



DX NEWS

*the magazine of the
National Radio Club*

SINCE 1933

Volume 47, Number 21

Monday, March 31, 1980.

STATIC FROM HQ

If you haven't noticed, our favorite publication is larger than normal this time. After being off for a week, we thought we'd give you something to keep you busy. Thanks to all who contributed. And, would you believe we still have at least 20 pages on hold!

Unless something comes in after our normal deadline, we have gone from feast to famine in the CPC test department. Keep sending those letters and maybe we'll still have a few tests to close out the season with.

Chuck Hutton asked that we give a report of TRF purchases and shipments, so here goes: Shipped - Mountain, Nowak, Ponder, Doherty, Eisentraeger (order #1), Arvin, Freed, Adamson, Legler, Tuthill, Reed, Sampson, Stilwell, Hagan, Smith, Paulsen, Cave, Satterthwaite, Wong, Yentema, Cantrell, Whittier, Greenlee, Monroe, Madzelonka, Nitshe, Lamb, Leamy, McIntire, Snow, Bennisson, Quaglieri, Wurtzel, Dimmick, Shiels, Poltz, Sluka, Gray, Recco, Valdron, Griffiths, Hahn, Messenger and Bedoya. To ship mid-April at latest: Eisentraeger (order #2), Taylor, Allen, Kazaross, Lou Ferrigno..out of filters because Radio West is sold out...will ship when filters arrive. Also, Chuck has three and only three TRF's left on a first come/first serve basis. His address is at the top of his column inside and additional info on the price, etc. is found in past issues of this fine rag....

The Three Mile Island DX Assn. (no foolin') asked us to pass on the following: The First Annual Pennsylvania DX Get Together will be held Sunday, June 15, 1980 at the picnic grounds at Penn State, State College, PA. All DXers and SWLs and Radio hobbyists are welcome, regardless of residence and area of interest. For more information send a SASE to Don Moore/Box 157, R.D. #5/Bellefonte, PA/16823.

In order to avoid any additional problems, we include the balance of the DX News schedule which appeared in the November 26 DNX on page 19:

April 7 - #22	May 26 - #25	July 14 - #28
April 21 - #23	June 16 - #26	August 11 - #29
May 12 - #24	June 30 - #27	August 25 - #30
		September 8 - #31
		September 22 - #32

Deadlines in Louisville are 10 days prior

//////////NOTE//////////NOTE//////////NOTE//////////NOTE//////////NOTE//////////

A slip up between ERC and us resulted in listing the wrong date for Dave Yocis's turn at Musings. Not only that but the two-word-city Musings deadline is also changed. The correct date for Dave's column is M-a-y 12. Send your Musings to Dave at 502 West McDonel, MSU, East Lansing, MI 48824 Important...important...important...Dave's deadline is: APRIL 28. The two-word-city Musings deadline is now Monday, April 7 in Provincetown.

//////////NOTE//////////NOTE//////////NOTE//////////NOTE//////////NOTE//////////

LOOK INSIDE

DDXD.....	2
IDXD.....	8
Selectivity Modifications--TRF....	20
Zonal Analysis Approach to Pan American DX.....	21
Graveyard DX Achievements.....	25
International DX Achievements.....	29
Broadcasting in Germany.....	30
Humpler 4NKB Receiver Review.....	37
Strong Signal Handling.....	40

Verie Signers.....	45
Musings of the Folks.....	46
Good Mews.....	58
A-Musing Members.....	60
April Fuel.....	61
LPC Resignation Statement.....	65

Happy EASTER from the Bunch
in LOU-AH-VUL!!!!

DOMESTIC DX DIGEST

DAVE SCHMIDT
42 CHELWYNNE ROAD
CASTLE HILLS
NEW CASTLE, DE 19720

We've got alot of info this week, thanks to all who sent their items in. When sending tips, please keep your info to one side of the paper, typed or written, ELT, etc. Here we go:

DX TESTS

- WMLP - Not Heard by DS-DE. KMNS - Not heard by DS-DE.
 WKSK - Heard by SRS-IN, TT only ERC-MA, DS - DE.
 WJAZ - Heard by WPT-DC, TT only DS-DE, Not heard RA-MA.
 WROM - Heard by SRS-IN, JF-ON. WJWL - Heard by SRS-IN, MF-MI.
 WNJR - Heard by RA-MA, WPT-DC. Didn't try-DS-DE.
 WGIG - Not heard by RA-MA, MF-MI. Didn't know DS-DE!

FREQ. CHECKS

- 1st Thu...WCPM-1280 w/TT. (DS-DE, EB-PA)
 1st Fri...WBIX-1470 w/TT. (DS-DE, JB-NY)
 WHBG-1360 w/TT. (DS-DE)
 WPMH-1010 w/TT. (DS-DE, JWB-PA)
 KGIR-960 w/TT 0101-0104 (DS-DE)
 WQCK-1600 w/DT (DS-DE, JWB-PA)
 WRTA-1240 Not heard. (DS-DE, JWB-PA)
 WRAW-1340 Not heard. (DS-DE)
 1st Sat...WRVK-1460 w/TT (JS-OH)
 1st Sun...WEVA-860 w/mx (MF-MI, 0900-0015 per v/l).
 2nd Mon...KRG1-1430 w/TT (SRS-IN)
 WSHY-1560 Not heard (JWB-PA)
 KQNK-1530 Not heard due to WCKY ET (JWB-PA)
 2nd Tue...KINO-1230 (WH-CO)
 2nd Sat...KNEV-1060 (WH-CO)
 KBRB-1400 (WH-CO, 0110-0120 per v/l).
 3rd Mon...KIMM-1150 (WH-CO, ann'd f/c 0230-0240)
 KSN0-1260 (WH-CO, new time 0230-0245, months 1-4-7-10 onLy?)
 KPMJ-1050 (WH-CO, 0100-0115 per v/l).
 3rd Tue...KYDE-1590 (WH-CO, 0615-0630 w/TT, per v/l).
 3rd Fri...KGAH-1330 (WH-CO, 0200-0215, not on list).
 KRTN-1490 (WH-CO, 0215-0230, not on list).
 3rd Sat...KCNT-1280 (WH-CO)



SPECIAL

- 1110 WVNH NH Salem, Still noted off the air 3/4 (SM-MA)
 1260 WWOK FL Miami, New address per v/l: 2741 N. 29th Ave.,
 Hollywood, FL 33020. (RA-MA)

ROY MUSCO phones in the info that the new stations for Greenfield, Mass. (1520), Vernon, Conn. (1170), and Richfield, Conn. (850) are still not yet on the air. I understand the Greenfield station is having problems finding a transmitter site.

MIDDAY TO MIDNIGHT

- 560 WFRB MD FROSTBURG - 3/6 1245 noted at very good level w/CW mx, w/WFEB null'd. (DS-DE)
 WEBC MN DULUTH - 3/8 1850 very strong w/Top 40, new. (JB-NY)
 KWTO MO SPRINGFIELD - 2/27 2129 Female DJ w/CW mx, ID. (GM-TX)
 600 KTBB TX TYLER - 2/27 1930 noted w/Top 40, ID. (GM-TX)
 WSJS NC WINSTON-SALEM - 3/2 2106 on top w/snow cancellations due to bad storm, rather rare here. (JB-NY) (EB-PA)
 610 WDAF MO KANSAS CITY - 2/3 2203 CW mx, ID, many mentions of KC u/MIP.
 WIOD FL MIAMI - 2/21 2300 ID w/"some place for sports," then list of teams aired on station. (EB-PA)
 630 WEJL PA SCRANTON - 3/2 1730 rather weak w/nx. (JB-NY)
 680 CKGB ON TIMMONS - 2/23 2253 fair in CFTR null w/rr, ID's. (SRS-IN)
 WCAW WV CHARLESTON - 3/8 1822 fair in CFTR null w/nx followed by jingle. (JB-NY)
 710 WKRG AL MOBILE - 2/20 1935 noted w/ID u/MOR. (EM-FL)
 KGNC TX AMARILLO - 2/20 1940 noted w/market report u/KRG. (EM-FL)

- 730 CKDM MB DAUPHIN - 3/9 2147 Dept. of Highways cx rpt., ID then into Gordon Lightfoot song. Good signal. (MK-MI)
 740 WVCH PA CHESTER - 3/9 1715 covering CBL w/religion, rare here (JWB), 3/9 1750 very loud in CBL null w/mx & promo "Insights for Living." S/off w/"ringing of the bells in the old court-house", 11,663 day of b'casting. First time on RS. (JS-OH)
 WGSM NY HUNTINGTON - 3/9 1801 s/off right after WVCH, no SSB (JS-OH)
 WNOP KY NEWPORT - 3/9 1802-1820+ jazz right after WGSM s/off (JS-OH)
 WPAQ NC MT. AIRY - 3/9 1805-1815 o/u WNOP w/nx. (JS-OH)
 KCMC TX TEXARKANA - 2/27 1940 w/CW mx, atop freq. at LSS. (GM-TX)
 790 KULF TX HOUSTON - 2/27 1944 w/spots for Houston & Apollos, ID (GM-TX)
 WNEWS FL S. MIAMI - 2/9 1814 Xlnt signal w/local baseball, gone at pattern change. (EB-PA)
 WETB TN JOHNSON CITY - 2/23 1806 spot for local group, jx, good (EB)
 800 WSVS VA CREWE - 3/12 1805 noted w/local bank spot, nx, insurance company in Victoria spot. Good. (EB-PA)
 860 WNOV WI MILWAUKEE - 2/28 1738 fair w/soul mx, ID "Radio 86, WNOV" (SRS)
 870 WHCU NY ITHACA - 3/8 1651 rarely heard here, noted w/MOR/BFL mx. Usually nothing but WCBS-880 splash here (GW-PA)
 920 WOKY WI MILWAUKEE - 3/2 1836 good w/promo for Easter Seals Dance (JB)
 WBBB NC BURLINGTON - 3/12 1830 Xlnt w/s/off, no SSB. (EB-PA)
 WMMN WV FAIRMONT - 3/12 1831 XLNT w/wx, many mentions of Marion county and Community College BKB team. (EB-PA)
 930 WGNT WV HUNTINGTON - 2/3 2215 many ID's, Top 40 mx, o/jumble. (EB-PA)
 940 WCPC MS HOUSTON - 2/20 1815-1830 noted w/Pop mx, loud. (EM-FL)
 WFNC NC FAYETTEVILLE - 3/9 1710-1730+ noted w/Texas/NC BKB w/local WGRP null'd. (JS-OH)
 KVSH NE VALENTINE - 1/26 1820 fair in partial CBM null w/local bank spot. (JP-OH)
 WCSW WI SHELL LAKE - 1/26 1746 good w/s/off by feamble, mention of WGM-FM. (JP-OH)
 950 KXJK AR FORREST CITY - 2/24 1835 ad for local Holiday Inn, then local mx. (EB-PA)
 960 WPRT KY PRESTONBURG - 3/12 1845 good o/WFIR w/s/off w/mention of FM on 105.5 (EB-PA)
 WFIR VA ROANOKE - 2/21 2235 noted w/promo & ID (EM-FL)
 WHAK MI ROGERS CITY - 3/2 1837-1845 very strong til s/off w/no SSB, my 1000th station, little slop from local WBBF-950 (JB-NY)
 970 WHA WI MADISON - 3/2 1850-1900 w/"Great Decisions" program, then s/off, o/u WMAY. (NZ-NE). Should send a v/f, Neil. (DS)
 WAVE KY LOUISVILLE - 2/27 1952 "97 Wave" ID, wx, pop mx. (GM-TX), 2/20 2249 Top 40 mx, ID, local WFLA null'd. (EM-FL)
 980 WRC DC WASHINGTON - 2/21 2246 talk show in progress, ID (EM-FL)
 990 KWAM TN MEMPHIS - 2/13 1830 ad for tax service, "Wam Public Service" then PSA. (EB-PA)
 WVSC PA SOMERSET - 3/8 1814 1st time w/s/off, FM mention (GW-PA)
 1000 WKDE VA ALTAVISTA - 3/12 1818 many mentions of Altavista, ID then talk. (EB-PA)
 WVOV AL HUNTSVILLE - 2/11 1751 spot for local home center & bowling alley then faded. (EB-PA)
 1020 WPBO IL PEORIA - 3/9 1859 s/off read over "Amazing Grace", semi-local KDKA null'd. (JS-OH)
 WCIL IL CARBONDALE - 3/9 1900 s/off right after WPBO, no SSB (JS-OH)
 1010 WXYQ WI STEVENS POINT - 1/26 1645-1700 fair o/u CFRB w/local spots, CW mx, UPI nx. (JP-ON)
 1060 WNPC TN NEWPORT - 1/22 1745 s/off weak u/KYW. (JP-ON) (JB-NY)
 WMCL IL MCCLEANSBORO - 3/3 1819 in w/"Salute to the American Farmer"
 1080 WPOK IL PONTIAC - 3/3 1820 in briefly w/good cx to Ill. (JB-NY)
 WQRO PA HUNTINGTON - 3/9 1645-1700 first time here, in well w/WEPP null'd. (JS-OH)
 1090 WISS WI BERLIN - 1/25 1745 good w/CKKW w/CW mx to quick s/off. (JF)
 1170 WLKE WI WAUPUN - 2/29 1821-1829 w/salesmans' job for WLKE spot, CW mx, promo for "SE WISC. official wx radar warning station" (NZ)
 1180 VOA FL MARATHON - 2/6 2110-2200 atop w/aurora cx, SS talk, s/off w/Yankee Doodle. (GM-MD)
 1210 WKNX MI SAGINAW - 3/7 1833 Top 40 mx, ID, o/u WCAU. (WPT-DC)
 1250 KBRF MN FERUS FALLS - 1/17 1742 weak o/u mess w/CW mx, local spots. Verie mentions CP is on. (JP-ON)
 1260 WNDE IN INDIANAPOLIS - 3/8 2203 nx, ID, time check by male ann'r, fair signal. (WPT-MD)
 WJJJ VA CHRISTIANSBURG - 3/16 1829 quick s/off noted w/no SSB, mention of "Rock in Stereo, V-105", their FM. (DS-DE)
 1270 WRJC WI MAUSTON - 2/6 1716 fair o/WXYZ w/promo for BKB game to be aired on WRJC-FM. (JP-ON)
 1280 WYVE VA WYTHEVILLE - 3/16 1827 noted w/Fox Old's spot then instr. mx til s/off. Now on 2500 watts. Loud. (DS-DE)
 1290 KOIL NE OMAHA - 2/27 2111 in mess w/Top 40, ID. (GM-TX)

WCUR RADIO - 640 AM

West Chester State College, West Chester, Pennsylvania 19380

1290 WNEU NY BINGHAMTON - 3/8 1539 in poor w/ad for store in Endicott. (GW)
 WHIO OH DAYTON - 3/8 1553 amazing daytime reception w/ad for
 Electrical Workers Union working for a better Dayton. (GW-PA)
 1300 WCJL WI MARINETTE - 1/23 1730 weak in mess w/s/off by female, ex-
 WLOT. (JP-ON)
 WKXI MS JACKSON - 2/7 1855 1910 good, alone of freq. during auroral
 cx w/disco mx, ID., "Kickcee". (JP-ON)
 1320 WKRK NC MURPHY - 3/6 1845 s/off w/mention of SY NC's most powerful
 station. Good o/pest WKTQ, #12 on 1320. (WPT-DC)
 KWHN AR FT. SMITH - 2/7 1855 fair u/CFMG w/Top 40 mx, ARN nx. (JF)
 WDMJ MI MARQUETTE - 1/22 1745 good, atop freq. w/sx. (JP-ON)
 WHOK OH LANCASTER - 2/15 1758 weak in mess w/ID. (JP-ON)
 1330 WPRZ IL EVANSTON - 2/27 1805 "Chicago land wx", local spot, xint. (EB)
 1350 WNIS VA PORTSMOUTH - 3/2 1749 on top w/talk show, new. (JB-NY)
 1360 WCHL NC CHAPEL HILL - 2/20 1955 ID noted then Top 40. (EM-FL)
 KLRN MO MOUNTAIN GROVE - 1/11 1740 weak in mess w/contest promo (JP-ON)
 WMNS NY OLEAN - 2/1 1731 fair w/WKYO w/bkb promo to be aired on
 WBZJ-FM. (JP-ON)
 1370 CFVD PQ VILLE-DEGELIS - 3/6 1800 running FF, pallelle to 1310 (CHGB),
 o/YFEA. (SM-MA)
 WLTH IN GARY - 2/20 1954 noted on past s/off w/OC, possible start
 of ET for new night operation. (SRS-IN)
 1380 WIZO TN FRANKLIN - 3/7 1845-1848 strong w/spot for Franklin businesses
 the CW mx. (JB-NY) (JP-ON)
 1390 WTNK MS MERIDIAN - 2/7 1846 strong, alone w/disco mx to s/off, no SSB
 1420 WLET GA TOCCOA - 2/12 1813 fair w/s/off, mention of PSA power,
 no SSB. (EB-PA)
 1430 WBEV WI BEAVER DAM - 1/23 1734 weak u/CKFH w/long wx then sx. (JP-ON)
 1470 CKO PQ POINTE CLAIRE - 1/24 1740 fair o/mess w/all nx, reports from
 other Canadian cities. (JP-ON)
 KTCB MO MALDEN - 2/16 1847 weak in mess w/s/off, mention of Tri-
 County B'casters. (JP-ON)
 1500 WMJL KY MARION - 2/16 1828 weak but alone w/s/off. (JP-ON)
 WAUK WI WAUKESHA - 3/8 1855-1859 strong at s/off, no SSB (JB-NY)
 1520 WBNO OH BRYAN - 2/27 1737 fair w/CW mx, antique show mention,
 w/WKVI. (SRS-IN)
 KMAV ND MAYVILLE - 2/14 1820 strong w/WKEW ending "World Today"
 program, ID then local nx. (JP-ON)
 1520 WCHE PA WEST CHESTER - 3/8 1323 "W.C.'s only radio station," good
 on tape. (GW-PA). 3/9 1800 topping freq. w/nx, wx, ID (JWB)
 1530 WRBX NC CHAPEL HILL - 3/1 1820 good w/SID "Top of the country from
 the top of your dial". (EB-PA) Eeeech! (DS)
 1540 WOOZ NC WHITEVILLE - 2/2 1801 weak in mess w/bits of s/off. (JP-ON)
 1550 KGMO MO CAPE GIRARDEAU - 2/22 2047 noted on past s/off time w/FM 101
 ID's. Test to go fulltime? (SRS-IN). No, sounds like some-
 body forgot to shut the AM xmitter down! (DS)
 WCVL IN CRAWFORDSVILLE - 1/21 1746 ID caught in mess on tape replay (JP)
 WKVA WV CAHLESTOWN - 1618 3/9 fair w/ID during s/off. (SDM-MA)
 1570 WSSA GA MORROW - 2/12 1817 fair at s/off, address given. (EB-PA)
 WTTI VA ROCKY MOUNT - 2/11 1801 s/off w/mention of 500 watt PSA
 power then SSB at s/off. (EB-PA)
 WCRL AL ONEOTA - 2/18 1829 xint at s/off w/mention of studio &
 x'mitter location. (EB-PA)
 1580 WBBA IL PITTSFIELD - 2/20 1844 fair w/s/off, mention of tuning to
 FM 97. (SRS-IN)
 WPUV VA PULASKI - 2/1 1800 good s/off w/mention of critical power
 hours, no SSB. (EB-PA)
 WLIJ TN SHELBYVILLE - 2/18 1830 good at s/off w/SSB. (EB-PA)
 WSKT TN KNOXVILLE - 2/21 1800 Religious mx, ID then nx, very good
 over the heap. (EB-PA)
 1590 WETT MD OCEAN CITY - 3/6 1251 good w/WQIQ nulled, MOR. "16 Wet"
 ID's. Must've done some pattern work as never this strong
 in the past. (DS-DE)
 KRAD MN E. GRAND FOLKS - 2/14 1900 weak w/ WAKR w/CW mx, ID then
 gone. (JP-ON)
 WHPY NC CLAYTON - 1/16 1800 fair o/uWJSO during aurora w/s/off by
 female. (JP-ON)
 WDBL TN SPRINGFIELD - 1/16 1830 weak in mess w/s/off w/mention of
 Middle Tenn. Enterprises. (JP-ON)
 1600 WJNJ FL ATLANTIC BEACH - 2/7 1740-1750 surprise w/Lost & Found thingle
 then wx for Jacksonville area, weak w/CHNR (JP-ON)
 WXVI AL MONTGOMERY - 2/12 1819 many mentions of M'garry, wx, ID (EB)
 WNST WV MILTON - 2/28 1800 good w/ID o/crowd. (EB-PA)
 WKXQ NC REDSVILLE - 2/8 1820 xint w/state wx. (EB-PA)
 CHNR ON SIMCOE - 2/8 1818 fair w/wx, complaining of no snow. (EB-PA)
 WAYC PA BEDFORD - 2/23 1746 w/"Music Radio" ID's, "That's all folks"
 s/off, xint signal. (EB-PA)

1600 WNEU WV WHEELING - 2/10 1801 xint w/"The best in entertainment", ID
 then off, no SSB. (EB-PA) 3/9 1820 w/wx and "16th caller"
 contest. (GW-PA).
MIDNIGHT MADNESS!
 540 CBK SK WATROUS - 3/5 0053 tentative based on CBC net. stuff heard
 on CBE earlier. Fair signal. (WPT-DC)
 WGTO FL CYPRESS GARDENS - 3/10 0143 super loud on ET w/CW mx, jx (DS)
 560 WIS SC COLUMBIA - 3/10 0028 fair to good w/CW mx. (DB-NY)
 WQAM FL MIAMI - 2/18 0144 w/pop mx, PSA, ID. (GM-MD)
 570 WKBN OH YOUNGSTOWN - 2/18 0153 modern cx mx, ID. WGSMS off. (GM-MD)
 580 WCHS WV CHARLESTON - 2/18 0157 pop mx, SID. (GM-MD)
 WHP PA HARRISBURG - 3/10 0229 not noted this AM, left a loud WCHS.
 Usually off SM. (DS-DE)
 600 WICC CT BRIDGEPORT - 3/9 0055 noted w/ID, mentions of Bridgeport,
 weak. (GW-PA) Try them during the day, George. (DS)
 KSJB ND JAMESTOWN - 3/9 0201 in well w/nx. (JB-NY)
 610 WIP PA PHILADELPHIA - 3/10 0145 noted on PoP this AM w/TT/OC, ID
 at 0200 mentioned off til 0500. (DS-DE) 3/10 off this
 MM but noted 0410 "returning to the air after brief period
 of maintenance." (RA-MA)
610 WIP WDAF MO KANSAS CITY - 3/10 0150-0205 noted w/CW mx thru WIP OC/TT,
 "61 Country." #5 on 610 here. (DS-DE)
 620 WTVN OH COLUMBUS - 3/10 0207 noted w/Top 40/oldies in WDAF fade. (DS)
 WTMJ WI MILWAUKEE - 3/10 0242 noted w/promo o/WHEW, first time in
 years. (DS-DE)
 630 CFCY PEI CHARLOTTETOWN - 3/9 0136 fair o/u UNID station, managed to
 catch ID "63-CFCY." (SDM-MA)
 740 KRMG OK TULSA - 3/10 0214 ID noted at tune in, then s/off. (DS-DE)
 3/10 0324 ET w/ID then mx. (DB-NY)
 760 WJR MI DETROIT - 2/23 0305+ noted w/ET/TT/OC, new Sat. AM SPT (JS)
 790 CKSO OH SUDBURY - 3/11 0150-0210 noted w/pop mx, ID then nx on hour.
 (NZ-NE). This guy is a real pest anymore here. (DS)
 810 CJVA NB CARAQUET - 1/11 0600-0630 strong w/nx/sports, cw mx and PFC
 folk mx. (JP-ON)
 850 KOA CO DENVER - 3/10 0200 local like signal, o/WJW ET. (JWB-PA)
 3/10 0400 good w/ID then talk. (DB-NY)
 WHDH MA BOSTON - 2/4 0301 very strong o/KOA/CKVL/WKIX mess w/ET
 while looking for the KGOE TEST. (JP-ON)
 910 WRNL VA RICHMOND - 3/9 0540 alone w/Top 40/oldies, WSBA off. (DS-DE)
 WORD SC SPARTANBURG - 2/17 0312 Noted w/Top 30 CW hits, promo for
 high school contest. (EB-PA)
 WLAS NC JACKSONVILLE - 3/3 0300 super loud w/ID, into A-P nx, then
 CW mx. (JS-OH)
 920 WMEL FL MELBOURNE - 2/17 0335 xint w/ID, time check & request. (EB-PA)
 930 WJAX FL JACKSONVILLE - 2/17 0600 weak o/u WBNW w/s/on w/ISSB. Log
 sez NSP. (JP-ON)
 940 KVSH NE VALENTINE - 3/10 0130 ET w/TT, ID & s/off. Maybe a switch
 to a 2nd MM f/c, heard in Jan & Feb. 0115-0130 (JS-OH)
 950 WIBX NY UTICA - 3/3 0152-0156 noted on late w/Big Band mx, sked
 change? (RA-MA)
 WPEN PA PHILADELPHIA - 3/17 0135 noted off this AM, WLOF left. (DS)
 970 WMAV IL SPRINGFIELD - 1/18 0310 fair w/WWSW/XEJ w/CW mx, PSA's,
 "Country 97" ID's. (JP-ON)
 1000 KOMO WA SEATTLE - 3/3 0440 ET/TT, clear ID 0500 then more TT, fight-
 ing WVI SSB & s/on at 0458. WVI 1st time since '68 (JS)
 1010 KSMN IA MASON CITY - 2/29 0205-0210 ET w/TT & one ID noted. (NZ-NE)
 1060 CJRP PQ QUEBEC - 3/15 0552 noted way atop KYW w/FF talk. (DS-DE)
 1070 CHOK ON SARNIA - 3/6 0010 spot for local car painter then Big Mac
 spot, many ID's, fair signal. (EB-PA)
 1080 KRLD TX DALLAS - 3/17 0151 loud, equal to WTIC OC w/CW mx, Larry
 Scott show. (DS-DE)
 1100 WWVE OH CLEVELAND - 3/10 0120 noted off this AM in passing. (JS-OH)
 1150 WGOW TN CHATTANOOGA - 2/17 0350 xint w/ID, James Taylor record (EB)
 1190 WOWO IN FORT WAYNE - 3/13 noted s/off 0206 w/SSB, to return 0500.
 Mentioned on 3/14 that off the past week and a half for
 xmitter work. (DS-DE)
 CHTN PEI CHARLOTTETOWN - (No date-DS) 0151 noted w/female DJ, Top 40
 (SDM-MA) 3/10 0215 first time this season, great signal. (JWB)
 1210 WCAU PA PHILADELPHIA - noted off both MM 2/25 & 3/3 (RA-MA, WPT-DC, DS)
 1240 KMCL ID McCall - 3/3 0600 very loud rebroadcasting audio from local
 WWB. (JS-OH) Is this a new network or something? (DS)
 KQEN ID ROSENBERG - 3/10 0600 super loud rebroadcasting audio from
 WWB. (JS) Last time I heard them, they were running WSNJ (DS)
 1250 WCHO OH WASHINGTON COURT HOUSE - 2/16 0645 weak w/WTAE, caught end
 of wx then McR. (JP-ON)

1270 CJTN ON TRENTON - 1/25 0130-0200+ excellent w/CKO Maple Leaf Hockey, w/WSPR, WXYZ nulled. (JF-ON)

KNWC SD SIOUX FALLS - 3/11 noted on ET 0124-0127 w/OC,TT, ID. (NZ-NE)

1280 WGSO LA NEW ORLEANS - 2/10 0319 noted w/tele-talk, many ID's (EB-PA)

WKST PA NEW CASTLE - 2/10 0328 w/American Top 40, u/WGSO (EB-PA)

WABK ME GARDINER - 3/9 0115 noted w/ad for Judy Collins concert at Augusta Civic Center, 1st time here. (GW-PA). Nice! (DS)

1320 WKTQ PA PITTSBURGH - 3/10 0045 fair to poor w/rr. (SDM-MA)

1330 WFBC SC GREENVILLE - 3/9 0106 wx report w/Jim Jefferies, then contest promo, better than usual. (GW-PA)

WFIN OH FINDLAY - 2/16 0602 most wanted, strong w/s/on w/ISSB then mention of 0 & ed by Findlay Publishing Co. (JF-ON)

1350 KCAR TX CLARKSVILLE - 2/16 0658 strong w/s/on w/ISSB, mention of PSA power, KCAR, Inc., o/WSLR. (JF-ON)

WNIS VA PORTSMOUTH - 3/3 0047 in well w/talk show about foot of snow area just rec'd (JB-NY)

1360 CJVL PQ STE-MARIE-DE-BEAUCE - 3/10 0128-0206 good at times in WDRG null & UNID TT w/Pop mx in EE & FF, male annr speaking in FF, ID before nx at 0200 (RA-MA)

UNID 3/10 0135-0155 OC/TT during CJVL reception, ID at 0154 1/2 w/call letters & location only, unreadable. Sounded like WFMW or WLAW, any ideas? (RA-MA)

WDRG CT HARTFORD - 3/4 0054 Xlnt Top 40 mx w/AM/FM ID's. (EB-PA)

1370 WSAY NY ROCHESTER - 3/6 0030 Rochester wx, EZL mx, o/others (EB-PA)

WFBA NH MANCHESTER - 3/1 0037 rr mx, ID, PSA. (GM-MD)

KAPB LA MARKSVILLE - 2/16 0700 very weak w/s/on w/ISSB, mention of Avoyelles Broadcasting Co. (JF-ON)

CJWW SK SASKATOON - 3/3 0142-0200 on top w/CW mx, spots. Seems to have changed formats from MoR listed in NRC Log. (NZ-NE)

UNID 3/3 0100-0430+ ET w/TT, no ID's at legal times, smashing WSPD. (JS-OH)

1380 KZUL AZ PARKER - 3/1 very weak TT noted on/off at right times, but no ID's, tentative. (JS-OH)

UNID 3/17 0230 somebody very strong w/religious mx o/u WBNX while sitting for WMLP DX which didn't show, local WAMS nulled (DS)

1390 WLAN PA LANCASTER - 3/3 0122-0128 weak u/WFBL w/ID's, mx, promos (RA)

WFBL NY SYRACUSE - 3/4 0100 Top 40 mx, ID o/WLAN. (EB-PA)

WEAM VA ARLINGTON - 3/3 0142-0149+ ET w/ID/OC/BBD mx. (WPT-DC)

1430 WNJR NJ NEWARK - 2/22 0127 noted w/tele-talk, ID then Mutual nx, fair (EB-PA) 3/10 0115-0132 strong w/TT, ID at end (JWB-PA)

UNID 3/10 0200-0430+ loud o/CKFH/WIRE w/TT, one ID given during only fade. Tape replay sounds like WLSA but nothing listed, looping E/W. Another 2 1/2 hours wasted, @#&***! (JS-OH)

UNID 3/7 0112-0140 ET w/non stop '30's big band stuff, vocals, etc. ID at end sounded like WIKS. (DS-DE)

1450 WMYB SC MYRTLE BEACH - 2/23 0325 w/beautiful ID atop all then gone(JS)

WCTC NJ NEW BRUNSWICK - 3/3 0106 on top of the mess w/s/off SSB (JB)

1490 WDXB TN CHATTANOOGA - 2/17 0228 xint w/CW mx, many ID's, nx. (EB-PA)

WWDE VA HAMPTON - 3/3 0102 fair/good atop pile w/instr. MoR mx, then nx w/mention of blizzard. (WPT-DC)

WFAD VT MIDDLEBURY - 3/8 0600 while trying for UNID s/on, popped atop w/ID then CBS nx & gone. (DS-DE)

1500 UNID 3/17 0250-0330+ somebody here playing non-stop religious vocals, audio somewhat distorted, w/no ID's heard. Looped E/W, way atop WCZY at 0300. (DS-DE)

1510 CJRS PQ SHERBROOKE - 3/3 0044 noted w/FF talk, male annr, fair o/WLAC. (WPT-DC)

1530 WTTI GA DALTON - 3/10 0215+ very loud on ET w/rr, used to test every MM a few years back. (JS-OH) Like WMOO does now-hi! (DS)

1540 WGRK KY GREENSBURG - 2/4 0133 fair o/u WPTR w/ET/TT on new freq., ex-1550. Don't know if fulltime yet. (JF-ON)

1550 WTYN NC TRYON - 3/9 0558 s/on w/prayer, mention of 500 watts, wiped out by CBE at 0559. (DS-DE)

WMOO AL MOBILE - 2/27 0120 ET w/ID & Gospel mx. (JS-OH) New policy: we'll list them when they're NOT on, figure them on every MM, or at least it seems that way-hi! (DS)

WBFJ NC WINSTON-SALEM - 3/3 0315-0335+ loud but fadey w/ET/TT/mx, several beautiful ID's, ex-WPGD. (JS-OH)

KQWB ND W. FARGO - 3/1 0315 unusually good w/Top 40, also gives ID's for FM "Stereo Z-98" (JS-OH) That's unusual! (DS)

1560 WPAD KY PADUCAH - 3/10 0108 s/off w/SSB, good signal. (MK-MI)

KKAA SD ABERDEEN - 0108-0127 3/10 believe s/off mixing w/WPAD, then ET, alone. (MK-MI)

KPMC CA BAKERSFIELD - 3/10 0307 s/off noted w/SSB, poor signal, in noise level. (MK-MI)

1570 WLQB MI FLINT - 1/12 0600 weak w/CFOR/CHLO w/s/on, mention of 750 watts (?-DS) and 178 watt PSA, ex-WCZN. (JF-ON)

CFOR ON ORILLA - 3/10 0011 fair u/CKLM w/s/off w/GSQ (SDM-MA)

1580 KLOU LA LAKE CHARLES - 3/10 0220 loud again w/AT-40 u/CBJ TT (DS)

UNID 3/3 0310-0328 very loud ET/TT then into some automated CW mx, off w/no ID. Looped S, format fit WSRF (JS-OH) It was probably them. (DS)

CBJ PQ CHICOUTIMI - 3/1, 3/3 more of their almost daily ET/TT/OC which goes AN. Wonder what they're up to? (JS-OH)

WBBR SC TRAVELLERS REST - 3/1 0205-0223 clear on ET w/TT/OC, one ID noted. V/f rec'd. (NZ-NE)

1590 WIXX WI NEW RICHMOND - 3/5 0245-0258 ET fair to good w/rock mx, s/off for testing, etc. (NZ-NE)

WETT MD OCEAN CITY - 3/1 0250-0310+ all over WAKR w/rock/disco. Calls self "16-Wet". (JS-OH) 3/10 0024 fair-good, etc. w/ID noted. (SDM-MA)

UNID 3/7 0013-0015 TT w/ID at end, caught "complete's radiation tests.we'll return at 6 AM." Sounded like an f/c. (DS-DE)

WE'VE BEEN BROUGHT TO YOU, THIS TIME, BY:

- | | | |
|--------|---|---------------------------|
| JF-ON | Jeff Falconer, Clinton, Ont. | Collins 51-J-4, SM2 |
| DB-NY | Dan Bartek, Rochester, NY | R-390A, SM2 |
| WPT-DC | William P. Townshend, Wash., DC | TRF |
| WPT-MD | Bill Townshend at J. Millers, GTG., Balt. | |
| EM-FL | Ed Mitkus, Tampa, FL | TRF, ICF-5900, SM2 |
| MK-MI | Mike Knitter, Cambridge,WI.(thought it was Mich., sorry!) | DX-150B, DX-300, LW |
| | | 1939 RCA 86T, GE TRF, LW |
| JB-NY | Jerry Bond, Rochester, NY | TRF |
| SRS-IN | Steve Shaffer, Hammond, IN | TRF |
| GM-MD | Greg Monti, Silver Spring, MD | TRF |
| GM-TX | Greg Monti, Richardson, TX | TRF |
| MP-MI | Martin Foltz, Lansing, MI | |
| GW-PA | George Walton, Easton, PA | RF 2200, Sanserino loop |
| SDM-MA | Steven D. Miller, Boston, MA | RF-2200 |
| NZ-NE | Neil Zank, Lincoln, NE | HQ-180A, TRF |
| JWB-PA | Joe Brauner, Punxsutawney, PA | A2515, LW, loop |
| RA-MA | Ray Arruda, Acushnet, MA | SX-122, 12 oz. beverage |
| SM-MA | Stan Morss, Bradford, MA | HQ-150, HQ-180A, SM 1 & 2 |
| ERC-MA | Ernest R. Cooper, Provincetown, MA | R-390A, HQ-180, SM2, Loop |
| EB-PA | Eric Breon, Middletown, PA | TRF, BCR 101, LW |
| WH-CO | Wayne Heinen, Colorado Springs, CO | RBB4, MW1, LW, Loop |
| DS-DE | Dave Schmidt, New Castle, DE | HQ-180A, TRF, Loop |

Anybody have any station logo's from envelopes that they'd like to part with? We can use them here to help decorate the column. This should just about catch up on everyone's loggings from the change over of editors, so from now on anything over 5 weeks old won't be used, we'd like to keep things up to date if possible. After all, this column can't look like one of PAUL MOUNT'S Musings-hi! Thanks to DAN BARTEK who phoned in his items. For those interested, I work a very strange schedule for CONRAIL in Wilmington, which goes something like Wed. 11p-7am, Thurs. & Fri. 3p-11p, Sat. & Sun. 7a-3p with the WCHE work on my days off. So, methinks it'd be better to stick with the mail unless you have some real hot info to phone in. Again, thanks to all who sent in their items this week!

73's & Good DX!

WRTH INFO

WRTH 1980 is available for immediate shipment at \$15 postpaid U.S./Canada. Add \$1 for First Class. A varying supply of 1977, 1978, and 1979 WRTHs is available, same price. Any 2 diff., \$28; any 3, \$39; all 4, \$48. Communications World 1979 and 1980 and several other current and out-of-print items by Davis Pub., Communications Handbook 1978 (Ziff-Davis), and other radio & computer mags & books are available near wholesale cost as a non-profit service to fellow club members. A complete list is available for a SASE. WRTH orders should be accompanied by check or money order (IMO only in Canada) payable to Donald Erickson, 6059 Essex St., Riverside, CA 92504. 714-687-5910 7PM-midnight & weekends.

