

# DX News

• Serving DX'ers since 1933



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**Late DX Test:** WGBW-1590, Denmark WI, will test on Sunday, October 23, at 0100-0200 ELT (possibly lasting until 0300). Power will be 10 kW on daytime pattern. Programming will include tones, IDs, and unique music. Contact: Mark Heller, WGBW AM 1590, P.O. Box 100, Denmark, WI 54208-0100, <wgbw@lsol.net>.

E-DXN subscribers can access this issue in time for this DX Test announcement.

**Contest 2011:** The second "sprint" for the NRC Contest runs on any three consecutive days of your choosing between November 3 through 15. Your entry for October's sprint must be submitted by November 15. Details on page 34 of the September 19 issue.

**Convention 2011:** Some photos from the convention are posted at the NRC web site <www.nrcdxas.org>; some of these will appear in future DX News issues. But we're full up this week!

**From the Publisher:** For all you do-it-yourself types, Gary DeBock has a great article this week on building an affordable inductive ferrite loop antenna for an ultra-light radio. I'm not sure how all the photos will come out in the printed version; but the full-color version is available in E-DXN and on Gary's web site.

The back cover hasn't been printing correctly in recent issues, but I'm told the problem has been resolved at the printer. All your contact addresses for NRC services are there – get out your magnifying glass and you'll find it!

Articles, suggestions, and other stuff for publication should be sent to the Publisher in Harpers Ferry. It's easiest to use e-mail if you can: <NRCDXNews@gmail.com>. Anything involving checks goes to Aurora!

### VOL. 79 DX NEWS PUBLISHING SCHEDULE

No	In By	Date			
6	Oct. 28	Nov. 7	18	Jan. 27	Feb. 6
7	Nov. 4	Nov. 14	19	Feb. 3	Feb. 13
8	Nov. 11	Nov. 21	20	Feb. 10	Feb. 20
9	Nov. 18	Nov. 28	21	Feb. 17	Feb. 27
10	Nov. 25	Dec. 5	22	Feb. 24	Mar. 5
11	Dec. 2	Dec. 12	23	Mar. 2	Mar. 12
12	Dec. 9	Dec. 19	24	Mar. 16	Mar. 26
13	Dec. 23	Jan. 2	25	Mar. 30	Apr. 9
14	Dec. 30	Jan. 9	26	Apr. 27	May 7
15	Jan. 6	Jan. 16	27	May 25	June 4
16	Jan. 13	Jan. 23	28	June 30	July 9
17	Jan. 20	Jan. 30	29	Aug. 3	Aug. 13
			30	Sept. 7	Sept. 17

### THE DX TIME MACHINE

**75 years ago:** From the Nov. 2, 1936 *DX News*: Several East Coast DXers were hearing TA signals in late October. In past years, TAs were rare before November 15 or so.

**50 years ago:** From the Nov. 4, 1961 *DX News*: John Callarman reported on his first evening of DX from his new location in Monroe, La., with a number of Central American stations heard.

**25 years ago:** From the Nov. 3, 1986 *DX News*: A Musing from Gene Martin contained a detailed daily history of his receptions of JOIK-747, and hypothesized that the "mid-winter anomaly" affects only TA, not TP, reception.

**10 years ago:** From the Nov. 5, 2001 *DX News*: The Ontario DX Association has assumed QSL responsibilities for CHWO-740, CFRB-1010, and CFRX-6070 Toronto; Radio Paradise, St. Kitts has moved from 830 to 820 kHz; John Sampson sent in a bandscan from a "Polar Bear DXpedition" to Churchill, in northern Manitoba.

## NRC AM Radio Log, 32nd Edition

The Log is unbound and three-hole punched for standard binders.

Price: To the United States, \$19.95 to members, \$25.95 to non-members; add \$3.50 for Priority Mail.

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Order from: NRC, P.O. Box 473251, Aurora CO 80047-3251 or www.nrcdxas.org  
CO residents add 3.5% sales tax.



# AM Switch



**Bill Hale** w\_r\_hale@sbcglobal.net

6124 Roaring Springs Drive

North Richland Hills, TX 76180-5552

**Status changes in AM stations, supplied by the FCC, CRTC, listeners**

## CALL LETTER CHANGES

None to report.

## CONSTRUCTION PERMITS ON THE AIR

1520 WXYB FL Indian Rocks Beach – Is now on with U1 640/17 at the adjusted transmitter location of 27-50-39/82-46-21.

## ACTIONS

- 680 WMFS TN Memphis – Licensed for U2 10000/5000, WMFS has a CP for U2 8000/5000. They are now operating under a **Special Temporary Authorization with U1 10000/1250** as they move the operations from their Tower #5 to Tower #4 to allow them to dismantle Tower #5 in preparation for the erection of a replacement Tower #5. [Call correction from last issue]
- 1400 WQXO MI Munising – Is operating with U1 100/100 from a temporary longwire antenna after their tower collapsed. They are working on building a new tower.

## APPLICATIONS

- 1400 CKSQ AB Stettler – Applies to move to 93.3 MHz.  
1450 KQTE CA Hellendale – Applies for U1 250/1000.

## AM on FM

- 1200 WCHB MI Taylor – W260BI (99.9) Hamtramck  
1490 KRKC CA King City – K285FW (104.9) King City  
1590 KGFK MN East Grand Forks – K239BG (95.7) Grafton, North Dakota  
1590 KGFK MN East Grand Forks – K300B (107.9) Grand Forks, North Dakota

## HEAR AND THAR

- \* **Fines:** A fine of \$4000 has been assessed to **WKQW-1120 Oil City, Pennsylvania** for operating past its post-sunset period.
- \* **News Item:** The CRTC conducted hearings on Monday 17 and Tuesday 18 [October] to hear applications for the vacant frequencies of 690 and 940 kHz in Montreal. Four groups will submit five applications, including all-traffic radio in French and English, news-talk in FF and EE, FF music and talk for the gay community, and a switch of frequency for CKGM-990 to 690 for a better signal. Stay tuned.
- \* **Thanks to:** Tim Noonan, Denis Picard, and Fred Vobbe.

## GRAVEYARD DX ACHIEVEMENTS – UPDATE

+ record held by a DXer in USA/Canada where a Canadian/USA record exceeds that mileage

### 1240 kHz

<u>Station</u>	<u>City</u>	<u>DXer</u>	<u>DX Location</u>	<u>Miles</u>
KLIC	MO Jefferson City	Steve Francis	Alcoa, TN	+ 491

Please preserve these QSL's for future display! Do not discard these items. For preservation information, contact the National Radio Club

If you are interested in helping preserve the history of our hobby through preserving your collections, you should consider ordering a supply of these free 3-inch-square stickers to place on your veries, recordings, etc. Specify the number you need, and order from NRC Publications - P.O. Box 473251 - Aurora CO, - 80047-3251. Include an SASE. Don't wait until it's too late - order now.

# Domestic DX Digest – East

**Mike Brooker** patria1818@yahoo.com  
99 Wychrest Avenue  
Toronto, ON M6G 3X8 CANADA

**U.S./Canadian Loggings from Eastern/Atlantic Time Zones. All ELT.**

## REPORTERS

- KK-VA** **Kraig Krist, Manassas** – Winradio G33DDC, homemade 134 foot multiband antenna running NW to SE.
- BM-MI** **Brian Miller, Berkley** – Tecsun PL-310, Sony ICF-2010, Sony SRF-T615, Wellbrook Loop
- MKB-ON** **Mike Brooker, Toronto** – Grundig G5, Grundig YB-400PE, Sony SRF-39FP, Panasonic RF-2200 (receiver emeritus)

