

January 2, 1999 - Volume 35 - Number 15 - Edition 1167 - ISSN 899-9733 ****************** IRCA WEB SITE: http://www.geocities.com/Heartland/5792/ **************** PUBLISHER'S E-MAIL ADDRESS: sanser@GTE.net ********** SOFT DX MONITOR E-MAIL ADDRESS: philip_bytheway@mukilteo.hac.com IN THIS ISSUE: CPC DX Tests Summary..2, Hot Stuff..5, Western DX Round up...6, Central DX Roundup...13, Eastern DX Roundup...15, DX Worldwide East..16, Western DX Forum..23, Verification Signers..24, BOD..25, Geo magnetic Indices..26, Geomagnetic Indices..27, IRCA Technical Column.. 28, IRCA 1999 Convention Information in the middle of the DXM...... ***************** CLUB POSITIONS NOW AVAILABLE: CPC Chairman, "DX Techniques" editor, "Sports" editor, IRCA Almanac coordinator as well as "DX Monitor" Publisher, DX Worldwide East editor. Contact IRCA President Phil Bytheway, 9705 Mary NW, Seattle WA 98117-2334. *********************** A DXers TECHNICAL GUIDE: Now in its 3rd edition published in 1998, this 155 page book answers questions on receiver and antenna theory (how to improve their performance), how audio filters and loop antennas can improve DX with hints on their construction, how to build a Beverage and phasing unit, and much more. Only \$10.00 for IRCA/NRC members, \$12.00 for non-members (overseas airmail add \$2.50). Order from the IRCA Bookstore 9705 Mary NW Seattle WA 98117-2334..... ******************* IRCA MEXICAN LOG 5th EDITION: The IRCA is proud to announce the release of the 5th edition of its MEXICAN LOG. The IRCA MEXICAN LOG log lists all AM stations in Mexico by frequency, including call letters, state, city, day/night power, slogans, schedule in UTC/GMT, formats, networks and notes. In addition, stations that have changed frequency since 1996 are cross-referenced on the old frequency. The call letter index gives call, frequency, city and state. The city index (listed by state, then city) includes frequency, call and day/night power. The log has been completely updated from the 1996 edition and carefully crosschecked by IRCA members in Mexico and the US. This is an indispensable reference for anyone who hears Mexican radio stations. Size is 8 1/2" x 11" and three \bar{h} ole punched for easy binding (optional). Prices: IRCA/NRC members - \$7.00 (US/Canada/Mexico/seamail), \$8.00 (rest of the Americas airmail), \$8.50 (Europe/Asia airmail), \$9.00 (Australia/New Zealand airmail). Non-members: add \$2.00 to the above prices. Make checks out to: Phil Bytheway. Order from: IRCA Bookstore, 9705 Mary NW, Seattle WA 98117-2334 *********************** RENEWING: If the number above your name reads 36-15 it is time to renew or you will be deleted from the address list. It makes it a whole lot easier on me if you renew early. I try to rubber stamp a reminder on the front page of the DX Monitor to let you know that it is time to renew. Again I asked you to please try to renew early...Thanks.......

WELCOME TO IRCA's "soft" DX MONITOR Vol 36 - No 15 December 23 1998

DXM dated January 2 1999 *********

ALL FUTURE DEADLINES WILL BE ON WEDNESDAYS... new plan to get DXM out quicker. Deadline for next issue Wednesday, December 30 1998. ************

Soft copies of the latest IRCA BookStore and Reprint Updater are available from: Philip_Bytheway@mukilteo.hac.com

CPC DX TESTS SUMMARY

CPC Chairperson (IRCA) - Lynn Hollerman - gmhollerman@mindspring.com

CPC Chairman (NRC) - Bill Hale - phantom2@eaze.net

1/ 1/99 Fri - 0300-0800 - 1420 - KSTN - Stockton CA (???)

1/ 4/99 Mon - 0100-0130 - 560 - WGAI - Elizabeth City NC (NRC) 1/ 4/99 Mon - 0600-0700 - 1620 - WJVA - South Bend IN (IRCA/NRC)

1/ 4/99 Mon - 0400-0800 - 1150 - KXTA - Los Angeles CA (NRC)

1/23/99 Sat - 0400-0415 - 850 - KICY - Nome AK (IRCA)

1/24/99 Sun - 0105-0115 - 1320 - WJAS - Pittsburgh PA (NRC)

1/24/99 Sun - 0115-0125 - 1360 - WPTT - McKeesport PA (NRC)

1/25/99 Mon - 0200-0600 - 1390 - WFIW - Fairfield IL (NRC)

1/30/99 Sat - 0200-0400 - 1160 - KSL - Salt Lake City UT (IRCA)

2/ 6/99 Sat - 0000-0600 - 1450 - CHUC - Cobourg ON (NRC) 2/15/99 Sat - 0105-0600 - 660 - KEYZ - Williston ND (NRC)

2/21/99 Sat - 0105-0130 - 1450 - WILM - Wilmington DE (NRC)

(ELT = Eastern Listening Time, i.e. the local time in the Eastern time zone). Please remember, what's listed as being on, say, Monday *may* be what you think of as Sunday night!

DETAILS:

Friday, January 1, 1999 - KSTN-1420, Stockton, CA 12:00-5:00am PST(3:00-8:00 am ELT). E-mail:KSTN@broadcast.net

WWW:http://members.spree.com/paulshinn/

WGAI-560 Elizabeth City, NC will broadcast Morse Code IDs, various station jingles and "test" announcements from midnight to 0030 hours Eastern Time on Monday, January 4, 1999. WGAI will be utilizing their regular nighttime power of 500 watts and normal directional pattern (they are U3).

Reports may be sent to: Mr. Bob Carter, PD/OM/Engineer WGAI-AM Box 179 Lovers Lane 27909 Elizabeth City, NC (Arranged by Bill Hale for the NRC CPC.)

WJVA-1620 South Bend, Indiana will broadcast Morse Code IDs during their regularly scheduled programming from 0600 to 0700 (correct) Eastern Time on Monday, Jamuary 4, 1999. At this time, they will be broadcasting on ?experimental' power of 10 kw non-directional. They have requested the new calls WHLY, and may be using them by then. They plan

to switch calls with their 1580 facility.

Reports may be sent to:
Mr. Larry Humphrey, CE
WJVA-AM (or WHLY, as the case may be)
2010 South Michigan
South Bend, IN 46613
(Arranged by Bill Hale for the NRC CPC.)
E-mail:WHLY@aol.com
WWW:http://members.aol.com/mike1580

KXTA-1150 Los Angeles, California will broadcast Morse Code IDs at 13 wpm at the top of each hour from 0400 to 0800 hours Eastern Time on Monday, January 4, 1999. Because the KXTA studio feeds multiple transmitters, the code will also be heard on KAVL-610 Lancaster, KLYF-850 Thousand Oaks and KCKC-1350 San Bernardino, all California. They have an automation system that triggers their IDs on command from Los Angeles. All stations will air their separate, individual IDs at approximately :55 past the hour. KXTA has a Web Site that shows some photos of the construction of their new 50 kW plant. Check it out at http://www.hottips.com

Reports may be sent to:
Mr. Mike Callaghan
KIIS Radio
3400 Riverside Dr., # 800
Burbank, CA 91505
WWW:http://www.hottips.com
(Arranged by Bill Hale for the NRC CPC.)

Saturday, January 23, 1999 - KICY-850, Nome, AK will test using Morse code IDs and voice announcements from 12:00-12:15 am Alaska Time (4:00-4:15 am ET). KICY will test using 10000 watts, non-directional.

Reception reports may be sent to:
Mr. Dave Oseland
General Manager
KICY-AM
P.O. Box 820
Nome, AK 99762
E-mail: kicy@nome.net
(Arranged by Ragnar Danneskjold for the IRCA CPC.)

WFIW-1390 Fairfield, Ilinois will broadcast a Morse Code ID, along with their regular on-the-hour ID at 0200, 0300, 0400, 0500 and 0600 Eastern Time on January 25, 1999. WFIW will be utilizing their daytime authorization of 710 watts non-directional. Fairfield is about 20 miles east of Mount Vernon, IL.

Reports may be sent to:
Mr. Kirk Wallace
WFIW-AM
Box 310
Fairfield, IL 62837-0310
(Arranged by Bill Hale for the NRC CPC.)

WJAS-1320 Pittsburgh, Pennsylvania will broadcast 15-second long 1 kHz tones, march music, Morse code IDs, and a little history of the station from 0105-0115 Eastern Time on Monday, January 24 1999. WJAS will be utilizing their daytime facilities of 5000 watts non-directional.

Reports may be sent to:
Mr. Phil Lenz, Chief Engineer
WJAS-WPTT Radio
900 Parish Street
Pittsburgh, PA 15220
(Arranged by John Malicky for the NRC CPC.)

WPTT-1360 McKeesport, Pennsylvania will broadcast 15-secong long 1 kHz tones, march music, Morse code IDs, and station history from 0115-0125 on Monday January 24 1999. They will be on their nighttime facilities of 1000 watts, directed due north. But possibly for the test will be on 5000 watts, non-directional for a short time.

Reports may be sent to:
Mr. Phil Lenz, Chief Engineer
WJAS-WPTT Radio
900 Parish Street
Pittsburgh, PA 15220
(Arranged by John Malicky for the NRC CPC.)

KEYZ-660 Williston, North Dakota will test with Morse code IDs and 1000 Hz tones at various intervals from 0105 to 0130 ELT and prior to the news at :00 from 0200 to 0600 on Monday morning, February 15, 1999. Both daytime and nighttime patterns will be used during the period from 0105 to 0130. Nighttime pattern only will be utilized the remainer of the period.

Reception reports may be sent to:
Mr. Earl R. Gross
KEYZ Radio
PO Box 2048
Williston, ND 58801-2048
WWW: http://www.keyzcountry.com/
(Arranged by Bill Hale for the NRC CPC.)

Saturday, January 30, 1999 - KSL-1160, Salt Lake City, UT will conduct a DX test from 12:00-2:00am MST(2:00-4:00am EST). The test will consist of Morse Code IDs on the hour and half-hour inserted into regular. Their format will be "The Road Gang Show", basically C&W music for truckers.

WWW: http://www.ksl.com/ E-mail: QSL@KSL.com

Reception reports may be sent to: ,'
John Dehnel
Chief Engineer
KSL-AM
55 N. 300 W.
Salt Lake City, UT 84180
(Arranged by Ragnar Danneskjold for the IRCA CPC.)

CHUC-1450 Cobourg, ON will conduct a DX test on Saturday, February 6, 1999 from Midnight to 6:00 am EST. The test will include march music and Morse code IDs.

Reception reports may be sent to: Mr. John Ton - Engineer CHUC-1450, P.O. Box 520, Cobourg, ON K9A 2L3 Canada E-mail: jton@eagle.ca or chuc@eagle.ca (Arranged by JD Stephens for the NRC CPC.)

Sunday, February 21, 1999 - WILM-1450, Wilmington, DE will test with tones, Morse code IDs, "recognizable music" and test announcements from 1:00-3:00 am ET. WILM will conduct the test using 1000 watts, non-directional. Pre-paid phone calls will be accepted at (302)656-9800; fax # is (302)655-1450.

Reception reports may be sent to:
Mr. Allan Loudell
Program Manager
WILM Radio
1215 French St.
Wilmington, DE 19801-3213
(Arranged by Bill Hale for the NRC CPC.)

Also, if you hear a test, PLEASE, PLEASE let me know, via e-mail or the the newsgroup! And, if you send a reception report to a station, please remember to include return postage with your report...

HOT STUFF

THE 1999 IRCA CONVENTION: Will be held at the Holiday Inn-Boardwalk Hotel in Las Vegas, Nevada. The dates are June 25, 26, 27 1999. Get in touch with Mike Sanburn, PO Box 1256, Bellflower CA 90707-1256. 310-614-1444 for details

THE 1998-99 TED VASILOPOULOS AWARD BALLOT

Each year, the IRCA membership selects an IRCA member to receive the TED VASILOPOULOS AWARD (TVA). The award was named after Ted Vasilopoulos, a charter member of the IRCA known for his high DX standards and contributions to the club. The award is given to the IRCA member that has made a significant contribution to promoting and keeping the IRCA a thriving club during the 1996-1997 DX season. The winner receives an engraved plaque and a free year membership in the IRCA.

The last 5 TVA winners are not eligible for the award. They are John C Johnson, Pat Martin, Phil Bytheway, Lynn Hollerman and Nancy Hardy. Any other IRCA member can be nominated and last year's winner, Phil Bytheway is coordinating the nominations.