INTERNATIONAL DX DIGEST

CHUCK HUTTON
P.O. BOX 2087
DECATUR, GA 30030
(404) 633-1198
BEFORE 2300 ELT

Times are GMT. For ELT subtract 5 hours. Deadlines are usually Monday.

To answer a question from someone, when using GMT for column reports, one does indeed use the GMT date also. I.e. if you sit down to DX at 7:30 PM 1/1 your time after watching Walter Cronkite, your IDXD report should read 0030 1/2. OK?

Foist, a Radio TV Marocaine schedule current as of 1/80, via Rick Carr:

	KHZ	PGM	HOURS	
Azilil	209	A	5-0	
Rabat-Temara	819	A	5-0	
	1026	B	6-1	
	1296	C	6-0	
Sebaa-Aioun	612	A/R	5-0	
	1044	B	6-1	
	702	C	6-0	
Oujda	594	B	6-1	
	828	A/R	6-0	
Quersazate	1118	A	5-0	(5-1=0500-0100, 6-0=0600-0000)
Rachidia	864	A	5-1	
Marrakech	972	A/R	6-1	
	1152	B	6-0	
	1593	C	5-0	
Tetouan	1053	A	5-0	
Laayounne	657	A/R	6-1	
Safi	1026	A	5-1	
	1323	B	6-1	
Agadir	936	A/R	5-0	
	1197	C/B	6-0	
Casablanca	1080	A/R	5-1	
	1188	B	6-1	
	1485	C	6-0	
Tanger	1116	A	5-1	
	1017	B	6-1	
	1233	R	6-1	
Sidibennour	540	A	5-3	

Verie de Senor Ernesto Cooper: 770 Panama HOL47 Chitre v/l from "Servicio Oficial del Estado Panameno, DG-No. 85, Panama 5, Panama, v/s Lorenzo E. Sanchez-Galan, Director General de Servicio Nacional de Radiodifusion. 531 Switzerland v/q, v/s D.G. Chisholm, card has Alpine scene

Ray Crawford, Invercargill NZ reports the following: 3ZE Ashburton commenced on 12/1/79, 24 hrs w/commercial pgms daytime and Tonight Show w/ Commercial Network 0700-1200 7 days a week. Relays RNZ National Pgm 1200-1700. (No frequency mentioned Ray, but if memory serves me correctly this is on 873. Correct? CH) 4EB Brisbane on 1485 started 12/1. Has ethnic pgms. S/off at 1400, s/on unknown. Power 100 watts. 2ST on 999 in Nowra has a relay on 1215, both 24 hours. 3EA Melbourne is now using a 5 kw xmtr, noted testing the end of November. 2EA on 801 in Sydney has a repeater on 1485 in Wollongong with 100 watts and also in Newcastle on 1584 with 100 watts; both have ethnic pgms 2000-1400. Ray's recent veries include Cuba 1430 with letter and LV de Cuba full detail card. JOIK and JOIB with cyclostyled letters from the stations. CBS Taiwan 750 and 1200 with what would have to be the nicest QSL cards-large blue diploma-sized cards with gold lettering.

A note from Bengt Ericson, Vaxjo Sweden: "The 719 logging in DX News #8 is interesting. WRTH-80 lists Canary Islands, Nigeria 50 kw, Tanzania 50 kw. EBU frequency list of December shows only Azurara off the 720 freq. Azurara is the only PP stn here. Nigeria closes around 2305-2315 GMT. Ivory Coast is not included in their latest publication for 720

Radio Shack is closing out both the DX-160 and DX-300. Close out price for the DX-160 is about \$119 and for the DX-300 about \$245. Two new models will be coming out. The DX-200 (\$229) may be in stores by the time this appears. A DX-302, priced at \$399, will be out "shortly". Also Chuck tells us the new version of the TRF is in Radio Shack warehouses and in limited Canadian and US stores. He tried one and it works "roughly" like the old TRF but has only 1 sliding control.

KHz. I put a guess for Nigeria. That is Owerri". (And a reasonable guess indeed. But it is so hard to be sure of what is really on the air and what is not, particularly for Africa and Latin America. The lists (including EBU) are not so good sometimes because they are not aware of everything- only some things. Often we DX'ers are able to beat them at their own game-CH)

Veries from Hank Wilkinson: 891 and 1035 Radio Thailand, Bangkok, v/s Ramyong Sakorn Pan, Chief, External Services. 1206 China, no location specified, v/s Ma Ruiliu, English Section, Radio Peking. 1206 DWWA, Quezon, Philippines, v/s Johnny Alabazo, Radio Engineering Dep't. 1224 TIPJ Heredia, Costa Rica, v/s Emilio Piedro Jimenez, Gerente Propietario. Address: Apartado 76. 1206 (HJW's favorite freq-CH) 2GR Grafton, Australia. 1044 Radio Peking for 4/14/79 report. 918 3YZ Greyouth NZ for 9/22/79 report. 963 3YC Christchurch NZ for 9/26/79 report. 891 Radio Thailand, Bangkok for 9/14/79 report. 882 JOJK Shizuoka w/NHK card. 684 ZKP Kempsey Australia w/ABC card. 567 JOIK Sapporo w/NHK card. HLKX 567 w/personal letter verie. 756 JOJK Kumamoto w/NHK card. 1000 HJAR LV de Cartagena verie from Orlando Figueroa S., Director in 3 weeks for 1/14 report. 1233 ZNC Newcastle ABC verie card in 2 weeks for 1/23 report. 927 ZZA Palmerston NZ verie letter and RNZ verie card in 2 weeks for 1/23 report, v/m Michael Lawrence, Supervising Technician.

In reference to some of the speedy replies from some of the above stations Hank says he has gone to enclosing a 3X5 photo of his den and equipment plus sending mint air mail stamps instead of IRC's. He thinks this is really the way to go. I agree, particularly with the stamps; IRC's are a lot of extra trouble and some times I know that I am tempted to just throw them away instead of going to the PO to redeem them-CH)

World DX News from Arctic Radio Club: Colombia RCN broadcasts "El Mundo de las Noticias" Mon-Fri 0430-0500 according to "Candlejas". 1380 HJLM R. Rumbo ex R. Indistrial. 1460 HJNA LV de la Amistad heard here by Scandinavian DX'ers. Most likely has changed frqs with HJZU R. Narino, who is now on 1340. Venezuela news from Radio Rumbos is relayed on many stations, including 600 YVQB R. Sucre, 740 YVNC R. Maracaibo, 940 YVNW R. Punto Fijo, 980 YVQM LV de El Tigre, 1080 R. Barcelona, 1100 YVSW R. Angostura, 1110 YVQT R. Carupano, 1250 YVPZ R. Puerto Ordaz, and of course 570 YVLX and 670 YVLL, both R. Rumbos. England 1458 BBC R. Manchester now 5 kw. USSR in the Estonian radio magazine "Radiolent" the Estonian stations are as listed in WRTH 80 except 612 is listed as Tallinn. Must be many kw as this stn is a local in Stockholm. Wallis et Futuna (new MW country as mentioned in previous issues of IDXD-CH) operates on 1090 1900-1100 with 1 kw from Futuna; 1188 is from Wallis with 1 kw and same sked. Address: FR3, Pointe Matalaa, Mata Utu, Wallis et Futuna. (Has been heard in New Zealand but so far no definite receptions in the US-CH) South Yemen Aden's Information Minister said 11/23 a 400 kw MW xmtr had been inaugurated. This must be the 1188 xmtr. Yugoslavia Radio Zagreb's night service is now aired on 1125 and 1134 from 0005-0500 except Thursday/Friday night. Radio Osijek is on the air on 1557 from 1400-1730 (Mon-Sat) and 0900-1400 (Sun). Transmissions are in Serbo-Croatian and Hungarian 1715-1730 (Mon-Sat) and 1330-1400 (Sun). Power 20 kw. Malta 756 is no longer airing the EE pgm. It is not clear whether they have left the freq or not. Saudi Arabia 618 Jeddah now in full operation 0400-2200, ditto Jeddah 1512. 1521 Duba now has domestic service 0400-0600 and 1500-2400. Spain EAJ51 R. Manresa is now 5 kw. (And has been wandering around 1578-CH) Transkei the new Capital Radio on 603 has been tentatively logged in the UK by Barry Davies. Some information reaching Sweden says that they are using 604 nights and 603 days! (Seems extremely unlikely! Why would they do that? CH) Sked is currently 0500-2400, but soon to increase to 20 hours a day. (As mentioned a few issues ago in IDXD, lightning struck their MW xmtr the first day of operation. However, that has been repaired. Unfortunately (via information from Pete Taylor, Richard Ginbey, et al) the signal from their 500 kw xmtr is so poor that they are not able to reach all of their target audience. The situation is so extreme that engineers have been flown in from the US to analyze the situation and find out why the signal is so poor. When this is resolved, perhaps NA DX'ers will have something of a chance to hear and log SA-CH) West Germany 756 is using 200 kw in many lists but the actual power is 400 kw according to technicians at the site. 828 Hanover is still 20 kw, not 40 as reported earlier. 936 Bremen is using only 10 kw at night. 972 Hamburg is now 450 kw. Hungary Potofi Radio has plans to go 24 hours. They plan to move the 300 kw xmtr on 539 to 1341 to accomplish this. Holland 1008 the superpower Flevoland xmtr is on the air from 0900 s/on. The night pgm is on this freq now instead of 675. Power 600 kw.

Iraq 603-a new xmtr is on the air from al Hamadaniyah carrying Voice of the Masses. 1197 Arbil is now carrying the Domestic Service 0330-0030 with an increased power. Some sources say 300 kw. Ireland RTE will not use its LW assignment of 254 before 1981 or 1982. Kenya the following xmtrs are ready for commissioning: 981 or 1044 Voi w/100 kw, and 702, 900 or 1107 Meru w/100 kw. Libya a new xmtr is on the air on 711. Has been heard around 0730 in Czechoslovakia; perhaps a Libyan noted recently on 701 that is drifting. Bulgaria is now using 711, ex 700. The 981 Horizont xmtr isn't being heard. China anyone wishing to place an advertisement in the Chinese Radio One and Two is asked to contact Chinese Broadcasting Service Company, Broadcasting Building, outside Fuxing Gate, Peking. Phone is 868581 ext. 2522. (Any takers? You can always call on Sunday rates when it's Monday morning business hours there, hi-CH) Cyprus R. Bayrak has bought new crystals for 1095 and 1503. Egypt 774 and 1575 are the freqs for the Middle East Program (commercial) now from 1300-2400. Gabon Africa Number One has been reported by a German DX'er at 0015 on 11/13. ID's were heard in FF/EE/II/GG with the usual address in Gabon. ("The usual address" is the address for the new Africa Number One, which came on the air late last year with several powerful SW xmtrs. Perhaps they have a powerful MW xmtr testing, which should make Gabon a lot easier than trying for 1554-CH) Wallis Islands S/off is at 1100 with La Marsellaise. News in vernaculars at 0815. Portugal a bill allowing private broadcasting to return under government control has been vetoed by the President. Solomon Islands 1386 is the planned freq for SIBC's new xmtr, location Kijakira, expected on the air in 1980. Another station planned is Craclosa Bay with 2 kw in 1981. Spain 1359 R. Peninsular de Barcelona ex 1539. Morocco Moroccan Radio plans to have Radio Tetuan back on the air before June or July 1980. South Korea 558 Pohang 250 kw w/EE pgm 1200-1230 and 0030-0100. 603 w/500 kw is Namyang w/2nd pgm. 711 500 kw is Sorae w/500 kw. 756 100 kw is Suweon w/1st pgm, ex HLSR prog. 918 50 kw is Yeoncheon w/1st pgm/972 1500 kw w/Education Pgm is Dangjin w/Social Education Program to North Korea. 1134 250 kw is Gimpo w/1st pgm. 1143 w/250 kw is Jeju w/2nd pgm. 1170 500 kw is Gimje w/Education Pgm 2 to Japan and South Korea, ex 972 KHz; JJ 1200-1430, EE 1100-1130 and CC 1130-1200. 1269 10 kw is Yangju w/1st pgm. 1341 10 kw is Gimpo w/1st pgm. 1008 w/domestic pgm is Sogcho 50 kw, ex 1170. 1st pgm is 2100-1900 in KK. 2nd pgm is 0600-0100 in KK and EE. Social Education 1 is 0600-0200 in KK. Social Education 2 is 1100-0600 in KK, JJ, EE, and CC. Kuwait 540 and 1134 carry 1st pgm in AA from 0325-2310. 1341 2nd pgm and Foreign Language Service from 0300-2200 sked is: 0300-0600 Koran, 0600-0900 EE, 0900-1100 Persian, 1100-1700 2nd pgm in AA, 1700-1900 Urdu, 1900-2200 EE. Micronesia 940 KSAI Saipan here, nominal 936. 1050 WSZE Saipan here nominal 1053, 1602 WSZC Truk here ex 1300. Papua New Guinea 1593 R. West Sepik opened w/10 kw on 12/4. China 873 Gansu People's Broadcasting Station announced use of this freq. 621/900 Heilongjiang PBS in Harbin announced a sked of 2040-0630 and 0630-1530. On Thursdays the First Pgm ends at 0510. Pgm's are CC except KK from 0300-0400. 738/1530 Jilin PBS operates here 2050-0530 and 0850-1505. 891/1287 Ningxia PBS sked is 2210-0150 and 0350-0600 and 0920-1535. Colombia 1390 HJFY R. Avenida ex 1370. Syria the Western/Turkish pgm from Damascus is now heard on 872, 1070, 1314, and 1484 as follows: 0900 FF, 1000 EE, 1100-1300 Western music announced in AA/EE/FF, 1400-1500 Turkish, 2000 RR, 2030 GG, 2100 FF and 2200-2300 EE. Damascus also broadcasts in Hebrew to Israel 0600-0730 and 1500-1630 on 782. This service also includes other languages from 0715-0725 as follows: Bulgarian (Sun), French (Mon/Wed), SS (Tues), AA (Thur), GG(Fri), and RR(Sat). Nigeria skeds: 621 Anambra BC, Enugu 0530-0005, 638 Bendel BC, Benin 0530-0005, 711 Radio Benue, Makurdi 0530-0005. 721 Imo BC Owerri 0500-2400. 729 Kano State BC, Kano 0530-0005. 756 Radio Oye, Ibadan 0400-0100. 809 Radio Kwara, Ilorin 0530-0005. 900 Ogun BC Service, Abeokuta 0500-0100. 945 Ogun BC Service, Abeokuta 0500-0100. 1017 Congo BC, Yola 0530-0005. 1313 Plateau BC, Jos 0530-0005. 1367 Cross River Radio, Wabarar 0530-0005. Federal Radio Corporation Stations heard: 593 Kaduna 0530-0005, 827 Enugu 0530-0005 ex 621, 1088 Lagos 0530-0005 not 918. Spain the following RNE stations will go on the air soon: 639 Almeria 20 kw, 774 Orense 20 kw, 855 Pontevedra 20 kw. 1467 EAJ38 R. Gerona ex 1485. 1539 R. Huesca here ex 1602. Colombia 1530 HJDN LV del Cine ex Radio Cine. Uruguay 850 CX14 R. El Espectador now 60 kw. Dominican Republic 1300 HIFV Radio Chihuahita is new in Chihuahita. Power is 500 watts. Luxembourg reworked its antenna system recently, ending up with a 4 mast system-one mast less than before. This means slightly less gain towards the northeast. During darkness they are $\frac{1}{2}$ power (600 kw) plus a 2 mast $\frac{1}{2}$ wave aerial system to northwest thus giving 6 dB less gain to the southeast as required by the Geneva Plan.

Monaco JJ has been heard on 1466 from 0030-0045, probably not regular. Morocco Sidi Bennour has been reported running the full 600 kw but European DX'ers doubt that power is correct. Oujda is back on its nominal frequency of 594. Spain EAJ1 R. Barcelona now broadcasts 24 hours Mon-Sat. Sudan Soba 960 is now using the full 200 kw. Thailand 927 xmtr is used from 0030-1550 with EE 0030-0300 and 1200-1255.

Via Distance: Argentina LRA13 560 now 25/6 kw. LRA4 690 now 25/5 kw. LS1 710 now 50/10 kw. LRA7 750 now 100/10 kw. LR6 790 now 50/10 kw. LRA8 820 now 25/5 kw. LR3 950 now 90/30 kw. LRA15 1030 now 50/10 kw. Brazil ZYH57 640 is on 640 with 25 kw 0900-0400. ZYK276 720 now 100 kw. ZYJ738 now on 620 ex 1580 with 50 kw. ZYK687 840 now 50 kw. ZYK522 R. Record on 1000 is now 200 kw. ZYK693 on 1040 is now 200 kw. ZYK694 R. Globo 1100 now 150 kw. ZYK274 1120 is now 50 kw. ZYK520 1200 now 50/25 kw. ZYJ458 1220 R. Globo now 150 kw. United Arab Emirates current skeds: 728 Abu Dhabi 1500 kw 0330-2230 in AA. 809 Abu Dhabi 50 kw 0330-0700 AA, 1000-1300 EE, 1300-1400 FF, 1400-1500 Urdu. 1575 Sharjah 50 kw 0330-2230 AA. (other skeds eliminated-unlikely to be heard-CH) Mexico KEABC 770 says it will soon start EE and SS on SW and MW. Gambia R. Syd 909 broadcasts mainly in EE but GG, Swedish, and vernaculars are also carried.

From New Zealand Radio DX League: Barbados 900 sent this revised sked: Mon-Fri s/on 0928, s/off 0400. Sat s/on 0400 and then 24 hour program until 0400. Sun s/on 0400 with Late Date for 2 hours to 0600 s/off. Then back at 0928 to 0400 s/off. (A very strange sked! CH) Mongolia Ulan Bator domestic service 2200-1500 on 882 and 827 w/news from 1400-1420.

Medium Wave News information: Dominica 595 is using only 1 kw due to hurricane damage. St. Lucia 840 was also badly damaged by hurricanes. As of 10/18/79 it was expected to be off the air for many months. United Arab Emirates reported heard twice on 1482. (Can any of our European members tell us for sure whether they are on 1481 or 1482? CH)

Our first information from Vienna Medium Wave News: Malta address for reports to the Overseas Broadcasting Service of the Libyan Arab Jamahiriyyah via Malta is: PO Box 17, Hamrun, Malta. The sked for Tripoli via Malta 1557 with 600 kw is 0700-0800 AA, 1800-1855 R. Mediterranean, 2130-2330 AA. (But this does not seem to be correct as after Malta relays Deutsche Welle 0300-0400 they carry Libya-CH) Angola R. Nacional has closed 1367. Egypt: R. Cairo general pgms on MW are 819, 875, and 1197. Second Pgm 1061 sked 1630-2000. Foreign Lang Service 557 sked 0500-2200. People's Pgm 711 sked 1200-2300. Middle East Pgm 774 sked 1200-2300. Voice of the Arabs on 621, 711, 1107 sked unknown. Palestine Service is on 621 and 1107. Sudan Corner is on 711. Holy Qur'an stations are: 1161 and 1311, sk3d 0300-0900 and 1200-2100. Ivory Coast has finally moved from 1493 to 1494. Lesotho sked on 891 is 0400-2035. Mozambique the opening ten minutes of "The Voice of Zimbabwe" is relayed in the Maputo area on 1079 at 1800. Reunion FR3 St. Pierre 666 now 20 kw. 729 St. Andre now also 20 kw. Senegal Dakar 765 now 400 kw according to EBU. Sudan Omdurman is still on 764 KHz. Iran the following external service transmissions have been confirmed by BECMS: 0530-0830 1116, 612, 576 in AA. 1730-2030 557 in Kurdish. 1730-2130 1116 and 1080 in AA. 1116 is Bandar Lengeh with 125 kw; 1080 is Abadan with 600 kw; 612 is Qara-e-Shirim with 400 kw; 576 is Abadan with 600 kw; 557 is Qeslagh with 1000 kw. Israel IDF Yamit now on 1368, IDF Haifa on 1305. Japan correct address for JOAR 1053 is Chubu-Nippon Broadcasting Company, 7-28, Shinsakee Naku-Ku, Nagoya, Aichi 460, Japan. Mongolia Domestic Service-First Program is 2200-1500 on 209, 226, 827 and 882. External Service is 209 1330-1400 in RR on Mon and Fri; 227 0820-0850 CC on Mon, Fri; 827, 1330-1400 RR on Mon, Fri; 882 1330-1400 RR on Mon, Fri. Mexico 540 XE.. San Felipe, BCN new. 710 XEZC Rio Grande, Zac. ex 1450. 870 XEAGR 1/15 Acapulco new. 820 XEESC Escarcega, Camp. .75 new. 860 XE.. Pabellon Ags. .4 new. 920 XE.. Jesus Carrenza, Ver. 5 kw, new. 920 XE.. Yogope, Ver. 1 kw, new. 920 XE.. Tuxpan, Ver. 1 kw, new. 930 XEIH Fresnillo, Zac. ex 1400. 930 XELCM Lazaro Cardenas, Mich. .5 kw ex 920. 950 XECAA Calvillo, Ags. 1/1 ex 1020. 1130 XEMOS Los Mochis, Sin. .5 kw, new. 1190 XE.. Acayupan, Ver. 1 kw, new. 1200 XE.. Loreto BCS 5 kw new. 1200 XE.. Chilapan, Gro. 1 kw new. 1260 ZELTZ Loreto, Zac. .5 kw ex 1000. 1340 XEVSV Villa de Seria, Son. 1 kw new. 1360 XEVAL Ciudad Vales, SLP 5 kw new. 1370 XEMON Monterrey NL 10 kw new. 1370 XE.. Huayacotila .25 kw new. 1400 XEFS Izucar de Pue...(?CH) .25 kw new. 1430 XEYMA Acapulco 1 kw ex 1000. 1460 XE.. Caxaca Cax. 1 kw new. 1470 XE.. Tlancheinol, Hgo. .25 kw new. 1510 XEKI inactive; replaced by XEKI in Navajoa, Son. w/.5 kw. 1520 XEGAJ Guadalajara, Jal. 1 kw new. 1520 XE.. Tenosique, Tab. .25 kw new. XEGGP Morelia, Mich. .25 kw new. 1540 XE.. Villa Hermosa, Tab. 5 kw new. 1550 XEUUV Jalapa, Ver. 10 kw new. 1550 XEXB Jalapa, Ver.

is inactive. 1580 XEVAB Valle de Bravo .25 kw new. 1600 XEGEM Toluca 2 kw new. XE., SLP, SLP 1kw new. 1600 XE., El Higo, Ver. .25 kw new. Colombia 1280 LV del Rio Suarez is now 2.5 kw. R. Sutatenza's new address is Carrera 10 No. 19-64, Piso 20, Bogota. HJZV 1160 is now 10 kw.

And more information from MW Special Club of FRG: France France Inter is 24 hours on 164, 675, 1161, and Nice 1350. Sked is 0430-2100 on all 1071 outlets, Toulouse 1161, Ajaccio 1161, Nancy 1350, Tours 1485 and Toulon 1584. All France-Culture xmtrs sked 0428-2300 except Sunday s/oh 0600. (Toulouse 945 may s/off at 2200-this is in German and I can't make it all out-CH) Languages currently carried on France Culture from 0430-0600 are PP, AA, Turkish, Serbo-Croat, SS, II, Laotian, Cambodian, and Slovak.

Almost the end..... more Arctic information: Belgium BRT intends to begin broadcasts to England on MW sometime this year. Bulgaria Varna is using 981 with 150 kw. Egypt Cairo 4 is using 936, heard by EBU in England and Italy. Portugal the Third Program is now called Radio Commercial. Azores 1570 CSBB1 is still using this freq.

Says Glenn Hauser in March 1980 FRENDX: "There is nothing to prevent Radio Moscow from reaching a US AM band audience". Not a bad prediction; the 600 KHz xmtr is now carrying R. Moscow in Cuba!

More from Listener's Notebook in March FRENDX: Colombia R. Mira on 6015 was destroyed by the 12/12 earthquake. (And assumedly 1190 also-CH) Hawaii KAIM 870 is to go to 50 kw. El Salvador the YSKL net announced 7/21 that members of the "People's Revolutionary Army" had seized 21 radio stations temporarily. They used the opportunity to announce that their own station would begin broadcasting in the central departments of the country on 1600 (local time?? CH) between 1400 and 1600 KHz. Later the inaugural broadcast was heard on 1600 KHz; it does not have a fixed sked and does not broadcast every day. On 1/26 listeners were advised to tune in on Tuesdays or Fridays at 1830 or 2400.

Mike Worst was in Lima, Peru 12/27 to 1/20 and checked the MW dial. All stations are as per WRTH 79 except: 560 R. Programmas del Peru ex LV de Oriente. 930 R. Moderna ex R. Central. 985 Estacion X ex R. Impacto et al. 1060 R. Exitos ex R. Mil Sesenta. 1080 R. Nacional Mil Ochenta off the air. 1130 Radio de Futuro ex R. Selecta. 1470 R. Frecuencia ex R. Inca del Peru. Also, 1040 Onda Popular was having transmitter and financial trouble. Oddly enough, about half of the mx was US, usually in EE.

- 151 WEST GERMANY fair signal w/light orchestral mx 2312 3/1. (Cruser)
 164 FRANCE Allouis w/strong signal 2310 3/1. (Cruser)
 180 WEST GERMANY Saarlouis--male annr followed by male singer. Fair signal, some QRM 2259 3/1. (Cruser)
 200 ENGLAND Droitwich w/male and female comments of opera and excerpts from same--good signal. (Cruser) oops, 2250 3/1.
 209 MOROCCO fair signal with middle east mx, FF annr 2240 3/1. (Cruser)
 218 MONTE CARLO fair signal, mx and male FF annr 2240 3/1. (Cruser)
 227 POLAND fair signal, male singer and romantic type mx 2315 3/1.
 251 ALGERIA good signal, some QRM, FF and mx 2236 3/1. (Cruser, last 2)
 520 AUSTRIA audio finally strong enough to ID 2045 2/22, running // 585. (Littek)
 567 IRELAND Tullamore poor to fair w/cl mx, then EE talk and operatic male vocal 0638 3/9. (Connelly) Mostly poor signal w/soft EE vocal mx 0047-0105 3/9. Fair at 0130 w/song "White Bird". Audio received after about 20 nights of nothing but carrier here. Country #82. (Kazaross)
 576 UNID TA w/3 KHz SAH, soft light mx 0206. West Germany likely-but who is the SAH from? E. Germany maybe?? (Kazaross) Or Bulgaria.....CH
 585 TUNISIA Gafsa the probable source of AA male moaning mixing with two other stations 0440 3/9. (Connelly) Weak but ID'd by //630 which was strong 0022. (Littek)
 585 UNID a second Arab really kicking up a storm here, no ID because (a) Im not Arab, (b) no parallel found. 0025 2/25. (Littek)
 594 AUSTRALIA 3WV Horsham heard 3/9 from 1225 to 1230 with good mx. Male annr with "DU" EE accent. (Wilkinson)
 600 CUBA Radio Moscow very strong here, rebroadcast from SW. (Eisen- traeger) R. Moscow relay noted at 0220 3/9 w/North American Service //SW. Announcing freq as ".59 KHz". Powerful sig noted but badly sloppd by local WIP-610. (Eckman)

- 600 CUBA Radio Moscow's North American service, parallel 9490 and 9610 KHz heard at 0200-0219 2/27 and again at 0154-0205 2/28. Poor signal strength under KTBB/WREC/WMT QRM. Audio quality better than daytime 11865 relay. I assume this is to be a Cuban-based relay station. I have not heard the Voice of Cuba here yet. (Allen) (It is in the 0500-1100 GMT period-CH) Russian by radio heard 3/6 0123. This was Part 9 of this series. (Arbogast)
 603 FRANCE poor w/6bn by female at 0600, into nx by FF male 3/9. (Kaz)
 610 TRINIDAD I didn't get the slogan and/or calls, but I heard them s/off Tuesday AM 2/26 w/WIP off, at 0526 with prayer and an anthem. They gave sked as 0454-0128 AST. (Cooper) A sked change and a good one at that-CH
 612 IRELAND Athlone heard for the first time on this channel: poor w/pop mx, annr in EE who mentioned RTE, then Suzi Quatro song 0700-0702; fair w/Blondie mx then man in EE 0706 3/9. (Connelly)
 630 TUNISIA this one's quite strong lately. Wiped out 630 on wve of 2/24 and tonight 2/26, there's again Arab stuff all over the channel. I can't remember exactly but a PFM has these guys 100 Hz or so off channel high, so there's always a rumble on the channel. (Littek)
 639 CZECHOSLOVAKIA Liblice good, easily splittable from CBN; Slavic talk by man, bell, s/off w/anthem, then carrier went off 2257-2300 3/8. (Connelly)
 639 SPAIN synchronized outlets poor w/female SS vocal 0555 3/1. (Con)
 650 HAWAII KORL Honolulu with pop record and sung KORL ID 1351 3/3, with local-like signal. Only second time here this winter. (Stonebridge)
 657 NEW ZEALAND 2YC Wellington heard on 3/8 from 0909 to 0915 with classical music on violin. Heard again on 3/9 from 1051 to 1055 with similar mx. (Wilkinson)
 657 UNID instrumental mx briefly at good level 0503 3/9, annct by female in unid lang 0506, sounded more like GG than II or RR. Gone by 0509. Who dis? (Portzer) Dis probably Germany since: (1) you say it sounds like GG, (2) only Germany and Russia are on the air then, and (3) I never argue with reporters....hi....
 666 PORTUGAL Lisboa presumed source of fair carrier 0223 3/9, badly QRM'd by WNBC. (Eckman)
 675 NEW ZEALAND 3YA Christchurch with news items by male annr on 2/23 from 1203-1205. Very seldom heard here due to tremendous slop from KNBR. (Wilkinson)
 684 SPAIN fair in slop 0129 3/9. No Yugoslav noticed. (Kazaross) Noted at 0248 3/11 w/fair sig but no audio. Prominent, slow SAH noted also. (Eckman)
 693 ENGLAND Droitwich et al good w/big band mx, man in EE, then religious mx 0647 3/9. (Connelly) (was listening to this a few minutes ago, one of the few times this outlet has been good here in Atlanta-CH) A real surprise here with powerful sig 0232 3/9 w/man in British accented EE. Good thru rest of evening. (Eckman) Good w/mellow mx and EE annr 0040 3/9. This was the best from Britain tonight. (Kazaross) 3/9 was THE night, wasn't it?????CH
 693 UNID female talk 0457, mx 0459:30, male talk 0500 3/9 thru horrible KIRO-710 splatter. BBC? (Portzer) Si, si-CH
 702 AUSTRALIA 2BL Sydney very loud from 1158 to 1202 on 2/23 with piano selection, "ABC" and six pips at 1200. Followed by news items to 1202 and then mx. Playing "Blues Indigo" and other oldies on 3/9 from 1216 to 1224. Not as dependable as last February and March. (Wilkinson)
 702 MONTE CARLO second time these guys faded up for an ID 0523 2/25 and then quickly disappeared. Very handy. Pgm in II. (Littek)
 719 PORTUGAL Azurara good w/PP talk 2220 2/28. Xlnt w/male PP MoR vocal, easily splittable from WGN/CMGN 0620 3/2. (Connelly) Fair to good w/man in PP 2248 3/8. (Connelly) Very good w/sig strength equal w/WGN. Nice folk mx w/YL PP annr 0139 3/9. (Kaz) (oops, the "illegal" abbreviation YL slipped through.....CH) Presumed the source of het/carrier 0004 3/11. Man speaking, presumed in PP 0005, fair signal. (Eckman)
 720 WEST GERMANY (sort of) Radio Free Europe here 2200-2201 2/24 w/ID in Polish (a friend ID'd the language for me). Came back at 0039 2/25, totally jammed. Par for the course. (Littek)
 720 USSR Yuzhno-Sakhalinsk at 1355 to 1402 3/3. Classical mx followed by woman in EE giving forthcoming pgm details on the 13, 15, 19, 25, 31, 41 and 49 meter bands. At 1400 the 10 note IS was played 5 times on what sounded like a xylophone. Then followed the news in a language I have never heard before. Fair signal. (Stonebridge) They have us covered..... auroral nights you tune to Cuba 600 and high-latitude nights USSR 720.....CH

730 DOMINICAN REPUBLIC HIZ "Broadcasting Nacional" topping this freq on 2/21 from 0557-0601 with their NA. Not enough for a report. (Cooper)

738 AUSTRALIA 2NR Grafton with newscast by anncr in "DU" EE accent 1101-1104 on 2/24. KCBS off. Heard again on 3/9 with ABC news up to 1215 then into musical selections. (Wilkinson)

73 ISRAEL x-on (s/on????CH) at 0300 w/Shalom and nx in Hebrew 2/23. (Littek)

738 SPAIN Barcelona w/fair carrier noted 0203 3/9, also 0330 3/11 but no audio surfaced. (Eckman)

747 AUSTRALIA 4QS Toowoomba with male anncr in "DU" EE accent giving news items on 3/9 from 1210 to 1214. (Wilkinson)

747 JAPAN JOIB Sapporo with man and woman in EE and JJ from 1042-1045 on 3/7. Was in // to JOGB 873. (Wilkinson)

747 UNID female talk in unid lang 0546, continued to 0550 fadeout 3/9. Maybe Holland? (Portzer) I guess so-it's too late for Bulgaria, and too early for Upper Volta, but I don't think they s/on until 0600. But they have been guilty of changing their sked in the past in order to confuse DX'ers-CH)

747 UNID mystery here w/powerful OC at 0335 3/9, off soon afterwards. Again on at 0555, off by 0610. Noted also at 2300 3/10 w/mx-sounded like an anthem. No audio noted afterwards (s/off?). Maybe Holland? (Eckman) Strange goings-on.... maybe Holland playing around but who knows? Any of our European members hear anything strange-CH

750 VENEZUELA YVKS Caracas 2/18. (Cruser) Can't get much briefer than that, can you/ CH

756 NEW ZEALAND 1YA Auckland with news pgm from 1001-1006 fade-out on 3/7. (Wilkinson) 3/16 1130 exceedingly loud w/usual dull MoR mx. (Brown) If I ever hear them, see how dull I call the mx! CH

756 WEST GERMANY Braunschweig/Ravensburg good w/nx in GG 0601 3/2. (Connelly) Fair w/piano mx (not // 719 Portugal) 0145 3/9. Poor-fair //1539 at 0520 w/church service apparently. (Kazaross) Noted w/unmistakeably German instrumental mx (marches, yodelling, oompahs, etc.), 2 GG vocal tunes and GG anncr 0418-0440 tuneout 3/9. Mostly fair-poor but sometimes up to armchair level. No actual ID but counted as country #60 on the basis of pgm content. (Happy Bruce Portzer) With smashing level, excellent w/GG male vocal and Bavarian ompah band mx 0430 3/9. (Connelly)

756 PORTUGAL Lisboa xlint w/classical mx thru TVI 0229 3/9. Lately has been one of the stronger low band TA's received here. (Eckman)

756 UNID operatic type mx 0556 3/9, series of pips with last one longer than the first 0600, then weak talk. (Portzer) Germany uses pips (at least sometimes) but damned if I remember how many-CH

760 COLOMBIA HJAJ 1/28. (Cruser) Vy brf log-CH

765 NEW ZEALAND 2ZK Hastings with classical mx from 1048 to 1051 on 3/9. Seemed to be in // to 2YC 657. (Wilkinson) Just wondering, were 3/9 and 3/19 (xlint TA nights) noteworthy out there? CH

765 SENEGAL Dakar w/FF, mx fair to good signal, QSB 2235 2/18. (Cruser)

765 SWITZERLAND Sottens weak w/man in FF, slopped by WABC 0602 3/2. (Connelly)

774 BULGARIA I was looking for Egypt, found Arab music all over the channel. Nx at 0430 was big disappointment when this ID'ed, // 747 2/25. (Littek)

774 SPAIN Caceres et al presumed the source of fair sig w/man in SS 0227 3/9. Severe WABC slop. (Eckman) Synchronized outlets loud w/ time pips, nx in SS 2200 2/27. (Connelly) Fair w/SS talk and strong het on WABC 2220 3/5. (Connelly)

782 PORTUGAL Porto-Miramar loud w/PP political speech, rising to dominance o/783 0616 3/2. (Connelly) Fair w/right mx 0227 3/9 badly hetted by 783 and WBBM slop. (Eckman)

783 EAST GERMANY Burg presumed the one w/unfamiliar IS 0259 3/9. Cl-type mx noted around 0320. (Eckman) Burg good w/man in GG atop strong 782 het 0604 3/2. (Connelly) Burg potent w/female GG vocal totally plastering Portugal 782 (heard as het only) 2241 3/8. (Connelly)

792 SPAIN latched onto second network here....SER...Sociedad Espanola de Difusion, this //810, 1260 w/man talking, typical mx, and weird noises 0043-0049 2/25. (Littek)

800 VENEZUELA YVTB Radio Exitos has moved here ex 980. (Clark)

810 BAHAMAS Freeport ZNS3 1/29. (Cruser)

810 COLOMBIA HJCY Bogota apparently SS nx 1/29. (Cruser)

810 NEW ZEALAND 4YA Dunedin heard on 3/9 from 1003 to 1047 with KGO off the air. Never heard here before. (Wilkinson)

810 UNID w/British accented EE male anncr heard in WGY fade 0112 3/9. Although LA's were weak (Cuba was even weak) I must assume this was ZNS3 and not Scotland, if we ever get good low end TA cx on a MM Scotland should be a good possibility. (Kazaross)