## LOGGINGS

- 930 WTAD IL Quincy** – 10/21 2102 – Very good, alone for quite some time with high school football. Confirmed with web stream. Eventually fell back under a mix of WEOL, WBEN and others. **(BM-MI)**
- 1030 KCTA TX Corpus Christi** – 9/26 0630 – In null of WBZ, fair before fade-out, with Spanish language local ads including one with local area code 361. **(BM-MI)**
- 1200 WXKS MA Newton** – 10/17 0804 – Over usual WCHB with local sports, station promo “hear about it on the hour, talk about it now on Talk 1200 Boston” into “your complete forecast from New England Cable News on Talk 1200 Boston” local weather. **(MKB-ON)**
- 1220 WGNY NY Newburgh** – 10/18 1805 – Fighting off WHKW’s gospel talk with local weather, “Fox Oldies WGNY” jingle into “California Dreaming” by the Mamas and Papas. **(MKB-ON)**
- 1240 WJNC NC Jacksonville** – 9/29 2000 – In WCNC/WCEM mix with ToH ID by woman: “You’re listening to FM 107... WTKF... 1240 WJNC Jacksonville...” **(KK-VA)**
- 1270 WTJZ VA Newport News** – 9/29 2011 – In WCBC mix with gospel songs, station promo mentioning “...Newport News Virginia Beach...”. **(KK-VA)**
- 1280 WSAT NC Salisbury** – 9/29 1900 – In mix with WHVR and others, oldies, man with station promo “Memories at WSAT.” **(KK-VA)**
- 1290 WHKY NC Hickory** – 9/29 1904 – In multi-station mix with station promo: “Bringing news, sports, talk...1290 WHKY Hickory.” **(KK-VA)**
- WJCV NC Jacksonville** – 9/29 1856 – In multi-station mix (WHIO, WDZY, WHKY, WFBG and others) with gospel singing, local weather, “...from the weather center at 1290 WJVC I’m David...”. **(KK-VA)**
- 1300 WKCY VA Harrisonburg** – 9/29 1830 – In mix with WJZ and others, station promo: “For the latest news visit wkcyam.com... brought to you by Augusta Health Medical Center Drive Fishersville” into Fox News Radio. **(KK-VA)**
- 1320 WVNZ VA Richmond** – 9/29 1900 – SS programs in mix with WJAS and others, ToH “WVNZ Richmond” ID by man in EE. **(KK-VA)**
- 1330 WEBO NY Owego** – 9/29 1831 – In WESR/WPJS mix with station promo “Your hometown station, news radio WEBO.”, man with ToH ID at 1900: “Remember you get local weather forecast every half hour and severe weather alerts at once from...station news radio WEBO” into CBS news. **(KK-VA)**
- WPJS SC Conway** – 9/29 2059 – In WESR/WEBO mix with religious programming, man with ToH ID: “WPJS in Conway South Carolina...” **(KK-VA)**
- WESR VA Onley-Onancock** – 9/29 1850 – Oldies in mix with WEBO, WPJS and others, “WESR” ID by man. **(KK-VA)**
- 1350 WRWR GA Warner Robins** – 9/29 1933 – In multi-station mix (WNTX, WARF, WBLT and others), woman with station promo “America’s...AM 1350 WRWR...all you need to know”. **(KK-VA)**
- WNTX VA Fredericksburg** – 9/29 1800 – In multi-station mix with Sean Hannity show, ToH ID by man: “This is WNTX AM Fredericksburg.” **(KK-VA)**
- 1360 WMOB AL Mobile** – 9/29 2023 – In mix with WHBG and others, “Through the Bible” gospel program, man with station promo: “Through the Bible is heard Monday

thru Friday at 7 AM and again at 12 PM and 7 PM on Thursday right here on WMOB". **(KK-VA)**

- WHBG VA Harrisonburg** – 9/29 1758 – In WMOB mix with usual ESPN radio programming, ID by man: "This is ESPN 1360 WHBG Harrisonburg." **(KK-VA)**
- 1370 WTAB NC Tabor City** – 9/29 1845 – In multi-station mix (WSHV, WSPD, WGIV, and others) with C&W songs, station promo: "Monday night football on WTAB. All the live action on WTAB radio 1370 sports and WTABradio.com. Pregame at 7 PM, warm up at 7:15, kickoff at 7:30. Play by play with Bridgette Miller and Dean Ward", WTAB jingle into C&W song. **(KK-VA)**
- 1380 WNRR SC North Augusta** – 9/29 2100 – In mix with WTAB and other UNIDs (C&W. R. Disney, Chinese, oldies and Spanish), "News talk radio...1380 WNRR" ID into Fox news. **(KK-VA)**
- 1390 WEED NC Rocky Mount** – 9/29 1933 – In multi-station mix (WSPO, WZHF, WNIO and others) with station promo "WEED Rocky Mount 1390 jammin' gospel". **(KK-VA)**
- WSPO SC Charleston** – 9/29 2030 – In multi-station mix with station promo by woman: "Please mention WSPO sports when you call..." into ad for Taste of Charleston. **(KK-VA)**
- 1400 WSMY NC Weldon** – 9/29 1937 – In mix with WINC and other UNIDs (talk, ESPN, bluegrass) with gospel songs, "14 hundred WSMY" ID by man. **(KK-VA)**
- 1410 WSCW WV South Charleston** – 9/29 1934 – In KQV/WPOP mix with C&W songs, station promo "...your favorite country songs. Charleston's home for classic country AM 1410 WSCW." **(KK-VA)**
- 1420 WVOT NC Wilson** – 9/29 1946 – In mix with WKCW and others with gospel songs, "WVOT 1420 AM" ID by man. **(KK-VA)**
- 1430 WVAM PA Altoona** – 9/29 1915 – In multi-station mix with ESPN Radio programming, man with "...Altoona...ESPN Radio 1430 WVAM" ID. **(KK-VA)**
- WEIR WV Weirton** – 9/29 1834 – In multi-station mix (WNAV, CHKT, WVAM, UNID gospel, C&W and SS) with Fox Sports radio, "...sports radio...1430 WEIR..." ID. **(KK-VA)**
- 1440 WLXN NC Lexington** – 9/29 1930 – In WAJR/WHKZ mix with oldies, station promo: "Your good time for good music is playing right now on WLXN 1440 AM and 99.9 FM." **(KK-VA)**
- 1450 WHTC MI Holland** – 10/14 0733 – Local news, "I'm Gary Stevens with WHTC news" good peak. Very briefly rising out of graveyard mix. **(BM-MI)**
- WLEC OH Sandusky** – 10/12 1207 – "Go to WLEC.COM" website promo. Poor, barely discernible from the rest of the other graveyard stations on daytime groundwave. **(BM-MI)**
- 1470 WGNR IN Anderson** – 10/13 1852\* – In with sign-off announcement. Very good until tail end of announcement. Then fell into mix with several others. **(BM-MI)**
- 1480 WGVU MI Kentwood** – 9/29 1957 – In mix with WPWC and others with station promo: "Playing the greatest hits of all time. Music from the 50's and 60's, Real oldies 1480 WGVU and 850 WGVS" into Beatles song. **(KK-VA)**
- 1510 WRNJ NJ Hackettstown** – 9/29 1830 – Oldies in mix with WLAC and others, station promo: "Our 6:30 report is on the way here on WRNJ. Here's the Little River Band" into song. **(KK-VA)**
- 1540 WBCO OH Bucyrus** – 10/13 1226 – "WBCO" jingle into song "The Captain of Her Heart". Weak mid-day groundwave signal with no interfering stations. **(BM-MI)**
- 1550 KLFJ MO Springfield** – 10/17 2258 – Good, appeared out of multi-station mix of WDLR, WZRK and others. Tourist information station mentioning the Branson Welcome Center, Milton Crapapple CD, Branson shows and attractions. **(BM-MI)**
- WUTQ NY Utica** – 10/17 0658 – Briefly on top with promo for WKTV news channel 2 (TV station in Utica), ad for Central New York Chevy dealers, lost to mush before legal ToH ID. **(MKB-ON)**
- WLFP PA Braddock** – 10/21 1844 – Over graveyard-like mush with local obituary announcements, promo for upcoming high school football game "...and you can hear it right here on 1550 WLFP". **(MKB-ON)**
- WZRK WI Lake Geneva** – 10/16 0710 – "Avenue 1550, WZRK Lake Geneva" slogan. Fair, mixing with WDLR and others. **(BM-MI)**



# *Domestic DX* Jim Tedford Radio\_Enthusiast@hotmail.com *Digest – West* 20310 Bothell-Everett Highway B4 Bothell, WA 98012-8133

**U.S./Canadian Loggings from Pacific/Mtn/Central Time Zones. All times ELT.**

## Reporters


BD-WI Bill Dvorak, Madison, WI Drake R8B, Quantum QX Pro loop  
 JDS-MN Jeff Steffes, Watertown, MN Drake R8, Kenwood R-2000, Quantum QX Loop  
 JJR-WI John J Rieger, South Milwaukee, WI Icom IC-R75, Kiwa loop, MFJ-959B tuner, preamp  
 JW-CO John Wilkins, Wheat Ridge, CO Drake R-8, 4-foot box loop  
 RD-MN Rick Dau, DXing on the road at the Super 8 Motel in Bemidji, MN Sony Dream Machine clock radio  
 WH-CO Wayne Heinen, Aurora, CO Drake R8B, E/W Flag, N/S Flag, Dual TG-1 Termination Gizmo and Mini DXP5