Also up for voting is the Heald Award. The purpose of the Heald Award is to recognize the IRCA member who most benefitted the club in a particularly noteworthy way during the previous year (1998-9). Ralph Sanserino, JD Stephens and Lee Freshwater are not eligible for the Heald Award. The winner receives a printed certificate. Should the same member win both the TVA and the Heald Award in a given year, he/she would be presented with the TVA, and the runner-up for the Heald Award would receive the Heald Award.

Send the names and a brief description why the person should receive either award to: John C. Johnson, 265 Waterton Way, Billings MT 59102-7755

 NOTICE OF UPCOMING ELECTIONS
ALL MEMBERS SHOULD KEEP A COPY OF THIS NOTICE

All IRCA members are hereby advised that elections for President, Secretary-Treasurer, and all seven Directors of the Board for the period September 15, 1999 through September 14, 2001 are about to begin.

The following timetable and conditions will be followed:

Nominations for President, Secretary-Treasurer, and the seven Directors will open December 1, 1998 and close January 15, 1999. Each IRCA member can only nominate one person for President and one for Secretary-Treasurer; up to a maximum of seven may be nominated for Director. A member may nominate him/herself. Only members in good standing shall be eligible. This means the nominee must have held one year's continous membership in the IRCA as of April 15, 1999. All nominations must be submitted in writing and be received by the Election Committee Chairman (ECC) by January 15, 1999. Faxes and e-mails which clearly identify the sender will be accepted.

As soon as possible after January 15, 1999, the ECC will send to the Secretary-Treasurer a list of all nominees; the Secretary-Treasurer will return the list to the ECC as soon as possible indicating which nominees have been members in good standing for the requisite one-year period.

The ECC will notify all eligible candidates concerning their nomination by February 1, 1999. All nominees must reply in writing (again, e-mail and faxes will be permitted) if they accept the nomination, except that those who may nominate him/herself will be presumed to be accepting the nomination. Each candidate, including self-nominees, may submit a campaign statement, not to exceed 20 DXM bulletin lines, to appear in a March issue of DXM. A campaign statement is not required of any candidate. If a member is nominated for more than one office, he/she may submit a campaign statement for each or any of the offices for which he/she intends to run. If nominated for more than one office, the candidate must decide for which office(s) they prefer to run and notify the ECC of all such office(s) the will run for. This decision by a candidate is final.

Notifications of acceptance and all campaign statements must be received by the ECC by February 20, 1999. The ECC will prepare the campaign statements in alphabetical order by candidate's last name, and the ballot categorically by office and in alphabetical order by candidate's last name and submit them to the Publisher by March 1, 1999.

All ballots must be received by the ECC no later than 0001, Mountain Local Time, May 1, 1999. Again, faxes and e-mails, clearly identifying the sender, will be accepted.

The above information is a summary of Article III of the IRCA Bylaws.

Please direct any questions to:

WESTERN DX ROUNDUP

Editor: Nancy Johnson - 265 Waterton Way - Billings MT 59102-7755

E-Mail: Nancy Johnson@prodigy.com

WDXR Deadlines: Fridays. Please use Eastern Time.

REPORTERS FOR THIS ISSUE:

- (FA) Frank Aden-4096 Marcia Place-Boise, ID 83704 FRG-7 with 4' box loop; Sony EXR-11 (1997 issue); radio in Chevy Cheyenne pickup
- (AB) Art Blair 7420 Telegraph Avenue-Orangevale, CA 95662 NRD-515 and Palomar loop
- (RD) Ragnar Danneskjold-Mesa, AZ GE SRIII, Optimus 12-604A, GE Superadio III, Realistic DX 440
- (LG) Larry Godwin-2390 Clydes Dale Lane-Missoula, MT 59804
 lbg@selway.umt.edu
 Hammarlund HQ-150, Sanserino air-core box loop & KIWA loop
- (GJ) Gary Jackson-7735 Center Parkway-Sacramento, CA 95823 FRG-880 & KIWA loop
- (CK) Chris Knight-P. O. Box 152-Dacono, CO 80514-0152 dxerl@juno.com Kenwood R-1000 and Sanserino loop
- (GL) Gary Larson-2806 Lincoln-Burbank, CA 91504
- (PM) Patrick Martin-PO Box 843-Seaside, OR 97138-0843 mwdxer@webtv.net Drake R8, 900' NNW terminated Beverage, 1500' E Beverage
- (NP) Nigel Pimblett-1146 Queen Street-Medicine Hat, AB T1A 1B4 Kenwood R-5000, KIWA loop and Beverages
- (CR) Craig Rathbone-Denver, CO Dxer@aol.com Sony 2010 & KIWA loop
- (MS) Mike Sanburn-P.O. Box 1256-Bellflower, CA 90707 Car radio, GE Superadio II, GE Superadio III, Sony SRF M40W
- (PT) Pete Taylor-6002 Bayview Dr. NE-Tacoma, WA 98422-1227 pvtaytac@brigadoon.com Sony ICF-2010 & KIWA loop
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118 rjw@webtv.net GE Superadio, GE TRF circa 1963, Select-A-Tenna, HQ-180A, & Radio West loop

OF SPECIAL INTEREST

- 1510 KJQI CA, San Rafael 12/7 1700 good with song "Merry Christmas,"

 ID "100 point 7, and AM stereo 15-10, KJQI, San Rafael, San
 Francisco, K-Joy." Call change, ex-KKHI. (RW-CA)
- ********************
- 550 KUZZ CA, Bakersfield 12/4 caught ID at 1030, C&W music. (FA-ID)
 KLLV CO, Breen 12/7 2226 good with Christmas music, woman
 announcer with ID "KLLV ,Breen Colorado. It's 8:29."
 (CK-CO)
- 620 KIGS CA, Hanford in with Portuguese music and talk 12/13 0149 over/under KEWS. Station is all Portuguese except for a couple hours of Spanish mornings. (PT-WA)
- 630 KHIT NV, Reno 12/14 0600 clear ID on top of hour "KHIT, Reno."

 Hasn't changed calls to KPTT per latest FCC database update. (RW-CA)
- 640 (KFI) CA, Los Angeles 12/7 0625 totally off, back on RS at 0700.

 Mexican/Cuba mix, nothing else underneath. Also off 12/14
 0550, don't know when they came back on. (RW-CA)
- 650 WSM TN, Nashville 12/15 0717 with ad about chilling wine using a CO2 extinguisher and talk about "Nash Flash" and into country music and ID at 0721 "Six Fifty Country." Rare. (RD-AZ)
- 660 KZTU OR, Junction City finally heard after months of trying at 1000 12/9, weak but on top in CFFR null. I barely caught ID for "KPAM, Portland-Vancouver; KZTU..." (LG)
- 680 KKGR MT, E. Helena 12/5 1847 Kenny Rogers song, ID's as "AM 680

- KGR" and "Helena's oldies, KGR," local ads. (NP-AB)
- 700 WLW OH, Cincinnati 11/17 1136 with a local talk program. Many people angry at Clinton. Many people angry with Larry Flynt over "outing" Livingstons affair. Talk of Flynt coming to Cincinnati. (RD-AZ)
 - KWLW UT, Salt Lake City 11/17 1149 playing old country music with Loretta Lynn singing "You Ain't Woman Enough to Take My Man" and Charlie Pride singing "Pure Love." Blew away WLW. Usually this station is just relaying an FM'er. Could this be a format change? Gave KWLW ID instead of FM'er ID. (RD-AZ)
- 720 KDWN NV, Las Vegas 12/15 0721-0732 with nothing but an open carrier then the Michael Reagan Show with very low & poor modulation (just an unusual occurrence). (RD-AZ)
- 730 KDAZ NM, Albuquerque 12/9 1833 local ads and traffic & weather. Weak in the mess. (CR-CO)
- 800 KPDQ OR, Portland on top with religious program 12/8 at 2258.

 ID'd at 2301, then "Focus on the Family," CHAB, the usual religious station here, not audible. (LG-MT) +12/13 0756 strong with call ID and commercials by man & woman alternating. I think this station either tuned up its transmitter or is running lkw day power at night of late. (LG-MT)
- 820 WBAP TX, Fort Worth 12/17 0106 with J.C. Penney ad, news and weather. Call letters were in the clear during an inhalation pause in KGNW's preaching. (PT-WA)
- 830 KFLT AZ, Tucson 12/6 0947 very good signal with "Inspirational music." New. (CR-CO)
 - KNCO CA, Grass Valley 12/4 1035 ad for META (sp?) Ford, gave temp as 28 degrees and mention of stores in Auburn. (FA-ID)
 - KPLS CA, Orange 12/1 while at job, tuned in and heard religious programming of Catholic Radio Network. (GL-CA)
 - WCCO MN, Minneapolis 12/13 0600 with top of hour ID and CBS news about Clinton impeachment going to the House for a vote.

 (RD-AZ)
- 840 WHAS KY, Louisville 12/6 collectibles show and weather at 0048. (RD-AZ)
 - KXNT NV, North Las Vegas 12/6 0006 ID "Not just another radio station, KXNT," into talk program. Slop from local KOA-850. (CK-CO)
- 860 KTRB CA, Modesto 12/5 2251 fair with sports news, weather forecast, current temps for Fresno, Modesto, Sacramento, and Stockton, ID "Newsradio KMVH/KTRB" mentioned. XEMO QRM. (CK-CO);
 - KPAM OR, Troutdale 12/4 1045 running Christian News NW. Good signal. New! (FA-ID)
- 910 KBIM NM, Roswell 12/5 2359 good with ad for "Cable One" cable TV in Roswell, :News 9-10" ID's, ABC news. Local KPOF nulled. (CK-CO)
- 920 KVEL UT, Vernal 12/9 2222 very good with local high school basketball, "...here on 9-20 KVEL," ad for "Vernal Big O Tire." (CK-CO)
- 960 KOVO UT, Provo 12/6 1830 fair with MYL, song from the movie "Titantic," ID "AM 12-80 KDYL." Nothing mentioned about 960. Apparently // 1280 kHz. (CK-CO)
- 970 WDAY ND, Fargo 12/4 0200 good signal over Mexico with ABC news, local weather at 0205. (CR-CO)
- 980 KVLV NV, Fallon 12/5 1807 "Hometown Radio KVLV," phone company ad, weather, more ID's, then into country music. (NP-AB)
- 1040 WHO IA, Des Moines 12/13 0633 with ID "This is where Des Moines

- comes for news, WHO." (RD-AZ)
- 1050 KTBA AZ, Tuba City 12/5 1859 very good with end of SRN news, one minute of light music, then legal ID "KTBA Tuba City."

 (CK-CO)
 - KNML NM, Albuquerque 12/5 1821 good & alone with ad, ID "Sportsradio 10-50 KNML," "Sports Animal" slogan, into ESPN sports. (CK-CO)
- 1060 KKDS UT, Salt Lake City 12/8 1844 "All American Classics" with some NOS but mainly C&W classics like Johnny Paycheck. (CR-CO)
- 1070 KWEL TX, Midland-Odessa 12/5 1900 Spanish, fair grupera music, legal ID in Spanish then s/off announcement. (CK-CO)
- 1080 KRPX UT, Price 12/5 1844 very good with ad for "Mailboxes Etc," mentioned "Get a discount for mentioning KPRQ 101," into
- song by Fleetwood Mac, DJ named "Linda." (CK-CO)

 1110 KRLA CA, Pasadena 11/30 0300 Nov. 29th was the last day of the music format after 39 years-to be all talk. Monday morning they left a heartbeat sound effect on with occasional talk show ads. The final 3 songs were "Queen of My Heart,"

 "Sleepwalk," and "Don't Let Anybody Get You Down." (MS-CA) +11/30 0800 ended its rock oldies/R&B format and began talk programming. Taped before change, aired beating heart sound with promos for upcoming programs every few seconds.
- 1120 KMOX MO, St. Louis 12/6 with symphony ad for Nutcracker Suite
 0635 & 0637 ID then talking about the St. Lucia festival.
 12/13 0640 talking about Clinton impeachment hearing in the
 House. Very rare. (RD-AZ)

Their FM is KLSX 97.1, also talk. (GL-CA)

- 1195 KANN UT, Roy (distorted spur of 1120) still noted strong here at 0757 12/13 and 12/16. (LG-MT)
 - 1200 CKXM BC, Victoria 12/6 0424 poor, but clear with WOAI off with country music, song called "Cracker Jack Diamond," ID "Great Country CKXM." (CK-CO)
 - 1210 KQEQ CA, Fowler 12/12 2301 fair over/under KEBR, etc on channel with what sounded like Black Gospel. At 2308 a spot announcement for a concert or dance in Fresno, that was tagged "Jammin' 12-10." Runs 370 watts and ND. New, reported. (PM-OR)
 - KUBR TX, San Juan 12/11 0755 with Spanish religious program. Announcers were Americans speaking Spanish and giving top of hour ID in English. (RD-AZ)
 - 1230 KFUN NM, Las Vegas 12/5 1917 good over all with country music, ID
 "Fun Country, KFUN," ads for "Nicoderm CQ" & "Radio Shack."
 - (CK-CO)