819 ANDORRA La Vieja poor to fair o/fast SAH/rumble; man in FF 0600 3/1. (Connelly)

819 NEW ZEALAND 1YZ Rotorua with DU EE accented male anncr and EZL mx from 1206 to 1210 on 3/9. (Wilkinson)

819 UNID loud het on enfeebled WBAP 0441 3/9. (Portzer)

828 AUSTRALIA 3GI Sale with news pgm from 1201 to 1206 on 3/9 with man in EE accent. One of the more consistent Aussies at this den. (Wilkinson)

828 WEST GERMANY Sudwestfunk here as usual //1017. Sometimes this 40 kw at 350 miles interferes w/Hannover (NDR) at 50 miles during the day. Hrd first at night, 2225 of 2/24. (Littek)

828 UNID het here PFM'ed to 826, 999.7 Hz. I suspect Libya but who knows? (Littek)

830 HAWAII KIKI Honolulu with rock records and several KIKI/KPIG ID's at 1413 3/3. KPIG ID was definite, is this AM or FM? Good signal but somebody was putting a terrific het on it. (Stonebridge)

837 AUSTRALIA 4RK Rockhampton with pop mx and vocals from 1118 to 1124. Not heard 3/9. (Wilkinson)

837 SOUTH KOREA HLKY Seoul very loud on 3/7 from 1016 to 1020 with two men speaking alternately in KK. (Wilkinson)

837 YUGOSLAVIA nx at 0530 from Novi Sad, sneaked in w/usual FF on this channel, 2/25. (Littek)

846 AUSTRALIA 2CY Cranberra with female choral group and female anncr 1224-1229 on 2/23. (Wilkinson)

846 KIRABATI Tarawa 3/17 0940 good w/ethnic mx through monstrous KOA splash. (Brown)

846 ITALY tentative, poor in WHDH slop 0601 3/1. (Connelly) Good w/nx in GG 0233 3/9. Good at 0303 w/EE nx. (Eckman)

855 ROMANIA R. Bucharest running //1152, noticed 2232 2/24 w/opera and suchlike. (Littek)

855 SPAIN Murcia presumed w/male in SS 0255 3/9, good level. (Eckman)

864 FRANCE Paris fair w/man and woman in FF 0711 3/9. (Connelly) Good w/man in FF 0523 3/10. One of the few good low band sigs this AM. (Eckman)

873 AUSTRALIA 2GB Sydney with male anncr on phone with someone on 2/24 from 1153 to 1158. Heard many phrases. (Wilkinson)

873 SPAIN poor-fair w/SS talk 0152 3/9. Good sig for 20 kw. (Kazaross)

873 UNID loud carrier, weak traces of rock mx 0525 3/9. AFN? (Portzer) Very likely-CH

882 AUSTRALIA 4BH Brisbane very strong on 2/24 from 1136 to 1142 with pop and jazz selections and female anncr. (Wilkinson)

882 NEW ZEALAND 1YC Auckland on 3/3 from 1035 to 1040 with male vocal-ist singing operatic type of mx. (Wilkinson)

882 WALES BBC w/MoR-pop-disco mx and accented EE talk various times x0335-0600+ 3/9. Good-poor, though anncrs not quite readable. Easily separable from KVRN. (Portzer)

891 AUSTRALIA 5AN Adelaide on 2/24 from 1126-1135 with fade from 1130 to 1133. Pop music w/male anncr. (Wilkinson)

891 FJI Radio Fiji heard on 3/3 from 1030 to 1034 with male and female vocalists on Hindustani type of mx. Best in a long time. (Wilkinson)

891 TURKEY making an effort to break a solid signal from Radio Moscow 1730 2/17 w/wailing sruff. (Littek)

891 UNID noticeable het on WLS 0356 3/9. Who's on at this hour? (Portzer) USSR and Turkey are on, plus Holland leaves their carrier on AM-CH

930 COLOMBIA HJCS R. Continental, Bogota noted in/out of several domestic on MM 2/11, circa 0720. (Cooper)

945 USSR easiest way to ID Moscow, w/pips at 0700 2/23. (Littek)

945 UNID possibly France-definite SS talk on a strong TA signal, atop a weak audible het 2229 2/28. This is well before the Ecuadorian fades in, DF correct for Europe/North Africa and it was much stronger than any 944 or 945 LA has ever been. (Connelly)

990 DOMINICAN REPUBLIC HISA R. Cibao, Santiago ex 980. (Clark)

999 ENGLAND unreal...BBC local radio stuff //1458. This one's 1 kw at most, 0106 2/25. (Littek)

999 ENGLAND R. Trent, IBA pop mx type stuff. Really unbelievable. This one's 200 watts, ID'ed 0107 2/25. No DDR to be heard. (Littek)

1000 COLOMBIA HJCC R. 10-20 noted giving calls on MM 2/13 at 0800. I've noted that Colombians have seemingly reverted to using their call letters these days on the hour and half hour-watch for it as it helps get a truer ID. (Cooper)

1008 JAPAN JONR Osaka with lively modern Japanese musical selections with male vocalists on 2/23 from 1055 to 1100. Male and female spoke from 1100 to 1103 followed by more similar mx. (Wilkinson)

1008 HOLLAND Pleveland apparently the TA running AN, noted 0228 3/18 with fair-poor sig. (Hutton)

1008 UNID TA w/the same typical type of soft mx that's carried AN by many Europeans 0157 and 0205. Faded across the hour. I suspect Holland and not Yugoslavia as this (the best low end TA opening ever noted from a non-coastal QTH) did not seem to include eastern Europeans. Any ideas? (Kazaross) Can't be Yugoslavia, WRTH says they s/on 0400 but every time I've heard them s/oh it was 0430 or 0445. I say Holland because the new superpower xmtr from Flevoland is supposedly on the air-CH

1017 TONGA Nuku'alofa 3AZ very strong on 3/9 from 0951 to 0955 with female speaking in Tongan. (Wilkinson)

1017 WEST GERMANY poor w/GG talk 0203 3/9. (Kazaross) To good peaks w/Muzak 2232 3/8. No sign of the Turk. (Connolly)

1035 ENGLAND wiping out 1/2 megawatt Russky w/5 kw as far as I know. Pgm was "Love Notes" and if you want a song for lovey-dovey, the address is BBC Radio Two, London, W1A 4WW. Real mellow stuff. (Littek)

1035 NEW ZEALAND 4ZB Wellington fair 1150 3/16 w/pop mx, male DJ. (Brown)

1040 HAWAII KPOI Honolulu 2/17 1220 good w/automated oldies and K-poy ID's; about all they ever say. (Brown)

1044 EAST GERMANY poor w/GG mx then female annr 0003 3/9. (Kazaross)

1044 MOROCCO Sebas-Aioun good w/man in FF o/SAH and mx from East Germany 2331 2/29. (Connolly) Poor w/pop mx including c&w hit "Lucille" 0537 3/8. (Connolly)

1050 VENEZUELA YVKZ R. Nacional noted on MM 2/18 when I tried for WHNZ's regular check, with WHN off, o/u another SS, seemingly a Colombian-no sign of XEG. (Cooper)

1050 MEXICO either XEG or XED in EE giving a Los Angeles telephone number and PO box as a contact for a counseling service on MM 3/10, w/WHN again off-XED would seem more likely to me as Tijuana is not all that far from LA whereas Juarez is way around Texas. (Cooper)

1053 ROMANIA running // 855 0443 2/25. (Littek)

1061 PORTUGAL Azurara/Norte badly drilling daytimer WGTR w/fierce het 2140 2/27. Good w/PP talk o/heavy het 2227 2/28. (Connolly)

1062 UNID normal Denmark destroyed by screaming het 2248 2/24. (Littek)

1107 WEST GERMANY/USSR a microcosm of the real world here, Russky slopping American (AFN) here so that neither is useful. Figures, doesn't it? Politics gets into everything these days. (Littek) (But somebody interferes with everybody in Europe....Besides AFN is low powered-BH)

1116a UNID (heard on car rx) talk w/muffled audio, pehhaps AA-three chimes were sounded, then more talk in foreign language 2225 2/29. (Connolly)

1134 YUGOSLAVIA Tovarnik perhaps the one w/man in unid lang 0419 3/19 at fair level. (Eckman)

1140 COLOMBIA HJKO Barranquilla La Voz de la Victoria is now AN SM's, fairly easy with WRVA off SM's and not a trace all season of Dave Gleason's Once-Q WQII. Noted weakly on SM 2/17 at 0702. (Cooper) Don't feel bad, I haven't heard WQII since 1976-CH

1143 SOUTH KOREA Jeju KBS powerful stn w/pgms in EE (sometimes with KK) on weekdays from 1100 to 1200. Male annr mentioned "Korean Broadcasting Service", "558", and "1143" frequencies at 1100/ (Wilkinson)

1143 SLAV noted 2300-2402 on evening of 3/12 with a healthy signal till about 2345 when it began to fade away-eight note IS at 2330 and six one second apart time pips from 2359:50 to 55, then a pause and female annr. (Cooper) Got your tape and have played it once; there seems to be a fair Radio Rodina ID-CH

1161 FRANCE Strasbourg et al poor to fair w/man and woman in FF 0525 3/8. (Connolly)

1179 SPAIN the big Swede is asleep at 0159 of 2/22 so 2 Spaniards were fighting it out. Neither ID'ed. (Littek)

1197 WEST GERMANY VOA suspected w/instrumental band mx 2350 3/18. (Kazaross)

1197 UNID man and woman shouting, possibly in AA; Morocco suspected 2226 2/28. (Connolly)

1206 CHINA Chinese stn believed to be the Yanbian PBS (Mx verie spells it Yanbien) heard very well from 0957-1004. (Date??CH) Beautiful stringed mx until 1000 then some beautiful chime-like music for 25-30 seconds, then male and female annets. Slow march-like mx followed by male and female annets alternating (news?), all in CC. (Wilkinson)

1206 FRANCE Bordeaux loud w/FF talk 2219 2/29. (Connolly) Very good w/man and woman in FF, heard well despite heavy WCAU splash 0523 3/8. (Connolly)

1215 ENGLAND BBC synchros fair w/cl mx 2328-2330 3/8. (Connolly)

1224t SPAIN apparent SS talk by man, heavily slopped 2320 2/29. (Con)

1233 BELGIUM weak here in FF //621 2306 2/24. (Littek)

1251 LIBYA creating a wicked het as usual, but lotsa audio 0215 2/22. 2/25 wicked het again, about 1 KHz but no audio this time. (Littek)

1269 WEST GERMANY Neumunster poor w/Muzak in CJCB slop 2332 3/8. (Connolly)

1287 CZECHOSLOVAKIA Praha-Melnik fair w/soft cl mx 2318 2/29. (Connolly) Probably the carrier noted at 0330 3/11, fair signal but no audio noted. (Eckman)

1305 UNID woman in FF, poor in bad WLOB slop 0450c 3/9. (Connolly)

1325 HAITI tentatively, monotonous tropical instrumental mx, then anthem. OC after s/off 0457-0500 3/9. Signal fair to poor. (Connolly) Poor-fair w/soft mx 0455 3/8 during unusually bad LA cx. Not noticed after 0500 so must s/off then. (Kazaross) Right, CH

1332 ITALY Rome fair w/cl mx 0515 3/8. Fair o/u WEVD slop w/cl mx, woman in II who mentioned Radotelevisione Italiana 0505-0508 and up loud w/harp mx and religious choral mx at 0514 3/9. (Con) Presumed the carrier here 0450 3/9. (Eckman)

1341 NORTHERN IRELAND Lisnagarvey BBC fair to good w/British EE annr and light mx 0516 3/8. (Connolly) Very poor, furst audio here 0500 3/18. (CH)

1341 SPAIN Valencia here w/pop mx 0020-0028, conversational newscast afterwards. Took a long time to ID this sucker, third network, RCE, Radio Cadena Espanola. (Littek)

1359 EAST GERMANY Berlin to good peaks; initially I was confused when I heard an SS male pop vocal but the identity of the stn became evident when a woman annr came on w/GG talk; this was followed by a Strauss waltz 0523 3/9. (Connolly)

1370 COLOMBIA two Colombians in/out with WFEA here on one of the very few AU mornings of the season, Friday 2/22, circa 0720-0740--HJBO R. Piloto and HJKX w/RCN ID's, the latter un. (Cooper)

1377 FRANCE Lille in w/big het, some FF talk; stringer than 1375, 2223 2/29. (Connolly) Good w/female AA vocal, flutes 0512 3/8. (Connolly) Good at 2223 3/10 even w/St. Pierre but little audio discernable. (Eckman)

1395 ALBANIA Lushnje good w/woman in GG 0510 3/8. (Connolly) Good 2222 w/mx. Internationale 2256. Relatively early fade-in for this time of year. (Eckman)

1400 COLOMBIA HJAS Barranquilla noted using two slogans--R. Libertad and R. Universal on "Colombia morning" MM 2/11 at 0850, in/out with myriads of domestics. They've not been heard since as cx have turned extremely un-auroral, negating all the fancy predictions of a year or so about cx this season. (Cooper) They are not just fancy predictions; each and every sunspot cycle peak has a corresponding peak in geomagnetic activity. We just happened to have a rather unusual year-CH

1404a GUINEA Conakry loud w/AA chanting, slight het present on high side 0530 3/9. I could not accurately measure frequency w/the HQ180A dial; possibly Guinea was on 1403.5a and the high side het was from 1404 Europeans. (Connolly)

1422 WEST GERMANY Saarbrucken fair w/hard rock 2316 2/29. (Connolly) Poor w/pop mx, heavy SAH from someone else present 2330 3/5. Fair to good w/man in GG 0500 3/8. (Connolly)

1440 LUXEMBOURG the monster puts in a good groundwave signal to Hamburg (30 dB over 1 uv/m). This was first disturbed by skywave at exactly 1601 GMT on 2/23. 1840 2/23: tell me European radio isn't confusing! Radio Luxembourg broadcasting in II doing a special on Liechtenstein. EE pgm followed at 1900, ID's as "Britain's #1 all music station". No kidding. (Littek) They have a good audience in England, so I'm told-CH

1449 ITALY likely the one w/soft mx 0556 3/8 during good high end TA cx. (Kazaross)

1449 RUSSIA I fell asleep when this guy signed on, but must have been 0300. (Littek)

1458 UNID carrier noted at good level (OC?) 0340 3/11. (Eckman)

1458 UNID maybe Albania-FF sounding talk by woman, poor o/SAH 2315 2/29. 1395 had strong OC at the time. (Connolly)

1460 TURKS AND CAICOS AFRTS has moved to FM 91.1 only. (Clark)

1460 TURKS AND CAICOS Radio Truks and Caicos ex 1550 with a new power of 2 kw. Just a freq change only! Not a new stn as per news on VSI. (Clark)

- 1467 MONACO Monte Carlo xlint w/EE preaching, London mailing address 2314 2/29. (Connelly) Ultra-loud w/choral mx, GG talk 0457 3/8. (Connelly) TWR very good 2221 3/10 w/man in unid lang. Good w/religious mx 2311. (Eckman)
- 1476 AUSTRIA Wien-Bisamberg ORF poor w/Alpine mx in bad WJIT/WSAR slop 2337 3/5. (Connelly) Xlint w/pop mx (some US disco) around 0405-0500 3/9. Man in GG at 0500. Also good w/OC 0350 3/11, man w/presumed s/on at 0400 in GG. (Eckman)
- 1503 POLAND fair thru WTOP slop w/piano mx, female and male Polish anners 0420-0430 3/9. Only weak carriers on 1368 and 1305. (Kazaross) Very good 0408-0500 3/9. Chopin IS noted at 0459. Also noted w/OC 0355 3/11. IS noted at 0358 w/fair signal. (Eckman)
- 1503 ENGLAND these low-powered Limeys, agsin. This one //1458. Must be more than 500 watts. The big Polack was asleep 0014 2/25. (Littek)
- 1521 CZECHOSLOVAKIA fighting it out w/WKBW slop w/bouncy instrumental mx 0450 3/9. (Kazaross) Dominant w/no sign of Saudi Arabia (unusual) 0330 3/18. (Hutton) Very powerful w/light mx 0410 3/9. Time pips at 0430, man in unid lang followed by IS (which matches Hvezda IS listed in WRTH). (Eckman)
- 1521 SAUDI ARABIA Daba very, very powerful w/AA chanting at 0314 3/11. Better than WKBW at the time. Still powerful at 0333 w/AA mx but faded somewhat by 0345. (Eckman) Totally overwhelming WKBW on car rx-male AA chant, then AA talk 2240 2/29. (Connelly)
- 1512 SAUDI ARABIA (out of order-CH) Jeddah likely the source of strong OC at 0245. Weaker at 0305 but slow, monotonous Koranic religious chants were audible on peaks until fade at 0326 3/9. By 0331 not even a trace of carrier remained. This stn is located on the Red Sea about 400 miles below Daba and has been operating w/nearly a full sked. The s/on time (0300) and the fade time plus the pgm material strongly suggest Saudi Arabia. (Kazaross) The sked on page two of this week's IDXD says 0400 s/on but I think you had Jeddah anyhow. Very recently this stn suddenly popped up in loggings and information columns from Europe so I think they went full power and extended their sked. Noted here very weakly a couple of times in the last two weeks-CH
- 1530 UNID female in unid foreign lang heard for a couple of seconds several times in WCKY fades 0405-0447 3/9. Lang not SS. Is Vatican on this early? (Kazaross) I forget, they extended their sked about a year ago and I don't remember the new one-CH
- 1539 WEST GERMANY Mainflingen noted w/male GG vocal, poor in heavy WPTR slop 0555 3/9. (Connelly)
- 1548 ENGLAND one of the UK locals briefly noted w/British EE annr atop a graveyard-type pile of signals and some CBE slop 0557 3/9. (Connelly)
- 1548 UNID presume one of the UK outlets here 0316 3/11 w/fair carrier but no audio. (Eckman)
- 1557 FRANCE Nice fair w/man and woman in FF 0606 3/1. (Connelly) Dominant and good despite WQXR slop; man and woman in FF, apparently a radio drama 0448 3/8. (Connelly)
- 1557 MALTA Cyclops fair w/AA-type mx 0252 3/11. (Eckman)
- 1560 MEXICO XEVIP Mexico City noted w/EE CBS nx 0600-0606 on MM 2/11 then s/off message also in EE. They'll be easier when we go on DST, being on an hour or more after WQXR s/off. (Cooper)
- 1566 AUSTRALIA 3NE Wangaratta 2/14 1144-1202 fair w/vocal MoR, male DJ, local mentions and TC at top of the hour. (Brown)
- 1566 TUNISIA all over this channel now that Switzerland is asleep. Talk about Allah, Tunis 0041-0045, but no moaning. Thank God! This 2/25. (Littek) Fair 2325 3/8 w/usual distorted audio. (Eckman) Fair w/AA talk in slop; low-pitched low side het also present 2312 2/29. (Connelly) Strong w/female AA chant 0444 3/8. The 1575 Tunisian reported by someone was not heard here. (Connelly) Who reported a 1575 Tunisian? I don't remember saying it and would like to get the details-CH
- ****1575**** THAILAND BenPachi VOA 3/5 1145-1202 w/nx in EE just before the top of the hour, then "this news has come to you from the VOA in Washington". Single beep, no Yankee Joodle, then into unid lingo. Reappeared 3/2, 7, 13, 14, 15 during same 15 minute period. (Brown) Tremendous!!! CH
- 1593 WEST GERMANY Langenberg blasting in w/woman in GG 0604 3/1. (Connelly) Xlint/like a local w/Muzak, then woman in GG 0440 3/8. Good but starting to fade with sunrise at first skip point 0716 3/9-naard w/GG talk. (Connelly)

- 1593 WEST GERMANY Langenberg good 0430 3/8 w/Beatles mx, strong 0450 3/9, very good 0250 3/11 w/opera mx. (Eckman) Absolutely local-like at 0545 3/9. This was the best TA all night from sunset to fadeout. It was about 3 dB better than WQQW and the mess on 1590 on peaks. This should have been heard far inland and possibly on the west coast when it's this loud. (Kazaross)
- 1595 HAITI R. Skywave noted w/OC shut off at 0301 3/9 hetted by WDR 1593. (Kazaross) Tentative, feeble het against WDR 1593. (Connelly)

and lastly.....

- 1090 CUBA new unid R. Guama outlet first noted here 3/4 at 0230, power estimated at 1 kw. (Hutton)

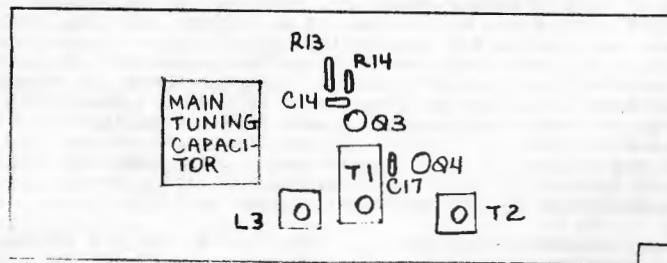
This long, long column was caused by:

Richard Allen	Billings, Okla.	TRF, SM2, Micronta counter
David Arbogast	Rootstown, Ohio	DX160, 100' LW
Kuss Brown	Stevensville, Mi.	SX122, 1500' Beverage
Richard Clark	Puerto Plata, Dom. Rep.	NRD505, loop
Mark Connelly	Billerica, Ma.	R390A, MW1, car rx
	W. Yarmouth, Ma.	HQ180A, SM2
Ernie Cooper	Provincetown, Mass.	R390A, loop
Eric Crusier	Lakehurst, NJ	Drake 2B w/converter, SX42, TRF, LW
Richard Eckman	Philly, Pa.	HQ180A (modified), SB620, Sanserino loop
Ed Eisentraeger	Rockford, Ill.	TRF
Chuck Hutton	Decatur, Ga.	R390A, TRF, 2300' phased Beverage, vertical
Neil Kazaross	Pawtucket, RI	R390A, 80' LW, Sanserino loop
Ar i Littek	Hamburg, W. Germany	Rohde and Schwarze receivers, Telefunken rx's, LW
Bruce Sportster	Seattle, Wa.	HQ180A, 2000' terminated Beverage at 45
Mike Stonebridge	Fox Creek, Alta.	GR78, 4' loop
Hank Wilkinson	Santa Rosa, Ca.	SP600, Sanserino loop

From the looks of things, 3/9 was the TA night of the year so naturally I missed it. Oh well, not too likely to hear anything new this year except new xmtrs. 3/18 GMT (3/17 EST) must have been on the same level as 3/9, just have to wait and see what kind of reports I get. Down here there was a TA or two on just about every channel, including the usually not-too-good bottom of the band. Tried my best to get some sort of ID out of 621 Canaries but it wasn't to be this time. Every last BBC major outlet was in, including 1341 which had'nt made it previously. 1008 had a signal on it again tonight so it looks like Holland has the super-power cranked up and in regular use. So much stuff up and down the dial but I don't think Pat wants me to re-cap it all here.....

Just stick a front and back page on this and you'll have this week's bulletin, Pat..... See you later---

THAT'S WHAT YOU THOUGHT! Pat



TRF Circuit Board - Back View

SELECTIVITY MODIFICATION FOR THE TRF

About a dozen DX'ers have inquired as to how to install ceramic filters in a TRF, so rather than responding to each person individually I am writing down the procedure here.

Basically, this procedure involves removing the emitter bypass capacitors from two IF stages and replacing them with ceramic filters. No other parts are added or subtracted. The only difficulty involved is simply the physical operation of cutting away the capacitor body and soldering the filters to the capacitor leads in somewhat cramped space.

The filters I used were Vernitron TFO1A's, available from Radio West at 2 for \$5. A couple of Murata filters were also used, but their minimum mail order of \$100 discourages most people.

The procedure:

- (1) remove the six screws holding the back of the TRF. There are two on the upper part of the case, two on the handle, one in the battery compartment, and one in the AC line cord compartment. Remove the back by pulling firmly. A gasket is used so you will have to pull and pull and pull.....
- (2) Locate the components pictured below. Push Q3, R13, and R14 away from C14 in order to create as much room as possible around the capacitor. You will be thankful for as much room as possible later on. Be careful not to apply too much sudden pressure to the resistors as some TRF's were furnished with extremely brittle resistors that fracture easily. Create as much room as possible around C17 also. Some things to do include pushing Q4 away from C17 and re-routing the grey wire to the other side of T1 if necessary. Be careful not to allow pushed leads to short onto other leads.
- (3) with a small (if possible) pair of diagonal cutters cut C14 and C17 in half down the middle of the body. Be careful not to cut the leads of the capacitor. Next cut away as much of the body as possible. At this point all that should be left of the capacitors are the leads and a small piece of ceramic and plate at the end of the leads. Take a pair of needle nose pliers and squeeze the ceramic in order to fracture all of it. Then squeeze the ends of the leads in order to wrap the remnants of the body around the leads. Now you should have a solder-able surface.
- (4) due to lack of room, it is best to melt some solder on the tip and then hold the filter onto the leads while applying the iron. Best of luck in getting this done quickly and easily. By sitting the filter on either a convenient transistor or transformer, this three-hand operation can be performed with only two hands.
- (5) while the radio is apart it is a good idea to align the RF and IF stages. Of the 60 or so TRF's I have aligned recently, not a one could not be improved by alignment. This can be done without service equipment if necessary. A very high level of TRF's are badly mis-aligned coming from the factory.
- (6) put the back cover back on the radio and hear some new DX!

Some comments on TRF's with these filters installed (from happy purchasers of TRF's via me): "I am impressed with its performance and look forward to many years of DX'ing with it"; "Frankly I am impressed! Except for readout it is every bit as good as my Gilfer 4 KHz FRG7 and in fact I'm not so sure the TRF selectivity is not sharper"; and from a long-time owner of Hammarlunds and Collins "the improvement in selectivity is immediately noticeable!". One fellow has ordered his second rx! Here in Atlanta Karl Jeter could not hear 1470 due to local WYZE 1480, 1460 being clearly readable with a semi-local 40 miles away. Well, Karl tuned his newly-modified TRF to 1470 and thought he was on 1460 because there was a nice, readable signal there. I've tried out many of the TRF with filters and have heard several TA's and a handful of Latin splits, including the new Radio Haiti-Inter on 1325.

I think you will be very happy with a TRF modified as per the above. Any questions, problems, etc. I will be most happy to help with.

← Chuck's expert drawing is over here.guys.

Chuck Hutton

ZONAL-ANALYSIS APPROACH TO PAN-AMERICAN DX

by Mark Connelly

The purpose of this article is to enable DXers in the northeastern states to DX Latin America in a systematic manner, based upon checking "pilot signals" from different areas. The methods employed are similar to those used in the recent "Zonal Analysis for TA DX" article. Of course, DXing the LA's is quite a different ballgame from TA-chasing.

Paths to Latin America are open under most night-time ionospheric conditions except the most utterly severe auroras. Auroral effects are chiefly of interest because of their influence upon domestic stations which interfere with the LA's. (Note: for the sake of convenience, the term "Latin American" (LA) will be used for all Caribbean, South American, Central American, and Mexican stations, even those which are in countries which speak English & other non-Romance languages.)

LA splits can be heard on most nights; on the other hand, domestic stations must be aurorally-weakened somewhat to permit large-scale DXing of LA's on 10-kHz. channels. The DXer should recognise the difference between short-skip and long-skip openings for LA's, just as these differences are observed in domestic DX. A DXer, who notes Dominican Republic stations over-riding normally-heard high-power co-channel Venezuelans & Colombians, should refer to the zonal chart at the end of this article and exploit the short-skip LA opening for other stations within 2000 miles. During such an opening, South American-chasing is best bypassed, to be re-attempted at another time. This situation is analogous to that of a domestic DXer in Boston who realises that, when WCBS-880 is loud on skip & WLS-890 is weak, it makes more sense to try for regionals & graveyards in the NY-NJ-PA area than trying to get similar stations from the Midwest.

Frequency-dependence of openings must be considered: many nights have exhibited auroral conditions with weak domestic skip & good LA's below 1200 kHz., whilst yielding strong short-skip domestics & poor LA's above 1200. Instead of formulating one band-wide "plan of attack" for LA DXing, the DXer should generate 3 plans of attack: one for low-band (500-900 kHz.); a second for mid-band (900-1200 kHz.), and a third for high-band (1200-1700 kHz.).

As we are dealing with north-south paths, the DXer must be aware of sunset and sunrise times at both the transmitter and receiver sites. These times themselves are reasonably accurate for fade-time predictions: the difference in sunset (or sunrise) times between those of the first ionospheric control point and that of the nearest ground point of interest (transmitter or receiver), when a north-south path is considered, is nowhere near as great as the difference in sunset (or sunrise) between ground-site & control-point on the east-west routes encountered in TA & TP DX.

The sunset/sunrise tables I previously published should be your guide to LA path viability. The DXer should first determine what LA's are capable of being heard at his hometown sunset & sunrise times.

In December, a DXer in Boston at local sunset can hear LA's having sunset earlier than 2112 GMT. Only the eastern tip of Brazil has an earlier sunset, however. Under normal conditions, domestic QRM will have already overtaken 10-kHz.-multiple LA's by the time they enter darkness. An aurora at this time of year could prove to be very beneficial: with domestics knocked out, a DXer could selectively tune for LA's far to the east. (e. g. Brazilians) shortly after sunset with no QRM from the Venezuelan & Colombian pests. Mid-December sunset for Venezuela doesn't occur until 2210 GMT. To me, far-east LA openings are far more rewarding than routine YV/HJ-chasing. North-coast Brazilian reception generally goes hand-in-hand with equally-fascinating African reception: both are auroral-conditions occurrences largely confined to coastal receiving sites at sunset with topnotch gear. Like Deep-South-American chasing, African & northern-Brazilian DXing put one's operating skills to a very thorough test.

Summertime LA DX at sunset is considerably different. The aforementioned Boston DXer has a mid-June local sunset of 0017 GMT. At that time, all of South America and the Caribbean islands are well into darkness. Even in Costa Rica, sunset has occurred 23 minutes earlier. Therefore, before domestics from the west start to skip in, a considerable chunk of Latin America is "open" for intensive DXing, without the need for AU CX. Of course, aurora will still enhance one's possibilities by extending domestic-free LA DX well into the evening, by which time Mexico and western Central America will be in the dark. The drawback to summer LA DXing (other than QRM) is that stations such as Fortaleza, Brazil on 760, 1200, & 1300 will be covered by stronger Venezuelans/Colombians as soon as they begin to propagate in. During an auroral winter opening, the DXer could "sit on" 640 kHz. and get Brazil, then Surinam, followed by Guadeloupe &

Venezuela as the sunset line moves westward, not reaching Cuba until 1½ hours after Boston sunset. In summer, the Cuban pest surfaces immediately after Boston sunset.

Because domestic skip is usually very strong up until east coast sunrise, the sunrise LA termination times are principally of interest to eastern DXers during disturbed conditions. At sunrise in December, the Boston DXer may hear Mexico, western Cuba, and western Central America: these have sunrise times later than 1216 GMT. Other LA's have faded earlier that morning (Rio de Janeiro, Brazil sunrise = 0810; Venezuela/Colombia/Caribbean area sunrise about 1045-1105). June sunrise in Boston permits DXing of countries with sunrise after 0912 GMT: these include all Latin American areas except the far east of Brazil.

The sunset & sunrise cases of the winter & summer solstices represent the extreme cases: other times of the year range between these extremes in terms of the amount of area "open" for DXing at LSS/LSR. The DXer should proceed to the following zonal-analysis, keeping in mind the necessity to "follow" the sunset & sunrise terminators from east (group 1) to west (group 5). Individual station schedules must also be considered: the World Radio-TV Handbook and the international DX column updates are your references.

Group 1 / 145° - 160° (E of N)

These can be isolated from the interference of more westerly LA stations by exploiting autumn/winter sunset auroral openings. Salt water in the direction of desired-station pickup is advisable: this should be within the first 10 miles from the receiving site as the signals of interest will be arriving at low angles, skimming the surface of the earth. Africans should be DXed simultaneously. Surinam on 725 is the heavy hitter of group 1. Other Surinam stations on 600, 640, 820, & 914 are likely to be heard. Hindi-culture programming forms an important part of the broadcasting scene in Surinam: the exotic East Indian music will definitely help you to locate the non-split Surinam stations. 760 is worth checking as there is a station in Fortaleza, Brazil here; also the more-common Guyana station should show. These are sandwiched between Africans (rare São Tomé on 759 & powerhouse Senegal on 765). A tough one is the French Guiana outlet on 1070. 960 is your best bet for Bermuda; this is favoured by short-skip openings, rather than by heavily auroral conditions. Barbados is frequently heard on 900 during the conditions that give decent group 1 reception. Rio de Janeiro on 860 & 1220 are generally best just before Rio sunrise, rather than at east coast US sunset.

Groups 2 & 3 / 160° - 195°

Within these groups are many of the Caribbean islands: a veritable motherlode of potential countries to beef up the DXer's totals. The splits may be heard most nights, even when domestics are strong. The best "pilot signals" are from St. Kitts on 1265 & 555. Antigua - 1155 is also super-easy; non-split ZDR-1100 is somewhat more of a challenge because of HJAT/WWWE QRM. Haiti offers 1035 as an easy split; 895, 1325, & others are more difficult. Tougher Caribbean splits include Grenada - 535, Dominica - 595, St. Vincent - 705, Montserrat - 885, and Anguilla - 1505. 10-kHz.-channel stations heard nightly include Netherlands Antilles - 800, Venezuela - 1200, Colombia - 1100, & Dominican Republic - 650. Of course, auroral conditions will greatly increase the quantity and the quality of DX heard; the reader is encouraged to read the recent "DXing Latin America & the Caribbean - Country by Country" article, the IRCA foreign logs, and the international DX columns for a more in-depth examination of the enormous number of potential targets. A highly-rewarding aspect of DXing Colombia & Venezuela is the reception of stations on the US regional & graveyard channels from 1230 to 1490 kHz.

Deep-South-American Hunting

This is a special breed of DX which is both satisfying and frustrating. The DXer should check Ecuadorian splits (605, 735, 945, 995, & 1465 for starters) as a prelude to DSA DX attempts. My experience is that the 0300 - 0900 GMT time slot is most productive. Spring & autumn are the seasons preferred by some DXers, although, theoretically, DSA should be DX-able all year. Peru - 854 (and also 880 during WCBS SP) and Paraguay - 645 come next on my DSA target list. If these are found, by all means, dig for more: Argentina, Chile, Bolivia, Uruguay, and (the ultimate) Falklands Islands on 536. Buenos Aires on 870 and Rio de Janeiro on 860 may serve as propagation-viability-indicators.

Bahamas on 810 & 1540 are regularly heard with the Albany, NY area stations on their channels disposed of with a good loop or auroral cx. Cuba is loaded to the gunwales with pests with which we're all too familiar. Those seeking unusual low-power Cubans should consult Schatz's recent list. Cayman - 1555 is a "regular"; 1205 is somewhat less commonly heard. Jamaica - 700 may be found with WLW looped or phased. A short-skip LA night is best to minimize YVMH/HJCX QRM. Belize - 834 and the Costa Rican splits (on 575, 675, 725, 775, 825, et al) provide effective propagation beacons to the Central American isthmus. Central America is generally best from 0400 - 0800 GMT; additional targets are noted in the recent LADX article by Kazaross, Connelly, & DeLorenzo.

Group 5 / 220° - 250°

Mexico is the country of interest here: 540, 730, 900, 940, 1000, 1050, 1220, 1500, 1560, & 1570 have all been heard in New England. Early morning (from 0600 Z to sunrise termination time) is the most efficient time period for DXing Mexico. During that period, the high-powered Colombians & Venezuelans start fading, leaving Cuba & domestics to QRM Mexico. Moderate, rather than severe, auroral conditions are best. The lowest-latitude "Down-Under" DX paths pass through Mexico & the US southwest: unusually-loud Mexicans & SW domestics could signal the tantalizing possibility of South Pacific DX making it to the northeastern USA. Tahiti - 738 & Tonga - 1017 would probably be the first heard.

Russ Brown has gotten TP/DU DX from Michigan; Gordon Nelson heard Tonga on 1020 in the '60s from MA. Despite the new splits, New England DXers have not recently heard TP/DU stations. Increased all-night domestic operation is the "villain" blamed for this by many DXers.

Other relevant articles:

DXN = DX News DXM = DX Monitor

Title	Author(s)	Where found	Comments
Cuban Stations	Schatz	DXN, 2-25-80	Deadly accurate
Zonal-Analysis Approach to TA DX	Connelly	DXN, 3-10-80 DXM, 2-16-80	Intro. to Zonal-Analysis; Applied to TA DX
TA DXer's Guide to Sunset/Sunrise Times	Connelly	DXN, 2-4-80 DXM, 2-23-80	Useful to predict reception path termination times for both LA's & TA's
DXing Latin America and the Caribbean	Kazaross/ Connelly/ De Lorenzo	DXN, 12-28-79 DXM, 12-22-79	A detailed look at LA DX targets for all 46 countries, arranged in order of difficulty
DXing Latin America and the Caribbean Comments/Corrections	Foxworth	DXN, 1-21-80 DXN, 1-28-80 DXM, 1-26-80	Additional info to the above article
LA DX from the Pacific Northwest	Portzer	DXM, 12-29-79	The Westerner's Version of the DXing LA article referenced above
LA Splits	Hutton	DXN, 2-19-79	Slightly dated, but still generally correct & useful.
Terminator Transit Mechanix	Schatz	DXN, 11-12-79 DXN, 9-24-79 DXN, 3-5-79 DXN, 10-9-78	The definitive work analysing the relationship of sunset & sunrise to DXing
Your First 20 NA/SA Countries	Edmunds/ Page Taylor	Old NRC Reprint available from Mark at address below	Info is dated but DX techniques therein are still valid. Of historical interest.

The reader is also advised to refer to the IRCA Foreign Logs for other articles pertinent to LA DX, TA DX, and medium-wave propagation in general. Mark Connelly, 30 William Road, Billerica, MA 01821.

NOTE FROM HQ:

Tomorrow, April 1 marks the beginning of LPC's 4th year. We're not sure how long LPC can last but we are appreciative of the past support you out there have given us, the editors and other workers. Thanks from the LPC.

