

October 6, 2001 - Volume 39, Number 4 - Edition 1226 - ISSN 899-9733

Publisher's Note

We have a double-issue this week, chock-full of DX, including Mark Connelly's Summer Roadtrip report, and results from the Grayland, WA DXpedition. Another change to the editorial crew: Kevin Redding has resigned from the post of Sports Networks editor. Thank you for your contributions, Kevin! Last minute news is that the WJNT-1180 test did not run. Lynn Hollerman received word from Stan Carter that it is rescheduled for 10/6/01, midnight - 1 am CDT, before most HDXM readers will receive this.

DX Test

PLEASE NOTE: Even if you don't hear a test, be sure and drop a card, letter, or e-mail to the station personnel, thanking them for going to the trouble to run a test!

Sunday, November 4, 2001 - WODI-1230, Brookneal, VA will conduct a DX test from 1:00 am - ?? EST. The test will consist of Morse code, distinctive music, and voice announcements. Reception reports (with return postage) may be sent to:

Dave Marthouse E-Mail: wodi@lynchburg.net
 WODI Radio
 1230 Radio Road
 Brookneal, VA 24528

(Arranged by Dave Marthouse for the NRC / DXAS.)
 Also, if you hear a test, PLEASE, PLEASE let me know, via either e-mail or in rec.radio.shortwave1
 And if you send a reception report to a station, please remember to include return postage with your report...—Lynn Hollerman

Editors Needed

The following columns need editors. If you would like to participate in YOUR club, contact Lee Freshwater at engwtrs@aol.com

DX Worldwide - EAST Sports Information

IN THIS ISSUE:

Editor Changes.....	1
Broadcasting Information.....	2
Western DX Roundup.....	3
Central DX Roundup	6
Eastern DX Roundup.....	8
Technical Column	9
DX World Wide -West.....	15
DX World Wide -East.....	22
Western DX Forum.....	29
Geomagnetic Indices	30
Club Information - FAQs.....	32

The 9th Annual Midwest Fall DXers Get-together

will be held at the Executive Inn, 2455 N Glenstone (City Rt 65) Springfield MO, October 12-14. Phone 417-866-7400. This motel is located about 1/2 mile S of I 44 across from the North Town Mall. The Executive is a moderate priced motel near several eating places. This is an informal GTG, bring your log books, veries and radios. Several tours of local BC stations are planned. Also those that plan for an extended stay may want to visit Branson MO just 35 miles to the south. For more information contact John Tudenham w0jrp@earthlink.net or 417-624-8058

Web Sites for AM DX Stuff

IRCA member Gerry Thomas, KB4JFM, sends word that he now has a website for Radio Plus. "It's at www.dx-tools.com and has Quantum Loops, a phaser and other accessories. IRCA members get a 10% discount." The IRCA website has a new look; check it out at <http://www.geocities.com/Heartland/5792>

BROADCASTING INFORMATION

Lee J. Freshwater - 414 SE 3rd St. - Ocala, FL 34471

E-mail: ENGWTRS@aol.com

CALL SIGN CHANGES

FREQ.	CALL - CITY	NEW CALL
780	WPPD- MULBERRY, FL	WREY
900	WEMG- PHILADELPHIA, PA	WURD
1050	KEYF- DISHMAN, WA	KDRK
1170	KBNZ- HONOLULU, HI	KZEZ
1210	WJZZ- KINGSLEY, MI	WLDR
1310	WSSJ- CAMDEN, NJ	WEMG
1370	KCNB- HOLDENVILLE, OK	KLIS
	WJWS- SOUTH HILL, VA	WSHV

FORMAT CHANGES

FREQ.	CALL - CITY	NEW INFO
540	WDMV - POCOMOKE CITY, MD	ADLT STNDS
	XEBACH - TIJUANA	CLASSICAL
710	WREM - MONTICELLO, ME	WEGP- TALK
790	WMC - MEMPHIS, TN	SPORTS
800	WJAT - SWAINSBORO, GA	ADDS ESPN SPORTS
860	KKOW - PITTSBURG, KS	ADDS FOX SPORTS
900	WURD - PHILADELPHIA, PA	STUNTING
910	WSTK - JACKSONVILLE, NC	SPORTS- ESPN
970	WWIT - CANTON, NC	OLDIES
1020	KOTD - PLATTSMOUTH, NE	SOFT AC +45 - ABC
	KOKP - PERRY, OK	TALK // KOKB
1050	KMIS - PORTAGEVILLE,, MO	CL. C&W - JRN
	WEVD - NEW YORK, NY	SPORTS - ESPN
	KDRK - DISHMAN, WA	C&W // FM
1090	WCZZ - GREENWOOD, SC	OLDIES - WW1
1220	WFKN - FRANKLIN, KY	ADDS ABC- COUNTRY
	WJUN - MEXICO, PA	SPORTS - ESPN
1230	KZSL - BARSTOW, CA	ADDS ABC- A. STNDS
	CHFC - CHURCHILL, MB	VARIETY // CBWK-FM
1240	KTAM - BRYAN, TX	REG. MEXICAN
1260	WNSS - SYRACUSE, NY	SPORTS - ESPN
1270	WMLF - COLUMBUS, GA	SPORTS - ESPN
1300	KKUB - BROWNFIELD, TX	SS REL. TEACHING
1310	WEMG - CAMDEN, NJ	SPANISH CHR
1320	WWWT - RANDOLPH, VT	OLDIES - JRN
1340	KLKI - ANACORTES, WA	ADLT STNS- ABC
1350	WNNG - WARNER ROBBINS, GA	ADLT STNDS- WW1
	WOAM - PEORIA, IL	ADLT. STNDS - ABC
1380	WHGT - WAYNESBORO, PA	HOT AC // WSRT
	KRCM - BEAUMONT, TX	OLDIES
1390	WADA - SHELBY, NC	CL. C&W
1400	KVOP - PLAINVIEW, TX	TEJANO
1420	WVOT - WILSON, NC	GOSPEL
1430	KHBM - MONTICELLO, AR	CL. ROCK // FM JRN
1470	WKAP - ALLENTOWN, PA	OLDIES WW1

1480	WNBX - SPRINGFIELD, VT	TALK
1490	WFAD - MIDDLEBURY, VT	OLDIES - ABC
1520	WKBZ - MUSKEGON HGTS, MI	REPORTED SILENT
1530	WOBS - JACKSONVILLE, FL	BLK GOSPEL
	WMBE - CHILTON, WI	SPORTS- ESPN
1570	KQWC - WEBSTER CITY, IA	ADLT STNDS - ABC
1580	KOKB - BLACKWELL, OK	TALK
1590	WXRS - SWAISNBORO, GA	TALK
1600	WKBJ - MILAN, TN	CL. C&W // WVHR
1660	WMIB - MARCO ISLAND, FL	WODX-NEWS B. TLK

CONSTRUCTION PERMIT ACTIVITY

890	WHNC - HENDERSON, NC	CHANGES SITE TO 36-20-08	78-22-11
1030	KCTA - CORPUS CHRISTI, TX	ADDS 1000 W.	
		NIGHTS, DA-N FROM DA-D CHANGES SITE	
		TO 27-56-04	97-15-31
1400	WLLH - LOWELL, MA	CHANGES SITE TO 42-39-29	71-19-04
1570	KBJT - FORDYCE, AR	DECREASES TO 780 W. DAYS 8 W NIGHTS	
		CHANGES SITE TO 33-48-10	92-26-10

WESTERN DX ROUNDUP

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

E-mail: NancyJohnson@prodigy.net

WDXR DEADLINES: Each Friday. Please use Eastern Time.

REPORTERS FOR THIS ISSUE:

(LG) Larry Godwin-2390 Clydes Dale Lane-Missoula, MT 59801 lbg@selway.umt.edu
Hammarlund HQ-150, Sanserino air-core box loop & Kiwa loop

(GH) Glen Hansen-105 McBride St.-St. Helens, OR 97051
Hammarlund HQ150, Drake R8B, various longwires, amplified
Sanserino air core box loop
(GH-OR2) DX'ing from Seal Rock, OR with Hammarlund HQ-150, Drake R8B,
80' longwire N-S, 60' longwire E-W

(PM) Patrick Martin-P.O. Box 843-Seaside, OR 97138-0843 mwdxer@webtv.net
Drake R8, 1500' E Beverage, EWE antenna, 1026 MFJ phasing unit,
400' NNW antenna/40' vertical

(bp) Bruce Portzer-6546 19th Avenue NE-Seattle, WA 98115 bportzer@home.com
(bp-WA1) DX'ing at Grayland, WA, Drake R8A, 800' Beverages aimed NW, W
& SW

(KR) Kevin Redding-Mesa, AZ amfmtvdx@qwest.net
Kenwood R-1000 and 85" wire

(RT) Rich Toebe-2103 Sargent Ct.-Davis, CA 95616 richtoebe@jps.net
Sony ICF-2010, internal antenna

(RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118 rjwmail@webtv.net
GE Superadio II, Select-A-Tenna, HQ-180A, Radio West loop

(JW) John Wilkins-Wheat Ridge, CO peakbagger@juno.com
Drake R-8, 4' box loop

OF SPECIAL INTEREST

1010 KXEM AZ, Tolleson 9/23 0919 call ID's heard during news or talk programming.
Fair signal but way under KSIR's 25kw. Ex-KXEG. (JW-CO)

1580 KHGG AR, Van Buren 9/11 0759 legal ID poking thru QRM at 0759:55 "The new
sports talk AM 15-80 KHGG Van Buren - Fort Smith, home of the ???

weekdays at noon." Ex-KFDF. (JW-CO) They have been KFDF for years! I remember hearing KFDF 30 years ago when I DX'ed from Fredonia, NY.--NJ)

1680 KJRO LA, Monroe 9/26 0230 with Black Gospel music and announcements "Rejoice" Gospel program (network) giving 1-877 number for requests & hellos. No ID at 0200 or 0300 though. I called the station today and was told that was reception and indeed them that they just came on. Good signal at times over KAVT with KAVT phased using MFJ-1026 unit. (PM-OR)

550 KMVI HI, Wailuku 9/17 0245 good on top of KOAC with sports talk, spot for valley Isle Motors. (PM-OR)

560 KMON MT, Great Falls 9/19 0510 weather report with weak signal. Hammarlund on N-S wire. (GH-OR2)

570 KQNG HI, Lihue 9/27 0251 good on top of KVI with talk, heard announcement for YWCA, tagged "KONG." (PM-OR)

590 KSSK HI, Honolulu 9/27 0253 fair mostly under KUGN with spot for AT&T Wireless, ID "92.3, AM 590, only on KSSK." (PM-OR)

620 KJOL CO, Grand Junction a powerhouse on 9/26 // KGVW-640 with religious program. At 0759 ID was "Christian Radio for the Western Slope, KJOL." (LG-MT)

KIPA HI, Hilo 9/27 "local-like" with NOS/pops music "It's Rainbow Radio" slogan at 0256. (PM-OR)

650 KHNR HI, Honolulu 9/27 mixing with California, ID at 0259 "On Newsradio KHNR." (PM-OR)

670 KPUA HI, Hilo 9/27 good on top of KBOI with spot after news and promo tagged "On KPUA AM 670" at 0306. (PM-OR)

690 ?KQMQ? HI, Honolulu 9/27 0311 presume the Disney station under XETRA to be KQMQ. (PM-OR)

720 KUAI HI, Elele 9/27 good mixing with KDWN at 0235 with Hawaiian accented announcer "On Kauai it's KUAI." (PM-OR)

KFIR OR, Sweet Home 9/22 moderately strong at s/on at precisely 0900. There was a rooster crow just beforehand. (LG-MT)

730 KWOA MN, Worthington 9/23 0259 full ID in pause of strong CKDM. Not common here, especially when on 159 watts nite power. (JW-CO)

760 KGU HI, Honolulu 9/27 0255 fair with talk under KFMB, at 0255 "On 7-60 KGU" ID. (PM-OR)

770 KNWX WA, Seattle 9/18 0835 traffic, with mentions of "Downtown Seattle," sponsored by Woodburn(?) Personnel; "I'm Jason...770 KNWX." Briefly fair in Kkob null. First new one of the season, WA#20. (JW-CO)

780 WJAG NE, Norfolk 9/18 0759. WJAG Sports Director with program notes, followed by a local ad, legal ID at 0800. Fair in XEMF null; no WBBM. (JW-CO)

790 KKON HI, Kealahou 9/27 mostly buried under KABC, etc but // to 620 at 0319 with Perry Como song. (PM-OR)

830 KHVH HI, Honolulu 9/27 heard with Art Bell, mixing with KNCO, also running Art Bell (echo effect), then break away for spots, spot for Digital Systems on Oahu. (PM-OR)

850 KHLO HI, Hilo 9/27 fair under/over KHHO with ID at 0359:50 "Right here on Hilo's KHLO, 8-50." This used to be a powerhouse with the old transmitter site. Now they are fair at best. (PM-OR)

870 KAIM HI, Honolulu 9/27 totally dominant with religious program and ID at 0330 "You've heard this program on KAIM." (PM-OR)

900 KNUI HI, Kahului 9/27 dominant with nice Hawaiian pops at 0825, with spot of Maui Internet service, "On Maui's KNUI" ID. (PM-OR)

CKBI SK, Prince Albert 9/22 0119 good over CKMO with C&W music, "Continuous Country Music, Country 90, CKBI" ID. (bp-Wa1)

940 ?KJPN? HI, Waipahu 9/27 0310 presume the JJ pop music under KWRU. (PM-OR)

- 980 KCTY CA, Salinas 9/16 2000 ID as "KCTY, Salinas, 980 AM." Not KDBV yet. (RW-CA)
- KJOX WA, Yakima 9/22 0856-0902 over CKNW, great signal with no sign of usual KFWB; ESPN program, then top of hour ID "The Valley's Sports Authority, KJOX Yakima." New, never heard from the Bay Area or here. (RT-CA)
- 990 KHBZ HI, Honolulu 9/27 0237 fair mixing with jumble of KTMS, etc with news on the airlines serving Hawaii, then break for spots & promo "Here all the latest Business News for the Islands right here on KHBZ." (PM-OR)
- 1020 CKVH AB, High Prairie country music with ID. Nasty howl in & out but up strong and clear at time. New log. (GH-OR)
- 1040 ?KLHT? HI, Honolulu 9/27 0324 presume the religious talk on love. (PM-OR)
- 1060 KAHU HI, Hilo 9/27 fair to poor with Hawaiian music, announcement with Hawaiian sounding announcer "It's 8.25 here at Kah-Hoo." (PM-OR)
- 1110 ?KAO? HI, Kehei 9/27 0215 fair presume mixing with KBND with talk. (PM-OR)
- 1130 KRNA AZ, Prescott 9/25 on top at 2100 under auroral conditions (no CKWX). ID "Newstalk 1130 AM, KQNA, Prescott Valley, Prescott." Only QRM was from an unID Spanish-speaker. (LG-MT)
- 1170 KPUG WA, Bellingham 9/20 2355-0001 ESPN baseball game Diamondbacks vs Dodgers noted very strongly over KLOK, fabulous signal. ID'd at one minute past with "Get with the team, Whatcom County's tuning into KPUG Bellingham." was still there at recheck half an hour later, on day pattern? Not there the next evening. New, never heard from Bay Area or Davis. (RT-CA)
- 1200 *KOQI* CA, Soquel 9/16 2100 with quick ID "KOQI, Soquel, performing transmitter tests at 1200 kHz," not KYAA yet. (RW-CA)
+Noted weak with open carrier on 9/25 and 9/28. At 0859 both mornings, a man ID'd as "KOQI, Soquel" so it hasn't changed calls yet. New. (LG-MT)
- 1230 KOZI WA, Chelan 9/15 0115 "The sounds you grew up with on Cozy" ID and ad for Front Line Real Estate team. Weak. new. (GH-OR)
- 1240 KMHI ID, Mountain Home has changed formats from NOS to C&W. Had a strong signal at 0800 on 9/28 with ID "Classic hit country on AM 1240, KMHI, your home town country station." (LG-MT)
- 1290 KGVO MT, Missoula 9/19 0305 talk show with good signal. (GH-OR2)
- 1300 KKSC CA, Brawley 9/25 0033 with Dodgers baseball vs Giants. Go Dodgers, help the Diamondbacks make it to the playoffs! (KR-AZ)
- 1340 KBBR OR, North Bend 9/21 0002 strong on channel with "Seattle Mariners baseball on the Bay Area's Newstalk 1340," then sank into the jumble. Came back several times and faded with no luck until 0033 with a clear KBBR call ID and a sound effect, then "Here's what's happening in the Bay Area." New from Davis. Note to geography buffs: North Bend is nowhere near Bend, OR. Bend is in the middle of the state, North Bend is on the coast. (RT-CA)
- 1370 KPCC CA, Quincy 9/17 1845 NOS oldies with ID. Great signal. (GH-OR2)
- 1380 KTKZ CA, Sacramento 9/17 0040. New! (GH-OR2)
- 1450 KFLS OR, Klamath Falls 9/18 2000 news on the hour. (GH-OR2)
- 1500 KUMU HI, Honolulu 9/27 0336 fair under/over KSJX with Dean Martin song, ID "Koo-Moo, Hawaii's memory station." (PM-OR)
- 1540 ?KXEL? IA, Waterloo tentative 9/23 0417 semi-dominant with long weather report for places in MO, IL, WI, etc, then C&W music, mixing with 2-3 other stations. (bp-WA1)
- 1570 KVTK SD, Vermillion 9/12 2359 legal ID at 2359:51 "You're listening to All Sports Radio AM 15-70 The Fan KVTK Vermillion," followed by ESPN Radio Sports Update. Poor in QRM with 71 watts. (JW-CO)
- CKMW MB, Winkler 9/21 2338 C&W music, woman DJ "Country 1570 CKMW" ID and mention of southern Manitoba. (pb-WA1)
- 1620 KSMH CA, West Sacramento 9/17 0100 strong signal with prayers for tragedy in NY. (GH-OR)

