



# DX NEWS

*the magazine of the  
National Radio Club*

— SINCE 1933 —

Volume 49, Number 7 Monday, November 23, 1981

## STATIC FROM HQ

This week is the long delayed and awaited BIG issue we've been promising. And just in time for the Thanksgiving holiday, when perhaps you'll have more time to read a big issue. Thanks to one and all contributors—we've used practically all the backlog of articles so keep the contributions coming our way!!!

This week we are pleased to announce that Rick Carr has volunteered to take over the Graveyard Achievements column from Bill Bergadano. We expect an intro from Rick in the next issue, but in the meantime all the contributions to that column should now be sent to Rick at: 402 John Nance Garner Circle, Apt. 102, Austin, TX 78753. Bill will be forwarding all contributions to-date on to Rick for his first column.

Received this week here at HQ was a brochure from Grove Enterprises, Inc. Although not strictly selling equipment related to CBX DXing, there are a few interesting pieces of gear offered. The brochure is free for the asking, just write to: Grove Enterprises, Inc., Brasstown, NC 28902.

One last time we will mention that late changes should be mailed to Joe Fela, who is compiling the 1982 Frequency Check List. Send any contributions to Joe at: 150 Robert Place, So. Plainfield, NJ 07080.

We just received a last minute call from Skip Dabelstein advising of a MM Test from KHND-1540 Harvey, ND. Although too late for this issue (it's to be on 11/16), see CPC column below for possible rerun of this test on 11/30.

Last call for Ray Arruda's annual Thanksgiving CTG on 11/28. For details, see last week's issue. This is always a highlight of the season, at least for NE members.

## CPC TESTS

Again this week we have a fair sampling of DX Tests for the upcoming season. Its still not too late to write those stations you always wanted to hear. Chances are that many members need that station also. And you could just be the winner of a year's membership in the NRC-FREE-if you schedule the most successful tests before April 15, 1982. So let's hear from you!!!

11/28 WGCH-1490 Greenwich, CT 0000-most of AM EST using tones and ID's. Sat. Reports to: Frank Hajdu, WGCH Radio, 1490 Dayton Ave., Greenwich, CT 06840. Arranged by Chris Lucas/NRC.

\*11/30 KHND-1540 Harvey, ND 0200-uncertain EST. This is a tentative replay of a test scheduled for 11/16 at same time. Will be using 500 watts non-directional and should be easy as KXEL has been noted off during that period. Reports to: M. Darrell Williams, P.O. Box 457, Carrington, ND 58421. Arranged by Skip Dabelstein/NRC.

12/7 WHEO-1270 Stuart, VA 0100-0130 EST using popular music, ID's and tones every 7 minutes. Reports to: C. Lemont Bryant, CE-WHEO, Route 1-Box 24, Stuart, VA 24171. Arranged by Mike Knitter/NRC.

12/14 WKDW-900 Staunton, VA 0005-0130 EST using 1000 watts, code and voice ID's, tones and music. Last 10 minutes will be at 250 watts. CE states that anyone hearing this station "will get a DX treat indeed". Reports to: Bill Betlej, Director of Engineering WKDW, P.O. Box 2189, Staunton, VA 24401. Arranged by Mike Knitter/NRC.

12/28 KADE-1190 Boulder, CO 0200-0300 EST using 5000 watts non-directional. Test will consist of 1000 Hz. tones and music with plenty of ID's. Prepaid calls will be accepted at (303) 444 5600. Reports to: Bob Greenlee, KADE Radio, 4840 Riverbend Rd., Boulder, CO 80301. Arranged by Bob Greenlee/NRC.

## LOOK INSIDE

Domestic DX Digest.....	2
International DX Digest.....	9
WTEL Station Profile.....	12
Dominican Republic Station List.....	14
Canadian Family Life-Updater.....	16

Kanadian Korner.....	18
Man-Made Electrical Noise on CBX.....	20
Phasing Unit-Construction & Use.....	23
Clear Channel Breakdown.....	36
Musings of the Members.....	39

# DOMESTIC DX DIGEST

DAVE SCHMIDT  
42 CHELWYNNE RD.  
CASTLE HILLS  
NEW CASTLE, DE 19720

Here is the official NRC column which considers a ribbon change in the typewriter a festive event! When sending your items in, PLEASE keep them on one side of the paper, type or neatly write, EST, skip a line between items. Things have really perked up, we've had some of the best aural conditions noted in some time. And here goes:

## DE TESTS:

1290 WKLB tentative, tone only, heard by MF-MI, SF-TN, RA-MA.

## FREQ. CHECKS:

1st THUR.... WMGT-1590 w/TT. ID's every 15-20 seconds, 0015-0035. (DS-DE)  
WQPM-1280 w/TT. phonetic ID's, off 0113. (DS-DE)  
3rd MON.... WRWB-1350 w/TT. (JP-ON)  
3rd TUES.... WSIG-790 w/TT. (JP-ON)  
WART-1510 w/TT. (JP-ON)  
3rd WED.... WPLI-1070 w/GW music, on 50kw day pattern. (JP-ON)  
4th WED.... KYMO-1080 w/TT. 0646-0648, anno'd as f/c, not on list. (SF-TN)

## SPECIAL:

920 KYST TX TEXAS CITY - This station is now fulltime, MSP as of 9/28, Top 40 music w/"AM 92" ID's. (AB-TX) 10/28 heard w/KYPR OG w/CW music, several call letter ID's, 1st time heard on new calls. (NZ-NZ) 10/28 2237 fair w/ID, ex-ITTV. (RK-IL)

1110 KTKR TX ALVIN - New station noted running day ET's as of 10/16 1900, ID's on hour. Good signal into Houston. (AB-TX)

1140 WASG AL ATMORE - Noted on ET w/gospel music 10/29 0145-0240, again 11/2 0200, frequent ID's, sounded like a DX TEST. (AB-TX) 11/2 0205 very good w/ET, frequent ID's and religious music o/a weak WRVA. (RM-IL) 10/27 0249-0315 heard on ET w/gospel music and many ID's, fair to good signal on this new CP, no sign of WRVA, just a weak Spanish noted. (NZ-NZ)

1150 WSNV SC SENECA - 11/3 0558-0601 s/cn w/Instr. SSB, detailed s/cn for AM-FM. Call is still WSNV, it didn't change per my last report. (TF-PA) It happens ole buddy....(DS)

1170 WZZE MA ORLEANS - Format: Standards, dropping MIL for "Music of the Stars," basically the same. This station's signal has deteriorated badly here. (ERC-MA) Here too!

1220 WMDQ MS HAZLEHURST - 10/26 1858-1912 ID heard well after their local sunset, called station and asked if they had gone fulltime, anno'r told me they were still a daytimer and would be on til 1830. After several minutes, he realized the time change and forgotten the new w/off time. In s/off he mentioned my name and that I called. Anyone else catch this one? (BM-WI)

1240 WOOB MA WEST YARMOUTH - Now off it's AM sked., s/off w/SSB 0100 daily, 0000 on MM's. (ERC-MA)

1290 WICR RI PROVIDENCE - Noted running Spanish on 10/27 til their 0100 s/off, fooled me for a bit! (ERC-MA)

1310 WKEL VA FAIRFAX - 11/3 0011 noted w/new CW music format, sounded like older, true nitty-gritty CW stuff, dropping Top 40. (DS)

WICH CT NORWICH - Noted running AM-6 w/Larry King, ruining one of the better DX channels in this area. (ERC-MA)

1340 WROD FL DAYTONA BEACH - Format, MIL, dropping Top 40. (ERC-MA)

WMID NJ ATLANTIC CITY - Seems to have switched to a MIL format, dropping Top 40, and still MSP. (ERC-MA) They were running a talk/MOR format during the day, NBC news, strong here days, will check it further. (DS-DE)

1350 WOYX PA YORK - Ex-WYLL, using these calls and is now MSP, MoR music, in/out w/WYWH/WEIS 0100-0500 u/normal conditions, should be easy w/these two running Kingie thru the week. (ERC-MA)

1410 WAMK MA BROCKTON - Ex-WOKW, day regular here w/adult contemporary music, no verie in a month's wait. (ERC-MA)

1430 KKEE TX GLADEWATER - 10/27 1851 good w/promo, would appear that their fulltime CP is now in use. (RK-IL) PS-Moo!

1490 WYTL WI OSHKOSH - 10/26 0230 fair w/CW music, used to have MM silent period at 0200. (JP-ON)

FLASH from HQ--WAVE-970 has officially changed their call to WAVG, noted this week here in Louisville. Also long silent WDCS-1290 is back on the air using black religious format.

14 KCMRADIO

David S. Cooper  
National Radio Club  
5 Abbey Street  
Providence, RI 02907

WVWA-WVWA

1560 KGUE TX PORT LOYACA - Now programming 100% spanish, as of 10/20, w/new management. (AB-TX)

WPAD KY PADUCAH - Per WPAD verie, they have left the CBS network and are now using the satellite music service from Chicago, using their CW music service. (JP-ON)

1580 WQTK MI ST. JOHNS - Ex-WREB, now CW music, retaining Mutual net., slogan "Your Friend in the Country." (MF-MI)

1590 WZIP FL S. DAYTONA - Ex-WELE, Format: CW. Noted 10/30 til 1759 s/off w/no SSB, in/out w/WQQW. (ERC-MA)

WJRO MD GLEN BURNIE - 11/4 0101-0155+ noted popping on/off w/ST, BZL music, very strong at times. Audio was very mid-rangin which made it easy to hear. This station has been off for about 2 years. (DS-DE)

## MIDDAY - MIDNIGHT:

560 KLVV TX BEAUMONT - 10/26 1942 in well, almost even w/WIND, talk show w/many Beaumont mentions. (BM-WI)

580 WCHS WY CHARLESTON - 11/3 2048-2117 music, election returns, ID's as "Radio 58", all in WHP null. (TF-PA)

WELQ MS TUPLO - 11/1 1900 good w/"Peace Radio" ID. (NM-IL)

590 KLEJ TX AUSTIN - 10/26 1900 ID for "Your Music and Information Leader". (RL-KY) Are you often misled? (DS)

690 WZIX LA NEW ORLEANS - 10/30 1822 way atop w/sports, helicopter traffic reports, PSA from LA Power & Light. (RM-PA)

WAFB FL JACKSONVILLE - 10/30 1800 CW music, ID then gone, apparent pattern change. (RM-PA) Yer rite on dat 'un, bud! (DS)

730 WARB LA COVINGTON - 10/28 1815 weak but alone w/Religious music, ID. (RL-KY)

740 CBL ON TORONTO - 11/3 2310 noted w/Electric Circus o/u KTRH and others, rare in these parts. (CG-TX)

770 KOB NM ALBUQUERQUE - 10/26 1920 mixing w/WABG, several ads, news, traffic report, ad for KOAB-TV. I've been looking for this one for a while! (RL-KY) Nice catch, Rich. (DS)

790 WMC TN MEMPHIS - 10/31 2025 w/Best Country ID, Wildcats Football noted later. (RM-IL) (TF-PA)

850 CKVL PQ VERDON - 11/3 2220-2241 French music, news w/WEZU nulled.

860 WLSB SC LAURENS - 10/29 1800 believe this one playing Taps before s/off heard following by SSB. (HJH-PA)

900 KRZH LA DAKDALE - 10/26 1824 good w/ad for blue jeans and Jimbo's or was that Jimbo's Jeans? (RL-KY) Go ask Jimbo! (DS)

WDDT MS GREENVILLE - 10/26 1825 wiped out KRZH w/many local ads, ID. (RL-KY) Where'd Jimbo go? (DS)

KALT TX ATLANTA - 10/26 1844 in quickly o/KIKR w/s/off. (RL-KY)

W02K AL OZARK - 10/28 1814 strong w/Sundance Serenade and a very unofficial s/off. (RL-KY)

910 CKLY ON LINDSAY - 10/27 2111 heard w/unusually strong signal, all alone on freq. (BR-NY) 11/3 female w/talk, ID as CKLY Radio 9-10, at 1953. So much for the Aural conditions. (EH)

940 WINZ PL MIAMI - 10/28 1809 good w/news of Miami murder trial, traffic reports, Radio 94 ID's. (RL-KY) 11/1 1905 very good w/Dallas/Philadelphia Football then "straight ahead" talk show about elections. (NM-IL)

990 KWAM TN MEMPHIS - 10/26 1828 way up o/WNOX w/Religious stuff, s/off w/mention of KWAM-101, ment. of E-O-E. (RL-KY)

KNIN TX WICHITA FALLS - 10/26 1847 xint w/Paul Harvey, spot for Wichita Falls, jingles/ID, o/WNOX/Spanish. (RL-KY)

1060 WNOE LA NEW ORLEANS - 10/29 1828 CW music, "The new WNOE" strong w/KYW nulled. (HJH-PA) Happens here, too. (DS)

1190 WIGR MS BAY ST. LOUIS - 10/27 1815 weak in KLIJ null w/weather for Gulf area, ID. (RL-KY) 10/25 1830 fair u/WOWO w/s/off. (RK)

1220 WSLM IN SALEM - 11/3 1711 Wall Street report, sports, local car dealer ad, fair but faded to WGAR. (JM-PA)

WBUL AL BIRMINGHAM - 10/26 1815 good w/full s/off, "The Bull of Birmingham" ID. (RL-KY) Not playing in China shops! (DS)

WLBI LA DENHAM SPRINGS - 10/27 1829 s/off w/mention of leaving air due to FCC rules, not because they want to. (BM-WI) Sob!

KBGL LA SHREVEPORT - 10/27 1845 s/off w/mention of leaving air due to FCC rules, not because they want to. (BM-WI) Sob!

1230 KBTM AR JONESBORO - 10/31 1900 fair w/ID, CBS news. (RK-IL)

KEWT MO LEBANON - 10/31 1816 fair w/UPI news. (RK-IL)

1240 WSEW PA SELINGROVE - 11/2 2238 w/ID noted in mess, when all else fails, the graveyards usually bail me out of a dull DX session. (RM-PA) Writing a book, Ed? (DS)

CJCS ON STRATFORD - 11/3 1828 briefly w/weather check, my 1st Canadian graveyard! (RM-PA) About as exciting as WPLN!

1250 WTHA SC CHARLESTON - 11/1 2050 end of rock music, mention of winners in recent contest/gimmick. (RM-PA)

1270 WTNT FL TALLAHASSEE - 10/27 1822, 10/30 1843 w/ID, ads for Carlisle Company in Tallahassee Mall. (HJH-PA)  
 KIOX TX BAY CITY - 10/29 1900 fair in WVOA null w/KIOX Country jingle. (RK-IL) Quality, young fellow...quality! (DS)  
 1280 WEXI PL JACKSONVILLE - 10/27 1759 heard w/weak signal during start of several day auroral surge, s/off w/"newswradio" ID. (HJH)  
 WGSO LA NEW ORLEANS - 10/30 1854 fair-poor mixing w/UNID EZL station, "News-watch New Orleans", ID's. (HJH-PA)  
 WNPT AL TUSCALOOSA - 10/26 1808 on top of crowd w/local ad. (RL)  
 WHCP TN COLUMBIA - 10/27 1854 spot for ABC sports and talk on World Series, then Tanya Tucker record. (RL-KY)  
 1290 WHIO OH DAYTON - 11/3 2012 tentative w/ID which sounded like them, many mentions of Ohio, rough due to CJBK. (SH-PA) Try anytime after midnight, just WHIO/CJBK here. (DS)  
 WZUU WI GREENFIELD - 10/24 1732 good w/oldies, ads. (RK-IL)  
 1310 WTTL KY MADISONVILLE - 10/24 2129 good w/local ads. (RK-IL) PS-Arf!  
 1320 CRBC NS NEW GLASGOW - 11/2 2127-2155 sports, weather then World Tomorrow Religious program, good signal mixing w/WJAS in WKAP null. (TP-PA) Know what I say? Toh got it! (DS)  
 1330 WHOT OH YOUNGSTOWN - 11/4 2130-2145 This fabled insitution was way atop 1330 again w/rock music, ID's. (TP-PA) Fabled? For what? Assop doesn't own them! (DS)  
 1350 WOYK PA YORK - 10/29 1735 ex-WZIX, fair-good w/weather. (WPT-DC)  
 WSMB LA NEW ORLEANS - 10/28 1816 Southeast Football Conference report. (BM-WI)  
 1360 KHRN MO CAMBRON - 10/31 1844 good w/news, s/off w/no SSB. (RK-IL)  
 KFFA AR HELENA - 10/31 2250 "The Delta Sound" w/mention of Phillips County, sport leaders in area, etc. Good signal. (NM-IL)  
 WAZA GA BAINBRIDGE - 10/28 1825 strong w/seafood ad, CW music then gone at 1830. (RL-KY)  
 UNID 10/28 1830 s/off noted here, almost positive ID was WFFA, (def. not KFFA), my log has no WFFA, any ideas? (RL-KY) Nothing here yet....my log isn't up to date either! (DS)  
 WKAT FL MIAMI BEACH - 10/28 1831 after above w/news, discount on Cable TV if you mention WKAT. (RL-KY) I tried it, they thought I was nutz! (DS)  
 1370 WOOA FL PENSACOLA - 10/30 1832 time check, traffic conditions, ID. Fair signal. (WPT-DC) Hurts to stay home, huh? (DS)  
 1380 WWSI FL ST. PETERSBURG - 10/27-10/30 1736-1745 traces on all 4 days, strongest 10/27 1736 w/CBS news and features on all news format, alone on freq. Kx-WLGY. (HJH-PA)  
 WAOX GA ATLANTA - 10/27 1920 strong, competing w/WWSI, PSA for United Negro College Fund then soul music. (HJH-PA)  
 WYMK LA BATON ROUGE - 10/30 1824-1830 strong at tune in, trivia question on Homer Pyle, spot for Ch. 9, "American County Countdown" promo, s/off w/SBB, features CW music. (HJH-PA)  
 CKFC ON BRANTFORD - 11/2 2200 segued from country music to EZL w/ID, no sign of pest WANS! (SH-PA) Right on! (DS)  
 1390 CHOO OH AJAX - 11/3 2118-2135 way o/WPBD/WBAM w/Back to the Bible, ID's as "Radio 14", more religion. Will see if 3rd report will produce a verie! (TP-PA) Pay your dues! (DS)  
 KCBC IA DES MONTERS - 11/1 1836 "KCBC" noted in middle of football game, broke in for ID. (MK-WI)  
 1410 WUNI AL MOBILE - 11/1 2110-2139 CW music, requests to be called to 432-1200 on music line, u/regular WOP/KQV. (TP-PA) 11/1 2120 time check, ID then CW music w/heavy mix of WIZM. (MK-WI) 10/30 1800 like a local, alone w/CW music, announcer was slurring letters together w/ID's. (HJH-PA) Jerry Starr!  
 WIZM WI LACROSSE - 11/1 2124 promo item, patting itself on the back for its great news department, ID, w/WUNI. (MK-WI)  
 WEAQ GA ROME - 10/27 2138 this dominant over tentative WUNI w/CW music. (HJH-PA)  
 KTOS AR FORT SMITH - 10/31 1845 s/off w/mention of KTOS FM, this u/XOLO. (BM-WI)  
 XOLO KS LEAVENWORTH - 10/31 1845 full s/off w/mention of 5000 watts and asked for cards and letters. (BM-WI)  
 1420 WDFP FL DELRAY BEACH - 10/28 1800 ending sports, ID then CBS news, "The Sports Giant in the Palm Beaches." (HJH-PA) 10/28 1742 Big Band music, ad for store in Boca Raton. (WPT-DC)  
 1430 KEES TX GLADEWATER - 10/27 1900 "KEES Radio" ID. (BM-WI)  
 XSTB TX BRUCEKENTIDGE - 10/27 1901 ID w/mention of Hwy. 180. (BM)  
 1420 WIMS IN MICHIGAN CITY - 10/28 1821 Coast Guard report for Lake Michigan. (BM-WI)  
 KYOW AR HOT SPRINGS - 10/29 1844 full s/off in clear w/mention of KACK FM 106. (BM-WI)  
 WKSR TN PULASKI - 10/31 1835 ID w/mention of Pulaski. (BM-WI)

**WXUR AM-FM**  
 BRANDYWINE MAIN LINE RADIO, INC.  
 TWO SOUTH AVENUE MIDIA, PENNA. 19063

1430 KELI OK TULSA - 10/26 1909 fair w/CBS news, ID, sports talk show, need KAKO to complete Tulsa here. (RL-KY)  
 KBES TX GLADEWATER - 10/28 1843 weak w/spots for Longview and Gladevater. (RI-KY) Musts be measles. (DS)  
 KRGI NE GRAND ISLE - 11/1 2140 ID then Crystal Gayle song. (MK)  
 WNWQ FL PANAMA CITY - 10/30 1813 "Seminola Update", talk on FL State Football homecoming game, gone at pattern switch. (BM)  
 WRXO NC ROXBORO - 11/1 1714 after many ads, s/off w/no SSB, fair signal w/mention of FM. (DS-DE)  
 1440 WODL PA CARBONDALE - 11/1 1730 this 15 mile distant local heard w/45 minute late s/off, contemporary music w/invite to tune to WLSF FM for CW music. Now why would anyone in their right mind want to do that? (HJH-PA) I-Q less than 400!  
 KMLB LA MONROE - 10/28 1845 blasting in w/jingle/ID, oldies. (RL)  
 XITR AR LITTLE ROCK - 10/30 1830 suddenly atop w/end of hymn then s/off. (SM-IA) 10/31 1830 s/off w/mention of Little Rock, "Family Oriented Inspirational Broadcasting." (BM-WI)  
 1450 WDAD PA INDIANA - 10/29 2128 briefly atop then gone in a flash, many WDAD mentions in 20 seconds. (SH-PA)  
 1460 WKOK LA BATON ROUGE - 10/27 1914 ad for "Wrestling Extravaganza" then local Mercury ad. (BM-WI)  
 1470 KBRZ TX FREEPORT - 10/28 1843 ID then CW music. (BM-WI)  
 WDCB FL DUNDEN - 10/30 1802 tentatively heard w/s/off w/new calls, just caught mention of "...QT Clearwater", lotsa noise from W3AN. (HJH-PA)  
 WTKO NY ITHACA - 10/29 1725 briefly surfaced o/WSAN/WLAM w/ID and arsa mentions, #100 from NY for me. (RA-MA)  
 KWKI AR GLENWOOD - 10/30 1842 atop w/s/off, please note this in AR andnot AZ as in changes column and White's Log, rather new station. (RK-IL) 10/29 1830 ad for store in Hot Springs, weather, good ID. (BM-WI) Shoulda went in the SPECIALS stuff....ah well. (DS)  
 1480 KRBC TX ABILENE - 10/26 2317 rock music, ID after each song. (BM)  
 KTHS AR BERRYVILLE - 10/31 1843 full s/off w/mention of KSGC FM, invite for listeners to write. (BM-WI)  
 KWKI ES WICHITA - 10/31 1855 "Radio 15" ID. (BM-WI)  
 KDRO MO SEDALLIA - 10/31 1900 fair w/ID. (RK-IL)  
 1500 KIVQ OK PAWUSKA - 10/30 1845 in well o/very weak KSTP w/OK. Network News then s/off. (SM-IA)  
 KGGG TX MERCEL - 10/28 1916 in solid w/s/off. (SM-IA) Solid! (DS)  
 KTXO TX SHERMAN - 10/29 1854 on top till s/off at 1900. (SM-IA)  
 WBRN MS QUITMAN - 10/27 1827 good w/Bottle West song, s/off w/SSB. (RL-KY)  
 1510 WRAL NC GREENSBORO - 11/1 1703 very strong w/gospel stuff, many ads, noted right after WJIC s/off. (DS-DE)  
 1520 WEIM VA RYMORE - 10/30 1944 heard weakly u/WKRW w/EZL music, many mentions of FM. (HJH-PA) And FM-FM, too! (DS)  
 WTGR SC MYRTLE BEACH - 11/1 1715 political ads for opposing candidates for Mayor of Myrtle Beach! (RH-PA) Big time stuff!  
 1530 WREM MS FOPPLARVILLE - 10/30 1823 ID w/mention of International Gospel Hour. (BM-WI)  
 WASC SC SPARTANSBURG - 11/1 fair at s/off, no SSB. (WPT-DC)  
 1540 UNID 11/1 1730 strong s/off but faded on calls, sounded like WTKV, mention of studios on Wilke Creek Road, announcer was Steve Cross, no SSB. (DS-DE)  
 UNID 11/1 1830 tune in to Spanish but gone at what sounded like a pattern switch, could this have been one of the TX guys who run Spanish? (Edmunds....oops! DS-DE)  
 WBTC OH URICHSVILLE - 11/3 1720 mentions of 250 watts and gave station location then s/off. (RH-PA)  
 KEDA TX SAN ANTONIO - 10/20 1945-2005 fair o/u buzzing w/Latin-American music, Spanish ID on hour. (JP-ON)  
 KQBC TX GALVESTON - 10/28 1833 weather, several Galveston notes. (BM)  
 1550 UNID 11/1 1759 ad for Rod's AAM Rootbeer Drive in, w/mention of Sheldon, no ID heard, pretty sure it was KIMA. (MK)  
 WSAO NS SANANTOIA - 11/1 1800 s/off noted w/fair signal. (MK-WI)  
 KQWB ND FARGO - 11/1 1807 news, mention of RKO catalite news, ads, local weather report. (MK-WI)  
 UNID 11/2 2300 classical music noted, no ID's. (OG-TX) KEHI (DS)  
 WLUK LA BATON ROUGE - 11/1 1808 noted w/Baton Rouge Fair promo, jingle then religious music. (DS-DE) 10/21 1930 w/ID, "good night" then off. (BK-WI)  
 KOKA LA SHREVEPORT - 10/23 1924 poor in mess w/ID. (BM-WI)  
 WAAX AL HUNTSVILLE - 10/30-1849 ID then UPI news. (BM-WI)  
 1560 EGUL TX PORT LAVACA - 10/28 1858 s/off in Spanish w/ID. (BM-WI)  
 KTUI MO SULLIVAN - 10/23 1928 s/off w/mention of 1000 watts, invite to tune in FM at 101. (BM-WI)