Pan-American Zonal-Analysis Chart (for Massachusetts QTH)

	5 220°-250°	4 195°-220°	3 175°-195°	2 160°-175°	1 145°-160°
A 500-1000mi. 805-1610km.	USA - TN	-	-	-	Bermuda
B 1000-1500mi. 1610-2415km.	USA - MS	USA - FL Bahamas Cuba	-	-	-
C 1500-2000mi. 2415-3220km.	USA - TX	Belize Jamaica	Dominican Republic Haiti	Anguilla Antigua Dominica Guadeloupe Martinique Montserrat Puerto Rico St. Kitts St. Lucia Virgin Isl.	-
D 2000-2500mi. 3220-4025km.	Mexico	Costa Rica Panama Honduras Nicaragua Guatemala El Salvador	Neth. Antilles	Grenada Venezuela	Barbados
E 2500-3250mi. 4025-5232km.	-	Galapagos Isl.	Colombia Ecuador	Brazil Manaus	French Guiana Guyana Surinam
F 3250-4000mi. 5232-6440km.	-	-	Peru	-	Brazil Natal
G 4000-4750mi. 6440-7647km.	-	-	Bolivia	Paraguay	-
H 4750-5500mi. 7647-8855km.	-	Easter Isl.	Chile	Argentina Uruguay	Brazil Rio de J.
I 5500-8000mi. 8855-12880km.	Tahiti	Pitcairn Isl.	-	Falklands Isl.	-
J >8000mi. >12880km.	New Zealand	Antarctica McMurdo	-	-	-

YAD..

ON MEMORIAL DAY WEEKEND YOU COULD: SIT HOME AND WATCH THE GRASS GROW, ATTEND THE NATIONAL GNOME LONG-DISTANCE WHISTLING CONTEST, SLEEP IN LATE, CHECK THE FUSE IN YOUR RECEIVER, CLEAN THE DOG SPOT ON THE RUG, OR.....COME TO YAD-80 IN YOUNGSTOWN, OHIO. SINCE ALL OF THESE HAVE THE SAME FUN POTENTIAL, FLIP A COIN. IF IT COMES UP YAD, LET US KNO' AS SOON AS POSSIBLE. CONTACT: JERRY STARR, WSRD RADIO, 401 NORTH BLAINE AVENUE, YOUNGSTOWN, OHIO 44505

GRAVEYARD DX
ACHIEVEMENTS

BILL HALE
1451-B FAITH DRIVE
RANTOUL, IL 61866

Well, friends and neighbors, gals and pals (as Bozo says), here we go with another star-studded edition of Graveyard DX Achievements. I want to say 'welcome' to all the new reporters! 'thanks' to them and all the established reporters who are making this the well-received column that it is. Each time GYDXA appears, the total of stations gets bigger, as the blank spots are being filled in fast. Here's how 1490 looks...

*** 1490 kc, before Jan. 1, 1960 ***

Station and location	DXer and location	Distance
WAJF Decatur AL	Gene Allen Vallejo CA	1985
WHBS Huntsville AL	Gene Allen Vallejo CA	2005
WHBB Selma AL	Gene Allen Vallejo CA	2040
WTRF Troy AL	Gene Allen Vallejo CA	2110
KWJB Globe AZ	Norm Maguire Albuquerque NM	250
KTYL Mesa AZ	Gene Allen Vallejo CA	680
KTKT Phoenix AZ	Norm Maguire Albuquerque NM	300
KYCA Prescott AZ	Stan Moras Bradford MA	2100
KAIR Tucson AZ	Gene Allen Vallejo CA	765
KFFA Helena AR	Norm Maguire E. Hartford CT	1060
KXAR Hope AR	Norm Maguire Albuquerque NM	710
KDRS Paragould AR	Gene Allen Vallejo CA	1765
KOTN Pine Bluff AR	Gene Allen Vallejo CA	1715
KKRN Russellville AR	Gene Allen Vallejo CA	1755
KDLA Auburn CA	Norm Maguire Albuquerque NM	800
KAFY Bakersfield CA	Norm Maguire Albuquerque NM	700
KPAS Banning CA	Norm Maguire Albuquerque NM	555
KOWL Bijou CA	Gene Allen Vallejo CA	130
KWIK Burbank CA	Hank Holbrook Chevy Chase MD	2300
KICO Calexico CA	Gene Allen Vallejo CA	535
KXO El Centro CA	Norm Maguire Albuquerque NM	520
KYOS Merced CA	Norm Maguire Albuquerque NM	755
KAFP Petaluma CA	Don Kaskey Galva IA	1430
KBLF Red Bluff CA	Norm Maguire Albuquerque NM	930
KXOA Sacramento CA	Gene Allen Vallejo CA	55
KVOE Santa Ana CA	Norm Maguire E. Hartford CT	2475
KDB Santa Barbara CA	Stan Moras Bradford MA	2450
KSYG Yreka CA	Norm Maguire Albuquerque NM	930
KBOL Boulder CO	Norm Maguire Albuquerque NM	340
WNLC New London CT	Norm Maguire E. Hartford CT	40
WTOR Torrington CT	Norm Maguire E. Hartford CT	25
WTRL Bradenton FL	Gene Allen Vallejo CA	2440
WJSB Crestview FL	Gene Allen Vallejo CA	2110
WTBS DeLand FL	Norm Maguire Albuquerque NM	1475
WKAT Miami Beach FL	Norm Maguire E. Hartford CT	1180
WEAR Pensacola FL	Gene Allen Vallejo CA	2080
WSIR Winter Haven FL	Norm Maguire E. Hartford CT	1050
WRDW Augusta GA	Norm Maguire E. Hartford CT	735
WMGR Bainbridge GA	Norm Maguire E. Hartford CT	1030
WMJM Cordele GA	Norm Maguire Albuquerque NM	1340
WKMA Quitman GA	Norm Maguire E. Hartford CT	1015
WNNS Statesboro GA	Norm Maguire E. Hartford CT	1030
KTOH Lithue HI	Norm Maguire E. Hartford CT	5000
KBLI Blackfoot ID	Gene Allen Vallejo CA	630
KCID Caldwell ID	Norm Maguire Albuquerque NM	765
WIMV E. St Louis MO	Gene Allen Vallejo CA	1745
WGIL Galesburg IL	Norm Maguire Albuquerque NM	965
WKBV Connorsville IN	Charles Martin Springfield Gdns NY	590
KBUR Burlington IA	Gene Allen Vallejo CA	1680
WKBB Dubuque IA	Gene Allen Vallejo CA	1695
KRIB Mason City IA	Gene Allen Vallejo CA	1565
KVOE Emporia KS	Gene Allen Vallejo CA	1420
WPKY Frankfort KY	Gene Allen Vallejo CA	2030
WKAY Glasgow KY	Gene Allen Vallejo CA	2000
WOMI Owensboro KY	Norm Maguire Albuquerque NM	1120
WSIP Paintsville KY	Gene Allen Vallejo CA	2155
KVQB Alexandria LA	Norm Maguire Albuquerque NM	880
WKIC Bogalusa LA	Norm Maguire Albuquerque NM	970
KEUN Eunice LA	Gene Allen Vallejo CA	1800
KCIL Houma LA	Gene Allen Vallejo CA	1900

KPLC	Lake Charles LA	Norm Maguire Albuquerque NM	810
KRUS	Ruston LA	Gene Allen Vallejo CA	1720
WPOR	Portland ME	Frank Wheeler Erie PA	500
WTVL	Waterville ME	Charles Martin Springfield Gdns NY	355
WGUM	Cumberland MD	Norm Maguire E. Hartford CT	300
WLOE	Boston MA	Charles Martin Springfield Gdns NY	200
WHOB	Gardner MA	Norm Maguire E. Hartford CT	60
WHAV	Haverhill MA	Charles Martin Springfield Gdns NY	220
WBRC/WBRK	Pittsfield MA	Norm Maguire E. Hartford CT	55
WJFK	Detroit MI	Gene Allen Vallejo CA	2095
WESK	Esacanaba MI	Norm Maguire Albuquerque NM	1225
WMPC	Lapeer MI	Charles Martin Springfield Gdns NY	670
WKBZ	Muskegon MI	Norm Maguire Albuquerque NM	1225
KDAL	Duluth MN	Norm Maguire E. Hartford CT	1000
KBZY	Muskegon MI	Norm Maguire Albuquerque NM	1105
KYSM	Mankato MN	Norm Maguire E. Hartford CT	1045
KLGR	Redwood Falls MN	Norm Maguire Albuquerque NM	895
WLOX	Biloxi MS	Gene Allen Vallejo CA	1990
WNAG	Grenada MS	Norm Maguire Albuquerque NM	895
WLAU	Laurel MS	Norm Maguire Albuquerque NM	1020
WMLS	Natchez MS	Norm Maguire Albuquerque NM	945
WHOC	Philadelphia MS	Norm Maguire Albuquerque NM	980
WEL0	Tupelo MS	Norm Maguire Albuquerque NM	970
WVIM	Vicksburg MS	Gene Allen Vallejo CA	1830
KIMO	Carthage MO	Gene Allen Vallejo CA	1540
KGIZ	Grant City MO	Charles Martin Springfield Gdns NY	1065
KTPR	Holla MO	Charles Martin Brooklyn NY	965
KBOW	Butte MT	Norm Maguire Albuquerque NM	800
KONI	Broken Bow NE	Gene Allen Vallejo CA	1230
KBON	Omaha NE	Gene Allen Vallejo CA	1425
KGKY	Scottsbluff NE	Charles Martin Springfield Gdns NY	1535
KWHN	Rene NV	Norm Maguire Albuquerque NM	790
WUSS	Atlantic City NJ	Charles Martin Long Beach NY	85
KVER	Albuquerque NM	Gene Allen Vallejo CA	895
KWEW	Hobbs NM	Gene Allen Vallejo CA	1150
KRSN	Los Alamos NM	Gene Allen Vallejo CA	900
KRTN	Raton NM	Gene Allen Vallejo CA	985
WBTA	Batavia NY	Norm Maguire Albuquerque NM	1620
WNBZ	Binghamton NY	Norm Maguire E. Hartford CT	175
WMBQ/WCNW	Brooklyn NY	Charles Martin Brooklyn NY	25
WKNY	Kingston NY	Charles Martin Springfield Gdns NY	85
WMIL	Long Beach NY	Charles Martin Springfield Gdns NY	8
WLBX	Long Island City NY	Charles Martin Springfield Gdns NY	30
WOLF	Syracuse NY	Norm Maguire E. Hartford CT	140
WHL	Woodside NY	Norm Maguire E. Hartford CT	105
WQQN	Boone NC	Norm Maguire Albuquerque NM	1375
WDNC	Durham NC	Norm Maguire E. Hartford CT	490
WLOE	Eden NC	Frank Wheeler Erie PA	330
WGTC	Greenville NC	Norm Maguire E. Hartford CT	495
WSTP	Salisbury NC	Norm Maguire E. Hartford CT	530
WSVM	Valdese NC	Frank Wheeler Erie PA	515
KNDC	Hettinger ND	Gene Allen Vallejo CA	1160
WSRS	Cleveland Hts OH	Gene Allen Vallejo CA	2175
WBEX	Chillicothe OH	Norm Maguire Albuquerque NM	1300
WOHI	East Liverpool OH	Frank Wheeler Erie PA	125
WMRN	Marion OH	Gene Allen Vallejo CA	2110
KWRW	Guthrie OK	Norm Maguire Albuquerque NM	480
KBLX	Muskogee OK	Norm Maguire E. Hartford CT	1285
KBKR	Baker OR	Norm Maguire Albuquerque NM	890
KRNR	Roseburg OR	Gene Allen Vallejo CA	370
KOCO	Salem OR	Norm Maguire Albuquerque NM	1100
WESB	Bradford PA	Norm Maguire Albuquerque NM	1590
WAZL	Hazlet PA	Frank Wheeler Erie PA	230
WARD	Johnstown PA	Norm Maguire E. Hartford CT	330
WMRP	Lewistown PA	Norm Maguire Albuquerque NM	1500
WBUD	Morrisville PA	Norm Maguire E. Hartford CT	150
WFEN	Philadelphia PA	Charles Martin Springfield Gdns NY	78
WWSW	Pittsburg PA	Gene Allen Vallejo CA	2275
WMBA	Newport RI	Charles Martin Springfield Gdns NY	145
WGCD	Chester SC	Frank Wheeler Erie PA	515
WLAT	Conway SC	Norm Maguire E. Hartford CT	595
WAKE	Greenville SC	Gene Allen Vallejo CA	2235
WCRS	Greenwood SC	Norm Maguire E. Hartford CT	690
KDSJ	Deadwood SD	Norm Maguire Albuquerque NM	695
KORN	Mitchell SD	Charles Martin Springfield Gdns NY	1240
WOPI	Bristol TN	Gene Allen Vallejo CA	2210
WJJM	Lewisburg TN	Gene Allen Vallejo CA	1980

WATO	Oak Ridge TN	Gene Allen Vallejo CA	2115
KNOW	Austin TX	Norm Maguire E. Hartford CT	1540
KIBL	Beville TX	Gene Allen Vallejo CA	1585
KBST	Big Spring TX	Norm Maguire E. Hartford CT	1675
KHUZ	Borger TX	Gene Allen Vallejo CA	1175
KNEL	Brady TX	Norm Maguire E. Hartford CT	1610
KGFI	Brownsville TX	Norm Maguire E. Hartford CT	1700
KREW/KVAL	Brownsville TX	Norm Maguire Albuquerque NM	800
KGKB	Brownwood TX	Charles Martin Springfield Gdns NY	1535
KKYS	Corpus Christi TX	Gene Allen Vallejo CA	1620
KTLC	Houston TX	Charles Martin Springfield Gdns NY	1395
KSAM	Huntsville TX	Gene Allen Vallejo CA	1615
KPAB	Laredo TX	Gene Allen Vallejo CA	1530
KVOW	Littlefield TX	Gene Allen Vallejo CA	1160
KPLT	Paris TX	Gene Allen Vallejo CA	1535
KGKB	Tyler TX	Gene Allen Vallejo CA	1580
KVWC	Vernon TX	Gene Allen Vallejo CA	1320
KVOG	Ogden UT	Gene Allen Vallejo CA	595
KCSU	Provo UT	Gene Allen Vallejo CA	595
WSYB	Rutland VT	Norm Maguire E. Hartford CT	130
WIKK	St Johnsbury VT	Norm Maguire Albuquerque NM	1850
WVET	Hampton VA	Frank Wheeler Erie PA	400
WRET	Richmond VA	Norm Maguire E. Hartford CT	350
WROV	Roanoke VA	Norm Maguire E. Hartford CT	465
KBRO	Bremerton WA	Ron Schiller Avenel NJ	2375
KELB/KLOG	Kelso WA	Norm Maguire Albuquerque NM	1140
KTBI	Tacoma WA	Gene Allen Vallejo CA	640
KENE	Toppenish WA	Norm Maguire Albuquerque NM	1045
KWVB	Walla Walla WA	Ernie Cooper Brooklyn NY	2200
KPQ	Wenatchee WA	Ernie Cooper Brooklyn NY	2275
WGKV	Charleston WV	Charles Martin Springfield Gdns NY	2275
WVVV	Fairmont WV	Norm Maguire Albuquerque NM	1490
WLOH	Princeton WV	Norm Maguire Albuquerque NM	1570
WIGM	Medford WI	Norm Maguire Albuquerque NM	1495
WOSH	Oshkosh WI	Gene Allen Vallejo CA	1720
KIML	Gillette WY	Norm Maguire Albuquerque NM	1140
KRTR	Thermopolis WY	Norm Maguire Albuquerque NM	660
KGOS	Torrington WY	Gene Allen Vallejo CA	835
EWOR	Worland WY	Gene Allen Vallejo CA	1000
WEGW	Mayaguez PR	Gene Allen Vallejo CA	860
CFRC	Kingston ON	Gene Allen Vallejo CA	3600
CJIC	Sault Ste Marie ON	Frank Wheeler Erie PA	230
CHLP	Montreal PQ	Norm Maguire E. Hartford CT	675
XEDR	Guaymas SON	Norm Maguire E. Hartford CT	380
CMOX	Havana Cuba	Gene Allen Vallejo CA	985
		Gene Allen Vallejo CA	2605

1490 khz. after or on Jan 1, 1960

WAJF	Decatur AL	Robert Kramer Chicago IL	510
WRLD	Lanett AL	Jerry Starr Youngstown OH	605
WBBB	Selma AL	Rich Eddie St Louis MO	465
KCUZ	Clifton AZ	Rick Carr Bloomington IL	1225
KAIR	Tucson AZ	Michael Hardester NAS Miramar CA	680
KTL0	Mountain Home AR	Norm Maguire Albuquerque NM	765
KDRS	Paragould AR	Larry Van Horn Millington TN	60
KOTN	Pine Bluff AR	Carl Dabelstein Lincoln NE	510
KARC	Russellville AR	Carl Dabelstein Lincoln NE	430
KWAC	Bakersfield CA	Bill Hardy Aberdeen WA	755
KOWL	Bijou CA	Pete Taylor San Francisco CA	160
KTOB	Petaluma CA	Nancy Hardy Aberdeen WA	540
KBLF	Red Bluff GA	Mike Hardester NAS Miramar CA	190
KDB	Santa Barbara CA	Bill Hardy Aberdeen CA	800
KOWL	South Lake Tahoe CA	Dave Margritz Omaha NE	1305
KBOL	Boulder CO	Gene Allen Vallejo CA	925
KGUC	Gunnison CO	Norm Maguire Albuquerque NM	260
KILQ	Manitou Springs CO	Carl Dabelstein Lincoln NE	485
WGCH	Greenwich CT	Rodney Valdron Petit Rocher NB	610
WNLC	New London CT	Chris Lucas Fairfield CT	61
WTRF	Bradenton FL	Alan Imprescia New York NY	1010
WKEM	Immokalee FL	Ernie Cooper Provincetown MA	1225
WMBM	Miami Beach FL	Jeff Kosnett Evanston IL	1170
WMOG	Brunswick GA	Ron Musco Windsor CT	900
WMLM	Cordale GA	Don Davis Warner Robins GA	50
WAJF	Decatur GA	Bruce Winkleman Man WV	355
WMOA	Marietta GA	Frank Dailey Preston CT	550
WSNT	Sandersville GA	Ernie Cooper Provincetown MA	990

WKRO	Cairo IL	Russ Edmunds	Glen Rock NJ	860
WDAN	Danville IL	Russ Edmunds	Parsippany NJ	700
WESL	East St Louis IL	Paul Mount	Nelsonville OH	460
WOPA	Oak Park IL	Wayne Heinen	Buffalo NY	480
WZOE	Princeton IL	Rich Eddie	St Louis MO	190
WKBV	Richmond IN	Rick Carr	Bloomington IL	220
KBUR	Burlington IA	Carl Dabelstein	Omaha NE	245
WDBQ	Dubuque IA	Wayne Heinen	Colorado Spngs CO	790
KBAB	Indianola IA	Dave Margritz	Omaha NE	140
KRIB	Mason City IA	Carl Dabelstein	Lincoln NE	230
KKAN	Phillipsburg KS	Carl Dabelstein	Overland Pk KS	285
KTQP	Topeka KS	Dan Phillips	Clinton TN	805
WPKY	Frankfort KY	Tim Kerfoot	Weston ON	480
WKAY	Glasgow KY	Rick Carr	Bloomington IL	290
WOMI	Owensboro KY	Paul Mount	Nelsonville OH	315
WSLP	Paintsville KY	Jeff Falcomer	Clinton ON	405
KRUS	Ruston LA	Andy Rugg	Waterloo ON	405
WTVL	Lewiston ME	Carl Dabelstein	Lincoln NE	615
WFOR	Portland ME	Dave Yocis	Fairfield CT	250
WTVL	Waterville ME	Tim Kerfoot	Weston ON	480
WARK	Hagerstown MD	Russ Edmunds	Parsippany NJ	405
WHAU	Haverhill MA	Andy Rugg	Montreal PQ	455
WMBG	Milford MA	Jerry Starr	Youngstown OH	470
WEXL	West Springfield MA	Chris Lucas	Fairfield CT	115
WABJ	Adrian MI	Jerry Starr	Youngstown OH	420
WTIQ	Manistique MI	Andy Rugg	Montreal PQ	565
WMPX	Midland MI	Rodney Valdron	Petit Rocher NB	975
WLRC	Whitehall MI	Russ Edmunds	Parsippany NJ	545
KXRA	Alexandria MN	Rich Eddie	St Louis MO	400
WLOX	Biloxi MS	Russ Edmunds	Parsippany NJ	1100
WHOC	Philadelphia MS	Bill Hale	Shalimar FL	140
WTUP	Tupelo MS	Jerry Starr	Youngstown OH	740
KTPR	Rolla MO	Ralph Sperry	Fairfield CT	1180
KDRO	Sedalia MO	Karl Jeter	Atlanta GA	500
KBON	Omaha NE	Carl Dabelstein	Lincoln NE	230
WEMJ	Laconia NH	Jerry Starr	Hubbard OH	785
WUSS	Atlantic City NJ	Jerry Starr	Youngstown OH	495
KRTN	Raton NM	Debra Hidden	Orlando FL	860
WUSS	Amsterdam NY	Mike Heppe	Houston MS	870
WETA	Batavia NY	Bruce Conti	West Warwick RI	170
WENY	Kingston NY	Dave Yocis	Fairfield CT	285
WICY	Malone NY	Chris Lucas	Fairfield CT	285
WDLG	Port Jervis NY	Morris Sorensen	Toronto ON	360
WOLF	Syracuse NY	Dave Fox	Reading PA	325
WSSB	Durham NC	Chris Lucas	Ithaca NY	115
WLOE	Eden NC	Rodney Valdron	Petit Rocher NB	605
WFLB	Fayetteville NC	Andy Rugg	Montreal PQ	705
WRNB	New Bern NC	Russ Edmunds	Parsippany NJ	425
WRMT	Roaky Mount NC	Tim Kerfoot	Weston ON	640
WHSI	Wilmington NC	Dave Fox	Reading PA	370
KNDC	Hettinger ND	Andy Rugg	Montreal PQ	705
KOVC	Valley City ND	Tim Kerfoot	Toronto ON	680
WREX	Chillicothe OH	Gene Nix	Billings MT	270
WJMO	Cleveland Hgts OH	Morris Sorensen	Leaf Rapids MB	710
WOHI	East Liverpool OH	Paul Mount	Nelsonville OH	34
WMOA	Marietta OH	Chris Lucas	Fairfield CT	430
WMRN	Marion OH	Tim Kerfoot	Weston ON	230
KOKC	Guthrie OK	Paul Mount	Nelsonville OH	36
KBIX	Muskogee OK	Chris Lucas	Danbury CT	510
KBZY	Salem OR	Carl Dabelstein	Overland Pk KS	260
WESB	Bradford PA	Rick Carr	Bloomington IL	470
WAZL	Hazleton PA	Mike Hardester	NAS Miramar CA	515
WGBB	Levittown PA	Chris Lucas	Fairfield CT	285
WMRP	Lewistown PA	Andy Rugg	Montreal PQ	330
WMGW	Meadville PA	Morris Sorensen	Toronto ON	360
WNBT	Wellsboro PA	Rodney Valdron	Petit Rocher NB	695
WMRB	Greenville SC	Rodney Valdron	Petit Rocher NB	825
KORN	Mitchell SD	Chris Lucas	Fairfield CT	215
WOPI	Bristol TN	Robert Kramer	Chicago IL	570
WDXB	Chattanooga TN	Rich Eddie	St Louis MO	570
WDXL	Lexington TN	Andy Rugg	Montreal PQ	750
KNOW	Austin TX	Carl Dabelstein	Lincoln NE	730
KBST	Big Spring TX	Tom Sundstrom	Willingsboro NJ	825
KDOK	Tyler TX	Bill Lackey	Kingsville TX	190
KVOG	Ogden UT	Bill Lackey	Kingsville TX	385
		Gary Atkins	Louisville KY	680
		Gene Nix	Billings MT	350

WKVT	Brattleboro VT	Rodney Valdron	Petit Rocher NB	480
WFAD	Middlebury VT	Chris Lucas	Fairfield CT	195
WIKB	Newport VT	Rodney Valdron	Petit Rocher NB	370
WYKR	Wells River VT	Rodney Valdron	Petit Rocher NB	395
WCUA	Culpepper VA	Andy Rugg	Montreal PQ	525
WVBC	Hampton VA	Andy Rugg	Montreal PQ	605
WAYB	Waynesboro VA	Ron Musco	Windsor CT	430
KVAC	Forks WA	Robert Wien	San Jose CA	765
KLOG	Kelso WA	Mike Hardester	NAS Miramar CA	590
WKIT	Charleston WV	Rodney Valdron	Petit Rocher NB	1030
WLOH	Princeton WV	Jerry Starr	Youngstown OH	220
WSGB	Sutton WV	Stephen McIntire	Des Moines IA	675
WGEZ	Beloit WI	Jeff Kosnett	Chicago IL	75
WLCX	LaCrosse WI	Jerry Starr	Youngstown OH	580
WIGM	Medford WI	Carl Dabelstein	Lincoln NE	430
WYTL	Oshkosh WI	Sharon Waterman	Southwich MA	800
KIML	Gillette WY	Gene Allen	Vallejo CA	985
KOJO	Laramie WY	Carl Dabelstein	Lincoln NE	455
WMDD	Fajardo PR	Hank Holbrook	Chevy Chase MD	1600
CKMV	Grand Falls NB	Rodney Valdron	Petit Rocher NB	110
VOHF	Harmon Field NFLD	Rodney Valdron	Petit Rocher NB	410
CKEN	Kentville NS	Rodney Valdron	Petit Rocher NB	195
CKAD	Middleton NS	Chris Lucas	Troy NY	495
CHYM	Kitchener ON	Bryan Lee	Brooklyn CT	415
GFPB	Port Elgin ON	Dave Fox	Reading PA	410
CKLR	L'Annonciation PQ	Tim Kerfoot	Weston ON	280
CKEM	Montmagny PQ	Tim Kerfoot	Weston ON	470
CJMC	St-Anne-des-Monts PQ	Rodney Valdron	Petit Rocher NB	100
CJSN	Shamavon SA	Morris Sorensen	God's Narrows MB	510

There it is, Graveyard fans. If you have any other GY achievements which would equal or surpass the ones shown in the past six columns, or, if you have any to add, send them in. Next time the Grand Totals column will appear. So get your GY totals, by frequency in to be included for that column, the last of the season. Until next time...

73
Bill

INTERNATIONAL DX ACHIEVEMENTS

NORM MAGUIRE
6105 DEL CAMPO PLACE NE
ALBUQUERQUE, NM 87109

DXer	Location	Countries	FOR.	T.V.	North America - Best
		VAC			
R. Crawford	New Zealand	161 VAC	1329	1474	357 YSCF El Salvador 1155 1kw
B. Dangerfield	Pennsylvania	117 VAC	353	430	115 R. Antigua 644
H. Gustafson	Florida	108 VAC	310	856	68 WXL5 Greenland 850 1 kw
R. Anderson	Virginia	105 VAC	514	1448	227 AHD Puerto Rico
H. Robie	Massachusetts	90	148	263	62 HOK Panama 250w
R. Schiller	Texas	86 VAC	381	2166	260 ACE Puerto Rico 1200 50w
D. Reynolds	California	85 VAC	493	1368	279 R. Montserrat 885 250w
N. Maguire	New Mexico	83 VAC	560	3126	289 ACE 1470 50w
E. Cooper	Massachusetts	78	757	4132	527 HP5B Panama 730 100w
H. Wilkinson	California	78 VAC	456	482	138 St. Pierre 1275 1 kw
G. Allen	California	65 VAC	544	2895	337 WUMS Ohio 1560 5w
A. Rugg	Quebec	60	179	1483	76 WKFE Puerto Rico 1550
R. Leamy	Ohio	48	116	317	86 R. Montserrat 885 250w
R. Sperry	Connecticut	42	249	1669	216 ACA Canal Zone
S. Dellit	Australia	37	218	362	109 KBBR Ore. 1340 250w
R. Carr	Texas	36	169	1175	154 R. Anguilla 1505
R. Kenneally	Ohio	30	127	805	100 JBC Jamaica 700
F. Wheeler	Pennsylvania	24	189	1707	179 KFAR Alaska 660 10 kw
W. Powis	Virginia	23	208	312	17 CBK Sask. 540 50 kw
P. Swearingen	Kansas	18	53	420	42 R. Jumbo Dominica 540
R. Eddie	Missouri	15	55	1028	51 R. Paradise St. Kitts
K. Rychalsky	Connecticut	12	48	262	46 R. Belize 834
N. Wolfish	Ontario	11	10	235	9 ??
P. Mount	Ohio	6	25	225	22 WKAQ Puerto Rico 580

Welcome to Ray Crawford and to the return of ERC. We have many other NRC members with good totals and would like to have your listings. VAC = Verified All Continents. T.V. = Total veries. Next issue will feature Asia totals and best veries. Hank Wilkinson continues to pull them in and extract veries from the stations. This time, he added a new country with a verie from Truk in the Eastern Caroline Islands. Good DXing and good health. 73,

Norm

BROADCASTING IN GERMANY

Arnim Littek

For those of you in North America who are avid TA DXers, this country permits plenty of opportunity for your reception of Europe. Perhaps some German stations are the easiest Europeans. With that in mind it would likely be worthwhile if the system of broadcasting in Germany were explained.

Everything is different. First of all, the Post Office in Germany is like a combination of Ma Bell and the FCC, in addition to its mail business. It licenses the frequency assignments within Germany, and also sells broadcasters their audio lines, for transmitter links, for news bureaus or special programs, and other sundry reasons.

Then there is the ARD (Arbeitsgemeinschaft der Öffentlich-rechtlichen Rundfunkanstalten der Bundesrepublik Deutschland) which is a relatively loose organization binding together most (not all) of the broadcasting units in Germany. The members of ARD are:

BR - Bayerischer Rundfunk
HR - Hessischer Rundfunk
NDR - Norddeutscher Rundfunk
RB - Radio Bremen
SR - Saarländischer Rundfunk
SFB - Sender Freies Berlin
SDR - Süddeutscher Rundfunk
SWF - Südwestfunk
WDR - Westdeutscher Rundfunk

DLF - Deutschlandfunk
DW - Deutsche Welle

RIAS-Berlin - Rundfunk im Amerikanischen Sektor

The first nine companies were either brought into being by individual state governments, or, as in the case of NDR and WDR, have contracts with the states which they serve. DLF and DW were founded by the national government in Bonn. RIAS is an associate member of the ARD.

Commercial radio, as we in North America know it, does not exist in Germany. Every radio and television set is taxed annually, under a relatively complex set of rules. Currently, the monthly rate is 3.80 DM for a radio, 13.00 DM for a television. No extra charge is added for radio and television and the monthly fee goes no higher than 13.00 DM per household. The funds are collected by the Gebühreneinzugszentrale, who turns it over to the ARD. The money is then split among the Rundfunks according to the number of radios in each region of land. The smaller Rundfunks, such as RB and SR receive disproportionately large divisions of the income, in order that they can make realistic contributions to ARD programming.

Another of the major functions of the ARD is the running of the program switching center in Frankfurt. Programming, both radio and television, is frequently shared among Rundfunks, and it is all sent over land lines. Because of the prohibitively high cost of a complete network among all the Rundfunks, a center was created in Frankfurt, through which all programming is switched. It was a huge expense, but so high are the costs in Germany for landlines that it very nearly paid itself off in its first year of operation (1975).

Most of the Rundfunks have more than one program. In North America it is relatively common for a station to have two programs, one for its AM transmitter and one for its FM transmitter. A standard number in Germany seems to be three. Not all have three programs; for instance, RB, which is sufficiently small that they produce only one program, but most have more. I shall take NDR for example, since I know it best. All three programs are mainly FM networks. NDR has virtually blanket coverage of its region with 17 transmitter locations, each with three transmitters (one for each program). In addition, in Kiel, Harz and Hamburg, there is a transmitter for a fourth program. This program, in various foreign languages, is for the many foreign workers (Gastarbeiter) in Germany. See map.

The foreign language program is of little concern for the MW DXer. NDR program 1 is the only program also transmitted on medium wave, from locations in Hamburg, Kiel, Hannover and Flensburg. That seems to be the case with most of the Rundfunks in Germany. One of their programs is made mono and sent to their MW transmitters. Almost as an afterthought.

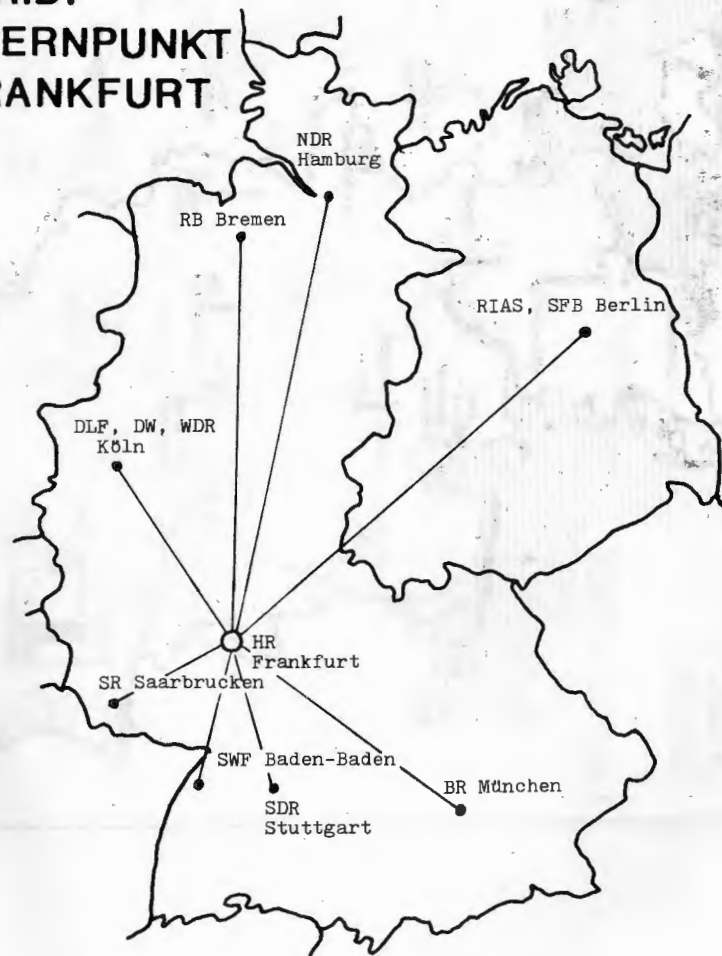
The broadcast stations here are not really 24 hour operations. Normal programming comes to a halt by 2400 or 0100 local time (GMT +1). However, the ARD has arranged that every night one of the Rundfunks produces a night program, which is made available to all the others through Frankfurt. Each day of the week has a different point of origin: (List of 1980)

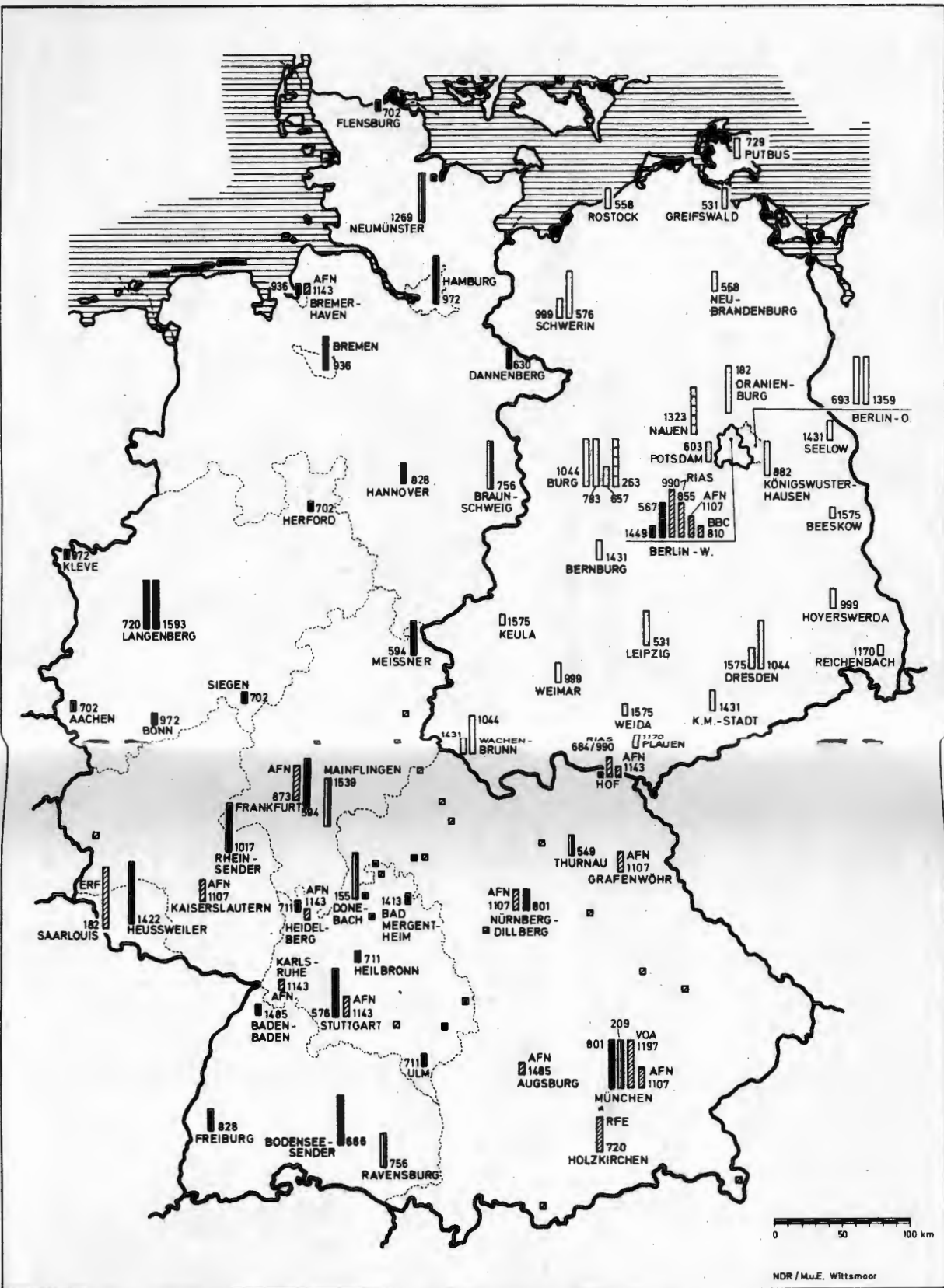
Monday/Tuesday - SFB
Tuesday/Wednesday - SDR
Wednesday/Thursday - HR
Thursday/Friday - BR
Friday/Saturday - WDR
Saturday/Sunday - SWF*
Sunday/Monday - NDR**

*SWF shares the duties with Saarländischer Rundfunk (SR). SR does the night show once every four weeks. For 1980 the schedule for SR is: Jan. 19/20, Feb. 16/17, Mar. 15/16, Apr. 12/13, May 10/11, June 7/8, July 5/6, Aug. 2/3, Aug. 30/31, Sept. 27/28, Oct. 25/26, Nov. 22/23 and Dec. 20/21.