- 1630 KKWY WY, Fox Farm 9/22 0000 C&W music, "Spirit of Wyoming, KKWY, AM 1630, Fox Farm - Cheyenne" ID into AP network news, good with Iowa in background. (bp-WA1)
- 1670 KNRO CA, Redding 9/18 2200 ESPN sports with ID. (GH-OR2)
- 1700 KQXX TX, Brownsville 9/21 2356 good with old rock songs, "All oldies KQXX 1700 AM" ID. (bp-WA1)
- 2980 KDBM MT, Dillon 9/22 0022-0105 second harmonic good-nil with satellite country music, "Real Country, AM 1490 KDBM" ID 0038, ABC news 0100. (bp-WA1)

UNIDS

- 530 9/22 2333 someone with continuous weather using synthesized speech, could never quite catch place names. (bp-WA1)
- 1610 HI? Landed on 1610 at 9/27 0315 and on & off for the next couple hours. Station mixing in the jumble, topping Tillamook Forest TIS with mentions of Maui. Woman announcer in message said "I'm Wailani..." Mentions of "First.church..." At one point it sounded like the Maui Visitors Center was mentioned. I would lose it and then it would pop back in, never enough to really ID it. I can't find a thing on a Maui TIS on 1610. Anyone know of one? (PM-OR)
- 1630 Strong open carrier 9/18 2135, S-9. (GH-OR2)

Thanks to our WDXR reporters this week!

Nancy 9/28 2300

CENTRAL DX ROUNDUP

Editor: John C. Johnson

E-mail: John_Johnson@prodigy.net CDXR reports ONLY: cdxr@prodigy.net

RIDING GAIN

- [NJ-MT] Nancy Johnson, Billings, MT
NancyJohnson@prodigy.net
Yaesu FRG-7 with Kiwa loop.
- [PAL-MN] Paul A. LaFreniere, Grand Marais, MN
Plafren@boreal.org
McKay Dymek DR-22, Superadio III
- [TN-WI] Tim Noonan, Madison, WI
DXing2@aol.com
http://www.angelfire.com/wi/dxing
Kenwood R-1000, Radio West Loop.
- [JJR-WI] John J. Rieger, South Milwaukee, WI
JohnJRieger@webtv.net
Icom IC-T75, Icom IC-R70, Kiwa loop, GE Superadio III, Terk AM 1000 loop.

DOWN THE DIAL

- 550 KTRS MO, St. Louis. 9-26 fair through WSAU. 06:12 with "The Big 5-50, KTRS" with hog market report, spot for beef. [PAL-MN]
- 670 KLTT CO, Commerce City. 9-23 poor with WSCR nulled. 07:00 with legal ID after religious show. NEW! #1990, CO#21, 670#5. [JJR-WI]
- 680 CFTR ON, Toronto. 9-28 fair. 06:20 with traffic, weather, car spot. Not rare, but never good. [PAL-MN]
- WPTF NC, Raleigh. 9-25 good, dominating. 05:00 with ID, news. [JJR-WI]
- 730 KKDA TX, Grand Prairie. 9-26 fair, lost to SS station. 06:29 with spots, announcements for Dallas area. Black format. [PAL-MN]
- WOHS NC, Shelby. 9-25 poor, steady, alone. 04:46 with "Super Oldies 7-30 WOHS" ID and spots. New! [JJR-WI]
- 740 WRPQ WI, Baraboo. 9-21 fair. 06:00 with CNN News then ID "7-40 WRPQ with music from yesterday and today." [PAL-MN]

790 CIGM ON, Sudbury. 9-25 poor, steady, over others. 04:46 with "AM 7-90 CIGM" and a PSA. Country format. [JJR-WI]

800 KQCV OK, Oklahoma City. 9-24 fair, popped up out of nowhere then faded out. 07:01 with ID into religious program. [JJR-WI]

850 WKVL TN, Knoxville. 9-28 good at power up. 07:00 with ID, "Talk radio 8-50 and 11-40 WKVL Knoxville" into CBS News. [PAL-MN]

860 KPAN TX, Herford. 9-25 poor. 06:36 with country music, mention of KPAN, spot, weather with temps for many TX cities. [PAL-MN]

890 KQLX ND, Lisbon. 9-21 poor under WLS. 06:36 with Red River Farm Network program. [PAL-MN]

950 KKFN CO, Denver. 9-22 poor, alone, steady, with WWJ way in back. No WNTD. 00:42 with "Sports Radio AM 9-50 The Fan." [JJR-WI]

970 WZAM MI, Ishpeming. 9-24 poor, fair on peaks. 06:19 with local PSAs, calls into AP News. [JJR-WI]

990 WNOX TN, Knoxville. 9-25 fair in fade up, unusually strong. 04:30 with news, weather, spots. "News talk 9-90 WNOX" ID. [JJR-WI]

1010 CBR AB, Calgary. 9-22 fair. 07:05 at end of CBC News with "CBC Radio 1" slogan. [JJR-WI]

1050 WDVM WI, Eau Claire. 9-24 fair to poor. 20:00 with mention of web site address www.divinemercyradio.com and legal ID. Long sought! WI#91 with 22 left to log. [TN-WI]

WTSJ OH, Cincinnati. 9-24 fair to good. 19:58 with promo for a religious program with mention of "AM 10-50 Cincinnati" and an eastern time zone start. No calls mentioned. [TN-WI]

1090 CKKW ON, Kitchener. 9-22 fair, no KAA. 00:39 with "Team Canada's Sports Network" into spots. [JJR-WI]

1140 KNEI IA, Wukon. 9-23 poor, alone, clear. 07:12 with "KNEI 103.5 FM" and country format. [JJR-WI]

1180 WPSG 649 WI, Milwaukee. 9-24 poor. 06:38 with Miller Park and Brewers info on parking, transit, games, etc. First time calls ever heard. [JJR-WI]

1210 KRSV WY, Afton. 9-25 strong. 22:00 with "If you're traveling through, we welcome you on KRSV Afton, Star Country USA." New!! [NJ-MT]

1230 KBAR ID, Burley. 9-24 fair above others. 22:00 with "Talk and oldies, 12-30 KBAR Burley." [NJ-MT]

KRXX ID, Rexburg. 9-24 through a jumble of stations. 21:06 with calls [NJ-MT]

1370 WCCN WI, Neillsville. 9-24 poor in WSPD null. 05:24 with calls, NOS format. [JJR-WI]

1400 WGIL IL, Galesburg. 9-22 poor with super tight null on semi-local WRJN. 07:26 with "...on WGIL." [JJR-WI]

1430 KEZW CO, Aurora. 9-28 fair, always a pest. 07:50 with weather, department store spot, mention of breakfast club. [PAL-MN]

1440 KRDZ CO, Wray. 9-23 fair to poor. 21:00 the ESPN station I was monitoring left and OC rather than IDing, and the KRDZ legal ID was heard in the background. I like catches like this! CO#15. [TN-WI]

1450 KLWW IA, Cedar Rapids. 9-24 poor. 05:20 with end of ABC news brief, calls, NOS format. [JJR-WI]

1590 WIXK WI, Richmond. 9-23 poor over others. 07:57 with "Real Country 107" slogan. [JJR-WI]

1660 KRZX TX, Waco. 9-24 poor. 07:20 with "...on KRZI" (/1580) into many local spots. Heard while waiting to ID Kansas City. New, #1991, TX#79. [JJR-WI]

UNIDS

670 unID 9-23 fair, WSCR nulled. 06:43 with Bobby Vee oldie until fade out. Might be KBOI. If it is then that would be a new state and station. [JJR-WI]

OPEN MIKE

Thanks to everyone who reported this week. This column was typed 9-29-01. 73, John

EASTERN DX ROUNDUP

Lee J. Freshwater - 414 SE 3rd St. - Ocala, FL 34471

E-mail: ENGWTRS@aol.com

Deadlines are : 8 AM SUNDAYS

STARS OF THE WEEK

(WM-MD)	William McGuire	2412 59th Place, Cheverly MD DX-398
(MH-NC)	Michael Hardester	3118 Gateway Dr, Jacksonville, NC 2001 Toyota 4 Runner w/fender ant.

LOGGINGS

1110	VAt	WCKO	Norfolk 9/19 1910 Tentative with blk gspl mx.	(WM-MD)
1150	CT	WMRD	Middletown 9/19 2045 Female giving ID as WLIS, then Buddy Holly song.	(WM-MD)
1150	VA	WNLR	Churchville 9/17 1920 Rel. Pgm hrd; mention of New Life Radio; station promo, ID	(WM-MD)
1310	ON	CIWW	Ottawa 9/19 2110 Station promo for "Oldies 1310"	(WM-MD)
1440	OH	WHKW	Warren 9/17 2100 Weather fcst; ID	(WM-MD)
1470	GA	WRGA	Rome 9/17 1927 Braves/Phillies BB hrd.	(WM-MD)
1650	VA	WHKT	Portsmouth 9/17 2025 "In your cars, enjoy the sounds from AM 1650" ID	(WM-MD)

UNIDEN

960	??	????	9/19 1945 BLK GSPL mx hrd	(WM-MD)
1230	??	????	9/17 2000 ABC Hourly news hrd in mess	(WM-MD)
1310	??	????	9/19 2030 "The Greatest Oldies" jingle, them gone	(WM-MD)

HAR/TIS

530 NC HAR	Camp Lejeune HAR active with base emergency status information. Camp is in THREATCON 3...& Continues with information about status and what to expect on entering base. Male announcer. Same message on 1610 kHz. 9/23 at 1500. Both signals good about 7 to 8 miles from base.	(MH-NC)
1550 NC HAR	Camp Lejeune with information on traffic congestion, have IDs ready, and to expect delays. Different message than on 530/1610. Male announcer. Noted second(same) transmission under Camp Lejeune, and suspect that it may be coming from MCAS (H) New River a few miles down 17-South. Noted solar powered transmitter (2 solar panels and 7 to 10 foot whip) about one-quarter mile away from main gate on 24 East. Range seems to be about 7 to 8 miles from base. Portable sign advising to tune to 1550 kHz for base information. Noted 9/22 @ 1300.	(MH - NC)
1610 NC HAR	Camp Lejeune with same message as on 530 kHz. Noted 9/23 at 1505.	(MH- NC)
1620 NC HAR	Swansboro HAR with NC DOT announcement about lane closings while bridge is being replaced. Portable sign advising motorists to tune to 1620 for information. This on 24 East. Strangely, no sign noted on 24 West approaching Swansboro. Noted 9/22 at 1345 while approaching Swansboro on Hwy 24 East.	(MH-NC)
1640 NC? UNID	Jacksonville area. Rebroadcast of NWS with Wilmington area weather continues. Noted 9/22 at 1310. Noted most days, but who is transmitting the station is unknown. If a military base, I would think they would be broadcasting base-related information. Fair to poor signal. Also, not noted in Morehead City. Any ideas?	(MH-NC)

That's a warp for this week. Thanks to Mike and William. Let's hear from the rest of you!!!!
73s and all the rest....G.B.A.....fresh 9/30 0800.....

IRCA TECHNICAL COLUMN

Nick Hall-Patch - 1538 Amphion St. - Victoria, BC V8R 4Z6 CANADA

E-mail: nhp@ieee.org

A home-built double-superhet LW/MW receiver with sync AM-detection

by Ad Dieleman

1 Introduction

When I read about synchronous AM-detection for the first time in the 1970's, I immediately realized that this was the way to go to properly receive amplitude-modulated signals and in 1983 I started to build a general-coverage receiver for 150 kHz-30 MHz around a sync-detector. However, I never got around to it; I built it up to the 2nd mixer stage (see the block diagram in Figure 1) and then I built a MW-only front-end, because MW has always been my primary interest in radio. I put up a front-end with a local oscillator and two ganged RF tuned circuits and RF amplifier, a conventional approach for a MW-receiver. And it worked reasonably well, I receive some Americans at my place in Dordrecht, Holland every now and then. But after a while I got fed up with its varying sensitivity and the fact that I never got the ganging between LO and RF circuits right.

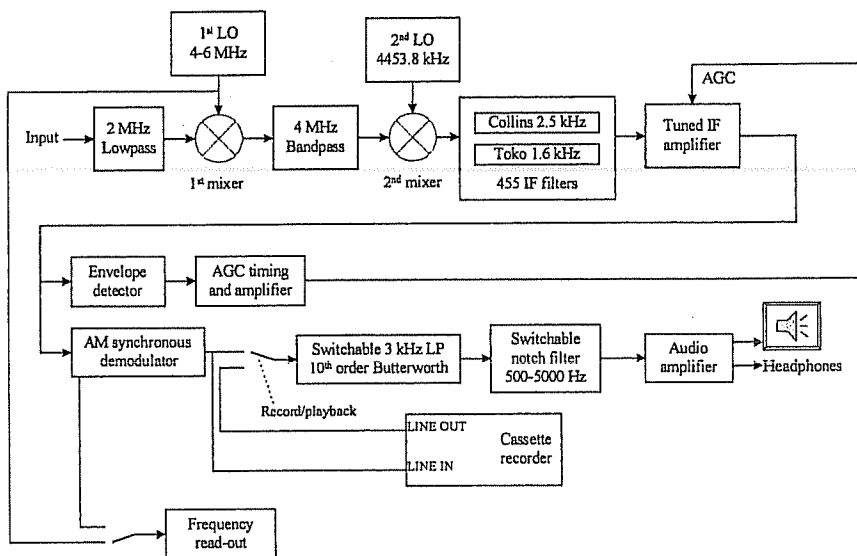


Figure 1 Receiver Block Diagram

I decided to follow a different approach: "Why not make a MW-receiver with a high 1st IF as is usual in 0.1-30 MHz HF-receivers?" In such an HF-receiver the first IF is placed above the highest frequency to be received, resulting in a first IF of 45 up to 75 MHz in various designs. Making the first local oscillator for such an IF is a major undertaking: obtaining adequate stability and freedom of sideband noise in a frequency range well above 50 MHz is not easy at all. Only with elaborate synthesizer circuitry and/or direct digital synthesis is this possible and still only the best receivers reportedly offer good performance in this respect.