1560 KDDA AR DUMAS - 11/1 1800 fair in WQXR null w/s/off by female. (WPT)  
 WTAI FL EAU GALLIE - 10/27 1800 in WQXR null w/GW music til s/off,  
 very auroral evening....Eau Gallie (Oh Golly!) (ERC-MA)  
 1570 KMAH LA WINNSBORO - 11/1 1820-1827 ad for Winnsboro Sports Center,  
 American Country Countdown then quickly faded. (DS-DE)  
 WCRL AL ONEONTA - 11/1 1744 s/off after gospel show w/vocal Dixie,  
 fair w/WHLP/WHII. (DS-DE)  
 WONA MS WIRONA - 11/1 1759 very quick s/off after Big Band/Jazz  
 music, mentioned to tune WONA-PH. (DS-DE)  
 WTWE FL AUBURNDALE - 10/30 1740-1748 noted w/slow southern GW music,  
 Community Calender, many ID's, good non-fading signal. (HJH)  
 KZOL TX FARNWELL - 10/24 2015 blasting in w/s/off, no sign of XERP,  
 was my most wanted Texan. (RK-IL) Mine, too! (NoCloud)  
 WLDM MA WESTFIELD - 10/17 1808-1815 s/off w/no SSB, lots of local  
 items, varied promptly, tx to fons tip from RA! (ERC-MA)  
 WOKZ IL ALTON - 10/23 1929 s/off w/mention of 1000 watts. (EM-WI)  
 KBRI AR BRINKLEY - 10/23 1930 noted calls atop din for about 10  
 seconds, #1 on my most wanted list! (EM-WI) Mine, too! (PHI)  
 1580 WEYY AL TALLADEGA - 11/1 1744 almost didn't feel like reporting  
 this common one, noted w/it usual s/off subtick, weak. (HJH)  
 WESS MS LEBAND - 10/26 1950 strong at s/off w/invite to tune WYAD  
 94.3, "WESS is everywhere". Someone forgot to turn their  
 clock back! (RL-KY) Mine, too! (WV)  
 1590 WSWW WI PLATTEVILLE - 11/1 2159 ID, quick weather, CBS news. (MX)  
 UNID 11/1 2159 ID noted here that sounded like KCBG, ID faintly  
 noted u/WSWW but faded. Help? (MK-WI)  
 1600 CHNR ON SIMCOE - 11/5 1740 farm program w/many and various weather  
 reports. (EH-PA)  
 WEUP AL HUNTSVILLE - 10/31 1752 Church Bulliten Board, ID. (EH-PA)

MIDWIFE - MADDAY:

590 CKRY ON TORONTO - 10/30 0600 popped up while looking for WMBS  
 w/weather, Sears ad. (EH-PA) Try 'em at sunset, ED. (DS)  
 680 KNBR CA SAN FRANCISCO - 11/1 0115 good w/Warriors game, some WMAQ  
 splash, it really does exist! (NM-IL)  
 690 UNID 10/10 0256-0355 ET w/TT, apparently using 2 patterns,  
 signal dropped out 0301. (BR-NY)  
 WTIY LA NEW ORLEANS - 10/5 0432-0440 fair on ET w/ music, ID's,  
 o/CMBC. (BR-NY)  
 740 KRMG OK TULSA - 9/28 0230 good/alone w/ID on ET. (BR-NY)  
 770 WABC NY NEW YORK - 11/2 0328 noted off but back by 0400. (RA-MA)  
 790 WMC TN MEMPHIS - 11/4 0259 WMC news promo w/"We listen to you",  
 ID then ABC news, good o/u WTAR. (JM-PA)  
 WQXI GA ATLANTA - 11/4 0531 w/PSA, weather report u/both WTAR/WMC  
 but on top at ID time! (JM-PA)  
 KGHM MT BILLINGS - 10/21 0300 this old regular surfaced w/ID then  
 into GW music. (JP-ON)  
 810 CJVA NB CARAQUET - 11/4 0058-0100 very strong o/WOY w/Franco talk,  
 s/off w/GSQ. Carrier was left on. well after s/off. (DS-DE)  
 820 WOST OH COLUMBUS - 11/4 0536 ET w/Empire Strikes Back music for  
 6 minutes, good o/WBAP, ID as "News 82". (JM-PA)  
 850 WHDH MA BOSTON - 11/2 0330-0333 noted in passing w/ET, TT, music. (RA)  
 920 KYFR IA SHENANDOAH - 10/28 0230 this one noted on ET of 00/TT and  
 Gospel music, was formerly AM. (NE-NE)  
 930 CKNS ON ESPANOLA - 11/2 0251 many ads, very good signal, often heard  
 in this area, slight fading w/ID's for CKNR/OJNR. (JM-PA)  
 John, note correct call/location on this guy. (DS)  
 960 CHNS NS HALIFAX - 9/30 1830-1900 noted w/religion, Jerry Falwell  
 Show, asking for \$100 donations. Wonder if he knows if  
 Canadian dollars are worth less than US money? (ERC-MA)  
 To worried about the MM! Sorry, wrong place! (DS)  
 1000 WCPL IN CHICAGO - 11/2 0346 ID for ET then music. (RA-MA)  
 1010 UNID 10/26 0302 ET in progress w/Gospel music, some TT, looping  
 south. (JP-ON) Most of 'em do for you anyway! (DS)  
 1050 WHN NY NEW YORK - 11/2 Off this MM leaving CHUMP/XEG. (RA-MA)  
 CKSB MB WINNIPEG - 10/19 0202 fair w/"Ici R. Canada, CKSB" ID  
 into talk program in French. (JP-ON)  
 1060 WHPB NH BETHUN HARBOUR - 10/26 0300 very weak on ET w/ID u/KTW. (JP)  
 1070 WPLI TN LOOKOUT MOUNTAIN - 11/4 0046 ET w/GW music, frequent ID's  
 w/mention of 50000 watt day pattern. (DS-DE)  
 UNID 11/2 0135 Larry King noted weak u/WIBG/XXX. (NM-IL)  
 1120 KMOY MO ST. LOUIS - 11/2 0339-0345+ noted off this AM. (RA-MA, NM-IL)  
 1130 KMKH IA SHREVEPORT - 11/1 0100 good w/Pony Express Local News. (NM)  
 1140 UNID 11/5 0039-0126 ET w/TT on/off, equal to null'd WRVA, breaks  
 in tone but no ID's detected. (DS-DE) (JP-ON)  
 1230 WLFH NY LITTLE FALLS - 10/21 0505 strong briefly w/ID, Gospel music.  
 WEEI PA BASTON - 10/21 0520 weak o/ress w/promo for Football and  
 ad for Phillipsburg Kawasaki. (JP-ON)

1240 WSDR IL STERLING-ROCK FALLS - 11/2 0606 weak w/area weather. (MK)  
 1260 WIBV IL BELLEVILLE - 11/2 0100 s/off noted w/ID. (MK-WI)  
 1280 KBRQ CO DENVER - 11/2 0006 job anno't for CE at station, anyone  
 out there want a job? (MK-WI) Key Jerry...great chance!  
 HAMILTON - 11/2 0041 "Hamilton's favorite music", ID then  
 rock music. (MK-WI)  
 1300 WEXI MS JACKSON - 11/3 0024 fair u/WFBR "Talk-Net" w/soul music,  
 jingle/ID, rare in these parts. (DS-DE)  
 WWOH PA CLARION - 10/17 0600 weak u/WRRB w/s/on, no SSB. (JP-ON)  
 1310 WYLP NY MOUNT KISCO - 10/3 0127 noted ending ET w/s/off. (ERC-MA)  
 1340 WSTY OH STUBBENVILLE - 10/21 0100 fair w/ID. (RK-IL)  
 1350 WYLL CT NORWALK - 10/30 0605-0615 atop w/local news, weather from  
 Travelers, music. (TF-PA)  
 CKAR ON OSHAWA - 11/3 0220-0230 atop w/music, often shows in the  
 0100-0300 time area when Conditions are normal. (ERC-MA)  
 WNIS VA NORFOLK - 10/14 0125-0140 good o/WSDR w/Larry King, ID,  
 Tidewater weather, 1st time since WME days. (JP-ON)  
 1360 WEBB MD BALTIMORE - 10/30 0615-0620 rarely heard, noted w/preach-  
 ing, varied last year. (TF-PA) Day regular here. (DS)  
 1370 WVMR WV FROST - 11/5 0033 noted in passing w/ID for ET, OC only,  
 very strong o/WSAY/WFSA. (DS-DE)  
 1380 WNSI FL ST. PETERSBURG - 11/2 0110 noted w/local talk show, ann'd  
 as news-talk for Tampa, St. Pete's area. (AB-TX)  
 1390 WRSC PA STATE COLLEGE - 10/18 0600 just got one ID, MoR music then  
 faded down. (JP-ON)  
 WKIC KY HAZARD - 10/20 0607 very weak w/s/on then faded. (JP-ON)  
 KKOA ND MINOT - 10/31 0130 Larry King in progress, ID, 3 min. of  
 local news then back to King. (MK-WI)  
 1400 WSTC CT STAMFORD - 10/30 0559-0613 s/on w/instr. SSB, detailed  
 s/on message. (TF-PA)  
 WBOO IN PENNSYLVANIA - 10/31 0000 ghoulishly strange signal,  
 ghostly strong w/ad for Hilda's Used Broom Lot. (RL-KY)  
 WYAH VA CHARLOTTESVILLE - 10/21 0400 weak w/ID w/Larry King "yours  
 exclusively on WYAH..." Wov. (JP-ON) That's on 590. (DS)  
 1440 WAJL FL WINTER PARK - 9/29-9/30 0100 w/semi local WPCQ off,  
 noted w/religion. No veris, they don't practice the  
 golden rule they talk about. (ERC-MA) It's all \$\$\$! (DS)  
 1450 WVBC VA HERRNDON - 10/28 0600 fair at a/on, ex-WOHN. (RK-IL)  
 WYIB SC MYRTLE BEACH - 10/31 0055-0105 on top w/MoR, ID then  
 ABC news. (ERC-MA)  
 WGCA SC CHARLESTON - 10/31 0135 BZL type music, noted taking o/  
 WMB, it used to be WQSN. (ERC-MA)  
 WQQT GA SAVANNAH - 10/31 0303 topped freq. w/news, CW music, uses  
 ID "Cowboy 14." (ERC-MA)  
 WMPJ FL DAYTONA BEACH - 10/31 0315 supplanted WQQT w/preaching.  
 CHEP PQ GRANBY - 11/5 0600 s/on w/"Oh! Canada", interesting  
 effect w/several SSB's in background. (TF-PA) Yeah,  
 about as much fun as a pancake throwing contest! (DS)  
 1460 WDOG SC ALLENDALE - 10/23 0600 fair w/s/on w/SSB. (RK-IL) PS-Burp!  
 WPDQ FL JACKSONVILLE - 10/14 0035-0052 w/soul music, local ads,  
 ID w/auroral conditions underway. (BR-NY)  
 1480 WUEZ VA SALEM - 11/4 0205-0230+ strange ET, loud w/rock music,  
 1 quick ID noted, then ran WPLJ audio, ABC PM news, brief  
 TT, then more WPLJ (ID's, ads and all!). WPLJ audio is  
 used on ABC's network to keep line open. (DS-DE)  
 WKND CT WINDSOR - 11/3 0610-0620 yelling, screaming and odd music,  
 and contest to win a trip, faded before I could discover to  
 where. (TF-PA) To where they yell & scream! (Musco)  
 WLEE VA RICHMOND - 10/29 0128 poor w/Larry King & ID. (RK-IL)  
 KLEE IA OTTUMWA - 10/26 0704 news, SE Iowa weather. (EM-WI)  
 1490 WGCN CT GREENWICH - 10/31 0606-0632 in WBOB null w/one ID, weather,  
 stock report, nite-alub type music, 1st time here. (TF-PA)  
 WSYM NC VALDESE - 10/24 0500 poor w/s/on, no SSB. (RK-IL)  
 1500 KSTP MN ST. PAUL - 10/5 0231 ID then rock music. (BR-NY)  
 1510 WAHT PA ANNVILLE-CEBONA - 11/4 0645 s/on then weather, ads, very  
 good w/no WRAA. (JM-PA)  
 1550 KIWA IA SHELTON - 10/25 0700 s/on w/SSB. (EM-WI)  
 1560 WGNW OH FAIRFIELD - 10/29 0655 "CW" ID, gospel music. (EM-WI)  
 1580 WJIX NC CAMP LEJEUNE - 10/17 0303 caught on ET w/TT, OG. ID'ed  
 then s/off promptly. (ERC-MA)  
 1590 WAIX IL GALESBURG - 10/21 0700 fair o/mess w/s/on, Instr. SSB,  
 quick ID, then local news. (JP-ON) (JP-ON)  
 1600 KCRG IA CEDAR RAPIDS - 10/21 0330 fair w/Top 40 music, female DJ,  
 HRNDERSONVILLE - 10/17 0640 weak in mess w/local high school  
 Football Scores. (JP-ON)



WORDS OF WISDOM:

"Let my words be soft and tender today because tomorrow I may have to eat them."

IKB-DE

OUT IN LEFT FIELD, or OPFS! DEPT.:

- 940 WJOR MI SOUTH HAVEN - 11/4 0610-0636 good signal w/repeated heavy fog warning, noted giving "Cozy 98" ID's. (JM-PA) Cozy 98 might be an FM slogan, John.
11/3 2159 Noted "This is Green Bay's first radio voice", called sounded like WHEM but nothing noted in log. Quick fade to WRRO. Call change on WHEM? (JM-PA)

RANDOMS:

Could the great southeastern Pennsylvania DX location have been found? We believe it just may have been where the nearest local is about 15 miles away and is weak, plus being on a hill for FM! Will it happen within the next six months? It may! We'll keep you posted!

OUR "TANKS" TO THE FOLLOWING:

- HJH-PA Harry Hayes, Wilkes-Barre, PA
SH-PA Ed Huber, Philadelphia, PA
WPT-DC Bill Townsend, Washington, DC
CG-TX Charles George, Dallas, TX
RL-KY Rich Levin, Louisville, KY
AB-TX Artie Bigley, Houston, TX
NM-IL Norm Meinholz, Champaign, IL
MF-MI Martin Foltz, Lansing, MI
JM-PA John Malicky, Pittsburgh, PA
SF-TX Steve Francis, Alcoa, TN
RA-MA Ray Arruda, Acushnet, MA
KE-IL Robert Krammer, Chicago, Ill.
ERG-MA Ernie Cooper, Provincetown, MA
JP-ON Jeff Falconer, Clinton, ON
MK-WI Mike Knitter, Cambridge, WI
SJM-IA Steve McIntire, Des Moines, IA
NE-NE Neil Zank, Lincoln, NE
BR-NY Bill Regan, Syracuse, NY
TP-PA Tony Fitzherbert, Chalfont, PA
EM-WI Bob Mielnarek, Milwaukee, WI
KCB-DE Iah. K. Bibble, Horsehester, DE
DS-DE Who'd you expect? Garnett Mims?

Thanks for the nice turnout this week, ya all! CU in 7, maybe sooner!

NUMBER 1 in Los Angeles

KFWB

COLOR channel 98

73's, Good DX!

JE

WAMK 141

POCKET-SIZED FUN RADIO

WNAR

Radio One Eleven Oh!

WRTH 1982

Donald Erickson
6059 Essex Street
Riverside, CA 92504-1599
714-687-5910 until midn. PST

1982 World Radio TV Handbook The 1982 WRTH will be published in Jan. or Feb. 1982 and retail in the USA for \$16.50. Orders received prior to December 15, 1981, are eligible for the pre-publication price of \$15.50/H, at which time the price will be \$15.50/H. Shipping/handling by UPS (where available) or Book Rate is \$2 USA, \$3 Canada, and \$5 elsewhere. Shipping/handling by First Class Mail/Air Printed Matter is \$4 USA, \$5 Canada, and \$15 elsewhere. Payments, by personal check or money order in the USA and International Money Order elsewhere, should be payable to DONALD ERICKSON, Calif. residents, please add 6% sales tax (78 cents). Orders should include a self-addressed, stamped envelope (Canadians may insert mint stamp inside) for confirmation after shipment. Please mail prior to 12-15-81 for the \$2 discount to: Donald Erickson, 6059 Essex St., Riverside, CA 92504-1599. 714-687-5910.

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.

Well, it looks like IDXD might not die after all but it sure isn't getting well very fast....if you guys think you are off the hook for non-support of columns, better re-think it. Not a whole lot but some very nice logs this time. See 790 for instance.

- 540 VENEZUELA Villa del Rosario YVVO 10/13 0550 fair s/unid LA w/R. Parija ID, into cl mx. (Falconer) I wish you would change your name, Jeff. The last month or so anything with "Falcon" in it makes us Atlantans ill, hi-CH
575 COSTA RICA TIRX R. Naelcmal, San Jose good w/cl mx 0604-0610 10/26. (DeLorenzo) You're safe Marc, we don't have any sports teams with names that sound like "DeLorenzo"-CH
640 VENEZUELA YVQO Ondas Portones, Puerto la Cruz lke, atop w/SS vocals, sds, ID 0150-0157 11/1. (DeLorenzo)
690 COLOMBIA Bogota HJUZ LV de Colombia 0610 10/28 SS vocals, Mor type mx, ID jingle heard once, SS man ID's after each song. CMCC Cuba nulled. Signal fair/good. (Smith)
705 ST. VINCENT my first ever audio on Kingstown, a toughie for me (everything is tough for you, Bob-CH) with MOR blasting away on 710. Some choral singing 0152 10/28 heard thanks to Radio West Loop, ex quite aural.... Could not hold them. (Foxworth) You're not supposed to hold the loop-it rests on flat surfaces-CH
710 VENEZUELA YVKY R. Capitel, Caracas full s/off routine w/ calls, freqs and powers by women; odd antiphonal version of MA; listed to D600 but 0457 s/off on 10/30; hard to hear on //4850. (Novella)
725 COSTA RICA TILX R. Columbia, San Jose good w/slow SS ballade, SS pop mx, ID's 0545-0601 10/26. (DeLorenzo)
\*\*\*\*\*0730000 BARBADOS the new station Voice of Barbados that was published in Sweden Calling DX'ers this summer is on the air. Logged here for the first time 10/27 in the evening, at times atop the freq. Normal GRM is WEAN here. Somewhat AU ex. Noted at 2307, man in Caribbean accent with islands mx-mentioned Radio Free Grenada once. Again 10/28 at 0102 with "You're listening to the Voice of Barbados, here is Y-O-B news". Telephone call-in show. At 0116 thanks listeners for concern, expresses solidarity with listeners, says problems are over and the transmitter is now on full power. At 0300 joins VOA for American news, was //5995 KHz. S/off noted 0323. Heard next night 0100, "the mighty voice of the Caribbean community". On 10/30 already in at 2256 even before WNWS pattern change. Believe power is 10 kw. I must be one of the earlier NAM loggings of this one. I suggest they open a SW service, who knows? (Foxworth) Believe this heard w/EE religion 2310-2400 11/1, then cl mx pgm heard 0010 11/2. (Patrick)
825 ST. KITTS Basseterre R. Paradise 10/27 0945 very strong w/country gospel mx. (Falconer)
834 BELIZE R. Belize 3/30 0500 xint w/WGCO obliterated by AU ex. Soft jazz mx, reverbed ID in EE and SS, then BHC mx. (Bredy)
950 MEXICO KEYJ Nueva Rosita 10/15 1000 strong over KIMM. R. Rosita ID's, jingles, lotsa sds. WRTH liste KEYJ as 100W, did they raise power? Came in awfully good. (Bredy) They raised power to 10 kw in 1976, a mere 5 years ago-CH
970 MEXICO KEJ Ciudad Juarez 10/14 0335 a regular here, often wiping out WDAY. Latin mx w/over-excited anncr giving R. Mexicana ID's after every record, sounds automated. (Bredy)

980 DOMINICAN REPUBLIC Santo Domingo HIFA La Voz de las Fuerzas Armadas in u/WTRY w/WCAP off and no sign of CKOK (980 regulars here) on auroral MM 10/12 0517-0157 (that's what it says-CH), in/out, rather weak. (Cooper)

1010 COLOMBIA HJGC Bogota 9/25 0350 good w/no Canadiana. (Normally I don't DX with Canadians either-CH) Lotas talk by male announcer w/deep, rich pipes, Emisora Mil Veinte ID. (brady)

1060 CUBA-ID'ed as CMKF or CMKS, caught several mornings thru KYW/WSTR/CJRP. I got the call letters and "territorio libre de America" on SK 10/25 in the last hour of EDT at 0555, then s/off followed with anthem which I would swear is the same as that of Colombia! (Did you check this against the tape of Latin anthems? CH) This is not listed in Ron Schatz' recent Cuban list, anybody have an address for him? (Cooper) I'm upstairs and the info is downstairs-if I have anything useful I'll pass it along in a letter-CH

1100 ANTIGUA ZOK was on late for pre--Independence celebrations and hrd 0302 11/1 with coverage of parade, fireworks, etc., at times dominant in WWWE fades. Tried mightily on 620 at same time after 0415 WYND off. Maybe something there but just suggestive in my mind, did anyone really hear ABS on 620 for this event? Also tried for anything on 3W from PTP, coastal, etc.-no luck on this non-active SW country. (Foxworth)

1124.4 COSTA RICA TISREB Sonido 1120, San Jose up briefly with non-descript slow folk type guitar and vocal mx. ID as "Sonido Once Veinte" at 0340, mx non-stop thru 0410 tuncout 10/30. (Novallo)

1160 COLOMBIA HJAZ Monteria, strong signal 9/17 0516-0535 and is generally loggable Mon-Fri 0500 on. (Cooper)

1170 UNID SS noted 0555-0608 w/WWVA off, slogan sounded once like "Radio Felitas" and next like "Radio Fedad" SK 10/11. This was a very auroral morning, and most mornings since likewise. (Cooper) Got a tape you could mail down? CH

1240 BAHAMAS ZNS2 Nassau riding in serenity and almost totally in the clear here on MM 10/19 at 0529 w/various types of music like soul, jazz, MoR. Again on MM 10/26. (Cooper)

1300 COLOMBIA HKOD Cartagena way up top on Tues AM 10/20 from 0520-0538 with usual Colombian fare (50%, no transgers. hi) (Bad jokes are reserved for the editor to make, hi-CH) (Cooper)

1310 COLOMBIA HJHW-not listed in WRTN '80, noted s/off at 0459 with the Colombian anthem by band and chorus o/HJAK. (Did they really get up on top of HJAK to play the anthem? Set the tube player was mad-CH) (Cooper)

1310 COLOMBIA HJAK Barranquilla La Voz de la Patria ID'ed in/out with XERV on 10/24 0528-0705, mostly out, no domestics noted at all on this frequency for several mornings. (Cooper)

1310 MEXICO XENV Veracruz R, Tropic heard again on 10/22 0511-0539, in/out with another unid SS, but on a subsequent morning I heard the ID as HJAK. After every selection the announcer screams "H-V!". (Cooper)

1310 UNID a big mystery SS here also, heard several mornings of this strong auroral weak of 10/19-10/26; a station with NXX-type mx, mostly US style and with a rather sexy (I guess) female announcer a la Dolly Holiday of a few years ago. Only brief annets and never a clue as to the identity of the station or the country. Anyone know who this is? (Cooper) Time? CH

1340 COLOMBIA HJFA Barranquilla poking thru occasionally on this crowded channel and ID bagged on MM 10/19 at 0659 as "Radiolimpics". The 80' WRTN shows this one on 1490 but listed as "nominal" 1340. (Cooper)

1370 UNID SS Noted on SK 10/18 and on other AM's, just the net. The signal was in occasionally between 0505 and 0557 s/off; akl I got was "La Voz de ....". (Cooper)

1430 CUBA Moron CHIN 10/28 2339 SS talk by man, song in SS by male vocalist. Xint. (Townshend)

1503 POLAND Warsaw 10/22 2208 strong w/cl mx program //6135. Only top-band TA's made it in on this auroral evening with A index of 35. I often find high band TA's doing well during auroral ex for some reason. (Falconer) A syndrome which many TA DX'ers have noted over the years but no one seems to have a good explanation for-CH

1520 COLOMBIA Barranquilla HJLQ 10/20 2330 alone on freq w/ lively mx and Minute ID's. (Falconer)

1530 CUBA CHIN Moron 10/28 2330 mx by men and woman, sports, Radio Moron ID, good. (Townshend)

1539 WEST GERMANY Weinlingen 10/22 2225 very good killing 1530 w/het on cl mx pgm. (Falconer)

1593 WEST GERMANY Langenberg 10/22 2230 fair w/cl mx. (Falconer)

Matt Stutterheim just called with the news that there is a strong unid LA on 543 so time to wrap this up in a hurry and turn the rx on. Could hear the het even with the noise from the typewriter and TV sitting next to it so I can watch "10" while I type this. There's the explanation for any types this time around, hi.

