers, sM Rnmona Harris, GN (John T. Pirkle, $\mathbf{E}$, Marke E. Andorson, Gark E. Andarson, CE Glomn "Sky" Corbin, Ptn
John $\boldsymbol{F}$. Bunideldt, TD Craig Fas than, PD William B. Noal 3kip Davis, Farm D John A. Columbue, Cs Michael B. Pancock, Opt Clifford J. Groth, Contrac
Donald Dosi Dean D. Croun, a


Thet's it for this time, and please don't forget that your recont vario signors are very important to other DXers. Sond thers 1 n with your kusings, double spaced, with frequencies and topes of verias, and postions of the verie elgnors. There Bave to be more of you seoking verifications than this! Ploase sond 'ex in!