However, for a MW-only receiver the first IF theoretically can be placed just above 1.7 MHz, being the highest MW frequency presently in use. 2 MHz seems a practical lower limit with good filtering before the first mixer. I chose 4 MHz because filtering requirements are more relaxed, the relative variation of the first LO frequency is less and, most important of all, my frequency read-out IC counts from 0-3999.9 and then reverts to 0000.0 for 4 MHz. Directly feeding the LO-signal of 4-6 MHz results thus in the received-signal frequency read-out of 0-2 MHz. Sometimes you need this kind of luck... Building a good local oscillator with a range of 4-6 MHz can be done with an LC-oscillator, which is what I did. Stability proves just adequate and sideband noise is not the limiting factor for the dynamic range of my receiver.

In the following description I shall only discuss the principles laid down in the block diagram. Circuit diagrams are not presented, partly because I don't want to fill a whole year's editions of DX Monitor, but also because I want to avoid the suggestion that you can build it by simply following the circuit diagrams.

2 From the input filter to the first IF

Returning to the block diagram you will see that the input signal is filtered by a lowpass-filter with a cut-off at 2 MHz. It is a nine-pole (4 L's, 5 C's) Chebishev-filter with a 1 dB ripple in the passband and an impedance of 500 ohms to match the input impedance of the mixer stage. The 1st mixer is built up around a Plessey SL6440. In earlier days I used an LM1496 at its highest allowable current and with a feedback resistor, this worked almost just as well!

The local oscillator is an LC-oscillator; it uses a large-size inductor and a Jackson 100 pF variable capacitor and its tuning range is 4-6 MHz. The reduction drive unit was taken from an R107 army radio. The receiver therefore has a tuning range of 0-2 MHz. In practice you can tune down to 3 kHz or so and I receive a lot of signals from 10 kHz upwards. To minimize drift during warm-up I used a BF240 bipolar transistor as the active element; it only needs 1 mA to perform well. It is followed by a buffer of a JFET/bipolar cascode to drive the mixer and another emitter-follower for the counter output. It drifts about 500 Hz in the first few hours after switch-on and then it drifts a few 100 Hz between day and night in accordance with the room temperature. This is good enough for listening, but not for unattended recording. If there is one thing to improve in my radio, it's long-term oscillator stability.

The resulting signal is filtered at 4 MHz. This "roofing filter" consists of two LC-bandfilters, separated by a low-gain amplifier. The input signal to the second mixer is about 2x that of the first mixer. With a conservative estimate of 50 for the Q of the bandfilters this gives a minimum image rejection for the second IF of 105 dB, which is amply sufficient. Its bandwidth is of the order of 50 kHz, so this means that the second mixer still gets a fairly large amount of signals to process.

3 The second IF circuitry

The 2nd mixer is again a Plessey SL6440. The 2nd local oscillator is a JFET-based crystal-oscillator. The frequency looks a bit odd; In the old days of 1988 I chose 453.8 kHz as IF because this was the centre frequency of the Toko IF-filter. Again a happy coincidence here: 453.8 kHz is near perfect as a carrier frequency to receive an AM-signal with its carrier as a USB-signal through the 2.5 kHz Collins-filter. I had the crystal made by KVG on custom order.

Then the IF-filters. There is a choice of two bandwidths "wide" and "narrow", switched with 2 relays, one at the input of the filters and one at the output. I didn't dare to use one relay because I was afraid of input-to-output cross-talk. The relays ground both input and output of the filter that is not in use. For the narrow bandwidth, intended for tough DX in a crowded band, I took a Toko mechanical filter of 1.6 kHz wide. Sadly enough, it

disappointed me then and it still does. For SSB AM-listening with sync detection you need to include the carrier in the passband. The carrier must not be attenuated more than about 15 dB, otherwise my sync circuit begins to have difficulties acquiring lock. With the Toko's bandwidth of 1.6 kHz, the resulting audio sounds too dull to be well-readable. Even in true SSB-fashion I'm not comfortable with the audio bandwidth.

For the "wide" position I opted for an LFD-4 ceramic filter, being 4 kHz wide (manufacturer? nothing on the filter!). Its shape factor is very good, less than 2, but it still proved too wide for DX-work. Tuning the carrier on the edge provides up to 4 kHz wide USB or LSB reception, which sounds very clear but also sharp. For program listening I usually tuned the carrier halfway from the centre to the edge, resulting in an audio bandwidth of over 3 kHz. This provided a nice, clear and very well-readable sound. Over this holiday period I replaced the LFD-4 "wide" filter with a Collins 2.5 kHz filter, the one that is sold as an add-on for the AR7030. Yes, it was expensive, it cost me 100 Euros! And yes, it makes a big difference. Again I am startled by the great influence of the IF filter selectivity on the receiver's character as a whole. I readily believe that DSP-filtering with its unheard-of shape factors makes for a new experience in DX-listening. Sometime I'll try to have a JRC NRD-545 next to my receiver to really hear the differences.

With the Collins 2.5 kHz filter I can really listen to AM in USB or LSB mode with the carrier locked, with a very well-readable signal and very good selectivity. I'm anxiously awaiting the first real opening to America, at the moment that I'll be awake, that is... I'm not really a die-hard DX-er!

After the filter comes the IF amplifier. It consists of three tuned stages. The first one is a gain-controlled JFET cascode, the other two contain BF981's as the active element. The second stage is also gain-controlled, the third one has a fixed gain. The IF gain is so high, that the AGC just doesn't turn down the gain on the receiver's own noise. I like this behaviour very much: it provides for constant output, no matter how weak the signal is. It is also beneficial for the following sync detector: it gets a constant input signal so that you can optimize lock behaviour for strong and weak signals alike. The tuned stages aid in providing high stopband attenuation; relying on the IF filter alone is a bit risky and not necessary.

4 AGC

There is an envelope detector, but it's only used for AGC! I wasn't ever tempted to use it for signal recovery. The AGC circuit contains an op-amp to provide high loop gain, so that there is very little output variation with signal strength. I never really measured it, but it's well below 3 dB for signals above a few microvolts. A fast-attack, slow-decay circuit is incorporated. For band-scanning there is a reasonably fast mode, there's also a slow mode with a decay time of over 1 second for listening to a fixed station. This is especially helpful when listening to two or more stations on one channel. In that case the carriers interfere and cause the signal strength to vary, while the modulation doesn't in SSB-mode. The slow AGC ignores the strength variations due to the interfering carriers and provides a clean mix of the audio signals. Quite regularly I identify the weaker of two or three stations on one channel this way.

5 Demodulation

The amplified IF-signal is then fed into the synchronous AM-demodulator. I consider this a vital part of my receiver and therefore I'll go somewhat more into detail. In its block diagram a standard PLL is seen with the voltage-controlled oscillator (VCO), phase detector and loop filter/amplifier. The VCO is an LC-oscillator with a varactor providing the voltage control, nothing special here. The linearizing network is incorporated to ensure that the VCO's "gain", i.e. frequency change per input voltage change is about the same for the total frequency range. Linearizing is done with a diode-resistor network around an op-amp.

The loop-filter determines the capture-range and the loop behaviour when locked. It is switchable: in the fast mode the loop bandwidth is about 30 Hz, so that it easily captures

while tuning. In the slow mode it's only 1 Hz, providing minimal audio distortion and optimum lock performance. It stays locked for more than 5 seconds in absence of a carrier. The "slow" loop filter is an integrating filter that is trimmed to have no drift in the absence of input signal. With this circuit I'm able to lock effortlessly to carriers of signals of which I can't even hear if they have audio content or not. It happens quite often that I lock to carriers of supposedly transatlantic origin, only to find out that I can't hear any audio but only noise!

The VCO frequency is preset by operating a potentiometer, allowing to position the carrier to lock onto anywhere in the passband of the filter. This effectively creates passband tuning, the frequency read-out however is affected according to the position of the VCO frequency. I quickly got used to this. The frequency read-out can be switched to show the VCO frequency, which is very helpful to pre-set the VCO to USB or LSB reception. For the Collins filter: USB = 453.8 kHz and LSB = 456.2 kHz.

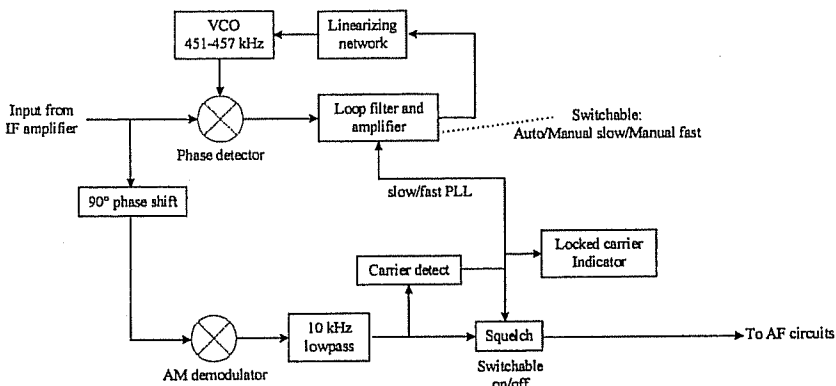


Figure 2 Synchronous AM Demodulator Block Diagram

As you can see I have built in automation in the loop-filter: as soon as lock is detected from the resulting DC-output voltage of the AM-demodulator, the filter switches from fast to slow. In practice I never use it; I just switch manually when I want to. In the fast mode the audio quality is more than good enough to listen to the signal and to decide if you're interested to stay on that frequency. Only then I switch the loop and the AGC to their slow modes and I turn off the squelch to keep hearing the signal during deep fades of the carrier portion of the signal. This is a common occurrence, causing a lot of distortion in envelope detectors!

Both the phase detector and the AM-demodulator are built up with LM1496 double balanced modulators. They always operate in their linear regions. More convenient solutions for PLL-based AM-demodulation exist in single IC's, but this arrangement offers more flexibility in circuit design, allowing all kinds of experiments.

The squelch is open (no muting) when there is sufficient detection voltage, indicating a carrier that the PLL has locked to. If not, the squelch circuit doesn't completely mute, but attenuates the audio signal about 5x (17 dB). This is done to attenuate the otherwise offensively loud beatnote when approaching a AM station's signal: the carrier is by far the strongest signal in a station's spectrum. The squelch's switch is a CD4053B CMOS analogue switch.

SSB and CW reception is simply done by uncoupling the VCO from the loop and tune it via its potentiometer on the preferred spot of the passband. SSB reception is fine, for CW the filters are of course much too wide.

So far I've found one station that doesn't benefit from synchronous AM reception. It is Europe 1 at 183 kHz. It sounds distorted with sync AM, in both the fast and slow PLL modes as well as on my Sony ICF-SW77 in sync mode. When I switch the Sony to AM envelope detection it sounds normal. It seems like the carrier is phase-modulated with a data signal, but I haven't checked this so far.

6 The audio circuits

First we encounter a filter that can be inserted into the signal path. It is a sharp audio-filter and provides a fixed -3 dB roll-off at 3 kHz and an attenuation of 60 dB at 6 kHz. This represents a shape factor of 2, aiding the radio's selectivity because the sync-detector puts adjacent-channel interference higher up in the spectrum. With the sharp IF-filters used now this audio-filter is hardly ever useful, but sometimes it helps to remove the last bit of interference. The signal's readability suffers from switching in this audio-filter, although the signal's bandwidth is not limited. Remember, the Collins filter is 2.5 kHz wide, which is narrower than the 3 kHz cut-off of the audio filter. My guess is that the non-linear group delay in the audio filter disturbs the signal's coherence.

A audio notch filter is also included. It is based upon a gyrator circuit, this is a circuit that produces inductance behaviour from an electronic circuit and a capacitor. This "inductance" is then combined with a real-world capacitor to make a series LC-circuit filtering out the offending frequency. The notch is about 40 dB deep, alas it is rather wide above 2 kHz, also removing a considerable portion of the wanted signal. Well, it's better than nothing and more than once it helped me out.

The audio-amplifier is constructed from discrete components and is not of the highest possible calibre. I have vague plans to replace it by an IC someday in the coming decade.

7 Using this radio

So what does all this mean when it comes to listening? Of course you have to start by connecting an antenna. I use a home-built tuned loop-antenna with 6 frequency ranges, providing continuous coverage from 10 kHz to 4 MHz. After having recovered from writing this article I might write something more about it. This antenna provides a good deal of selectivity and this certainly aids in preventing spurs and birdies in the receiver. I don't have the possibility to set up a beverage aerial, so I can't test it. If someone in Holland or Belgium has one, or an NRD-545 for that matter, I'll happily drive a few 100 km to meet, chat, compare and fiddle around.

Effectively this radio receives broadcast stations in SSB-mode with the aided comfort of perfect and stable zero-beat, allowing one to listen to music without discomfort. Especially the Collins filter provides very good performance this way, although I am a bit irritated by the fact that an adjacent channel sometimes causes interference with a resonance-like sound effect at about 3 kHz. I don't yet know where this comes from, the received signal itself sounds OK and the measured filter characteristic in the radio looks good enough. I know that the filter is quite unforgiving towards improper termination impedances, so the input is terminated with an LC-circuit of 2.2 kOhm resonant impedance and a Q of about 50 and the output is terminated with a 2.2 kOhm resistor.

The receiver handles signals up to about 50-100 mV without protest; above that, extra noise and whistles emerge due to overloading of the SL6440 mixer stages.

Given that I use my loop aerial, I feel that this radio is not the limiting factor in DX-ing. Splatter from strong stations frequently spoil reception of weak stations. I performed a number of tests to see if intermodulation was a source of these disturbances and I had to conclude that this was not the case. The fact that equally strong signals yield very different disturbing effects, bears this out. I can't measure the dynamic range, but I'm guessing that it's somewhere between 80 and 90 dB. So far I found that splatter from nearby strong

signals dominates over dynamic range problems in my situation. If you run into dynamic range problems with a dynamic range of 80 dB the transmitter has to have an attenuation of more than 80 dB of its outband signals, otherwise you would hear splatter before the receiver generates intermodulation problems. This can be checked quickly by inserting attenuation: if it's splatter, the interfering noises do not change in strength and character. Therefore a close-in dynamic range of 80-90 dB may well be sufficient; further away, at e.g. 50 kHz distance, the dynamic range has to be larger. In my case the loop antenna's selectivity takes care of that. I speculate that this phenomenon is also the cause of the conclusions in a number of reviews of the JRC NRD-545. The reviewers are in general not enthusiastic about its dynamic range figures when interfering signals are a few kHz away, and at the same time most reviewers rave about the set's ability to recover weak signals in a crowded band compared to other receivers they have evaluated.

Selectivity measurements indicate that the selectivity of the receiver is determined by its filters. The shape factor with the Collins is about 1.9 and stopband attenuation quickly goes up to > 90 dB.