Kevin Brady-Sioux Falls, SD	TRF, 50' LW
Marc DeLorenzo-Sudbury, Ma.	HQ100, SM2
Jeff Falconer-Clinton, Ont.	NRD515, 190' LW, tuner
Bob Foxworth-NY, NY	NRD515, ????????
Jay Novello-Endwell, NY	R7, R. West loop, dipole, LW's
Frank Patrick-Endicott, NY	DX160, DA5
Ross Smith-Fallston, Md.	SK99, Sanserino loop
Bill Townshend-Washington DC	TRF

Hold the presses....Per 0300 11/11 J.D's heard by Matt and lil Joe me, 543 is R. Jorjarscion, Managua. They have quite a decent signal so make tracks to the radio if you need them.

COLORADO DX-PEDITIONS, P.O. BOX 3434, LITTLETON, COLORADO 80161  
303-781-1185 or 303-547-3541

Dear DXer,

Rob Harrington and Chris Knight will be going in to the COLORADO MOUNTAINS for some mini DX PEDITIONS this winter. The locations will be announced 24-to-48 hours before we leave. We can tell you that the locations will be in one of these cities ALAMOSA, MONTE VISTA, DEL MONTE, FORT CARLAND, SAGUACHE, WESTCLIFFE, SALIDA, PONCHA SPRINGS, BUENA VISTA, LEADVILLE, FAIRPLAY, DILLIN, FRISCO, VAIL, WOODLAND PARK, IDAHO SPRINGS, CENTRAL CITY, BLACK HAWK, ESTES PARK, CRAMBY, KREMMLING, REDCLIFFE, WINTURN, BECKERS, CENTER, OR GRAND LAKE OF COURSE ALL OF THEM ARE IN COLORADO.

And we have decided on the dates for our MINI-DX-PEDITIONS  
Departure on SATURDAY MORNINGS (7:00AM) on  
NOV 7th, NOV 21st, DEC 5th, DEC 19th (1981)  
Jan 9th, Jan 23rd, FEB 6th, FEB 20th, and MARCH 27th (1982)  
Returning to Denver/Pueblo on Sunday in the late afternoon.

If you are going to be in Colorado during any of these dates, making contact Rob at 303-781-1185 or Chris at 303-547-3541 and we will give you more information about our DX-PEDITIONS in to the mountains of cold snowy wet COLORADO.

73s Rob Harrington  
and  
CHRIS KNIGHT  
"THE COLORADO CRAZYS, WE LIKE TO DX IN THE SNOW"

# WTEL - STATION PROFILE

BY TONY FITZNEBERT

A radio station which broadcasts Armenian, Russian, English, Ukrainian, Spanish, Polish, Italian, German, Lithuanian, Slovak and Hungarian on a regular basis within a market of over 4 million people? Add a few Black preachers, several syndicated religious programs, and, during morning drive time, a popular local religion broadcaster, and you have the programming for a very unique AM station, with an even more unusual history. While many people in the fourth largest radio market in the USA drive to work listening to KYW, WIP, WFIL or a number of others, relatively few commuters are consciously aware of one of the most varied formats in radio - found on Radio 860, WTEL, Philadelphia.

WTEL's history is as colorful as its studios and offices, located on the top two floors of a castle-like dwelling in a Black neighborhood of North Philadelphia. The original station was the creation of electronics hobbyist E. Douglas Hibbs, in a corner of his electrical supply shop in Philadelphia's Frankford section. The station broadcast as WPKD for Hibbs' Foulkrod Broadcasting Company, from amid an inventory of crystal sets and their components in the store on Fouldrod Street. Shortly after WPKD went on the air, Mr. Hibbs asked to change his call to WTEL because of his infatuation with the concept of broadcasting pictures, and aspirations to build a TV station, even in that early year!

Mr. Hibbs was a pioneer in foreign language and ethnic broadcasting. As Frankford has traditionally been a melting pot of ethnic neighborhoods, the little station was a logical choice for those who wished to broadcast in their native tongues to their countrymen.

A more noteworthy milestone by WTEL was the first ever live football broadcast. In 1925, Mr. Hibbs broadcast the Frankford Yellow Jackets football home games from the field. Imagine him swathed in a coonskin coat, huddled on the 50 yard line in the crisp autumn chill, surrounded by all of his broadcasting equipment, including a 50 watt longwire transmitter! This must surely also qualify as one of radio's first remote broadcasts. The Yellow Jackets were a powerful contender, winning the national championship in 1927. This team was the forerunner of the Super Bowl contending Philadelphia Eagles - and Philadelphia wishes that the current Eagles squad would duplicate this effort!

Until 1959, WTEL shared time with WHAT and WCAM on 1310 kcs. Time on the frequency was divided into thirds, so that each station broadcast a total of eight hours, divided again into three different times daily. This arrangement ended when WHAT applied for 1340 kcs. WCAM, the city of Camden's municipal station, became the lone occupant of 1310 as WTEL was granted a license to broadcast on 860, non directional, daytime, with 250 watts of power, as constrained by treaty arrangement with Canada. The studio moved from Mr. Hibbs' shop to more spacious quarters at Broad Street and Roosevelt Boulevard. Until 1969 the signal emitted from a single tower in the middle of a vacant lot at Wyoming Avenue and "H" Street.

WTEL listeners over the years enjoyed big band music, sports programs, Christian Science News, many live variety shows, and the popular Arnold McDonald Show, which during the 50's, featured interviews with notable band leaders and other show celebrities. Many personalities in Philadelphia radio such as Bill Campbell, Jim McCann of WFIL fame, and John Paul Weber of WIP received their start on WTEL.

During the rise of TV in the late 50's, before the advent of DJ's and Rock and Roll, WTEL experimented for a year with a Black oriented format, and then established its present religion/ethnic programming.

In 1969, WTEL applied for a power increase to 10,000 watts. The FCC approved the application with the provision that WEEU-850-Reading, the clear channel Canadian AM's, and stations on 860 in Baltimore and Pittsburgh be protected, and that the signal not carry west of Norristown. As a result, a 4 tower array was built at the parameter, of the furthest westerly point permitted north of Norristown. The parallel towers push the signal east. The 0.5 mv/m signal covers an area bordered by Trooper, Somerville, NJ, the southern tip of Staten Island and Sea Isles NJ. (This writer has driven past the west end of the array, eyeballed the towers, and received nothing on 860 on the car radio). A powerful secondary signal brings WTEL into Brooklyn where the station

has regular listeners. The station has received DX reports from many parts of New England, northern NJ and even one from Nova Scotia.

The WTEL studios and offices are at Old York Rd, and Hunting Park, in a formerly wealthy neighborhood of aged solid brick rowhouses, in a turreted granite castle. In this fortress resembling the setting for a Stephen King novel, WTEL occupies the top two floors, and a bricklayers' union hall is on the ground floor. This anachronism overlooking lushly green Hunting Park, was built in 1925, by German beer baron Boobo Hoff, "to last forever". Impressions of lavish tastes backed by great wealth are exuded by the 30 inch thick granite walled mansion, while the inside visitor is impressed by the hand carved designs in the hardwood floor. Mr. Hoff supplemented his brewery interests with the promotion and managing of professional boxing matches.

The offices occupy the second floor. The bulk of the broadcast facility, including the control room, two studios used for live ethnic broadcasts, and a production studio, which can double as an auxiliary control room, are on the top floor. In the 'castle turret' is found a religious record library and the Spanish AP wire from San Juan. A fully equipped studio is located at the transmitter. Interestingly, most of the ethnic program hosts have used the same studio for years - and, being creatures of habit, would be very uncomfortable if they had to use the other studio!

The WTEL broadcast day begins at local sunrise with Harry Bristow hosting a religion-oriented DJ show featuring Christian music and talk broadcast from the transmitter which is nearer to his home. Harry, who signs the station on, owns a Christian bookstore in Glenside, and is the founder of the first Christian Cinema in the country. From 9 AM to noon an assortment of local and nationally syndicated preachers and Christian music is heard. From noon to sign off, Italian, Polish and a preponderance of Spanish programs are heard. On weekends a virtual United Nations of ethnic programs are heard.

WTEL is staffed by nine full time personnel, plus a part time weekend board operator. Included are the two owners, the Vice President of Engineering, an office manager, two technician/board operators, two secretaries and Harry Bristow. The philosophy behind the successful WTEL format is that many people wishing to preserve their ethnic heritage and culture, want to and are encouraged to both learn and speak their ethnic tongue and remain close to their roots. Thus, WTEL may be heard by up to 2 million people at different times within a week in an area between Brooklyn and Cape May!

Presently, WTEL's management is contemplating a switch to an all Spanish format. Thousands of people of Spanish extraction live in Philadelphia, as well as within the primary signal area of Atlantic City, New Brunswick, Trenton, Camden and among the migrant farm population of Vineland. As the Spanish population has no full time radio voice, this estimated 500,000 people are a logical target market. Successful Spanish stations such as WQBA, WJIT and WRYM provide models for this possible decision. Other religion formatted stations in the Delaware River Valley duplicate many of the WTEL programs, including the 50,000/10,000 watt W22D, whose pattern is very similar to WTEL. Under consideration is an emphasis on local service to the Spanish community, including drive time traffic reports, news, commuter information, and the more personal touches such as community calendar items and lost pet announcements. The AP Spanish wire already serves the station - interestingly, this tends to run about 15 minutes behind its English counterpart in times of critical international news, a fact which manifested itself after the attempted assassinations of Pope John Paul and President Reagan. Up to the minute news was available from a TV in the president's office and a portable radio atop the control board, tuned to a certain all news station! Some members of the WTEL staff are actively involved in other areas of Spanish broadcasting, such as, engineering Philadelphia sporting events broadcast to Venezuela and other South American countries. A fluent knowledge of Spanish and other languages is very helpful in operating the WTEL board!

As mass appeal variety formats in metropolitan radio markets have become virtually extinct, and former number one stations are slipping down the ARB's, format specialization is the present philosophy of success. WTEL fills a void in Philadelphia by bringing an international format to thousands of people to whom listening to their native language and keeping up with their culture are important. A Spanish format could further fill that void, broadcasting to a population group numbering more than half a million in Philadelphia & NJ.

The writer is deeply grateful to Ted Klatt-VP of Engineering and Theodosia J. Kurek-Station Manager of WTEL for their assistance in recalling and sharing historic details and current information about their station. Also to Quentin C. Sturm-Executive Vice President & Program Director and George D. Hopkins-President & Treasurer of WTEL and to technicians Jerry Elnhaus & Bill Jack for their contribution of information and anecdotes for this profile.

## 1981 DOMINICAN REPUBLIC STATION LIST

by Richard K Clark

540.3	HICM	1000	Radio ABC	Santo Domingo
560	HIAA	5000	Radio Ritmos	Santiago
570	HIMS	10000	Radio Cristal	Santo Domingo
590	HIDV	10000	Radio Santa Maria	La Vega
610	HIJR	5000	Radio Accion	Santiago
620	HISD	10000	RTVD	Santo Domingo
629.8	HIAP	1000	Radio Monte Cristi	Monte Cristi
650	HIAT	10000	Radio Universal	Santo Domingo
660	HIAM	2000	Radio Quisqueyana	Santiago
670.5	HILF	1000	Radio 670	San Pedro
680	HIJX	3000	Radio Lanza	Santiago Rodriguez
690	HIAM	10000	Radio Guarachita	Santo Domingo
698.9	HLDC	1000	Radio Mao	Mao
720	HLAQ	5000	Radio Norte	Santiago
730	HLA	10000	Broadcasting Nacional	Santo Domingo
750	HIDB	5000	Radio Alegre	Santiago
760	HICO	5000	Radio Santo Domingo	Santo Domingo
770	HIMD	500	Radio Tamboril	Tamboril
780	HIBO	500	Radio Constanza	Constanza
790	HILL	5000	La Voz del Tropico	Santo Domingo
820.8	HIAZ	5000	Radio Santiago	Santiago
830	HIJB	10000	HIJB	Santo Domingo
840	HIAB	500	Radio Isabel de Torres	Puerto Plata
849.9	HILR	10000	Radio Clarin	Santiago
860	HILR	50000	Radio Clarin	Santo Domingo
880	HIOR	1000	Radio Santa Cruz	Mao
890	HIKJ	5000	Radio Continental	Santo Domingo
900	HIBN	1000	Radio Puerto Plata	Puerto Plata
910	HIDE	500	Radio Tiempo	San Francisco
930	HICK	5000	Ondas del Yaque	Santiago
950	HIG	5000	Radio Popular	Santo Domingo
960	HIF	5000	La Voz del Atlantico	Puerto Plata
970.8	HIVP	1500	Radio Variedades	Villa Tapia
980	HIFM	5000	La Voz de Las Fuerzas Armadas	Santo Domingo
990	HISA	5000	Radio Cibao	Santiago
1000	HILG	1000	Radio Beller	Dajabon
1010	HIJP	50000	Radio Comercial	Santo Domingo
1029.8	HIDL	5000	Novidades 1030	La Vega
1040	HION	10000	Radio Central	Santo Domingo
1050	HICE	10000	La Voz de La Hispania	Santiago
1060	HIKX	1000	Radio Mar 1060	San Pedro
1060	HIKX	1000	Radio Azua	Azua
1070	HIBI	10000	HIBI Radio	San Francisco
1080	HIMC	500	Radio NPQ	Santo Domingo
1090.1	HIJM	5000	Radio Amistad	Santiago
1100	HIND	1000	Radio Oriento	San Pedro
1100	HIMP	1000	Radio Ocoa	San Jose de Ocoa
1100	HIRB	1000	Radio Jimani	Jimani
1100.3	HIPS	5000	Radio Nagua	Nagua
1110	HIJJ	500	Radio Jarabacoa	Jarabacoa
1120	HICN	5000	Radio Antillas	Santo Domingo
1130	HIML	10000	Radio Exitos	Santiago
1140	HIMR	5000	Radio Anacaona	San Juan
1150	HIAS	1000	Onda Musical	Santo Domingo
1160	HIBG	5000	Radiolandia	Santiago
1170	HI..	1000	CP	Monte Cristi
1180	HIBE	50000	Radio Mil	Santo Domingo
1190	HLAQ	5000	Radio Azul	Santiago
1200	HIMK	1000	Radio Monte Mio	Azua
1200	HIBS	1000	Radio Dial	San Pedro
1210	HICJ	1000	Radio Merengue	San Francisco
1220	HIN	10000	Radio HIN	Santo Domingo
1230.6	HING	1000	Radio Ideal	Moca
1239.8	HIAU	5000	La Voz de La Libertad	Puerto Plata
1240	HICV	5000	Radio Barahona	Barahona
1250	HIBC	5000	Radio Progreso	San Francisco
1260	HIT	1000	Radio Vision	Santo Domingo
1270	HISD	1000	RTVD	Santiago
1270	HITA	1000	Radio Ambients	Bani
1289.9	HIVD	500	Radio Janico	Janico
1290.1	HIVM	1000	Radio Bonao	Bonao
1290	HIGA	5000	Radio Guarocuya	Barahona
1300	HIKQ	1000	Radio Radio	Santo Domingo

1301.2	HIMH	1000	Radio Real	La Vega
1310	HIQP	1000	CP	Puerto Plata
1310	HISD	1000	RTVD	El Seibo
1315	HLAY	500	Radio Bani	Bani
1320.5	HINZ	1000	Radio Boya Musical	Sabana Grande
1330	HIFA	5000	La Voz de Las Fuerzas Armadas	Moca
1330	HI..	10000	CP	Santo Domingo
1340	HIBZ	1000	Radio Centro	San Juan
1350	HIXZ	1000	Radio Listin	Santo Domingo
1360	HISD	1000	RTVD	Monte Cristi
1360	HIMG	1000	Radio Rutas Musical	La Romana
1360.3	HISD	250	RTVD	La Vega
1370	HISD	1000	RTVD	Barahona
1370.9	HIFA	5000	La Voz de La Fuerzas Armadas	Elias Pina
1380	HISC	5000	Radio Nacional	Santiago
1380	HIRP	500	Radio Saibo	El Saibo
1394.3	HIAR	500	Radio San Cristobal	San Cristobal
1400	HISD	1000	RTVD	San Juan
1400	HISD	250	RTVD	Federnales
1400.1	HIAL	1000	Ondas del Valle	La Vega
1410	HI..	5000	Radio Gri Gri	Rio San Juan
1410	HIAE	5000	La Grand Musical	Santo Domingo
1410	HIPK	1000	Radio Weiba	Weiba
1411.1	HIRM	500	Radio Sol	Higüey
1415.8	HISG	250	Radio Marion	Dajabon
1420	HIFD	250	Radio Oro	Cotui
1430	HIVG	3000	Radio La Vega	La Vega
1439.9	HIPS	1000	Radio Bahía	Nagua
1440	HILF	1000	Radio Cayacoa	Higüey
1440.3	HIKX	1000	Mi Radio	Santo Domingo
1440.4	HIAD	5000	Radio San Juan	San Juan
1450.5	HIAC	250	Radio Util	Salcedo
1460.3	HIAN	5000	Radio Magua	Hato Mayor
1471.2	HIEH	1000	Radio Sur	Barahona
1480	HIAH	500	Radio Disco	Santo Domingo
1490	HISD	250	RTVD	Puerto Plata
1500	HI..	250	Radio Color	Higüey
1500	HISD	1000	CP	San Pedro
1500.4	HIAP	250	Radio Generacion	Moca
1510.4	HIBL	10000	Radio Pueblo	Santo Domingo
1530	HIJN		(Testing)	Santiago
1540	HIFB	1000	La Reina	Santo Domingo
1540	HIBD	250	La Voz de La Romana	La Romana
1549.9	HITS	10000	Radio Enriqueillo	Tamayo
1560	HICJ	5000	Radio Maiba	Santiago
1560.7	HIPZ	1000	Radio Pedernales	Pedernales
1569.9	HIAJ	1000	Radio Union	Santo Domingo
1570	HI..	1000	CP	Jarabacoa
1570	HILH	250	Radio Juventud	La Romana
1580	HIWJ	250	Radio Samana	Samana
1590	HIDA	3000	Radio Hit Musical	Santiago
1600	HIEG	5000	Radio Triunfo	Santo Domingo

## Incorrect IDs

1490	HISD	Puerto Plata	ID....	1500
1500.4	HIAP	Moca	ID....	1490
1301.2	HIMH	La Vega	ID....	1310

For additional information, contact: Richard K Clark - apartado 273 -

La Vega - Dominican Republic

## THEY JOINED

We have one new member this week. Musa soon and introduce yourself Charles!!

Charles S. Wackerman, 7237 Fairbrook Rd., Baltimore, MD 21207

The following members have recently renewed membership in THE # 1 MW ECB club: Duane McMurray, Edwin Farrell, Greg Mantl, Dave Gleason, Mark Schlesinger, Weldon Childers, Roger Sabella, E.B. Johnson, Robert Fischer, Mike Buretta, James Jamson, George Walton, Vic Melis, Ralph Sperry, Stephen Francis, Mark Strickert, William Lackey, George Holland Jr., Brad Lovett and Neil Zerk. Thanks gents!!! Oops, left out Lonnie Nine and James Herkimer.