**NDR shares the duties with RB. RB does the night show every four weeks also. The 1980 schedule for RB is: Jan. 13/14, Feb. 10/11, Mar. 9/10, Apr. 6/7, May 4/5, June 1/2, June 29/30, July 27/28, Aug. 24/25, Sept. 21/22, Oct. 19/20, Nov. 16/17 and Dec. 14/15.

A.R.D. STERNPUNKT FRANKFURT





STAND: JANUAR 1979

LANGWELLEN- UND MITTELWELLESENDE

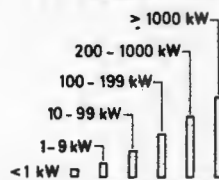
BUNDESREPUBLIK

- SENDER DER LANDES - RUND-FUNKANSTALTEN
- ▤ SENDER DER DBP FÜR DIE RUND-FUNKANSTALT DEUTSCHLANDFUNK
- ▨ SENDER ANDERER DIENSTE RIAS, AFN, BBC, RFE, VOA

DDR

- STAATL. RDFK. KOM.
- ▤ SENDER ANDERER DIENSTE
- ▨ FREQUENZ IN kHz

SENDERLEISTUNG



In North America, it has become something of a common practice for some stations, especially in larger cities, to employ an aircraft for audience information of traffic developments. The Germans have a different approach; the Verkehrsstudio.

Most, if not all the auto radios in Germany can be fitted with tone decoders, which, when they hear a certain combination of tones, perform a function, specifically that of switching the local radio program to its Verkehrs (traffic) program, to inform the driver of the local problem. This system employs FM subcarriers. Traffic information is an integral part of every newscast in Germany also, but the tone decoders are used to switch a network newscast to a more local traffic news studio. It is also used when an emergency occurs, or a problem occurs and no newscast is imminent. In these cases, it can just override normal programming. A different combination of tones switches to a different region. This way the Verkehrsstudio in, say Hamburg, can get out traffic reports to each of the major cities in its domain. Aircraft are used too, but mainly to inform the studio. All information must first be confirmed by the police. A bit of extra German bureaucracy, but its only formality.

DX'ING GERMANY

There are advantages and disadvantages in this for the North American DXer chasing down Europeans. The biggest advantage is the transmitter power race that is always going on. In Europe, the AM band has turned into a very large propaganda instrument. In Germany, the powers go all the way up to a maximum of 1200 kW, that's 2.4 times the power of Bonaire, and almost everyone in the NRC has heard that! That makes it hard to DX here, but easier to hear Germany in North America. After all, 800 kW on 1593 kHz should get out fairly well.....

The difficulties though, are numerous. Non-commercial radio has a lot less identifiable detail. Less stuff like telephone numbers, store advertisements unique to a city, and such like. With the non-commercial radio comes a laid-back CBC-type of attitude to radio. IDs are not pounded out every 5 minutes. If fact seldom more than once an hour, and it is quite possible that that is skipped too.

Modulation levels are generally lower here too. That means audio is harder to pull out of a carrier. There's less audio processing in Germany, too, especially compression. Compression makes the sound seem louder. It's hard to explain so briefly, but a compressed signal is more easily heard than a "natural" signal.

And then, of course, there's language. Europe is a disaster area for languages. In one twist of the wrist, I can tune 25 languages. And to compound the problem, you might get "This is Radio Moscow" or, "Govorit London". Since a lot of these transmitters are propaganda instruments, they very frequently broadcast in non-native languages. For DXing in this situation I can only suggest WRTVH, two aspirin and a heap of patience.

On MW, fortunately, the Germans tend to stick to their own language. Except for the Deutschlandfunk (DLF). But since there are so many German speaking people in Europe (Switzerland, Austria) the language is popular among the international propaganda set. So, be wary....German does not always mean German stations.

CREDITS

ARD - Tonstudioteknik - editor: Michael Dickreiter, June 1977. Schule für Rundfunktechnik, Nürnberg.

NDR - Hörfunk und Fernsehsender in der Bundesrepublik Deutschland und Berlin (West) - collected by Measuring and Monitoring Station Wittsmoor - editor: Walter Fiegerbaum.

Rundfunk Sender im Langwellen und Mittelwellen Bereich (taken from "Final Acts of Regional Administrative LF/MF Broadcasting Conference, Regions 1 and 3, Geneva 1975"), version Nov. 23, 1978.

Logbook from Norddeutscher Rundfunk Mess und Empfangsstation Wittsmoor, Jan. 8-28, 1980.

Freq.	Place	Affiliation	Power (kW)	Remarks
520	Hof	BR	.2	
	Wuerzburg	BR	.2	
531	Greifswald	DDRI	10	
	Leipzig	DDRI	100	
549	Nordkirchen	DLF	100	(under constr.)
	Thurnau	DLT	20	
558	Neubrandenburg	DDRI	10	
	Rostock		10	(part time only)
567	Berlin	SFB	100	
576	Schwerin	DDRI	250	
	Stuttgart	SDR	300	
594	Frankfurt	HR	400	
	Meissner	HR	100	
603	Koenigwusterhausen	DDRI	20	
630	Dannenberg	SFB/NDR	10	
657	Neubrandenburg	BRF	20	Burg, (250 kW days from)
666	Boderseesender	SWF	180	(300 kW days)
	Hof	RIAS	40	
	Berlin	BRF	250	(DDR)
702	Aachen	WDR	1.2	(5 kW days)
	Flensburg	NDR	1.2	(5 kW days)
	Herford	WDR	2	
	Siegen	WDR	2	
711	Bopfingen	SDR	.2	
	Heidelberg	SDR	5	
	Heilbronn	SDR	5	
	Ulm	SDR	5	
	Wertheim	SDR	.2	
720	Holzkierehen	RFE	150	
	Langenberg	WDR	200	
729	Putbus		10	(part time only)
756	Braunschweig	DLF	200	(800 kW days)
	Ravensburg	DLF	100	
	Burg	VDR	250	(DDR)
801	Dillberg	BR	50	
	München	BR	420	(450 kW days)
810	Berlin	BBC	5	(German)
828	Freiburg	SWF	40	
	Hannover	NDR	5	(40 kW days)
	Kiel	NDR	.5	
	Berlin	RIAS	100	
	Koenigwusterhausen	DDRI	100	
936	Bremen	RB	100	
	Bremerhaven	RB	5	
972	Bonn	WDR	5	
	Hamburg	NDR	300	
	Kleve	WDR	3	
990	Berlin	RIAS	300	
	Hof	RIAS	40	
999	Hoyerswerda	BRF	20	(DDR)
	Schwerin	BRF	20	(DDR)
	Weimar	BRF	20	(DDR)
1017	Wolfsheim	SWF	600	
1044	Burg	DDRI	20	
	Dresden	DDRI	250	
	Wachenbrunn	DDRI	250	
1107	Berlin	AFN*	10	*(All AFN stations are in English)
	Grafenwoehr	AFN	10	
	Kaiserlautern	AFN	10	
	München	AFN	40	
	Nuernberg	AFN	10	

Freq.	Place	Affiliation	Power (kW)	Remarks
1143	Bad Kissingen	AFN*	.25	*(All AFN stations (are in English)
	Bamberg	AFN	.25	
	Bitburg	AFN	.25	
	Bremerhaven	AFN	5	
	Fulda	AFN	.25	
	Giessen	AFN	.25	
	Goepfingen	AFN	.25	
	Heidelberg	AFN	1	
	Hersfeld	AFN	.25	
	Hof	AFN	1	
	Karlsruhe	AFN	1	
	Stuttgart	AFN	10	
	Wertheim	AFN	.25	
	Wildfleck	AFN	.25	
1170	Wuerzburg	AFN	.25	
	Plauen	BRF	5	(DDR)
	Reichenbach	BRF	5	(DDR)
1197	München	VOA	300	
1269	Neumuenster	DLF	600	
1323	Nauen	RV	150	(DDR)
1359	Berlin	RBI	100	(DDR, 250 kW days)
1413	Bad Mergentheim	SDR	2	
	Buchen	SDR	.3	
	Heidenheim	SDR	.3	
1422	Saarbrücken	SR	600	(1200 kW days)
1431	Bernberg	BRF	20	(DDR)
	Karl-Marx-Stadt	BRF	5	(DDR)
	Seelow	BRF	5	(DDR)
	Wachenbrunn	BRF	20	(DDR)
1449	Berlin	SPB	5	
1485	Anklam +11	DDRI	More or less 1 kW X 12	
1539	Mainflingen	DLF	700	
1575	Dresden	BRF	5	(DDR)
	Beeskow	BRF	5	(DDR)
	Keula	BRF	10	(DDR)
	Weida	BRF	5	(DDR)
1584	Bad Doberan +8	DDRI	More or less 1 kW X 9	
1593	Langenberg	WDR	800	
1602	Angermuende +12	DDRI	More or less 1 kW X 13	

Affiliation abbreviations:

DDR = East Germany

AFN - American Forces Network
 BBC - British Broadcasting Corporation
 BRF - Berliner Rundfunk
 RBI - Radio Berlin International
 RV - Radio Volga
 VOA - Voice of America
 Other abbreviations are found on first page of this article.

RADIO TRINIDAD



To Pat Hartlage, Esq.

Thank you for your reception report of our transmission
 on 730 KHz at 0700 GMT, on 18th February, 1980.

We have pleasure in verifying your report which is much appreciated.

Date 6th March, 1980.

Engineer-in-Charge

HUMPLER 4NK8

Over the years, DXers have all wished, at one time or another, that someone would build the "ideal" BCB receiver. Until now, many attempts have been made, but none have been thoroughly satisfying. Now, we are happy to announce the Humpler 4NK8. Packaged in a handsome corrugated cardboard carton, this set is only available by mail. It operates on AC/DC; it's self-contained, has rechargeable batteries or operates from its own solar panel. (If the user wishes to DX at night, he can then unfold the self-contained sunlamp and reflector in order for the solar cells to operate with the added benefit of allowing the user to obtain a suntan while DXing Florida).

Seriously, upon first seeing one, the impression one gets is like that of seeing the Grand Canyon (or, Cleveland) for the first time. The sleek, silver-grey plastic housing is accented by a "black-out" dial, a light blue control panel, masculine chrome knobs, and grille-cloth by Halston. There are several trap doors on the top of the cabinet. These doors contain the shielded ferrite antenna, a collapsible whip, the solar panel, and the sunlamp. On the back-side, there are the usual output jacks and a couple of "new" ones (which will be described later), and an indentation where the power cord comes out (the cord itself is on a retractable reel, similar to those found on vacuum cleaners). The whole set rests on four rubber feet and weighs in at 14 pounds (metric is not used on this set as it would look rather silly resting on four rubber "meters").

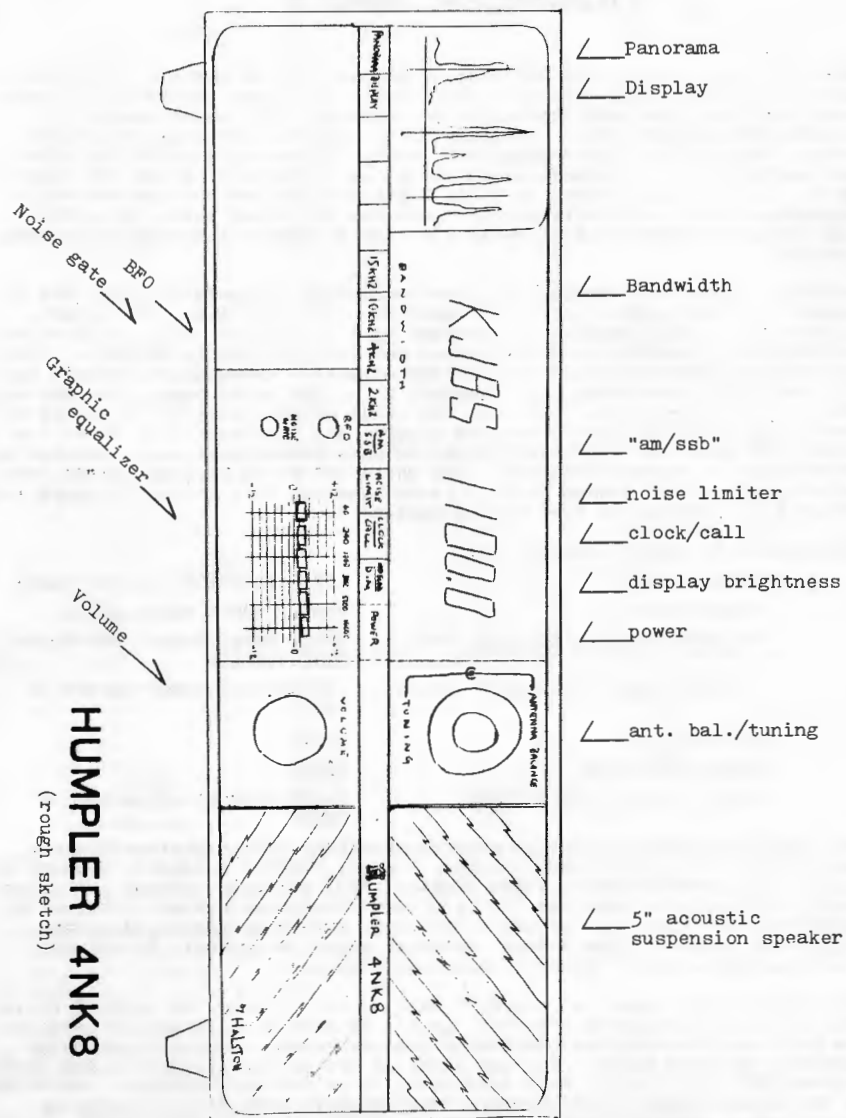
Manufacturer's specifications are:

Band coverage	500 - 2000 kHz (in one band)
Sensitivity	Very: don't shout at it
Selectivity (at -6db and -60db)	2kHz, 4kHz, 10kHz, and 15kHz (switchable)
Signal/noise (all stages, total)	-100db with power switch on "off"
IF rejection	100db
Image rejection	100db
Total harmonic distortion	0.00% with power switch on "off"

Additional features: Built-in graphic equalizer, noise limiter/blanker, oscilloscope tuning/panoramic display, clock, digital frequency readout to 0.1kHz, programmable call-letter display, BFO, built-in antenna (shielded ferrite and whip to make use of the altered reception pattern obtained by using whip and loop), solar panel, sunlamp, am/ssb detector, display brightness control, tape output, external amplifier output, IF output, headphone jack, and 5" acoustic suspension speaker.

With spec's like those, we couldn't wait to try it out. We decided to use the built-in, rechargeable battery pack. No need to flip any switches as the built-in circuitry automatically switches power sources to whatever supplies the most power: for instance, if the set is plugged in and there's a power failure, the set will automatically switch to batteries. We hoisted up the antenna (a 15" shielded job on a hydraulic-damped, telescoping swivel mount) and depressed the power button (which promptly lit, indicating the set in operation). The frequency readout and call-letter readout came on in a bright green, fluorescent glow, and the oscilloscope instantly came to life. Unexpectedly, a rich, mellow sound came out of the 5" acoustic suspension speaker. Wow! Sound like that only until now, found on expensive stereos and "state-of-the-art" consoles from the late 30's. Something was wrong, however. The testing session was right in the middle of the day, and, according to the frequency, we were tuned to Denver, only receivable here during the night. It was coming in like a local! Frequency readout said 750.0kHz, the graphic equalizer was set for "flat", bandwidth was "4kHz", noise filter/blanker was "in", and the clock said 1323:05. Incredible!!

We played around with it a little bit more and found it was no mistake: the set performs as well during the day as all the other sets perform at night! The dual-conversion Rice i.f. strip (based on Uncle Ben's principle) really does the trick. The near-perfect i.f. rejection eliminated all slop



MORE YAD...

YAD-80 IS COMING! MAKE YOUR PLANS NOW! WHERE ELSE CAN YOU HAVE SO MUCH FUN FOR SUCH A SMALL REGISTRATION FEE (\$ 23,660.98). MEET ALL THE RICH HRC'ERS, SEE: KREJNY ACTUALLY DX! SEE: AL MERRIMAN FALL DOWN! SEE: RON MUSCO STAND UP! SEE: IF WAYNE HEINEN'S V.W. MAKES IT FROM COLORADO! SEE: THE COUNTRY'S RAREST DX-CATCH STATION! SEE: DEAD STEEL MILLS! SEE: SA!! SEE: NOTE! SEE: BEE! SEE: SHARP! SEE: SHORE! SEE: RATIONS! SEE: MO SEE: LEVEL! SEE: SI SENOR! ALL AT YAD-80 IN YOUNGSTOWN OHIO ON MEMORIAL DAY WEEKEND. FOR MORE INFO, SEE: JERRY STARR, WSRD RADIO, 401 N. BLAINE, YOUNGSTOWN, OH 44505. SEE IF YOU CAN BE THERE. WE WANNA SEE YOUR FACE IN THE PLACE!

from locals. The logic-controlled r.f. never overloaded, avoiding the need for an attenuator. The 50:1 tuning ratio made tuning a breeze, and the graphic equalizer brought those ID's right out in the open.

The antenna system is rather unique. It uses the principle RDF's use. Basically, there's a loop and a whip. This combination allows the user to actually control the pick-up pattern of the antenna, by adjusting the "antenna balance" control, which is dual-concentrically mounted with the tuning knob. One tunes in a station, rotates and tilts the loopstick, twiddles with the balance knob for best results, and merrily logs new stations. The significance here is when there are two stations on the same frequency, 180 degrees apart, and you can't null either one out. By adjusting the balance control, it is possible to re-shape the pick-up pattern to actually null out one of the stations: the net neffect is that you have a "cardiod" pick-up pattern. The only problem is that the side nulls loose depth, but with the set's fantastic selectivity, that is really no problem.

The oscilloscope indicator is a real boon to DXing. In "panorama", the display shows a bandwidth (horizontal axis) of 30kHz. The centerline of the scope shows where the set is tuned. The frequency tuned appears as a peak in the center. If there happens to be any adjacent stations, they will show up, also, as peaks, however many kHz they are away from the tuned frequency. This makes tuning a snap. Just watch those peaks. Also, the vertical axis indicates relative strength of the signals.

Pushing the "clock/call" button, the clock becomes a call-letter indicator, which the user programs to readout the appropriate call-letters for any given frequency. This operates in a similar fashion to an expensive FM receiver currently on the market. The alpha-numeric display is good for all 26 letters of the alphabet and numbers from 0 to 9.

And speaking of fashion, the grille-cloth by Halston will certainly allow this set a place in any living room.

The controls for adjusting the oscilloscope and for programming the clock/call-letter display are behind a hinged door under the oscilloscope. Bandwidth controls, display controls, "am/ssb" switch, noise-limit switch, "call/clock" switch, oscilloscope functions, and power switch are all mounted in a neat row across the front of the set between the blackout dial and the control panel.

So, just how good does the set operate? How does it compare to anything else on the market? In the words of its producer, Ewell Humpler, "Just ask any April Fool!"

Is this really necessary?

EDITOR: In a few days, the U.S. government will meet in Buenos Aires to convince South Americans to convert to 9 khz AM spacing. They will claim "bad interference" if we don't switch, claims based on theoretical projections that don't seem to fit reality.

Note that Europe has been on 9 khz spacing through three sunspot minima already, and there is no record of interference occurring in the Northeast due to European signals. It's equally improbable that harmful interference will occur in South America due to African interference, noting Africa went to 9 khz spacing at a 1966 Geneva conference and for the past decade no interference to general listeners is reported except for one or two freak occurrences.

In the absence of a pressing need of their own, is this vague threat of interference by itself enough to convince other Region 2 governments to make a change that many North American broadcasters don't want?

It's ironic that no attention is paid to the real threat to good reception quality on AM—poorly designed TV receivers that radiate sweep oscillator harmonics, and noisy electrical machinery. This accounts for practically all the noise pollution on the AM band. This is the real technical threat to wider-bandwidth AM radio's attempt to catch FM, and to AM stereo, and I question whether the newer detectors for AM stereo can handle this noise problem.—Robert Foxworth, New York.

Open Mike

Broadcasting Mar 3 1980
19



STRONG SIGNAL HANDLING

Chuck Hutton

In the October 1975 issue of Ham Radio¹ James Fisk makes a statement which I think contains the most important principle needing consideration by the MW DX'er seeking a receiver suited for his somewhat unique needs. His statement is: "Why design a high frequency receiver for extraordinary sensitivity when its performance is limited by external noise over which you have no control? A very sensitive receiver is more prone to intermodulation and cross-modulation effects, and these may be more important".

Indeed for the broadcast band DX'er, strong signal handling is likely to be the most important quality of his receiver. To those accustomed to judging a receiver in terms of sensitivity and selectivity, this may come as somewhat of a surprise. In order to explain the wisdom behind Mr. Fisk's words and justify the above statement, let us now take a look at just what dictates the reception of a station at MW frequencies.

I. Selectivity

If you were to install a mechanical filter in your rx or purchase a receiver with an excellent crystal lattice filter or mechanical filter, you would expect top-notch selectivity and the accompanying ability to DX up close to the locals. This is not guaranteed, however. When considering selectivity, two major factors tend to be ignored: ultimate rejection of the filter, and where in the receiver (electrically) the filter is located. Ultimate rejection of a filter is defined as the greatest amount of signal that will be rejected; this value is a function of the characteristics of the filter and the amount of signal that leaks around the filter and appears at the input to the next stage. Figure One is a diagram of the selectivity of a good quality ceramic filter, an average crystal lattice (8 pole) or mechanical filter, and the best quality mechanical filter available. One can easily see that the ultimate rejection of (a) is around 40 dB, of (b) around 70 dB, and (c) around 90 dB. Now what does this mean in terms of practical performance? As the average S-meter is calibrated to a standard of 6 dB/S-unit, filter (a) will totally reject only an S7 signal, (b) only a S9+16 dB signal, and (c) a S9+36 dB signal. As we are interested in strong signal handling, we can see that (a) will handle no locals, (b) might handle the weaker ones, and (c) will handle most of them. We will discuss the importance of this situation a bit later on when we devote our attention to strong signal handling by itself. Let us now return to where in the receiver (electrically) our filter is located. The chief consideration here is the old adage "place maximum selectivity in front of maximum gain", or, "put the selectivity as close to the antenna as possible". Why? Because the more stages that are exposed to a large number of strong signals, the more the receiver will suffer the effects caused by strong-signal overloading. Ideally, the selectivity should come at the first mixer output that is at the center frequency of the filter. Therefore, one stage may precede the filter in a receiver with no RF stage and single conversion, or as many as six stages in the case of a dual RF stage, triple conversion receiver with the filtering located after a stage of amplification at the final IF. Receivers have been built with both extremes! With the latter scheme, the strong signal damage is done before the sharp filter gets a chance to do its job and remove the unwanted numerous signals. This particular situation is even more undesirable than it sounds because certain types of distortion caused by strong signals increase 3 dB as the strong signal level increases by 1 dB; therefore if we have 30 dB more gain in front of the filter with the 6-stage scheme, we may possibly have 90 dB more intermodulation distortion (a term to be explained later).

II. Sensitivity

Briefly in the discussion on selectivity, we touched on what happens when there is an excess of gain in front of the filter. This situation may also occur if the receiver has too much sensitivity for MW DX. Impossible, you say? The more sensitivity, the weaker the signal that can be heard? You are thinking in terms of a signal that does not have to compete with either man-made or natural noise, both of which are at very significant levels at MW frequencies; these levels in fact are higher at MW frequencies than at SW frequencies. The required sensitivity of a MW receiver will be, on the average, almost 100 times less than that required for DX on the 10 meter ham band at 29 mHz. A good range of sensitivity for MW DX is the 10-20 uv area. A full discussion of why this

is the case would take up too much space and bog the article down with figures and graphs; the interested readers can find all the information needed on man-made and atmospheric noise levels in the material referenced in the appendix. Particularly useful are the Fisk article, the CCIR report, and the Skomal book.

If you are using a receiver with "good" sensitivity by modern standards (less than 1 uv), you should be thinking hard about what Mr. Fisk had to say at the beginning of this article. Your situation is the dangerous one he refers to, with even more emphasis, as what he had in mind of course refers to situations likely to be encountered on the ham bands. The MW situation is much more difficult; while a ham might complain if he lives within a mile of a few friends running the 1 kw legal limit, we must contend (assuming an urban location) with 50 kw NSF locals and a total of perhaps 20-30 stations all running the same power or more than the ham is allowed. In addition, the MW DX'er is often interested in hearing a station only 5 or 10 kHz away from a very strong local. The ham can exercise the option of moving his frequency away from the interference. Hardly a viable option on the BCB.... We are thereby in an unfortunate position: the MW DX'er needs better strong-signal handling than possibly anyone else, but also suffers from a great deal of unneeded sensitivity that is detrimental to strong signal handling.

III. Strong Signal Handling

So far we have made reference to two parameters that may make a receiver handle strong signals in a poorer fashion than the receiver is basically capable of. Or rather, then the mixer(s) is/are capable of. It is in the mixer that most unwanted effects are produced. The RF stage (if used) may contribute to the problems to be outlined below but this is usually secondary as the signal levels are higher in the mixer(s) and this leads to a greater concentration of problems, in addition to the fact that by nature, the mixing process is prone to produce certain unwanted products. To describe the basic strong-signal handling of a receiver, let us launch into a basic description of some terms that are applied to mixer performance.

When a non-linear device (a mixer as opposed to an ideal amplifier) is presented with two frequencies, the unfortunate by-product is a complicated assortment of new frequencies. For example, take f_1 of 750 kHz and f_2 of 790 kHz. Intermodulation distortion (the process referred to above) will produce a plethora of unwanted signals at frequencies related to the originals with definite mathematical relationships. The third-order intermodulation products will fall at 830 and 710 kHz, the frequencies where I note an unfortunate jumble of audio from super-local WSB-750 and local WQXI-790. The importance of third-order IM products is that: as the desired frequency levels are increased, the third-order IM products increase, but for every 1 dB increase in the input level, the IM level at the output increases by 3 dB. Taking that fact into account, it becomes apparent that as the input level to the mixer increases, a point will be reached where the level of the undesired IM products will be equal to the level of the desired input frequencies. This point is referred to as the third-order intermodulation level intercept point. A mouthful of a phrase indeed, but a very important term to become acquainted because it is the internationally recognized standard of performance for mixers and an excellent way for the DX'er to evaluate the strong-signal handling of his receiver. A top quality receiver will specify this data, as the manufacturer will be aiming for a market that both wants and understands strong signal handling. An average receiver is not likely to include this data with its advertising specs because the intended market is not likely to be familiar with such terms.

Figure Two illustrates the process by which the third-order IM intercept point is established. As seen by examining the portion of the graph near the intercept point, a real-life amplifier goes into a condition known as "gain compression" before it is actually possible to establish the intercept point. Interpolation is used to establish the intercept point once the data at other levels has been obtained. Gain compression is mentioned because it has a practical effect on DX'ing; when your receiver is tuned to a wanted, weak station near in frequency to an unwanted, strong station, the result is an apparent weakening in the level of the weak station. An example would be DX'ing for R. Melodia, Quito on 735 kHz while WSB-750 is on the air. Melodia appears quite weak while WSB's carrier is on the air, not because WSB is interfering in a direct sense, but because WSB is so strong here that their RF is exceeding the bias on either the RF or mixer stages. This drives the grid into conduction which reduces gain and increases distortion. When discussing gain compression, the standard is the 3 dB compression point; this usually occurs 10-15 dB below the intercept point.

Cross modulation is yet another type of amplitude distortion caused by strong signals. It is defined as the transfer of modulation from an undesired signal to a desired signal that the receiver is tuned to. Cross modulation is unrelated to the desired-signal level, instead being proportional to the square of the undesired signal level. A pleasant effect of this relationship is that if you can afford to place 5 dB of attenuation in front of the receiver (an RF attenuator such as supplied on the FRG7) cross modulation will be reduced by 10 dB. With a sensitive receiver (and therefore too much gain for the MW band) it is often quite feasible to do just this. Cross modulation can be related to third-order IM intercept point by the equation

$$m/m' = (P_{ip}/4P_c)^{-1/2}$$

where: m/m' = ratio of cross-mod transferred from the larger signal to the smaller one

P_{ip} = intercept point power

P_c = interfering signal power

and cross-mod in dB is $m/m'(\text{dB}) = 20 \log(m/m')$

This formula is included in order to allow interested DX'ers to compare third-order IM intercept point (the usual standard) to cross-modulation levels (sometimes specified instead)

The last strong signal concept to be discussed is dynamic range. This is an attempt to specify the range of signals that the receiver is capable of handling. In other words, the range from the weakest signal that can be used to the strongest signal that can be handled. It is an important value to specify because it demonstrates the ability of the receiver to handle both situations; a receiver may be able to handle extremely strong signals simply because it has very little gain (and therefore less sensitivity) ahead of the mixer. A receiver that handles a 100 mv signal by applying it straight to the mixer is obviously inferior to a receiver that can also handle a 100 mv input signal but also sends it through a stage of amplification before it proceeds to the mixer.

IV. How to Achieve Strong Signal Handling

So far we have touched on the above in relation to RF stages (don't have more sensitivity than you actually need) and IF stages (use filtering that will be effective against strong locals). Our discussion of the heart of the matter—the mixer(s)—has been limited to terms used to quantitate mixer performance. Back-tracking a bit, we should also take note that at MW frequencies, the RF selectivity can be very important to the mixer. A large number of high-Q tuned circuits ahead of the mixer is going to prove beneficial to the receiver. A practical example is the R390A, which features an elaborate network of mechanically tracked tuned circuits of high Q and moderate loss. This situation is excellent for MW DX, as the mixer(s) are thereby protected to some degree from many unwanted strong signals.

The heart of the matter is the performance of the mixer itself. Different mixers have third order IM intercept points ranging from -40 dBm to +30dBm. A -40 dBm level mixer will manifest itself in a MW band full of cross-modulation, third order intermodulation, and slop from locals. A +30 dBm level mixer will provide performance almost totally free from said effects as it will prove close to impossible to overload such a mixer. With no RF stage ahead of the mixer (not only possible but desirable for MW and most SW frequencies) we are talking about close to a volt of RF before performance is impaired. A mixer like this is obviously no ordinary mixer; it is a double-balanced Schottky diode mixer developed for specifically this purpose. A poor mixer is typified by a bipolar transistor and a fair mixer by a tube or good FET design. A balanced FET design (such as used in the FRG7) will yield improved performance over that of a single semiconductor, but performance will still fall far short of a double balanced diode mixer. This type of design has been incorporated in many new high-performance receivers such as the Drake R7, the Dymek DR series, the new RACAL receivers, and the Rohde and Schwartz receiver. A good way for you to get a feel of what this type of mixer can do would be to proceed to the nearest ham outlet that carries Drake equipment and give the R7 the once-over.

You may have noticed that these receivers carry hefty price tags. This is not because of the mixers! Basic double balanced mixers start at less than \$5 to the experimenter, with the high-performance types ranging up to \$25. Considering the price reduction manufacturers of receivers will obtain, it is likely that in the very near future, we will see moderately priced receivers featuring these mixers.

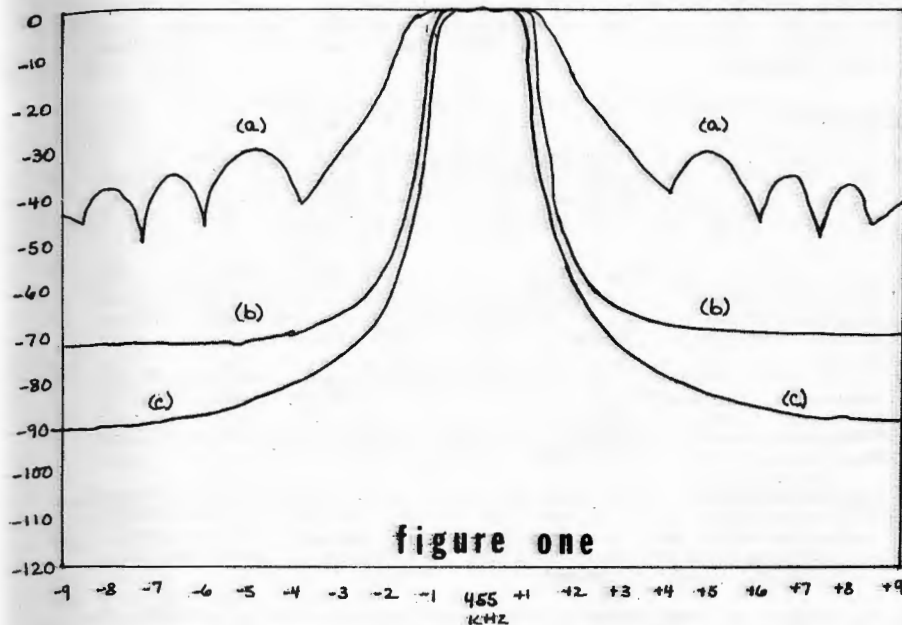


figure one

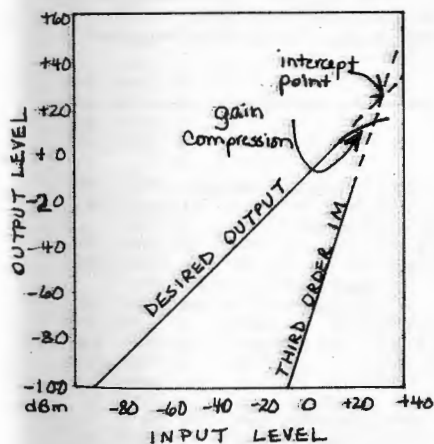


figure two

STILL MORE YAD...

PICTURE YOURSELF IN YOUNGSTOWN, OHIO. PICTURE YOURSELF WITH MANY OTHER DX-ERS ALL IN THE SAME ROOM. PICTURE YOURSELF AT YAD-80. NO, IT'S NOT A BAD DREAM, IT'S TRUE. MAKE YOUR PLANS NOW FOR THE BIGGEST, BEST YAD YET. FOR MORE INFORMATION, CONTACT: JERRY STARR, WSRD RADIO, 401 NORTH BLAINE AVENUE, YOUNGSTOWN, OHIO 44505. MAKE YOUR PLANS FOR THE MEMORIAL DAY WEEKEND IN YOUNGSTOWN NOW! THIS OFFER MAY NOT BE REPEATED. I REPEAT, THIS OFFER MAY NOT BE REPEATED.

The best way for you to obtain further, more detailed information on strong signal handling is to obtain good references and read them at the pace correct for your interest and knowledge. The material listed is not overly technical and should allow the reader to go farther than is possible here.

References

- "Receiver noise figure, sensitivity, and dynamic range-what the numbers mean", Ham Radio, October 1975. A thorough and knowledgeable digest of receiver parameters. By all means obtain a copy of this article through your local library or the back issues available from HR.
- "Man Made Radio Noise", Edward N. Skomal, Van Nostrand Press, 1978. For those wishing to pursue further the subject of atmospheric and man-made noise in order to draw conclusions about receiver sensitivity needed on the MW band. Contains many excellent graphs.
- "Atmospheric Noise and Receiver Sensitivity", QST, November 1969. Introduces the reader to the CCIR charts and receiver noise figure.
- "Receiver Sensitivity", QST, September 1969. A companion article to the above.
- "World Distribution and Characteristics of Atmospheric Radio Noise", CCIR Report 322, International Radio Consultative Committee (CCIR), 1963. The bible for those interested in Atmospheric and man-made noise. Comprised of charts of noise levels for radio frequencies by location, time, and season.
- "Get the Most From Mixers", Mini-Circuits Laboratory, Brooklyn, NY. An incredibly informative publication giving detailed data on the double-balanced diode mixers.

In addition, there have been a good number of articles published in the amateur press over the past 5 years that deal with receiver front ends. The best single source of these is Ham Radio; the yearly receiver issue is worth the cost of a subscription alone.

THEY JOINED

Göran Eriksson, FREGATTVÄGEN 10, 3 tr, S-181 37, LIDINGÖ, Sweden
 Major Ron Hammer, 821 Elisa Way, Roseville, CA 95678
 Maurice J. Rubino, 10 Huckleberry Ln., Sharon, MA 02067
 Tom Jackowski, 8 Marcia St., Parlin, NJ 08859
 Thomas L. Jones, 28 Minot Ave., Acton, MA 01720
 Michael Roth, 41 Cedar Spring Road, Milford, CT 06460
 Edd Buttell, 264 Mount Hope Rd., Apt. 26, Mansfield Center, CT 06250
 Peter Osroff, 2442 East 26th St., Brooklyn, NY 11235
 Charles S. Hadley, 1191 Shore Rd., Cape Elizabeth, ME 04107
 Raymond Drier, 5662 Leete Road, Lockport, NY 14094
 B. O. Plenty, Box 1, Lick Creek, KY 41540

We also want to acknowledge those of you who had the guts to stay with us: University of Manitoba DX-SWL Club, Thomas J. Cieslewicz, Patrick Golembiewski, Michael Albanese, Jerry Conrad, Larry VanHorn, Edward Bates, Randy Seaver, Gorman Cantrell, Oliver P. Ferrell, Jim Reilly, Dennis Perkins, Edward Paulsen, Jeff Weinbrum, Dale Wolf, George Santulli, III, John E. Marx, James Phillips, Bertram Podall, Paul Buehler, Relfe Luton, Martin Foltz, Arnim Littek, Carrol Bailey, John Schmelzer, Paul Swearingen, Harry Waldron, G. Harley Deleure, John Shiels and J. Michael Coughlin.