 KDIX ND, Dickinson dominated at 0859 12/13. Man said "You're flying high with the hawk of the prairie, KDIX." (LG-MT)
 - 1240 KMHI ID, Mountain Home on top at 0000 12/16 with One-on-One Sports program and ID as "Sports Radio 1240, KMHI." (LG-MT)
 - KFOR NE, Lincoln 12/16 0206 fair with local news & promos for upcoming show. New. (CR-CO)
 - KALY NM, Los Ranchos de Albuquerque 12/5 1907 fair and pretty much alone with Spanish, "Kah-lee La Caliente" slogan, into ranchera music. (CK-CO)
 - CFNI BC, Port Hardy finally after years of trying, logged this one 12/11 with oldies and "Coast Radio" ID's. Was // to both 1440 & 1490, who were coming in "like a ton of bricks." CFWB-1490-Campbell River was totally dominant on 1490 kHz for a time. Unbelievable signal! The skip distance isn't that hot, but stations in the 300-500 mile

- range are very strong tonight in most directions. CFNI logged at 0335. New. Also had a KGY ID (1240), so I am going to try a taped report to them. This one is not easy! (PM-OR)
- 1260 KWYR SD, Winner 12/13 0223 very strong signal with national ads such as Gold Bond, and C&W music. (CR-CO)
- 1270 KTFI ID, Twin Falls 12/4 0302 fair with NOS/oldies and news at 0302. (CR-CO)
- 1280 KEAN TX, Abilene 12/4 0255 fair with sports, ad mentioning West Texas, "Serving Abilene, this is sports radio 12-80." No call letters heard. Local KRRF "Ralph" off. (CK-CO)
 - KDYL UT, Salt Lake City 12/4 0305 fair peaks with MYL &call ID.
 Local KRRF off! (CK)
 - KIT WA, Yakima 12/4 0259 poor with ID only "AM 12-80 KIT" near top-of-the-hour. (CK)
- 1310 KNOX ND, Grand Forks 12/6 0324 poor in mess with 2 call letter ID's during promo. Local KFKA off. (CK-CO)
- 1320 KWHN AR, Fort Smith 12/6 0406 fair with end of news, ID "This is newsradio 13-20 KWHN." (CK-CA)
- 1340 KGLW CA, San Luis Obispo 12/7 0000 caught legal ID at top of the hour. (MS-CA)
 - KVRH CO, Salida 12/5 1921 briefly good over local KKYD with local high school sports scores with emphasis on Buena Vista High School, also mentioned "Salida Girls," break, then call letter ID "Radio KVRH." (CK-CO)
- 1350 KGHF CO, Pueblo 12/13 0651 over/under Mexican, mostly under. Ad for Natural Hair and ID. Only popped up for a very short time. (RD-AZ)
- 1370 KPCO CA, Quincy 11/30 weak but in the clear with legal ID at 0900. (LG-MT)
 - KSOP UT, Salt Lake City 12/13 0102 good signal with C&W music and no news at the top. Slogan is "Country 104.3 KSOP."

 (CR-CO)
 - CFOK AB, Westlock on top with C&W, call ID and Alberta news at 0900 11/28 and 12/10. Man said "Serving Clyde and Dunn," I think. Not far from here, but seldom heard. (LG-MT)
- 1380 KSRV OR, Ontario 12/6 0917 very good with country music, "KSRV" jingles. (CK-CO)
- 1410 WIZM WI, La Crosse 12/9 2130 fair with promo "La Crosse's news station, WIZM" ID's, weather forecast and current temp for La Crosse. (CK-CO)
- 1440 KUHL CA, Santa Maria 12/12 1859 local ads, ID "You're listening to KUHL and KTME...", into ABC news. New catch here.

 (NP-AB):
 - KMED OR, Medford 12/12 1906 ads, ID as "The great music station, AM 1440, KMED." (NP-AB)
- 1450 KVSI ID, Montpelier 12/16 0902 good as usual with ABC news and local ads for Rainbow Rental and Sales during the news.

 (CR-CO)
 - KQDI MT, Great Falls caught ID at 1859:50 12/13, because of glitch in unID One on One Sports station that was booming in. At ID time there was just dead air (never did find who it was), but heard fair "This is KQDI....Great Falls, Montana." Into net news. I just came in from repairing my Eastern Beverage after a wind storm, so this was a complete surprise. Good Idaho/Montana conditions this afternoon.
- 1470 KNXN AZ, Sierra Vista 12/2 fair with Spanish, "Radio Buena" slogan, legal ID in both Spanish and English "You are listening to KNXN, Sierra Vista," into "Radio Unica"

New.

(PM-OR)

- programming. (CK-CO)
- 1490 KRKC CA, King City 12/2 0450 spot for Family Coffee Shop in King City featuring breakfast all day! Country tune by Brooks & Dunn. Dominant briefly, KBKO also. (MS-CA)
 - KOWL CA, South Lake Tahoe 12/7 0500 caught ID by female announcer under KCID. (FA)
 - KPKE CO, Gunnison 11/30 2328 poor, but above muck with phone number "641-8000" mentioned, call ID and "The Peak" slogan. (CK-CO)
 - +12/12 0153 very strong for long stretches with rock and AdCon music. Ads for local donations and where to send them. Slogan is "Hits of the 70's, 80's and 90's." (CR-CO)
 - KCID ID, Caldwell 12/10 1035 sports & weather...20 degrees in Caldwell, ID at 1036 followed by C&W music. Personal best on this frequency at 417 miles. (AB-CA)
 - KKAN KS, Phillipsburg 12/16 0810 fair to good with sports and ads for Farmers State Bank. New. (CR-CO)
 - KRTN NM, Raton 12/12 0230 up for a moment above the rest.
 (CR-CO)
- 1510 KFNN AZ, Mesa 12/12 2005 gal with legal ID, "Small Business Focus" program at 2006, then dropped into the mix. (AB-CA) +12/12 2255 in KGA null with ad for Phoenix computer store. Seldom heard. (LG-MT)
- 1540 KTCD CA, Los Angeles with sports promos and ID 12/5 0159 through KXPA open carrier and their 0200 ID. Couldn't pull out KXEL. New. (PT-WA)
 - (KXPA) WA, Bellevue off 12/8 0804. Between this and the numerous times I have heard then with open carrier, I have to guess that they just go silent when they don't have paid programming. Again, no KXEL! (PT-WA)
- 1550 KXEX CA, Fresno 12/7 2138 Spanish, very good peak with local ad,
 "Aqui en Fresno" mentioned twice, "laser gun" sounds and
 clear "La Doble X" slogan. Into tropical music. (CK-CO)
 - ?WQEW? NY, New York unfamiliar Tony Bennett cut not one NOS syndicators would use noted 12/17 1940 before KNZR obliterated it. I try to watch my P's and Q's on 1560 (with wPad and wQew) especially with the latter going Disney soon. (PT-WA)
 - KYCY CA, San Francisco 12/8 0150 "Young Country," per new call change. (FA-ID)
- 1570 KHPN CO, Loveland 12/6 2256 again dominant and huge. Even noted on Sony Walkman! Classic country song "Would You Lay With Me in a Field of Stone." Caught legal ID on hour, then AP network news, sports and weather. (MS-CA) +12/10 heard with C&W music per tip from Chris Knight. Tough to ID, but at 0159:45 heard "KHPN, Loveland, Windsor....and even Ft. Collins." Into AP net news at 0200. Thanks Chris for the tip they were operating at full
- 1580 KCWW AZ, Tempe 12/12 2200 good with quick ID on top of hour "KCWW, Tempe-Phoenix." Hasn't changed calls to KMIK yet per latest FCC database update. (RW-CA)

power (1kw). New. (PM)

- WPGC MD, Morningside (not heard) powers up to 50kw at 0715 in Dec., 0730 in Jan. (the latest) and 0700 in Feb., per engineer. Beams E-W to protect CBJ. Should make it to Pacific NW. (LG-MT)
- ?CBJ? PQ, Chicoutimi evidently the French-speaker with "Radio Canada" ID at 0800 12/5. QRM from KGAL and KCWW prevented hearing call letters, if announced. (LG-MT)

- 1590 KIMN NV, Sun Valley 12/5 1800 legal ID on the hour. Dominating the frequency, which is very unusual. (NP-AB)
- 1600 KYGO CO, Lakewood-Denver 12/8 heard in the clear with lots of "104.3" mentions and full ID 0801. New. (PT-WA)
- 1610 LONGO RADIO CA, El Monte 12/4 1430 new low powered station at Longo Toyoto, much like the one reported previously on 1610 from Toyota of Garden Grove. Billboard on 10 Freeway. (MS-CA)
- 1620 WPHG AL, Atmore weak but all alone with call ID and USA Radio network news at 2000 11/30. Usually KYIZ is strong at this hour. Also noted with ID at 2300 12/3, mixing with KYIZ and unID NOS station that was probably wanted WJVA. (LG-MT)
 - +12/4 2259 fair with legal ID "... 16-20 WPHG Ardmore, Alabama," into USA Radio News. Another station underneath playing light rock music at times, sometimes instrumentals. (CK-CO)
 - WJVA IN, South Bend extremely weak with Nat King Cole song at 2258 and call ID at 2300 12/14. WPHG ID'd a few seconds beforehand (with pips), then dominated completely a few minutes later. KYIZ not audible on semi-auroral evening. New state. (LG-MT)
- *KYIZ* WA, Renton had open carrier only 12/9 0855-0900. (LG-MT)

 1630 KCJJ IA, Iowa City 12/6 2224 fading up with Christmas music "Hark

 The Herald Angels Sing." First logged them on Thanksgiving
 morning at loud 10kw level. (MS-CA)
 - KKWY WY, Fox Farm 12/12 0845 fair with new format of C&W and ID's as "Thanks for listening to KKWY Fox Farm-Cheyenne." Also using the slogan "The Spirit of Wyoming." They were // KJJL with NOS. Now apparently separate with C&W. Signal was the best I have heard them, about S3 off Eastern Beverage. (PM-OR)
 - +Atop KCJJ at 0900 12/17 with C&W, JD, and ABC news. This one seems stronger the past few days. (LG-MT)
 - ?KKWY? +12/3 2100 have been hearing very weak C&W music under KCJJ, suspect it has to be them. (FA-ID)
- 1690 *KAYK* CO, Arvada had open carrier only on 12/8 2242-2257, when suddenly reappeared. (LG-MT)
- 1660 KXOL UT, Brigham City 12/6 2257 loud with "Shake, Rattle & Roll" and "Let Me In." Legal ID mentioned "Top of the dial, KXOL Brigham-Ogden-Layton-Salt Lake City." (They used to mention Logan too!) (MS-CA)
- 1680 WJNZ MI, Ada moderately strong with soul program // to KYIZ-1620 at 0751 12/17, then ID at 0800 as "WJNZ Ada-Grand Rapids."

 Another station mentioned, too, but couldn't copy. (LG-MT)
- 1690 KAYK CO, Arvada 12/6 0820 good this morning with Disney ID by
 Goofy and song "One Week" by Bare Naked Ladies (Can they
 say that on a kids station? Hi). Also noted spot for
 Blockbuster gift cards. (MS-CA)
 - ?WMBM? MD, Lexington Park probably the weak talk station barely audible through KAYK's open carrier 12/8 2242-2257. I phoned station; has new phone number 301-475-8383. (LG-MT)

DX TESTS

- 660 (KEYZ) ND, Williston 11/30 0105-0600 KTNN coming on too strong, possible beeps at 0404!? (MS-CA)
- 1320 (WJAS) PA, Pittsburgh 12/14 0105-0115 nothing heard that sounded like a test. KOLT was the most dominant. (FA-ID)
- 1360 (WPTT) PA, McKeesport 12/14 0115-0125 I may have heard some very weak bits of code, but nothing that could be ID'd. (FA-ID)

- 1390 (WFIW) IL, Fairfield 12/14 checked at 0100, 0300, 0400, 0500 and 0600. May have heard some tones or clicking noises, but nothing that could be ID'd. (FA-ID)
 - (WEGP) ME, Presque Isle 12/14 0200 nothing that sounded like a test. (FA-ID)
- 1490 (KQTY) TX, Borger 12/4 0159-0205 checked for code ID, nothing heard. (FA-ID)
 +11/30 0159-0559 2nd DX test not heard either. (MS-CA)

UNIDS

- 580 11/17 1120 one of three stations on 580. Could not get ID before fade. Playing Michael Medved Show. Who had Medved on 580?
 (RD-AZ)
- 1450 12/16 0135 unID with One on One Sports. (CR-CO)
- 1610 UnID TIS/HAR noted 12/12 at 2200 giving parking information. Gave call letters KNIP553. (GJ-CA)

Quite a bit of DX'ing has been going on this week. Thanks to all of our reporters!