## Station News

590 KXSP NE Omaha – 9/29 2200 – Out of sports programming with mention of ESPN "...on AM 590 KXSP Omaha's new home for ESPN Radio" mixing with but mostly under KCSJ. During the overnight didn't hear "Big Sports" slogan anymore. (WH-CO)  
 1350 WPDR WI Portage – Is now '60's-'70's oldies, ex news-talk. Morning programming is live (with a real DJ), and features ABC News at the top-of-hour, local and national news, sports and business/markets features. The rest of the day is automated music. (BD-WI)

## DX Loggings (All Times ELT)

590 KLBJ TX Austin – 9/29 2300 – Faded up briefly at ID time "NewsRadio 590 KLBJ and K259AJ 99.7 FM," and lost to semi local KCSJ. (WH-CO)  
 610 KCSP MO Kansas City – 9/27 2159 – "Let's take a break for station identification on the Royal's radio network. "The most listened to sports station is Kansas City 610 Sports KCSP Kansas City;" (WH-CO)  
 KNML NM Albuquerque – 9/27 2356 – "Let's take a break for station identification on the Arizona Diamondback Radio Network; "Fox Sports Radio ... SportsRadio 610 KNML Albuquerque, a Cumulus station The Sports Animal;" back to play by play coming up over KCSP. (WH-CO)  
 730 KQPN AR West Memphis – 9/26 2027 – "Fox Sports 730 KQPN West Memphis Arkansas - Memphis Tennessee" in the IBOC hash. (WH-CO)  
 770 WABC NY New York – 10/15 0615 – *Garden Sense* program taking callers about yard and gardening. Station ID @ 0618 "*Garden Sense* on Seventy-Seven WABC." Followed by commercials. (JDS-MN)  
 800 CKLW ON Windsor – 10/15 0650 – Two male announcers talk about exercise and fitness equipment on the *Get Fit* program. Into Station ID @ 0659 "This has been *Get Fit* on AM Eight-Hundred...AM Eight-Hundred CKLW, Windsor, it's seven o'clock." (JDS-MN)  
 820 WBAP TX Fort Worth – 10/15 0713 – "That's your WBAP traffic report, I'm Katie London." Followed by weather forecast. (JDS-MN)  
 840 WHAS KY Louisville – 10/15 0717 – Commercial: "U of L Cardinal football, Ten- Thirty this morning, your complete Cardinal coverage is on Eighty-Four WHAS." (JDS-MN)  
 850 KOA CO Denver – 10/15 0722 – Out of *Pro Football Weekly*, into commercials for Mike Ford Infinity, Century Link, Chase Freedom, Tynan's Volkswagen of Aurora, advance Auto Parts, and Operation Home front of Colorado. Followed by Station ID: "Home of the Denver Broncos, Eight-Fifty KOA." Then back to *Pro Football Weekly*. (JDS-MN)  
 860 KKOW KS Pittsburg – 10/20 1937 – Out of song: "Hillbilly Rock "Marty Stuart on classic country." Followed by commercials with references to Pittsburg. Into station ID: "KKOW Eight-Sixty AM." (JDS-MN)

- 880 WCBS NY **New York** – 10/20 1948 – Traffic report followed by “Our next traffic update in less than ten minutes on WCBS.” Into weather forecast. (JDS-MN)
- 910 KJJQ SD **Volga** – 10/20 1959 – Out of song: “Heaven’s Just a Sin Away” The Kendalls “The Ranch Nine-Ten KJJQ Volga,” Into ABC news. (JDS-MN)
- 920 KDHL MN **Faribault** – 10/15 0747 – Out of country music song; “Statler Brothers on KDHL.” Into local community events calendar with references to Faribault. (JDS-MN)
- CFRY MB **Portage La Prairie** – 10/18 2111 – Fair, over/under KWAD, with Portage Terriers HKY and a “CFRY” ID just before commercial break. (RD-MN)
- 940 CJGX SK **Yorkton** – 10/18 2106 – At armchair level, with calendar of local HS HKY games, then “GX 94” ID into weather forecast (“low tonight in Yorkton of minus 5”) and current temps from around Manitoba and Saskatchewan. (RD-MN)
- 1010 KSIR CO **Brush** – 10/14 2005 – Poor; many local “Northern Colorado” ads, PSAs, sponsors of game. Others tightly nulled. (JJR-WI)
- WSPT WI **Stevens Point** – 10/14 2129 – Poor, “Stevens Point trailing the Marshfield Tigers 34-0. Heard until fade.(JJR-WI)
- CBR AB **Calgary** – 10/15 0833 – CBC news with references to Calgary and the Calgary Stampede, into weather report with the forecast high of nine degrees in Calgary, followed by sports. Station ID: “That’s a look at news, weather, and sports on CBC Radio One.” (JDS-MN)
- 1060 KNLV NE **Ord** – 10/15 0535 – Poor to fade out. “AM1060” non ids over and above very weak KYW. (JJR-WI)
- 1070 WTSO WI **Madison** – 10/15 0859 – Out of program: *The Big Wild* with Red and Gundy “The Big Ten-Seventy WTSO.” Into sports scores and local weather, followed by *Ultimate Outdoors Radio Show*. (JDS-MN)
- 1090 WHGG TN **Kingsport** – 10/14 2000 – Poor with ID. Religious programming before and after local ID. Alone. No KAAY at all. (JJR-WI)
- 1130 CKWX BC **Vancouver** – 10/18 2244 – Out of Home Depot and Little Caesar’s commercials: “Breaking news, traffic and weather... News Eleven-Thirty Vancouver’s traffic and weather station...News Eleven-Thirty time Seven-Forty-Five.” (JDS-MN)
- 1160 KCTO MO **Cleveland** – 10/19 1900 – Poor to good in partial null of WYLL and WCRT with Mexican regional music, legal ID (calls and frequency in English); ads in Spanish with plenty of references to Kansas City, slogan “La Super Equis.” Back to music. My second new station of the season, breaking a three week drought. (BD-WI) Newbies take note: This is a good example of a perfect logging report (JDT-WA)
- 
- 1180 KOFI MT **Kalispell** – 10/19 2015 – Out of oldies song by Ray Charles, “What’d I Say”; “Eleven-Eighty KOFI.” Then fades out as another oldies song is starting. (JDS-MN)
- 1200 CFGO ON **Ottawa** – 10/20 2055 – NHL hockey, Ottawa Senators vs. Winnipeg Jets, Into commercials for the Tool and Equipment Store, and Mortgage Brokers Ottawa. Followed by “Sports Radio Twelve-Hundred.”(JDS-MN)
- 1210 KGYN OK **Guymon** – 10/15 0528 – Poor. “US Country 1210, KGYN” between C&W songs. No WPHT at all. Someone off frequency a bit on 1210 tonight. (JJR-WI)
- 1240 WIAN MI **Ishpeming** – 10/17 2006 – Poor-very poor w/“MI Wolverines on 1320 WDMJ and 1240 WIAN;” into FOX Sports. Calls heard twice. Calls stand for Ishpeming And Negaunee, FWIW. (JJR-WI) When I lived in Marquette in the Upper Peninsula (UP) of Michigan, Ishpeming and Negaunee was where you went for fun. (JDT-WA)
- KALY NM **Los Ranchos De Albuquerque** – 10/2 2302 – Out of light rock song. “... on Jenny Radio...” in kids voice fair in the mix. (WH-CO)
- 1250 CHSM MB **Steinbach** – 10/20 2127 – “You’ve been listening to *Through the Bible*. Community service radio AM Twelve-Fifty.” Into Christian business and church directory. Followed by weather forecast with low of zero and high of seven given. Then into program: *Back to the Bible*.(JDS-MN)
- 1260 KBLY ID **Idaho Falls** – 10/14 2128 – End of 1st quarter of Blackfoot Broncos vs. ?? high school football game; local spots. Fair/poor. (JW-CO)
- KPOW WY **Powell** – 10/14 2105 – Play-by-play of high school football, Powell Panthers vs. Cody Broncs. Fair in QRM. (JW-CO)
- 1360 WMOB AL **Mobile** – 10/17 0304 – Poor but over others. Throughout Mobile;” w/Southern Gospel music. No calls heard. (JJR-WI)