YOU GUESSED IT...

REMEMBER FUST? REMEMBER ANGST? REMEMBER INSIPID? REMEMBER ALPHONSO BODOYA? REMEMBER YAD? IT'S HAPPENING AGAIN, MEMORIAL DAY WEEKEND IN YOUNGSTOWN, OHIO. REMEMBER YOUNGSTOWN? IF YOU'RE COMING TO YAD, LET US KNOW. CONTACT: JERRY STARR, WSRD RADIO, 401 NORTH BLAINE AVENUE, YOUNGSTOWN, OHIO 44505. REMEMBER YOUR NAME? YOU WON'T!

A - Ray Arruda	E - Juergen Trochimczyk	H - Stan Morss		
B - Wayne Heinen	F - Jeff Falconer	I - Frank Johnson		
C - Niel Wolfish	G - Dave Yocis	J - Bill Regan		
D - Yngve Mattsson		K - Ernie Cooper		
540 KKAK 1	Mrs. Norma K. Farnsworth, Trfd B	1070 KENR 1	Ron Haney, CE	B
560 KLVI 1m	Stephen Sandlin, CE	WDLA f	"Engineering Dep't."	B
570 CKSW 1	Ken L. A. Burgess, A	DKST 1	Ron McLeod, GM	D
580 CKY 1	G. Buzunis, E	1080 WCGG 1	Jack G. Lovelady, DoE	E
590 WQW 1	Eric Foxx, Op M	D	WWEVO 1qm	Sabrina Raley, CE
600 KLBJ 1	Fred C. Hill, VPoE	E	1090 CHEC 1	R. E. Sillito, DoE
600 KJJB 1	Harvey G. Van Eram, SM	D	1110 CHQT f	Robert Hunter, CE
WREC 1	Howard Moran, CE	E	WTIS 1	Matthew L. Burt
610 WIP 1m	Philip Harris, CE	G	WSFW 1brc	Criss Onan, SM
CKYL 1	Richard Rafferty	D	1130 WQUP 1	J. W. Newman, CE
WIOD q	u/u	E	1150 WBAG 1	Jack Starnes, GM
WHYM 1	Jeff Blackwell, PD	E	CKIQ 1	George J. Young, E
WSLS 1	George Gillock, PD	E	1170 WCOV 1	Philip B. Witt, CE
620 WTMJ 1	Stephen Wexler, SpclAsttoProm D	D	1220 WENC p	William F. Rogers, CE
660 WESC 1	Connie Glennon, S to CE	E	WOMN 1	Win Sutor, CE
KCRO 1m	Jerry Sorenson	F	WKMT 1	Jonas Bridges, GM
710 WGBS f	John E. Morris, CE	E	1230 WGGG r(1n	German) Thomas Calato, M E
WROM f	John Steadham, CE	A	KINO 1	Loy Wayne Engelhardt
WDSM 1	Carl G. Williams, CE	D	1240 WBAX 1	Robert P. Moran, CE
	(Pat Puchalla, ACE	D	CKIM 1	H. G. Feltham
700 WLW q	u/u	G	1250 WDAE qm	Y. Wilson Welch, CE
740 WIRJ 1	Tony Reeves, GM	E	KBRF 1	Harry Howard, CE
750 KSEO 1m	David L. Anderson, CE	E	KCUE 1m	George L. Brooks, O
WSB q	George Fischer, PD	G	1280 WANS 1	James Graham, CE
760 YCPS c	Judy Harper, Trf Clerk	A	1300 WCJL 1m	James R. Callow, CE, GM
790 WETE 1m	Donald Gibson, PD	F	WQPM r	u/u, CE
WPFA 1	Donald Griffith, GM	E	1330 KWHL 1m	Edward M. Tink, ExecVP
KCAM 1	James M. Andrews, SM	D	1340 WCBQ 1m	Jake Leitner, PD
CFNW 1	James O'Rourke	D	WTIF 1m	David B. Benoist, newCE
810 KWSR ul	C. N. Price, GM	B	WKOKE q	Harry C. Weaver, P, GM
850 WRAP 1	(David Gibson, CE	A	1350 CKAR 1	John Smith, Prod M
	(B. Gibson, CE	A	WZIX q	John R. Hess, CE
WHDH q	u/u	J	VSMB q	u/u, CE
KOA q	u/u	J	1360 WAPR 1	Robert D. Stoehr, P
860 WAZE 1m	Carl J. Marrocchi, P	E	KBUK r	John E. Bacho, CE
870 WWL q	C. De Cota	G	KLRS 1m	Tammi Greer, Skpr, TrfM
880 WCBS q	u/u	G	1370 WAXE 1	Katherine Robinette, OM
890 WENC 1	(Ken Abbott	E	WCOA f	u/u, E
	(Mike E. Smith	A	WSAY 1	Annette C. Capitano, M A
900 WSWN 1	u/u	E	1400 WKPT 1m	George E. DeVault, JrVP
910 KINA 1h	E. Joseph Eck, CE (A10A)	B	1420 KTOE 1m	Bud Quimby, CE
KLCN q	Richard C. Dunier, CE	J	1430 WKEX ul	Jeffrey G. Bevis, CE
920 WGST q	Milton C. Thurlow, CE	E	WBVE 1	W. John Klinger, P, GM
930 WSOQ q	William Huffautler, CE	F	1470 WSAN q	u/u, Tech Sup'r.
CKNS 1,rc	Mike Edwards, PD	J	1490 WDXL ul	Ben Enochs, M
940 WMAZ pu	W. D. Sowell	J	WSTP 1q	Fred J. Ostwalt Jr., CE
950 WWJ 1	Thomas H. Montgomery, CE	D	WJNL 1	William P. Caramana, CE
960 WEAV q	Koland C. Roy, CE	J	WKEM 1	Nelson Porter
WBQC q	u/u	A	1500 KTXO 1	Ron Henderson, son of O
WHYL 1	Brian R. Greenway, CE K3WKK	A	1510 KEAM lu(for KYK)	Al Lynch
CKWS 1	Theresa Lumsdon, From M	D	WITS q	Richard Jolls, CE
WGRO 1	Dean Blackwell, GM	E	1520 WEKY lu	Douglas De Vos, Op M
970 WFIA q	Patrick McLaughlin, CE	E	WGNB ur	C. W. Caldwell, D
KOCK 1	Richard Jones, CE	D	1530 WMBT fu	Julian J. Milewski, CE
WRKN 1m	Randy Harris, E	F	WENG 1	Jeffrey E. Barker, VP, GM
980 WITY 1bf	William Craig, PD, ACE	EJ	KGEC 1m	Mary Sullivan
WBOP 1	Wayne Coleman, M	E	WOGA 1m	Arthur Sutton, PD
990 WNTY 1	Victor J. Nejfelt, AE	A	1550 WYOU 1m	(Ed Pendino, CE
KNIA 1	Eddie Bell, CE	B		(Phil Scott, E
1000 WKBQ pu	(Buck Poe, OM	J	1560 WYSE 1	John L. O'Donnell, P, GM
	(Austin B. Rigsbee, SM	A	WAGL 1m	B. Len Phillips, SM
WKYR q	u/u	A	1570 WLCB ul	Fred Applegate, M
1050 WKAU 1m	James J. Rammer, CE	F	1580 KGAF 1m	Mary Jones, OM
WHGI plb	J. Christopher Dixon, PD	JK	KLQU q	David Chimento, CE
KFML 1	John Bridges, CE	B	WPGC 1mh	Ward W. Fetrow III, CE
WHBO 1	James Genovese, PD	E		KA3DRG
1060 KNLV 1	Jesse Bonner, M	B	WYFA f	Eugene Healy, CE
KHYM 1	Al Tarasiuk, PD	B	1590 WDQI 1	Ronald R. Malone, CE
WQIO 1m	Daniel E. Brumbaugh, CE	F	WSMN p	Al Rowe, P
1070 WGOE pu	James K. Luther, CE	F	WUNR p	Jane A. Duncklee
WSCP 1brc	Richard Sterling, PD	C	1600 WAAM q	u/u, CE

Bill Regan, what is "rev"? -EAC

MUSINGS

ERNEST R. COOPER
5 ANTHONY STREET
PROVINCETOWN, MASS. 02657

The opinions expressed in this column are those of the individual members, and do not necessarily reflect those of the editors, publishers or NRC.

DXING AND VISITING

PAUL MOUNT - 35 1/2 West Columbus Street - Nelsonville, Ohio - 45764
At the end of my N.J. visit I saw CHRIS HANSEN on the way down to Bill Wurtzel's. Bill lent me his Superadio & I spoke on the phone to BILL BERGADA who keeps logging stations I need from N.J. & is closing in on my Teaneck total. I drove back New Year's Eve and hit 1980 in Athens, G. Did anyone tape WNBC at midnight saying good-bye to fads and trends of the 70's? WMMN, W Va. is my UNID M-92. WYNO-1130 Nelsonville's tower is up just S of school property, but no one seems to know anything else about it. 1/4 - Talking to a partyer at the Toledo radio it turned out he knew all about DXing, QSLs, TV pix, etc. so we drew yagi plans while the others partied. Around here I'm always thrilled to meet anyone who's tokenly DXed. 1/11-13 I visited GEORGE GREENE and JOHN SALLY on my first weekend trip anywhere in Ohio. MM 1/13 I was up to 5am but no DX logged, just typing Forums and listening for program content on Superadio. 1/16 - WLFA-1590 Ga. loud in car 5:47-5:56pm w/T-40. WEYY-1580 fair @ 6 w/long s/off u/CBJ, leaving Paul Harvey NK. 1/20 - WNDL-1260 local-like @ 12:57am. WBT-1110 s/off @ 1 leaving UNID BFL. MM 1/21- 1590, same here & N.J. - WAKR and "16-Yet". Comparing the TRF & Superadio I found the Space Magnet (inductively coupled) works much better w/the TRF than the GE & that the 200mm AM antenna on the GE was no more sensitive extended than pushed in. However the two tone controls on the GE are a dream and are used as selectivity controls for co-channel stations and the overall sound quality is much better. WBCM-1440 is back to old calls from WRDD, Aning as "14-40 Radio, the New WBCM" w/T-40. WIST-1240 N.C. good 1:39 w/WIST School of Broadcasting spot. WFIR-960 has AT-40 Sun. 10pm to 2am MM. I heard a F record collector in NYC call in on KMOX-1120; interesting, as WNEW-1130 was on per call to East Coast. 1/22 - WAOK-1380 & WOSC-1390 good 1:15-1:30. 1/26 - FRANK MERRILL visited me at WJGN and GEORGE GREENE came to Nelsonville the next day - nice to see them again. Laundry is done and so is this Muse. 73.

DAVE'S ARRANGED A TEST FROM WPIC-790

DAVE ARBOGAST - 3851 Porter Road - Rootstown, Ohio - 44272 216-325-2807 before midnight/ELT
Hi y'all! On the local radio scene, WGT-1500 is running a program where Junior Achievement people come in, about 15 or 16 years old, and run an hour radio show, complete with spots and all. I like listening to it. To DX: That's right, zilcho. For some excitement, I started to DX FM & TV. With TV it's a pain, 'cuz I can't go to the kitchen for food during the spots, hi! This past week I went to WSTB, a non-commercial station at a local High School, to see their operation, so we can get an idea on how to set up our radio station when we get it. Right now, though, we need money. Anybody got 25 grand to give away, hi? Next week I'll be going to WETL, another non-comm. for the same reason. My communications club will be going to tour 3WE in Cleveland, and hopefully WGAR also. I'm arranging both tours. I talked to 3WE's G a few weeks ago, & he said they don't s/off when they do maintenance, they use their AXR. They don't like to s/off 'cuz they don't own the tower they transmit from! Don't that beat all? I talked to PAT HARTIAGE yesterday. I got the info on my TEST of FPIC straightened out. It's Monday. I called the CE of WPIC, Charles Ring, and we found out I was looking at an old calendar when I wrote the CPC letter! Well, that's all for now. I may see you at YAD - all depends on whether I can get a ride. 73's and here's hoping all NSPers go off this Monday.

LYNN'S GOT SOME LATE DATA ON FLORIDA STATIONS

LYNN GILLIS - Box 105 - Bloomfield, Kentucky - 40008 3/3/80
Here's the second Muse coming to you from Central Florida. The March 1 or so Mid-South blizzard delayed our return till noon today. MM 3/3, I overslept & got up @ 3:15 am. The session was a bust with only one good one, KCMC-740, @ 3:45am good enough for a report. I have decided to verify my best catch only here, which is the above. Chiefland (near the Gulf about half way between Tallahassee & Tampa, more toward Tampa) is definitely superior to Lake Wales as a DX site. Fla. isn't a very good DX site unless you're near the Coast where I am not. Here's some changes noted; some new, some not. WLPE-790, WAPR-1390 & WIPC-1280 are on the Fla. Net. On Mutual is WAKA-1390 & WFIV-1080. WMOP-900 is APR. WHHL-1190 & WMT-1050 are using the newish calls. WMT is definitely KARL JETER's & ERNEST COOPER's UNIDs in the 12/28 DX NEWS. WIPC-1280 is EZL & AN, probably with the U-2 1,000/500 CP they applied for. WAKA-1390 was heard w/HOK in mid-afternoon. I've been busy with reception report backlog & CPC TEST requests. If I get it back, CJOB-680 will be my best verie so far from Kentucky. See you nextish from the newest regular Muser. 73's.

WEVA-860 HAS A REGULAR FREQUENCY CHECK

MARTIN FOLTZ - 1112 West Kundle Avenue - Lansing, Michigan - 48910
Some more good DX heard lately so another muse. 2/3 - WEVA-860 caught on end of f/c w/mx & ID @ 12:15. Unn XEMO took over w/REL program after that. 2/4 - Finally a definite log on WHEB-750 w/T-40 6:02-6:15 in MSB null, state #44 and first new one in five or six years. 2/6 - WPDJ-750 in w. c/w 5:45-5:57, WMT-1580 in 6:10-6:30 s/off, no SSB. 2/10 - KFJL-1270 in w/ band mx in RYK null 12:20; Ecuador-995 trying to make it 12:45 but too

(Martin Foltz, cont'd.) weak. 2/11 - No WGIG-1440-TEST but a new one in WHEY-1440, KLIP-1190 IN Fair w/T-40 @ 3:49. 2/21 - Local WCEB-1390 testing w/OC TT & the song HONEY, HONEY, repeated. 2/25 - WJWL-900-TEST heard in CHML/XEW null @ 1:02-1:25 for State #45. States still needed are Maine, Nevada, Idaho, Alaska & Hawaii. Veries: v/1 - WEVA-860, w/q WRFD-880, WHEB-750. WEVA said r/c first Sunday shortly after midnight. WHEB said "no equipment tests up-coming." 73's.

A WESTERN PENNSYLVANIA BAND SCAN

JOSEPH W. BRAUNER - R.D. 1 - Box 153 - Punxsutawney, Pennsylvania - 15767 3/5/80
With DX just about nil, how about a bandscan for Ground-Hog Town? The Code: None, good dependable signal. 1-Weak or QRM. 2-poor, not heard daily. 3-OK. 4-500-550-WGR. 560-WFRB. 570-WKBN. 580-WHP. 590-WBBS. 600-WFEM. 610-WFVN-1, CKB-1. 620-WHJB. 630-WMAL-1. 640-WHELO. 650-WSM-2. 660-WNBC-2. 670-WAAC-2. 680-WFSR. 690-WZAP-2. 700-WLW-1. 710-WOR-2. 720-WGN-2. 730-WPIT. 740-CBL. 750-? 760-WJR. 770-WABC-2. 780-WABS-1, WBM-2. 790-WPIC. 800-CILW. 810-WEDO. 820-WOSU. 830-WCCO-2. 840-?? 850-WJAC. 860-WYJZ-CJCB. 870-?? 880-WRFD-2. 890-WLS-2. 900-WCPA. 910-WAVL. 920-WKVA. 930-WPMD-1, WBN-2. 940-WESA/WGRP. 950-WNCC. 960-WKZA. 970-WWSW. 980-CFPL. 990-WVLC. 1000-WUM-1, WIOO-2. 1010-CFRB-1, WINS-1. 1020-IDEA. 1030-?? 1040-?? 1050-WBUT. 1060-KYW-1, WQIO-2. 1070-WKOK. 1080-WEP-1, WQEO-2. 1090-PBAL-2. 1100-WWME. 1110-WJSM. 1120-WVOL. 1120-WASP. 1140-WBYZ. 1150-WKPA-1, WJUN-2. 1160-?? 1170-WWVA. 1180-WHAM. 1190-WANN. 1200-Mix. 1210-WCAU. 1220-WGAR. 1230-WCRO. 1240-WRTA. 1250-WTAE. 1260-WPHB. 1270-WCBC-1, WHLD-2. 1280-WKST. 1290-WFBG. 1300-WWCH. 1310-WNAE, WDFD-2. 1320-WKTQ. 1330-WRIE. 1340-WTRN, CVI. 1350-WWBR. 1360-WYXZ. 1370-WKMC. 1380-WACB. 1390-WFMJ. 1400-WKBI-WAMQ. 1410-KQV. 1420-WCED. 1430-WVAM. 1440-WHHH. 1450-WDAD. 1460-WMBA. 1470-WRML. 1480-WCKNS. 1490-WJNL. 1500-WGPT lately, used to be WTOP-2. 1510-WAHT-1, CKOT-2. 1520-WBKW. 1530-WBCW. 1540-WPME:11 1550-WFFM. 1560-WQXR-2. 1570-WQTF. 1580-WEND. 1590-WPGW, WCBG-2. 1600-WAYC, WNEU-2. 73, goodDX.

TONES, TONES, AND MORE TONES

FUREST E. OSBORN - 202 North Jackson - Hooker, Oklahoma - 73945 3/6/80
First off, thanks to MIKE JEZIORSKI for IDing my Q-Country on 1570 as CRIQ in Erandon. I had figured that it had to be but didn't count it until the help in Musings. I've got lots more UNIDs and appreciate any and all help. Listening time has been scarce but here is the lowdown: On 1/16 @ 8:31pm ELT, CKDK-730 with ad for Mary Jane shop in downtown Daphin. On 1/21 @ 3:11am, UNID TT u/ASAI-1360; @ 3:20 XEW-1390 R. Fiesta, Chihuahua, on top as usual for the last few weeks. From 3:32 to 3:45, TT on 1480, possibly KCCX Mont.; also KRLD-1080 was testing earlier on 1/21 w/OC TT & ID @ 2:57am. On 1/28 lots of tones - @ 2:40am, TT on 1390; 2:56 TT on 1150, then AI NK @ 3am. At 3:04 a buzz-tone on 900 u/two SS stations. At 3:12 a carrier on 735 suddenly went off the air. At 3:14 a het on 747 looping E/H but faded out. At 3:35, soul mx on 1510 u/WLAC, possibly unnn KDKO, Colo. At 3:36 TT on 1530, off @ 3:37, on @ 3:39, then TT & ID @ 3:48 as WHEM, Lapeer, Mich., TT off/on until at least 3:51 (WCKY also testing with different tone). At 4:06, CFRB-1010, Toronto, on top. 4:10, varying tone on 1150. At 4:32, WCKY-1530 w/ID & OC. On 1/29 @ 4:34am TT off & on on 550; from 4:45 to 4:55 TT & buzz alternating on 1010 looping N/S. On 1/30 @ 2am TT u/KFH-1330; TT on 990 from 3:32 to 4:12, @ 4:15 KRDS-1190 from Tolleson, Ariz. finally IDed. On 2/13 @ 1:26am varying tone off & on on 1600; TT on 1490 from 1:32-1:45; At 1:49, Caribbean mx on 675, probably Costa Rican. At 1:51 SS on 725, also hets on 765, 775, 1005, 1125, 1205. At 2:10am TT & ID of KTYN-1430, Minot, N.D. At 2:22 dial tone in null of XEB-1220, possibly WAEB Ala. On 3/3 @ 2:02am KLIF-1370 s/off; @ 2:36 TT o/WSAI-1360; @ 2:41 KAAM-1310 w/TT & announced as annual PoP; @ 2:51am TT on 1220, sweeps @ 2:55 o/WGAR, also @ 2:51 tones on 1200 & 1210. WOI back on @ 2:57. At 3:03, tones on 1350 & 1370. At 3:06, KPNC-1560 s/off announced off until 4:30am, SSB @ 3:08. TT on 1550 from 3:13-3:15. 3:32, KCJW-1560 w/ID and KOK. At 4am, KZZP-1310 Kesa, Ariz. with new call, ex-KCXB; @ 4:05 KOKY-1250, ex-KIAZ, KALC, etc. w/APR FX. On 3/4 @ 1:39am TT & ID "This has been KIKZ-1250 in Seminole, Texas". At 1:50 TT u/KLEO-1480, unreadable ID @ 2am, more TT; @ 3:55 TT off/on u/KCWN-1388, At 4:20 TT/OC on 1310. On 3/5 from 2:29 to 2:42, TT off/on o/WMAQ; @ 2am TT went off on 1390, no ID. At 3:17 @ WQXR, N.Y. testing" o/EPMC piano mx on 1560; @ 3:25 TT off/on u/WSIX-980, @ 3:30 WY on KMBZ; @ 3:33, TT-1240 looping N/S. Also on 3/5 @ 1:57pm KCR0-660 ex-KCWE; Omaha, w/REL program. As you can see, lots of TT & very few IDs, but a new one pops through every once in a while. Since beginning to DX seriously in the last 4-5 years, I have IDed right at 900 on the EQ-150, SX-99, Zenith Royal 500, clock radios & car radios, so I can't complain too much. It's certainly a hobby that can go wherever you go & the NRC helps you get there. How about more Musings from Okla., Kan., Tex., Col., & N.M.? I need all the help I can get, hi. 73 to all.

HOW ABOUT SOME CHEERY MAIL TO MARTY?

MARTY WRIGHT - 1913 Jeanette Lane #7 - Springfield, Illinois - 62702
Just a short Muse to let you all know why I have not answered some of your letters, etc. I just got out of the hospital where I got some bad news. I have cancer - liver, lung, and spleen - and it's left me pretty weak with not much time at the dials, or the strength to report or muse. I am no longer at WCVS. Reception reports should now go to Robert Miller, Ch. I did manage to catch eight minutes of the WJWL-900-TEST, only because the CID and the "close encounters" beacon though. CHML was very strong QRM out of the time. I hope to get better with the chemo-therapy treatments and muse more often in the future, and I always look forward to DX NEWS and reading about what the rest of you are doing.

The next issue is next week, April 7. That same date is your deadline for the two-word-city special Musings section. So, hurry. Also remember that the deadline in East Lansing for Dave Yocis's Musings Section is April 28. Please double space and please stick to 30 lines or less.

BRYAN GRIFFITHS - 33 Jeddburgh Road - Toronto, Ontario - M5M 3J5 3/1/80
It's been a long time so a re-intro. I'm 37 and have been DXing on/off over 20 years & been an NRC member since 1973. The following February DX was all done w/a TRF. 2/6- WILY-1210 Ill. 5:36pm NX & WX - no sign of WCAU; KKJG-1550 Mo. 7:00pm ID "KKJO St. Joseph, it's six o'clock", then pattern change. 2/10- 1:59am chimes & La Voz de Cuba ID in WGR-550 null. WLKE-1170 Wis. local NX & 6:01pm. 2/14-KGEL-920 Minn. local NX then s/off @ 2am, well on top. 2/16- WAYB-1490 Va. 5:49pm detailed WX & calling themselves "Beautiful Radio for the Shenendoah Valley". 2/18- WCRJ-1530 Fla. s/off @ 6:15 mentioning to s/on 7:15 am. WSJC-810 Miss. @ 6:43pm with spot for Amara Radar Range outlets in McComb & Magee, mixture of T-40, AOR & mellow rock, Wide World of Sport at 6:45, lost @ 6:45 1/2 pattern change. This one at last after trying many times. Strangely WPCF-940 wasn't strong at the time but no sign of KCMO enabling WSJC to get thru with WGY null. 2/28- FRIS-1410 Va. 6:02pm s/off mentioning FM-93.5; daytime WJMD-900 Md. 6:38-6:45pm on with mx & snow-related closings. As of 2/28 CKAN-1480 Ont. on RS but still having XR problems. Call to station 416-898-1100 confirms they were on night pattern, 3-4pm 3A. 73's.

NIEL'S IN TOUCH WITH SEVERAL NRCERS

NIEL WOLFISH - 15 Donwoods Grove - Toronto, Ontario - M4N 2X4 3/6/80
Hello once again. Before I get to the point of this Muse I must slightly change a line of mine from my first Muse. I meant earlier that I would like to hear from Toronto and Ontario DXers (and others too!) by mail. Phoning me makes things rather difficult. However, I always reply to letters promptly. Right, MARK STRICKERT, STEVE SHAFFER, PAUL MOUNT, BRYAN GRIFFITHS, GEORGE GREENE, DOUG MISKE, & GREG WILSON? Well, unfortunately, CKQM-1480 is now on, with MoR type programming 6 till midnight (since 2/28) & is rather amateurish right now .. i.e. many missed record & commercial cues. Last Friday DOUGLAS MISKE, MICHAEL BOLITHO (not in NRC) & I took an evening trip North in search of CKAN in Newmarket. We ended up settling for mailing our reports. (I'd like to receive the first verie) at the Newmarket P.O. The address is Box 1480 w/a 13Y 4X1 postal code. After Newmarket, a hop, skip & a jump took us to Burlington to visit with GREG WILSON. The following evening, GEORGE GREENE (of no fixed address) was in town, so we got to look at his famous photo album again (I can pick your picture out now with ease, ERC) (after seeing the album only four times)! Well, on the DX front, I'll start at the present and go backwards. 3/3- WIS and CUCH finally. 2/25- WUDX. Verie in from France-1557 and WKBN-570 plus an SW one (Niger). I now have 13 heard on 920 making it my best regional ahead of 1480 (12) and 980 (10). All time favourites are still 1240 (12), 1490 (23), 1550 (28) and 1580 (31). That's out of 687 heard. Well, 73's till whenever.

ANOTHER HAPPY PURCHASER OF A SUPERADIO

TIM KERFOOT - 189 Cedarvale Avenue - Apt. 505 - Toronto, Ontario - M4C 4K1
Yesterday I purchased a G.E. Superadio, and it appears to be a very good receiver for MW DX. It vastly outperforms the TRF in this apartment. I have made one new catch on it so far; 3/9- WELV-1370 @ 5:59 s/off, but not enough for a report. I have received one new verie, CFMR-1410. New local CKAN-1480 is now on the air. Concerning the question of whether Canada is domestic or foreign, I find that distinction very irrelevant for DX purposes and do not segregate my catches on that basis. I just keep an aggregate total. Why, for example, is St. Pierre-1375 considered foreign when it is so close to Newfoundland, but Newfoundland considered domestic? For statistical purposes I would much prefer aggregate totals, but if questioned on the matter I would probably consider Canada as domestic and everything else foreign. 73.

BILL ATTENDED A WADXA GTG IN BALTIMORE

BILL TOWNSHEND - 4500 Connecticut Avenue N.W. #301 - Washington, D.C. - 20008 @ 2-966-8046 3/9/80
I made the WADXA GTG at JERRY MILLER's pad in Crabtown (Baltimore) last night. TOM WHITE was the only other NRCer there - he will be hosting the next WADXA GTG at his Arlington, Va. pad on Sat. 5/10. Jerry's DX shack was not as impressive as that at the ROUSE's home, but he had overhead wires strung up in the back of his living room. SW & MW DXing were hampered around 1930 due to a cold front T-storm and its QRN, which knocked the temperature down to size from 73°F/23°C, exactly a week after a major snowstorm (7", temperature 14°F/-10°C. The GTG was originally planned for 3/1 but thanks to Arlene Luskin's (she is a WADXA coordinator) trip to S.C. (she was snowbound there in the Carolinas), the GTG was set back to last night. I'd take T-storm QRN to traveling in the falling stars (not the kind seen at night, hi) with howling winds. I caught both DX TESTS last week (WJR-1130 and WJAZ-960) & talked to Sam Dudas, WJAZ's CE in person. He said that since I had conclusive proof, despite heavy QRN (WJR had QRN, too) of hearing his station (audio TT changed on the TRF as Sam fiddled with the audio oscillator), to expect a barrage of WJA? promo material (T-shirt, bumper sticker, etc.) which I may auction off at the IRCA Convention in Derbytown (NRC HQ) in August. Due to higher costs of air travel to the WC I may pass up the Convention in L.A. over Labor Day (I may go to Virginia Beach for fun & sun instead) and the ANARC meeting in mid-July. Local yokel WDON-1540 has changed format from T-40 (it was CWM for a while) to religious. I used to hear Don Dillard's Oldies show 5-5:30pm weekdays around 7:56-7:59pm (also Jay Perre on WEAM-1390 around that time) with lots of R&B sounds, "Do-Wop" and rockabilly pieces on these stations. Jay Perre used to be on Saturday nights 9pm to midnight. I still like such mx. C U N 28. 73's de WPT.

Next deadline in Provincetown is April 7, then we leave the weekly schedule. The April 7 deadline is for the April 21 issue date. After April 7 send your next Musings to Dave Yocis, 502 West McDonel, MSU, East Lansing, MI 48824. His deadline will be Monday, April 28.

GEORGE WALTON - 314 High Street - Easton, Pennsylvania - 18042 3/10/80
Hello members. Big news here on Leap Year Day, Feb. 29, 1980, the arrival of my daughter, Jennifer Louise. Both her and Eileen are fine and in good health. Unfortunately, her birthday will only fall once every four years, hi. DX has been rather sparse what with a lot of trips to the hospital, etc. However, what I did catch has surprised me as CY have been excellent since November with 107 new stations. Most have been caught on the 2P-2200 & the Sanserino Loop. My old TRF just continues to gather dust as it is rarely used. Oh by the way, ERC, why not have a special Musings issue of DX NEWS for those people whose last names start with the letters A-Z inclusive? Hi. On to some DX now. WMOO, Mobile, was heard on ET along with WGOE in Richmond on 1/27. 2/3 finally saw the arrival of W100 or as they call themselves, W-one hundred. It's been a long time trying to bag this one. My most amazing catch of the month was KSTP-1500. What is amazing is the fact that WTOP is so strong here. Sunset on 2/16 yielded WORI, Oak Ridge, Tenn. & KNIM in Maryville, Mo. KNIM has to be one of my finest catches ever as the log shows them to be only 250 watts & they are 1,008 miles away! The WRCM TEST was caught here weakly w/WOR. A verie came back very quickly to my report. Shortly after the TEST VPLRD in Port of Spain, Trinidad, came booming in on 730. Telecom with JOHN RUEHLER shows that he heard it also. Anyone else? (What's 'Telecom?' -ERC) SSS on Feb. 28 also produced KSO-1460 in Des Moines & WVOV, Huntsville, Ala. On 2/20 WFIL was successfully nulled enough to let WBHQ, Memphis, to come in. On Feb. 26 WIRD, Lake Placid, N.Y. was heard at about 9pm. The log shows them to be daytime only. Was there a change or were they just in the Olympic spirit like the rest of the country? (They had a special permit to broadcast evenings during the Olympics, with 300 watts -ERC) March 7 produced WAIT-820 in Chicago. Another surprise, because usually WGY-810 slops over. Eliminating powerful stations on adjacent frequencies seems to be very hard for me to do. On March 8 SSS proved fruitful again as WIBG, Ocean City was finally logged along with WYSC, Somerset, Pa. on 990. And on Mar. 9 I caught #3 from Maine with WABL-1280 in Gardiner. Enough for now, come on, everyone - MUSE! 73's.

BILL'S MOVED FROM LOUISIANA TO IOWA

BILL SMITH - Route 2 - Box 116 - Reinbeck, Iowa - 50869 3/10/80
After a recent move from Louisiana to my native state, I am in the process of once establishing a radio location that I have sought for nearly 30 years. I was able to convince my wife that we needed a farmstead for our new home & was then successful after a six week search in locating the place, the only farm within one mile, on a hilltop with full 360 degree horizon and the only power line within one-half mile is that which feeds the farmstead. Thus far I have completed the inside work, wiring the racks for the HQ-180AX and FRG-7. I have yet to begin the outside antenna work on the five acres, but with the assistance of CHUCK HUTTON have determined how to locate four Beverage antennas for MW which will also serve through 60 meters. So far I have up only a long random-length wire, but the results have been most encouraging. Certainly it is nice to have a deep rural location with very minimal noise. There are many, many signals down in the low noise level. Recently I received from Mr. Hutton one of his modified TRFs & must report very satisfactory performance. For MW selectivity I would rate it close or equal to that of a 4 kHz modified FRG-7. The sensitivity certainly is no problem. Belize-834 is good copy most every night on the TRF, equal to the FRG-7. I'd also be interested in personally meeting any other MW DX buff in this general area, East Central Iowa. Regards. (Please double-space, Bill!! -ERC)

KARL'S GOTTEN A PILE OF NEW VERIES

KARL FORTH - 2714 North LeClaire - Chicago, Illinois - 60639
Not much BCB DX in February due to a change in work hours to 3pm-midnight and generally sub-par SRS CX. On 2/1 much wanted KSDN-930 was heard fair @ 4:08am w/IDs & pop mx, heard at same time next day. 2/3- WKMT-1520 w/s/on @ 7:15am (Sunday morning). 2/5- KRRE-1360 poor w/WSAI/WGEE w/r/c-TT & CIDs @ 2:02am for N.M. #14. 2/10- KNIX-1580 noted on night pattern w/fair signal at 1:07am w/PSAs, spots, C&W mx for report. MM 2/18- Unn WROM-710 heard on DX TEST for tape and report. MM 2/25- WJWL-900-TEST heard fair w/73 to the NRC WJWL CIDs & the first five notes of a movie theme from 1:02am. 3/1- WESK-580 on w/f/c poor w/WCBS/CKPR, best @ 5:57am w/ID, WEVA-860 w/ID & into UPI NX @ 6:15am in CUBC null. MM 3/3 found good CX to the NW, nothing new but reports for WCEJ-810 & KMTX-950, which was bombing in on their r/c through KIMN @ 3:32am. 3/9- Unn WCRJ-1570 noted w/CKLQ/CFOR w/ID & TT @ 1:07am while looking for CKTA. Then a big surprise @ 5:59am w/WACE-730 w/s/on, then CBS NX through WGN slop & CJNR, thanks ROB KRAMER for this tip. Veries: w/q- KGA-1510 for f/up, v/cm CKGM-980. v/1- CKAP-580, VFLO-670, WAKX-970, WACR-1050, WISS-1090, KMJJ-1140, CJOC-1220 WCHK-1390 WFMT-1450 (Thanks EARLE HIGGINS for v/s), WBKV-1470 & KNIX-1580 bringing totals to 2,096/1,111. 73 & have a nice Spring.

SID'S STILL PULLING 'EM IN

SIDNEY E. MARSHALL - 7224 Pam Drive - Millington, Tennessee - 38053 3/1/80
Only a few notes to report due to being away from the dials for several days this past week, due to my work sked. On 2/24 @ 6:32pm WKCM-1140 Ky. came in on top of WRVA with full s/off announcement being heard. New ones from this state are tough to land so I was real proud to land this one! Also on 2/24, after a long dry spell, I finally bagged another new one from Canada by hearing CKOC-1150 at 7:03pm. It was in w/a very strong signal for about ten minutes with several IDs, cash give-away promos, mx, TCs, and more mx. Then on 2/29 At 6:30pm WPID-1280 Ala. came in weak but clear, w/WPPT, with full s/off being heard. During the month of February I landed 31 new stations, bringing my total to 714 heard since April '79. As I will be off from work on MM 33, I plan to be up to try for WGIS-1440, Ga. & WNRJ-1430, N.J. TESTS as listed in the last minute Flash Tips in the 2/23

Sidney Marshall, con'd.) DX Monitor. I'd really like to hear WJNR as the only other N.J. I have is WPAT-930 which I landed @ 3am 6/16/79 while in the hospital in Memphis, some 18 mi. S of my home. I heard WOWO-1190 Ind. announce they will be signing off every night at midnight during the week of 3/3 for renovation work so I may lose some sleep trying for WLIB & KEX on this frequency. Hold it! While writing this Muse I've been camped on 1190 & just heard another new one! WYAD, Ala. was just in good w/ID & WX @ 5:11pm 3/1. (Muse #2) My DXing time over the past week and a half has been greatly reduced due to my work sked & there have been a few days that I didn't get any time at the dials at all. In spite of the limited time at the dials I have managed to pick up a fair amount of new ones to push my total up to 725 heard in the last 11 months. My how time flies as it will soon be a full year I've been back in DXing with the NRC! You'll have me for another year as I sent my membership renewal in a few days ago. New since earlier Muse: On 3/2 @ 5:10pm KFBP-1270 Mo. was in w/a good signal w/WX, temperatures in several cities within the state, mx, & promo for their FM. On 3/3 WKTY-580 Wis. was in briefly @ 7:09pm. Then on 3/4 I got three new ones as follows: WMTS-810 Tenn. @ 7:08am, KBHC-1260 Ark. @ 12:52pm (I was surprised to hear this one at mid-day!), & WFIN-1390 Ill. @ 7pm s/off. On 3/6 KTPA-1370 Ark. @ 7:14pm w/WX s/off. With this one I have now 77 ark. stations logged. Then on 3/9 @ 6:30pm I caught the s/off of WAGY-1320 N.C. Had it not been for my new Misuho Audio Processor I don't believe I would have heard this one! Then on 3/10 I was having difficulty sleeping so I turned on the RF-2200 & caught a couple of new ones that I'm real proud of: At 2:14am KPNC-1560 Cal. was in for several minutes w/a strong signal & later @ 2:42 I added another new one from Canada, CKLQ-1570. On the evening of 3/10 @ 6:35pm WERE-970 Ala. was heard for a couple of minutes to close out a very good Monday. So till my next Muse good DXing to all.