# CANADIAN FAMILY LIFE—IT'S TWINS!!

by JOHN OLDFIELD

OCTOBER 1, 1981

\*-Mother Station      a-Local Studio

## BRITISH COLUMBIA:

- \*CFCP-1440 & CPWB-1490s & CPRI-1240s "Coast Radio" Courtenay/Campbell River/Port Hardy
- \*CNUB-1570 & CHFQ-1370s Nanaimo/Parksville-Qualicum
- \*CENK-1270 & CKGO-1240s & CPVR-850s & CKGO-FM 106.1 Chilliwack/Hope/Abbotsford/Boston Bar. "FVR-Fraser Valley Radio" CPVR twins only the AN show. Watch for separate IDs & local ads
- \*CKEK-570 & CPEK-1340s Cranbrook/Pernie. "EK-East Kootenay Radio" CKEK applied for 2 FM twins at Elkford & Sparwood
- \*CKXR-580 & CKGR-1340s & CKOR-1400 Salmon Arm/Revelstoke/Golden "A Country-First Voice West of the Rockies". Calls not presently used.
- \*CKKC-1390 & CFKC-1340s Nelson/Creston. "KC-Kootenay Country"
- \*CKOK-800 & CKOO-1240s & CKOO-1-1490 & CKSP-1450s. "OK-Okanagan-Boundary" Pentiction/Osoyoos/Oliver/Summerland. May use pre timed separate IDs.
- \*CHNL-610 & CHNL-1-1400 & CHNL-2-1340 & CJNL-1230s & CHNL-1400s Kamloops/Clearwater/Ashcroft-Cache Creek/Merritt/Princeton. "NL Radio in BC's South Central Interior" Note 2 twins on 1400
- \*CKCQ-920 & CKWL-570s & CKBX-1240s. "Cariboo Radio Network" Quesnel/Williams Lake/100 Mile House
- \*CKPG-550 & CKMP-1240s Prince George/Mackenzie
- \*CJDC-1350 & CHET-1450s Dawson Creek/Chetwynd
- \*CJGI-620 & CJVH-1340s & CJPJ-1480 & CJPJ-1450. Last 2 are 50 watt lprts Prince George/Vanderhoof/Ft. St. James/Fraser Lake
- \*CPBV-1230 & CPLD-1400s & CHBV-1450 & CHLD-1480 & CKBV-1490. Last 3 50 w. Smithers/Burns Lake/Houston/Granisle/Hazelton. BV-Bunkley Valley
- \*CJCI & CPBV (same owners) join all of their 9 stations on the AN show "CI-Central Interior Network" 0130-0900 ELT. Note 2 twins on 1450/1480
- \*CKTK-590 & CKTK-1230s Terrace/Kitimat "TK Radio". Also 5 PM mini-twins
- \*CKNL-560 & CPNL-590s Ft. St. John/Ft. Nelson. "NL-Alaska Highway"
- \*CLSL-940 & C...-1600s? Richmond/Delta-Surrey on in 1982. Has a CP
- \*CJOC/CJPR Lethbridge/Crowsnest Pass, AB want a 50 watt twin 1340-Elkford. CBC Vancouver (CBU-590) has a short wave relay, CKZU-6160 khs. Calls used only at s/on and s/off.
- CKWX-1130 Vancouver has a short wave relay, CKFX-6080khs. Call not used

## ALBERTA:

- \*CHEC-1090 & CKTA-1570s Lethbridge/Taber "Check-10-90"
- \*CJOC-1220 & CJPR-1490s & C...-1340 Lethbridge/Crowsnest Pass/Elkford, BC. Elkford is a 50 watt lprts application. CKEK-570 also has application
- \*CJDV-910 & CKBR-1340s & CHOA-1400s Drumheller/Brooks/Stettler CHUM now owns "Big Country Radio". Watch for change to twins
- \*CJYR-970 & KYR-1450 & CIYR-1230s & CPYR-1400 & KYR-1-1230 Last 2 50 w. Edson/Jasper/Hinton/Whitcourt/Grande Cache. "YR Radio" "Yellowhead Radio" CIYR Hinton now 1 kw, studio hours 0800-1400 ELT. Note 2 on 1230
- \*CPOK-1370 & CIOK-1310s & CIOK-1-1340 Westlock/St. Paul/Grande Centre "OK"
- \*CFCM-1060 Calgary has a short wave relay, CPVP-6030 khs. No call used.

## SASKATCHEWAN:

- \*CJNB-1050 & CJNS-1240s North Battleford/Meadow Lake "Plus Two Radio"
- \*CPSL-1190 & CJSL-1280s Weyburn/Estevan "SL-See Line Radio"
- \*CKSW-570 & CJSN-1490s Swift Current/Shanavon "SW-SN" "Southwest Sask."

## MANITOBA:

- \*CPAR-590 & CJAR-1240s Flin Flon/The Pas "Arctic Radio"
- \*CPAM-950 & CHSM-1250s & CJRB-1220s "RSM-Radio Southern Manitoba" Altona/Steinbach/Boissevain. Watch for separate ads & ID inserts
- \*CHMM-FM Winnipeg feeds its AN show to 9 stations in Ontario.

## ONTARIO:

- \*CHMM-FM Winnipeg "Stereo 97.5" feeds its AN show to: CJRL, CPOB, CFAK, CKDR, and twins CKIG, CKHD, CKRE, CKEP and CKSI
- \*CKDR-900 & CKIG-1340 & CKHD-1450 & CKSI-1400 & CKEP-1490 & CKRE-1340s Dryden/Ignace/Hudson/Sioux Lookout/Bar Falls/Red Lake. Two on 1340 CKDR twins are just 50 watt lprts except CKRE. Some local ID and ads.
- \*CPOB-800 & CFAK-1240 Ft. Frances/Atikokan CFAK is a 50 watt lprts

- \*CFIX-1170d & CHBR-1110d Cornwall/Hawkesbury French daytimers have a CP for night as soon as they can find a frequency!
- \*CPOS-560 & GPPS-1490s Owen Sound/Port Elgin
- \*CJKL-560 & CJTT-1230s Kirkland Lake/New Liskeard
- \*CKBB-950 & CKCB-1400s Barrie/Collingwood
- \*CPEK-630 & CPBQ-1340s Huntsville/Parry Sound
- \*CJBJ-800 & CJNK-1240s & CJTN-1270s Belleville/Bancroft/Tranton
- \*CFCL-620 & CFLN-1340s & CFLK-1230s Timmins/Hearst/Kapuskasing French
- \*CJNR-730 & CKNR-1340s & CKNS-930s Blind River/Elliott Lake/Espanola
- \*CFYN-1050 & CJWA-1240s Sault St. Marie/Wawa...may no longer twin
- \*CKAP-580 & C...-1450s Kapuskasing/Timmins....application 2nd try
- \*CFRB-1010 Toronto has a short wave relay CFRX-6070 khs. Call not used

## NEW BRUNSWICK/NOUVEAU BRUNSWICK:

- \*CKCW-1220 & CJCW-590s Moncton/Sussex. CJCW studio times:0500-1200 ELT
- \*CJCI- 920 & C...-730s Woodstock/Grand Falls....application
- \*CJEM- 570 & CKMV-1490s Edmunston/Grand Falls (Grand Sault)
- \*C...-1380 & CJVA- 810 plan to twin at times with CJEM/CKMV Note that NB is now officially a bilingual province

## NOVA SCOTIA:

- \*CKAD-1350 & CKDY-1420s & CKEN-1490s & CPAB-1450s Middleton/Digby/Kentville/Windsor
- \*CHNS- 960 Halifax has a short wave repeater, CHNX-6130 khs
- \*CJCB-1270 Sydney has a short wave repeater, CJCX-6010 khs
- \*CKBW-1000 Bridgewater has 2 FM twins and may apply for AM

## QUEBEC:

All are French except CFCP, which is English.

- \*CHNC- 610 & C...-1150s & C...-1450 New Carlisle/Gaspé/Murdochville
- \*CKRB-1460 & CIRE-1240s St. Georges (de-Beauce)/Lac-Etchemin
- \*CKVM- 710 & CKVT-1340s Ville-Marie/Témiscaming
- \*CJBR- 900 & CJEM-1450 now CBC (SRC) owned....will just relay CBGA
- \*CJPP-1400 & CJAP-1240s & CHRT-1450s Rivière-du-Loup/Cabano/Pohénégamook
- \*CHCB-1310 & CHAL-1350s & CFVD-1370s La Pocatière/St. Pamphile/Dégelis
- \*CKCN- 560 & CIPC- 710s Sept-Îles/Port-Cartier
- \*CHVD-1230 & CJMD-1240s & CFED-1340s Dolbeau/Chibougamau/Chapais
- \*CKRN-1400 & CKLS-1240s & CHAD-1340s & CKVD-900s Rouyn/La Sarre/Amos/Val-d'Or
- \*CKML- 610 & CKMG-1340s & CKSJ-1400s & CKLR-1490s Mont-Laurier/Maniwake/St. Jovite/L'Association. "Reseau des Laurentides"
- \*CHLC- 580 & CPRP- 620s Hauteville/Forestville
- \*CKLE-1330 & CPDA-1380s & CKTL-1420s & CJAN-1340s & CJLP-1230s & CKFL-1400s Thetford Mines/Cictoriaville/Plessisville/Asbestos/Disraeli/Lac-Mégantic "Reseau de Apalachee"
- \*CFPL-1000 & CPVM-1220s Rimouski/Amqui
- \*CFCP-600 Montreal has a short wave relay CFRX-6005 khs. No call used

## NEWFOUNDLAND & LABRADOR:

- \*CJYQ-930 & CFYQ-1010s & CIYQ-670s & C...-970s & CKYQ-610s St. John's/Gander/Grand Falls/Musgravetown/Harbour Grace/Grand Bank "Q System"
- \*YOCM-590 & CKGA-730s & CHCM-560s & CKCM-620s & CKVO-710s & CKIM-1240s & CHVO-850s St. Johns/Gander/Marystown/Grand Falls/Clareville/Sais Yerte/ Spaniard's Bay--Harbour Grace. CHCM part twins live CHVO. Newfoundland Broadcasting
- \*CPCB-570 & CFCN-1230s & CPNW-790s & 4 twins on FM Corner Brook/Point aux Basques/Point aux Choix
- \*CFW-1340 & \*CFLN-1230 Wabush/Happy Valley--Goose Bay. Each twins 50%
- \*CEN-640 St. John's has a short wave relay, CKZN-6160 khs.

Thanks for your tips sent to columns in NRC & IRCA and to Rene L. of Quebec for telling me where to put all of those hyphens and diacritical marks. (NOTE: some of these were omitted in retyping this article. Gary Atkins)

73 John Oldfield 7135 129A Street Surrey, BC V3M 6T4

# KANADIAN KORNER...KNEWS FROM THE NORTH

JOHN OLDFIELD

OCTOBER 1, 1981

- 540 PQ CBFP lprt delets. Now 91.9 FM
- 550 PQ CHLN CP 20 kw. Days
- 550 ON CHNO Sudbury 50 kw. Days
- 550 BC CFCJ Kamloops CP 25 kw. Days
- 560 NF CHCM Marystown now twins CHVO 4:30-1:30pm ELT
- 570 NB CJEM & twin CMKV-1490 are dropping all SRC (CBC French)
- 580 BC CKXR & twins are not now using calls. Just "R. Country"
- 580 PQ CHLC joins "Le Réseau Radiomutuel" network
- 580 NS CJFX drops all CBC & joins AN 'John Gilbert Show' network
- 600 SK CFCQ Saskatoon joins the 'John Gilbert Show' network
- 600 NS CKCL Truro CP 10 kw days
- 600 NF CBNI lprt delete. Now CBYM-FM
- 610 PQ CHNC got CP for twin at Gaspé-1150
- 610 BC CHNL got CP for twin at Ashcroft/Cache Creek-1340
- 620 PQ CFRP joins Radiomutuel...like its mother, CHLC
- 640 NT CB.. Gjoa Haven lprt 40w, will take CBC-Northern via satellite.
- 680 MB CJOB wants 50kw day & night
- 680 ON CPFR gets 50kw night w/xr site (night) at Grimby (near Hamilton)
- 680 ON CKGE moves to 730
- 730 ON CKGB Timmins CP (ex 730) 25kw day & night
- 730 BC CBRF Fernie lprt moves to 97.7 FM
- 740 NB G... Grand Falls wants 10 kw, U2 to twin CJCJ-920
- 740 BC CBRS & CBWK moved to FM. CBRN moves to 90.7 FM
- 740 NF CBNI lprt moves to 90.5 FM
- 740 PQ CBSI-13 is ex CBQL and relays CBSI-FM-which mostly relays CBGA
- 790 PQ CKBH Bale-Comeau 1 1/2 kw, U1, Box 260 42 Place LaSalle G42 2H1
- 800 BC CJJC dropped lots of REL. Agah using full call ID's
- 850 AB CKRD Red Deer joins the AN 'John Gilbert Talk Show'
- 850 NF CHVO Spaniard's Bay/Harbour Grace is on & part twins VOXM-590.  
Note that CHCM-560 part twins CHVO.
- 900 BC CBUB lprt moves to 95.3 FM
- 900 BC C... Pantistion..delets..FM approved instead
- 900 PQ CKTS drops all CBC
- 900 PQ CJEN Off since 8/23/79. CRTC wants bids. Anyone miss them?
- 910 AB CJDV & twins bought by CHUM. Got a CP for 50 kw. day & night too.
- 910 PQ CHRL joins the "Télémedia" Network of Quebec
- 920 MB CFRY dropped its already approved CP for 50 kw
- 920 PQ CFLS got a CP for 10 kw day & night
- 940 BC CISEL Richmond, is on NSP 2 1/2 kw. Also got a CP for Surrey-Delta
- 970 NF C... Harbour Grace, is apparently on twinning CJYQ-930
- 990 BE CBWX lprt of CBUF-FM is now on FM
- 990 BC CBUS 100 Mile House, lprt is moving to FM. This one got out to WA & OR. This may be your last chance to try for a lprt.
- 1010 ON CBEA lprt now on FM
- 1010 NF CFIQ CP 5 kw, U2. Now on 1350
- 1050 ON CFPN drops all CBC
- 1050 AB CFCP drops all CBC stuff as part of their license requirement
- 1070 BC CBUV lprt moves to 91.9 FM
- 1130 PQ CBGA-10 is ex CBGR
- 1140 PQ CBMI lprt is now FM
- 1150 ON C... Sarnia, is a TIS station CP
- 1150 PQ C... Gaspé, 5 kw, U2, will twin CHNC-610 New Carlisle
- 1170 BC CBUV lprt moves to FM
- 1190 NF CBNC lprt moves to FM 89.7
- 1190 ON CJMR & CHWO want to move their xr site, still sharing (same owners)
- 1220 PQ CFPV Amqui, twins part of CFLP-1000, 39 Saint-Benoit Blvd. GOJ 1B0
- 1220 NB CKCW Moncton, wants 25 kw days
- 1230 ON GJLB Thunder Bay is ex CFFA
- 1230 AB CJOK dropped NHL Edmonton Oilers hockey
- 1230 PQ CBSI-2 is ex CBDR
- 1230 AB CIYR Hinton, gets a studio (live 8am-2pm ELT) & 1 1/2kw U1..r/CJYR
- 1240 PQ CBSI-4 is ex CBEP
- 1240 PQ CIRE now owned by CKRB. Joins Télémedia & drops all SRC (CBC French)
- 1250 ON CHWO wants to move its xr site, sharing with CJMR-1190
- 1270 PQ CBGA-6 is ex CBGD
- 1280 PQ CKCV got a CP for 50 kw, U4
- 1310 AB CIOK got OK to twin in part its owner CPOK-1370. Still must carry a bit of French/Ukrainian/Cree
- 1340 AB CIOK-1 Grande Centre, just relays CIOK-1310
- 1340 BC C... Elkford. CJPR-1490 wants a 50 w, lprt twin here

- 1340 PQ CEJA-7 is ex CBGN. This one is 250 watts
- 1340 ON CKRE Red Lake, CP 250 watts, U1, to twin CKDR. Local IDE & ads
- 1340 PQ C... Jonquiere...denied
- 1340 BC CHNL-2 Ashcroft/Cache Creek, 1 1/2 kw, U 1, to twin CHNL-610-Kamloops
- 1340 BC CBUR & CBRY lprts gone to FM
- 1350 BC CKEG Nanaimo is on NSP
- 1350 PQ CBSI-14 is ex CBGD
- 1370 ON CB.. Kapuskasing. CBC decided to use FM here
- 1380 NB G... Moncton, CP 10 kw, U2, French. Wants to part twin CJVA/CJEM/CKWV
- 1380 PQ CBGA-9 is ex CBGJ...CBGA-2 is ex CBGB
- 1390 ON CHOD Ajax wants to change its day xr site
- 1400 ON CKOB Renfrew CP 1 kw, days
- 1400 ON CHLZ lprt moves to FM
- 1400 NB C... Moncton English CP denied
- 1400 NF CBNL lprt is now CBTB-FM
- 1400 ON CKSI Sioux Lookout, 50 watt lprt twin of CKDR-900
- 1420 PQ CBGA-5 is ex CBGC
- 1430 ON CJCL Toronto is ex CKFH
- 1450 PQ C... Murdochville would also twin CHNC-610
- 1450 BC CHET Chatyud is on, twinning CJDC-1350 Dawson Creek
- 1450 ON CKHD Hudson is on, a 50 w lprt twin of CKDR-900-Dryden
- 1450 NP CBND lprt is now CBYP-FM
- 1450 PQ CBSI-5 is ex CBGP, -9 is ex CBGG, -7 is ex CBGM
- 1450 ON CHUC wants 10 kw, day & night.
- 1450 ON C... Timmins wants 5 kw, U2 to twin CKAP
- 1460 PQ CKRB drops all SRC (CBC French) and joins Télémedia
- 1470 PQ CBSI-11 is ex CBGI
- 1470 PQ CKPE Ville-de-la-Baie is the new name for Bagotville
- 1470 ON CHOW got the CP for 10 kw nights
- 1480 PQ CHRD got a CP for 50/35 kw. It says 35!
- 1480 ON CKAN is on...CRTC news is a bit slow, eh?
- 1480 AB CKER Edmonton is on. Ethnic radio mostly. AN too.
- 1490 AB CJPR Crownest Pass is the new town name
- 1490 BC CKOO-1 Oliver, is on twinning CKOO-1240 (CKOK-800)
- 1490 BC CHPE Prince George is OFF. CBXC-FM now does the job
- 1490 ON CKEF Ear Falls, 50 watt lprt twin of CKDR-900 is on
- 1500 BC CKAY Duncan is now 10 kw, U3
- 1530 MB CISV Winkler-Morden is on. SV-Sun Valley (or Serving Vinapig?)
- 1530 PQ CBSI-10 is ex CBGQ
- 1550 PQ CBSI-8 is ex CBGQ, -12 is ex CBGK
- 1550 PQ CBGA-3 is ex CBGE
- 1600 AB C... Calgary, wants 50 kw, U2
- 1600 BC C... Delta-Surrey. CISEL-940 got a CP (on in 1982) May move to 1260.

The rest is lost in the old mail strike. 73 John Oldfield

*Radio and Television  
Q's are passed to present*

Two veries from Dave Schmidt--WVVF was outlaw verified in 1969.

# WVVF

## KENT STATE UNIVERSITY KENT, OHIO

12 NOON  
WVVF-AM 840 ON YOUR DIAL  
WEST CHESTER, PENNA.

# WKSU

RADIO

FM 89.7 MC 7500W. ERP  
AM 730 KC CARRIER CURRENT

# MAN-MADE ELECTRICAL NOISE IN THE BCB

Dallas Lankford  
(c) November 1981

The purpose of this note is to survey the literature on expected values of man-made electrical noise in the BCB. The intensity of man-made noise may vary greatly, depending upon the time of day and location. For example, at the usual urban home or apartment complex there are many potential sources of high intensity man-made electrical noise, including power line noise, TV's (horizontal oscillator harmonics), florescent lights, light dimmers, fish-tank heaters, and a host of other appliances. Even if these noise sources can be eliminated from the immediate vicinity of a receiver, some strong man-made noise may remain (next-door neighbors' light dimmer, etc.). And even if all of the nearby man-made noise sources were eliminated some residual man-made noise would still be present.

The primary source of residual man-made electrical noise is the power grid. Therefore, it is not surprising that residual man-made noise is composed of harmonics of 60 c/s and sounds to the ear like 60 cycle hum. Buehler and Lunden [1966] reported that audio spectrum measurements showed most of the residual man-made noise was concentrated at or near harmonics of 60 c/s with peaks in the 40 - 1000 c/s range as high as 30 db above threshold noise. They suggested that a comb-filter might function effectively as a noise-blanker in high man-made noise locations. (Such a noise-blanker might be a partial solution to noise problems with light dimmers, fish-tank heaters, and the like.) Spectrum measurements also allowed them to distinguish between noise from a 287 kV power line and city noise because of square wave switching of the power. Their measurements were developed into a number of man-made noise curves which we give in Figure 1 below.

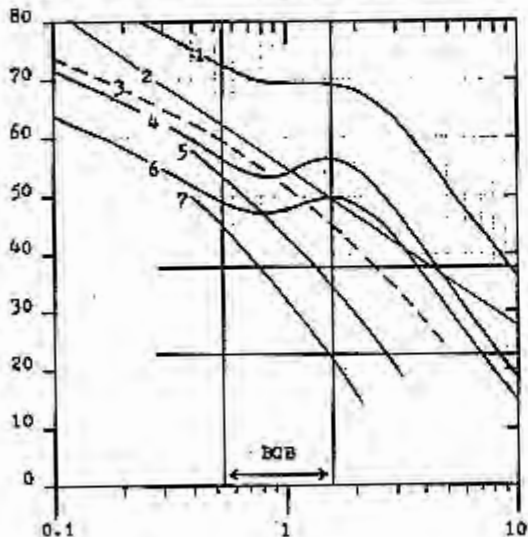
FIGURE 1

MAN-MADE ELECTRICAL NOISE POWER IN DB ABOVE  $kT_0b$ ,  $b = 1$  KHZ

versus

FREQUENCY IN MHZ

1. Seattle, city center
2. CCIR [1964]
3. 345 kV power line, 1 mile distant
4. 10 miles from Seattle, over sea
5. 10 miles from Seattle, over land
6. 20 miles from Seattle, over sea
7. 20 miles from Seattle, over land



The noise powers of Figure 1 can be converted into field strengths by the formula  $V = P + 20 \log f - 65.5$  where  $V$  is field strength voltage in db above 1 microvolt per meter,  $P$  is noise power in db above  $kT_0b$ ,  $f$  is frequency in mhz, and the logarithm is base 10. For example, taking 72.5 as the value of  $P$  at 540 khz in the center of Seattle, we get 1.648 for  $V$ , i.e. 1.21 microvolts per meter. Noise powers were read from each curve at 540, 1000 and 1600 khz and converted by the formula above into field strengths in microvolts per meter, and are presented in Figure 2 below.

As can be seen from Figures 1 and 2 the intensity of man-made electrical noise can vary greatly depending upon the proximity of the city or high voltage power lines. The measurements were taken in and around Seattle which has one of the highest rates of electrical power consumption in the U.S.A. So the noise curves of Figures 1 and 2 are best thought of as upper bounds of man-made noise. The measurements were also taken around 9 a.m. local time when atmospheric noise is at its lowest. Some parts of the curves below 38 db in Figure 1 may be extrapolations since some of the equipment used for those measurements had a measured sensitivity of 38 db

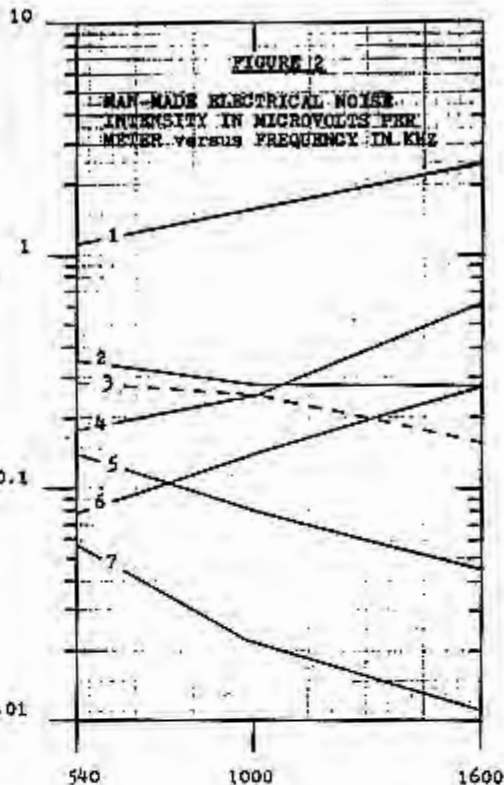
at 2 mhz (which translates into 0.09 microvolts per meter). Over sea water excellent grounding via a short length of belden braid trailing stern allowed the 21 foot rod antenna to be tuned which improved instrument sensitivity by 15 - 20 db.

The power line noise measurements are for fair weather. Wet weather increases high voltage power line noise 10 - 20 db with maximum increase occurring when a very fine mist is falling.