- 1370 KXTL MT **Great Falls** – 10/20 0859 – Wall Street Journal Report just ending; spot for local computer store; legal ID at 0859:50 by male voice: "Southwest Montana's Talk Radio Leader, AM 1370 KXTL Butte"; CNN news at 0900; local weather and ads at 0904. Fair and pretty much alone. **(JW-CO)**
- KWTL ND **Grand Forks** – 10/19 0859 – Ad for a Catholic course sponsored by the Diocese of Fargo; ID at top of hour ID: "Real Presence Radio....AM 1370 KWTL Grand Forks," and into EWTN program *Catholic Connection*. Fair signal. **(JW-CO)**
- 1410 WRMN IL **Elgin** – 10/14 2103 – Very poor with calls said during high school football game. Alone though some fading. **(JJR-WI)**
- KGRN IA **Grinnell** – 10/14 2026 – Poor through fade out with calls heard; high school football programming. Alone. **(JJR-WI)**
- WHLN KY **Harlan** – 10/17 1940 – Poor with weather, calls. Alone. **(JJR-WI)**
- 1450 WMIQ MI **Iron Mountain** – 10/17 0250 – Poor with "Talk 1450 WMIQ;" into Yahoo Sports. Kinda strong to fade. **(JJR-WI)**
- WMOH OH **Hamilton** – 10/18 0723 – Poor. "Front coming from WI..." "1450 the Ticket" over others **(JJR-WI)**
- 1550 KIVA NM **Albuquerque** – 10/4 2100 – Ending local spots: "...here on KIVA..." still atop the channel at this time **(WH-CO)**
- WZRK WI **Lake Geneva** – 10/14 2100 – Very poor with local ID and web address. Over assumed WDLR-OH with Spanish. Rare at night. **(JJR-WI)**
- 1560 KNZR CA **Bakersfield** – 10/2 0855 – "... on the *Ralph Bailey Show* right here on KNZR;" popped out of the mix briefly. **(WH-CO)**
- KABI KS **Abilene** – 10/2 0405 – Up briefly over KKAA with light NOS music and brief "...on KABI" ID. **(WH-CO)**
- KKAA SD **Aberdeen** – 10/2 0200 – Out of rather somber Christian music, "This is Family Radio, KKAA Aberdeen" became dominant after XEJPV sign off. **(WH-CO)** I expect Family Radio is generally somber these days, what with the failed predictions of the end of the world. **(JDT-WA)**
- KGOW TX **Bellaire** – 10/2 1235 – Out of string of local spots "AM 1560 KGOW SportsTalk" mixing with KKAA's Christian music. **(WH-CO)** 10/15 0745 – Good! Loud with very local ads. "1560 The Game;" heard twice after ads. "Yahoo Sportsradio." All alone on frequency. **(JJR-WI)**
- 1570 CKMW MB **Winkler** – 10/18 2104 – Fair with George Strait song "Check Yes Or No", then "1570 CKMW" ID. **(RD-MN)**
- 1580 KMIK AZ **Tempe** – 10/1 1601 – "This is KMIK and KMIK-HD Tempe-Phoenix;" by little kid, to usual Radio Disney. **(WH-CO)**
- KREL CO **Colorado Springs** – 10/1 1000 – Out of business news program; "KRCN Longmont, KREL Colorado Springs, KSKE Buena Vista The Radio Colorado Network;" to weather forecast. Still mixing with KMIK. **(WH-CO)**
- KAMI NE **Cozad** – 10/1 0800 – Out of religious commentary; "KCVN Cozad- Kearney-North Platte. KAMI Cozad. A service of Bott Radio Network;" to a PSA on Asian widows being abused. **(WH-CO)**
- KOKB OK **Blackwell** – 9/30 2205 – High school football play by play. "We'll take a break here in the action on KOKB" and into local spots. Fair mixing with Disney and another HSFB game. **(WH-CO)**

Nice quantity and quality of loggings. Thanks to all contributors. See you next time. **(JDT-WA)**

## *International DX Digest*

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**Loggings of stations outside the Lower 48 and Canada. All times UTC.**

### Trans-Atlantic DX

- 162 FRANCE *France-Inter*, Allouis SEP 13 2331 – French talk, then Mideast type music. [Connelly-MA] OCT 20 2213-2216 – Strong with man in French discussing a female singer

- followed by an English version of Sinead O'Connor's "Nothing Compares 2 U." This version did not compare to Sinead O'Connor! [DeLorenzo-MA]
- 171 **MOROCCO** *R.Mediterranee*, Nador OCT 20 2218-2225 – Very loud and clear with news of Khadafy's death in Arabic. At 2225 into Super Tramp's "Give A Little Bit." [DeLorenzo-MA]
- 189 **ICELAND** *Ríkisútvarpid*, Gufuskálar SEP 13 2331 – Album rock music; poor. [Connelly-MA]
- 198 **UNITED KINGDOM** *BBC Radio 4*, Droitwich et al. SEP 13 2330 – Two men with newstalk in English; poor. [Connelly-MA]
- 234 **LUXEMBOURG** *RTL Junglinster* SEP 13 2325 – Man in French; poor to fair. [Connelly-MA]
- 531 **ALGERIA** *Chaîne 1*, F'kirina Wilaya d'Oum El Bouaghi SEP 13 2330 – Rustic instrumentation and group Arabic vocal; fair to good. [Connelly-MA] OCT 9 0254-0300 – Fair with male Arabic chanting; at 2300 time pips, announcement by man in Arabic, fanfare, then into apparent newscast. Parallel to 549 kHz. [DeLorenzo-MA] OCT 20 0156 – Arabic talk parallel much stronger 549 kHz. [Renfrew-NY]
- 531 **SPAIN** *RNE5* sychros OCT 11 2300 – Woman with news in Spanish; evenly mixed with Algeria. [Connelly-MA]
- 549 **ALGERIA** *Chaîne 1*, Les Trembles SEP 14 0000 – 5 pips + 1 higher pitch pip, news by man in Arabic; good. OCT 11 2300 – Parallel 531 with Arabic talk, emphasis music; good. [Connelly-MA]
- 576 **CANARY ISLANDS//SPAIN** *RNE5* sychros OCT 11 2300 – Parallel 585 with fanfare music, ID by man "Radio Nacional de España, informativos," then news by woman; poor. [Connelly-MA]
- 585 **SPAIN** *RNE1* Madrid SEP 13 2359 – Man in Spanish; audible during pauses in WEZE slop. [Connelly-MA]
- 595 **MOROCCO** *SNRT* Oujda OCT 11 2259 – Music; in WEZE slop, hetted by 594 station likely Portugal. [Connelly-MA]
- 603 **FRANCE** *France Info*, Lyon-Tramoyes SEP 13 2359 – Parallel 1206 with lush-strings nostalgic music; poor. [Connelly-MA] OCT 20 0310 – French talk parallel 1206 and much weaker 837, surprisingly good. [Renfrew-NY]
- 603 **SPAIN** *RNE5* sychros OCT 11 2301 – News by woman in Spanish; poor. [Connelly-MA]
- 621 **CANARY ISLANDS//SPAIN** *RNE1* sychros SEP 13 2329 – Parallel 639 with man and woman in Spanish; fair. [Connelly-MA]
- 639 **SPAIN** *RNE1* La Coruña et al. SEP 13 2329 – Parallel 621 with man and woman in Spanish; fair with some CBN slop. [Connelly-MA]
- 666 **PORTUGAL** *RDP Antena 1* sychros SEP 13 2331 – Parallel 720 with female operatic vocal; fair. [Connelly-MA]
- 684 **SPAIN** *RNE1* Sevilla SEP 13 2329 – Parallel 621 with talk by woman; through bad WRKO slop. [Connelly-MA]
- 693 **UNITED KINGDOM** *BBC5* Droitwich et al. OCT 11 2300 – "You're listening to Five Live" and "This is BBC Radio Five Live"; good. [Connelly-MA] OCT 20 0157 – Very good with Brit talk. [Renfrew-NY] OCT 20 2255-2300 – Excellent with post-fight discussion of heavyweight boxing match, parallel to a weaker 909 kHz. [DeLorenzo-MA]
- 702 unID OCT 11 2258 – Mideast female vocal; fair, alone on channel. [Connelly-MA]
- 711 **FRANCE** *France Info*, Rennes OCT 11 2259 – Parallel 1206 with man and woman in French, piano music; good. [Connelly-MA] OCT 20 0220 – Poor but separable from 710, parallel Delicast. [Renfrew-NY]
- 720 **PORTUGAL** *RDP Antena 1* sychros SEP 13 2331 – Parallel 666 with female operatic vocal; under YVQE. [Connelly-MA]
- 729 **SPAIN** *RNE1* sychros SEP 13 2329 – Woman in Spanish parallel 621 et al.; in CKAC slop. [Connelly-MA]
- 738 **SPAIN** *RNE1* Barcelona SEP 13 2329 – Parallel 621 with man and woman in Spanish; fair through CHCM and CFZM slop. [Connelly-MA] OCT 20 0202 – Very poor in CFZM Toronto slop; parallel 774 and 855 kHz. [Renfrew-NY]
- 747 **CANARY ISLANDS//SPAIN** *RNE5* sychros SEP 14 0000 – *R.Nacional de España* ID; through slop. OCT 3 2259 - Mellow Spanish vocal. [Connelly-MA]
- 756 **GERMANY** *Deutschlandfunk*, Braunschweig & Ravensburg OCT 9 0315 – Strong with female pop vocal and man in German; parallel to 6190 kHz which was buried under an unidentified station. [DeLorenzo-MA] OCT 20 0236 – Presumed with classical music. [Renfrew-NY]
- 756 **SPAIN** *R.Euskadi*, Bilbao SEP 14 0000 – Pips, woman then man in Spanish; poor but dominant. [Connelly-MA]
- 774 **SPAIN** *RNE1* sychros OCT 11 2259 – Woman in Spanish; through 780 WTME Maine music slop. [Connelly-MA]