1998-99 IRCA "Call Letter Scrabble" DX Contest

Standings as of December 15, 1998

1.	John Tudenham	860	7.	Nigel Pimblett	323
2.	Dan Sys	816	8.	Mike Sanburn	191
З.	Pete Taylor	791	9.	Lynn Hollerman	153
4.	Stan Weisbeck	582	10.	John C. Johnson	63
5.	Greg Hall	469	11.	Dale Park	15

CENTRAL DX ROUNDUP

Editor: John C. Johnson - 265 Waterton Way - Billings MT 59102-7755 E-Mail: John Johnson@prodigy.net

RIDING GAIN

- [EB-MO] Eric Bueneman, NOUIH, Hazelwood, Missouri. NOUIHEric@aol.com
 Realistic STA-90, Realistic TM-152, National NC-60 Special,
 Sangean ATS-803A. Worcester Space Magnet 2, MFJ-1778 G5RV
 antenna with MFJ-956 antenna tuner.
- [NJ-MT] Nancy Johnson, Billings, Montana Nancy Johnson@prodigy.com Yaesu FRG-7, "Radio West" Loop. Or the radio in the 1995 Mustang. :-)
- [JJR-WI] John J. Rieger, South Milwaukee, Wisconsin.
 johnjrieger@webtv.net
 Drake SW2 with Palomar loop and amp, Drake SW8, FRG 100 with
 Kiwa Loop and MFJ 959B pre-amp, DSP-599zx Audio Noise
 Reduction Filter. And sometimes my 1972 DX machine, Panasonic
 RF-1150.

SPECIAL INTEREST

1260 WSDZ IL, Belleville. EX-WIBV. 12/18 good to fair over WNDE. 0155
Noted with a mix of children's standards and Top 40 music,
Radio Disney promos, "Radio Disney is WSDZ Belleville, St.
Louis" legal ID at 0200. [EB-MO]

DOWN THE DIAL

- 650 CINT SK, Saskatoon. 12-5 fair then fade to poor. 0753 with Dr.
 Laura and "News, talk radio" slogan. Promos and local
 mentions in spots. EX-CKOM. [JJR-WI]
- 680 CJOB MB, Winnipeg. 12-5 fair. 0744 with "CJOB 68" out of country song into spots. Not common here. [JJR-WI]
 - WCNN GA, North Atlanta. 12-9 good to fair on 50kW day power o/WJCE. 0727 with entertainment news, local spots, CNN News update, frequent "News Radio 6-80 WCNN" ID's. An ex-local for me! [EB-MO]
- 690 WOKV FL, Jacksonville. 12-9 fair to poor w/WTIX, KSTL. 0708 noted with weather forecast, local spots, TC, frequent "News Talk 6-90 WOKV" ID's and local talk. Last heard as WPDQ. [EB-MO] 730 CKDM MB, Dauphin. 12-5 fair. 0734 with spots and "Today's hot new
- country, CKDM" slogans. [JJR-WI]
 880 CKLQ MB, Dauphin. 12-5 fair, no WCBS! 0715 with weather, mention of 6" of snow coming. "Q Country" slogans. Also heard on
- of 6" of snow coming. "Q Country" slogans. Also heard on 12-12 poor in WCBS null. [JJR-WI]
 1100 WCGA GA, Woodbine. 12-12 good in WTAM null. 0722 after four
- country songs an ID! Phone number given and then back to music. NEW! GA#57. First new logging on 1100 in 13 years! [JJR-WI]
- 1150 WIMA OH, Lima. 12-16 fair in brief fade up. 0058 with promo and "11-50 WIMA." Hasn't been heard here in years. [JJR-WI]
 1320 KSIV MO, Clayton. 12-15 fair. 1748 with power down announcement
- 1320 KSIV MO, Clayton. 12-15 fair. 1/48 with power down amnouncement "...tune 91.5 or if you're in St. Louis stay here...." Quickly replaced by WILS and 2 others. [JJR-WI]
- 1330 KOVE WY, Lander. 12-15 strong. 2100 ID "KOVE Lander, Riverton, Arapaho." [NJ-MT]
- 1340 KPRK MT, Livingston. 12-15 strong on Mustang radio. 1856 with weather, call ID, local spots. [NJ-MT]
- 1420 KTOE MN, Mankato. 12-17 strong. 1957 with local spot, "KTOE Mankato" jingle into Christmas music. [NJ-MT]
 1430 KEZW CO, Aurora. 12-16 very strong. 2023 with local spot,
- 1430 KEZW CO, Aurora. 12-16 Very strong. 2023 With 166al spot,
 "...more of the restaurant show on KEZW..." TC, phone
 number 303-695-1430 given. [NJ-MT]
- 1440 CKJR AB, Wetaskiwin. 12-17 strong. 2000 with "It's all requests and dedications from 14-40 KJR" into country music. [NJ-MT] 1470 KBSN WA, Moses Lake. 12-17. 2005 with call ID going into local
- 1470 KBSN WA, Moses Lake. 12-17. 2005 with call 1D going into local news. [NJ-MT]
 1490 WNDV IN, South Bend. 12-15 fair on top. 0649 with "14-90 WNDV"
- IN, South Bend. 12-15 rair on top. 0049 With "14-90 WNDV"

 ID's and usual '70s oldies off the bird. This is EX-WNDU.

 [JJR-WI]
- 1530 WJJG IL, Elmhurst. 12-15 poor w/WSAI. 0815 with SSB and jingle then lost in jumble. [JJR-WI]
- 1580 KGAL OR, Lebanon. 12-17. 2008 with call letters given going into weather forecast. "Weather every 10 minutes on the nines."
 [NJ-MT]
 - WLIJ TN, Shelbyville. 12-9 fair to poor w/WJVA and others. 0632 noted with weather forecast for Shelbyville, bluegrass show promo, mention of calls before fading into background. [EB-MO]
- 1590 WPVL WI, Platteville. 12-15 fair, dominating. 0823 with morning news "...on WLGR (1280) and WPVL..." Not common here.
 [JJR-WI]
 - WTVB MI, Coldwater. 12-15 fair. 1745 with jingle and spoken "AM 15-90 WTVB" into Christmas music off the bird. Not heard in a few years. [JJR-WI]
- 1640 WKSH WI, Sussex. (NO DATE) Noted now on 24 hours. Good to fair signals wiping out KDIA. [EB-MO]
- 1680 WJNZ MI, Ava. 12-15 good to local-like signal. 0620 noted with

the Tom Joyner morning show ||KATZ-FM 100.3. Local news at 0630. Call change, ex-WBHD. [EB-MO]

1700 WPMI800 WI, Racine. 12-15 poor u/KBGG. 0800 with test announcements. Call not given though location was. [JJR-WI]

25 YEARS AGO

January 5, 1974 issue of IRCA's "DX Monitor" ... EDXF editor Bruce Heimburger of Ann Arbor, MI said he was unable to type EDXF due to final exams ... DXWW editor Ron Schatz of Miami, FL proposed (to the BoD) a "Most Valuable International DX'er" award yearly ... Included with this issue was a four page Mexican station list.

OPEN MIKE

640

The actions of men are the best interpreters of their thoughts. 1999 is here! Wow, 2000 is less than a year away now! Nancy and I hope you all had a wonderful Christmas and that the new year is bringing you lots of good DX. We thank everyone who sent greeting cards during the holidays. 73, John.

EASTERN DX ROUNDUP

Editor: Lee Freshwater - 414 SE 3rd St - Ocala FL 34471

E-Mail: LFreshwate@aol.com

	8	STARS OF THE WEEK			
(LF-FL)	your editor	Drake R-8A / HQ180A, Potomic FIM-41			
		KIWA Loop, 75' 1.w. N/S			
(MC-PA)	Mark Clark	Pottstown, PA VIA E-MAIL			
		Drake R-8B, R.Shack ctr-69 recorder			
		135' inverted L antenna			
(RB-PA)	Rich Boehme	1722 Piccadilly Cir., Allentown, PA 18103			
		VIA E-MAIL			
(MB-ON)	Mike Brooker	99 Wychrest Ave., Toronto, ON M6G 3X8			
		Panasonic RF-2200, RFB-45 VIA-E-MAIL			

LOGGINGS

WHLO OH Akron 12/14 17:02 Brokered time station with a call in

20	٠	show for a Y2K doomsday fear monger group. Mention of
		the city Akron. Briefly strong but signal degraded
		into the mush. [RB-PA]
KLCN	AR	Blytheville, AR Dec. 8 1759 EST fr o/nothing in
		particular w/local nx, ID at 1800 "non stop news 24
		hours a day, this is the new 910 KLCN Blytheville"
		into AP network nx. (MB-ON)
WSUI	IA	Iowa City, Nov. 30 0700 fr-gd w/ID announcement
		"it's 56 DEGREES at your NPR news station AM 910 WSUI
		Iowa City-Cedar Rapids, a service of the University of
		Iowa" into NPR nx. QSLed on CPC test in 1995. (MB-ON)
WSBA	PA	York, Nov. 30 0723 fr w/ID as "News-talk 910 WSBA"
		into local birthday greetings. (MB-ON)
WGOC	TN	Blountville 12/14 17:45 Country Music and then an add
		for a local fish market, saying that they have fish
	WSUI	WSUI IA

			fresher than the shore and Tennessee's freshest fish.			
			[RB-PA]			
1110	WNNW	NH	Salem, Dec. 4 1803 gd w/SS news, followed by sign-off			
			announcement in EE. Off at 1805 w/no SSB. Are they a			
			local in Boston? Must be. How many Hispanics could			
			there be in Salem, NH? (MB-ON)			
1260	CIHI	NB	Fredericton 12/7 18:53 Top 40/AC with a station ID,			
			"CIHI 1260 serving Fredericton, Moncton,"			
			Dominating Frequency. [RB-PA]			
1270	WCBC	MD	Cumberland 12/7 19:01 Station ID barely audible in			
			mush. [RB-PA]			
1310	WNAE	PA	Warren, Nov. 27 0725 fr o/Ottawa w/dual WNAE and			
			WRRN-FM ID, promo for local spaghetti dinner into			
			"Midnight Blue" by Melissa Manchester. (MB-ON)			
1350	KRNT	IA	Des Moines, IA Dec. 8 0725 pr and losing fight			
			w/CKDO, heard only "22 degrees in Des Moines" into "I			
			saw mommy kissing Santa Claus". (MB-ON)			
1490	WOMI	KY				
			hour over/under other stations. (MC-PA)			
*****	************					

SPECIAL INTEREST

720	WRZN	FL	Hernando 12/15 1900 Booming signal. Had to be left on 10kw again. Listened all the way home from
			Gainesville. Heard again 12/16 1950 with fair signal
			here at home. You may want to try for this one around
			sunset. (LF-FL)
1650	WHKT	VA	12/10 2200-2300 Presumed to be station running non
			stop instrumental music. Signal was S-20 !!! Had to a
			full 10 kw. Based on daytime reception in Virginia,
			this has to be the station testing. No ID's heard at
			all. Heard for a couple of nights, but not on tonight
			12/16. (LF-FL)
*****	*****	***	**********

DX WORLDWIDE EAST

Editor: Mark Connelly - 30 William Rd - Billerica, MA 01821-6079 E-Mail: WAllON@ix.netcom.com

This column is for international DX loggings (no US/Canada station logs by US/Canada DXers) by members in the time zones from Central (winter: UTC-6) eastward to UTC+6. Others: report to Pat Martin's DX Worldwide West.

Please report in the format I've used for my DXWW-E reports. Times are UTC. Dates should use 3-letter month abbreviations (rather than all numbers).

Report from Mark Connelly - Times / dates = UTC / 1998

[Connelly*H-MA] = East Harwich, Cape Cod, MA (GC= 70.021 W / 41.713 N) (near junction of Routes 39 & 137: pitch pine forest 2 km from ocean)

[Connelly*R-MA] = Rockport, MA (GC= 70.622 W / 42.667 N) (Granite Pier)

[Connelly*Y-MA] = South Yarmouth, Cape Cod, MA (GC= 70.20 W / 41.65 N) (Windmill Beach: River St. at Willow St.)

e-mail = WAlION@ix.netcom.com

Receivers: Drake R8A (most DX); car radio (DEC 5: 1954 - 2003 UTC)

Antenna systems: cardioid array with BBL-1 broadband loop & APW-1 active whip to DXP-1A phasing unit; car radio whip

*** TRANS-ATLANTIC DX ***

- 549 ALGERIA Les Trembles, DEC 2 2329 loud with man & woman AA group discussion and teletalk. [Connelly*R-MA]
- 576 SPAIN RNE5, Barcelona, DEC 3 0050 // 621 with SS discussion; poor to fair. [Connelly*R-MA]
- 585 SPAIN RNE1, Madrid, DEC 3 0042 // 621 with 2 men in SS; fair. [Connelly*R-MA]
- 594 PORTUGAL R. Renascenca, Muge, DEC 3 0211 // 963 with slow vocal; poor to fair, over other. [Connelly*R-MA]
- 603 SPAIN RNE5, Sevilla / Palencia, DEC 2 2338 // 657 with SS talk; to fair peak. [Connelly*R-MA]
- 621 CANARY ISLANDS // SPAIN RNE1 synchros, DEC 2 2340 SS talk; HUGE ! RNE1 different to RNE5 programming at this time.