In Figure 3 below the expected values of city noise power and high voltage power line noise power versus distance are shown. The city noise power becomes asymptotic to about 72 db at short distances. Based upon theoretical calculations of Thomson et al. [1963] high voltage power line noise becomes asymptotic to about 105 db at short distances.

Figure 1 is based upon a 1 khz bandwidth as seen by the receiver's detector. Occasionally the 1 khz bandwidth of my HQ180A will extract a signal when all else fails.

But the 2 khz bandwidth is my usual DXing bandwidth. To convert from the 1 khz bandwidth of Figure 1, add  $10 \log(b)$  where  $b$  is the bandwidth in khz. For example, add 3.01 db for a 2 khz bandwidth. Or add 6.99 db for a 5 khz bandwidth (the widest HQ150 selectivity position). These bandwidth additions do not change the noise field strengths of Figure 2, but they do determine how much noise power reaches your earphones or speaker, i.e., the effective sensitivity of your receiver. (Calculations of effective sensitivities follow the same pattern as in Lankford [1979] and so will not be given here.) Thus it follows that Figure 2 gives us some idea of the lower bounds on the weakest BCB signals that can be heard in the presence of man-made electrical noise.



0.01

0.1

1

10

100

1000

10000

100000

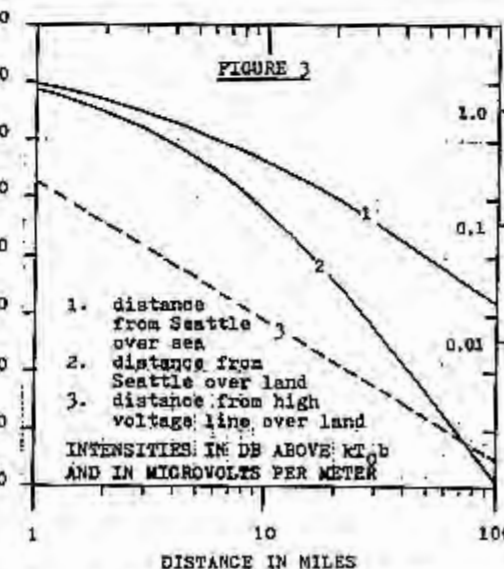
1000000

10000000

100000000

1000000000

10000000000



DISTANCE IN MILES

by Mark Connelly, WAIION

The expected values of man-made electrical noise powers given above are substantially lower than values reported by Hutton [1979], but are of the same order of magnitude as values reported by David and Vogt [1969]. Indirect support for the values we have given also comes from field strength intensity measurements of Dellinger and Cosentino [1940], Norton and Reymier [1933] and Norton, et al. [1934, 1935]. In the process of studying field strength intensities of various ECB stations all of those researchers recorded residual noise at various times. Though they made no attempt to distinguish among atmospheric, man-made, and cosmic noise, their experiments do provide us with some information about expected noise intensities from all sources. All of the measurements were taken near Washington, D.C. Residual noise at night varied from about 0.2 microvolts per meter to about 50 microvolts per meter. The lowest noise level was obtained by Dellinger and Cosentino [1940] on Dec. 28, 1936 at 4 a.m. EST on 1040 kHz (after Rennes, France had faded out). From CCIR [1964] we find that the expected atmospheric noise power at that time and frequency is 60 db or 0.56 microvolts. Since the CCIR values are the mean values which will be exceeded 50% of the time, values as low as 0.2 microvolts are not surprising in that case. It is, of course, impossible to say whether the residual noise was man-made, atmospheric, or cosmic. Other measurements from the articles mentioned above were also in reasonably good agreement with the CCIR values and/or the man-made noise values we have given above.

The information we have presented in this article provides the ECB DXer with a systematic approach to evaluating his present or potential DXing locations. Our general conclusions hold nothing new for the knowledgeable ECB DXer: man-made noise levels are lowest in rural regions away from high voltage power lines. However, Figures 1, 2, and 3 do allow the DXer to make more precise estimates of man-made noise. For example, when we considered the sensitivity question for sets of the art loop antennas, we did not have the information of this article available and hence guessed at the minimum noise levels which could be expected. It now appears that our guesses in Lankford [1981] were quite reasonable, though perhaps on the low side for large urban areas. Consequently it is questionable whether a large air core loop would out-perform a good ferrite rod loop antenna in or near large urban areas. Listening tests at my location in Ruston, Louisiana indicate that man-made noise is the limiting noise during the day, and is often the limiting noise at night (when atmospheric noise levels are low). This is evident by several S-units of "noisy" 60 c/s hum when using my 100 foot long wire (suggesting that a shorter long wire would have adequate sensitivity while improving the dynamic range of my receiving system). Man-made noise is rarely heard on my loops.

## REFERENCES

- Buehler, W. and Lunden, G. Signature of high-frequency radio noise. IEEE Trans. on Electromagnetic Compatibility EMC-8, 3 (Sept. 1966), 143-152.
- CCIR World Distribution and Characteristics of Atmospheric Noise. International Radio Consultative Committee, Documents of the Xth Plenary Assembly, International Telecommunication Union, Geneva, 1964, Report 322.
- David, P. and Vogt, J. Propagation of Waves. Pergamon Press, 1969.
- Dellinger, J. and Cosentino, A. A radio transmission anomaly: Co-operative observations between the United States and Argentina. Proc. IRE 28, 10 (Oct. 1940), 431-437.
- Hutton, C. Noise levels and useable receiver sensitivity. DX News 46, 28 (Aug. 13, 1979), 25-28.
- Lankford, D. Atmospheric and galactic noise in the ECB. DX News 46, 21 (Mar. 19, 1979), 9-10.
- Lankford, D. Loop antennas, theory and practice. DX News 48, 19 (Mar. 2, 1981), 18-25.
- Norton, K., Kirby, S. and Lester, G. An analysis of continuous records of field intensity at broadcasting frequencies. J. Res. NBS 13 (Dec. 1934), 897-910; Proc. IRE 23, 10 (Oct. 1935), 1183-1200.
- Norton, K. and Reymier, S. A continuous recorder of radio field intensities. J. Res. NBS 11, 3 (Sept. 1933), 373-378.
- Tomson, K., Barthold, L., La Forest, J. and Lindh, C. 500-kV-line design. III - Conductors. IEEE Trans. on Power Apparatus and Systems 82 (Aug. 1963), 587-597.

Permission is given to the National Radio Club to copy and/or otherwise use all or parts of this article.

This article is presented to describe the actual construction of a versatile phasing unit and to delineate methods of using the unit to produce nulls of unwanted stations or noise signals, allowing desired DX to be heard. The following works should be read as a preface to this article:

Analysis of Beverage Antennae	Chuck Hutton	NRC Reprint A28
Practical Phased Beverages	Chuck Hutton	DX News 17 DEC 1979
Phased Longwires	Mark Connelly/ Nick Hall-Patch	IRCA Reprint A28
More Thoughts about Phased Antennae	Mark Connelly	DX News 21 JAN 1980
Improve your Latin-American DX by Phasing Non-Identical Antennae	Mark Connelly	IRCA Reprint A33, DX News 8 JUN 1981, DX Monitor 13 JUN 1981
Phasing Unit Design Modifications	Mark Connelly	DX News 26 OCT 1981, DX Monitor 24 OCT 1981

The construction article to follow is the first article to actually outline a step-by-step procedure to build a versatile phasing unit which can be used by itself to phase wires of 30 m/98' length (or greater) or, when fed to an RF amp., to phase wires as short as 5m/16'. The amplified shortwire concept will be covered in the next article of this series. The phasing unit to be built incorporates several recent improvements such as flexible LC module design.

## Starting the Project

The prospective builder should have rudimentary tools and shop accessories such as a soldering pencil, resin core solder, screwdriver & nutdriver sets, 6-32 tapping tool, longnose pliers, diagonal cutters, regular 'emo' pliers, hacksaw or jigsaw, drill with a reasonably good assortment of bits (see Figure 6 in main body of article), ruler/scale, calipers or micrometer, wire stripper, push-pin insertion tool (e. g. Vector P91-DP), vise, solder sucker, file, and X-Acto (or similar) knife set. The author does not like wire-wrapping for RF work, but some would rather wrap than solder.

A volt-ohmmeter comes in handy for verifying switch connections and wiring runs. A well-stocked hardware cabinet is useful. A candle will be used to dribble wax over the two toroidal transformers when they have been assembled. Glue or rubber cement applied to the toggle switches will hold them into place more securely than the manufacturer supplied nut & lockwasher arrangements could do alone.

When the builder has marshalled all of the necessary tools & accessory items together into a suitable work area, parts acquisition is the next phase. At the outset, you must realize that Radio Shack won't have many of the needed parts. Electronic parts retail stores must be located. In the Boston area, You-Do-It Electronics in Needham Heights, MA. has many (but not all) of the necessary components. Those in rural areas will have to shop by mail. Consult QST and other hobby publications for parts suppliers. When you buy components new, you are paying 'top buck'. Mass auctions & 'flea-markets' are a much cheaper way to obtain necessary parts.

IMPORTANT NOTE: The drilling drawing, component layout drawing, and wiring drawing are laid out for the specific parts listed. Parts electrically equivalent to those listed, but possibly different from a mechanical standpoint, may certainly be used — as long as the builder adjusts all assembly drawings to reflect component variations, before any actual drilling or assembly is undertaken.

Table 1: Parts List for Phasing Unit

Component Designation(s)	Quantity Required	Description	Manufacturer	Part #	Approx. Price
C1, C2, C3, C4	4	10-365 pF variable capacitor	Calcraft	A1-232	\$2.70/1
C5, C6	2	47 pF fixed mica capacitor	Sprague	QCR-1171-01	\$1.40/1
J1, J2, J3, J4, J5, J6, J7	7	insulated banana jack	H. S. Smith	1463	\$2.10/2
L1x, L2x	2	470 uH inductor	Mytronics	WEE-470	\$2.75/1
L1y, L2y	2	270 uH inductor	Mytronics	WEE-270	\$2.75/1
L1z, L2z	2	120 uH inductor	Mytronics	WEE-120	\$2.75/1
R1, R2	2	100K pot w/switch	Radio Shack	271-216	\$1.69/1
R3, R4, R7	3	1K pot w/switch	Calcraft	B1-660	\$1.10/1
R5, R6	2	1K fixed resistor	Radio Shack	271-023	\$0.19/2
SW1, SW2	2	SPDT toggle switch, centre-off	or Aico	MST10SE	?
SW3	1	3-pole, 4-position switch	Radio Shack	275-325	\$2.39/1
SW4	1	4-pole, 3-position switch	G. C. Electronics	35-379	\$2.15/1
			G. C. Electronics	35-380	\$2.15/1
			Radio Shack	275-663	\$2.99/1
SW5, SW6, SW7	3	DPDT toggle switch, no centre position	or Radio Shack or Aico	275-1546 MST20SN	\$2.69/1 ?

(parts list continued next page)

24 Table 1 (continued)

Component Designation(s)	Quantity Required	Description	Manufacturer	Part #	Approx. Price
T1, T2	2	toroidal core	J. W. Miller	T-106-2	\$1.50/1
" "	225'	#28 solid enameled magnet wire	Columbia Electronic	10023-13	\$2.49/375'
" "	8	push-pins for lead attachment	Keystone Electronics	1499PX	\$2.49/100
" "	4	tie-wrap to secure T1, T2	Waldon "speedy ties"	65001	\$3.30/100

(Metal Hardware Assemblies)

H1, H2, H3, H4, H5	5	6-32 X 1 1/4" threaded spacer	"	"	"
" " " " "	10	6-32 X 3/8" binder-head screw	"	"	"
" " " " "	9	6-32 internal tooth lockwasher	"	"	"
H5	1	6-32 solder lug	Waldon	KT-197 or KT-194	?/15

(Nylon or Plastic Hardware Assemblies for mounting C1-C2-C3-C4)

NC1, NC2, NC3, NC4	4	4-40 X 3/8" screw	"	"	"
" " " " "	8	4-40 hex nut	"	"	"

(Miscellaneous parts - no designation numbers)

1	Vectorboard 4.8" X 6.5"	Vector	85W48VE DP	\$3.30/1
1	ground plate, 6" X 10" bare metal	LMB	(8 X 10 Cap Cover)	\$2.98/1
1 roll	insulated hookup wire, #22 solid	Columbia Electronic Cables	10010-13	\$2.49/90' roll
2	single-line knobs for SW3, SW4	Archer	274-407	\$1.29/2
5	calibrated knobs for H1, H2, H3, H4, H5	Archer	274-413	\$1.39/2

(Optional Support Leg Assembly)

2	solid metal, wood, G-10, or plastic cylindrical dowel	"	"	"
	1/4" long X 3/4" dia.	"	"	"
2	6-32 X 3/8" binder-head metal screw	"	"	"
2	6-32 internal-tooth lockwasher	"	"	"

(Balanced Cable Assembly, from phasing unit to receiver balanced inputs)

± 1 w/3.3'	TV Twin-Lead or AC "zip cord"	"	"	"
2	bananas plug	Radio Shack	274-730	\$0.99/2
2	receiver connectors (e. g. spade lugs)	"	"	"

(Unbalanced Cable Assembly, from phasing unit to receiver unbalanced input & rx. ground)

± 1 w/3.3'	RG174 coaxial cable	"	"	"
2	bananas plug	Radio Shack	274-730	\$0.99/2
1	receiver input connector (e. g. PL-259, BNC, phono plug, etc.)	"	"	"

(Balanced-Mode Ground Jumper (from phasing unit ground to receiver ground))

± 1 w/3.3'	insulated hookup wire, #16 stranded	"	"	"
1	banana plug	Radio Shack	274-730	\$0.99/2
1	alligator clip or spade lug (to rx.)	"	"	"

NOTE: Asterisk (\*) indicates that there are many different suppliers of this product at varying prices. Consult local hardware stores and electronic parts outlets for availability. Some small pieces of hardware may be available at the builder's place of employment.

Table 2 Functional Descriptions of User-Adjustable Controls on Figure 1 to follow.

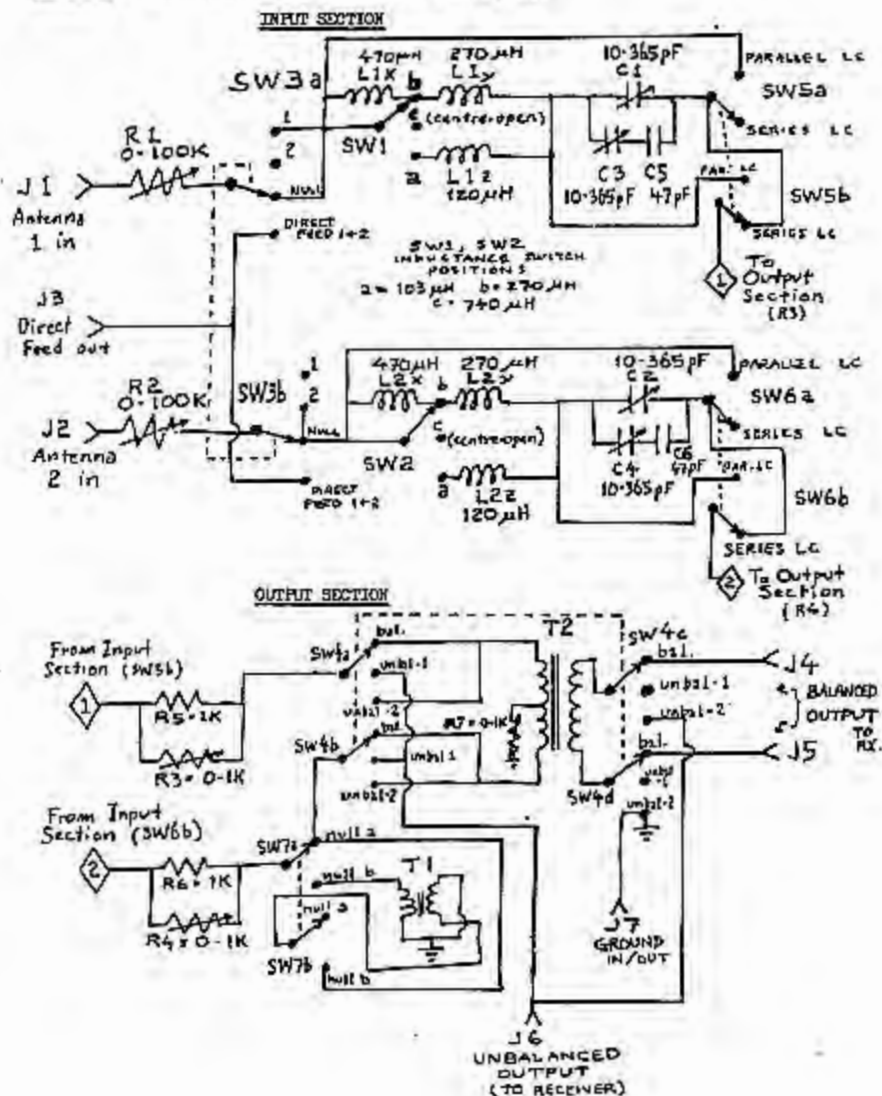
Component Designation	FUNCTIONAL NAME	NOTES
R1	#1 main (level) pot.	adjust signal level from Antenna 1 3 possible inductances (e.g. 103, 270, or 740 uH)
SW1	#1 L switch	
SW5	#1 LC switch	
C1	#1 main tune cap.	choose series or parallel LC
C3	#1 trim cap. (a. k. a. vernier cap, fine-tune cap.)	
R3	#1 trim pot.	
<b>CONTROLS ON ANTENNA #2 LINE</b>		
R2	#2 main pot.	adjust signal level from Antenna 2 choose one of 3 inductance values (as done with SW1)
SW2	#2 L switch	
SW6	#2 LC switch	

(controls list continued next page)

Table 2 (continued) User-Adjustable Controls CONTROLS ON ANTENNA #2 LINE

Component Description	FUNCTIONAL NAME	NOTES
C2	#2 main tune cap.	switches phase-reversing transformer, T1, in or out of Antenna #2 line.
C4	#2 trim cap.	
R4	#2 trim pot.	
SW7	null-mode switch	
<b>CONTROLS SIMULTANEOUSLY EFFECTING BOTH ANTENNA LINES</b>		
SW3	antenna switch	choose Ant. 1 only, Ant. 2 only, both, or none
SW4	bal./unbal. switch	
R7	ground pot.	

Figure 1 Schematic Diagram of "MWX-1" Phasing Unit



- (1) Wind T1, T2.
- (2) Preliminary Vectorboard drilling.
- (3) Ground plate preparation.
- (4) Preparation of (optional) support legs.
- (5) Final Vectorboard drilling.
- (6) Mount components onto Vectorboard.
- (7) Wiring of components.
- (8) Inspection of completed wiring, checking of switch connections.
- (9) Final mechanical assembly: attach Vectorboard to spacers on ground plate.
- (10) Connect appropriate antennae to completed unit. Run cable from phasing unit to receiver.
- (11) Commence W.King.

### 1. Wind T1, T2

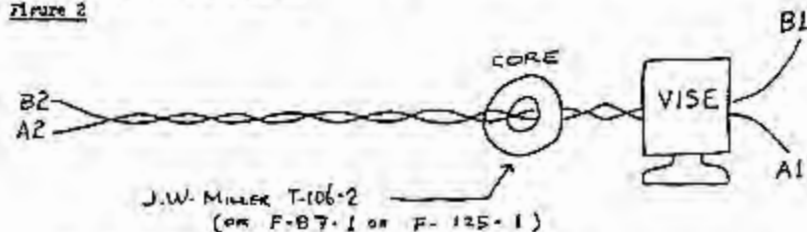
T1 is used as a phase-reversing transformer which yields phase shifting required to establish some nulls.

Cut 2 pieces of #28 enameled solid magnet wire to a length of approximately 2 metres/64". Label one end of one of the wires 'A1'. Label the other end of that wire 'A2'. Label one end of the second wire 'B1' & label its other end 'B2'.

Tape the 2 wires together 10 cm./4" from the A1 & B1 ends. Insert the taped part of the wires into a bench vise. Stretch the wires out taut and tape the A2 & B2 ends to the blade of a large screwdriver. Ensure that the labels do not become detached from the wires! If the gassed label method is too clumsy, other ways to differentiate the 'A' wire from the 'B' wire may be devised: these include knotting each end of one wire, leaving the other wire unknotted; or, stripping enamel varnish from each end of one of the wires and not stripping the other.

Turn the screwdriver slowly & evenly such that a twisted pair of leads is formed. One or two twists per inch along the entire length of the paired wires is the result desired. Detach the B2 & A2 ends from the screwdriver. Slip the toroidal core over the leads, as shown in Figure 2.

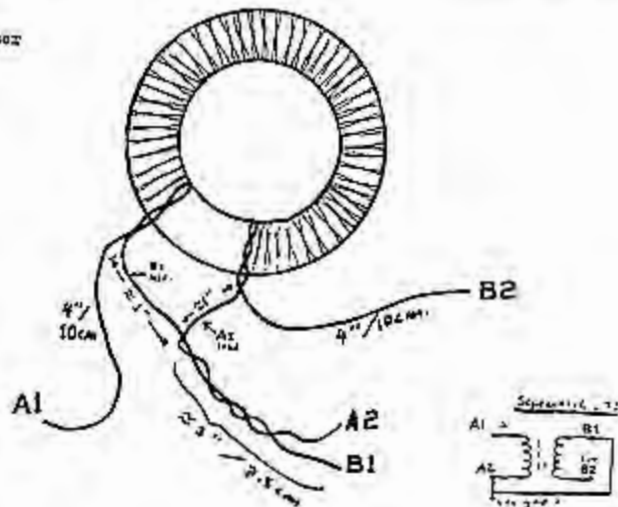
Figure 2



Wind 40 to 50 turns of twisted pair on the core. After that, untwist the wires between the A2 & B2 ends and the toroid. Re-label the B wire such that B2 is now 4" from the toroidal core. Cut off B wire more than 4" from the core. Similarly, re-label the A wire so that A2 is now 4"/10 cm. from the core. Detach the A1 & B1 leads from the bench vise & untape them. Twist lead A2 with lead B1. Temporarily retain all labels on lead ends. Drip candle wax over final T1 toroidal coil assembly. The T1 assembly should resemble Figure 3.

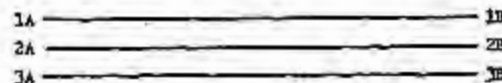
Figure 3

T1, Phase-Reverser



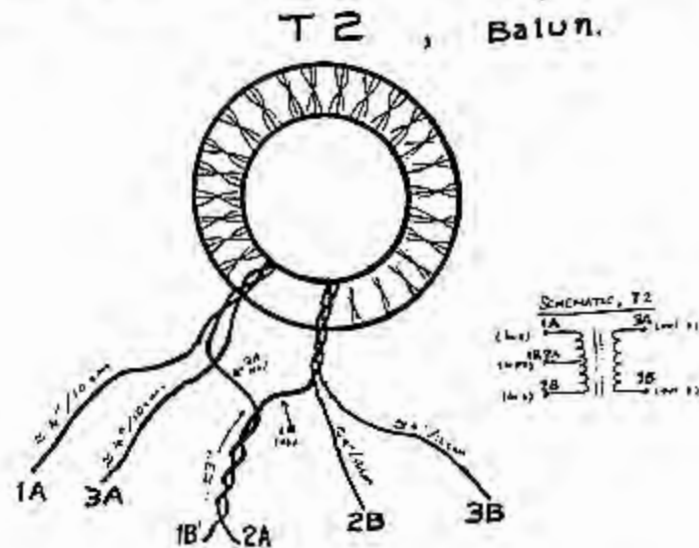
T2 is the balun transformer, necessary to provide balanced outputs. Cut three #28 magnet wire leads to 1-m./3.3' each. Using the practices employed in fabricating T1, label the leads, as in Figure 4.