- 783 **MAURITANIA** *R.Mauritanie*, Nouakchott SEP 13 2258 – Arabic talk by man, interspersed with North African background music; fair to good. [Connelly-MA]
- 792 **FRANCE** *France Info*, Limoges OCT 11 2259 – Parallel 711 with piano music; fair. [Connelly-MA]
- 819 **EGYPT** *ERTU Santah* OCT 11 2300 – Arabic talk by man, Qahira (Cairo) mention, then woman in Arabic; fair. [Connelly-MA]
- 837 **CANARY ISLANDS//SPAIN** *COPE* synchros SEP 13 2301 – Man and woman with news in Spanish; good. [Connelly-MA]
- 837 **FRANCE** *France Info*, Nancy OCT 11 2259 – Parallel 711 with piano music; under *COPE* synchros. [Connelly-MA]
- 855 **SPAIN** *RNE1* synchros SEP 13 2300 – 5+1 pips, fanfare music, *R.Nacional de España* ID by man, news by woman; fair. [Connelly-MA]
- 864 **FRANCE** *France Bleu*, Villebon-sur-Yvette OCT 11 2202 – French talk by man mentioned Paris, then slow nostalgic French male vocal; to good peak. [Connelly-MA]
- 882 **CANARY ISLANDS//SPAIN** *COPE* synchros SEP 13 2359 – Woman in Spanish; fair/dominant. [Connelly-MA]
- 891 unID SEP 13 2359 – Monster carrier, feeble audio fragments heard may have been Portugal under. Algeria testing for a reactivation? [Connelly-MA]
- 909 **UNITED KINGDOM** *BBC5* synchros OCT 11 2159 – Telephone interview; fair. [Connelly-MA] OCT 20 0203 – Fair in domestic slop; Brit talk. [Renfrew-NY]
- 917 **NIGERIA** *R.Gotel*, Yola SEP 13 2300 – Het, bits of talk; stronger than 918 but audio was light. [Connelly-MA]
- 918 **SPAIN** *R.Intercontinental*, Madrid SEP 13 2301 – Man in Spanish; to fair peak and gradually becoming stronger than adjacent 917 Nigeria. [Connelly-MA]
- 936 **IRAN** *IRIB* Urumiyeh OCT 20 0215-0303 – Middle Eastern male vocals, no chimes at 0230, finally got a Global Tuners receiver working from Austria, but not much to work with. Finally got a Delicast link to *IRIB* working and definitely parallel, with talk, then distinctive music around 0250. By 0300 fading badly, but on Delicast I noted Pink Floyd's "Time" (alarm clock and heart beat sfx) being sampled to mark the bottom of the hour at 0300. Pink Floyd from Iran? Yow! [Renfrew-NY]
- 936 **SPAIN** *RNE5* synchros SEP 13 2359 – Woman in Spanish; mixed with blank carrier of somewhat greater strength. [Connelly-MA]
- 945 **FRANCE** *France Info*, Toulouse SEP 14 0000 – *France Info* fanfare music, man in French; fair. [Connelly-MA]
- 954 **QATAR** *QBS* El Arish OCT 11 2301 – News items by woman in Arabic with "stinger" electronic sounds between items; in mess. [Connelly-MA]
- 954 **SPAIN** *Onda Cero*, Madrid SEP 13 2259 – Man and woman in Spanish; through 950 WROL slop. [Connelly-MA]
- 981 **ALGERIA** *Chaîne 2*, Algiers SEP 13 2301 – News by woman in French; fair. [Connelly-MA]
- 999 **SAUDI ARABIA** *BSKSA R.Quran*, Tabuk SEP 13 2259 – Koranic vocal; slightly under Spain. OCT 11 2259 – male a cappella vocal; dominant. [Connelly-MA]
- 999 **SPAIN** *COPE* synchros SEP 13 2259 – Fast Spanish talk by woman; good, over Saudi Arabia (Koran). [Connelly-MA]
- 1044 **SPAIN** *SER* synchros OCT 11 2200 – 5+1 pips, Cadena *SER* mention, music fragment, then news by man in Spanish; fair to good. WBZ IBOC was off at the time. [Connelly-MA]
- 1053 **SPAIN** *COPE* Castellón OCT 11 2259 – Spanish teletalk; poor to fair. [Connelly-MA]
- 1088 **ANGOLA** *R.Nacional*, Mulenvos SEP 13 2359 – Big het against 1089 *TalkSport*. [Connelly-MA]
- 1089 **UNITED KINGDOM** *TalkSport* synchros SEP 13 2359 – Football event promo by man in English; fighting with strong 1088 Angola het. OCT 11 2201 – "TalkSport news at 11", item about Iranian plot to assassinate the Saudi Arabian ambassador to the US; strong on peaks, slight 1088 het. [Connelly-MA]
- 1098 **SPAIN** *RNE5* synchros SEP 13 2300 – Parallel 855 with *R.Nacional de España* ID, news; good. [Connelly-MA]
- 1107 **SPAIN** *RNE5* synchros SEP 13 2300 – Parallel 855 with *R.Nacional de España* ID; fair through WPMZ slop. [Connelly-MA] OCT 20 0359 – Spanish talk, pips, then *RNE* flourish. On Global Tuners 1107 is a mess with one or more synchros slightly off channel. [Renfrew-NY]
- 1116 **SPAIN** *SER* synchros SEP 13 2300 – Pips, man with news in Spanish; in slop. [Connelly-MA]
- 1125 **SPAIN** *RNE5* synchros SEP 13 2300 – Parallel 855 with pips, *R.Nacional de España* ID; fair with some synchro-echo. [Connelly-MA]
- 1134 **CROATIA** *Glas Hrvatske*, Zadar OCT 11 2159 – Hymn or anthem into pips and *Hrvatski Radio* ID at 2200 UTC. OCT 11 2207 – *Hrvatski* mention, Croatian newstalk by woman; loud!