STEVE BAGS SOME BEAUTIES

STEVE FRANCIS - 1620 Lodge Street - ALGON, Tennessee - 3/7/79
 Long-sought WCNE-1580 Ind. was testing w/rr & a fine signal 2/21, ID @ 3:08.
 MM 2/25- Unn WJNL-900-TEST heard w/ID around 1:16, mcho TT but no more IDs, so I tuned out @ 1:30. 2/27- The last N.C. station I ever expected to hear - WEEB-990 - was in like a rock at its 7am s/on-SSB, thanks to WNOX being off for some reason. They've been going off a lot lately, but they nearly always return between 5 & 5:15; s/on this AM was 7:02. The channel is a mix of CBW KTRM/XYT/KMIM WBOO in WNOX's absence; now if only somebody'd come on with an ET! Whooops, outa order: MM 2/25, unn KQWB-1550 N.D. was heard pretty much on top w/rr - obviously on day rig for some reason - twixt 4:10 & CBE's s @ 5. They were drowned out most of the time by some kind of rumbling het, but were easily atop WOKJ WAAV. Del. & N.D. the same night! 3/1- Unn WEXL-580 TEST assumed the one w/TT & ID @ 5:55, I wasn't awake enough yet to catch the ID. MM 3/3- Unn WJNR-1430-TEST poor w/WRE WIRE 1:05-1:34 w/TT & IDs mentioning 6am s/on. A couple of years' worth of persistence paid off on 950 this morning with reception of the r/c from KMTX, Helena, Mont. They break the TT for 4 1/2 seconds every 40 seconds for an ID; of the 23 IDs between 3:30 & 3:45, three were faintly audible w/ the WJW/WAL/XYTJ QRM. They all came at times when the TT was atop the QRM; the IDs were very poorly modulated compared to the tone. I noticed their switch from the usual ID-every-five-minutes format to the present one back in December & knew I'd luck out with one of those frequent IDs sooner or later. KMTX makes Montana #2 in the logbook here. Speaking of IDing every 40 seconds, the unn WJAL-960-TEST on 3/5 was heard poor/fair doing just that between the TT & WFR QRM. If this is some kind of fad catching on among CB's, it has my wholehearted support, hi. 6:20am, the R. Cadena Habana relay on 1120 was in fair u/KMOX, a Paul McCartney record made for an easy // with the powerhouse on 1160. Artemisa is the site for 1120 per RON SCHATZ's Cuban list. MM 3/10- WNOX was off again, so I parked on 1000 @ 3am, mailed a couple of unID LAs, & started a continuous tape running. The object was to try & snag an ID from KOMO on one of their day rig OC ETs. Since RICK KENNEALLY's reception was on 12/31, I knew by counting up the alternate MMs since that this was an "off" week for them. Success! At 3:28, a weak "KOMO in Seattle" was heard about even w/the Spaniards. Those of you fortunate enough to have this fine channel usable every MM shouldn't have much trouble bagging KOMO. Outa space, 73 till next time. Don't forget the pre-6am s/ons in April from many daytimers in the Mid and North Atlantic states!

MIKE'S DXING AGAIN - AND MUSING AGAIN!

MIKE KNITTER - 2159 Circle Drive - Cambridge, Wisconsin - 5/3/79
 Hi everybody! Let's see, it's been quite a while, a year or two, since my last musng, so I guess I better get on the stick. First off, we moved from S.D. to here about two years ago. Would you believe I'm still unpacking boxes? For now I reckon a short re-Intro is due; I'm 28, have a wife and a beagle (a house dog, not a hunter). I work for GTE Telephone Co. Having moved I've started over with my log book & station counting. But I've geared up again, since Nov. '79, I'm up to a big 288 stations. But I've also logged some from Central & South America. This is a first for me! Well, maybe I should say the splits are a big first! I heard PUB-800 & CMQ-640 before. But my other new ones TIRN-575, Belize-834 (do they have call letters?) & CMW-600 are ones I've never heard before. I've been hearing the Russians up here the past couple of days, usually around 10pm ELT, they walk all over WMT with ease. The wife got me a DX-300 for Christmas. Aside from the overloading it works okay. Anybody out there know how to cure the overload problem aside from getting a new RX, hi? If so let me know please. Also in the "shack" is a DX-150B, a Sony TC-270 reel-to-reel recorder, cassette recorder, this typewriter, & a timer I use when too tired to stay up MMs. The reel recorder I like because I can record WWV on one channel & "live DX" on the other. Thanks to MARK STRICKERT for the acknowledgement on the stickers - I wasn't expecting it. Also I'll keep looking for those other ones, they are probably in one of those boxes I haven't unpacked yet. Latest here: KSUD WJMT CKBI WJWL WAAK KBHS KKA4 (been after that one quite a while. That's all I can think of, so till later, maybe next month, good DXing to all. '73's.

NEWS OF THE CHICAGO CAPITAL RADIO SCENE

JIM WALLACE - 3786 Quince Drive - Apt. E - Columbus, Ohio - 4/22/80
 Some interesting things have been happening in radio locally. My old employer WTHH in Heath, is no longer broadcasting on 1000 kHz. Since 2/25, it's been on 790. I'm not sure what the new pattern is, but its 500 watts comes into Columbus better than the old 250w. Apparently, WTHH is still operating daytime only, although I expect it to eventually go fulltime, because that was the main purpose for the move. With 1000 clearer at SRS and SSS, I've logged a few new ones there: WSPF, Hickory, N.C.; WGGG, Palhalla, S.C., & WKYE, Remingway, S.C. WRFD-880 is losing its CBS affiliation 6/1 to WCOL-1230. WRFD has a state-wide signal, but WCOL is NSP, apparently a stronger factor for CBS. WRFD says it will go to APR NX. Ironically, WCCL is cutting back on its local news and has fired two reporters. In other news of radio news, WOSU-822 is now all news & public affairs. From 7am to noon, it is broadcasting "Morning Edition" NX, which is a combination of NPR's "Morning Edition" and WOSU's own news. The afternoon consists of mostly public affairs with a ten-minute newscast at 1:50 & APR NX @ 3. WOSU's "Afternoon Edition" news runs from 4-5pm, solo by the best radio news program in the nation, NPR's "All Things Considered." At 6:30, a German course airs for 15 minutes, solo by various public affairs programs to s/off. Saturdays are basically the same as before: a mix of public affairs, news, & classical mx. Sundays feature big band and jazz music from 7am to 5pm, then "All Things Considered" until 6. I'm up to 1,134 stations logged & 251 verified. That's almost 200 new stations this season. I hope some of you heard the WJAZ-960-TEST 3/5. I and fellow Columbus DXer DAVE HAMMER, heard it, but FAT FLANAGAN fell asleep in his chair and missed it. 30. (He slept through the St. Pat's issue too, Jim! -ERC)

HE'S LOCKING FORWARD TO THE PROJECTED DAY PATTERN BOOK

KEN ONYSCHUK - 239 Fir - Park Forest, Illinois 3/9/80
 I probably missed the 2-9 year member issue, but here goes anyway. Sat. 3/1 I mailed out letters requesting BB radio networks to Milwaukee, Detroit, Cleveland, Boston, Philadelphia, Toronto, Cincinnati, Atlanta, Houston, Texas, Kansas City, San Diego & Minnesota. Thru Sat. 3/8, I've gotten three back, including a very nice letter from the Detroit Tigers. The 1980 White Sox network is YBEM-780. The Cubs will mail theirs to me this week. Locally, I hope a lot of regional DXers can hear my local WCGO-1600. Lately, they've been IDing much more often than in the past, say every five minutes or so. Also, I understand the WJPC-950 night phaser is still at the Quincy, Ill. manufacturer. At least 950 is still safe here. Still WSPA can be a pest. I saw that 540 kc. day pattern map in DX NEWS. A nice job by JERRY ROBERTSON. I hope he continues the work on the rest of the AM dial. I think it's worth a good \$10, roughly. I'd also want to say that I use the IRCA Almanac regularly. It's a valuable book, and what I want to know, it's got it. Also JOHN CALLARMAN did a heck of a job on that update. It's also a heck of a job getting all that info in my Log Book, hi. Can anyone supply me with the rest of the network stations that carry Ray Durkee's syndicated oldies program, "Sunday at the Memories." I've heard it regularly since October on WKAN-1320 from 11:15am to 2:15pm. I like the music very much. It originates from California. (maybe WKAN "kan" get it for you, Ken -ERC) Continuing, last Sat. 3/1 I read about the EE broadcasts of R. Moscow on CMA-600 Cuba. So I tuned in and there it was, in very good. So ved. night after bowling league, I came home & taped five minutes of it and brought it to work. It surprised a lot of people. Also, I finally IDed that CBS station on 610 at SSS. After WJVM's pattern change, looping WDAF. I could barely hear it before its pattern change. Sat. 3/8, after the College Bowl, KDAL Duluth-Superior IDed, then ran CBS NX @ 7 but never IDed before pattern change at 7:15. I had to catch it before 7 or forget it. Then after I looped KDAL, in like a local, CHNC Mount Laurier Que. in FF. (CHNC is New Carlisle, Ken & Mt. Laurier is CKML -ERC) I spent a long winter, working a lot (5-7 days) every week trying to stay healthy and keep my Nova going. I enjoyed a lot of High School BEK on WISV-1260, WJOL-1340, WTAQ-1300, & many FMers. I went to several games. No time for DX TESTS unfortunately, but I had to get my sleep. Right now I'm nursing a sore right shoulder I hurt at work. Gotta go. 73.

FOOTBALL MEMORIES

CHAPTER XXXVIII - OPENING NIGHT ON WAVE - by PETE KEMP.
 Radio Station WAVE in Louisville commenced operation on December 30th 1933 with 1,000 watts on 940 kc/s., and a 339' antenna atop the Brown Hotel. The station consisted of four offices, two studios, and a control room located in the NE corner of the 15th floor of the Brown Hotel. Its premier broadcast was from the Brown's Crystal Ballroom and part of an hour-long salute to WAVE from the NBC Network. NBC announcer Ford Bond was M.C. Its opening statement read, "Louisville, Gateway to the South, is on the air over the National Broadcasting Company. Station WAVE is presenting its first program. WAVE, a new station, dedicating itself to the service of radio listeners, to the betterment and enjoyment of the people it serves. Programs of national importance, programs of local interest, music, sports information... and all the arts which are vocal...will be yours at the twist of the dial on this wavelength granted by the Federal Communications Commission to the associated station of the National Broadcasting Company in Louisville, Station WAVE." On November 3, 1940, WAVE increased power to 5,000 watts and on March 29, 1941 changed its frequency to 970 kc/s. Also in that year they moved their transmitter site to Jeffersonville, Ind. and its studios to 334 East Broadway. In 1959 WAVE moved its studios again, this time to 725 South Floyd, in downtown Louisville.
 P.S. from ERC: WAVE's predecessor on 940 was old WFLW, "Hopkinsville in Ole Kentucky" - 'twas my first-ever verification, logged 12/26/32!
 NEXT ISSUE - BRAD LOVETT will tell us of his boyhood memories of WOWO, Fort Wayne, Indiana.
 LET'S MAKE SURE WE DELUGE DAVE YOCIS WITH LOTS OF MUSINGS WHEN HE OBSERVES HIS MAIDEN VOYAGE AS MUSINGS BACK-UP EDITOR. HIS ADDRESS AGAIN; 502 W. McDonel - MSU - East Lansing, MI 48824.
 DEADLINE: MONDAY APRIL 28TH

DAVE DESCRIBES COASTAL DX EFFECTS

DAVE YOCIS - 502 West McDowell - MSU - East Lansing, Michigan - 48824, 517-353-1503 (this time; 85 Vesper Street - Fairfield, Connecticut - 06430)

How lucky I happened to be home when this deadline for the ocean-front states came around! Although you won't believe it from the WX, this is "Spring" break & we have some DX from Connecticut for a change! Details will be in the various columns, probably not till next issue, though. While I'm here let me tell all you land-locked people what it's like to have a sea path in at least one direction. My home here is a little over two miles from Long Island Sound, at 25 miles from the true Atlantic. We have an excellent path to the South & a number of excellent catches can be made. Spanish even in normal CX is heard on quite a few channels (it's about 1,100 miles to Cuba, and its stations have amazing consistency, even 5,000 watters). On Auroral evenings, all the lower part of the band (below 900k) is virtually all in SS. PJB-800 often has the strongest signal on the band, except for WICC-600. The NYC clears who have their XRs in New Jersey are often overcome by Latins (although WNBC & WCBS, who have their XRs on Long Island & therefore also come in over a sea path are not bothered too much). We also note domestics all along the coast, but an inland reception of a low-powered domestic on sunset is relatively rare. In milder Auroras, Florida Peninsula blocks similar effects that others notice from Georgia & the Carolinas. Ground conductivity in all other directions is quite poor & so daytimers from the South dominate. Other news: TA's finally made it to Michigan. Weak hets from 719 & 782 were noted on 3/1 @ 2am EST, precisely Lisbon sunrise. Now if I had only been listening a little earlier! In closing, I remind you that ERNIE COOPER, a la Johnny Carson, will be having a guest editor (yours truly) & I hope that EVERYONE will drop a line or two (but not more than 30, hi) by April 28th 73.

OOPS - WRONG SECTION - MANITOBA HAS A SEACAST!

MORRIS SORENSSEN - Box 764 - Leaf Rapids, Manitoba - ROB IGO 3/5/80

My only new DX catch since my last report came on MM 2/18 when I logged the KURL-730-TEST weak, mixed w/CXIG. CKDM was off. Last week I was in Brandon with part of our High School Track Team & took the TRF along. Brandon's about 135 miles W of Winnipeg on the Trans-Canada Highway. The city has two locals, CKL-1150 which is MoR & T-40 with a lot of "oldies" & CKIA-1570, a o/w station which often IDs as "Q-1570". Both stations carry a lot of livestock reports reflecting the rural base of the community. Strongest semi-locals included KFTR-550, CKDM-730 & CJRB-1220. I didn't do a lot of listening as the kids were always borrowing my radio but most of the Winnipeg stations were audible during the day. On the subject of whether Canada's domestic or foreign (or from a Canadian view, whether the U.S.A. is domestic or foreign) I get around the problem by keeping three totals - Canadian, U.S. & Foreign! Leaf Rapids is having its annual Winter Carnival this weekend & I have been asked to set up a display on DXing for the hobby show. I will exhibit my RF-2800 (the HQ-150 is too big) plus various QSLs, permants, & DX publications including DX NEWS and the Domestic Log. By the way I hope this makes it in time for the issue featuring states and provinces with seacoasts. If you don't believe that Manitoba borders on salt water you'd better dig out your Atlas! (By golly, he's right - this should have been in with the coastal Musings! - and also the Ontario Musings too! -ERC)

LONGS FOR MORE MUSINGS FROM IOWA

STEPHEN J. MCINTIRE - 2224 Swartz Street - Des Moines, Iowa - 50317 3/11/80

Not much DX to report, as my parents have gone off to Florida for the Winter, leaving me in charge of the newspaper. As a result, mucho work & not much desire or opportunity to DX. New since last time; MM 12/10 - KRNT-1350 had one of their irregular SPs & I caught KIDN Colo. @ 3:25 which I heard many years ago as KKAM. The KEGG-1560-TEST was in late but very well 3:50 on w/more KCJF than usual as others noted. 12/21 - A long-sought SSS target finally came in, KSGL-900 Kan. 6:16. MM 2/18 - President's Day - a legal holiday here tho's no paper to put out & a rare chance for a good MM session. WKOM-710-TEST in well o/u WOR w/WEB luckily off. KURL-730 was heard tentatively w/weak TT & one good sweep tone; w/1 back in less than two weeks confirmed it was they. Verles also from KEGG (a very nice personal v/1) & WRGM. KRNT was off this morn again & KIDN was heard again; no sign of lusted. after WKCL. A real surprise was WJDX-620 Miss. in so strongly I thought it was TMJ or WRJZ @ 2:43. MM 2/25 - Only one catch (maybe) but if it holds up it's the highlight of the season. During WJWL-900 TEST time, the "alien signal" from "Close Encounters" was heard during the 1:10-1:20 period along with what sounded like weak CIDs (no good for me, I don't read code). A tentative sent, if it checks out, it will be State #48 heard (w/K.H. & Vermont left) & #47 verified (Maine & D.C. are heard but not verified). I too bought a TRF from CHUCK HUTTON, though it was a used one but with filters added & realigned. It seems less selective than my other TRF or the RF-2200 (due to insertion loss no doubt, though it might just have weak audio), but the selectivity is very good. I've only really checked it out on one SSS session, but at that time I heard KCTA-1030 quite well with the antenna pointed straight at WHO. If I tried that on my other radios, I'd be lucky to be able to hear something on 1070 as WHO is only 12 miles away with their super-efficient transmission system. I'll be back for the "two word" issue w/news of the Des Moines radio scene & I hope to see some other Musings from Des Moines and Cedar Rapids, as I'm tired of being about the only Muser from Iowa. 73 and see you in the City of Angels.

PLEASE REMEMBER; ONLY ONE MUSING PER ISSUE PER MEMBER NOW THAT WE ARE OFF OF OUR WEEKLY SKED. SO PLEASE OBSERVE THE DEADLINE DATES SHOWN ELSEWHERE IN THIS ISSUE. ALSO PLEASE PUT YOUR NAME & ADDRESS ATOP YOUR MUSING, AND PLEASE DOUBLE-SPACE WE HOPE YOU'RE ENJOYING THIS ISSUE.

AND HERE THEY ARE - THE TUG BOAT OPERATORS, DEEP SEA DIVERS, FISHERMEN, SWIMMERS, CLAM DIGGERS, SUN WORSHIPPERS, LONGSHOREMEN, S. UGLERS, AND WHAT HAVE YOU - THE MEMBERS WHO LIVE IN A SEACOAST STATE OR PROVINCE!

A NORTH-WESTERN BAND-SCAN

GUY KUDLEMYER - 1314 City View #1 - Eugene, Oregon - 97402
Howdy. I read with interest a Musing in the 2/25 DX NEWS by MARK CONNELLY discussing Twilight Rush Hour DXing. Intrigued by this thought, I attempted to log some exotic DX on the radio in the ol' Pick-up Truck while commuting homeward. The results were not surprising - not a single TA was heard. Not France, Albania, Mauritania or even a groundwave from WABC. Not even anything as "easy" as "eregall-765". "Someone's handing me a line", I concluded, as I drove along feeling depressed and ejected, hi. Then I stopped & considered a few pertinent facts; #1, TA's don't make it this far West under any circumstances with any predictability; #2, my "commute" is only ten minutes to home; #3, I get off from work @ 3:30pm. (The sun doesn't ever go down till 4:20 in the heart of Winter, and this time of year, it's approaching 6:30). After considering all this I felt much better, & decided I'd put that idea to work next season, only in reverse - TP's & PSA stations on my morning commute. Thanks, Mark, for the idea - it must be nice to log such difficult (from here, anyway) stations with ease. Now, keeping with the current trend in DX NEWS, I submit a "Eugene, Ore. Groundwave Study". All stations noted were logged on a Sunday AM in late January; 550-KCAC. 570-weak unID (KV1?). 580-weak unID (KCMX?). 620-KGW. 630-KWKO. 670-KBOI. 690-KRCC (plus unID w/ol mx); 710-KIRO; 720-KDWN; 730-KBOY; 740-KCBS; 750-KXL; 770-KKA; 780-KCRL; 790-KWIL; 800-KPDQ; 810-KGO; 850-KTAC; 860-KSEA; 900-unID (Canadian?); 920-KGAL; 930-KAGI (plus unID, KSWB?); 940-KWRK; 950-KYES; 960-KAGO; 970-KYTE; 990-KRRT; 1000-KDWO; 1080-KWJJ; 1150-unID (KKEY?); 1190-KEX; 1220-KCCS; 1230-weak unID (KTDO or KHSN?); 1240-KFLY; 1260-KYX; 1300-KRWB; 1310-KAPT; 1330-unID (KUPL?); 1340-KLOO; 1370-KFIR; 1380-unID (KBCH?); 1390-KSLM; 1400-KNND; 1410-KPAM (plus an unID); 1420-KYNG; 1430-KGAY; 1440-unID (KMBE?); 1460-KROW; 1470-KDUN; 1480-unID (KARO or KRED?); 1490-KBZY; 1520-KYXI; 1550-KGAR; 1580-unID. All other frequencies were either blotted out by locals or completely dead. I hope someone out there finds these interesting. Question & Answer time; I may be the world's most uninformed DXer, but does anyone know the story on KSUB (or whatever is) that was supposed to be on by this time w/50kwh from St. George, Utah? I've been trying for that one for a long time. BILL HARDY, I will get around to answering some day, & yes, PETE NOIAN, I am still alive. Adios.

SINGS THE PRAISES OF HAMMARLUND HQ-180'S

RANDY TOMER - 1038 11th Street - Arcata, California - 95521 (postmarked 2/27, rec'd 3/4)
This Irish Musings issue is definitely the most ridiculous ploy the MRC has come up with yet to drum up a few extra Muses, but it did get me to dig out the typewriter & come up with a Muse, which is long overdue from this DXer. I guess I can qualify even though my last name is Dutch, since I have a classic Irish mother, & I've been known to put away my fair share of Old Bushmill's Irish Whiskey at times! With the coming of St. Pat's Day WC DXers should be aware that DU's will also be coming in with increasing strength and quantity, and the Eastern DXer may get that long-awaited first Aussie. DX for TP's has been on the upswing here, with quite a few foreign stations noted during late February, see IDXD. I'm now living right in downtown Arcata (since August '79) & the noise level here is horrendous, limiting my DX somewhat, so I often drive out to the waterfront a mile from here where it's very quiet, & DX with the M-2 set on the dash and the FRG-7 plugged into the cigar lighter. I also have a good DX site set up in the boondocks. My house trailer is there and a couple of 250' LW's; it's a pretty good DX location but is 12 miles from here. The recent articles on Hammarlund receivers were interesting, it's good to see continued interest in these fine machines, in spite of all the new stuff that's coming out. I wonder how many DXers use the "slot" filter in their HQ-180's effectively? Here's my method; Set the selectivity to a fairly wide position, then turn the BFO to "CW" and zero beat the desired station. You will then hear a strong beat note on the undesired signal; adjust the "slot frequency" control until this beat note disappears. Then return the BFO to the "AM" position & switch the selectivity to a narrow position. Although it's no miracle worker, the slot does make a noticeable improvement when QRM is 2 kHz or closer to the desired signal. Overall, I find that the HQ-180A leaves little to be desired as a DX rig, guess you could say I'm a "Hammarlund Man." Several owners of Hammarlund SP-600's feel they are superior to the HQ-180, that's saying quite a lot for the SP-600. A good repairman on the WC for older tube receivers is Frank Glass of RQ Service Center, 14910 Los Gatos Blvd., Los Gatos, Cal. 95030; if this guy is in your vicinity, your RXes will be in real good shape!

KELEY MISSED THE IRISH ISSUE OF MUSINGS TOO

KELLY ANDREWS - 1800 Windsong Trail - Richardson, Texas - 75081
Even though I'm probably an issue late on the Irish Musing, I thought I'd send in a Muse just to let everyone know I'm still alive & well. I completed the move from Richmond to Dallas during the last week of October, but very little DXing has been done from the new site. Probably the most productive aspect of the move was the opportunity to stop by stations that had been hold-outs & get some long-awaited verifications by way of a personal visit. Such a technique was used with WRCC, Columbus, Ga., WVI, Montgomery, Ala., WRX, Selma, Ala. & KOKA, Shreveport. All were very friendly, offered a tour of the facility and indicated they do verify as a rule; it's amazing how people respond to a personal visit. Only DX from Texas was the morn of 2/18 with WWQ-1430 in a lam s/off following ABC NX, IDing as 3WQ-Panama City, Fla., & KURL-730-TEST under heavyweight XEX w/TT; veries back on both of these. Only problem is I don't have the time, patience or money to start all over on verification totals even though this DX scene is totally different from what I was used to in N.C. & Va. Current totals from all locations are 829 verified in 45 states; eight provinces

(Kelly Andrews, cont'd.) & 31 countries. I still need veries from CHWO-Oakville and WEZJ-Williamsburg, Ky; anybody able to offer any help? Return percentage here is running around 90% for the past four years. 73.

HIS GTG WAS SNOWED OUT!

BILL COLEMAN JR. - 114 Circle Drive - Rocky Mount, North Carolina - 27801 /919-443-7282 3/7/80
Well, I had to cancel the March 1 & 2 DX get-together, or rather the SNOW storm we had canceled it for me, hi! Twelve inches in my backyard! Kind of disappointing, but we're going to try again soon in the near future. If anyone has a better date/time, etc., please suggest it whenever you write. I heard the WROM-710 2/18 TEST, real strong signal here, and well over pest WOR, "The Big Bore", hi. Excuse my poetry! Local WRMT-1490 was off the air Sat. 3/1 due to the storm, nobody showed up to relieve the man who had already been working 12 hours (so I understand). They usually s/off @ 12:05am daily. Only station around here that stayed on was the FM of WCEC-810, WFMa-100.7. I called the CE & asked if they were going to keep the AM on due to the snow emergency, & he said he was only keeping the WFMa on, didn't see any need to keep AM on AN as they did the FM. I guess only daytime stations with NO FM service can stay on, somebody please verify this? (Our local WVLC-1170 stayed on when a hurricane threatened in '77 & they have an FM -ERC) Oh, I almost forgot to mention, WCEC-810 will start using CBS network NX on March 17th. Hey, any of you guys up on MMs with any DX tips, give me a call. I'm a night owl, and I'm usually up till 4am, so feel free to call. The phone doesn't ring here, but only a light flashes, so it doesn't wake anyone else up, hi. That goes for other mornings, too! So make a note of my number as it's non-published (listed above). Any amateurs who are C.W. buffs, please write & we'll set up a sked, on CE mode. My call is K4LADP. I use a Yaesu FT-101ZD on bands 80, 40, 15, 10, & a Drake TR-7 transceiver, and an Info-Tech video display. Correspondence, phone calls always welcome, even especially from our foreign country members. I also exchange cassettes of air checks, etc. Peace. 73's.

LET'S ALL SUPPORT DAVE'S DDXD COLUMN!

DAVE SCHMIDT - 42 Chelwynne Road - Castle Hills - New Castle, Delaware - 19720 3/4/80
I hope this makes it in time for the "Seacoast Special." Although I'm not near the coast, we've still got one in the Diamond State! DX: 2/20- CXTB-610 12:57-1:09am w/c/w mx, CJOQR-FM ID's, WIP null'd, o/u WIOD. This is only my fourth 610 logging in 15 years of listening! 2/25- WGOO-1090 12:44-12:57am w/Pop (thanks ERNIE COOPER for the tip!), WNTS-1590 1:35-2am w/REL mx, "The Spirit of Life", o/WAKR. 2/26- WFGI-1050 5:56-6:09pm w/REL stuff, before WEN set in. 2/27- WJMA-1340 6:03-6:12pm w/NX, then MOR. 3/1- The TT from the WBSK-580 TEST snuck u/WEP 5:49-5:58am, WEP is exceptionally strong here at night. And a f/up went to WBEV-930 for an 11/18/79 report. Veries: w/1- WRMG-1520, WLBA-1130. w/f- WROM-710-TEST. Total: 1,019. Thanks to all for their support to DDXD, it's appreciated. And I hope you'll be able to keep the support up as was done for RAY ARRUDA, who did a very good job. More as it hits the wire! 73's.

LOGS KOB-770 & CKXL-1140 IN SPITE OF A BROKEN WRIST

EDWARD R. COTTON - 4106 Second Street - Chesapeake, Virginia - 23321
Well, here goes my first kusing of the year. No excuse, except I broke my wrist a few weeks ago when I slipped on some ice, left behind after a record snowfall. So far this year has been one giant snowfall, an all time record for us of 41.9 inches, so far. I got hold of this typewriter and have been practicing so here goes. This season hasn't been too bad DX-wise. I've logged 80 new stations and three new states. The states were Wyoming with KTW0 on 10/30/79 u/WBZ, New Mexico with KOB u/VABC, heard twice this season, and Nevada with KMLJ also heard twice with WRVA off on SMs. on 1/20 CKXL was heard in good w/rr mx. All have verified except KOB which is out now. I have been concentrating on verifying all the three-letter calls. So far out of 35 heard I have verified 25, 18 of them this season. Verie-signers are being sent to ERNIE COOPER. CX seem to have gone kaput like they did last year at this time. No new stations in over two weeks. Domestic totals, stations; 897/85; states; 43/39. Well, that's it for now, a Muse just to let everyone know I'm still here. I hope Ernie will excuse the typing; I haven't been typing long and this is one-handed and left-handed. So long and 73's.

LET US NOW WELCOME A NEW MEMBER IN ENGLAND

HERB MOUNTAIN - 528 Itham Road - Blackpool, Lancs., England FY4 1QY 0253-44808
Although I joined the N.R.C. in December of '79 I have not had time to Muse until a few days ago, which in themselves were taken up DXing, bringing five newies and several unids (Reports sent in to DAVE SCHMIDT). To introduce myself, I'm a record shop owner and have been DXing for over 15 years but have never taken the hobby seriously enough to join a club before. I haven't found out yet whether or not I'm the only Limey in the NRC, hi. Equipment here is a Panasonic RF-2800 with Joystick antenna and Joymatch tuner. I have also on order a TRF from CHUCK HUTTON. The ground wave situation in this area is amazing, with 14 pirate stations from the Republic of Ireland and other regular English weekenders. Most regular North American here is CJOQ-930, more often audible than not. I am listening to it while I write this. I'm looking forward to Musing again soon and meeting many new friends through the NRC. 73. (They'll be most welcome, Herbi -ERC) (There is one other English NRCer - KEN BROWNLESS, 7, The Avenue - Clifton, York. -ERC)

PLEASE REMEMBER ALWAYS TO SEND RETURN POSTAGE TO STATIONS WHEN REQUESTING VERIFICATIONS. IT IS, AFTER ALL, A FAVOR TO US - SO THE LEAST WE CAN DO IS TO PAY THE COST OF THE POSTAGE! BE SURE TO REPORT TO OR THANK ALL STATIONS LISTED IN THE SPECIAL TESTS SECTION ON PAGE 11

JERRY HAD A GOOD DECEMBER

JERRY BOND - 143 Burwell Road - Rochester, New York - 14617 3/3/80
Long time no Muse & with quite a bit of DX to report this season, I think it's about time I sent a report in. I've been swamped with work the past month or two but I'm still DAXing a little - mostly on weekends. Here's what I've been hearing since my last Muse several months ago. 12/15- This was an unusual afternoon for Quebec. I noted CJFF-1400 o/ WYSL as early as 2:38pm & from that point until 4:30pm FF stations just dominated the dials. CFIP-1000 was the only new one logged although there were many I think would have been new had I gotten some ID's. Another new logging that afternoon was WGUY-1250 w/a Jimmy Fund Telethon @ 3:49pm. 12/21- Another good day for Quebec - this time around sunrise. CKSM-1220 was logged for the first time from 8:10-8:35am with Christmas mx & I also heard CJSO-1230 strong as late as 8:45am. FF was also noted around 8:30-8:45 on 1230, 1350, 1360, 1270 & several other frequencies. Then on 12/24 I logged a couple more new ones while having breakfast - KBIO-1310 @ 7:34am with local SX & WECB-1230 @ 7:45 w/a promo for a special "20 hours of Christmas" show @ 6pm that evening. On 12/29 I didn't log anything new but I noted WCRV-1580 at their 4:30pm s/off. They said that the FCC prevents them from fulltime operation and they urged listeners of WCRV who miss the station after sunset to write to the station & they will forward the letters to the FCC. On 12/30 I caught the pirate PRN on 1620 from 12:32 to 12:40am & they announced they were playing a tape of their 11/12/79 broadcast in which they talked about how to get QSL's from them. They were coming in fairly well with some deep fades. I noted them later @ 1:28am but a bad het prevented me from making anything out. SSS on 12/30 was pretty good - ore new logging taken in WYNS-1150 @ 4:19pm. Also noted were WFWB-1000 @ 4:15pm & WNTY-990 @ 4:16 s/off w/no SSB. Both are quite rare here. The final day of the year provided some excellent loggings. First of all I heard an ET TT on 1060 & when the station IDed they said it was W... in Lebanon, N.C. This was @ 2:04am. The call sounded like WWHI - not WQWX which is listed in the log. (It's WWHI, according to updaters -ERC) I see where they have applied for the call WWHI so I guess they have changed. Anybody know for sure? Another new logging on the morning of 12/31 was WOOF-560 which was noted w/an ID @ 3:26am announcing the end of an ET. Then @ 4:06 I caught KMBZ-980 in very strong with an editorial in which they praised themselves as being a great station. 1979 really ended on a good note DX-wise. I'll report on my early 1980 DX next time. 73.

NEEDS TECHNICAL HELP FROM STEVE BOHAC

DAN BARTEK JR. - 4 Hanford Way - Fairport, New York - 14450
It's been a long time since I mused; it's almost six months. First, thanks to LOU BUEHLER & family for the great Convention at St. Louis last year. Also thanks to WALT BREXVILLE and family for the use of their "A" frame house; Estate; and beverage. I had a good DX chat with ROK SCHATZ after DXing. His talk on the LSCA #1 & 2 was very interesting. I always wondered how anyone could DX down there! I never tried it here though; as no luxury loop. I'm not sure where to connect longwire input to SM-2. Anything's better that what I have now! I need technical help please, Mr. Bohac or Mr. Truax. The dial on my 390 seems to lock up at .056.5. (Thanks very much, DICK TRUAX). It will not rotate any lower (i.e. to .000.0). Any help would be appreciated. Slugs (Cores) look to be moving freely (No, I didn't touch them!) Best DX to date; S.E. 800 KHz, TWR, Bonaire, Netherlands Antilles, 2211 miles. W: 1400 KHz, Burns Lake, B.C., CFID, 1,400 miles approximately. SW: WBAP-820 Ft. Worth, 820 miles. W: WBO-1040 Des Moines, about 950 miles. I should have done better. I had a great thrill meeting the "T-shirt man" (Mr. COOPER). Thanks for all your years of unselfish help with Musings, ERNIE. 73's. (There's no "mister" here, Dan - just ERNIE! -ERC) F.S. - Who tested 3/3, midnight past 1:45am on 960, over-riding VFIR. Any help? Thanks much!

CONCLUDING HIS TALE OF HIS MOST UNUSUAL DAY

HARRISON PIERCE REED III - 123 Woodlawn Avenue - Saratoga Springs, New York - 12866
(cont'd from last issue) WLAB was strong & alone on 1350, while WTSN was way o/WBFR-1270. WARA & WQVR were doing battle on 1320, while WATR was not to be heard. 1310 belonged to WRC, & the long-sought Maine & Conn. stations were not there. The Gospel programme on 1260 had to be Boston, & WARE was with WBER & WGUY on 1250. 1220 was WBB/WLKP, & WHIM completely walloped WUHN on 1110. Does anyone know what became of WVN? (They're currently silent -ERC) The GYs were madhouses, every one! 1230 was ridiculous. It was worse than a night of excellent skip. 1240 was so jammed that semi-local WWWD was getting buried. 1240 was a mess, & 1400 had LLE dominating, with spots for a station at 99.5. WABY was buried. 1450 was impossible too, as was 1490. I tried the "graves" all afternoon, & could not positively ID any single station except WLLH. Then, as has been the case all week, as sunset approached, the skip faded, then died completely. Now the GYs had only the usual stations heard during the day & absolutely no co-channel interference on either 3WD or WABY, even when null'd! 1490 was WCSS, w/WAD under, the same as during the day. WNSC was alive & well on 1450, while WBT & WBRV battled it out for control of 1240. On 1230 WNUC was still in their on groundwave, 74 miles away! I could not even hear the Latins I sometimes get when domestic skip dies. The skip above 1500 started to open up slightly a bit later, & WKBW was there along with WQXR & WQQW. WDR was in evidence as a 3kc het on WQQW, but not sufficient in strength to surface alone. No other TAs could be heard at all, so even that aspect was poor. When skip is this poor, my pocket radio does one thing strange: it picks up little images of strong SW stations! With no stations on M to fight them off, these little images surface all over the dial. Annoying is a kind description! Last week I reported hearing WCHE testing on 1520 on 1/29. Today I received my verification from CE DAVE SCHMIDT. You will recall I told you that the test was unusually clear with courteous IDs, given slowly & distinctly, so as to be easily read under superpower WKBW. Now I suspect why: DAVE is one of us! I wonder why he did not give the NRC advance notice of the TEST, or did he? (He did!) -ERC

A QUARTET OF PROGRESS GENTS TOGETHER IN FLORIDA

STEVE KENEDY - Box 231 - Immokalee, Florida - 33944
Howdy from the Ear of the Everglades. Lots of news. 2/24, RON SCHWARTZ, MARK STRICKERT, & TODD HYLER came up for a day of eats, DX gab, & even some DX. At 6:04pm we were all amazed to hear R. Moscow relay via Cuba on 600 kHz! We believe we could have been the first to hear this, as it wasn't noticed 2/22. Possibly this is the most powerful station in North America, as on 2/25 @ 4pm I was able to hear it on my car radio with a windshield antenna! Back to the first Immokalee NRC GTG; Ron, Mark, & Todd arrived about 11:30am to meet me at WKEM. After the nickel tour of the place, we went out for lunch, picked up a six-pack of beer, & to my tiny place. Mucho talk about EX & NRC. Ron & I put together an LSCA from what parts were available...thanks, Ron, for the parts...and played around with it. We dug out a couple of Cubans I had never heard before. LSS was approaching, & Ron demonstrated how TMM works. We started with a het on DEC-595, but we started to scan the dial & ran into R. Moscow via Habana. I checked for SW //s, & only heard the USSR XR, so we concluded this is via satellite. By 7pm all were getting the hungries again, so we piled into Ron's car & ran off to a restaurant that specializes in Mexican food - no Cuban restaurants up here. Sorry the food wasn't so hot fellas, I know they can do a better job. I eat there all the time. After a hearty meal, we bade adios hasta luego. All in all, I really enjoyed the mini-GTG, & really appreciate fellow NRCers who will drive over 200 miles round trip just to visit my humble abode, especially with the price of gas these days. Due to my vision, my wife would have to drive if I was able to reciprocate the visit. Again Ron, Todd, & Mark, thanks & mucho gracias. By the time the next season begins I will have a working LSCA to dig out DX - right now I am rounding up parts. It looks definite now I will finally be able to get an FRG-7 - when Uncle Sam returns my taxes. Just to show I still DX - new for log; R. Cadena Habana-1160, CMGB-920 R. Relej, Cardenas, Cuba (ex-1560); CMKP-580 R. Rebelde, Baracoa, u/WDBO, all daytime heard here. At night, HIJB-830 Sto. Domingo, CMJX, R. Moron, Cuba; R. Cd. Agramonte-1577w, Santa Cruz del Sur, Cuba; new domestic WRCG-1430 (ex-WRBL); 4VW-1325 R. Haiti-Inter. Who says Florida is poor for DX? It's great if you want almost unlimited LA DX, especially South Florida. Right, Ron? Let's have NRC-'81 in Ft. Lauderdale! This Summer, plans include possible GTG, plans for an Alligator Alley Beverage Party next winter, & a So. Fla. groundwave survey. That's it for now - till next time, setenta-tres (73). (IF YOU'RE SERIOUS, STEVE, PUT YOUR BID FOR THE 1981 NRC CONVENTION IN WRITING & SEND IT TO N.R.C. HQ -ERC)

WHO COULD BE MORE "COASTAL" THAN A COASTGUARDSMAN?