 [Connelly*R-MA]
 - + DEC 5 2317 dance music, then man in SS; monster signal. [Connelly*Y-MA]
- 639 SPAIN RNE1, La Coruna, DEC 2 2342 SS // 621; tough CBN slop.
 [Connelly*R-MA]
- 648 SPAIN RNE1, Badajoz et al., DEC 2 2341 // 621 with man in SS; fair over others. [Connelly*R-MA]
- 657 SPAIN RNE5, Madrid, DEC 2338 // 603 with man & woman in SS. [Connelly*R-MA]
- 684 SPAIN RNE1, Sevilla, DEC 2 2336 SS talk with several people in the studio; very good. [Connelly*R-MA]
- 693 AZORES RDP, Santa Barbara, DEC 3 0040 // 837 with folk-influenced rock (like Jackson Browne); good strength carrier, light audio. [Connelly*R-MA]
 - + DEC 5 2301 PP soccer coverage; loud. [Connelly*Y-MA]
- 711.04 WESTERN SAHARA Laayoune, DEC 2 2344 AA strings at light audio level; fair with WOR phased. [Connelly*R-MA]
- 729 SPAIN RNE1, Oviedo et al., DEC 2 2346 // 621 with woman in SS; poor. [Connelly*R-MA]
- 738 SPAIN RNE1, Barcelona, DEC 2 2346 // 621 with SS man & woman; good, over slight CHCM . [Connelly*R-MA]
- 747 CANARY ISLANDS // SPAIN DEC 2 2347 SS talk; in jumble. [Connelly*R-MA]
- 756 SPAIN R. Euskadi, Bilbao, DEC 2 2348 SS teletalk; poor to fair. [Connelly*R-MA]
- 765 SENEGAL Dakar, DEC 2 2348 AA dialect talk; very good at S9+20. [Connelly*R-MA]
 - + DEC 5 2245 group-vocal & banjo-like instrument (cora ?); HUGE. [Connelly*Y-MA]
- 774 SPAIN RNE1 synchros, DEC 2 2350 // 621 with fast SS talk by man & woman; over AA station. [Connelly*R-MA]
- 792 SPAIN SER, Sevilla, DEC 2 2353 SS teletalk; slopped by WSKO & Canadians. [Connelly*R-MA]

- 837 AZORES RDP, Pico da Barossa, DEC 3 0029 romantic PP vocal duet; slightly over Canaries-Spain. [Connelly*R-MA]
- 837 CANARY ISLANDS // SPAIN COPE synchros, DEC 2 2355 SS talk and promo's for programming; strong, over Azores. [Connelly*R-MA]
- 846 ITALY Rome, DEC 2 2358 woman in Italian; poor, in WEEI slop.
 [Connelly*R-MA]
- 855 SPAIN RNE1, Murcia et al., DEC 2 2359 // 621 with SS teletalk; fair. [Connelly*R-MA]
- 864 SPAIN RNE1, Socuellamos, DEC 3 0217 // 855 with SS talk & teletalk; to fair peak. [Connelly*R-MA]
- 873 SPAIN SER R. Zaragoza, Zaragoza, DEC 3 0011 // 1044 with SS teletalk; poor. [Connelly*R-MA]
- 882 CANARY ISLANDS // SPAIN COPE synchros, DEC 2 2356 to fair peak with SS talk and interspersed music, // 837. [Connelly*R-MA]
- 891 ALGERIA Algiers, DEC 3 0001 // 549 with woman doing news in AA; monster carrier, but light audio. [Connelly*R-MA]
- 918 SPAIN R. Intercontinental, Madrid, DEC 3 0215 man in SS; poor, in CJCH slop. [Connelly*R-MA]
- 954 SPAIN R. Espana, Madrid, DEC 3 0005 newstalk by man in SS; fair to good. [Connelly*R-MA]
- + DEC 5 2240 woman in SS; loud. [Connelly*Y-MA]
 963 PORTUGAL R. Renascenca, Seizal, DEC 3 0211 // 594 with slow pop
- male vocal; poor in CHNS slop. [Connelly*R-MA]
 981 ALGERIA Algiers, DEC 5 1958 hetting WCAP during pre- sunset
 fade-up. [Connelly*Y-MA]
- 999 SPAIN COPE, Madrid, DEC 5 2209 SS teletalk mentioning "americanos", then "Cadena COPE" ID & some electronic music;
- excellent. [Connelly*Y-MA]

 1008 CANARY ISLANDS Las Palmas, R. Las Palmas / RadioVoz, DEC 5 2210 excited SS sportstalk by man; to good peak with WINS phased.
- [Connelly*Y-MA]

 1026 SPAIN SER synchros, DEC 5 2212 // 1044 with woman in SS; in WBZ slop. [Connelly*Y-MA]
- 1035 PORTUGAL R. Nacional, Lisboa, DEC 5 2214 sports related PP talk & teletalk; very good. [Connelly*Y-MA]
- 1044 MOROCCO Sebaa-Aioun, DEC 5 2211 man & woman in FF, then North African vocals & violins; way over SER-Spain. [Connelly*Y-MA]
- 1044 SPAIN SER synchros, DEC 3 0011 // 873 with SS teletalk; excellent. [Connelly*R-MA]
- + DEC 5 2212 woman in SS; audible behind Morocco. [Connelly*Y-MA] 1053 MOROCCO Tanger, DEC 5 2239 segment of AA vocal, then talk by
- woman; through tough WEVD slop. [Connelly*Y-MA]

 1053 UNITED KINGDOM Talk Radio synchros, Start Point et al., DEC 3

 0238 // 1089 with EE teletalk; poor to fair in WEVD slop.
- [Connelly*R-MA]
 1071 SPAIN EI, Bilbao, DEC 3 0240 // 1197 with rock vocal; to fair
- peak through CBA slop. [Connelly*R-MA]

 1089 UNITED KINGDOM Talk Radio synchros, DEC 3 0015 teletalk,
- advertisements for CD's; poor to fair. [Connelly*R-MA]

 1098 SPAIN RNE5 synchros, DEC 3 0020 // 1107 with "My Way" by Frank
- Sinatra; over growl. [Connelly*R-MA]
 1107 SPAIN RNE5 synchros, DEC 3 0020 // 1098 with "My Way" by Frank
- Sinatra; good. [Connelly*R-MA] + DEC 5 2234 - man & woman in SS; good. [Connelly*Y-MA]
- 1116 SPAIN SER synchros, DEC 3 0022 // 1044 with segment of SS public address, then in-studio discussion; choppy.
- [Connelly*R-MA]
 1125 SPAIN RNE-5 synchros, DEC 3 0241 // 855 with SS operatic-style
 vocal; fair. [Connelly*R-MA]
- 1134 CROATIA HR, Zadar, DEC 3 0023 Slavic talk; over/under Spain.

- [Connelly*R-MA]
- 1134 SPAIN COPE synchros, DEC 3 0023 SS talk; over/under Croatia.
 [Connelly*R-MA]
- 1143 SPAIN COPE synchros, DEC 3 0023 woman in SS; poor to fair.
- [Connelly*R-MA] 1152 SPAIN RNE5 synchros, DEC 3 0024 - SS talk; in jumble.
- [Connelly*R-MA]
 1179 CANARY ISLANDS // SPAIN SER synchros, DEC 3 0025 SS teletalk;
- slightly over others. [Connelly*R-MA]
 1197 SPAIN EI, Vitoria, DEC 3 0240 // 1071 with pop-rock vocal;
- fair. [Connelly*R-MA]
 1215 SPAIN COPE synchros, DEC 3 0032 // 837 with excited SS talk.
- [Connelly*R-MA]

 1224 SPAIN COPE synchros, DEC 3 0033 bits of SS talk; poor, in slop.

 [Connelly*R-MA]
- + DEC 5 2225 SS talk fragments; poor. [Connelly*Y-MA]

 1251 LIBYA Tripoli, DEC 3 0153 AA talk; fair to good. Weak het from
- something on 1250.75 off in the background. [Connelly*R-MA] 1259 AZORES RDP, Faial, DEC 3 0150 het against CIHI & nulled WPZE.
- [Connelly*R-MA]

 1287 SPAIN SER synchros, DEC 3 0035 // 1044 with SS teletalk; fair.
- 1287 SPAIN SER synchros, DEC 3 0035 // 1044 with SS teletalk; fair [Connelly*R-MA]
- 1296 SPAIN COPE, Valencia, DEC 3 0054 // 837 with woman in SS presenting teletalk show; to good peak. [Connelly*R-MA]
- 1305 SPAIN RNE5 synchros, DEC 3 0056 // 621 with SS male vocal; poor to fair. [Connelly*R-MA]
- 1314 NORWAY NRK, Kvitsoy, DEC 3 0149 Cheap Trick "I Want You to Want Me"; dominant, Spain audible well under. [Connelly*R-MA]
- 1359 SPAIN Arganda, DEC 5 2227 SS talk; through slop from CKBC/WLYN/WDRC. [Connelly*Y-MA]
- 1385.92 GUINEA Labe, DEC 5 2229 drumming, African male vocal; poor-fair, in WPLM slop. [Connelly*Y-MA]
- 1413 SPAIN RNE5 synchros, DEC 3 0140 echoey SS teletalk; through CIGO-1410.5 slopper. [Connelly*R-MA]
- 1503 AZORES AFRTS, Lajes, DEC 3 0130 US EE talk; in slop. [Connelly*R-MA]
- 1521 SAUDI ARABIA BSKSA, Duba, DEC 5 1954 het and bits of audio starting to fade up.
 - + DEC 5 2150 AA male vocal; mixing with SER-Spain. [Connelly*Y-MA]
- 1521 SPAIN SER, Castellon, DEC 5 2150 SS teletalk; over/under Saudi Arabia. [Connelly*Y-MA]
- 1530 VATICAN R. Vaticana, DEC 3 0102 dissonant modern symphonic music; over WSAI and another station. [Connelly*R-MA]
- 1548 KUWAIT VOA, Kuwait City, DEC 3 0104 VOA EE news; to good peak.
 [Connelly*R-MA]
- 1550 ALGERIA RASD Clandestine, Tindouf, DEC 5 2003 SS talk; starting to fade up to QRM WNTN daytimer.
 - + DEC 5 2155 AA male vocal came up and demolished the rap song WDZK was playing. [Connelly*Y-MA]
- 1575 SPAIN SER synchros, DEC 3 0115 // 1044 with woman in SS; in CBJ slop. [Connelly*R-MA]
- 1583.62 unID (CEUTA?) DEC 3 0113 someone drifted to the low side of the channel; hetting SER Spain-1584.0. [Connelly*R-MA] + DEC 5 2157 off-channel signal still here. [Connelly*Y-MA]
- SPAIN SER synchros, DEC 3 0115 // 1044 with SS female teletalk; poor with 1583.62 het and CBJ slop. [Connelly*R-MA]
 - + DEC 5 2159 woman in SS; over growl from low-side drifter.
 [Connelly*Y-MA]
- 1601.9 unID DEC 3 0118 maybe one of the Spaniards off channel; het

- against SS stations on 1602. [Connelly*R-MA]
- 1602 SPAIN EI, Vitoria, DEC 5 2158 fast SS talk by man & woman (non-SER); good. [Connelly*Y-MA]
- 1619.5 NETHERLANDS Scheveningen, PCH, DEC 3 0246 code ID's; way over the 1620 domestics. [Connelly*R-MA]

*** PAN-AMERICAN ***

- 530 TURKS & CAICOS R. Vision Cristiana, DEC 5 0343 SS Bible reading hitting S9+40, as loud as anything from Boston or New York.