Figure 4



Tape the 3 leads together, 10cm./4" from the 1B/2B/3B ends. Insert this taped section into a bench vise. Tape the 1A/2A/3A ends to the blade of a large screwdriver. Stretch the wires straight & taut, then turn the screwdriver slowly & steadily to twist the leads. Wind 25 turns of twisted triple wire onto a J. V. MILLER T-106-2 (or F-87-1 or F-125-1) toroidal core. Untwist the leads between ends 1A/2A/3A and the core. Move the three labels (1A, 2A, 3A) in towards the core along their respective leads such that each label is 4"/10 cm. from the core. Cut off wires greater than 4" from the core. Release the 1B/2B/3B ends from the bench vise. Twist the 2A lead and the 1B lead together. Leave labels on all leads for now. The T2 assembly should resemble Figure 5. Drip candle wax over final T2 coil assembly.

Figure 5



Completed T1 & T2 assemblies may now be set aside until they are required later.

### 2. Preliminary Vectorboard drilling

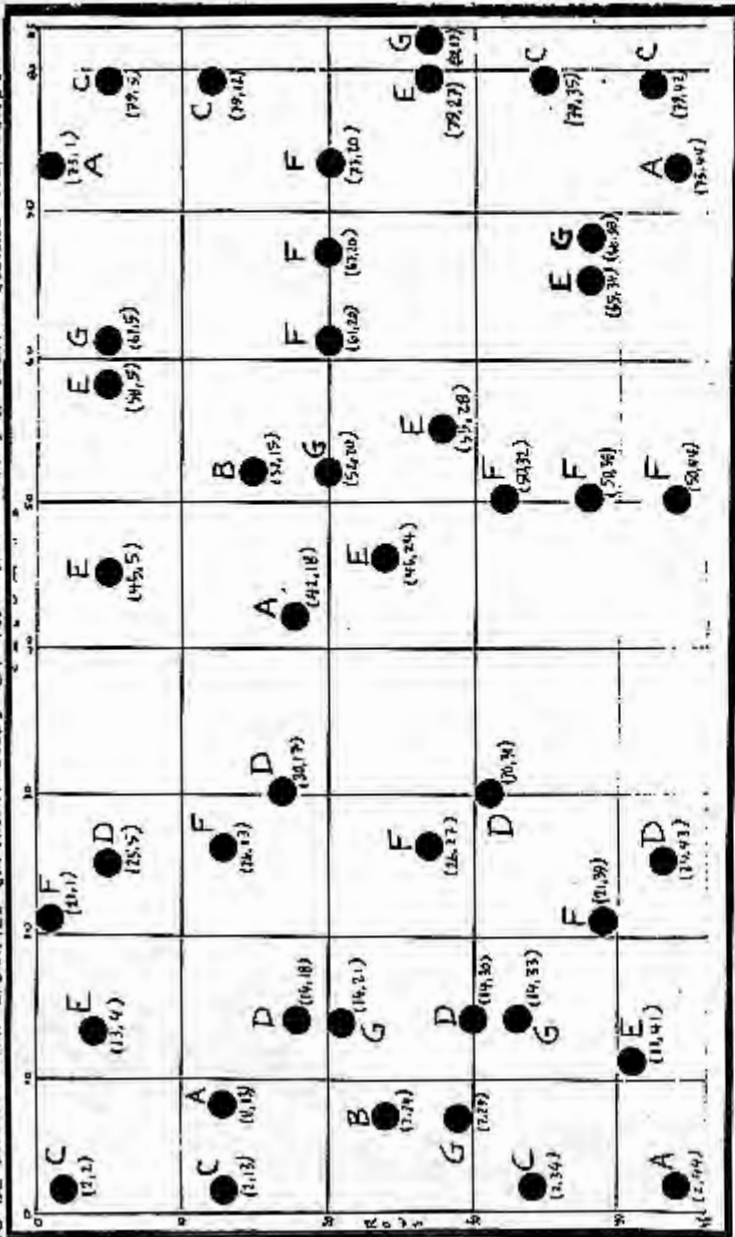
Observe the drilling master, Figure 6. The .062" diameter holes on the Vectorboard are arranged in an 84 column by 47 row array. Consider the left-most, or first, column on the board to be Column #0 (zero). The right-most, or last, column will be considered Column #83. Similarly, the top, or first, row is Row #0 and the bottom, or last, row is Row #46. The distance between any two adjacent columns is 0.1" the distance between any two adjacent rows is also 0.1". There is 0.1" of board material between the edges of the board and the closest end row or column.

Use a felt-tipped marker to make vertical lines on the Vectorboard at columns 0, 10, 20, 30, 40, 50, 60, 70, 80, & 83. Make horizontal lines at rows 0, 10, 20, 30, 40, & 46. These lines will aid in locating holes to be drilled. Note that all holes on the drilling master are specified by two numbers in parentheses: (column # first, row # second). Mark the five 'A' series holes shown on Figure 6. Locations are (2,44), (8,13), (42,18), (73,1), and (73,44). Drill these out, using one of the bits prescribed in the table accompanying the drilling master.

The Vectorboard with the 5 A-series holes will now be used as a template to prepare the ground plate. Other holes shown in Figure 6 will be drilled later, after the ground plate has been completed.

FIGURE 6:

OVERALL BOARD DIMENSIONS: 8.5" x 21.59 CM. WIDE BY 4.8" x 12.19 CM. HIGH - VECTORBOARD HAS 30 x 48 HOLES (EACH OF .062" DIA.) ARRANGED IN 84 COLUMNS (NUMBERED 0 TO 83 ON THIS DRAWING) AND 47 ROWS (NUMBERED 0 TO 46). DISTANCE BETWEEN ADJACENT COLUMNS = 0.1" DISTANCE BETWEEN ADJACENT ROWS = 0.1". LOCATIONS OF HOLES TO BE DRILLED ARE SPECIFIED (IN PARENTHESES) BY ROW (FIRST NUMBER) & COLUMN (SECOND NUMBER).

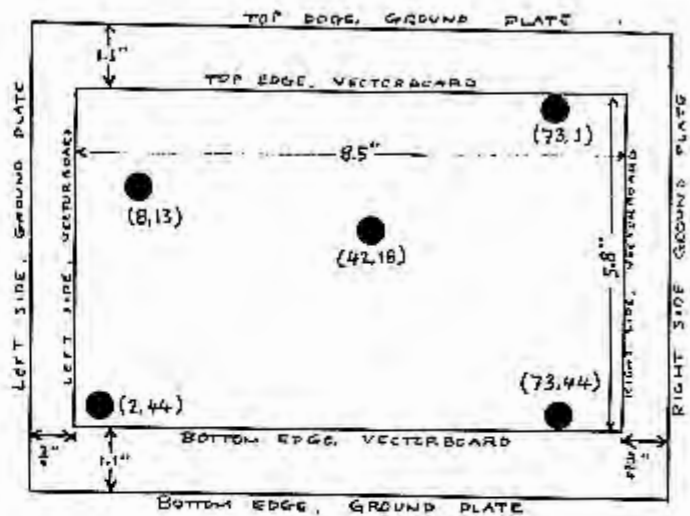


DRILL 'A' SERIES HOLES (5 TOTAL) FIRST; THESE ARE ALSO TO BE DRILLED ON GROUND PLATE.

28  
LETTER (A THROUGH G) SEQUENCE INDICATES DRILLING ORDER - LAST.

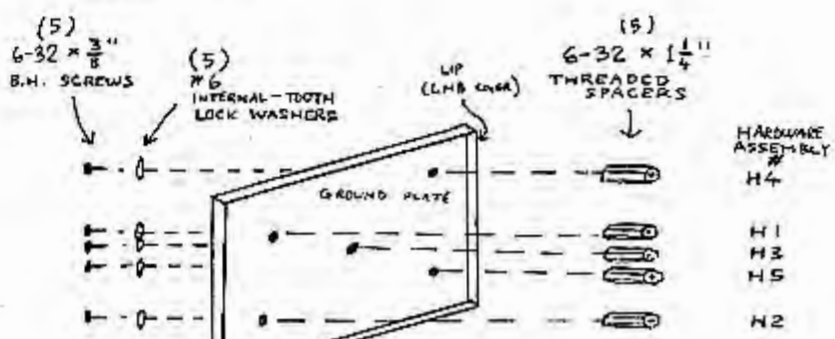
LETTER DRAWING	DRILL BIT SIZE	NO. OF HOLES
A	$\frac{9}{64}$ (.1406") OR #28 (.1405") OR #3 (.5114) OR #8.75 MM	5
B	$\frac{11}{32}$ (.3438") OR #5 (.348) OR #8.75 MM	2
C	$\frac{7}{16}$ (.4375") OR #0 (.5160") OR #8.0 MM	7
D	$\frac{9}{32}$ (.2812") OR #K (.2810") OR 7.2 MM	6
E	$\frac{1}{4}$ (#E (.250")) OR #4 M4 OR 6.4 MM	8
F	$\frac{1}{8}$ (.1250") OR #30 (.1285") OR #3.2 MM	10
G	$\frac{3}{16}$ (.1875") OR #35 (.1800") OR #2.8 MM	7

FIGURE 7:



Hold the Vectorboard in place with Scotch tape. Use a pencil to mark the 5 A-series holes onto the ground plate. Then, remove the Vectorboard. Drill the 5 pencil-marked points on the ground plate; use the same drill bit as that which was used to drill the A-series holes on the Vectorboard. Using the holes just drilled, mount five 6-32 x 1 1/4" threaded metal spacers on the front of the plate, with 6-32 x 3/8" metal screws & #6 lockwashers on the back, as shown in Figure 8.

FIGURE 8



3. Ground Plate (LMB "2X10 Cap Cover" or equivalent)

The ground plate is an 8" by 10" (20.32 cm. x 25.4 cm.) bare metal sheet of approximately 0.05" to 0.1" thickness. This will eventually be attached 1 1/4" behind the circuit board by means of hardware assemblies H1 through H5. The ground plate serves 3 purposes; (1) to make a mechanically stable assembly (2) to protect the components and the wiring to be built onto the backside of the Vectorboard (3) to reduce the effect of hand capacitance on tuning & nulling.

To prepare the ground plate, place the Vectorboard over the 8" x 10" metal plate. The LMB plate has an edge lip projecting 1/4" perpendicular to the surface on one side. Consider the side with the lip to be the front side of the ground plate. The Vectorboard (with only "A" series holes drilled) is centered over the front side of the ground plate, in accordance with Figure 7.

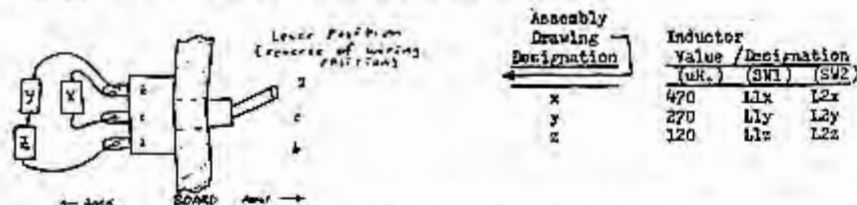




32 7. Wiring (back side of board)

Assemble the two inductance switches, SW1 & SW2 with appropriate inductors as in Figure 11.

Figure 11 Installation of L1x/L1y/L1z on SW1; L2x/L2y/L2z on SW2



Solder all leads to switch pins indicated. Solder the junction of L1y & L1z and that of L2y & L2z. Ensure that none of the exposed leads can be pushed into a position which could cause an undesired shorted connection.

Locate pots R3 & R4. On each pot, ascertain which two terminals are those to be used; do this by checking for zero ohms on a volt-ohmmeter with that pot turned fully counterclockwise (as observed from the front of the board) and by checking for approximately 1K with that pot turned totally clockwise. Place a 1K fixed resistor (R5) across the two terminals to be used on R3. Place 1K fixed resistor (R6) across the two terminals to be used on R4. Solder these in place after slipping plastic insulation over the leads (or after making leads sufficiently short to prevent adjacent undesired connections). Cut off excessive fixed resistor leads.

On the back side of the board, connect a 47-pF mica capacitor (C5) from the stator lug of C1 to that of C3. Connect a 47-pF mica capacitor (C6) from the stator of C2 to that of C4. Put plastic insulation stripped from hookup wire over any mica capacitor lead greater than 1/4" long.

Ascertain which two terminals of R1 are to be used; the resistance between the correct terminals should be zero ohms with the pot adjusted fully counterclockwise as observed from the front; the resistance should be about 100K with the pot fully clockwise. Determine the two terminals of R2 to be used by the same method. Establish which two terminals on R5 are to be used; resistance between the proper terminals should be zero ohms with its knob adjusted fully counterclockwise as viewed from the front; the resistance becomes 1K with the knob set fully clockwise.

Use the wiring run list (Table 3), the schematic (Figure 1), and the backside wiring drawings (Figures 12A & 12B) to wire the components together, using #22 insulated hookup wire of the shortest length consistent with neat layout & ease of servicing. Ends to be connected should have about 3/16" of insulation stripped away. Good solder joints should be made at every connection point.

If different colours of wire are available, a coding scheme may be useful for later troubleshooting - e. g. wire runs 1 to 5 black, 6 to 10 brown, 11 to 15 red, 16 to 20 orange, 21 to 25 yellow, 26 to 30 green, 31 to 35 blue, 36 to 40 violet, and 41 to 46 grey.

Table 3: Wiring Runs (number given corresponds to sequence of installation)

INPUT SECTION			OUTPUT SECTION		
#	From	To	#	From	To
1	J1	R1 in	23	arm/centre, SW5b	R3 in, jct. R5
2	R1 out	arm, SW3a	24	R3 out, jct. R5	arm, SW4a
3	1, SW3a	3 (null), SW3a	25	1 (bal.), SW4a	3 (unbal-2), SW4a
4	1, SW3a	c (arm, centre), SW1	26	1 (bal.), SW4a	push-pin (67,11)
5	c (arm, centre), SW1	top (par.), SW5a	27	1 (bal.), SW4b	3 (unbal-2), SW4b
6	jct. L1y/L1z	C1 rotor	28	1 (bal.), SW4b	push-pin (72,11)
7	C1 rotor	C3 rotor	29	2 (unbal-1), SW4a	2 (unbal-1), SW4b
8	C1 rotor	top (par.), SW5b	30	2 (unbal-1), SW4b	3 (unbal-2), SW4c
9	C1 stator, jct. C5	arm/centre, SW5a	31	arm/centre, SW6b	R4 in, jct. R6
10	arm/centre, SW5a	bottom (ser.), SW5b	32	R4 out, jct. R6	arm/centre, SW7a
11	J3	4 (dir.), SW3a	33	top (null b), SW7a	push-pin (44,31)
12	4 (dir.), SW3a	4 (dir.), SW3b	34	push-pin (50,38)	J7
13	J2	R2 in	35	arm/centre, SW7b	push-pin (43,46)
14	R2 out	arm, SW3b	36	bottom (null a), SW7a	top (null b), SW7b
15	2, SW3b	3 (null), SW3b	37	bottom (null a), SW7a	arm, SW4b
16	2, SW3b	0 (arm, centre), SW2	38	J6	3 (unbal-2), SW4c
17	c (arm, centre), SW2	top (par.), SW6a	39	arm SW4c	push-pin (67,6)
18	jct. L2y/L2z	C2 rotor	40	arm SW4d	push-pin (72,6)
19	C2 rotor	C4 rotor	41	3 (unbal-2), SW4d	J7
20	C4 rotor	top (par.), SW6b	42	J8	1 (bal.), SW4c
21	C2 stator, jct. C6	arm/centre, SW6a	43	J5	1 (bal.), SW4d
22	arm/centre, SW6a	bottom (ser.), SW6b	44	R7 in	push-pin (79,18)
			45	R7 out	J7

The first backside wire to be attached is wire-run #46. This consists of a 1 1/2" lead with one end soldered to J7. The other end should be soldered to a #6 internal-tooth solder lug. The lug will be attached to hardware assembly R5 at hole (73,44) later.

Figure 12A: Input Section Wiring (back of board, refer to Table 3)

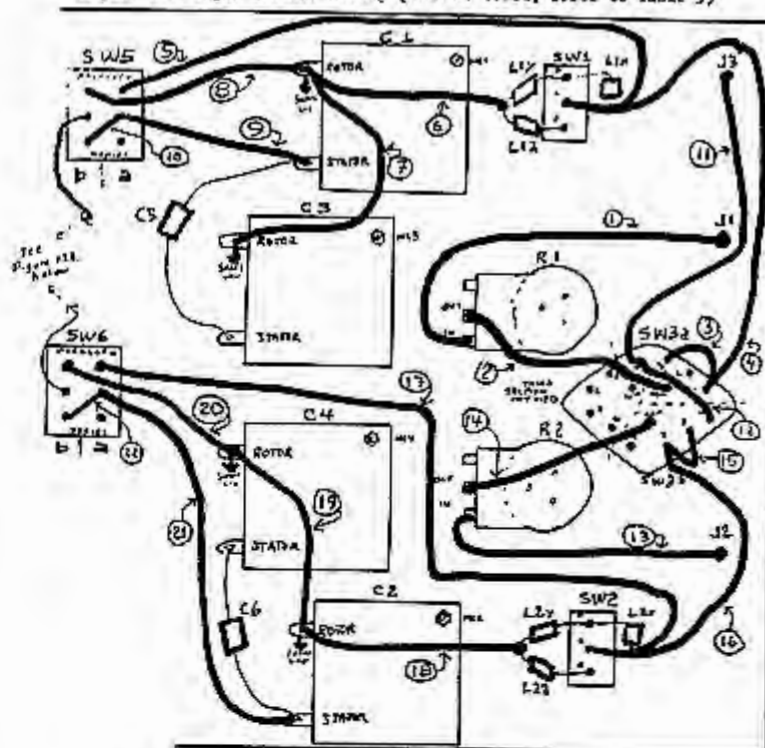
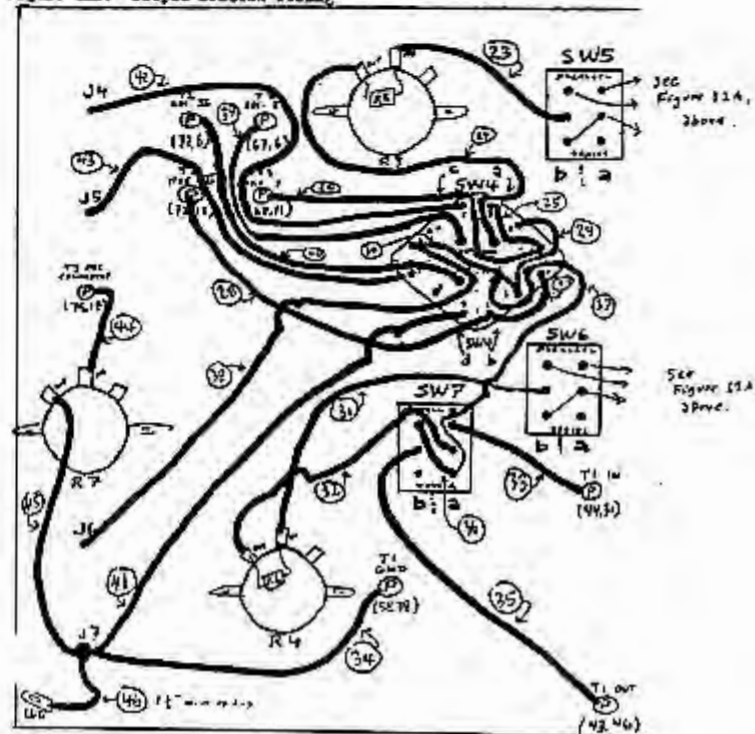


Figure 12B: Output Section Wiring



After the 46 wiring runs have been completed, the T1 & T2 leads may be connected on the front of the board to the push-pins to which leads have already been affixed on the back of the board.

These are connected in accordance with Table 4.

Table 4: connections between push-pins (front side) and T1/T2 leads

Toroidal Transformer	Lead Name	Lead(s) # (Figures 3 & 5)	To Push-Pin at Hole #
T1	in	A1	(44, 31)
"	ground	A2 & B1	(58, 38)
"	out	B2	(43, 46)
T2	primary-I (in-I)	1A	(67, 11)
"	primary-II (in-II)	2B	(72, 11)
"	primary centre tap	1B & 2A	(79, 18)
"	secondary-I (out-I)	3A	(67, 6)
"	secondary-II (out-II)	3B	(72, 6)

Cut leads to proper length, consistent with a neat layout and short runs. Strip about 1/8" (maximum) of enamel varnish from lead ends & solder bared toroid lead ends to the appropriate Table 4 push-pins. Soldering should be done quickly so as not to loosen the push-pin leads which were connected on the back of the board. This completes phasing unit wiring.

8. Inspection of wiring, checking switches, etc.

Reference actual physical assembly to appropriate drawings. Visually inspect each component to ensure correctness of assembly. Check wiring runs visually and with an ohmmeter. Verify proper potentiometer & switch connections with an ohmmeter. Ensure that there are no unwanted connections (such as two adjacent pins on a switch accidentally touching). Flux may be cleaned from solder joints with alcohol & a cotton swab or with a commercial de-fluxer.

9. Final Mechanical Assembly

Refer to Figures 7/10 for hardware assembly hole locations. From the front of the Vectorboard, load a 6-32 X 3/8" metal screw with a #6 internal-tooth lockwasher on it through each of the following holes: H1 (8,13); H2 (2,44); H3 (42,18); & H4 (73,1). Place the #6 internal-tooth solder lug, attached by wire run #46 to J7, over the end of a 6-32 X 3/8" metal screw. From the front of the Vectorboard, load this screw with attached lug to the H5 hole (73,44). Place the back of the Vectorboard upon the spacers on the front of the ground plate so that each of the 5 screws protruding from the back of the Vectorboard may be screwed into its corresponding ground plate spacer. Turn all screws such that tight fits are made with the spacers.

PHASING UNIT IS NOW COMPLETED !

10. Connect Phasing Unit to Receiver. Antennas

The following discussion applies to use of the phasing unit in a "stand-alone", or unamplified, configuration. Solder banana plugs to the input leads of two longwire aerials, preferably of similar length. Each wire should be at least 30 m./98' long for optimal performance. Nulls can be produced with shorter wires, but signal strengths of wanted stations tend to be quite low by the time post-nulling is completed, if the phasing unit output is not amplified. Plug one longwire into J1; the other into J2.

If a receiver with unbalanced (single-ended) input is to be used, run an approximate 1 m./3.3' length of coaxial cable (RG-174 or equivalent) from J6 (centre, or 'hot' conductor) & J7 (shield/ground/outer conductor) to the receiver input & to receiver ground. The coaxial cable to be used should be fitted with banana plugs on the end attached to the phasing unit & with the appropriate receiver input connector(s) at the opposite end.

If a receiver with balanced (dual) inputs is to be used, run about 1 m./3.3' of TV twinlead or "AC zip cord" from J4 & J5 of the phasing unit to the appropriate balanced inputs of the receiver. The phasing unit end of the cable should be fitted with banana plugs; the other end should have the proper receiver input connector(s). If the balanced cable is used, a wire tying phasing unit ground to receiver ground is also necessary. Once all connections have been made to the finished phasing unit, interesting DX should now be possible.

Using the Phasing Unit

This section describes the manipulation of phasing unit controls necessary to produce nulls of dominant "pest" stations, allowing weaker co-channel or adjacent-channel stations to be heard. A station to be nulled can be in the exact opposite direction from a desired signal: this is the situation frequently encountered in Trans-Atlantic DX situations. A loop is generally incapable of nulling a station to the southwest, for instance, without simultaneously killing signals from the northeast. From the Boston/Cape Cod region, a loop can hardly dump WBAI-1090 to the southwest to allow southeastern signals from WVSZ & WJBC through. To get BBC-1069, however, from the northeast, phased longwires will outperform the loop after WBAI is nulled. This article will briefly outline some phasing techniques to get the user started; each DXer will then evolve personal techniques best suited to a particular antenna/receiver/type-of-DX combination.