8 The lessons I learned

I think it was a good idea to

- invest in an expensive IF filter. The radio's performance got a giant boost from it.
- opt for the double-superhet concept. It's simpler to build in spite of its more complex block diagram, it offers constant sensitivity and a continuous tuning range from VLF to MW.
- choose 455 kHz as a second IF. Of course one could consider building a single-super MW-radio with a high IF. I wouldn't go this route. There is not much to be had in terms of IF-filters above a few MHz; I remember vaguely that Kenwood and/or ICOM used 8-9 MHz crystal IF-filters. The choice in IF-filters is by far the largest at 455 kHz and because the IF filter characteristic is so vital, it's nice to have as many options as possible. It took me three filters to achieve a receiver performance that I feel is right; of course you can go right to a bandwidth of 2.5 kHz with a quality filter and avoid my earlier mistakes.
- put so much effort in a well-working AM sync detector. Don't consider a radio without a well-working synchronous AM-detection if you are serious about broadcast AM listening! Once you've experienced its advantages you won't want to live without it. Having said that, there are a couple of radios around with a badly working sync circuit. Incidentally, I've read that the NRD-545 denies its AGC flexibility to the AM and ECSS listening modes; this is a serious omission in my view. If you are planning to build your own sync detector I highly recommend studying Floyd M. Gardner's "Phaselock Techniques" (John Wiley & Sons). It is a thorough and very well-written book on the subject. If you have a good receiver without sync detection, but with an IF output, it surely is an option to buy or build an external AM sync detector unit.
- not put too much effort in attaining a very high dynamic range. So far I haven't felt the necessity to upgrade. I acknowledge that a better antenna or just a different location might necessitate a higher dynamic range, I can't really judge that.
- add a recording input and output. I'm able now to replay that difficult to understand ID or to capture the ID at the whole hour, while I favour doing something else instead of waiting in front of my radio for half an hour only to miss the moment suprême. While I'm at it, even a very good cassette recorder like my Nakamichi CR-4E proved hardly good enough to reproduce the difficult signals without undue tape modulation noise or Dolby pumping effects. I'm seriously considering a mini-disc walkman for this purpose. "Davez" (URL: <http://www.ticon.net/~joelt/index.html>) is very satisfied with this solution.
- choose 20 V as the main supply voltage. This is high enough to have ample headroom in the various mixing and amplifier stages and low enough to enable usage of almost any active element. Looking back, a voltage of 15 V would still be sufficient, but I wouldn't like to go much lower; 12 V is the absolute lower limit in my view. The

consequence of this is that you need two 12 V lead-acid batteries to power the radio, which I did. Forget about up-converting from a single 12 V battery, you'll receive nothing but harmonics of the switching frequency. Believe me, I tried...

It wasn't such a good idea to

- not build a strictly modular receiver. When I would start all over again, I would build each module with appropriate connectors in a sort of rack-mounting set-up.
- build a high-order sharp cut-off audio low-pass filter. It doesn't do much good, a milder filter will undoubtedly do better.
- opt for a two-position only IF filter block. I seriously consider rebuilding it with at least three positions, preferably five or six.
- use multiplexed LED's in the frequency read-out unit. Avoid this like the plague! The kit I bought had this arrangement and it took me a several months of experimenting only to find out that I couldn't eliminate the harmonics of the multiplexing signals out of my radio, let alone out of the nearby loop aerial. I ended up rebuilding the kit by replacing the LEDs by an LCD with the appropriate driver IC's.

Any questions or reactions? You can contact me directly by e-mail: ad.dieleman@planet.nl. I'd love to hear from you!

(This article originally appeared in Medium Wave News and is used with permission of the author. The internet version appears at: http://www3.telus.net/7dxr/ircatech/diel_rcvr.pdf)

DX WORLDWIDE – WEST / TROPICAL BAND DX

Editor: Patrick Martin – P.O. Box 843 – Seaside OR 97138

E-mail: mwdxer@webtv.net

This time we have a great report from the DXpedition at Grayland, Washington. Grayland DXpedition September 20-23, 2001.

John Bryant writes: *"The first night, UTC Friday, Sept 20, was excellent DX conditions from 1100 to 1400 on the lower part of the band. Most loggings were from Japan, China, and the Koreans. Most notable loggings, though, were 1557 Family Radio in EE from Taiwan and Radio Mayak/Radio Rossii 576. Also somewhat unusual were a large number of NHK 1 stations from Japan, including several lower power outlets.*

The second night, UTC Saturday Sept. 21, was characterized with excellent DX only from 1100 to about 1230 UTC and then only marginal conditions thereafter. The best frequencies had moved up the dial to the middle and upper segments of the band. Most notable logging was 1323 China Radio International's Russian Service, beamed to the Russian Far East from Urumchi, Xianjiang Province in Central Asia! Don Nelson was managed a brief logging of 864/3260, Madang, Papua New Guinea. He also focused on Hawaii after local dawn here in the Northwest, logging eight of the more elusive Hawaiians.

The third night, UTC Sunday Sept. 22 was very unusual. The middle period, characterized in the previous nights by excellent DX from the Pacific and Japan, was limited to a handful of hets. Don Nelson was actually seen playing solitaire on his computer. A few lowband Hawaiians were the only MW DX until about an hour before sunrise. Then, suddenly, the band was alive with audio from modest and small-sized Japanese transmitters and the Big Guns of the Russians and Chinese MW Foreign Services.

The final evening, UTC Sept. 23, Monday, was also a very fractured DX session was good reception from Japan from about 1130 to 1245 UTC followed by "the bottom dropping out". The final hour and a half was very sparse until just a dawn when the only Philippines station logging suddenly appeared on 1503.

All in all, the September 2001 Grayland DXpedition was our best medium wave DXpedition in about three years, with many new loggings for us all."

DXers at this year's DXpedition included Don Nelson, John Bryant, Walt Salmaniw, Phil Bytheway, Bruce Portzer, Chuck Hutton, and Guy Atkins.

DX LOG

- 180 RUSSIA, Petropavlovsk/Chita, Radio Rossii, RR vocal mx 1319 9/22, fair // 189 (BP-WA)
 *Also noted 9/21 1330. Hrd well with RR prog // 189. (JB-WA)
- 189 RUSSIA, Belogorsk, Radio Rossii 9/21 1330, Hrd with ex. Level (JB-WA)
 *Also noted R. Rossii vocal mx, woman ancr in RR // 180 1319 9/22 (BP-WA)
- 243 RUSSIA, Razdolnoe, 1320 9/22, RR talk good-fair u/beacon QRM (BP-WA)
- 530 ALASKA, Adak 9/22 0624 lots of code IDs mixing with SQM (BTW-WA)
- 531 JAPAN, Morioka JOQG, NHK 1 9/20 1305 to 1330. Noted in parallel with other NHK 1 stations running special news account in JJ of America's War on Terrorism. Fair. (JB-WA)
- 531 UNID, 9/22 at 1200 US 1950s song "Rock Around The Clock" noted here briefly before fading into the noise, Possible NZ. (GA-WA) (*Sounds like it may have been 4XA, Old Gold. PM*)
- 550 HAWAII, Wailuku KMVI, Sept 22 0900. Hrd with ESPN Radio coverage fair to poor under KARI Blaine WA. Hrd also at 1200 with much better signal and several IDs. Still carrying ESPN programming. (JB-WA)
 *Also noted Sept 22 at 1203 UTC. Excellent signal on all Beverage antennas. Ads for Maui businesses, ID. "You're in the zone for sports 24 hours a day, seven days a week...SportsZone 55, KMVI Wailuku." (GA-WA)
 *Also noted at 0847 9/22 local Maui ads mixing with KOAC (BP-WA)
- 558 FIJI, Radio One 9/22 1322 noted loud in passing (BTW-WA)
 *(t)Also noted Sept 22 at 1237. Island choral mx and fair level, fading down by 1243. (GA-WA)
- 558 JAPAN, Kobe JOCR 9/21 1130. AM Kobe noted in passing with JJ talk by men. Fair.
 *Also noted 9/22, hrd well 9/23 at 1410 (JB-WA)
- 567 JAPAN, Sapporo JOIK NHK 1 9/21 1215-1230. Noted w/JJ talk weakly in // with NHK 1 Tokyo 594. Also hrd on 9/22 (JB-WA)
 *Also hrd 1126 9/22 fair with talk in JJ (BP-WA)
- 570 HAWAII, Lihue KQNG, 9/22 1205. Hrd at good level with local weather, IDs, etc after network news. (JB-WA)
- 576 RUSSIA, Radio Mayak/Radio Rossii(?), Petropavlovsk, FE (presumed location) 9/20 1330 to 1406. We were stunned to hear the old Radio Moscow IS "Moscow Nights" on chimes as I tuned across 576 at 1330. The chimed version was followed by a brief orchestral version and then Radio Mayak/Radio Rossii programming continued in Russian. Was a mixture of RR talk and pop tunes until 1400. At 1400, there were only three notes of the Moscow Nights chimes followed by an abrupt program change to a few bars of music that normally follow BBC's Big Ben and lead in to the BBC News in EE. This is exactly what followed. The BBC News in EE was still going at 1406 when the signal faded abruptly due to local dawn here in the Pacific NW. Who knew? Also hrd at 1346 9/22 (JB-WA)
 *Also noted Mayak pogram loud with RR talk and pop tune sung in EE 1353 9/22 (BP-WA)
- 585 JAPAN, Kushiro JOPG 9/22 1401 NHK 1 noted // to 594, as the RR FS signal faded down. Fair signal until band fade at 1430 dawn. (JB-WA)
- 585 RUSSIA, Belogorsk, FS 9/22 1347-1401. FS to China noted with trid. RR mx programming and talk in Beijing dialect Chinese and at the hour, in Russian. Program closed with the old Radio Moscow IS of "Moscow Nights" played on a stringed instrument. Excellent! Fading to fair level at close. (JB-WA)
 *Also noted Voice of Russia, CC Service good 1349 9/22 (BP-WA)
- 594 JAPAN, Tokyo JOAK 9/21 1128. Male and female ancrs in JJ and bamboo flute mx. Mentions of Tokyo 1130 Fair to good. (GA-WA)
 *Also hrd at 1355 9/22 strong with JJ talk (BP-WA)
 *Also noted 9/20 1305 to 1330. Noted in // with other NHK 1 stations running special news account (in JJ) of America's War on Terrorism. Excellent signal all night and usually the strongest NHK1 station. Also hrd 9/21,22,23 (JB-WA)

- 603 UNID, possible Chinese talk 1348 9/22, quickly lost. (BP-WA)
- 612 AUSTRALIA, Brisbane 4QR 1404 9/23 good-fair with ABC News "612 ABC Brisbane" ID (BP-WA)
 * Also noted 9/23 1340. Hrd with ABC talk show at fair level. (JB-WA)
- 612 JAPAN, Fukuoka JOLK NHK 1 9/22 1405 UTC JJ NHK 1 programming noted in parallel with 594 at fair level. (JB-WA)
- 620 HAWAII, Hilo KIPA 9/22 1154, Hrd // to much weaker KKON Kona, 790 with mx programming and local IDs. Net News on the hour. Good signal. (JB-WA)
 *Also hrd 9/22 1141 // 790 with mx and "Rainbow Radio" ID at 1151 (BTW-WA)
 *Also 0940 9/22 way atop w/soft oldies "AM 620 & 790, Rainbow Radio" slogan and ads. (BP-WA)
- 639 CHINA, CNR various locations 9/22 1344 noted in CC // 4490 (BTW-WA)
 *Also noted CNR 1 1342 9/22 man in CC either via phone or poor quality audio feed, slight echo from a // co-channel transmitter(s) seemed //4460 (which had UTE QRM) very echoey at 1357 recheck. (BP-WA)
- 639 JAPAN, Shizuoka NHK2 JOPB 9/23 1342-1405. Noted at fair to poor level with NHK2 prog.//774 (JB-WA)
- 650 HAWAII, Honolulu KHNR 9/21 1409-1420. Hrd at good level with lengthy network news. Local promo for SF Giants baseball on KHNR at commercial break. BC station phased out. Faded out due to local dawn in NW (JB-WA)
- 657 D.R.KOREA, Pyongyang, 1307 9/22. talk in KK (BP-WA)
 *Also noted 9/20 0950 with man and woman in KK in passing with good signal, by 1124 noted at fair level // 3250. (JB-WA)
- 666 JAPAN, Osaka JOBK NHK 1 9/20 1305-1330 UTC Hrd at good level with lengthy Network news. Also heard 9/21,23 (JB-WA)
- 675 UNID, probably China or Taiwan 1330-1341 9/22, in what sounded like a Chinese minority language (not Mandarin), mostly talks with a couple of distinctive Chinese musical rifts, good signal at times. Any ideas? Have recording available. (BP-WA)
(Bruce, your UNID is Hohhot I would guess. They are a regular when CC conditions are good. PM)
- 684 JAPAN, NHK 1 synchros 9/22 1240. Hrd in // to 594 at fair level. (JB-WA)
- 693 JAPAN, Tokyo JOAB NHK2 Tokyo 9/20 0950 noted in // to other NHK2 stations with beginning EE lessons for Children with excellent signal. Also hrd 9/21,22,23 (JB-WA)
- 702 JAPAN, likely Kimami, NHK2 synchros, 9/22 1242. Noted at weak level // 774 (JB-WA)
- 720 HAWAII, Elele KUIA 1259 9/22 "720 KUIA, Elele, Kauai" ID into CNN nx (BP-WA)
- 729 CHINA, Nanchang 1308 9/22 what sounded like news/feature program back to back IDs as "Jiangxi Renmin Guangpo Daitai" by man and woman. Good signal, easily separated from 730 domestics. (BP-WA)
- 729 JAPAN, Nagoya JOCK, NHK 1 9/20 1305 to 1330. Noted in // with other NHK 1 stations. Fair (JB-WA)
- 738 FRENCH POLYNESIA, Tahiti, Papeete 0842 9/22 good w/FF songs and male/female ancrs (BP-WA)
 *Also noted 9/22 1312 FF talk noted in passing (BTW-WA)
- 738 TAIWAN, Penghu, BEL2 9/22 noted // 1143. (BTW-WA)
- 738 UNID, Several stations mixing 1358 9/22. Two time signals at 1400 UTC, one had 3 pips and a second tone and the other had 2 pips and a 3 second tone. Woman with possible ID in CC followed, probably the Fishery station which was dominant // 1143 a few minutes later, but didn't sound like the Yuye Guangbo Diantai. Recording available. (BP-WA) *(Bruce, I have also logged Changsha here quite a few years back. PM)*
- 747 JAPAN, Sapporo JOIB 1410 9/22. Good w/end of Radio Japan news in EE, then back to JJ (BP-WA)
 * Also heard 9/20 0950 noted // to other NHK2 stations with beginning EE lessons for Children with good signal. Also hrd 9/21,22,23. (JB-WA)
- 756 JAPAN, Kumamoto JOGK, NHK 1 9/22 1246, noted at fair level // 594 (JB-WA)
- 765 AUSTRALIA, 1328 to 1334 9/23. C&W mx program strong at times, but had bad KNWX-770 splatter. Sounded like it was a special Sunday night type show rather