 [Connelly*H-MA]
 - + DEC 5 2000 already loud at 3 p.m. local with classical music, bried EE announcement "Views expressed do not necessarily represent those of this station." SS religious talk by man, with interspersed music, followed. [Connelly*Y-MA]
- 535 GRENADA GBC, St. George's, DEC 3 0047 Carib-EE talk by man, then a mellow soul vocal; fair. [Connelly*R-MA]
- 540 CUBA R. Rebelde, CMHV, Sancti Spiritus, DEC 5 0343 SS sports // 600; slightly over pile-up. [Connelly*H-MA]
- 540 MEXICO XEWA, San Luis Potosi Monterrey, DEC 5 1127 SS shouting, Mexico mentions, ranchera music; over/under WLUX and others. [Connelly*H-MA]
- 555 ST. KITTS & NEVIS ZIZ, Basseterre, DEC 5 0349 reggae & soul music; fair. [Connelly*H-MA]
- 570 CUBA R. Reloj, DEC 5 0350 clock-ticks, SS news, on-the- minute beeps; huge, annihilating WMCA. [Connelly*H-MA]
- 580 CUBA R. Rebelde, Mantua / Baracoa, DEC 5 1010 // 710 with woman in SS; mixed with WKAQ. [Connelly*H-MA]
- 580 PUERTO RICO WKAQ, San Juan, DEC 5 1017 several local Puerto Rico mentions in SS talk; mixed with Cuba and a third SS
 - speaking Latin American. [Connelly*H-MA]
 + DEC 5 2328 ray gun sounds, WKAQ jingle: strong, over second SS
 station that was likely YVMJ. [Connelly*Y-MA]
- station that was likely YVMJ. [Connelly*Y-MA]

 600 CUBA R. Rebelde, CMKV, Urbano Noris, DEC 5 0342 SS sporting

 event // other Rebelde's; local-like. [Connelly*H-MA]
- 607.9 CURA R. Rebelde outlet, unknown city, DEC 5 0341 SS sportstalk (// 600) and a mention of "onda corta" (shortwave).
- [Connelly*H-MA]

 610 COLOMBIA (t) Radiodifusora Nacional de Colombia, Uribia, DEC 5

 1025 most likely this one with back-to-back mellow romantic and
- folk-style SS vocals; in jumble with WIOD/WIP. [Connelly*H-MA]
 620 COLOMBIA (t) DEC 5 2320 apparent Colmundo ID; poor, in mix with
 apparent PP (Brazil), Antiqua, Cuba, and domestics.
- [Connelly*Y-MA]
 630 PUERTO RICO WSKN, San Juan, DEC 3 0226 man & woman in SS,
- Portoriquena mention; over CFCY/WPRO. [Connelly*R-MA] + DEC 5 1003 SS talk about Latin American countries, then Super
 - Cadena jingle; over/under WPRO. [Connelly*H-MA] + DEC 5 2311 SS talk about the economy of Puerto Rico and links
- to the US; local-like signal, alone on channel. [Connelly*Y-MA] 640 CUBA R. Progreso, Guanabacoa / Las Tunas, DEC 5 0945 relaying the R. Reloj program at this time; over/under YVQO Venezuela.
- [Connelly*H-MA]

 640 VENEZUELA Union R., YVQO, Puerto La Cruz, DEC 5 0945 SS

 Venezuelan national news; over/under Cuba. [Connelly*H-MA]
- 650 COLOMBIA RCN Antena Dos, HJKH, Bogota, DEC 5 0957 brassy orchestration & SS song, Antena Dos ID, mention of "musica salsa"; good, over second SS Latin American. [Connelly*H-MA]
- 660 COLOMBIA (t) R. Autentica, HJJN, Cali, DEC 5 0951 apparent
 "Autentica" mention, then folk-style vocal; under WFAN.

- [Connelly*H-MA]
- 670 CUBA R. Rebelde, CMQ, Arroyo Arenas, DEC 5 0936 // 600 with SS romantic vocals; dominant. [Connelly*H-MA]
- 670 VENEZUELA R. Rumbos, YVLL, Caracas, DEC 5 2305 mentions of "liga de Venezuela"; jumbled with Cuba and possible WWFE.

 [Connelly*Y-MA]
- 680 PUERTO RICO WAPA, San Juan, DEC 5 2303 SS man screaming, Puerto Rico mentions either a sporting event or a political rally.

 Mostly under WRKO. [Connelly*Y-MA]
- 700 JAMAICA JBC R.1, Montego Bay, DEC 5 1047 disco vocal, Caribbean EE talk; jumbled with SS Latin Americans and WLW. [Connelly*H-MA]
- 700 VENEZUELA R. Sur, YVPQ, Puerto Ordaz, DEC 5 2300 probably this with sporting event, SS advert mentioning Puerto la Cruz.

 [Connelly*Y-MA]
- 705 ST. VINCENT & THE GRENADINES Kingstown, DEC 3 0222 old-time C&W male vocal; fair to good. [Connelly*R-MA]
- 710 CUBA R. Rebelde synchros, DEC 5 1010 // 1180 with SS talk by woman; over/under WOR. [Connelly*H-MA]
- 720 VENEZUELA R. Oriente, YVQE, Porlamar, DEC 5 2315 Oriente slogan, SS political talk. [Connelly*Y-MA]
- 730 unID DEC 5 2249 song ended, announcer said "Musical! en ano nuevo" (?), then old-style group vocal. Possibly a Venezuelan or Dominican Republic station. [Connelly*Y-MA]
- 731.95 unID DEC 3 0220 SS drifter now here (formerly on approximately 733 to 735), some talk but no ID. [Connelly*R-MA]
 - + DEC 5 2313 drifter mentioned "tropical" or "musical"; very mushy audio.
 - + DEC 5 2330 slogan sounded like "R. Roberto" or similar. [Connelly*Y-MA]
- 750 VEMEZUELA RCR, YVKS, Caracas, DEC 3 0309 SS Caracas news and sports. [Connelly*R-MA]
 - + DEC 5 0401 absolutely blasting in with the Venezuelan national anthem. [Connelly*H-MA]
- 759.77 unID DEC 5 2251 somebody putting a rough growl on the low side of HJAJ-760.0. [Connelly*Y-MA]
- 760 COLOMBIA RCN, HJAJ, Barranquilla, DEC 3 0205 sporting event with excited SS announcer; huge. [Connelly*R-MA]
- 760 CUBA R. Reloj, Las Mercedes & Guanabacoa, DEC 5 0400 usual SS news & time show; briefly over growl. [Connelly*H-MA]
- 770 COLOMBIA RCN, HJJX, Bogota, DEC 5 1055 "la radio de Colombia" jingle, RCN ID; over/under WABC. [Connelly*H-MA]
- 780 VENEZUELA R. Coro, YVMN, Coro, DEC 5 0247 R. Coro ID and SS talk about election coverage; huge and dominant. [Connelly*H-MA]
- 800 NETHERLANDS ANTILLES Trans-World Radio, PJB, Bonaire, DEC 3 0218
 southern US preacher; excellent over slight het from Spain-801.
 [Connelly*R-MA]
 - + DEC 5 0403 instrumental of "What Child is This?" (/ "Greensleeves"), then a man in SS greeted his listeners in Venezuela. [Connelly*H-MA]
- 810 COLOMBIA R. Net, HJCY, Bogota, DEC 5 1040 timecheck mentioning "la hora en Colombia"; mixed with several others. [Connelly*H-MA]
- 810 PUERTO RICO WKVM, San Juan, DEC 5 2333 local Puerto Rican ad with swing music inspired by the recent Brian Setzer Orchestra hit; atop Colombia. [Connelly*Y-MA]
- 830 CUBA R. Reloj, DEC 5 1100 Reloj ticker-and-talker; under WCRN. [Connelly*H-MA]
- 840 CUBA CMHW, Santa Clara, DEC 5 1057 running the Reloj program at this time, SS news about relations between France and Cuba; local-like. [Connelly*H-MA]
- 895 ST. KITTS & NEVIS VON, Bath Village, DEC 3 0003 Carib-EE news

- and public-affairs talk; poor. [Connelly*R-MA]
- 900 CUBA R. Progreso, DEC 5 2345 SS mentions of various Cuban cities, then R. Progreso ID; excellent, way over others.
- "Pipeline" to Cuba and south Florida at the time. [Connelly*Y-MA]
- 940 CUBA R. Reloj, DEC 5 1103 R. Reloj news and "RR" beeps; mixed
- with CBM. [Connelly*H-MA]
 940 VENEZUELA R. Punto Fijo, YVNN, Punto Fijo, DEC 3 0214 probably
 this with several Venezuela mentions; over other Latin Americans
- this with several Venezuela mentions; over other Latin Americans with CBM phased. [Connelly*R-MA]
- 1000 COLOMBIA RCN, HJAQ, Cartagena, DEC 3 0308 // 760 with SS sports; over/under CKBW. [Connelly*R-MA]
 1020 VENEZUELA R. Margarita, YVRS, La Asuncion, DEC 5 2213 Margarita
- mentions; mixed with another Latin American that was probably R.

 Calendario.
 - + DEC 5 2240 talk about Venezuelan politics; good. [Connelly*Y-MA]
- 1050.31 unID DEC 5 2216 nasty het on WEVD, but not much audio
- sliding by. [Connelly*Y-MA]
 1080 VENEZUELA R. Barcelona, YVQJ, Barcelona, DEC 5 2237 romantic
- vocal, R. Barcelona ID; good with WTIC phased. [Connelly*Y-MA]

 1090 VENEZUELA Union R., YVSZ, Caracas, DEC 5 2219 Union Radio ID;
 dominating the channel. The only QRM was a slight het from
- UK-1089. [Connelly*Y-MA]

 1110 VENEZUELA YVQT, Carupano, DEC 5 2234 Carupano ID's in SS talk about "beisbol"; over other SS Latin American (maybe YVRX).
- [Connelly*Y-MA]

 1130 COLOMBIA unID city, DEC 3 0205 SS sporting event coverage of the same game being broadcast on HJAJ (RCN) 760, but with the
- other team's announcers; over WBBR. [Connelly*R-MA]

 1140 VENEZUELA La Voz del Caribe, Porlamar, DEC 3 0200 SS political talk, mentions of La Guaira, discussions of workers' issues.
- [Connelly*R-MA]

 1180 CUBA R. Rebelde, DEC 5 1010 // 710 & others with SS talk by woman; over WHAM. [Connelly*H-MA]
- 1210 VENEZUELA R. Anzoategui, YVZT, Barcelona, DEC 5 2225 SS sportstalk with mentions of teams from several Venezuelan cities; over WPHT. [Connelly*Y-MA]
- 1349.31 unID DEC 5 2232 this is a Latin American drifter previously noted on 1349.37. Fast SS dance-club music, woman in SS, then
- slow female vocal; briefly good. Ideas ? [Connelly*Y-MA] 1375.02 ST. PIERRE ET MIQUELON RFO, DEC 3 0142 man in FF; loud.
- [Connelly*R-MA]
 + DEC 5 1956 pre-sunset fade-up. [Connelly*Y-MA]
- 1420 VENEZUELA R. Marabina, YVNZ, Maracaibo, DEC 3 0137 fast SS Maracaibo adverts; over domestics and 1422 TA het.
 [Connelly*R-MA]
- 1429.13 unID DEC 3 0135 weak het against WXKS/WNJR. [Connelly*R-MA]
- 1470 VENEZUELA R. Vibracion, YVSY, Carupano, DEC 3 0134 Isla
- Margarita mentions; barely above WZOU and others. [Connelly*R-MA] 1500 VENEZUELA YVRZ, Cumana, DEC 3 0133 "Dos Mil" slogan, then
- tropical SS vocal; over/under WTOP. [Connelly*R-MA]
- 1505 ANGUILLA R. Anguilla, The Valley, DEC 3 0128 bits of talk; hammered by WNRB slop. [Connelly*R-MA]
- 1560.4 unID DEC 3 0110 presumably an off-channel Pan- American with a het against WQEW. I suppose the Mideast clandestine could also be a possibility. [Connelly*R-MA]
- 1610 ANGUILLA Caribbean Beacon, The Valley, DEC 3 0247 religious music; over TIS's. [Connelly*R-MA]
 - + DEC 5 2205 maybe this with CNN Radio News; briefly over Woods Hole, MA TIS. [Connelly*Y-MA]

12/17. Medium wave signals from northern Europe were very strong here between 0200 and 0500 UTC on 18 DEC 1998 in Billerica, MA (15 miles / 24 km north west of Boston).

Norway-1314 was hitting S9+40, Germany-1422 was loud; also, there were huge signals from UK stations on 882, 1089, and 1215 as well as Ireland - 567 / 612, Denmark-1062, and many others.