As nulling is discussed, the reader is advised to refer to Table 2, the list of adjustable controls (at the beginning of this article).

After the DXer has properly connected two longwire aerials to the phasing unit input & has made the necessary phasing unit to receiver connections, nulling may commence. The following procedure is just one of several possible nulling schemes:

1. Set balanced/unbalanced output switch (SW4) to balanced if receiver has balanced dual inputs, or to unbal-2 if receiver has single-ended, unbalanced input. The unbal-1 position may work better for shorter wires on some receivers, notably the TRF; but all initial unbalanced nulling should be done in the unbal-2 condition. This is because unbal-2 condition, using the balun, provides greater isolation between inputs & outputs, hence less stray coupling & greater tuning accuracy. Switching to unbal-1 should be done towards the end of the procedure.
2. Null switch to null mode b. This includes the phase-reverser (T1) in the Antenna 2 line.
3. "PEAK #1 LC" subroutine.
  - (a) Antenna switch to Ant. #1.
  - (b) #1 main pot & #1 trim pot to zero ohms (fully counterclockwise).
  - (c) #1 trim cap. to centre (halfway between fully meshed plates & fully open plates).
  - (d) Sweep the #1 main cap. through its range on each of the following LC #1 module modes:

LC module mode	#1 L switch	#1 LC switch
1	a, 103 uH	parallel LC
2	b, 270 uH	" "
3	c, 740 uH	" "
4	a, 103 uH	series LC
5	b, 270 uH	" "
6	c, 740 uH	" "

When the sharpest, highest gain peak in signal level is found, leave the #1 L & LC switches & the #1 main tuning cap. in the positions which produced that peak.

4. "PEAK #2 LC" subroutine

- (a) Antenna switch to Ant. #2
  - (b) #2 main pot & #2 trim pot to zero ohms.
  - (c) #2 trim cap to centre (halfway between fully meshed plates & fully open plates).
  - (d) Play the #2 main cap., the #2 L switch, & the #2 LC switch to open a distinct, good peak signal, in the same fashion as that of step (d) of the "PEAK #1 LC" subroutine. The #2 L & LC switches can initially be set at the positions corresponding to those of the #1 switches; if the longwires are electrically similar, the positions of controls yielding a peak on the #2 line will be very similar to the positions of the #1 line LC controls yielding a peak on the #1 line.
5. Switch the Antenna switch between Ant. #1 & Ant. #2 repeatedly and note which antenna line is producing the stronger unwanted-station signal.
  6. Antenna switch to null.
  7. Adjust the main pot. on the line which had yielded the stronger signal in step 5. A "dip", defined as a point within the moving range of a control (not at an end setting) at which a readily-perceptible minimum signal occurs with greater level as the control is adjusted either clockwise or counterclockwise from that point, should occur. If there is no well-defined dip, return that pot. to zero ohms.
  8. Carefully off-tune the main tune cap. on the line which had produced the greater level in Step 5. If a dip occurs, leave that cap. at the dip-yielding setting. Improve the null by tweaking the #1 & #2 trim caps, & the #1 & #2 trim pots. The ground pot. may also have a favourable effect on obtaining some nulls. If the unbal-2 SW4 position was used up to this point & the desired station left after nulling seems too weak, switch to unbal-1. After a slight retweaking of trim caps, & trim pots, a null of the pest giving a greater wanted-station level may occur in some circumstances.

Nulls should be attainable in about 4 out of 5 situations, using the method above. In cases where sufficient cancellation of an unwanted station does not occur, the above procedure can be re-iterated with the null switch on null mode a. That should assist in obtaining more of the desired nulls. Some nulls may be impossible with a particular pair of wires. It is strongly advised that the DXer have 3 longwires, each separated by a horizontal angle of 120°. In the New England region, longwires aimed at 50° for TA DX, 170° for LA DX, and 290° as a post-station aerial should work well. TADK is best heard by using the phasing unit to subtract the pest signals arriving best on the 290° longwire against desired stations on the longwire aimed 50°. LADK is best heard by subtracting the 290° wire pest signals from the desired signals heard best on the wire pointed at a bearing of 170°. The concept of phasing wires running in different directions seems to work better than the parallel-wire concept when the wires are shorter than 152 m./500'. There are many different antenna pairs which may be presented to the input of the phasing unit, each with unique properties; examples include 2 parallel longwires, 2 longwires running in opposite directions, 2 longwires separated by a 90° horizontal angle, one horizontal longwire vs. a vertical longwire, a horizontal longwire high above the ground vs. a horizontal longwire lying on the ground in either the same or in a different direction from the high wire, or two phased verticals.

A future article on Amplified Phased Shortwires will address some of the null-producing possibilities of various wire combinations as well as dealing with the "LSCA" concept of working a loop against a longwire (or shortwire) to obtain single-direction nulls. Additional phasing-unit-control-manipulation procedures will also be explored.

It is sincerely hoped that this construction article will stimulate others to experiment with phased-wire systems and to come forth with both technical articles and analyses of DX loggings obtained through use of phasing units.



# Radio Antilles

With 200,000 Watts,  
Power Enough To Dominate  
The Scattered Islands Of  
The West Indies

By Mark Stivers

Last fall, when I was still in Philadelphia, the station next to WXPB boosted its signal to 17,000 watts. This seemed like an imposing figure, especially since it threatened to wipe WXPB right off my little radio. These days, however, I am living practically on top of a station with the stupendous output of 200,000 watts—Radio Antilles.

The Western Hemisphere's most powerful commercial station is located on the island of Montserrat, one of the world's smallest countries: 39 square miles with a population of 12,500. While you are digesting that contrast, consider also that Montserrat is the site of George Martin's sumptuous Air Studios, where Paul McCartney recorded his last album, and which is currently servicing the Police. Radio Antilles, known familiarly as "R.A.," or "Antilles," is a constant presence on Montserrat. When I walk down the street it often seems to be coming at me from all sides. Nearly every Montserratian home has a radio, though it may cost many months' salary; and most of those radios are tuned to Antilles. It is impossible to spend a day in Plymouth, the capital city, without hearing the station, seeing the Radio Antilles bus, passing by people—both locals and expatriates—wearing the Antilles T-shirts (available for the equivalent of about \$4.50 U.S.). Antilles is one of the island's biggest employers; everyone knows someone who works there.

This is radio on a grand scale. The transmission covers an area of 800,000 square miles, from Cuba in the north to Venezuela in the south. Antilles broadcasts in all the major languages of the Caribbean: English, Spanish, and French. It is far and away the most popular station. There is no real competition. It is the self-proclaimed Spirit of the Caribbean.

Antilles operates two studios in Plymouth, but its main building and transmitter lie to the south, just where the paved coastal road ends. For size and modernity there is little to compare with it on the island. Inside, the rooms are windowless and air conditioned. This has a feel of extravagance to it; most Caribbean buildings are cross-ventilated. But then Antilles is extravagant. And if the sealed-box architecture is an

imported style. Antilles is itself imported. It is owned and operated by Deutschfeldt, a West German corporation, with the blessings of the German and Montserratian governments. The station manager and chief engineer are Germans; the rest of the staff is drawn from islands throughout the West Indies.

Antilles could not survive without the parent company, for it does not turn a profit. Considering the massive signal and the small number of commercials, it is hard to see how it could. As one employee comments, "You could take all the commercials for a month and add on a thousand dollars and you wouldn't even get the electricity bill." Deutschfeldt covers the losses.

All that electricity fuels the hot, relentless, yet soothing sound of a big commercial station. And Radio Antilles is the biggest. The ear is not given a moment's rest. Once you click on Antilles, you are awash in the sonic wave. The identification spots are short and dramatic: "Ray-dee-oh An-TIL-LEASE!" chirruped by electronic angels. Or else a corporate-male voice reassures: "The Big R.A. is the station tuned in to the people." The commercials, too, are short and direct. "Not just any deodorant soap."

So superficially Antilles resembles a lot of American stations. This extends to the music played. A Saturday afternoon show called the Hit List counts down the top forty songs. Although there is a sprinkling of island music, the list is dominated by black American stars: Marvin Gaye, Dinah Washington, Ohio Players, Chaka Khan, and most of all Stevie Wonder. (I was astonished to hear a Leon Redbone song in the Number Seven spot.) Turnover is slow. The week I listened, there were only three new entries in the top forty. And the top hits are played absolutely to death. I have been on Montserrat for two months, and not a day has passed without my hearing John Lennon sing "Watching the Wheels," currently Number One.

Records, by the way, are extremely expensive on Montserrat. At one point, I had the idea of sending some reggae records back to WXPB. Then I discovered the price: twenty-four dollars, which works out to about what imports cost in the States. And the price of a stereo is unmentionable.

The disc jockeys on Antilles (officially known as On Air Personalities) project their characters aggressively. None of that laid-back ease for them; they assure that the wall of sound remains unbroken. They like to talk over the songs and frequently break into song themselves. A.I. RIGHT! A virtuoso trick is to talk in short bursts, turning the song up again during the pauses. The mood is of enjoyment and bold intimacy. "It's a little hot today in the studio, the air conditioning is broken down, so right now I'm bare backed... all night!" There is a program of dance music called "Party Time"; the announcer creates an actual party in the studio, complete with guests and drinks.

The station offers other delectable repasts, local announcements, world news ("What they don't report," one man commented to me, "don't happen"), and specialty programs of calypso, patois (French dialect), jazz, classical, and even a kid's show.

The huge antennas and sleek buildings on Radio Antilles are symbols of modernity and growth on Montserrat. So is the sound. It is the steamrolled hum of the city, with its promise of endless movement, endless fascination, endless romance, all wrapped in a delicious tune. And in a land full of radios, Antilles has the means to keep that fantasy alive for nearly everyone.

"In the morning, you can hear everything you need, before you see another face, on the nineteen eight one big... R... A..."

Mark Stivers is a Peace Corps Volunteer stationed on Montserrat.

## MUSINGS

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

### THE EARLY BIRD GETS THE DX WORKS!

ANTHONY LAGATTUTA - Box 6291 - Portsmouth, VA - 23703-0291  
Greetings. 9/24- CKCY-920 atop channel at 4:32am. WFIH-960 (CBS network) stop @ 5:25, WJW-950 @ 5:28am. WRAR-1000 at 11:22am with splatter from local WPMH-1010 (religious). WAND-970 at 11:30am. WAKR-1590 atop @ 9:04pm. Often WJ50-1590 is like a local in the evenings. WJ50 mentions "the radio station adults like best". CHOW-1470 @ 9:16pm, C&W, mentioning "Number 1 in Metro Niagara", 9/28- WWSW-970 @ 4am, 9/29- WHPY-1590 @ 6:19pm, C&W, mentioning "1-5-9". WAGL-1560 briefly at 7:30pm s/off, but with 50kw, they'll be back, hi! I'm still waiting for an ID from WPAZ-1560 w/WQXR 1560 nulled. WVXO-1580 s/off @ 7:45pm. WEUP-1600 @ 7:47pm. Unk on 1600 mentioning FM on 106.3 (Ohio?), WAMJ-1580 (often strong here at s/off) mentioning that they would appreciate listeners' comments on their station and mentioning ERP of 5,000w. MINX-1600 @ 8:02pm. I thought MO or AR was in after others left the air, but it turned out to be WCLS-1580 (QOS). VOX on 1580 at 8:30pm w/good signal & "Caribbean Report." 9/30- WH10-1290 at 5am w/CBS NX. WADO-1280 EE SID solo by SS. WSAI-1360 @ 5:06am with Mutual news solo by Larry King. 10/2- WSRF-1580 C&W @ 6:59pm with two gentlemen announcing, taking turns or talking to each other. WBIG-1470 atop @ 7:11pm. There has not been much time of late to spend with DX-related items, but it is nice to share a few words weekly in these pages. I enjoy reading through each and every issue and one thing I'm gathering info on is how stations verify these days. The Q of such stations as WLES-580 and WPRO-630 might enjoy knowing that they put fine daytime signals into this area. Best wishes. (Two Musings combined; due to ERC's mis-filing the one that should have been in last week's DX NEWS -ERC)

### \*LAST OF THE TWO-POR-184 MUSINGS\*

KONSTANTINE RYCHALSKY - Box 87 - Beacon Falls, CT - 06403-0087 10/31/83  
Here are the results after one month's use of my Xeroxed four page report form on a trial basis. Actually it's no different from anyone's report - I know just that I don't spend hours on hours typing & it saves electricity and wear/tear on my machine. Anyhow a mixture of new logs, travel logs & non-verifiers have been sent out. Gsd, only 31% reply. Of the new logs, a 50% return. Recent verifiers: WBCB v/l (after nine days); WPGM v/l (22), WTDW v/l w/B.S. & programbook (9), WBCB after nine days sent a program guide, no veria, but a 'nutter' report out; WCCB (7), WKVT v/l B.S. (7) and WSAJ report returned due to move & no forwarding address - remailed to city only. From Summer '81: WDEW reply on tentative...not they. One note however all above replies DID use the return postage supplied. After a significant number of experimental reports I will have a few hundred permanent reports printed up on index stock...thus also eliminating cost of envelopes. I am budgeted to this hobby as you can see. The idea of Xeroxing first 50 or so was ideal for I already need to make a few minor changes, like change my name to Prince Chuck, hi. Maybe that would get a royal reply. For all waiting for a promo package from me - all are in the mail and you should get them some time this side of sunset cycle. I am cleaning out my files and does anyone out there collect surveys? I wish to trade for AM promo items other than SCs - unless they're super-colorful. Trade is on a one-for-one basis & the remainder is payable by a 20% stamp. This is strictly on approval basis trade - an item not wanted is returned to sender. SCs here are: WRKO, WABC, WDRG & KRLA. Oldest is 1973 and some are year-ending lists. 73s.

### HI ROSE, HI ROSE, IT'S OFF TO WORK HE GOES

RAY ARRUCA - 47 Burt Street - Acushnet, MA - 02743  
Has anyone else noted the increased number of AM talk shows on MW? It's OK by me as I'd rather DX w/a talker than a rocker, hi! WTKO-1470 Ithaca was NY State #100 entered into the log book on 10/29 at 5:25pm w/ID on area mentions, w/NSAN/WLAW. NM 11/2 once again brought nothing new, but the following were off and/or testing at various times: WABC-770, WHDR-850, WCFB-1000, WHH-1050 & KMOX-1120. Tuesday AM 11/3 r/o from WKLB-1290 was tentative w/TT only from 5:31-5:36. Verifiers are back from the following: WNY-1220 (v/l) WAMK-1410 (v/l), WBSY-1460 (v/l), WINK-1470 (v/l, CM) WABT-1510 (v/l) and an f/1 from long holdout WJIK-1580. (Is that a v/f, Ray? -ERC) I go back to work on November 9, so SSS DX will be limited to weekends & AM, PM listening.

SENDING OUR BROCHURE, "BROADCASTERS' GUIDE TO DX" ALONG WITH YOUR VERBIE REQUESTS SHOULD NOT ONLY ENHANCE YOUR CHANCE FOR GETTING THAT COULDED VERBIE. BUT IT WILL EXPLAIN BOTH THE DX GAME AND THE N.R.C. TO THE STATION PERSONNEL! SO YOU WILL BE HELPING NOT JUST YOURSELF, BUT YOUR FELLOW DXERS AS WELL. WHY NOT ORDER YOURSELF A BATCH OF THEM TODAY?



49XN via Bruce Sherman.

THERE'S A NEWIE IN BARBADOS ON 790

BOB FOXWORTH - GPO Box A-866 - New York, NY - 10116  
 More Musing, continued from last week. Biggest disappointment was not being able to meet CHUCK HUTTON & some other old friends like ALAN MERRIMAN not being able to make the Convention. I was ready for some extensive NRD trials. Maybe some other time. Picking up on some random items, I am certain that ERC's mystery on 1450 from a Musing a few weeks ago is CHEP, Granby. I have been hearing them many nights, just at midnight w/a CHRL ID, then local ID & s/off, with anthem off around 12:02am, and OC staying on seemingly forever. I suspect they are another of the many Quebec stations that, at least at times, run their day facilities at night. Or else their DA is way out of spec. The fact that they are violating treaty provisions in either event somehow makes little impression among the FCC bureaucrats. However, two of their commissioners get all bent out of shape over the un-proven allegation of heterodyne interference from Europeans on a 9 kHz spacing plan while we are on a 10 kHz plan. It's charitably, ignorance at best. Speaking of more FCC inanity - actions that will ultimately cause more harm than good to the greatest number of people - the geniuses have granted, so far, two CPs on the broken Clears - Fayetteville NC on 1200 (ex-1230) and a new station at Lafayette, LA on 770 with 1,000 day & 500 night beams, I think, "East." I believe WFAL will likewise be 500w. I am taping clear audio from such as WOAI & KSL for nostalgia value five years hence. Another new station, of somewhat greater interest is the Voice of Barbados, operating on 790 kHz. They were first publicized in the DX world as far as I know in "Sweden Calling DXers" "1644 (7/28/81)" & again in Bulletin #164? (8/18). I haven't seen them mentioned in DX NEWS but then I didn't read that carefully, so maybe it was there after all. Anyhow I heard them on the evening of the 27th during AU CX w/a fair signal, IDs such as "The mighty voice in the Caribbean Community" etc. running to 11:23pm s/off that night. There is also reportedly a new station in Bermuda on 1450 kHz. They sure pick the wrong frequencies! That should be a difficult one here, hi. CHUCK HUTTON's receiver frequency display chip sounds like the Oki NSM-5526 which displays AM & FM with pin-selectable offsets for IF. Who'll be the first to put one in a TRF? I thought Radio West was working on that two years ago, but it never happened. 73.

THERE'S A NEW "TIZZIE" IN CONWAY, NH

ROD O'CONNOR - USCG Base - South Portland, ME - 04106 11/1/81  
 It has been a few months since my last Muse, so here are a few stray comments & tidbits which I have been collecting all Summer. No AM DX to speak of at all this Summer, most DX was on TV (UNF especially). Noting the new DX NEWS & BRIAN VERNON's comments on new KSKO-870, I was surprised to see them there, rather than 830, or Broadcasting magazine had them. It's just as well, since KCBF Fairbanks is applying for 820. Nothing has been seen about new application for Sand Point AK on 840. New application noted for Valdez, on 1230! New CP on 580 at Petersburg, AK was given KRSA. Now a little closer to Maine! A new TIS XR was noted a couple of weekends ago at Conway, NH, while checking out the foliage. Exact frequency is unknown, although just a carrier was being broadcast, no info heard. Several signs around the area mentioning "Tune to 1600 AM for tourist info". The signal wasn't too bad either. I'll try to check out this guy the next time I'm out that way. Speaking of TIS, I was down to the Outer Banks of NC during September and saw (and heard) the Cape Hatteras NC TIS, but could not get any info. The park rangers knew nothing about it, nor was there any mention of it in visitor centers. The XR is located at Bodie Island Visitor Center, but no info was being broadcast, only an OC. Good luck with this one! Also, down that way WOBX-1530 is to increase power from 250w to 1kw soon (if not already). The new tower is already installed w/ FM antennas operating off it. Local WMER-1440 was granted new transmitter and site. Have a good Thanksgiving!

NOVEMBER 7 WAS A GOOD NIGHT FOR DX

BRIAN ELSACK - 2704 Hibbert Avenue - Columbus, OH - 43202 614-268-0783 11/4  
 CX have been really good lately; I just haven't had time to DX as much as I'd like to. On 11/1 WKST-1280 was playing an Olivia-Hewton John song, then they IDed @ 10:38pm, solo by a political ad & then a station promo. This one came up out of the mud for the ID! CX on 11/3 were really good. The regional channels sounded like the locals, a lot of mud & mixed signals. All stations closer than 150-200 miles were wiped out; & several long distant skip paths were open; most notably from the SW (the Cubans were also very predominant) At 9:57pm there was a "R. Mexicana" ID on 970 (XBJ), then they went into SS mx. At 9:57 I heard WERC-960 (hi!) w/local ER from the Birmingham area, then into T-40 mx. A few minutes later at 10:01pm, WFR-960 came up w/CBS net MX (not a new station). At 10:09 I heard a WRC-950 ID amongst many other stations. I was also listening to WLS-890 (they were coming in like a local) & the DJ mentioned that AM band CX were really good this week, & that he had been listening to R. Moscow from Cuba on his way home from work the other day! At 10:53 there was a "R. Rebelde" ID on 570 (CKEA); & @ 10:59pm there was another one on 550 (CKBA). Both had SS programming. Another batch of new stations to add up. That is enough for now. As they say here in ConTown: May SRS w/good oxx o/w TAs&TEs r/ FCC in ERC (whaaaa...? 73's. (Translate, please, Brian?? -ERC)

PETER'S FEELING HIS WAY IN NEW LOCATION

PETER A. NOLAN - 861 East 14th Avenue - Vancouver, BC - V5T 2N5 604-874-6356  
 I haven't done any DXing more "serious" than the TRP & heard listening as yet, but still some interesting things have been heard; and, per my local "informants" who've been DXing here for longer than I, some rare ones also. My better RX is suffering from old age and weariness in general, and rather than un-mothball it I may finally break down and get the new RX I've been promising myself for years some time soon. I've also been ambitious enough, since moving, to put my verie collection (1200+) back in order, and, who knows, perhaps even add to it this season now that I'm aware of some very obvious NW stations I've never QSLed. That is, if postage costs (not to mention the risk of trying to obtain anything through the mail) don't scare me off. To the dials: 9/11- 4:00am, 1490 yielded CK00-1, Oliver, the new relay of CK00-1240, running the usual pop //--CK0K-800; I hadn't heard them before, but since then they & KLOG-1490 u/txm have turned out to be regulars. 9/12- 1:55am KKSX-910 in w/new satellite AdCon format, slogans "Your Star Connection" & "Northwest 91", o/XNEM; good OR & Southern WA CX that night. (I'm only mentioning a handful of what, from this location, were all new stations for me). 2:30am, KOAC-550 u/semi-local GOS past KARI; 2:55am, KOLC-920 through KXLY (KOAC running classical, KOLC pop); 3:30am, KRLC-1350 noted w/rr through another semi-local, CKEG-1350 (which signed on in July, just in time for me to move here, hi!). 9/21- 8:09am I logged KNIX-1580 w/C&W u/KDAY, AZ #1 & state #18. (I used to think 20 states from anywhere was a one-night proposition, but Vancouver, being a crowded local dial in an unpopulated corner of the continent, has changed my thinking!) 9/21- 8:59, religion, into ID, for KBEX-1600 u/KASH, KORI. 9/25- 8:51am, KPLI-1240, Mountain Home, ID, surfaced on my only open local frequency. Same day, old friend KTIL-1590's morning program (with the same log and spots as when I set it up 2+ years ago, but an incompetent announcer) (maybe that's the same, too, hi) slipped in u/KZOK. To be continued.

WAKE UP! THE JAPANESE ARE COMING!

GERRY THOMAS - POB 736 - Pensacola, FL - 32503 904-432-8208  
 And the new portables just keep appearing. Both Sony & Panasonic have recently introduced, or are in the process of introducing, new SW portables that might be of interest to MW DXers. The new Sony of note is the ICF-6500W, a fairly compact portable that features LCD readout and covers MW, FM, & SW from 3.0 to 28 mhz (there's a gap between 10 & 11.7 mhz). I suspect that this is the ICF-5900W with digital instead of analog readout. My 5900 has served me well under very heavy use for over three years and MW performance is commendable (except for image rejection), so, if indeed the 6500 is the 5900 re-worked, the 6500 should be worth a close look for MW DX (CHARLIE BANFIELD & I have a line on one for test purposes). The price of the 6500 is a reasonable \$199.95 which means a discount price of about \$160 or so. The 6500 will, therefore, replace Panasonic's discontinued RF-2600 as the lowest-priced portable on the market. Panasonic has introduced the RF-3100, a step up from both the 2600 and 2900, which features full SW band coverage as well as MW & FM - list price is \$369.95. Another new generation Panasonic portable is the RF-6300, an apparently high tech model with 12 memories, etc. Price on this one is \$749.95. Incidentally, I've found a new source for Panasonic products Division, 854 Phoenix, Box 1002, Ann Arbor, MI 48106 (They have the 3100 for \$269 & the 6300 for \$499 and offer a 31-day trial period). Finally, I've been delayed in getting out the Comquest info (the cabinet manufacturer in CA is three weeks behind sked and says it will be another three weeks) so don't give up hope, hi, and thanks for the tremendous response. 73's.