- than regular format. Still there at 1343 recheck under 1000 hz(!!!) tone. But gone later at rechecks, 3-4 possibilities listed. (BP-WA) *(Maybe Bega, NSW, PM)*
- t774 AUSTRALIA, Melbourne 3LO 9/23 1030. Noted with Aussie talk mixing o/u JJ signal, fair (JB-WA)
- 774 JAPAN, Akita JOUB, NHK2 9/20 0950 Noted // to other NHK2 stations, also hrd 9/21,22 (JB-WA)
 *Also noted 9/22 1013 good w/EE lessons (BP-WA)
 *Also hrd 9/21 1342. EE lessons Strong signal (GA-WA)
- 790 HAWAII, Kealakakea KKON, 1137 9/22. Weak u 3-4 other stations with soft oldies. IDed by checking 620 for parallel. (BP-WA)
 *Also heard 9/22 1154 hrd // to KIPA-620, weak signal in pile up. (JB-WA)
 *Also hrd 9/22 1141 // 620 with mx and "Rainbow Radio" ID at 1151, complete ID at 1200 (BTW-WA)
- 792 AUSTRALIA, Brisbane 4RN 9/22 1408. Hrd with Aust. National News at fair level. Hrd poorly 9/23 1045 (JB-WA)
- 792 AUSTRALIA, Brisbane 4RN, hrd 9/22 1324 strong signal with Indo gamelan mx. This was an UNID, but Bruce Portzter IDed it by checking the playlist on the Internet of 4RN. (JB-WA)
- 792 AUSTRALIA, Brisbane with gamelan mx 1323 9/22, was an UNID, but IDed by Bruce Portzter (GA-WA)
- 828 JAPAN, Osaka JOBB 9/20 0950. Noted // to other NHK 2 outlets. (JB-WA)
- 846 KIRIBATI, Tarawa 9/20 0705. Male speaking in island lang. With nx(?) resolved briefly at 0705 to 0710. Het present for several hours, fair to poor signal. (JB-WA)
 *Also heard 0915 9/22. Woman ancr, 2 songs sung by what sounded like a young child, then island mx. (BP-WA)
- 864 JAPAN, Hokkaido HBC synchros (JOHE/JOQF) 9/23 1240. Noted at fair level // HBC key station on 1287 (JOHR) (JB-WA)
- 873 JAPAN, Kumamoto JOGB 1053 9/22 good w/JJ talk // 774 (BP-WA)
 * Also noted 9/20 0950, noted // to other NHK 2 outlets. (JB-WA)
- 882.6 UNID, 9/22 1020. Moderate het right on 882.6 and best on Western Beverage. Seemed to follow TP fade pattern over a few minutes time. Hrd 1105 recheck drifting up slightly to 882.63. Also noted 9/23 at 1100 with even a stronger het, but no audio. (GA-WA) *(This is likely DWIZ-Metro Manila. They have been off freq. for years. PM)*
- 890 ALASKA, Homer KBBI 1359 9/22, loud with NPR program, promo for Prairie Home Companion" and "KBBI Homer" ID (BP-WA)
- 891 JAPAN, Sendai, NHK1 JOHK 9/20 1305 to 1330. Noted in // with other NHK 1 outlets. (JB-WA)
- 900 HAWAII, Kahului, KNUI loud and way atop CKMO 1252 9/22 w/local ads, Hawaiian mx ID "Maui's Aloha Station, AM 900, KNUI" (BP-WA)
- 909 UNID, Aussie or NZ with telephone talk show 1416 9/22, briefly through 910 splatter (BP-WA)
- 936 AUSTRALIA, Brisbane 4PB fair with nx // 3PB 1026 (BP-WA)
- t936 CHINA, Anhui PBS (presumed) Hebei 9/20 1135 Noted in passing with Beijing dialect CC talk, good signal. (JB-WA)
- 940 HAWAII, Waipahu KJPN 9/22 1210, hrd with locally produced JJ programming w/JJ talk, JJ pop mx, etc. local ID in EE 1230. Good level. (JB-WA)
- 945 CHINA, CNR 1 1229 9/23 fair to good with long string of ads in CC, then "Zhongyang Renmin Guangbo Dientai" ID (BP-WA)
 *Also noted 9/20 1233-1303. Was // CRI 5030, male speaking in Beijing dialect good to excellent levels 5+2 pips at top of hour. Good level (JB-WA)
- 954 JAPAN, Tokyo JOKR TBS 9/21. Hrd with normal all night pop mx with good to excellent signals. (JB-WA)
- 963 CHINA, CRI Russian Service fair // 1323 1247 9/22 and 1417 9/23 (BP-WA)
 *Also noted 9/20 1135, noted in passing with woman speaking in Russian at excellent level. (JB-WA)
- 972 REP. OF KOREA, Tangjin HLCA 1134 9/23 loud with discussion by 2 women in KK 1452 9/23 still quite strong w/KK talk. Fading fast by 1458, but time signal and possible ID still audible at 1500 (BP-WA)

- *Also heard HLCA man and woman with news (?) at 1008 9/20. (JB-WA)
- t981 TAIWAN, Kuanghua BS/Air Force BS, Hsinfeng (presumed) 1145-1216. On with a mixture of CC talk and mx until 1200 when there was a partial ID followed what seemed to be news. Good signal (JB-WA)
- 999 UNID 1215 9/23 woman in Asian lang. Didn't sound like JJ or CC Mandarin) Then CC type mx. Briefly hrd through KOMO 1000 splatter. (BP-WA) (*Maybe you heard Jakarta? It has been logged here once. PM*)
- 1008 JAPAN, Osaka JONR, ABC Osaka 9/21 at 1335. Noted at fair level with phone-in show hosted by male. Also hrd 9/23 at 1130 UTC (JB-WA)
*Also noted 9/22 1300 JJ talk and pips (BTW-WA)
- 1026 AUSTRALIA, Melbourne 3PB fair w/nx // 4PB 936 (BP-WA)
- 1026 CHINA, UNID 9/22 1335 CC Drama at good level before quick fade. Beijing is among the several CC stations listed in PAL for this frequency. (GA-WA) (*Beijing is fairly common here on 1026, QSL'd years back. PM*)
- 1035 NEW ZEALAND, Wellington 2ZB 1217 9/22 fair w/ads. Wellington mention and "18 after Midnight" time check (BP-WA)
- t1040 HAWAII, Honolulu, KLHT (presumed) 9/22 1305. Hrd two hours as dominant w/light Christian mx. This matches their longtime format. No call ID heard. (JB-WA)
- 1044 CHINA, CRI FS , Japanese Service, Changzhou 9/22 1412. CC FS hrd at fair level with JJ programming in // to 7190 khz. (JB-WA)
- 1053 JAPAN, Nagoya JOAR 9/23 1252, finally noted dominating the KK jammer with pop mx program at good level. (JB-WA)
- 1053 KOREA, Bubble jammer 9/20 noted as usual with fair to good signal throughout the night 1100-1400 UTC. Also hrd 9/21,22,23 (JB-WA)
*Also noted jammer fair 1227 9/22 (BP-WA)
- 1062 AUSTRALIA, apparent mix of 5MV and 4TI 1339 9/23 with pop mx and "ABC Local Radio" promo then man talking but too weak to understand, gradually overtaken by a second station running a rel-oriented telephone show. Rechecked at 1435 and hrd ABC mentionnromo for "The Listener", then guitar jazz//4QD-1548. According to ABC website ABC local/regional stations run a rel. talk show calls "Sunday Night" after 2200 local time. Due to time zone differences, 5MV would have been running it a half hour later that 4TI (BP-WA)
- 1062 NEW ZEALAND, Wanganui, Radio Sport, 9/22 1346. Accented male ancrs discussing different players (soccer?). Signal quickly faded after 2 or 3 minutes. Fair. Def RR,CC, & JJ lang. also hrd on 1062 1343-1349, but only briefly. Many frequencies in this time frame noted a jumble of stations and languages. (GA-WA)
- 1071 JAPAN, Hiroshima JOFK 1235 9/23 // 594 mixing with another station playing CC type flute mx (BP-WA)
- 1098 MARSHALL ISLANDS, Majuro V7AD 9/23 1037. Variable levels for poor to good. Nice female vocals of island choras. Interesting propagation this evening, there was very little differences between the three beverages, both MW and tropical bands. (GA-WA)
*Also noted good 0848 9/22 with pop mx and woman in unid language. (BP-WA)
- 1107 JAPAN, Kagoshima, JOCF? 9/23 1021. Possibly this station rather than the other much weaker JJ outlets on freq. Animated M&F JJ talk, fair to good. (GA-WA) (*JOMR is the one I hear-5 KW in Northern Japan, which is closer.PM*)
- t1107 REP. OF KOREA, P'ohang HLAIV 1053 9/23, briefly strong with what sounded like a Drama in Korean. (BP-WA)
- 1134 JAPAN, Tokyo JOQR 9/23 1255-1310. Hrd with fair signal covering sumo after 1300. (JB-WA)
- 1143 PHILIPPINES, Poro VOA 9/22 1415 on top (BTW-WA)
- 1143 TAIWAN, Kaohsiung 9/22 1409 noted // 738 (BTW-WA)
*Also noted Taiwan area Fishery Station 1405 9/22, strong // 738. Woman in Chinese. repeater on 1593 (listed as 3 KW) was very tentatively hrd, but way too much 1590 QRM to tell for sure. (BP-WA)
- 1152 FIJI, Rakiraki, Radio One Sept 22, 1146. South Pacific island mx and talk by male in presumed Fijian at 1149. Faded down 1150 and replaced by an Aussie in EE. Back up at 1154, overriding the Aussie. Fair to good on peaks. (GA-WA)

- 1179 JAPAN, Osaka JOOR 9/23 1340 Woman ancr in JJ, followed by soundtrack of inst. mx. Very good signal. (GA-WA)
 *Also noted JOOR MBS 9/21 1052-1107, Hrd good to excellent signals, man & woman in JJ until top of hour. Also noted later that night. (JB-WA)
- 1179 UNID, 1208-1213 9/22. EE pop mx loud on SW beverage, no anmts hrd. Does fit the listed Aussie/NZ stations. There is a Vanuatu station listed, but wasn't // 7260 (BP-WA) (*Maybe Ruai Mai station at Auckland? 1 KW PM*)
- 1188 JAPAN, Kitami, Hokkaido JOKP NHK 1 9/21 1110-1121 male & female in JJ with fair signal // 594 (JB-WA)
- 1197 JAPAN, Kumamoto JOBF 9/23 1026, possibly this outlet? hrd with Interview type program, two male ancrrs. Fair (GA-WA) (*JOWL is more common.PM*)
- 1197 JAPAN, Ashikawa STV station JOWL Hokkaido 9/21 1122-1128 UTC and 1251-1305 hrd with JJ pop mx and talk // to STV station 1440 with fair to good signal on 1197. Poor signal on 1440. (JB-WA)
- 1197 JAPAN, UNID 1327 9/22 and 1303 9/23. pop mx and woman DJ fair, many possibilities listed. Still in weakly with jazz and commercials 1444 9/23 (BP-WA) (*JOWL likely.PM*)
- 1197 UNID, 1157 9/22 DU fair w/ad and DJ chatter, then EZL inst. Possibly 2ZW since Newstalk ZB network runs NOS mx program 0600-1200 on Sat/Sun. (BP-WA)
- 1206 CHINA, Yambian 1211 9/23, good with man and woman in Korean, FS QRM from 1210 (BP-WA)
- 1224 JAPAN, Kanazawa, JOJK, NHK fair w/JJ talk 1044 9/23 (BP-WA)
- 1242 JAPAN, Tokyo JOLF 1044 9/23 rapid JJ talk fair (BP-WA)
 *Also noted JOLF 9/21 1128. Hrd throughout the night with fair to good signal. Also hrd 9/23 1135 UTC (JB-WA)
- t1251 AUSTRALIA, Dubbo 2DU, 1153 9/22 pop mx fair, good w/nx in Aussie EE at 1201 recheck, one report was by an American woman (possibly from CNN), started to fade, nx ended exactly at 1204 with "Radio (2letter or 2 syllable)" mention, pop mx No ID, but 2DU is the only Australian listed. (BP-WA) (*2DU used to be common back in the early 80s.PM*)
- 1260 CANADA, Tofino National Park Weather Radio, 9/22 at 1424. Marine weather forecast by male ancr in EE, followed by female in FF. Very good. This TIS reportedly has 10 watts (*No, they are 50 watts, regular here.PM*) (GA-WA)
- 1278 JAPAN, Fukuoka JOFR, 9/23 1137 to 1210 UTC Hrd well w/program of JJ ballads and a few US Motown ballads too. (JB-WA)
 *Also noted 1049 9/23 good with JJ discussion, 1128 w/mx (BP-WA)
- 1287 JAPAN, Sapporo, JOHR 9/21 1130. Hrd throughout the night fair to good. (JB-WA)
- 1296 JAPAN, Matsue, JOTK NHK 1, 9/21 1340-1352. Hrd fair level w/JJ talk // 594 (JB-WA)
- 1296 UNID, teletalk fair 1215 9/22. accent sounded more NZ than Aussie, lost in splatter. (BP-WA) (Prob 1ZH.PM)
- 1314 JAPAN, Osaka JOUF 9/21 1332. Hrd throughout the even at fair level. (JB-WA)
- 1323 CHINA, CRI Russian Service (FS) to FE 9/21 1136-1142 and 1200-1215 UTC Hrd at good level with deep fades, RR talk, both classical and folk mx. Hrd well also 9/23 1127 (JB-WA)
 *Also heard CRI Russian Service 1235 9/22 talk and piano mx, good. Strong 1105 9/23 man & woman with nx in RR at 1113, then fanfare, brief anmt and mx (BP-WA)
- 1323 CHINA, various 9/22 1234 CC talk (BTW-WA)
- 1323 JAPAN, UNID 9/23 1029 JJ talk briefly. All stations in Pacific Asian Log are 1 KW or less. Fair, before complete fade down. (GA-WA)
- 1332 JAPAN, Nagoya JOSF good w/JJ talk 1039 9/23 (BP-WA)
 *Also noted 9/23 1045. Hrd fair level throughout the night until after 1400, occ excellent levels. (JB-WA)
- 1332 UNID, Aussie or NZ 1144 9/22 briefly good with 2 men doing sports broadcast. NZ most likely (BP-WA)
- 1368 JAPAN, 1038 9/23 either JOTS or NHK 1 outlet, fair w/JJ talk (BP-WA)
- 1386 JAPAN, NHK2 synchros 9/21 1150 noted w/EE lang lessons at fair level. Also hrd 9/22, 9/23 (JB-WA)

- *Also noted 1209 9/23, good with JJ woman talk // 774 (BP-WA)
- t1413 JAPAN, Fukuoka (presumed) KBC JOIF 9/23 1216. Noted in passing with JJ talk and good level (JB-WA)
- 1422 JAPAN, Yokohama JORF 9/21 1152, noted in passing with good signal. (JB-WA)
*Also noted 1036 9/23 man & woman in JJ 1148 good with pop song. (BP-WA)
- 1467 FIJI, Rakiraki, Radio Fiji two 9/22 1132. Hindi mx at fair level, male ancr in Hindi, mentions of Indonesia. (GA-WA)
*Also noted 1129 9/22 Hindi mx and talk, quite loud but deep fades. (BP-WA)
- 1467 JAPAN, NHK2 Synchros 9/23. Hrd at poor level // 774 (JB-WA)
- 1467 UNID, strong carrier, weak audio (Asian lang) 1146 9/23, plus several other times. Never produced much audio. (BP-WA)
- 1500 HAWAII, Honolulu, KUMU 9/22 1243, nice clear ID (BTW-WA)
- 1503 JAPAN, Akita, JOUK NHK 1, 9/20 1305 to 1330 noted // with other NHK 1 stations running special news account in JJ on America's War on Terrorism. Fair signal, Also hrd 9/21 (JB-WA)
*Also noted 1354 9/23 JJ talk mixing with filipino, NHK time signal 1400 (BP-WA)
- t1503 PHILIPPINES, Roxas City (listed) DYBB 9/23 1350-1401, hrd with initially good level in Tagalog, but fading rather quickly. Will report with a tape. (JB-WA) (*They do QSL too. PM*)
*Also noted 1347 9/23, Filipino talk, very lively an animated as though it were about Sports, rel, or politics. Strong at times with many deep fades, erratic signal. Two stations listed, no ID heard. (BP-WA) (Very likely DY Double B.PM)
*Also 9/23 1348 Nice signal presumed Tagalog with lively male announcers possibly calling sporting event. Good level on peaks occ JJ QRM. (GA-WA) (*Likely DYBB PM*)
- 1548 AUSTRALIA, Emerald 4QD good with sportscast 1046 9/22. Good with rel type telephone talk 1420 9/23 (BP-WA)
- 1557 TAIWAN, Kouhu, Family Radio 9/20 1019-1045. First noted by Don Nelson running EE rel programming, giving multiple SW frequencies and IDing as Family Radio and International Family Radio with an Oakland CA address. Fair to poor (JB-WA)
* Also noted Scripture reading in EE at 1411, a hymn at 1412, more Bible reading at 1416. Good level, mixing w/JJ talk at times (GA-WA)
*Also heard 1322 9/22 fair-poor in 1560 splatter inst mx, woman ancr mentioned "Family Radio" (BP-WA)
- 1566 REP. OF KOREA, Cheju, HLAZ 1045 9/22 strong w/rel program in CC (BP-WA)
*Also noted 9/21. Hrd with rel. prog, hymns, sermons, etc. throughout the night with good to excellent signals. Also hrd 9/22, 9/23. (JB-WA)
- 1575 THAILAND, Bangkok, VOA 9/21 1158-1203. Hrd at good level with SE Asian lang.prog (Burmese sked) until top of the hour when Yankee Doodle and "This program has come to you from the Voice of America, Washington" Was hrd clearly. Good level. Also hrd 9/23 1150-1215 UTC (JB-WA)
*Also noted 1201 9/23 good with VOA ID and EE News (BP-WA)
*Also hrd 9/21 1425 male & female ancrs in EE and 9/23 1206, VOA News. (GA-WA)
- 1593 JAPAN, NHK2 synchros 9/23 1150. Noted at fair levels // 774 (JB-WA)