WESTERN DX FORUM

Reid Wheeler - 5910 Boulevard Lp SE - Olympia WA 98501-8408 E-Mail: reid@olywa.net; phone 360-786-6756; fax 360-753-3824

Pete Taylor - 6002 Bayview Dr. NE - Tacoma, WA 98422-1227 pvtaytac@brigadoon.com

I note with interest that both M Street and the NRC Log list KFMB-760 as 50kw-D and 5kw-N. Everyone please take note that the opposite is true they are 5kw-D and 50kw-N. Timing is everything; in this case, according to their engineer, the then-KBIG-740 application snuck in and was approved before KFMB's request for 50kw days. Some of you may remember that KFMB was previously on 540 on a semi-permanent but nonetheless temporary arrangement with the Mexican government. Someone got excited, I guess, and they were bounced to 760 with 5kw. Before the treaty was revised again, a Tijuana station was built on 540. With XEBCH now well ensconced with its wide coverage area and unknown actual nighttime power, I'm sure KFMB wishes it were still on 540. Another good example of frequency changing was when the CRTC switched CFRB-860 10kw and CJBC-1010 5kw, both ending up with 50kw but with CFRB having to go directional. I think we know who gained on that. This leads us to the future demise of CBF, CBL and CBM, all of which I believe are still operating past their projected sign-off deadline. What I still haven't heard is whether these channels will be returned to the CRTC for reassignment to the most qualified applicant or whether Canada will simply give up the frequencies, resulting in a flurry of power increase applications from US stations which previously protected them. I'm not losing a lot of sleep on this - all three have eluded me thus far - but someone knowledgeable about all this sort of stuff knows what will happen, it would be great if you would share it in these pages. And while I am not enthralled with the existence of the CBC all night programming, I have to say that I truly enjoyed their Quebec election coverage as heard here on CBK. The reporters were quite incisive - and opinionated - and it was a kick. On another matter, congrats to Dan Sys for his strong contest showing. If you live in mid-America and are surrounded by states, I would think this contest would be a breeze for you. Please keep Nancy Johnson busy; if you don't then West coasters will prevail! Happy New Year everyone, and to all, a good night (of DXing, of course).

Gary Larson, 2806 Lincoln, Burbank CA 91504

[12/10] Wanted to wish everyone a great holiday season and a good New Year and hope you all have good dx. Stay healthy. 73

Mike Sanburn, PO Box 1256, Bellflower CA 90707-1256 310-614-1444

It's official - the 1999 IRCA Convention will be held at the Holiday Inn-Boardwalk Hotel in Las Vegas, Nevada. The dates are June 25, 26, 27

but there is no obligation to attend the full 3 days. On the other hand, some may wish to negotiate a week-long vacation. Our location is close to McCarren Airport at the south end of the strip. We're right between the Monte Carlo and the brand new Bellagio Resort. Other hotels within waking distance are the MGM Grand, New York, New York, Caesar's Palace, and Luxor. Mike Stonebridge asked me if the hotel's toll free number from reservations, 1-800-635-4581, could be accessed from outside of the United States? I called them to ask and if it doesn't work then call 1-702-733-2400. Use code I-R-C when making reservations to get the discounted price. Regularly scheduled airport transport buses are operated by both BellTran and Greyline. Visit the ground transportation desk in the terminal. Renting a car is highly recommended! Our hotel features a Coney Island theme. There are 2 swimming pools, a nightclub, a casino, a live stage show, a roller coaster, and the strip's only 24 hour all you can eat buffet!! We will be meeting in the VIP room on the second floor. Our activities schedule will be similar to the 1997 IRCA convention that I hosted in Costa Mesa, Calif. Friday we'll do station tours, dinner and presentations. Saturday is the business meeting, prize drawing, banquet, and the big DX Tupperware party also known as the IRCA Auction. Proceeds, of course, benefit the club. I am asking for donations of radio-oriented items: T-shirts, coffee mugs, license plates, books, CD's, key rings, pens, Frisbees, clocks, hats, toys, airchecks, bumper stickers, letter openers, tools, software, hardware, accessories, anything of value to fellow Dxers. They can be sent to the above address or brought directly to the convention. Sunday is an "on your own" day - but we'll probably have an IRCA picnic. We will officially welcoming Phil Bytheway's club decalcomania of which I am also a member. In fact, all club members, whether longwave, shortwave, or gigahertz, are invited to attend. Show up even ef you don't belong to a club. If possible, bring along the usual show and tell items: veries, photo albums, radios, etc. Some of the popular tourist attractions in town include the all new Star Trek experience at the Las Vegas Hilton [www.startrekexp.com] and the Antique Auto Museum at Imperial Palace. Who knows, maybe Mr. Warmth, Don Rickels, will even be playing that weekend. A visitor's guide and map can be obtained by writing to: Las Vegas Convention and Visitor's Authority, 3150 Paradise Rd, Las Vegas NV 89109-9096. Room reservations must be made by April 25th to receive discount rate. More info to come... Happy New Year and good DX. 73

VERIFICATION SIGNERS

Stephen S. Howe - 8 Dutch Village, Apt. DL - Menands, NY 12204-2930 E-Mail: showe@cnsunix.albany.edu

My deadline is the last Wednesday of the month.

CONTRIBUTORS

GVJ Gary V Jackson, 7735 Center Parkway, Sacramento CA 95823 PM Patrick Martin, P O Box 843, Seaside OR 97138-0843;

mwdxer@webtv.net

PES Paul E Sojka; ks2s12@aol.com

PT Pete Taylor; pvtaytac@brigadoon.com

FREQ CALL NAME, TITLE; ADDRESS; WHAT; WHEN; WHO

- 530 * Bob Williams; Morago/Orinda Fire Dept, 33 Orinda Way, Orinda CA 94563; P; 4; GVJ
- 850 WREF Irv Goldstein, VP/GM; Berkshire Broadcasting Corp, 198 Main St. Danbury CT 06810**; LM; 4; PES

- 1010 KIQN Christopher Wilde, PD; Eagle Gate Plaza, 60 East South
 Temple #120, Salt Lake City UT 84111; LM; 23; PM
- 1150 CKBL Jason Mawr, PD; Okanagan Radio Limited, 300-435 Bernard Ave, Kelowna BC V1Y 6N8; L; 10; PM
- 1520 KKSN John Hug II, Creative Services; 4614 SW Kelly, Portland OR 97201; P; 10f; PM
- 1560 WRHC Ana Vidal, VP; 330 SW 27th Ave, #207, Miami FL 33135; F; 60; PM
- 1640 KDIA Clifford Brown, Jr, PD; 3267 Sonoma Blvd, Vallejo CA 94590; F; 6f; PM
- 1660 KXOL Beverly ("Bev") Snyder, GM; 4455 South 5500 West, Hooper UT 84315***; PT L; 10; GVJ
- 1671 (No signer); Tappisaki Beacon Office, Tappi Minnmaya-Mura-Higashitsugaru-gunn, Aomori Pref 030-1711, Japan; C; 80; PM
- 1700 WCMQ Ralph Chambers, CE****; PT
 - KBGG Eldon L Schlenker, DirEng; 5161 Maple Dr, Pleasant Hill IA 50317; L; 30; GVJ
 - TIS Javier del Rio; State of California, Dept of Transportation, Box 942874, Sacramento CA 94274-0001; P; 3; GVJ

WHAT was received: L = Letter with personalized statement; F = Form letter; Q = QSL card, commercially printed; C = Postcard or similar card supplied by station; P = Prepared card supplied by DXer; R = DXer's report returned with statement; cf = Certificate; E = Verification by e-mail; fx = Verification by FAX; M = Coverage map; B = Bumper or other sticker; bc = Business card; + = Extra goodies WHEN the reply came: Number of days elapsed; f = Follow-up, by mail, FAX, e-mail, or visit; n = Return postage not used; r = Return postage returned

NOTES: * [for this column] = Call letters are KPD373; ** [for this column] = See comment below; *** [for this column] = See comment below; **** [for this column] = See comment below

A big welcome to Paul to the column and to the IRCA! Report often! Good to have Pete back with us this month! Paul indicates that the address for WREF-850 comes from their letterhead and differs from that in the NRC Log; telephone and FAX numbers are (203) 744-4800 and (203) 778-4655, respectively. Pete clarifies the information for KXOL-1660 and WCMQ-1700 that was reported in the September column (which appeared in October). Thanks, Pete! For KXOL-1660: Beverly ("Bev") Snyder is the GM for the station according to M Street and confirmed by Pete by a telephone call; Brent Larson is listed as the Station Manager and PD, and has also signed several verifications; the address for the station listed on their stationery (4455 South 5500 South, Hooper UT 84315) is incorrect, according to M Street and again confirmed by Pete by a telephone call to a long-time employee with the sales department; the correct address is 4455 South 5500 West, Hooper UT 84315; finally, the station is licensed to Brigham City, Utah. For WCMQ-1700: Pete indicates that Ralph Chambers, the CE, is still the primary verification signer, but that his workload sometimes necessitates passing verie requests to his Executive Assistant (Nini Veras); the city of license is Miami Springs, but the studio is in Coral Gables, Florida. This column was prepared on 12/16/98. 73, SSH. *-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-