- [Connelly-MA] OCT 20 2154-2200 – Fair with male pop vocal in presumed Croatian; anthem (presumed national anthem) at 2159, three widely spaced pips at 2200, ID by woman and into news by man and woman in presumed Croatian. Heard mentions of the death of Khadafy and Libya. Parallel to webstream via delicast.com. [DeLorenzo-MA]
- 1134 **SPAIN** COPE synchros SEP 13 2300 – Cadena COPE ID, pips, reverberated Spanish talk by man and woman; loud. [Connelly-MA]
- 1143 **SPAIN** COPE synchros SEP 13 2300 – Spanish news; fair, showing about 8 dB weaker than parallel 1134 on Perseus display. [Connelly-MA]
- 1152 **SPAIN** RNE5 synchros SEP 13 2300 – Parallel 855, 1125 et al. with *R.Nacional de España* ID, news; over others. [Connelly-MA]
- 1179 **CANARY ISLANDS//SPAIN** SER synchros SEP 13 2301 – Parallel 1116 with Spanish newstalk; poor. [Connelly-MA]
- 1179 **ROMANIA** *R.Romania Actualitati*, Galbeni-Bacau et al. OCT 11 2200 – ID "Radio Romania Actualitati... hora exacta"; over others. [Connelly-MA]
- 1206 **FRANCE** *France Info*, Bordeaux SEP 13 2300 – Classical music, then typical fanfare music, *France Info* ID by man, news; loud. [Connelly-MA]
- 1215 **SPAIN** COPE synchros SEP 13 2258 – Fast Spanish talk by woman, slight echo; over UK. [Connelly-MA]
- 1215 **UNITED KINGDOM** *Absolute Radio* synchros OCT 11 2208 – *Absolute Radio* ID, talk by two men. [Connelly-MA] OCT 21 0154 – Strong very rock music. [Renfrew-NY]
- 1251 **LIBYA** *R.Libya*, Tripoli OCT 20 0406 – Rapidly fingered traditional instrument with male vocalist. First time I've been able to dredge up any audio from this one, though the het is omnipresent on my car radio much of the time. Matches Global Tuners online receiver from Italy. Used to be the Voice of Africa, but just heard "Radio Libya" at 0408. New! [Renfrew-NY]
- 1305 **SPAIN** RNE5 synchros SEP 13 2301 – Man and woman in Spanish with news; poor to fair. [Connelly-MA]
- 1377 **FRANCE** *France Info*, Lille OCT 11 2219 – Parallel 1206 with man and woman in French; fair. [Connelly-MA] OCT 12 2227 – Good with discussion between man and woman in French. [DeLorenzo-MA]
- 1386 **SPAIN** *Euskadi Irratia*, Bilbao SEP 13 2300 – Folk music, then Spanish talk; fair. [Connelly-MA]
- 1413 **SPAIN** RNE5 synchros SEP 13 2300 – 5+1 pips, fanfare music, ID by man "Radio Nacional de España, informativos," news by woman; good. [Connelly-MA] OCT 20 0226 – Poor, but there in Spanish. [Renfrew-NY]
- 1457.8 **ALBANIA** Fllakë OCT 11 2158 – Talk by man, possibly preaching (or politics?); poor. [Connelly-MA]
- 1467 **FRANCE** TWR Roumoules OCT 11 2200 – Carrier dropped momentarily, then signal came back about 10 dB stronger, into majestic trumpet music, a few words by man in British English, followed by hymn; good. [Connelly-MA]
- 1503 **IRAN** IRIB 1, Bushehr OCT 11 2223 – Mideast music with Indian influences, then man in Farsi; good. [Connelly-MA]
- 1521 **SAUDI ARABIA** BSKSA Duba SEP 13 2300 – 5+1 pips, man in Arabic; good. OCT 11 2224 - Parallel 9555 with man in Arabic; huge! [Connelly-MA] OCT 20 0228 – Heavy slop from nearby WWKB could not completely block a very strong signal from the Saudi station. [Renfrew-NY] OCT 20 2113-2110 – Good with radio drama in Arabic, parallel to 9555 and 9870 kHz. [DeLorenzo-MA]
- 1548 **KUWAIT** *R.Sawa*, Kuwait City OCT 8 0235-0240 – Good with lively pop music, man and woman in presumed Farsi. Just about sunrise in Kuwait. [DeLorenzo-MA]
- 1557 **FRANCE** *France Info*, Fontbonne OCT 11 2301 – News in French by man and woman; fair. [Connelly-MA]

#### Pan-American DX

- 530 **CUBA** *R.Enciclopedia*, Villa María OCT 4 0000 – *R.Enciclopedia* ID by woman; good. [Connelly-MA]
- 555 **ST. KITTS & NEVIS** ZIZ Basseterre OCT 3 2300 – Caribbean English news by man; through WGAN slop. [Connelly-MA]
- 570 **CUBA** *R.Reloj*, Santa Clara OCT 4 0100 – Long tone for top-of-hour, ID "Radio Reloj de Habana, Cuba", ticks, news, "RR" beeps; huge over WMCA. [Connelly-MA]
- 580 **DOMINICAN REPUBLIC** HIAF *R.Monte Cristi*, Monte Cristi OCT 4 0101 – Merengue music, *R.Monte Cristi* ID; over WKAQ, WTAG. [Connelly-MA]

- 580 **PUERTO RICO** WKAQ San Juan SEP 14 0000 – "Escuche WKAQ" ID; dominant over WTAG and CFRA. OCT 3 2301 – WKAQ ID, fast Spanish talk by man; over WTAG. [Connelly-MA]
- 600 **CUBA** *R.Rebelde*, San Germán OCT 4 0000 – Parallel 670 with music fanfare, reverberated Spanish talk by man, Rebelde ID; over WICC, WFST, and CBNA. [Connelly-MA]
- 620 **CUBA** *R.Rebelde*, Colón OCT 4 0101 – Parallel 600, 670 with stadium sound effects, organ playing "If You're Happy and You Know It, Clap Your Hands" kids' music and "charge" theme, announcer mentioned "pelota" (ball) and baseball terms such as foul, fly, hit; over WZON, WVMT, WSNR, and CKCM mess. [Connelly-MA]
- 630 **CUBA** *R.Progreso*, Camaguey OCT 4 0059 – Parallel 640 with romantic Spanish vocal; under WPRO. [Connelly-MA]
- 640 **CUBA** *R.Progreso*, two sites OCT 4 0001 – Parallel 690 with flute music, vocal; over CBN and WNNZ. [Connelly-MA]
- 650 **CUBA** *R.Progreso*, Ciego Avila OCT 4 0100 – Parallel 640 with vocal music, Cuba mention; over WSRO, WSM, and CKGA. [Connelly-MA]
- 650.14 unID SEP 13 2359 – Growl against WSRO Massachusetts. [Connelly-MA]
- 660 **CUBA** *R.Progreso*, Jovellanos OCT 4 0159 – Parallel 640 with ABBA "I Do I Do I Do"; atop(!) WFAN. [Connelly-MA]
- 670 **CUBA** *R.Rebelde* synchros SEP 13 2359 – ID "Rebelde, La Habana, emisora de la revolucion"; loud, over YVLL. [Connelly-MA]
- 670 **VENEZUELA** YVLL *R.Rumbos*, Caracas SEP 14 0001 – ID "Radio Rumbos"; just a bit under Cuba. [Connelly-MA]
- 690 **CUBA** *R.Progreso*, Santa Clara OCT 4 0001 – Parallel 640 with flute music, vocal; through WRKO slop. [Connelly-MA]
- 700 **ECUADOR** HCRS2 *R.Sucre*, Guayaquil OCT 4 0202 – *R.Sucre* ID; in mix with others. [Connelly-MA]
- 710 **CUBA** *R.Rebelde* synchros SEP 14 0001 – Rebelde talk parallel 670; clobbering WOR. [Connelly-MA]
- 720 **CUBA** *R.Progreso*, Mabujabo OCT 4 0201 – "Radio Progreso de Habana, la onda de la alegria" ID popped out of mess. [Connelly-MA]
- 720 **VENEZUELA** YVQE *R.Oriente*, Porlamar, SEP 13 2330 – ID "En Venezuela, Oriente... AM"; fair on LSB to dodge WOR IBOC. [Connelly-MA]
- 730 **CUBA** *R.Progreso*, La Fe OCT 4 0159 – ABBA "I Do I Do I Do" parallel 640; over CKAC, WJTO, and Latin American jumble. [Connelly-MA]
- 750 **CUBA** *R.Progreso*, Palmira OCT 4 0159 – ABBA "I Do I Do I Do" Parallel 640; over/under YVKS. [Connelly-MA]
- 750 **VENEZUELA** YVKS *RCR* Caracas SEP 13 2359 – Two men in Spanish teletalk, Caracas mentions; atop CBGY and Cuba. OCT 3 2301 – Caracas adverts; good. [Connelly-MA]
- 760 **BRAZIL** ZYH588 *R.Uirapuru*, Fortaleza OCT 3 2301 – *R.Uirapuru* ID, man in Portuguese; to fair peak. [Connelly\*O-MA]
- 760 **COLOMBIA** HJAJ *RCN* Barranquilla OCT 4 0059 – "RCN Radio" ID; good. [Connelly-MA]
- 760 **PUERTO RICO** WORA Mayaguez OCT 4 0101 – Puerto Rico adverts popped up over HJAJ briefly. [Connelly-MA]
- 770 **CUBA** *R.Rebelde*, Victoria de las Tunas OCT 3 2359 – Parallel 600 with female vocal, then "en Habana" mention by man. [Connelly-MA]
- 779.953 unID SEP 13 2330 – Het growl, not much extractable audio. [Connelly-MA]
- 780 **VENEZUELA** YVMN *R.Coro*, Coro OCT 4 0059 – Food service advert, Coro address, then *R.Coro* ID; good. [Connelly-MA]
- 790 **CUBA** *R.Relej*, Pinar del Rio & Holguin OCT 4 0100 – Relej news, time ticks; mixed with WPRV. [Connelly-MA]
- 800 **NETHERLANDS ANTILLES** PJB *Trans-World Radio*, Bonaire OCT 4 0100 – *R.Transmundial* ID by woman, group hymn, Spanish talk by man; good, over WNNW and CJAD. [Connelly-MA]
- 820 **ST. KITTS & NEVIS** *Trinity Broadcast Network/R.Paradise*, Charlestown OCT 4 0100 – ID "This is the Trinity Broadcasting Network."; good, over WNYC. [Connelly-MA]
- 840 **CUBA** CMHW *Dobleve*, Santa Clara OCT 4 0200 – *Dobleve* ID, woman with Cuba news; over Haiti. [Connelly-MA]
- 840 **HAITI** *Radio 4VEH*, Cap-Haitien SEP 14 0000 – "Dashing through the snow" instrumental fanfare, man in French, then gospel group vocal; good over others (Brazil, Cuba). OCT 4 0000 – *4VEH* ID by man in French; over Cuba. [Connelly-MA]
- 860 **BRAZIL** ZYJ459 *Radio CBN*, Rio de Janeiro SEP 14 0001 – Excited Portuguese talk by man; over CJBC, Relej, and several others. [Connelly-MA]