ROD O'CONNOR - USCG Group - 259 High Street - South Portland, Maine 3/11/80
Greetings fellow NRCers. Very little DX to add to these pages, but since this is an issue for us "Coastal DXers", I would be nuts to miss it, especially since I missed Saint Patrick's Day edition. Finally on the air, after much delay, is WDCI-1590, Gorham, Me. Although the news item I furnished for DX NEWS a few weeks back indicated a s/on of some time between Christmas & New Year's, WDCI didn't make it until the first week in March. Their four 410' towers are oriented in an E/W direction, with most of the signal coming right into Portland. Most likely they could be picked up quite well across the Gulf of Maine through much of Nova Scotia. In fact, I imagine they could squeak down to Cape Cod. (You heard 'em yet, ERC1?) (Once, @ 3:30am -ERC) WSMN would be quite an obstacle though. Next Muse, I will try to get their operating hours. I am pretty sure they are Mutual w/NY on the hour. Other Maine news; WGAN-560 is now APR NX, having dropped UPI. In the last DX NEWS (3/3/80) DAVE RUKAKOSKI mentioned hearing WSBG-95.3 FM from Southampton, L.I., N.Y. which used to be WVEJ. They are a Class A FM station & cannot operate over 3kw. As it is, they only put out 2,350w according to my FM Atlas. I tried to get a job there a few Summers back while stationed in NYC, but didn't get it. They used to play real "Shmaltzy" type mx to go with the "Beautiful People" crowd out in the Hamptons. I am getting ready for summer ground-wave DX on the beach, despite the fact that now it is about 15C with 30 knots of wind making it feel like -25C! Good DX to all.

AROUND THE WORLD OF RADIO

PETE KEMP - 5 Greenwood Avenue - Bethel, Connecticut - 06801 WB1FZX
ESTP's radio listeners, with links to WEEB & WGR, were treated to live radio coverage of the American-Russian Olympic Hockey game. ESTP received the feed and full cooperation from Canada's CTV network. Edwin Howard Armstrong, inventor of the superheterodyne receiver, has been inducted in the National Inventors Hall of Fame. He was also known as the father of FM radio. Bill Edvardson, of WQSK in Albany, received a call on the air from a listener in Singapore, about 10,000 miles away. He it wasn't DX, just a regular touring the Far East. Yankee Baseball, in Albany, has switched from WOKO to WRWO. WCFM is going to carry the Mutual Radio Theater from 11pm to midnight. Harvey, N.D. has been granted a 500-watt on 1540. There are now 4,558 commercial radio stations on the air in the U.S. Despite the recent FCC ruling that third class radiotelephone licenses would not be required for logging, etc. Third class licenses are still available but no broadcast endorsements (element 9) will be issued or renewed. Cuba's new 600 kHz has been heard many times here in Connecticut despite WICC in Bridgeport. Complaints have already started pouring in the FCC offices concerning its interference. Art Flemming, formerly the host of TV's "Jeopardy" is now an afternoon voice on KMOX. Dow Jones & Co. is putting together a financial news wire service. They plan to program 17 live business reports daily, Monday thru Friday. The service will be carried over Associated Press satellite transponders. Mary Bitterman has been approved as the new hear of the VOA. So much for now.

Watch for Dave Yocis' deadline in East Lansing--April 28. Give him a workout! Remember only one Muse per issue (any extra's will be held!) so watch your deadlines. In Provincetown, the next deadline is April 7 and then May 13.

A BIT OF A MAIL MIX-UP

KARL V. JETER - 3590-C Clubhouse Circle East - Decatur, Georgia - 30032
Greetings. A strange story starts off this muse; My copy of DX NEWS #17 didn't show up in the mailbox, but the next week, #18 arrived intact. THEN, about three days after #18 arrived, there was the errant #17! If that wasn't enough, (Thanks, USPS!) half the issue was upside down - must've been a topsy-turvy trip, hi! On to DX, which has been quite good here. Going back to 2/18, weak TT w/"Sweeps" noted on 730 during the sked KFL-TEST, tones strongest @ 2:22am, much XEX, a tentative report sent. This would be Mont. #1 for me. 2/19, just after local WYNX-1550 s/off, WHHC in good w/SS s/off & EE legal ID at end. This along w/unn WCTV-1550 in later with light rr & NX. On 2/23 a semi-daytime reception, w/WPWL-1460 heard well w/rr 8:05-8:07am w/semi-local WDX null. 2/23 PM, report taken on WHAL-1400 w/Ford dealer ad @ 6:29pm. WJWL-900-TEST not definite, I heard some TTs around 1:42, no ID, match. 2/29, I noted a het on 1320k, and was surprised to hear Radio Haiti-Inter on 1325, xint signal 9:29-9:39pm (unusual, as at first they seemed to be SS, then by 9:40 or so were in fast FF). Best SSS reception of late was on 3/1 to get March off to a good start; WVSC-990 was in nicely 6:05-6:08pm w/NX, local & state, for first time Pa. was ever heard @ SSS as I remember. PM of 3/2 also was good: I got WMLB-1440 good o/WBHY et al 6:36-6:42pm w/rr. Later, several s/off's on 1540, one @ 7pm was WBNL, Boonville, Ind. (250w) then @ 7:15, a s/off w/k-call, but not sure, they had FM mention. Still later, another new-then @ 7:15, a s/off w/k-call, but not sure, they had FM mention. My TEST bad-luck continued on 3/3 w/only some TT noted 1:01-1:04am on 1430 for WJNR. And finally, 3/4 PM, I was very surprised to hear ol' Herbie Hoefliker's beacon, KNDY-1570 at s/off @ 7:45pm. Good ol' Herbie was met by me & several pals on the way to the '77 Lincoln Convention when we stopped at KNDY. He was really nice, but he won't answer my reports! A few veries in Feb. but none in March so far: KSRB-1570, WNPC-1060, WGWR-1260, WCIK-1070, WBOL-1560. 73's for now.

LONGWAVE TA'S ARE MAKING IT INTO JERSEY

ERIC W. CRUSER - 1 Lake Shore - Lakehurst, New Jersey - 08735 W2DYR
Hello again from Ocean County, in the Pinelands of New Jersey, which does have a long shore line on the broad Atlantic. I'm still doing a bit of DXing & found CX very good the first day of March on the low bands with several signals from Europe, including: W. Germany on 151 & 180, France on 164, Drotwich, England on 20, Morocco on 209, Monte Carlo on 218, Poland on 227 & Algeria on 251. Recent additions of internationals heard on the regular BCB are YVKS-750, Caracas, HJAJ-760, Colombia, Senegal on 765, Freeport, Bahamas & HUCY, Bogota, Colombia on 810 kHz. A carrier with low audio was heard on 885 kHz @ 6:30pm Feb. 18th. My VERTH shows only Saudi Arabia on that frequency (could bet?) Other new loggings here are WYRE-810, WLVV-940, WLCR-730, WPCP-940, Voice of Cuba-600, WBEQ-560 (while WPIL was off) & KQJ-850. Receivers in use are a Drake 2B with home brew converter, SM2 and a TRF. Antennas are ham band LWS. Until next time, 73.

TRAVELING BUT NOT DXING

BRYAN LEE - Box 69 - Brooklyn, Connecticut - 06234
Well it's about time that I muse again, I guess. Since my last Muse around November or December, I haven't DXed at all. None - not even a simple bandscan. I've been struck by DX-boredom, I have it bad, too! During February vacation, from Feb. 17-24, I went along with my father to Arizona (after having a six hour delay in Boston!). On the 21st, we flew from Phoenix to Albuquerque, N.M. and drove down to Socorro, N.M. where I was born and where my father went to college. I did some recording in both Phoenix and Albuquerque. The best recordings being from Abq due to a misunderstanding with my tape recorder, hi. Not much in the way of SC's, actually as far as getting SC's was concerned, the trip was a disaster due to the flooding in Phoenix. We stayed in Tempe & to get into Phoenix required a five hour wait to get across either of the two bridges open over the normally dry Salt River. It was interesting enough though. Phoenix is a beautiful city, but they lack any knowledge of good bridge building, hi! Maybe I'll muse again, soon, I hope! (We do too, Bryan -ERC)

AM & TV DX IS GOOD; RICHARD HAS A NEW RX

RICHARD CLARK - Apartado 115 - Puerto Plata, Dominican Republic
Hi everyone, here is another report from Pto. Plata in which TV DX has been really great & making it hard for to DX BCB. My new RX, an NRD-505, is the best radio I ever had; much better than the R-390, SPR-1, HQ-180 & SX-62A. It has a video readout of RTTY, CW in which I really like on SW. The selectivity & sensitivity is very good and it does not overload on locals! This radio is like the R-388 and the higher class radios that cost \$2,000-plus. I am very happy with Gilfer in getting me this radio. Now for some DX news here: 1261 HL.. La Voz de Cibao is on the air, location unknown, but I can say it is not La Vega, Santiago, Puerto Plata, and so it has to be in Monte Cristi or Nagua area. A very poor level here with HIT null. R. Turks & Caicos is on 1460, ex-1550, not a new station as per news on VSI, just a frequency change only! AFRIS-1460 is now FM only. R. Exitos, YVTB is now on 800, ex-980 & was heard 2/10 w/PJB on top. Another pest on 800 for me, PJB YVTB/CILW XEROK & R. Exitos-Panama! For now, 73's.

STAN MORSS - Route 3 - Bradford, Massachusetts - 01830
"Harrisonburg Night" tonight - WKCY-1300 & WBBG-1360 both on top @6pm. 6:05 saw WEGP in the clear on 1390, then, wonder of wonders, WLLH off the air - top dog was WMCS w/o/w & CJFP in as I turned the SM-2 but try as I might, no WLTN (no sign of WRBL either - maybe they are off for real.) WLLH came back on @ 6:35 & weaker than usual, maybe only one transmitter was on?

GET THOSE MUSINGS REPORTS OFF TO DAVE YOCIS FOR HIS APRIL 28th DEADLINE! DOUBLE SPACE!

STATIC ON THE INCREASE - DX, TOO!

ERNIE COOPER - "The Village Idiot" - 5 Anthony St. - Provincetown, Mass. 02657 617-487-9337
 Three veries made it in this fortnight; v/1- WDCI-1590; v/1-CM: CKTA-1570, & v/q from a tentative, WOKE-1340. Let's start by acknowledging phone calls from these good friends in NRC; MARK CONNELLY, GARY LOVEGREN, STAN MORSS, FRANK MERRILL, DAVE FOX, & ex-NRC'er Bill Wurtsel. MM 3/3 was a very noisy one, but DX was good! UNID Eder w'OC TT on 1370 o' WFEA @ 1:25-plus. Unn WNEV-1330 was running late, w/a program in Yiddish, noted o'VDLW @ 1:37. Unn WNEF-1290 was still going on RS @ 1:40am. An UNID TTR on 1280 didn't ID, 1:40-1:46. I took a third report on CKO-1470 hoping for a verie, they're running me out of Canadian stamps; any Canadian member willing to send me some 17-centers for U.S. money or stamps? Then a lucky one as I caught a test ID from WBFJ-1550, "Winston-and-Salem" N.C. @ 2:34am for a newie. Then @ 3:27am I noted some "home-spun" hymns on 1590, & figuring I had WNTS, I hung on, took a report, & got an ID "WDCI in Gorham, Maine" (also new!) STAN MORSS says their RS weekday s/on is 4:30 so this must've been a test. They've just begun RS, contrary to what a non-NRC'er said who "heard them on RS" back in November. Add to the Larry King Thing; WJON-1240, WDXI-1310, KCMJ-1010 & KAUS-970 - oyl 3/5- No sign of WJAZ-960 TEST. CHUM & WEN-1050 about even this AM, CHUM's array must be awry. Unn WMLB-1550 Conn. TTING @ 12:40-12:53, o/ CBE. Another pattern is askew; that of CHRM-1290 as suddenly they're on top here AMs AN. 3/6- UNID TT-1330 @ 1:09am u/ADLN. 3/8- WMOO-1550 another of their frequent ETs @ 1:07-1:17. UNID TT w/WOR-710 @ 1:25. Longtime no-heard CFAC-960 actually topping that spot @ 2:15! 3/9- On 1150 u/WHEU, CHSJ giving away a weekend in New England - I wonder where they'd send me if I won, hit Somebody off frequency on 612a giving CST TX checks @ 2:09; a very weak signal. On 567, Ireland w/c1 mx @ 2:27am. Unn CKCY-920 in WJAR's null @ 2:52. MM 3/10- Unn WNCX-1070 s/off @ 1:07. CKKW-1090 noted this AM ANING & using AM-PM ID CKKW/CFGA. TTR on 610 @ 2:12. At 3, on 1500, two unns, ESTP & WCZY fighting weakly - a bantam-weight bout, hi. WRKO-680 off by 3, w/CJYQ/CFPR there. Old friend El Mundo in on 860 for the first time this season - that's Brazil. WHN-1050 was off; in EE, someone giving a Los Angeles phone number for counseling - XMG, or XED? XED's quite near L.A. 3/11- TT-1400 @ 2:33 & 2:48 on 580. 3/14- Rain, wind, noisy but DX good. UNID TT-1530 u/WCKY @ 2:27, then newie WUTG-1550, ex-WBVM, Utica, ET-o/w IDING frequently 2:46-3:04 & on. 3/15- I got the sixth & last member of the FFC Appalachian net today, 2:42-3:09; GJLP-1230, Disrabli, P.Q. SM 3/16- TTR on 990 2:36-2:42, my UNID c/w again topping 1400, still no announcements caught, 2:48-3:07-plus. WPOP-141C had his SP earlier today; they came back on at 3am. I've got at least two requests for a Provincetown daytime bandcam; I'll try to comply next Musing. C U N 7.

Hold the presses.....the following was received in Louisville just before we went to press.

GOOD NEWS of the members ... James Fenimore Cooper - editor

"FLYING HIGH AGAIN" or "THE PLANE, THE PLANE" (apologies to "Fantasy Island")

NELSON CONNORTH - 765 Transatlantic Drive - Clamagansett, MA. 02673.1416
 Well today I felt that it was about time to report my DX doings for the past winter. The big development here was the new computer-controlled DX'ing machine with a telemetry-operated MW receiver in a radio-controlled model plane. The plane receiver is coupled to a portable shortwave transmitter which broadcasts back the audio from MW signals received. On Christmas, I sent the plane off to Sweden to see what DX was like there. I had excellent signals from many Russians; India was good at sunset. At Swedish sunrise, several American signals were heard, but they were just the usual powerhouses like WOCB-1240. 'och was noted taking Finland/France-1242 to the cleaners, absolutely stomping in with ads for Hefty Blooper's Lower Cape Used Car Lot. On New Year's, I sent the plane to Tahiti to see what Pacific DX was all about. Aussies & Zedders were in like locals and I got a charge from hearing hometowners like WVLC-1170 mixing in with local Polynesian signals. Sitting at home and vicariously travelling the world with my model DX plane has given my enthusiasm for DX'ing a whole new lease on life.

"FREAK TP OPENING" (or should I say "Freak TV opening?"-ed.)

CHUCK ECKAROSS - Wouff Hong Rd. - Turret Lathe, NJ
 I got bored with the TV show I was watching, so I turned down the audio on the boob tube & walked over to the R390A across the room. Then I connected up my new Pooper-Scooper 13-J loop which had just arrived from Radio East. When I heard all the hets on my receiver, I nearly fell off my chair. I was getting hets that had to be TP's, because it was 5 in the morning EST. My countries total to that point was at about 90, all TA's & LA's. I knew that bagging all these TP's would push my total over 100. Carrier around 819 - has to be 1YZ in New Zealand! Gleelessly logged for country #91. Something on 567 - JOIK in Sapporo, Japan listed, so here's #92. Whee! I took a quick break to have coffee & watch the farm report on TV. The price of manure shares was up sharply. After flipping the TV off, I returned to the R390A. But, alas, impending sunrise had apparently taken its toll on the DX. All the hets were gone & I uttered a choice curse. But I'll be at it again tomorrow morning, searching for those elusive TP's.

here last week was a resounding success. Delirious Credenzo, W. T. Infirmiry, and Transmogrified Paul Hatch brought their receivers. Transmogrified's HRO ran circles around the other rigs, primarily because of the built-in '57 Chevy engine. F Stop Fitzgerald brought his Nikon to make a pictorial record of the event. Chopped Mutton, editor of Interplanetary DX Digest, brought an impressive pile of veries. The helium-balloon-supported mile-long vertical aerial over the salt marsh & pitch-pine grove out back worked like gangbusters, but *#!*! Urumchi overloaded the front end and produced spurs which covered up the better DX. Pest Falklands on 536 was in like a lorryload of liverwurst. Nelson Conworth brought a VW Microbus filled with computer-simulated strip-chart print-outs analysing the strengths of WBZ vs. KTWO on the moon for a whole 11-year sunspot cycle. Will Pretzel, also known as the "Mid-winter Anomaly", brought a tape of his latest DX, WABC-770. He also brought his new comedy record called "DX'ing been belly belly good to me". All in attendance enjoyed the traditional wolfing-down of pizza & guzzling of beer while DX'ing on the vertical Beverage; plans were drafted for two phased mile-high helicopter-supported verticals for next year.

"ANOTHER REPORT FROM THE COLLEGE OF FORMATOLOGY"

DELIRIOUS CREDENZO - 5 Grid Drive - Gordonville, OH
 Signals fading in & out, operator "slightly looped". Format news: The conflicting application problem regarding the new 1450 outlet in Provincetown, MA, has been resolved. Cooper Enterprises' bid was rejected; a religious outfit led by Anita Bryant & Carl McIntire has been granted the licence. FCC said that the Bryant/McIntire-run operation would more accurately reflect the character of the community. WCAS-740 has taken a different approach to the '50s revival. WCAS calls itself "The Voice of Beatnikism". Cool jazz is played & old taped interviews with Jack Kerouac & Richard Fariña are run. A new all-Arabic station is on the drawing-board for the Bronx; a competing application from a Jewish group was summarily dismissed. Ian Dury & Frank Zappa records are now featured on the new #1 station in Salt Lake City. Coptic Church services on Jamaica-700 are now sponsored by "Smokenders". A pro-breast-feeding group has asked for equal time after the Milkman's Matinee on WNEW. Don't forget to petition for a 1610 - 1800 kHz. "bootleg band"! LXXIII & remember to 'stay delirious'.

'70s INSIPIDITY AWARDS CONFERRED"

BURMAN PERCY SLEDGE - "The Old Buzzard"- Dental Floss Rd. - Flapjack, Montana
 Fuel? What fuel, bah humbug! I'm freeing my appendages off! Here are my "Terminal Insipidity Awards" for the '70s: I've conferred them upon: stations on 1270 that ID as AM-13 or 13-q. DXers who report the shortwave spurs on their cheapie multiband portables to the international MW columns. Reception reports that state "If you don't verify, all I have to do is make one phone call to the Mafia" Receivers that need an exorcist, not an engineer, to repair them. Loop antenna kits with missing pieces. Anyone who calls himself an "Ayatollah". Daytime stations that have to go off during the ninth inning of a tied baseball game. DJ's who talk over records, especially when you are trying to put the record on tape. Musically narrow-minded people who think it's impossible to enjoy both disco & hard rock (not to mention classical, country, jazz, folk, etc.). Radio stations that aid & abet the "rock vs. disco battle" by staging demonstrations at which fights break out. Light dimmer gadgets that QRM DX. Stations that throw carriers & test tones without ID'ing. Receivers and tape decks with labels reading "no user-serviceable parts inside", thereby assuming that all users are semi-morons with no electronics knowledge. Preacher shows that ask you to "reach deeeeeeep into your wallets!"

WDE DEL YANQUI EN LA AMERICA LATINA"

- KLDTZ - Owsley Blvd. - Dayglo Beach, FL

at a drag it was getting to work today! The Transit Mechanix were on strike because the services of two of them had been terminated. New contests for the '80s: Contest #1 - Log Swan Island on as many channels as possible, using an "LSCA" antenna. Contest #2 - Log all megawatt Costa Ricans. The first listening block will be on 1 April 1980, tuning 624 to 626 kHz. Contest #3 - a precision frequency measuring test. Over the next month, special pirate stations operating near 1160 will broadcast non-stop Caribbean music (Jimmy Buffett records & reggae tunes). Every hour an address will be given to which your reports may be sent. Closest PFM wins a bottle of Uncle Fidel's Cuban rum, confiscated during the Bay of Pigs invasion. 73 de Ronaldo McDonaldo.

T. BARNUM - Watergate Hotel - Washington, DC

etto is "Theré's a sucker born every Monday morning." My partner Bailey safari, using Beverages to lure rare African beasts. Good DX cx. today. Heard from work: WTOP-1500, easily getting by CKAY. Heard from tunnel on I - 95: WRC-980, generally better than co-channel Arica, Chile. Heard from McDonald's: WMAL-630 demolishing KJNO. Heard at home: WADC-1260, topping the synchronised Russians. 73 (square root of 73 squared)

YOU GUESS WHO - No address given Vol. 65 No. 7
 Hi! How's DX-er-ing? Well, in this neck of the DXing woods, everything is just "great", hi! I just got my 8,473rd GYer - CXXX-1490, in Elsa, Yukon Territory, at 11:38am on 13/37. Signal was fair-to-fair-ly good, with lotsa "QSB". Did anybody notice that "local" WBZ operates w/50kw now? Another newie was XEMP in 1580 in Leland, MS at 3:35a.m. I guess a call change from WESY. Why don't more of you contribute to DX NEWS and DX Monitor? I noticed that JOE Q. CITIZEN in downtown Peoria, Ill. hasn't Mused in over five years. What's the problem, Joe? Congratulations go out to IRCA's pub staff for getting the bulletin out on time last week, excellent job, fellows! Well, that's about all for now and I'll be back, probably in Vol. 35 No. 17 or 18 w/another of my fascinating Musings! P.S.: I just submitted 17,839 clips to HQ at IRCA for publication in DX Monitor. Look for them and I hope you enjoy reading them! One tells how many radio stations operated on AM and FM in Tegucigalpa, Honduras in this past year, yep, you guessed it, 1979. Let me know what you think of it and write your opinion a Musing or Forum. Well, gotta go and til next time, good DX-er-ing!

NO NAME OR ADDRESS - Shawmut, Massachusetts Vol. 65 No. 8
 Hey did everybody hear about the Great DXing Switchoff? It seems that LPC will be editing Arctic Radio Club in Sweden, Bruce Portser will become editor of the World Radio-TV Handbook, and Nancy Hardy's pet dog Spot will become editor of Southern DX Digest. All other positions in the club are open! So get your applications in right away! Personally, I'd like to edit International DX Digest, even though I don't know anything about foreign DXing. (I even mistake WOSU-820 for Cali!) but I love NRC and it's my #12 hobby overall. (IRCA is #189). Unfortunately or "shuocs" hi, I don't know who I should apply to since LPC just moved to Stockholm. Anybody out there in DX-er-ing land who knows please write me at the above address.
 (The above were sent in unsigned; we believe they are the work of DAVE YOCIS. -ERC)

MARK CONNELLY - 30 William Road - Billerica, Massachusetts - 01821 2/15/80
 An APRIL POOL'S MUSE: "TV Shows I'd Like to See." A "M.A.S.H." episode depicts the radio op. in Korea tweaking a loop to get KF1. Bostonian Major Winchester says he won't do any surgery until he hears WBZ. On "Lou Grant", 'Animal' comes in late on Monday morning and says that he was up until 3 that morning trying to get a DX TEST from an Alaskan Graveyarder, whereupon Grant ships him to a graveyard in Alaska. Ernie Cooper visits Fantasy Island and wants to DX in 1935, but with an R-390A & a Sanserino Loop. The experience leaves him double-spaced. A call comes in to the police desk on "Carter Country" about some nut from Decatur, Ga. stringing a mile of wire through a local farm, turning off the milking machines, and humming the Paraguayan National Anthem. An episode of "WKRP in Cincinnati" deals with a DX TEST by WKRP and a subsequent controversy over whether or not to verify reports sent in. Sample reports, good and bad, are read. In another WKRP Show, Phil Boersma takes over the station and plays non-stop Iggy Pop. In Los Angeles, a reception-report rig, selling reports on western stations to eastern DXers, is broken up by an intrepid SWAT team on "Rockford Files." A man apprehended in Central Park carrying six bulky portable radios is brought into NYC Police HQ under suspicion of burglary. He says he uses the radios for DXing and weight-lifting. Barney Miller and the other cops agree to let him go after they are subjected to an hour of continuous poetry. Public Television does a documentary on "70's Culture": discussion includes Wes Boyd's mid-70's Domestic DX Digest column credits about looped & stoned DXers. "60 Minutes" does an expose: "The Swan Island Story". A DX Quiz game show is started; prizes include McKay-Dymek DR33's, Drake R7 DR7's, and KNBR bumper stickers. The grand prize, a Heald Travel Agency DX-pedition to the South Pacific, is won by a Watertown, Mass. contestant who correctly explains the Etiology of Quasimonthly Ionospheric Periodicity and its Effects on DX and Fishing.

DAVE RUKAKOSKI - RFD #1 - Box 409 - Brooklyn, Connecticut - 06234
 (rec'd 3/25/80 - year later -ERC) Last Sunday I held a little GTG in a swamp four miles N of Gallstone. We (Ecks Ray, Ann R. Sea, Juan Kerf, and Coco Hammarlund) set up a 127,000 foot longwire, in a SSW to NES direction, avoiding quicksand, and other obstructions. We all DXed w/a fairly new GT-8940C-730A Static Splitter All Wave Signal Searcher. Results were very disappointing! PestCFBB-1210 splatter was totally destroying anything from 1170-1240, and a great loud spur on 750 dimmed the chance of hearing the much wanted W8B-750. Only new stations heard were WART-1530, WANG-980, WSOB-1110, and CUTE-362436 w/a nice figure...er, signal, hi. Just got a verie from WROT, in the form of a scribbling thank you letter on their bumper sticker! By the way, I was just handed the early morning slot (midnight to 6am) on radio station WQRM-1240; that is every morning, and I'll play anything loud, no, not tones, hi. WQRM's signal is heard pretty far, for 10kw, what do you expect? That does it for now, detailed GTG report in next ABUSINGS column. 73 and NSP!

SOME DAFFINITIONS:

- A Nervous Postman: A very wary Verie Fairy.
- A Two-Way radio bought from WISN-1130, which doesn't work: A balky Milwaukee Walkie Talkie.
- A directional pattern out of whack: An awry array.
- Clear Channel: A frequency where it never rains.
- Communications Receiver: A set the store writes you about when you miss a payment.
- Frequency Counter: What's the difference - who needs one? There are exactly 107 frequencies. Everybody knows that!
- N.R.C. Loop: A swingin' antennal
- N.R.C. Convention: An excellent way to lose your Summer suntan. -ERCooper

Did you hear about the girl who wanted to join the Navy as a pilot? She said she wanted to be in the Air Waves!

Did you hear about the station in Peachtree, Ga. that ran a DX TEST? Everyone heard it but they reported the audio being a little fuzzy!

Did you hear about the station in British Columbia that was so hard up for cash they sponsored a salmon race?

Welcome to a new member in Panasonic, New Jersey - Ray Dio.

New Receiver - Ripley Radiol! Once you hear a atation, you can believe it or not!

Show me a man who's a disc jockey and I'll show you a man who's on spins and needles!

Show me a man with a song in his heart & I'll show you a man with a pacemaker made by Hammarlund

Diner offering a "Rock and Roll Sandwich" - that's a bun with pebbles on it!

The inventor of AM Stereo was recently sick - came down with a case of mono!

Definition of a DXer - a person who lets his mind go right down the tubes!

Next week on the XEMP Mystery Playhouse we'll find out why no one knew the garbageman was hiding in the closet until the wind changed.

Send a large SAE to Flywheel and get in return...99 things to do with turnips, 75 illegal.

The Agriculture Department has offered a report on Everything You always wanted to know about Lettuce but didn't have the head to ask.

The NRC has a professor in its membership who designed a new pattern for argyle socks - now that's a real knit-wit!

NEG recently offered a new book which was autographed by the author. Many were dissatisfied when they received the book and found nothing but a big X inside. It was later learned that the author couldn't write and he didn't write the book - he typed it!

Now, here are some people we'd like to see Larry King have on his show:

- ELGRIA STEINWAY - Female activist engaged in equal rights for pianos.
- REINO LEAL - Famous big game hunter from Wallingford, Pa.
- BIRD REYNOLDS - Famous actor who sleeps in trees.
- BERT SPARKS - Famous person who starts a lot of forest fires!
- BOBBY VINTAGE - Popular singer who is the son of Julio Gallo.
- SHA-NA-KOOK - A famous 50's singing group from Fairbanks, Alaska.
- JANE EORDA - Famous Japanese actress with good mileage.
- ANNETTE FUNGJELLO - Famous person who sings in seven flavors and can't keep still.

One of our many all night stations was recently offering Lucille Ball Party Hose - not only do they get runs, they get re-runs!

"On our next talk show, we will talk to a professor who is trying to determine how long America was lost before Columbus found it."

One all night talk show recently interviewed a scientist who was trying to determine if the Eiffel Tower really did contain any Eiffel!

Next week, WKEG will be interviewing a farmer who can gargle in Spanish, and tell us about how he took the burps out of turnips, and the new book he recently published, "Something you can do with Parsley."

Did you know that the first Public Service Announcement ever run on radio was for a party to be held on the Titanic for the "It Couldn't Happen in a Million Years Club?"

A hat maker was recently turned down as a prospective person to be interviewed. They said he was too much of a put-on.

Don't forget to write for your free pamphlet for 30 things you can do with 3-in-1 oil - all of them disgusting!

New Receiver - Bagel Radio - Just set it on a station and it locks it in!

On a recent doctor's program, an automobile mechanic reported he wasn't feeling well. It was finally determined he was two quarts low.

Special notice - the monthly meeting of the Vic Damone Fan Club has been canceled due to boredom

A new reporter to Musings reports that he's going to make a lot of money this year... he just bought a printing press!

A New York clothing dealer recently ran an ad on an all night show, "Be a real honey, bring us more money! We take cash, checks, credit cards and hostages when you don't have the first three!

A new member who recently joined the Club reports he can make himself a directional loop by just putting his hands on his side. Welcome to Arms Akimbo.

There was once a DXer who bought a bunch of very high priced radios in the hope that it would make him a better DXer. It didn't help but there was one thing that no one could take away - his New York accent!

XERF is now offering a special book, "My Trip to the Zoo" by Martin Perkins.

Then there was the NRCer who got a job at a playground - says they gave him the swing shift.

Recently an all night talk show had an interview with a man who likes to race motor cycles. Only thing was, he couldn't figure out why they always beat him!

Then there were two twin brothers who recently joined the Club. Their first Musing stated they worked in an ice cream parlor and were known as "The Double Dips."

Then there was the DXer who had a date with a printer's daughter. It didn't work out - said she wasn't his type.

NKEW recently ran an ad for BUFFALO CLEANERS! It was a Public Service Announcement for the street department who were looking for street sweepers!

On a recent case of the WABC Divorce Court of the Air - a dentist and a manicurist were recently seperated. They were always fighting, tooth and nail.

WBT recently played a song dedicated to a meat cutter - "Butcher Arms Around Me."

Did you hear about the new beauty queen the record industry picked? They chose a girl with measurements of 78 - 45 - 33!

News flashes: Share croppers in Iowa refuse to share their crops!
State of Maine revokes Frost's poetic license.
Miniature cow in Indiana gives first quart of condensed milk.
Battle of Bands in Boston injures 35. Details on the farm show!

There was a DXer who claimed his radio was worth a million dollars. However, that same person was recently arrested when he tried to cash in the knobs from his TRF!

XERF is advertising a new fast food restaurant - Arno's International House of Spam!
(signed) DAVE SCHMIDT

And now, by Poor Old Ernie. Cooper. I picked up a newie the other MM - "Radio Nylon". They announced they have been stocking up their record library. No wonder they had such a sock!

And, this announcement just in from Louisville. In order to help save energy, the National Radio Club will from now on be closed on Sundays.

Isn't it funny? With all the new religious-oriented radio stations, we don't see any improvement in people.

But we like WGOR-1520's new slogan. You know - they're the religious station in North-Western Ohio - "Holy Toledo."

We see there's an application in for a new station in Dedham, Mass. They want 1,000/250 U-1 on 1450 - a natural for that city, on a graveyard channel.

I recently called up a certain station which was noted on about 1541 on its AN show. The engineer-on-duty explained, "Oh, you see, I've just smoked a joint and we're a little on the high side!"

I just heard a very humorous record on an SS station. At least I think it was humorous - at least it sounded funny to me.

As an ex-resident of Brooklyn, New York City, I can truthfully say "DXing in Fun City is about as rewarding as a deep-sea fishing trip to Wyoming."

And remember, you DXers who wear glasses - don't wear them out - take them off when you're not looking at the dial. Conserve!

Did ja notice? We just changed the name of this section - like everybody else, we just ran out of FUEL.

In fact, we're now heating this barn thusly: The living room with hot tempers, the radio nook with hot music, and the kitchen with hot cross buns.

The number of compliments we received after last year's column has nothing to do with its re-appearance this year. What was that number, you ask? Ever hear of (blank) Mostel?

We were happy recently to receive a Musing from our "Travlin' Man" George Greene, on his recent visit to Akron.

And there's another NRC Traveler from Ohio, Frank Merrill. What is there about Ohio that makes travelers out of its residents?

Remember, if you try to be obnoxious, you'll likely succeed.

No, it is not true - you do NOT need a luminous dial to listen to the Night Watch Show.

A local DXer missed the entire World Series last October. He spent all the time looking for the Pirates on 1620.

We heard an interview with a prominent football coach, who proudly announced he has just acquired a six-foot-eight-inch wide receiver! Wonder if it was an R-390A?

A Q-Multiplier is a marvelous gadget. Why just the other evening I tuned in WFTS-1440, known locally as M-Q. I turned on the Q-Mult, and presto! The next ID, "28.61"

Remember, you cannot get Telephonitis if you have a lot of hang-ups.

Do you recall a while back I had trouble with it taking ages for the receiver to warm up? Why Nolan Ryan could warm up before my set was ready to go - and he'd be working on his tenth strikeout by the time the thing turned on!

And we got a charge out of this selection, recently heard on a local FM station: "The First Time ever I Sawed Your Face" - by the Carpenters.

What is everybody screaming about, with the proposed nine kHz separation plan? Just think - then EVERY station will be on a split channel! Wow! What DX!

Let's go back to the Q-Multiplier for a moment. You know how to make the voice clearer when you pick up a station with a female DJ? Put your Q-Mult on "Broad"!

For a while I thought my radio was on the bum - but it was the other way around - the bum was on the radio.

We noted with interest a recent discovery that you can enhance the performance of a TRF by putting your finger on the exterior antenna post. And now we have a way to make that into a directional antenna - just hire yourself a whirling dervish!

We caught a Venezuelan frequency check. They're very easy to pick out - just listen for a 1,000 cycle note with a Spanish accent.

We have a new member who is of Royalty. He is a Prince - well, he must be - his brother is a Queen!

Here's a co-inky-dinky. We have two lawyers in the Club and they are going to try a case against one another, a case involving the suit of a "lady of the evening" by the wife of one of her customers. So one NRCer against another as barristers - The Lawyer for the Prosecution vs. the Lawyer for the Prostitution!

We have a new retired ex-Army officer joining the Club - Major Factor. He lives in Tab, a suburb of Pepsicola, Florida.

And - flash - this just came over the telefunken. Stop and Shop is merging with the A & P! They're going to call their super markets: Stop & P!

We got a call on the hot line the other morning, and the guy said, "I'd commit suicide, but I'd probably live to regret it!"

And, it is time to leave you for another year - but just so the 27 of you who complained about "Old Faithful" (the ancient but revered old L.C. Smith typewriter of Musings fame) - she is mad at you, and she refused to do this section! And as she sits over there sulking while we bang away on this one, it's so long, and enjoy the next 366 days till next April 1st!