TROPICAL BAND DX ROUNDUP

- 1737 PAPUA NEW GUINEA 1326-1335 KUT Radio, Southern Highlands CE 9/21 beacon poor-fair level. (GA-WA)
- 2390.08 MEXICO, Radio Huayacocotla 9/21, Ottmar Liebert tune 1212-1215 UTC woman ancr in SS and ID at 1219. SS Romantic mx 1223. Good tune-in, but fading to fair. (GA-WA)
- 2410 PAPUA NEW GUINEA, Radio Enga 0940-0945 UTC 9/21. Hrd at fair level with Melanesian mx and tok pisin lang, mentions of PNG. (GA-WA)
- 2960 INDONESIA, RRI Manggarai, 1230-1234, 9/21 Male ancr w/ID 1230, followed by talk and lagu populer. Fair-good. (GA-WA)
- 2980 USA, Dillon MT, KDBM 0422-0505, 2nd harmonic (2x1490) good to nil with sat. C&W. Real Country AM-1490 KDBM" ID at 0438. ABC News at 0500 UTC. (BP-WA)

- t3200 SWAZILAND, TWR 0308-0312 Weak brief signal of African choral mx, just above noise level. Male & female ancrs in unk.lang. Too faint to make out any other details. (GA-WA)
- 3255 SOUTH AFRICA, BBC 0312-0318 UTC 9/23. Two male ancrs, reports from BBC reporters. Fair and improved signal Hrd // 6005 (GA-WA)
- 3264.6 INDONESIA, RRI Gorontalo 9/21 from 1246-1304 Fair to good of US R&B mx, male ancr with bouncy talk, ID at 1259, SCI at 1259, then dead air for a minute before returning at 1301. Suddenly off for good at 1304 UTC. (GA-WA)
- t3324.8 GUATEMALA, Radio Maya 1050-1101 UTC with folklorico mx and female ancr in SS, weak signal. (GA-WA)
- 3325 INDONESIA, RRI Palangkaraya 9/23 1057-1102, superb signal! Male ancr with ID, TC, local news. (GA-WA)
- 3344.8 INDONESIA, RRI Ternate 0951-0954, woman ancr with monotone and mentions of Indonesian cities, fair-good. (GA-WA)
- 3976.1 INDONESIA, RRI Pontianak, 9/22 1455-1504. Strong signal. Also heard 9/23 1447 UTC. (GA-WA)

REPORTERS

- GA-WA GUY ATKINS, DXing with AOR AR7030 with Lankford sensitivity mod and extra filters, Sharp MD-X5 MD recorder, JPS NIR-12 DSP audio filter, ERGO receiver control software
- JB-WA JOHN BRYANT DXing with NRD535 and Ten-Tec 340
- BTW-WA PHIL BYTHEWAY, DXing with Drake R-7, Drake R-8
- BP-WA BRUCE PORTZER DXing with Drake R8A, MFJ-1026 signal enhancer, HP Spectrum Analyzer

Antennas used: Three matched terminated dual-wire Beverages, at 1000 feet long each aimed SW,W, & NW.

DX WORLDWIDE - EAST

Editor: Phil Bytheway - 9705 Mary NW - Seattle, WA 98117-2334

E-mail: phil@radiodx.com

Mark Connelly's Summer Roadtrip 2001 DX Report #2

On the web at "<http://www.geocities.com/markwalion/cape2001.htm>"

See "<http://www.geocities.com/markwalion/dxclams2001.htm>" for 2001 Roadtrip 1 report

[Connelly*B-MA] = Billerica, MA (GC= 71.221 W / 42.533 N) (home)

[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*rw-MA] = Rowley, MA (GC= 70.829 W / 42.745 N) (Stackyard Road / Parker River - Nelson Island wildlife refuge: salt-marsh)

Receiver: Drake R8A

Antenna systems: broadband loop, active whip, "Kaz" antenna, Superphaser-1 phasing unit

TRANSATLANTIC DX

153 ALGERIA Chaine 1, Bechar, AUG 23 0137 - // 549 & 891 with Arabic talk, flute music; good to excellent. [Connelly*H-MA]

+ SEP 7 0021 - Arabic vocal; over Germany. [Connelly*rw-MA]

153 GERMANY DeutschlandRadio, Donebach, SEP 7 0020 - classical music; slightly over Algeria. [Connelly*rw-MA]

162 FRANCE France-Inter, Allouis, AUG 23 0145 - man in French; good. [Connelly*H-MA]

+ SEP 7 0001 - news in French; excellent. [Connelly*rw-MA]

171 MOROCCO R. Mediterranee Internationale, Nador, AUG 23 0144 - Arabic vocal with large string and drum orchestra having an "epic film soundtrack" effect; loud. [Connelly*H-MA]

- + SEP 6 2352 - female Arabic vocal and large orchestra; local-like ! [Connelly*rw-MA]
- 177 GERMANY DeutschlandRadio Berlin, Oranienburg, AUG 23 0143 - C&W / rockabilly influenced vocal; to good peak. [Connelly*H-MA]
- + SEP 7 0000 - woman with news in German; fair to good. [Connelly*rw-MA]
- 180 TURKEY TRT, Polatli, AUG 23 0146 - mideast pop vocal in distant T-storm static. [Connelly*H-MA] + SEP 6 2359 - music, talk; poor. [Connelly*rw-MA]
- 183 GERMANY Europe No. 1, Felsberg, SEP 9 0235 - old-style soul vocal (Lou Rawls ?), then man in French; good. [Connelly*rw-MA]
- 189 ICELAND Ríkisutvarpid, Gufuskalar, SEP 6 2359 - Scandinavian talk by man; to fair peak. [Connelly*rw-MA]
- 198 UNITED KINGDOM BBC R.4, Droitwich et al., SEP 4 0138 - talk about role of women in Korean society; fair. [Connelly*B-MA]
- + SEP 6 2355 - weather observations mentioning Land's End, Mull of Kintyre, other locales; excellent. Not // BBC WS - 5975 at this time. [Connelly*rw-MA]
- 207 GERMANY DLF, Aholming, SEP 7 0020 - // 153 with classical music; mixed with Morocco. [Connelly*rw-MA]
- 207 MOROCCO RTM, Azilal, SEP 6 2350 - // 612 with Arabic female vocal, drums; very good. [Connelly*rw-MA]
- 225 POLAND Polskie R., Konstantynow, SEP 7 0022 - Slavic talk by man & woman; poor to fair over "QM" beacon. [Connelly*rw-MA]
- 234 LUXEMBOURG R. Luxembourg, Junglinster, AUG 23 0140 - synthesizer mood music; good. [Connelly*H-MA]
- + SEP 6 2356 - French talk, folk music; loud signal, but audio was somewhat mushy. [Connelly*rw-MA]
- 252 IRELAND Atlantic 252, Clarkestown, SEP 6 2357 - alternative dance-rock with Celtic influences; local-like. [Connelly*rw-MA]
- 531 SPAIN RNE R.5 synchros, SEP 7 0024 - // 774 with Spanish phone interview; fair, over others. [Connelly*rw-MA]
- 549 ALGERIA Chaîne 1, Les Trembles, AUG 23 0137 - // 153 & 891 with man in Arabic and flute music; loud ! [Connelly*H-MA]
- + SEP 4 0414 - energetic pop male Arabic vocal with drums and violins, talk by female DJ followed; loud. [Connelly*B-MA]
- + SEP 6 0025 - woman in Arabic.
- + SEP 7 0059 - HUGE with violins, male Arabic vocal. [Connelly*rw-MA]
- 549 GERMANY DeutschlandRadio, Nordkirchen & Thurnau, SEP 7 0025 - // 153 & 756 with classical "mood" music; under Algeria. [Connelly*rw-MA]
- 558 SPAIN RNE R.5 synchros, SEP 7 0057 - // 585 with Spanish talk; in WGAN slop. [Connelly*rw-MA]
- 567 SPAIN RNE R.5 synchros, SEP 7 0058 - seemed like Spanish talk // 585, not Ireland; poor. [Connelly*rw-MA]
- 585 SPAIN RNE R.1, Madrid, SEP 7 0056 - // 1017 with woman in studio & man on phone; in 590 slop. [Connelly*rw-MA]
- 603 SPAIN RNE R.5 synchros, SEP 7 0100 - // 585 with Spanish news read by woman; slightly over likely France / Madeira mix. [Connelly*rw-MA]
- 612 MOROCCO RTM, Sebba-Aioun, SEP 6 2350 - // 207 with Arabic female vocal with drums; fair. [Connelly*rw-MA]
- 621 CANARY ISLANDS // SPAIN RNE R.1 synchros, Santa Cruz de Tenerife et al., SEP 4 0417 - fast Spanish newstalk; good. [Connelly*B-MA]
- + SEP 7 0007 - man & woman in Spanish with news; fair to good. [Connelly*rw-MA]
- 639 SPAIN RNE R.1, La Coruna, SEP 7 0008 - // 621 with woman in Spanish; fair. [Connelly*rw-MA]
- 648 SPAIN RNE R.1, Badajoz et al., SEP 7 0018 - // 774 with man & woman in Spanish; poor. [Connelly*rw-MA]
- 657 SPAIN RNE R.5, Madrid, SEP 7 0102 - // 621 with news by man & woman in Spanish; fair over WFAN slop. [Connelly*rw-MA]

- 693 UNITED KINGDOM BBC R. 5, Droitwich et al., SEP 7 0012 - English talk; over unID music station. No high-side het noted, so Azores probably back on 693.0. [Connelly*rw-MA]
- 711 FRANCE R. Bleu, Rennes, SEP 7 0014 - // 1206 with soul vocal; barely over W. Sahara and its 50 Hz growl. [Connelly*rw-MA]
- 729 SPAIN RNE R.1 synchros, SEP 7 0015 - bits of Spanish talk in CKAC slop. [Connelly*rw-MA]
- 738 SPAIN RNE R.1, Barcelona, SEP 6 2342 - Spanish talk; through CHCM slop with CHWO/WJIB phased. [Connelly*rw-MA]
- 747 CANARY ISLANDS // SPAIN RNE R.5 synchros, SEP 7 0016 - Spanish talk; mixed with probable Netherlands. [Connelly*rw-MA]
- 756 GERMANY DeutschlandRadio, Braunschweig & Ravensburg, SEP 6 2338 - classical music; loud, well over Spain. [Connelly*rw-MA]
- 756 SPAIN R. Euskadi, Bilbao, SEP 7 0005 - Spanish talk; now over Germany. [Connelly*rw-MA]
- 765 SWITZERLAND RSR, Sottens, SEP 6 2335 - emotional French male vocal; to good peak. [Connelly*rw-MA]
- 774 EGYPT Abis, SEP 7 0055 - Arabic female vocal; briefly over Spain. [Connelly*rw-MA]
- 774 SPAIN RNE R.1 synchros, AUG 23 0212 - woman in Spanish, then male folk vocal with acoustic guitar. [Connelly*H-MA]
+ SEP 6 2337 - // 855 with man & woman in Spanish; slightly over presumed Egypt & 770 slop. [Connelly*rw-MA]
- 783 MAURITANIA ORTM, Nouakchott, SEP 6 2334 - // 4845 with Arabic talk by man, interspersed with string music; excellent. [Connelly*rw-MA]
- 792 FRANCE R. Bleu, Limoges, SEP 7 0006 - // 1206 with slow vocal; fair. [Connelly*rw-MA]
- 792 SPAIN SER, Sevilla, SEP 7 0103 - // 873 with news; loud, way over France. [Connelly*rw-MA]
- 801 SPAIN RNE R.1 synchros, SEP 7 0105 - // 738 et al. with fragment of music, then Spanish talk; mixed with second station that seemed Arabic (likely Jordan). [Connelly*rw-MA]
- 819 EGYPT General Programme, Batra, SEP 7 0019 - shrill Arabic vocal; riding up over Morocco. [Connelly*rw-MA]
- 819 MOROCCO RTM, Rabat, SEP 7 0101 - clearly // 612 with news by man in Arabic; loud, over Egypt. [Connelly*rw-MA]
- 836 AZORES RDP, Pico da Barrosa, AUG 24 0152 - group vocal, percussion; better than adjacent 837. [Connelly*H-MA]
+ SEP 6 2330 - blues-style vocal // Madeira-1125; good. [Connelly*rw-MA]
- 837 CANARY ISLANDS // SPAIN COPE synchros, AUG 24 0153 - woman in Spanish; poor. [Connelly*H-MA]
+ SEP 7 0042 - // 1296 with Spanish news; excellent, well over presumed France. [Connelly*rw-MA]
- 855 SPAIN RNE R.1, Murcia et al., SEP 6 2325 - // 1152 with man & woman in Spanish; fair to good with WEEI phased. [Connelly*rw-MA]
- 864 EGYPT Holy Koran R., Santah, SEP 6 2324 - Koranic male vocal; loud, now way over France. [Connelly*rw-MA]
- 864 FRANCE France Bleu, Paris, SEP 6 2322 - French talk, then slow female vocal; slightly over Egypt. [Connelly*rw-MA]
- 873 SPAIN SER synchros, SEP 6 2321 - // 1575 with Spanish talk about something going on tomorrow in Salamanca; huge signal. [Connelly*rw-MA]
- 882 CANARY ISLANDS // SPAIN COPE synchros, SEP 7 0108 - // 837 with woman in Spanish; over/under UK. [Connelly*rw-MA]
- 882 UNITED KINGDOM BBC R. Wales, Washford, SEP 7 0108 - orchestral music; evenly mixing with COPE Canaries-Spain. [Connelly*rw-MA]
- 891 ALGERIA Chaîne 1, Algiers, AUG 23 0137 - // 153 & 549 with man in Arabic and interspersed flute music; fair. [Connelly*R-MA]
+ SEP 7 0109 - // 549 with vocal, then woman in Arabic; big carrier, light audio. Something else under also had mideast-sounding music (perhaps Turkey ?). [Connelly*rw-MA]