- 860 **CUBA** *R.Relej*, Jovellanos OCT 4 0100 – Relej news, ticks, beeps; over jumble. [Connelly-MA]
- 870 **CUBA** *R.Relej*, multiple sites OCT 4 0059 – Relej news, ticks, "RR" beeps; under WLVP. [Connelly-MA]
- 900 **CUBA** *R.Progreso*, San Germán OCT 4 0059 – Parallel 640 with romantic vocal; good. [Connelly-MA]
- 940 **PUERTO RICO** WIPR San Juan OCT 4 0100 – Spanish ID "WIPR AM, San Juan"; good. [Connelly-MA]
- 1000 **CUBA** *R.Granma*, Media Luna OCT 4 0101 – ID "Transmite Radio Granma... Cuba"; dominant. [Connelly-MA]
- 1000 unID SEP 14 0000 – 5+1 pips that were 30 sec. late (0000:30), discernable audio that followed was a jumble of stations (Spanish and Portuguese talk mostly). [Connelly-MA]
- 1060 **CUBA** *Radio 26*, Jovellanos OCT 4 0200 – Revolución and Cuba mentions; over WQOM. [Connelly-MA]
- 1060.285 unID OCT 4 0200 – Het against Cuba and WQOM. [Connelly-MA]
- 1070 **COLOMBIA** HJAH *Emisora Atlantico*, Barranquilla OCT 4 0301 – *Emisora Atlantico* jingle, Barranquilla mentions; fair on USB to dodge WTIC IBOC. [Connelly-MA]
- 1070 unID OCT 4 0201 – 5+1 pips that were 1 minute late; in jumble. [Connelly-MA]
- 1100 **BRAZIL** ZYK694 *R.Globo*, São Paulo SEP 14 0000 – Globo ID, reverberated Portuguese talk by man; over WTAM. [Connelly-MA]
- 1110 **VENEZUELA** YVQT *R.Carúpano*, Carúpano SEP 13 2300 – "En Venezuela, Carúpano"; just a bit under WPMZ Rhode Island. [Connelly-MA]
- 1170 **COLOMBIA** HJNW CARACOL Cartagena OCT 4 0301 – Colombia, CARACOL mentions; over WWVA. [Connelly-MA]
- 1180 **CUBA** *R.Rebelde*, multiple sites OCT 4 0101 – Parallel 670 with baseball coverage, "charge" stadium music; good, over WHAM. [Connelly-MA]
- 1190 **COLOMBIA** HJCT *La Voz de la Costa*, Barranquilla OCT 4 0301 – Barranquilla news; mixed with WLIB. [Connelly-MA]
- 1210 **CUBA** *R.Sancti Spiritus*, Sancti Spiritus OCT 4 0300 – Cuban news topics in Spanish talk; briefly over WPHT. [Connelly-MA]
- 1220 **BRAZIL** ZYJ258 *R.Globo*, Rio de Janeiro SEP 14 0001 – "Goooooal" screaming, numerous Brasil mentions in fast reverberated Portuguese talk by man, raygun sounds; good. [Connelly-MA]
- 1280 **BERMUDA** VSB2 Hamilton SEP 13 2359 – Choral hymn and piano; mixed with WFAU. OCT 4 0300 - Choral hymn, "You're listening to revival time on BBN, the Bible Broadcasting Network"; briefly over WADO and WFAU. [Connelly-MA]
- 1620 **CUBA** *R.Rebelde*, multiple sites OCT 4 0300 – Rebelde 9-note sounder, man in Spanish; over unID second Spanish talker. [Connelly-MA]



*Jim speaks:* I haven't doing much real-time DXing so far this season. I'm still way behind in reviewing Perseus recordings from last November in Newfoundland. But I did a little bit of listening. Nice to hear two stations from Asia the first time out! Lot of additional stations heard, but the ones I've left off were mostly weak Iberians.

Hey, have you heard about the dreaded ash borer beetle? Well it's in our area. One of my ash trees has died and I suspect the ash borer. This endangers my flag antenna, which is suspended between 4 ash trees in a line. The dead tree is not one of the four, but nearby. So that's the bad luck. The good luck is that municipal water has come into my neighborhood. This will give me a way of getting my antenna feed wire to the house under the driveway instead of lying on top of it when I have the connector water pipe installed.

### Contributors

Mark Connelly WA1ION, South Yarmouth MA; Microtelecom Perseus, west-null Kaz Delta, 5-m vertical (mid-base to apex) by 20-m horizontal, base height 1 m, and north-null Delta, 6-m vertical (mid-base to apex) by 7-m horizontal, base height 1 m.

Marc DeLorenzo, South Dennis MA; JRC NRD-525, 75 x 75 x 60-ft east/west dual feedline Delta with remote variable termination, 350-ft north/south longwire, Mini MWDX-3 phaser.

Jim Renfrew, Holley NY; Drake R8B, Perseus, Flag antenna (Kaz consultation).



# 7 Inch Diameter “Affordable” FSL Antenna

## Combining Maximum MW Performance with Minimal Expense

By Gary DeBock, Puyallup, WA, USA (October 2011)

Introduction. Most AM-DXers have become aware of a strange ferrite-based portable antenna--the subject of intense speculation and experimentation throughout the year. After the publication of



Graham Maynard's introductory article in the March edition of Medium Wave News, distinctive new Ferrite Sleeve Loop antennas have suddenly appeared on the DXing scene, offering hobbyists the unique option of high gain performance from an extremely compact size. While the DXing performance of these new FSL antennas can indeed be astonishing, the construction cost of full-sized models can be equally breathtaking – resulting in an official nickname of the “Financial Sinkhole Loop.”

Although the cost of multiple ferrite bars will never be cheap, the author was determined to design a moderately-sized FSL which would deliver maximum DXing performance at a reasonable cost. The performance benefits of this new antenna

are superb, and it would be very regrettable if access to the breakthrough design was limited because of its excessive cost. While the terms “reasonable” and “affordable” are of course open to interpretation, at the time of its design (August 2011) the 7” FSL antenna described in this article could be constructed at a material cost of under \$150 (U.S. dollars). Although the unpredictable eBay sellers of Russian surplus ferrite may well erode the author's original objective of reasonable assembly cost, it is sincerely hoped that this article will provide sufficient motivation for many new DXers to construct their own high-performance FSL antenna in an economic manner, and personally experience the astonishing benefits that this new antenna design has to offer. Although this 7” FSL is of modest size and cost, it has been tested repeatedly against a full-sized 4’ PVC box loop, with superior performance results.

Project Overview. FSL antenna construction is likely to be quite different from any other antenna project undertaken by a hobbyist due to the twin challenges of ferrite sleeve symmetry and bump resistance. Significant weight from the collection of ferrite rods must be supported on a shock-absorbing, resilient frame – the importance of which will increase if your FSL is to be taken out in remote locations for portable DXing. The ultimate tragedy would be for a hobbyist to spend serious \$\$ to purchase multiple ferrite rods, then have many of them shatter out in the field after an unplanned “drop test” due to an unsuitably rigid frame. For this reason the development of a strong but resilient frame was a top priority in this project, and its careful duplication is recommended unless your FSL antenna's mission will be limited to shack usage in secure, indoor locations.