BOARD OF DIRECTORS

Phil Bytheway - IRCA PRESIDENT, 9705 Mary NW, Seattle WA 98117-2334

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18.2.1
         Ralph Sanserino as 'DX Monitor'
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            co-editor-in-chief/publisher
                                                            Y
         Phil Bytheway as co-editor-in-chief/
18.2.2
           publishing coordinator
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18.2.3
         Lee Freshwater as EDXR editor
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         John C Johnson as CDXR editor
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         Nancy Johnson as WDXR editor
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18.2.6
         Pat Martin as DXWW-W editor
         Richard C Evans as EDXF editor
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         Reid Wheeler as WDXF editor
         Robert Wien as Broadcasting Information
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         Bruce Portzer as DXWW-II editor
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18.2.10
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         Nick Hall-Patch as Technical Column editor Y
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18.2.11
18.2.12
         Stephen S Howe as Verification Signers
                                                                     Y
                                                       Y
                                                          Y
                                                             Y
                                                                  Y
                                                                        γ
                                                                           Y
            editor
         Bruce Portzer as IRCA Countries Committee
18.2.13
                                                       Y
                                                          Y
                                                             Y
                                                                  Y
                                                                     Y
                                                                        Y
                                                                           Y
            chairman
18.2.14
         Mark McMillan as DX Records/GYDXR editor
                                                       moot
         Reid Wheeler as Election Committee
18.2.15
                                                                     Y
                                                                        Y
                                                                           Y
                                                       Y
                                                          Y
                                                             Y
                                                                  Y
            chairman
         Chris Knight as IRCA MEXICAN LOG
18.2.16
                                                                           Y
                                                       Y
                                                          Y
                                                             Y
                                                                  ٧
                                                                     Y
                                                                        Y
            coordinator
                                                          Y
                                                             Y
                                                                  Y
                                                                     Y
                                                                        Y
                                                                           Y
          Steve Ratzlaff as IRCA Reprints manager
                                                       Y
18,2,17
                                                                    Y
                                                                        Y
                                                                           Y
                                                       Y
                                                          Y
                                                             Y
                                                                  Y
18.2.18
         Phil Bytheway as IRCA Bookstore manager
          Phil Bytheway as ANARC Representative
                                                       Y
                                                          Y
                                                             Y
                                                                  Y
                                                                    Y
                                                                        Y
                                                                           Y
18.2.19
                                                       Y
                                                          Y
                                                             Y
                                                                     Y
                                                                        Y
                                                                           Y
         Mike Sanburn as IRCA Publicity chairman
18.2.20
          Lynn Hollerman as Computer Bulletin Board
18.2.21
                                                             Y
                                                                  Y
                                                                     Y
                                                                        Y
                                                                           Y
                                                       Y
                                                          Y
            representative
          Bill Nittler as IRCA registered agent
18.2.22
                                                             Y
                                                                     Y
                                                                        Y
                                                                           Y
            (must live in CO)
                                                          Y
          Eric Bueneman as Hearing it Through the
18.2.23
                                                              Y
                                                                  Y
                                                                     Y
                                                                        Y
                                                                           Y
            Grape Vine editor
                                                       Y
                                                          Y
          Mark Connelly as Temporary Editor of
18.2.24
                                                                        Y
                                                                           Y
                                                       Y
                                                          Y
                                                              Y
                                                                  Y
                                                                     Y
            DXWW-E
          Approve of a $5.00/year (voluntary) charge
18.2.25
                                                                        Y
                                                                           N
                                                       Y
                                                          Y
                                                              Y
                                                                  Y
                                                                     N
            for SDXM
          Approve of Mike Sanburn bid to host the
18.2.26
           '99 convention in Las Vegas NV on
                                                                     Y
                                                                        Y
                                                                           Y
           June 25-27 1999
                                                       Y
                                                          Y
                                                              Y
                                                                  Y
```

LF - Lee Freshwater, LG - Larry Godwin, NHP - Nick Hall-Patch, MH - Mike Hardester, JJ - John Johnson, NJ - Nancy Johnson, PM - Pat Martin, Y - Yes, N - No, A - Abstain

All passed. 18.2.14 is declared moot as Mark McMillan has dropped out of the club last year.

Those receiving SDXM that are interested in making the voluntary contribution of \$5.00, please send it to me, Phil Bytheway, 9705 Mary NW, Seattle WA 98117-2334. Please make checks out to Phil Bytheway.

GEOMAGNETIC INDICES

Tabulated from WWV at ~0518 GMT nightly

Geomagnetic Summary December 10 1998 through December 22 1998

	GEO - Go maf - mo mas - mo mis - mo	ajor f	lare torm	activity	pca - polar cap absorption SA - Solar Activity spe - satellite proton event ss - severe storm		
Date	FLUX	A	к	SA	GEO	OTHER	
12/10	134	5	3	low	quiet-active	swa	
11	143	20	2	low	quiet-active	-	
12	Z.	z	z	z	z	-	
13	144	1	1	low	quiet	swa	
14	144	5	z	low	active-unsettled	swa	
15	z	z	Z	z	z	-	
16	141	9	0	low	quiet-unsettled	swa	
17	146	0	0	moderate	quiet	swa	
18	155	2	0	high	quiet	maf 1722	
						swa	
19	138	3	3	low	quiet-unsettled	swa	
20	135	11	1	moderate	quiet-unsettled	swa	
21	135	2	1	low	quiet	swa	
12/22	129	3	1	low	quiet	swa	
--*-*-*-*-*-*-*-*-*-*-*-*-*-*							

GEOMAGNETIC INDICES

maf - major flare

phil bytheway - Seattle WA - philip_bytheway@mukilteo.hac.com

Tabulated from WWV at ~0518 GMT nightly

GEO - Geomagnetic activity

Geomagnetic Summary November 19 1998 through December 3 1998

pca - polar cap absorption

SA - Solar Activity

mas - ma	jor	storm		spe - satellite pro	ton event
mis - mi	nor	storm		ss - severe storm	
FLUX	A	ĸ	SA	GEO	OTHER
117	7	3	very low	quiet-unsettled	_
122	11	3	low	quiet-unsettled	_
z	z	z	z	z	-
126	7	2	high	quiet-unsettled	maf 1623
120	9	3	moderate	quiet-unsettled	maf 0600
140	12	3	low	quiet-active	-
150	9	1	low	quiet-unsettled	-
z	z	z	z	Z	-
159	10	2	high	quiet-unsettled	swa
165	3	2	low	quiet	swa
168	4	2	low	quiet-unsettled	-
163	12	3	low	quiet-active	-
163	8	1	low	quiet-active	***
152	4	1	low	quiet	-
	7	2	low	quiet-unsettled	-
*-					
If you note any AM changes (call, format, slogan, etc), please send					
	mis - mi FLUX 117 122 z 126 120 140 150 z 159 165 168 163 163 163 152 153 *-*-*-* note any o the NRC	mis - minor FLUX A 117 7 122 11 z z 126 7 120 9 140 12 150 9 z z 159 10 165 3 168 4 163 12 163 8 163 12 163 8 152 4 153 7 **-*-*-*-*-** note any AM o the NRC Log	117 7 3 122 11 3	### FLUX A K SA 117	### FLUX A K SA GEO 117

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IRCA Technical Column

editor:

Nick Hall-Patch 1538 Amphion St. Victoria, B.C. Canada V8R 4Z6

A Precision Frequency Measurement System

by Albert Lehr

(editor's note: Precision Frequency Measurement (PFM) of received radio signals goes back quite a long way in the medium wave DXing hobby. In the early '70s, Gordon Nelson and Ron Schatz among a few others were able to derive fairly exact frequencies of received MW signals using a signal generator, a digital frequency counter accurate to one hertz or better, a receiver and some interfacing circuitry. Charles Taylor describes such a system in IRCA reprint T31. An accurate measurement of a received signal can provide a "fingerprint" which along with a direction-finding antenna such as a loop, can allow a DXer to identify a signal even before it delivers audio, and long before any audio includes an ID. Al's system is a considerable improvement on the older designs, as it allows measurement of frequencies to better than 0.01 Hz, and provides a synchronously demodulated output as well.

The original designs for PFM of a received signal used a separate signal generator that was carefully tuned to the same frequency as the signal which one was trying to measure (see figure 1). First one heard an audible heterodyne between the signal generator's output and the received signal, which became lower in pitch as the generator approached the received signal's frequency. This would be followed by a "subaudible heterodyne" (SAH), a pulsating sound in which the number of pulses per second indicated the separation between the two frequencies in hertz. Finally, the generator's frequency would be exactly the same as the received signal's, and there would be no interference between the two signals. At this point, the signal generator's frequency would be read on the frequency counter which would also indicate the exact frequency of the received signal.

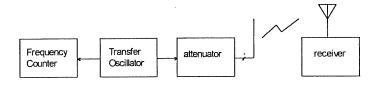


Figure 1

If you read Charles Taylor's article you will discover that PFM is not quite so simple, but the basics are as described above. Now, on to Al's set-up:)

My Precision Frequency Measurement system may be more capable than the systems of 25 years ago, but it is also more complex. Unless you own a receiver which provides an output from its local oscillator, as well as an output from the final IF amplifier, you will need to modify a receiver to provide these outputs (as I did with my Allied A-2515) to enable you to perform accurate PFM. In addition, if you want to define signals very precisely, you will need either a very accurate frequency counter or one that will accept an accurate external timebase signal, which you will provide. Finally, there is some construction involved in providing an interface between

the receiver and the frequency counter, but the interface provides the bonus of a synchronously demodulated output from the receiver.

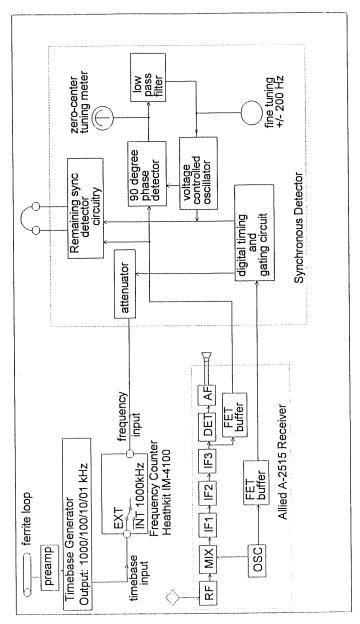


Figure 2

Figure 2 shows a block diagram of the overall system. There you will see that FET buffers have been added to my A-2515 receiver to provide the required local oscillator and IF outputs. Such buffers may be added to other types of receivers if you have the expertise. You will also note

that my receiver is a single conversion model; the system described is usable only on a single conversion receiver with an IF below the tuning range, and the local oscillator frequency must be at least twice that of the VCO frequency. Unfortunately, this requirement eliminates most modern day communications receivers, but the diehard experimenter may have an older receiver put aside which will fill the bill.

The timebase generator

The timebase for the frequency counter is my own design, and derives its accuracy from reception of the time and frequency standard station WWVB on 60 kHz. Its carrier frequency is referenced to the National Institute of Standards and Technology frequency standard, and, due to its low frequency, suffers very little from propagation induced disturbances. My generator consists of a 6 MHz crystal oscillator which is divided down to 60 kHz and phase-locked to WWVB's signal which is received using a ferrite loop and preamplifier. (recently a micro-controller based circuit with a function similar to this generator showed up in EDN magazine. See http://www.ednmag.com/reg/1998/080398/16di.cfm for details)

As noted in figure 2, the output of the timebase generator consists of several frequencies. Each frequency provides a different gating period for the frequency counter (the gating period is the time it takes to count the frequency displayed by the counter). The longer the gating period used, the more precise is the measured frequency. The various timebase frequencies and their related gating periods are:

1 kHz (gating period of 1000 seconds) - It is very seldom that I want to wait for a minimum of 16 minutes and 40 seconds for a frequency reading. The first reading will almost always be wrong, meaning that it could be over a half-hour wait for a valid readout. I don't think that this gating period isof much practical use to a DXer, although it does give a precision of 0.001 Hertz.

10 kHz (gating period of 100 seconds) - Not too long a wait, so it is usable if the VCO can hang on to the carrier long enough. Not very good on crowded channels or on fading signals, but I was able to measure CKXM on 1200.01156 kHz.

100 kHz (gating period of 10 seconds) - Probably the best combination of resolution and practicality. I used this to measure Norway on 1313.9990 kHz and Denmark (?) on 1062.0000 kHz in December 1997.

1000 kHz (gating period of 1 second) - Used when changing frequencies, for scanning across the band, or when conditions on the channel make a longer gating period useless.

The remainder of the block diagram includes PLL (phase locked loop) components (phase detector, low pass filter and voltage controlled oscillator), a digital timing and gating (DTG) circuit, some additional synchronous detector circuitry, and a fine tuning control and zero-center tuning meter to aid in getting the PLL to lock on the IF output.

DTG A pulse synchronization circuit using a 74LS74, (described in Don Lancaster's TTL Cookbook) is used in the DTG circuit to produce a 455 kHz gating pulse that is delayed until it coincides with the arrival of a pulse from the conversion (local) oscillator of the receiver. This gating pulse then removes pulses (one pulse at a time) periodically from the conversion oscillator pulse train to produce the frequency that is to be measured, which is exactly the same as the frequency received at the antenna.

As an example, let's say that you tune to a station on exactly 1000 kHz. In the period of one second, the conversion oscillator will put out 1,455,000 pulses. The gating circuit will remove 455,000 of them, leaving 1,000,000 for the frequency counter to count. Suppose that the conversion oscillator drifts to 1455.025 kHz. The station carrier in the IF channel moves to 455,025 kHz. The VCO will track it, the gating circuit will remove 455,025 pulses per second and the counter will still count 1,000,000 pulses.

PLL and synchronous detector
Although one could still accurately measure stronger received signals by simply running the IF FET buffer output through a limiter and using

its output as the 455 kHz input to the DTG circuit, a carefully tuned PLL is required to lock onto very weak IF signals. Besides providing switching pulses for the DTG circuit and the 90 degree phase detector, the voltage controlled oscillator (VCO) also switches a zero degree phase detector that produces audio for the headphones. I use 4066 CMOS analog switches as the phase detectors, and the demodulation is definitely better than what comes from the receiver.

Tuning Meter and Fine Tuning Control indicate whether the VCO is in the center of its lock range. The meter is useful only after the VCO is locked, or on the verge of locking. I try to get within a few Hz with the receiver main tuning by listening to the heterodyne between the signal carrier and the VCO output. When the heterodyne approaches zero, the meter will flutter as the VCO control voltage from the phase detector begins to capture the signal. If the meter reads off-center after the VCO locks, it means that the phase difference between the VCO and the signal is more or less than the desired 90 degrees. Then I can use the fine tuning to adjust the VCO to the center of its lock range.

I have found that this system does pretty well with fading signals and also handles sideband splatter reasonably well as long as the VCO is in the center of its lock range. The low-pass filter eliminates most of the effects of splatter from the PLL circuit, but any splatter that affects the receiver AGC system may cause some problems with measuring weak signals. My A-2515 has no AGC on/off switch, but it seems likely that it would help the PLL further if the gain could be adjusted manually, or if a faster AGC decay was available.

This system is still experimental and I don't consider it to be a finished product. Some portions of the synchronous detector don't yet work as well as I would like and I have several revisions in mind. For example, I have breadboarded an improved VCO circuit that I plan to install soon. Since I like to have my sync detector operational for DXing, I keep putting off taking it "off-line" for modification. If this article inspires others to try out something similar, I can be reached at ALehr@compuserve.com

(ed. note: although PFM is "precise", i.e. the frequencies read should be the same for each and every sample, even with a high resolution such as 0.01 Hertz, the frequencies read really need to be "accurate" for the measurement to be of most use. An accurate measurement is one which indicates the true frequency of the monitored station. Unless the timebase of the frequency counter is both stable and accurate in itself (i.e. a 1 MHz timebase is really 1000000.000 Hertz, and doesn't drift), then a measurement made with a PFM system may have a high frequency resolution and be precise, but not be a true representation of the actual frequency of the monitored station. So it is very important to have a good timebase for the frequency counter.)

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The IRCA maintains a large file of articles which have appeared in past issues of DX Monitor. These articles cover a wide variety of topics, including: antenna theory and construction, tips for the foreign BCB DXer, how to improve your DXing skills, history of DXing and broadcasting, lists of stations by subject, construction projects and receiver modification, receiver reviews, medium wave propagation, and more. Copies are available for a nominal charge. For a list of reprints, send \$1.00 to:

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CLAIB ADDRESSES AND OFFICERS

President: Phil Bytheway, 9705 Mary NW, Seattle WA 98117-2334 (425) 356-3927 W aproposals), email: philip bytheway@mukilteo.hac.com or pfalz.d3@juno.com

/Secretary-Treasurer: Ralph Sanserino

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(dues/address changes), email: sanser@gte.net

Co-Editor-in-Chief/Publishing Coordinator: Phil Bytheway, 9705 Mary NW, Seattle, WA 98117

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