- 909 UNITED KINGDOM BBC, Moorside Edge et al., SEP 7 0111 - English talk; over possible Arabic station & tough WABI slop. [Connelly*rw-MA]
- 918 SPAIN R. Intercontinental, Madrid, SEP 7 0111 - old-fashioned Spanish female vocal (romantic); fair to good. [Connelly*rw-MA]
- 936 SPAIN RNE R.5 synchros, SEP 7 0112 - // 639 with Spanish talk, teletalk; to good peak. [Connelly*rw-MA]
- 945 FRANCE France Bleu, Toulouse, SEP 6 2319 - '60s-style French male group vocal; good. [Connelly*rw-MA]
- 954 SPAIN Onda Cero, Madrid, SEP 6 2318 - man & woman in Spanish; fair to good with WROL phased. [Connelly*rw-MA]
- 972 LIBYA Libyan Jamahiriya BC, Sirte, SEP 6 2317 - Arabic vocal; through WZAN slop. [Connelly*rw-MA]
- 981 ALGERIA Radiodif. Algerienne, Algiers, SEP 6 2227 - religious-sounding male Arabic chant; fair to good with WCAP phased. [Connelly*rw-MA]
- 981 GREECE ERA, Athens, SEP 7 0034 - // 1512 with Greek talk; fair over others. [Connelly*rw-MA]
- 999 SPAIN COPE, Madrid, SEP 6 2229 - fast Spanish teletalk; good, over slight CKBW slop. [Connelly*rw-MA]
- 1008 CANARY ISLANDS Onda Cero, Las Palmas, SEP 6 2315 - non-SER Spanish talk by woman; loud with WINS phased. [Connelly*rw-MA]
- 1017 SPAIN RNE R.5 synchros, SEP 7 0056 - // 585 with teletalk; good. [Connelly*rw-MA]
- 1044 SPAIN SER synchros, SEP 4 0125 - fast monotone newstalk by man in Spanish; to fair peak. [Connelly*B-MA]
- 1053 SPAIN COPE synchros, SEP 6 2313 - Spanish talk seemed sports-related; to fair peak over others & WEVD slop. [Connelly*rw-MA]
- 1053 UNITED KINGDOM Talk Sport synchros, SEP 7 0054 - // 1089 with English talk mentioning the Internet. [Connelly*rw-MA]
- 1071 SPAIN Euskadi Irratia, Bilbao, SEP 7 0053 - operatic music, Spanish talk; in bad CBA slop. [Connelly*rw-MA]
- 1089 UNITED KINGDOM Talk Sport synchros, SEP 6 2309 - talk mentioning political leadership; to good peak. [Connelly*rw-MA]
- 1098 SLOVAKIA R. Slovensko, Velke Zaluze, SEP 6 2305 - Slavic female ballad vocal & piano; loud, way over Spain. [Connelly*rw-MA]
- 1107 SPAIN RNE R.5 synchros, AUG 23 0245 - woman in Spanish; fair. [Connelly*H-MA]
+ SEP 7 0052 - // 855 with man & woman in Spanish; big carrier, light audio. [Connelly*rw-MA]
- 1116 SPAIN SER synchros, SEP 7 0051 - // 1044 with musical interludes and Spanish talk; over others. [Connelly*rw-MA]
- 1125 MADEIRA Centro Regional da RDP, Ponta do Pargo, SEP 6 2330 - // Azores-836 with blues-influenced vocal; slightly over jumble. [Connelly*rw-MA]
- 1125 SPAIN RNE R.5 synchros, SEP 6 2258 - Spanish talk, drum music; in mix with Croatia, Madeira, and possibly others. [Connelly*rw-MA]
- 1134 CROATIA Hrvatski R., Zadar, SEP 6 2348 - pop vocal with Beach Boys influences; excellent / dominant. [Connelly*rw-MA]
- 1134 SPAIN COPE synchros, SEP 6 2235 - Spanish phone interview; well over Croatia's music. [Connelly*rw-MA]
- 1143 SPAIN COPE synchros, SEP 6 2258 - jazz; fair. [Connelly*rw-MA]
- 1152 SPAIN RNE R.5 synchros, SEP 6 2325 - Spanish talk // 855; fair.
+ SEP 7 0050 - // 774 with segment of Spanish speech, then in-studio announcer; loud. [Connelly*rw-MA]
- 1179 CANARY ISLANDS // SPAIN SER synchros, SEP 7 0047 - // 873 with fast Spanish talk; over a music station and a possible tone-tester. [Connelly*rw-MA]
- 1206 FRANCE France Bleu, Bordeaux, AUG 23 0112 - uptempo French female vocal; to good peak before fading. [Connelly*H-MA]
+ SEP 6 2254 - "I Will Survive" by Gloria Gaynor; blasting in. [Connelly*rw-MA]
- 1215 UNITED KINGDOM Virgin R. synchros, AUG 23 0252 - Celine Dion singing "My Heart Will Go On"; over Spain. [Connelly*H-MA]
+ SEP 7 0046 - "One Hand in My Pocket" by Alanis Morissette; good, over Spain. [Connelly*rw-MA]

- 1251 LIBYA Libyan Jamahiriya Broadcasting, Tripoli, SEP 7 0043 - male Arabic talk, string music; over apparent Portuguese teletalker. [Connelly*rw-MA]
- 1287 SPAIN SER synchros, SEP 7 0042 - // 1044 with teletalk; poor to fair. [Connelly*rw-MA]
- 1296 SPAIN COPE, Valencia, SEP 7 0042 - // 837 with Spanish news; to good peak. [Connelly*rw-MA]
- 1314 NORWAY NRK, Kvitsoy, SEP 7 0041 - cool jazz; slightly over Spain. [Connelly*rw-MA]
- 1359 SPAIN Arganda, AUG 23 0515 - Spanish news and teletalk; loud. [Connelly*H-MA]
+ SEP 6 2215 - pre-sunset het fade-up.
+ SEP 7 0116 - man in Spanish; in CKBC slop. [Connelly*rw-MA]
- 1377 FRANCE France Bleu, Lille, AUG 13 0410 - man & woman in French; fair through slop from strong St. Pierre - 1375. [Connelly*B-MA]
+ AUG 24 0017 - // 1206 with mellow ballad.
+ AUG 24 0243 - "Clair" by Gilbert O'Sullivan; excellent, clobbering St. Pierre. [Connelly*H-MA]
+ SEP 6 2216 - male pop vocal over WMYF-1380 NH slop; well before sunset. [Connelly*rw-MA]
- 1404 FRANCE France Bleu synchros, SEP 7 0040 - // 1206 with French disco; poor. [Connelly*rw-MA]
- 1413 SPAIN RNE R.5 synchros, SEP 7 0039 - // 774 with woman in Spanish; in jumble. [Connelly*rw-MA]
- 1422 GERMANY DeutschlandRadio, Heusweiler, SEP 7 0038 - // 756 with violins, woodwinds. [Connelly*rw-MA]
- 1467 FRANCE TWR, Roumoules, AUG 13 0344 - musical-box interval signal; fair. [Connelly*B-MA]
- 1485 SPAIN SER synchros, SEP 7 0035 - Spanish talk; poor with unID other signal. [Connelly*rw-MA]
- 1512 CRETE / GREECE ERA, Chania, SEP 7 0034 - // 981 with man & woman in Greek; to good peak with WWZN phased. [Connelly*rw-MA]
- 1521 SAUDI ARABIA BSKSA, Duba, AUG 23 0259 - interval signal (about 7 descending notes on oud); huge, trashing WWKB.
+ AUG 24 0305 - Koranic male vocal; local-like. [Connelly*H-MA]
+ SEP 6 2218 - // 9555 & 9870 with Arabic male vocal with lush strings and percussion; good, way over others; loudest pre-sunset TA. [Connelly*rw-MA]
- 1521 SPAIN SER, Castellon, SEP 7 0032 - Spanish teletalk; good with WWKB phased. [Connelly*rw-MA]
- 1548 KUWAIT VOA Relay, Kuwait City (Kabd), AUG 23 0122 - VOA sports report mentioning Formula 1 Auto Racing; fair through WPTR-1540 slop. [Connelly*H-MA]
+ SEP 7 0030 - "VOA News Now" mention, Voice of America ID, timecheck "midnight 30 UTC", then item about meeting between Shimon Peres and Yasir Arafat; good. [Connelly*rw-MA]
- 1550 ALGERIA RASD Clandestine, Tindouf, SEP 8 2303 - // 7460 with strings, muffled Arabic talk; in & out of domestic jumble. The 7460 outlet was slightly over WWCR religious broadcast. [Connelly*rw-MA]
- 1575 ITALY RAI R. Uno synchros, AUG 13 0350 - test tones, then sound of glass being tapped; ID by woman "RAI - Radiotelevisione Italiana" at 0400. Signal was mostly over SER - Spain. [Connelly*B-MA]
- 1575 SPAIN SER synchros, SEP 6 2247 - Spanish newstalk; jumpy fading on signal. [Connelly*rw-MA]
- 1584 CEUTA RadiOle, SEP 6 2246 - mellow female pop vocal; way over SER talker. [Connelly*rw-MA]

PAN-AMERICAN DX

- 526 BAHAMAS ZLS, Stella Maris, AUG 23 0232 - "ZLS" code beacon; fair. [Connelly*H-MA]

- 530 TURKS & CAICOS R. Vision Cristiana Internacional, South Caicos, AUG 23 0234 - Spanish mentions of religious schools; excellent over 531 het.
+ AUG 24 1301 - English ID for 1330 NY outlet and for 530, South Caicos Island. Spanish slogans "La Emisor del Dios" and "Radio Vision Cristiana" followed. Good steady S7 daytime groundwave signal during E. Harwich testing of a "Kaz" antenna fed at both ends. [Connelly*H-MA]
- 540 COLOMBIA (t) R. Autentica, HJKA, Bogota, AUG 23 0231 - maybe this with old-fashioned Spanish religious music; mushy signal. [Connelly*H-MA]
- 550 CUBA R. Rebelde synchros, AUG 24 1006 - // 670 with excited shouting; mixed with RI & VT domestics. [Connelly*H-MA]
- 550 VENEZUELA Mundial, YVKE, Caracas, AUG 23 0229 - political speech to "el pueblo Venezolano", // other YV outlets; loud ! [Connelly*H-MA]
- 555 ST. KITTS & NEVIS R. ZIZ, Basseterre, AUG 23 0127 - live remote outdoor broadcast with announcer talking to people in the crowd; to good peak. [Connelly*H-MA]
+ SEP 4 0405 - "I'll Take You There" by the Staples Singers; fair. [Connelly*B-MA]
- 570 CUBA R. Reloj, AUG 24 1002 - Reloj news, ticks, beeps; over WMCA. [Connelly*H-MA]
- 580 DOMINICAN REPUBLIC R. Monte Cristi, HIAF, Monte Cristi, AUG 24 0826 - meringue music, Monte Cristi mention; over/under WKAQ. [Connelly*H-MA]
- 580 JAMAICA RJR, Galina, AUG 24 1000 - mention of "Caribbean Ministry, Box 20, Kingston 10", then "Good morning Jamaica. This is RJR"; good. [Connelly*H-MA]
- 580 PUERTO RICO R. Reloj, WKAQ, San Juan, AUG 24 0825 - Puerto Rico news; slightly over HIAF. [Connelly*H-MA]
- 580.52 unID AUG 24 1001 - very weak het; maybe the same thing Krueger in FL heard on 580.8 a while back. [Connelly*H-MA]
- 600 CUBA R. Rebelde, CMKV, Urbano Noris, AUG 23 0150 - // 670 with reverberated speech about Cuba & socialism; over growl from the YV or HJ. [Connelly*H-MA]
- 620.28 unID AUG 24 1008 - perhaps Nicaragua or other Central American here with man & woman in Spanish NOT // Cuban Rebelde outlets; splittable from ME/NJ/VT domestics on 620 before taking a quick fade. [Connelly*H-MA]
- 627.5 unID AUG 24 0823 - het; late reception time would suggest Cuba. [Connelly*H-MA]
- 630 PUERTO RICO WUNO, San Juan, AUG 24 0840 - Spanish talk about Puerto Rico events, bits of songs were featured; over WPRO. [Connelly*H-MA]
- 640 CUBA R. Progreso, Guanabacoa / Las Tunas, AUG 23 0227 - // 890 with newstalk about a visit by a Venezuelan ambassador; excellent over Spain-639 het.
+ AUG 24 1011 - near-dawn reception with a huge signal: R. Progreso ID (// 890) and sports-related news items mentioning many Latin American countries. [Connelly*H-MA]
- 649 unID AUG 24 0956 - weak het against WSM / LA's. [Connelly*H-MA]
- 650 COLOMBIA RCN Antena Dos, HJKH, Bogota, AUG 23 0237 - sports promo with "Goooooooooal !", then Antena Dos jingle and talk about Bogota; atop second Latin American. [Connelly*H-MA]
- 652.5 CUBA AUG 24 0843 - the split-freq. station noted by Terry Krueger in FL makes it to Cape Cod as a weak het against the 650 HJKH/HIAT mix. [Connelly*H-MA]
- 670 CUBA R. Rebelde, CMQ, Arroyo Arenas, AUG 23 0150 - political speech // 600; huge. [Connelly*H-MA]
- 670 VENEZUELA R. Rumbos, YVLL, Caracas, AUG 24 0227 - several Rumbos ID's, steel band music; good. [Connelly*H-MA]
- 680 PUERTO RICO WAPA, San Juan, AUG 23 0152 - Wapa / Guapa mentions, Spanish talk in touchy null of WRKO (Dr. Laura). [Connelly*H-MA]
- 690 ANGUILLA Caribbean Beacon, The Valley, AUG 24 0026 - // 6090 with preacher in English and, every few sentences, a translation into Spanish; good with CINF phased. [Connelly*H-MA]
- 700 JAMAICA RJR, Montego Bay, AUG 24 0820 - thickly-accented local talkshow mentioning Negroes, World War II; over Latin Americans with WLW phased.

- + AUG 24 0952 - Jamaican-accent preaching; excellent, over WLW & Latins. Actual frequency measured as 699.98. [Connelly*H-MA]
- 710 CUBA R. Rebelde synchros, AUG 24 0847 - // 670 with Latin American pop music influenced by 1950's doo-wop; under WOR. [Connelly*H-MA]
- 730 COLOMBIA Cadena Melodia, HJCU, Bogota, AUG 24 0901 - several "en Colombia" mentions; over Charleston, SC station with CKAC phased. [Connelly*H-MA]
- 740 CUBA R. Progreso synchros, AUG 24 0853 - program "El Diario de R. Progreso"; over second Latin American and CHWO. [Connelly*H-MA]
- 750 VENEZUELA RCR, YVKS, Caracas, AUG 23 0154 - Spanish news about Venezuelan corporations and farmers; loud.
- + AUG 24 0902 - sign-on with Venezuelan anthem; huge, annihilating WSB. [Connelly*H-MA]
- 760 COLOMBIA RCN, HJAJ, Barranquilla, AUG 23 0134 - // 1000 with fast play-by-play sports mentioning Copa America (or Americana); dominant.
- + AUG 24 0151 - local ID mentioning 760 kHz, RCN Barranquilla; loud. [Connelly*H-MA]
- 770 COLOMBIA RCN, HJJX, Bogota, AUG 23 0203 - Spanish news item mentioning Maturin, Colombia; over WABC. [Connelly*H-MA]
- 780 VENEZUELA R. Coro, YVMN, Coro, AUG 24 0232 - slow Spanish talk, R. Coro ID, then high-intensity advertising and jingles; loud, over CFDR and second Latin American. [Connelly*H-MA]
- 780 VENEZUELA Ecos del Torbes, YVOD, San Cristobal, AUG 24 0859 - "Ecos del Torbes presenta ." popped up over mess. [Connelly*H-MA]
- 780 VENEZUELA AUG 23 0240 - two stations carrying the same national political speech. Surprisingly the delay between the two stations' audios was 1.5 sec. [Connelly*H-MA]
- 790 BARBADOS (t) V. of Barbados, Bridgetown, AUG 23 0213 - US soul music, Caribbean announcer; under WSKO. [Connelly*H-MA]
- 800 NETHERLANDS ANTILLES Trans-World Radio, PJB, Bonaire, AUG 23 0214 - Spanish religion, R. Transmundial mention; over jumble. [Connelly*H-MA]
- 810 BAHAMAS ZNS3, Freeport, AUG 24 0946 - black gospel music; over WGY / CJVA / LA's. [Connelly*H-MA]
- 810 CUBA R. Rebelde, Guantanamo (?), AUG 23 0221 - // 670 with Spanish talk about the Cuban government. I was surprised to hear this overriding the CJVA / WGY / ZNS3 / WKVM / HJCY melange. [Connelly*H-MA]
- 813.25 unID AUG 23 0215 - het. + noted having drifted to 812.9 on AUG 24 at 0944; perhaps Cuban. [Connelly*H-MA]
- 830 CUBA R. Reloj, AUG 24 0942 - Reloj program over WCRN & unID Latin American. [Connelly*H-MA]
- 830 ST. KITTS & NEVIS Trinity Broadcast Network, Charlestown, AUG 23 0223 - // 7510 with Black Baptist singing; way over WCRN. [Connelly*H-MA]
- 840 CUBA "W", CMHW, Santa Clara, AUG 24 0805 - program with results of voting by the audience for the better of two songs. Vocal by "La India" won. Announcer gave name of show as "Ritmo de la Noche", Santa Clara local mentions followed. Huge signal. [Connelly*H-MA]
- 850 unID, AUG 24 0940 - Spanish talk with "del Caribe" mention; under WEEI. [Connelly*H-MA]
- 860 CUBA, CMBL, Arroyo Arenas, AUG 23 0225 - running Rebelde program // 600 (but delayed about half a second). This has been noted with R. Reloj service on other occasions. Atop unID that had Colombian style accordions. [Connelly*H-MA]
- 860 VENEZUELA R. Mundial, YVOL, San Cristobal, AUG 24 0914 - "Ocho - Sesenta, Mundial" ID, folk-style music; loud. [Connelly*H-MA]
- 870 CUBA R. Reloj, AUG 24 0910 - news, clock ticks, "RR" beeps; mixed with second Spanish station and WWL. [Connelly*H-MA]
- 890 CUBA R. Progreso, CMDZ, Santiago de Cuba, AUG 23 0227 - // 640 with mentions of Cuban - Venezuelan diplomatic relations; jumbled with WBPS and others.
- + AUG 24 0936 - Progreso ID, but running an independent program from usually // 900 at the time. [Connelly*H-MA]