TERRY NEEDS HIS BEAUTY SLEEP

TERRY A. KLASEK - 9720 Vickie Place - St. Louis, MO - 63136 314-868-7274  
 Consecutive accolades or in common terms, greetings! Hey, I'm back next week I think I'll be front - hi! OK all you buns in St. Louis, are you alive? RICH EDDIE, WALT BREVILLE, ROGER GIANNINI, & BOB JINKERSON, if you're alive, please send in a Muse to ERC or better yet send one per week for oh, four months! - am fairly well into my new job's routine, & DX time is on the rise. I do some afternoon DX, & plenty of evening DX, SSS to about 9:30pm CST. Those who know me know I need beauty sleep, & of course I must spend time with my family too so I do get in time at the dials. I do not listen as often as some DXers because I am not a slave to the hobby nor is DXing the only thing in the world for me. DXing is a hobby, not a person's life! There are five or so DXers who believe otherwise, I ask these not to contact me for any reason. (C'Bye, Terry, hi -ERC) I can't respect one who DXes AM or late hours, and sleeps till noon or later, these do not work or do anything with their lives, but DX and check the mailbox! I am happy to say there are only a few of those guys. I am not critical of students for they are learning and hence doing something! - don't like people who do NOTHING. Yet these brag to anybody who will listen all their "totals". We all need to reflect, & see our hobby in proper perspective. By the way too many people are overly-serious! Remember this is a fun hobby! I promise no more soapbox Kusings for one full year - C U again soon - good DX and 73's. (A few descriptive nouns omitted - ERC)

GREG IS OFF FOR FLORIDA

GREG LEDBETTER - Box 374 - Purvis, MS - 39475

11/5/81

Hello again to all DXers. It's been NOISY here in South Mississippi. I talked to a radio personality from WBAP last Monday night (10/26), but unfortunately all that the guy did was play the song I requested. No plug for my location or for the NRC. That is not the easiest station to get in contact with. I tried for four nights before I got anyone to answer a phone. Some notes on area stations - WTLX-690 LA is now an NBC affiliate w/network coverage at 5 before the hour. WBSY-1230 MS & WFOR-1400 MS remained on full power Tuesday night. Neither one of them are received here on low power, unless it was luck. Since WTLX is New Orleans' new NBC affiliate, WNIW, the former N.O. NBC station is now with MBS. The return to standard time has paid off; 58 new stations have been added to my ever-growing list. This brings my total to 566 heard. My FM total could have an advance in total, thanks to all the simulcasting that takes place, usually in the early morning hours. WKLS-97.7 CA is one of a few, & they broadcast on AM off of FM. "Make sense? KAAY/KLPQ, WBSY/Y-104" (FM) broadcast technique in this area still puzzles me. Is it done from the FM side onto both, or the AM side? I'm going to Florida this weekend (I may encounter some of a brewing storm there too, hi), #600 will probably be logged somewhere between Mobile AL & Immokalee, FL. Being as close to Miami as I'll be, WQAM & WQBA will be the first ones I'll go for in the logging category. I have logged three Miami stations from home: WIMZ, WGBS & WIOD, "TOD blasting out KILT & WSGN for a few minutes when it was received. I also hope to log the "new" WPCF along the way. WPCF "disappeared" from 1430 kHz (re-suiting later as WWVQ) & I haven't heard them on their new frequency. 5% of the 566 total came from Florida. I hope to up it a little (13% comes from the home state). This will be the second big chance this year for adding onto this total. I logged 92 new ones between here & Vegas, but I don't know if I can top that record - but there's always a possibility. I will probably not muse for a while so until next time, 73. (You're always welcome in Musings, Greg! -ERC)

OCTOBER IS HARVEST TIME FOR BOB

BOB MIELCAREK - 2317 East Ohio - Milwaukee, WI - 53207

414-481-6755

Since my last Muse I've added 30 new stations to my total which now stands at 646. SSS sessions during the last week of the month were the best I've ever had. Many of my catches were from the South, with Arkansas & Texas coming in well. The list includes: 10/21 WLUX-1550 LA in a SSS. 10/23: KOKA-1550 LA @ SSS. KTUI-1560 MO, KBRI-1570 AR, both signing off. 10/25: KIMA-1550 LA s/on. 10/26- KLEB-1480 LA s/on, WMDG-1220 MS s/off late, with KRBC-1470 TX in later that night. 10/27- WLBZ & KBQL-1220 LA s/off, with KEES-1430 TX, KSTB-1430 TX & WYOK-1460 LA all in a few minutes later. 10/28- WSHB-1350 LA, KGBC-1540 TX, KBRZ-1460 TX & KGUL-1560 TX, all in during a SSS session. SSS on 10/29 brought KWKI-1470 AR & KXOW-1420 AR. Three more were added on 10/30 @ SSS, WAAY-1550 AL, WWVQ-1430 FL & WRPM-1530 MS. 10/31 was the best day of them all with six newies in 55 minutes at SSS, KOKY-1440 AR, WRSR-1420 TN, KTHS-1480 AR, XTCS-1410 AR, KCLD-1410 KS, & KWKN-1480 KS. The best if the bunch were KBRI, my #1 most wanted station and WMDG. I heard WMDG 6:52, 22 minutes after then s/off time. When I called the station to find out what was up the DJ told me they didn't s/off until 7:30 EDT. After a few minutes of talking he let out a yelp, said he had forgotten about signing off earlier due to the return to standard time. He asked if I was from the FCC & signed off 40 minutes late. I got back to the radio in time to hear him say that Bob from Milwaukee had called and that he had to sign off. I wonder if anyone else caught this rare bit of DX? I sent a report but I doubt if they will verify their being on the air 40 minutes late. (Did you send your report to that DJ, Bob? -ERC) Veries are in from WVJS, WRPD, KWNN, KSRB & KTUI. Thanks to DON LYNCH for the tips on Maine & New Jersey. Was anyone in the Milwaukee area had any luck with those two states? Since most of my DXing is done at SSS I probably won't have much to report until the end of the month. I do have the last three Mondays in November & the first Monday in December off, so I'll get in some all-nighters. All for now.

TONY FINISHES HIS SYRACUSE REPORT

TONY FITZHERBERT - 116 Devon Road - Chalfont, PA - 18914

10/30/81

Hi. Many tries and subsequent treats back from CHOW (for 6/28/81 report), WBBX-1380, WVOS-1240, WRIB-1330, CHS3-1150, WCRK-1150, WBNX-1380, WRYP-1590, CBGA-1250, & v/package from WZYQ. Totals as of 10/28/81 on the DX-160 are 528/364/270 for a 74% return rate. Best frequencies are 1150 with 17 & 1380 with 15 heard. Syracuse Radio - Part II - station visit to the beautiful new studios of "The Entertainer-62" WHEN, the account executive guided me through the automated FM, and the AM w/e real live DJ surrounded by cartridge decks - format is AC, studio/offices are surrounded by a four-tower array, no network - verified in Chalfont. Then W3YR-570, no visit, studios are in a downtown shopping mall, XB is a three tower array of city, NBC, & AC mx, & heavy local WX/SX/MX - they are #1 in Syracuse ARBs. 1220 is WZGZ-BFL, ex-W50Q, net is M, with "relaxing music all of the time". I have heard them in Chalfont, never tried for a verie. 1390 is WFRB, W/NYL & AC MX - studio/offices are on Carrier Circle just S of the Thruway. Odd array, a 500'+ tower, &

(Tony Fitzherbert, con'd.) a sawed-off little tower half as tall. They're regular at night in Chalfont when they veried as "Fire-14" - NYL is a great improvement over their ROK. WSEN-1050, out in Baldwinsville is D-3, CWR, IDs as "Syracuse's Live Country" vs. WOLF's automation - good sounding station, no net. Finally, a station visit to WNDR-1260, CBS w/AC format - a quick tour of the FM facility (automated), the production studio (loaded with sound effects), the AM studio with live DJ with excellent voices, upon which I commented to the PD who was guiding me around - he said, "Sssh, don't let him hear you say that! He'll want more money!" Station is in a swamp off Andrews Road East of Syracuse, four tower array is also in the swamp. The PD, a man of about 50, really knew his radio, with 12 years in Philadelphia, as well as elsewhere. I enjoyed talking with John, who veried a report from Chalfont two weeks after the visit. So that's the Syracuse Radio picture - a trip to Buffalo recorded an opportunity to learn about Buffalo Radio - next time. Good DX.

DAVE CLEANS UP DURING THE AURORA

DAVE FOX - 333 Douglass Street - Reading, PA - 19601

11/3/81

DX to the Deep South has really picked up here in the last ten days or so. Beginning on 10/25, WZAL-1540 was noted weakly at their 6pm s/off, mention of 2500 watts and the playing of America. Before that, at 5:42pm, a weak s/off was noted from WYNC-1540 concluding with much guitar mx. Nassau was so pesty that a good copy could not be obtained on either! MM 10/26 found some interesting stuff on 1490: At 1:07am WAJP was heard w/s off after CBS NX. At 1:10 CFS was heard w/s off. Later 1490 seemed to be dominated by WTLX/WABJ. Only other DX noted was an ID after a period of TT from WMAX-1480 @ 1:05am. At 555 on 10/26 a good s/off was noted from WELN-1520 at 6pm after Fla. network NX. Does anyone have a new address for WELN? The Post Office can't deliver to the address listed in the log! On 10/27, 1510 was wide open and WNBC's s/off was quickly followed by WKAO's s/off @ 6pm. The format of the former is Christian Broadcasting while WKAO mentions "Music of your Memories". Most surprising of all was the 6:27-6:30 logging of KAGX-1510 w/a C&W tune, "The Word" by Dennis James and a complete s/off. Amazingly the "word" for the day was Laughter - which I did after nailing this one. On 10/28 & 10/29 both WABB-1580 & WUNI-1410 were heard booming in from about 5:50-6:15pm, WUNI w/C&W mx & WABB mentioning that they are playing "Unforgettable Memories" 24 hours a day. On 10/30 two s/off's were noted on 1590. WORS which was in from about 5:53-6pm s/off w/C&W mx and local announcements. At 6:15pm a super s/off was noted from WATH w/XR, office & studio location given. On 10/31, WRSO-1540 was finally bagged from 5:35-6pm s/off w/r/r & many spots for Sylvester. On SN 11/ WVA-1170 was noted off & a good radio promo was heard from KV00-1170 @ 1:09am. At SSS on 11/1 a weak s/off was noted from WLIC-1540 @ 5:45 w/mention of their 2500w, no SSB. Later from 5:49-6pm WSWG-1540 was heard with the conclusion of the Bush Album Rock Countdown, NX, WX, & s/off w/mention of FM-99.1.

RADIO IN THE EARLY FORTIES

SEN DANCERFIELD - 202 Governor's Drive - Wallingford, PA - 19086 Nov. 2, 1981

The Thirties had ended and the Forties came in with World War II. I began that decade DXing in Pittsburgh, still with my 1936 six tube Philco (what a great receiver that was!) & an LW in the backyard. A few months later I was in college for two years; then a half year in a steel mill, and three years in the Army. Not much DXing. Then two more years of college, & into life's greatest adventure! marriage. Still not much DXing, but still hanging onto the Philco, any LW being long gone. Now in the Forties, the number of AM stations grew slowly until after the war, but the FM stations came into their own, and by 1948 TV was in strong, and the golden age of AM radio was over. Radex was deeply into SW, and the MW hobby seemed to be over the hill. The big excitement was the major reallocation in North America that occurred in the Spring of 1941. At that time, all stations located on 740 kc/s, and higher moved from one to three frequencies on the band. Some stations changed their position on a much greater scale, and the band opened up to 1600 kc/s, where previously it had ended at 1500, plus the two experimental frequencies of 1530 and 1550. This created some problems for stations such as WWSW, Pittsburgh, whose AN program (one of the few at that time) was called the 1500 Club. However, WPNP's 920 Club did become the 950 Club, & it is still on the air. In 1941 the pop music world on radio almost came to a halt when ASCAP (American Society of Authors, Composers, and Publishers) took their music off the networks, and the networks responded with BMI (Broadcast Music, Inc.) What this meant was that great composers such as Berlin, Porter, Garshwin, Kern, et weren't heard on radio in 1941. This dispute got settled, but the next year, 1942, musicians stopped making records on Petrillo's orders, and didn't resume until 1944. Radio suffered from all this, plus the loss of entertainers to the Services, and the breaking up of the big bands. In 1943 I realized a dream of many years (and perhaps a nightmare?). I was DXing from England, and in a few months, France, Belgium, Germany, and Austria. The TA's I had tried so hard to catch and couldn't, I was now listening to first hand! In England we were supplied with quite sensitive receivers, capable of picking up both AM & SW stations. (To be continued from here next week -ERC)



DX IS GOOD IN THE "STATE OF FRANKLIN"

THOMAS A. CONNATSER - Route 9 - Box 78 - Sevierville, TN - 37862 11/5/81  
Hello, all! Space shuttle went nowhere Wed. 11/4, so I took in an afternoon at the dial. No vacation for DAVE SCHMIDT this week! In addition to the usuals mentioned in an earlier bandscan, several newies were added. One of the more notable was WYMR-1410, they must be on LKW NOW. WJAP-1450 was o/WMG @ 12:38pm w/livestock report. WZZJ-1440 w/P DJ playing c/w mx @ 12:45, later than afternoon @ 4:08 I heard new WKKC-710, Williamsburg's other station, fair w/rr. WSVQ-740 is now o/w. They used to be a rock-r and put in a great signal here for only 250w. WWIT-970 is now running rr. I've heard them run about everthink else. Wonder what they'll be running the next time I hear 'em? Two stations from Athens were heard, WXXL-1390 w/classified ads and the 1090 station was also heard, but I didn't get an ID on them so I don't know if they've changed call letters yet or not. Bucking up a couple of days, one of my best catches on 11/2 when WNOX took an unsked SP 8:48-9:13pm. I heard o/w mx, ads, AI NX, & at least three WNYR mentions. Log shows then on 680 as \$250w daytime. On Tues. 11/3 I got a WNYR-990 window sticker from WHEELS CONOVER, so that answers that. WNOX was back @ 9:13 w/mention of operating from XR site due to problems at the studio. Another note on WNOX, Phil Williams returned to morning drive there on 11/2, leaving U-102, very interesting. Another new one later Monday night as I sat on 1560 for nearly 45 minutes trying to get a decent report on WPAD. Report ended up in File 13 as I felt it didn't contain enough info for a positive verification, but I did hear of mx under then during most of that time. WQXR-NY was surely the one responsible, although I didn't get a definite ID on them. I was going to mention how I DX, & write reports in this Muse, but there was so much DX to report that it'll have to wait till later. Final DX news (not the club bulletin, hi) was two from Canada on 11/5. Promo for all of the CHLO jocks was heard at 12:49am folo by an ABBA record after a fade. When the DJ into'ed the ABBA disc three minutes later he IDed as CFOR! Two stations in less than three minutes on 1570, not bad, eh! I also heard some EE religion u/them & suspect KARL JETER's favorite station, XERP - hi. They were in good earlier in the evening. Finally a couple of bits of broadcasting news: WSEV-TN is planning to move its XR to the old FM site just N of Sevierville. Tower will have to be insulated and a ground system installed if they do. Newspaper article says they plan on installing the insulator without dismantling the tower or using a large crane. That ought to be a job! Finally, unofficial word of the good news we've been waiting for for five months. Heard an unofficial word last weekend that a CP to install a 5kw SR is grted to WECO-940. If this is true, we might be running the 5,000w by the first of the year. I'll check into this matter further, and if I find official proof that the permit has been issued, I'll let you know.

AREY SKIPPED TO THE COAST

SKIP AREY - 22 Osborn Avenue - Somers Point, NJ - 08244 WB2GHA  
Good Morning Campers! Welcome to the wonderful world of 20¢ postage, or should I say 40¢ QSL turnaround postage. It's enough to make you tape your veries. My final 18¢ QSL came back from WIOD-610 after reporting their nightly interruptions of Mystery Theater on WIP. Reaganelectronics will probably make FLA a regular along with R. Havana/Koscow as XR powers grow. Shout louder, I can't hear you!! Ahem. The Elf of Provincetown has done his Christmas carding early I see. (Buzzard's Bay??) (That's the Cape Cod sorting center, Skip! -ERC) As you can see from the above address, effective Nov. 10, 1982, I am closer to the coast line. This will be temporary digs for between six months to a year, after which I will be permanently (five years anyway) in Linwood, NJ. All my gear is still in boxes but my trusty transomgrified TRP & its accessories is conveniently located in its ever portable Gray suitcase that NRCers will remember from NJCON '81, so I'll be up and running on MW right away. The Church is now assigned to is located next door to the studios of WONE-1490. Will wonders never cease!! Good night, WALT SHARP, wherever you are.  
Peace.

MIKE'S LOOKING FORWARD TO SOME HOLIDAY DX

MIKE ROTH - 41 Cedar Spring Road - Milford, CT - 96460 NOV. 4, 1981  
My first Muse since early August. Almost no time for DX, going to school, then work, then to Electronics School. I did pass #200 heard, w/WTOW on 9/27 or so. New Vane Jones Log in last week. I also put in a new ground system and took up the slack in the LW. Like I've said before, the Superadio is on FM almost all the time now. Note that WFIP, Milford, CT, was never C&W. I hope it never is. (I can remember when they were, Mike -ERC) It is hoped though that the upcoming Thanksgiving vacation will let me log some new ones. I really miss the \$\$\$ DX. I used to get 85% of my stations at that time of day but I work that shift now. Does anyone know of a comprehensive list (available to the public) of TIS-type stations such as those at airports and major tourist places such as Disney World? It would be interesting to know the power of these stations. ?? (The IRCA Almanac lists a lot of them, but not the power.)  
OH CANADA!  
We in the U.S.A. are getting used to our new 20¢ postal rate - but have you heard what has happened in Canada? Their domestic rate will go from the present 17¢ to 30¢ on 1/1/82, and mail to the U.S.A. will jump to 35¢! U.S.A. mail to Canada will remain 20¢ an ounce.

LOGS NEW BERUDA ON 1450

EMBERT 1. COOPER - 5 Anthony Street - Provincetown, MA - 02657 617-487-9337  
No new AM veries in; two NYC FMers came through though. An "extra" verie came from WMYB-1450, nnn, for my nostalgia report - they run 165 watts at night! Hey, POXY BOB WORTH - you were right! There sure is an outlet in Bermuda on 1450 - 'twas logged here on AM 11/9 on AM show "Midnight Watch" w/a wide variety of musical styles, including a really campy song called, "Sarah Stout, She Wouldn't Take the Garbage Out". Call letters sounded to me like WYV, and of course the inevitable slowen, "Radio 15". And now, back-tracking: MM 11/2 - Not much doing; Rolland LIMDBLADE called & was hearing a BE station u/WBAS-840; also here, also an OC beating u/WBAS, the 32L UNID. On 790 oos with "Special of the Week", the life story in music of Ronnie Milseb, also noted on 1250, call on 790 sounded like CFBK?? This 2:45-3:15-+. Tues. 11/3 - Log finally on WOKX-1350, NoR, York, PA, a very sharp feder o/w WHEB/WNIR. I noticed WFER-1300 is on a satellite thing now, with a very gabby woman sooo. Wed. 11/4 - UnID TTer on 1550 1:23-1:37. The AU CX seemed ended. Thu. 11/5 - TTer on 1420, loud, I suspect 'twas WLMA getting ready for full time. The two Caymans stations were preprogramming this AM @ 1:21 & on, NoR, 1555 & 1205. WPEA-1370 was off & ETing today; WFLI-1070 was ETing w/C&W, & noted every morning for the rest of the week. TW-775 was still on @ 2:51, seems AH now, lots of USA ar. Fri. 11/6 - On 1370 u/WPEA, someone on/off w/TT @ 1:37+, & sweep tones today on 1550 @ 1:49. Sat. 11/7 - Unn WQGN-1590 heard to s/off @ 1, no 3SB. Larry King had "Gork" from the planet "Fringus" on today - very humorous! At 1:09 I noted TT on 1590, no IDs. SM 11/8 - WTOP-1500 off today, also WITS-1510. WLOV-1500 was strong @ 1am. Then a battled WNEW-1130 slop & HJKO-1140 for 1 1/2 hours to draw a log on new WASG-1140, Atmore, AL, on ET/WREL C&W. Many calls on this one from NBC friends. Here's this week's callers, thank you ALL!! PAUL MOUNT, STAN MORSE, JOE PELA, RICH SEGALAS, FRANK MERRILL, STEVE FRANCIS, RAY ARRUDA, DAVE SCHMIDT, TOM BULL, ROLLAND LIMDBLADE, MARK CONNELLY, & BOB GALERSTEIN, in that order! MM 11/9 - Main interest was Bermuda-1450 as noted above; also CFDA-1380, unid in WBNX' null @ 1:46. WENE-1430 was off today, & CJCL rolling in there w/one other RSR, UNID (no time!) Unn WFBG-980 noted on 7:0-7:15 @ 02:43-2:47+. Local WOCB-1240 was your tester most of the morning. Also off today were WHN-1050, WOR-710, WITS-1510, WUMB-1600, CJRS-1510. WLAC was heard, therefore, nicely, with XERP-like mail order (junk?) Unn CHWD-1250 had a massive signal AM, claiming to be Canada's first nostalgia-type station, but CJCL-1430 had the same type of show. Tues. 11/10 - Tentative on WPEX-1490 w/e-TT @ 1:28. Unn WKBK-122X NH was testing w/mx most of the AM o/WGAR. CUM? Also, see you at RAY ARRUDA's Lower Deck on Saturday!

1981-'82 TIP TRADING LIST

Here is the first list of DXers who wish to be informed of late-breaking DX tests, stations noted testing as-it-happens, reception of stations from a certain area, or other tips you want to share to help fellow DXers. Please call the listed person only during the time indicated that the DXer can receive phone calls. States are listed to help determine who would benefit most from your tip.

Name	State	Phone #	Times Available		
			MH	SM	Sunsel
Skip Arey	NJ	608 785 1538			\$\$\$
Bill Coleman	NC	919 443 3551	NH	SM	\$\$\$
Ernie Cooper	MA	617 487 9337	NH	SM	\$\$\$
Don Erickson	CA	714 687 5910	NH	SM	\$\$\$
Tony Fitzherbert	PA	215 822 7242			\$\$\$
Dave Fox	FR	215 373 4406			\$\$\$
Steve Francis	TX	615 982 3122			\$\$\$
Harry Hayes	PA	717 823 6628			\$\$\$
		717 842 2131 (weekends)			\$\$\$
Mike Knitzer	WI	608 423 4159	??		
Robert Kramer	IL	312 262 6299	NH	SM	
Albert Label	CA	714 484 0604			
		714 566 0092			
		714 271 6557	NH		\$\$\$
Paul Mount	NJ	201 836 1137	NH		\$\$\$
Steve Paradise	NJ	608 825 8212	NH	SM	\$\$\$
Ken Romstadt	OH	419 475 3089	NH		
Phil Sullivan	MA	617 263 9330			\$\$\$
Dave Whatnough	ON	416 527 0383	NH	SM	
Bill Whitacre	TX	214 343 1435	NH		

If you would like to be placed on this list, please send a card with format similar to the above, to Paul Mount 471 Emerson Ave., Teaneck NJ 07666.