- 895 ST. KITTS & NEVIS V. of Nevis, Bath Village, Nevis, AUG 24 0157 - sign-off with an anthem or hymn; audio off by 0159 but blank carrier left on. [Connelly*H-MA]
 + SEP 7 0110 - phone-in talkshow, Caribbean-accented presenter; fair. [Connelly*rw-MA]
- 900 CUBA R. Progreso, AUG 24 0935 - R. Progreso ID, Spanish talk; dominant. [Connelly*H-MA]
- 960 CUBA R. Reloj, AUG 24 0932 - Reloj program; over domestics and unID Latin American. [Connelly*H-MA]
- 1000 COLOMBIA RCN, HJAO, Cartagena, AUG 23 0134 - RCN sports in Spanish // 760; over/under CKBW. [Connelly*H-MA]
- 1020 VENEZUELA R. Calendario, YVMX, Maracaibo, AUG 24 0203 - numerous Maracaibo local adverts; atop channel during brief fade of YVRS. [Connelly*H-MA]
- 1020 VENEZUELA R. Margarita, YVRS, La Asuncion, AUG 24 0201 - fast folk music with male group and old-style accordion, then R. Margarita ID well over YVMX / KDKA. [Connelly*H-MA]
- 1040 DOMINICAN REPUBLIC R. Cadena de Noticias, HION, Santo Domingo, AUG 24 0931 - Radio Noticias jingle; over dogpile of other stations. [Connelly*H-MA]
- 1041.22 unID AUG 24 0928 - weak het against HION. [Connelly*H-MA]
- 1110 VENEZUELA R. Carupano, YVQT, Carupano, AUG 24 0241 - numerous R. Carupano ID's, then romantic music including old-fashioned waltzes; in easy WBT null. [Connelly*H-MA]
- 1136.4 unID SEP 6 2300 - wobbly carrier, weak. Not sure if Pan-American or Transatlantic in origin. [Connelly*rw-MA]
- 1160 BERMUDA VSB3, Hamilton, SEP 7 0049 - // 5975 with classical music presentation; in mix with WOBN / WVNJ / WSKW. [Connelly*rw-MA]
- 1375.02 ST. PIERRE ET MIQUELON RFO, St. Pierre, AUG 24 0306 - French hard-rock male vocal; excellent. [Connelly*H-MA]
- 1529.6 URUGUAY (t) R. Independencia, CX50, Montevideo, AUG 24 0253 - bits of Spanish talk audible on lower sideband on this unique frequency (previously logged in NF). Noted during reduced QRM from the usual 1530 jumble (WSAI/ Sao Tome / Vatican). [Connelly*H-MA]

WESTERN DX FORUM

Reid Wheeler – 5910 Boulevard Loop SE – Olympia, WA 98501-8408

E-mail: WMA001@home.com Phone 360-786-6756 Fax 360-753-3824

Mike Sanburn, PO Box 1256, Bellflower, CA 90707-1256 (mikesanburn@hotmail.com)

Hello again – it was great fun hosting this year's IRCA convention in St. Louis. Across the river in Illinois, we found a tower farm near the Gateway race track that was home to at least 3 directional AM'ers. I believe they include KTRS-550 (ex KSD) and KJSL-630 (ex KXOK) – will research this further. Changing planes in Dallas I noted the 3 familiar towers near DFW airport that I have yet to identify. Also on the final segment from DFW back to Long Beach, a night flight, after takeoff I could see the 12-tower array of AM-1190 in Dallas. They've had many call letters including KLIF, KLUV, KGBS, KOOO ... Haven't logged that one in SoCal yet. There's always so much radiowise that a person can see and do while traveling. I'm constantly researching new places for future conventions. Hope to host another in Portland, Maine sometime, possibly hear some transatlantic DX ... if any member is planning to bid for 2002, I believe the deadline is Oct. 15th. I'll support you fully with my vote, my attendance, and of course lots of radio goodies... I'll be passing on the M Street Directory but will buy the NRC Log. The Lakewood library has the 2001 Broadcasting Yearbook now. I was sitting there the other day when somebody came walking up to me and it was none other than Don Schmidt of S.C.A.D.S. fame. They are still getting together every month in Orange County. They have a link on the IRCA website. Their radio fest 2001 will be held October 6th + 7th at F&M Bank community room, 12535 Seal Beach Blvd, Seal Beach CA 90740 and will include Don Barrett's – topic: medium-wave-radio! (visit www.laradio.com). Now that we're back in the months with R's in them, good DX! Ciao, 73.

GEOMAGNETIC INDICES

Editor: Phil Bytheway

E-mail: phil@radiodx.com

Geomagnetic Summary May 22 2001 through September 30 2001
Tabulated from email status daily

Date	Flux	A	K	SA Forecast	GM Forecast	Etc.
5/22	150	5	2	low-moderate	quiet-unsettled	1
23	152	9	3	low-moderate	quiet-active	5
24	159	14	3	low-moderate	quiet-active	3
25	170	7	2	low-moderate	quiet-unsettled	1
26	162	10	2	low-moderate	quiet-unsettled	2
27	147	10	1	low-moderate	quiet-unsettled	3
28	147	5	2	low	quiet-unsettled	6
29	143	18	3	low	unsettled-active	5
30	139	9	0	low	quiet-unsettled	2
5/31	132	4	1	low	quiet-unsettled	3
6/ 1	133	5	1	low	quiet-unsettled	2
2	133	9	5	low	unsettled-active	9
3	134	20	2	low	unsettled-active	4
4	145	10	3	low	quiet-unsettled	6
5	154	15	3	low-moderate	quiet-unsettled	6
6	153	10	2	low-moderate	quiet-unsettled	6
7	158	9	2	low-moderate	quite-unsettled	6
8	165	12	2	low	quiet-unsettled	6
9	180	9	3	low-moderate	quiet-unsettled	7
10	177	17	4	low-moderate	unsettled-active	8
11	163	17	3	low-moderate	quiet-unsettled	6
12	162	9	2	low-moderate	quiet-unsettled	5
13	166	6	3	low-moderate	quiet-unsettled	6
14	181	11	2	low-moderate	quiet-unsettled	3 maf 1142
15	195	6	3	low-moderate	quiet-unsettled	5
16	197	11	2	low-moderate	quiet-unsettled	1 maf 1013/spe
17	208	6	0	low-moderate	quiet-unsettled	3
18	205	8	3	low-moderate	unsettled-active	6
19	221	31	4	low-moderate	unsettled-mis	5 mas 0600
20	195	13	3	low-moderate	quiet-active	7
21	199	15	1	low-moderate	quiet-unsettled	5
22	200	13	2	low-moderate	quiet-unsettled	4
23	204	9	3	moderate	quiet-unsettled	6 maf 2222
24	206	8	2	moderate	quiet-unsettled	1 maf 0408
25	195	11	2	low-moderate	quiet-unsettled	6
26	182	7	1	low	quiet-unsettled	4
27	168	8	4	low	unsettled-active	8
28	148	8	0	low	quiet-active	3
29	140	2	1	low	quiet	2
6/30	140	4	2	low	quiet-unsettled	5
7/ 1	137	10	2	very low-low	quiet-unsettled	7
2	135	7	2	very low-low	quiet-unsettled	6
3	134	5	1	very low-low	quiet-unsettled	3
4	132	8	3	very low-low	quiet-unsettled	7
5	127	10	2	very low-low	quiet-unsettled	6
6	120	10	2	very low-low	quiet-unsettled	5
7	116	6	2	very low-low	quiet-unsettled	6
8	118	6	2	very low-low	quiet-unsettled	6
9	126	13	5	low	unsettled-active	8
10	130	10	2	low	quiet-unsettled	4

11	130	10	3	very low-low	quiet-unsettled	7
12	132	7	1	very low-low	quiet-unsettled	3
13	134	8	3	very low-low	quiet-unsettled	1
14	133	7	3	very low-low	quiet-unsettled	9
15	141	11	2	low-moderate	quiet-unsettled	4
16	142	11	3	low	quiet-unsettled	8
17	146	17	2	low	quiet-active	
18	143	6	1	low	quiet	
19						
20	143	8	1	low	quiet-unsettled	
21	139	7	3	low	quiet-unsettled	
22	140	6	2	low	quiet	
23	143	10	2	low	quiet-active	
24	133	14	3	low	quiet-active	
25	133	16	3	low	quiet-active	
26	133	22	4	low	unsettled-active	7
27	123	14	2	very low-low	quiet-unsettled	3
28	121	10	2	very low-low	quiet-unsettled	5
29	116	4	1	very low-low	quiet-unsettled	4
30	117	8	2	very low-low	quiet-unsettled	2
7/31	115	9	3	very low-low	quiet-unsettled	8
8/ 1	117	18	3	low	quiet-active	7
2	120	13	2	low	quiet-unsettled	5
3	121	7	2	low-moderate	quiet-active	1
4	132	13	1	low-moderate	quiet-unsettled	6
5	148	9	3	low-moderate	quiet-unsettled	7
6	156	23	3	moderate	unsettled-active	3
7	164	19	3	low-moderate	unsettled-active	5
8	166	14	3	low-moderate	quiet-unsettled	4
9	167	10	1	low-moderate	quiet-unsettled	5
10	163	11	3	low-moderate	quiet-unsettled	6
11	160	9	2	low-moderate	quiet-unsettled	7 spe 1020
12	160	16	4	low-moderate	active-mis	7
13	152	20	3	low-moderate	unsettled-active	6
14	147	13	2	low-moderate	quiet-unsettled	5
15	147	7	1	low	quiet-unsettled	4
16	147	7	2	low	quiet-unsettled	3 pca 0210
17	145	30	3	low	mis-mas	6 mas 1100/spe/pca
18	156	17	2	low	unsettled-active	2 spe ends
19	158	12	1	low	quiet-unsettled	2
20	156	8	2	low	quiet-unsettled	3
21	160	12	2	low-moderate	quiet-active	7
22	162	15	3	moderate	quiet-active	7
23	170	7	1	low-moderate	quiet-unsettled	5
24	174	5	1	moderate-high	quiet-unsettled	1
25	199	11	2	moderate-high	quiet-active	7 maf 1645
26	190	13	2	moderate	active-mis	6
27	192	14	4	moderate	active-mis	8
28	199	13	2	moderate	quiet-unsettled	3
29	197	10	2	moderate	quiet-unsettled	3
30	199	16	3	moderate-high	quiet-unsettled	6
8/31	189	17	3	moderate-high	quiet-unsettled	6
9/ 1	184	9	1	moderate-high	quiet-active	4
2	184	9	0	moderate-high	quiet-active	1
3	183	8	3	moderate-high	quiet-active	3
4	199	21	3	moderate-high	quiet-active	6
5	218	17	3	moderate-high	quiet-active	7
6	218	6	2	moderate-high	quiet-unsettled	5 maf 1432
7	222	5	1	moderate-high	quiet-unsettled	2

8	226	6	2	moderate-high	quiet-unsettled	4
9	250	8	2	moderate-high	quiet-unsettled	5
10	236	7	2	high	quiet-unsettled	1 maf 2045
11	245	5	2	moderate-high	quiet-unsettled	5
12	250	12	3	moderate-high	quiet-unsettled	6
13	235	14	3	moderate-high	quiet-unsettled	7
14	240	16	3	moderate-high	quiet-active	2
15	237	9	3	low-moderate	quiet-active	7
16	219	14	2	low-moderate	quiet-unsettled	5
17	207	7	1	low-moderate	quiet-unsettled	5 maf 0353
18	199	12	2	moderate-high	quiet-unsettled	5 maf 1550
19	203	10	3	moderate-high	quiet-unsettled	3
20	199	8	1	low-moderate	quiet-unsettled	4
21	227	6	2	low-moderate	quiet-unsettled	3
22	239	8	2	low-moderate	quiet-unsettled	5
23	255	12	1	moderate	quiet-unsettled	4
24	259	20	3	moderate	unsettled-active	9
25	279	7	1	moderate-high	unsettled	5 maf 1038/pca/spe
26	275	16	5	moderate-high	mas	9 maf 0432/pca/spe
27	283	20	2	moderate-high	unsettled-active	5 spe 1215/pca
28	270	11	2	moderate	unsettled	6 spe/pca
29	266	12	3	moderate-high	unsettled-active	6 spe/pca
9/30	240	21	3	moderate-high	unsettled-mis	7 spe

THE INTERNATIONAL RADIO CLUB OF AMERICA (IRCA)

P.O. Box 60241, Lafayette LA 70596

The IRCA is a non-profit organization devoted to the hobby of hearing distant stations on the Broadcast Band (510-1720 kHz). DX Monitor, the official publication of the IRCA, is published in "soft" form 40 times a year (weekly from September to April, twice monthly from May to August) and in printed form 35 times a year (weekly September to April, monthly May to August). DX Monitor contains members' loggings, articles on radio stations, receiver reviews, technical articles, DX tips, and other material of interest to Broadcast Band DX hobbyists. IRCA is a member of ANARC, the Association of North American Radio Clubs.

CLUB ADDRESSES AND OFFICERS

President: Lee Freshwater, 414 SE 3rd Street, Ocala FL 34471 (proposals/gripes),
e-mail: ENGWTRS@aol.com

Secretary-Treasurer: Lynn Hollerman, (dues/address changes, see address above)
e-mail: lynnhollerman@yahoo.com

Board of Directors: Phil Bytheway (chairman), Nick Hall-Patch, John C. Johnson,
Nancy Johnson, Patrick Martin, Mike Sanburn and Pete Taylor

Editor-in-Chief: Rich Toebe, 2013 Sargent Court, Davis CA 95616-7621
e-mail: richtoebe@jps.net (all material for publication goes here)

MEMBERSHIP DUES (DXM=printed DX Monitor, SDXM=soft e-mailed version)

Destination	SDXM	DXM	DXM+SDXM
USA	\$10	\$25	\$30
Canada & Mexico (group 2)	\$10	\$31	\$36
Western Europe (group 3)	\$10	\$45	\$50
Australia/NZ/Japan (group 4)	\$10	\$46	\$51
Rest of world (group 5)	\$10	\$43	\$48

TRIAL MEMBERSHIP TO USA-CANADA-MEXICO only: \$10 DXM, \$12 DXM/SDXM
Installment Rate: 2 payments a year of one-half dues plus \$1

Make checks and Money Orders in US funds payable to IRCA

Send all dues and address changes to: IRCA, PO Box 60241, Lafayette LA 70596

Sample copies of DX Monitor are available for 34c to USA addresses, 60c to Canada and Mexico, or 2 International Reply Coupons each to other countries, and are available from 2103 Sargent Court, Davis CA 95616-7621.

Unless otherwise noted, permission is granted to publish, broadcast, or otherwise reproduce non-copyrighted material appearing in DX Monitor provided credit is given to the IRCA and the original contributor. Opinions in DX Monitor are those of the original contributors and do not necessarily reflect those of the IRCA, its publishing staff, editors or officers. Pb