The task of obtaining the large collection of ferrite rods is likely to be the major purchasing challenge faced by the builder, and unless a diligent search is made for an economic option the cost of so many rods can easily reach astronomical levels. To economize most builders turn to the eBay sellers of surplus Russian ferrite rods, who currently offer very acceptable material at unbeatable prices. These sellers can be expected to price their rods according to the changing market demand (while never missing a chance to get a few extra rubles, if possible), and they have become quite aware that their ferrite products are increasingly popular. The 140mm x 8mm ferrite rod size called for in this article is not etched in stone, and perfectly adequate results can be obtained by substituting slightly shorter ferrite rod sizes, or by tightly taping together two shorter 8mm rods to make a longer one, then adding it to the cylindrical ferrite sleeve. The eBay ferrite



Surplus Soviet Ferrite-- The Main Ingredient

sellers will typically raise prices after they notice increased demand for one certain size — so work around their higher prices by ordering cheaper ferrite rods of other sizes, and substituting them into your FSL project in creative ways. Minor substitutions in ferrite length or diameter will not cause significant changes in the tuning range or performance of this proven MW antenna design. Even broken ferrite rods are not a deal-breaker in an FSL ... simply tape the broken pieces together tightly (in their original orientation), and install them in the sleeve. Although maintaining a standard ferrite rod size is recommended for the best performance results, mixing in a few outsized ferrite rods is another option if your ferrite sleeve ends up with a slight gap. Use the rods that you have on hand in creative ways, and you will probably be more than satisfied with your antenna's DXing results.

In addition to the multiple ferrite rods, FSL antenna construction also requires a few components which may be in short supply at various times due to increasing demand from hobbyists. If you have difficulty in tracking down any of the listed components a general post to the Ultralightdx Yahoo group may be helpful, since several of the group members often have extra supplies of various scarce material.

This ferrite sleeve loop antenna is designed to be inductively coupled to any portable radio with a loopstick, and no radio modifications are necessary to receive the antenna's high gain DXing boost. Although FSL's are typically used to dramatically boost an Ultralight radio's weak signal sensitivity, they may also be used with medium and full-sized AM-DXing portables like the ICF-S5W and RF-2200, providing the same high gain inductive coupling boost (and a quantum leap in these classic portables' weak signal DXing effectiveness).



**Material Required.** To construct this 7" FSL antenna in the author's design system the following list of parts will be needed. Substitutions for the frame material (PVC pipe, rubber plumbing coupler, "Funnoodle" inner core and pipe insulation padding material) may adversely affect the antenna's survivability in portable operating situations, especially if hard material is substituted for soft material. Substitutions in the variable capacitor, Litz wire or ferrite rod material may result in decreased antenna performance from the design standard. The PVC frame has been carefully designed so that the entire FSL antenna will fit inside a small Sterilite plastic tote of 14 1/4" x 9 5/8" x 12 1/8" size (36.2 cm x 24.4 cm x 30.8 cm), commonly available at Walmart and other North American stores. Provisions have also been made to plug in a protective "rain hood" PVC frame section, to provide protection for the antenna (and inductively coupled portable radio) from wet weather.

- A) 68 Russian surplus 140mm x 8mm ferrite rods (typically ordered from the eBay sellers "Alexer1" or "Sovtube"). Ordering a few extra rods to compensate for bent-shaped pieces is recommended (70 total should be sufficient).
  - B) A 381 pf, 8:1 vernier drive "N50P" variable capacitor from <http://www.crystalradiosupply.com>
  - C) 30 feet of 660/46 Litz wire from the eBay seller "Mkmak222" (substitutions not recommended)
  - D) A 5' long section of Schedule 40, 3/4 inch diameter PVC water pipe
  - E) Four 3/4 inch diameter PVC "Tee" fittings
  - F) A 7" long section of the "Funnoodle" 3" diameter swimming floatation aide. A 7" long section of the "Big Boss Noodle" 3 1/2" diameter swimming flotation aide is also acceptable
  - G) A 6 1/4" diameter rubber plumbing coupler (Fernco Inc. Part #1004-44, 4" concrete to 4" concrete)
  - H) A 36" long section of 1 1/8" Inner Diameter pipe insulation, 3/4" thick
  - I) Three heavy-duty (175 pound test) 18" long plastic tie wraps
  - J) A 2" long section of 3/32" shrink tubing
  - K) Johnson and Johnson waterproof medical tape (either 1", 2" or 3" wide sizes)
  - L) Scotch brand "Extreme" strapping tape
  - M) PVC pipe assembly glue, with brush inside can (Oatey Rain-R-Shine #30891 blue glue recommended)
  - N) An Oatey 4" x 4" closet spacer foam package
- Miscellaneous: 6-32 x 3/8" screw, two 6-32 nuts, 6-32 lock washer, 12" of 5/8" I.D. rubber air hose, a variable capacitor control knob ( for 1/4 inch shaft, Crystal Radio Supply knob #3 recommended), two "Duro" .07 oz (2 gram) Super Glue packets

### Step-By-Step Construction

**1.** Cut the PVC pipe into a single 8" section, two 4" sections, and four 2 ½" sections. Suggestions on cutting and gluing PVC pipe are contained in the PVC Loop article (posted at <http://www.mediafire.com/?igw1zjwfmw>). After reading the gluing suggestions in the article, glue a PVC "Tee" fitting to one end of the 8" long PVC pipe section, ensuring that the pipe is glued to the center opening of the PVC fitting (see photo below), and that it is bottomed out in the fitting.

**2.** Insert the unglued end of the 8" long PVC pipe section through the inner hole of the 7" Funnoodle section until it is flush with the opposite end of the Funnoodle. Stand this assembly on the flush edge (see photo at right).

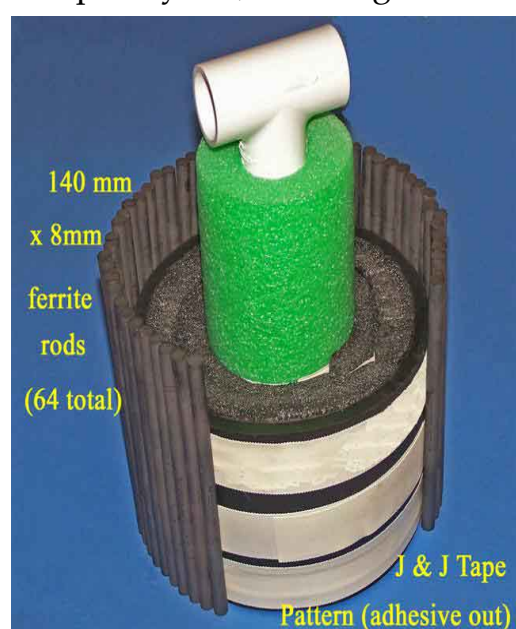
**3.** Wrap several strips of J & J waterproof tape around the Funnoodle outer surface in equally spaced circular strips, adhesive side out. Overlap each tape strip so that it will be tightly secured around the Funnoodle surface. This spaced taping pattern should only be done for a 5" long section of the Funnoodle, starting from the bottom edge (flush to the table—see photo at right).

**4.** Take the pipe insulation, and separate it at the factory-precut line for a length of 24". Cut six 4" long sections of the pipe insulation (with even, perpendicular cuts).



Trim each of the factory-cut edges of these 4" sections at an angle, so that each individual piece will make a close fit with the next one, when wrapped around the Funnoodle section (see photo at lower left below). Attach the first pipe insulation piece tightly around the taped Funnoodle section (see photo above). Tightly place another pipe insulation section against this first one, then a short piece (1 ½" wide) of pipe insulation to complete the first layer (see photo at left). Wrap another spaced pattern of J & J waterproof tape around this first layer (adhesive side out). Begin the second pipe insulation layer by overlapping one of the first layer mating edges with a standard long piece of pipe insulation. Three standard long sections should complete the second layer of pipe insulation, which together with the first layer should fit snugly within the rubber plumbing coupler, as shown in the photo at right below.

**5.** Carefully insert the inner core material inside the rubber plumbing coupler at the edge, working it inside inch by inch (see photo at right). Remove the inner PVC pipe, if necessary. When finished, the inner core material should be flush with the outer edge of the rubber plumbing coupler, and provide a snug but resilient fit. Reinsert the PVC pipe (if removed previously), and ensure that the assembly's flush side is completely flat, allowing it to stand vertically.



**6.** Stand the inner core and rubber plumbing coupler assembly vertically on the flush end, as shown at left. Remove the metal hose clamps from the rubber plumbing coupler, if not done previously. To fill up the slight horizontal slots left on the plumbing coupler after removal of the hose clamps, some ½" J & J tape or a folded length of 1" tape (adhesive side out) may be used until the slots are level with the main rubber surface of the plumbing coupler.

Tightly wrap a pattern of J & J waterproof tape horizontally around the plumbing coupler (adhesive side out), using overlapping edges to secure each strip (see photo at left). Make sure that each J & J tape strip is wound tightly, so that the strips



do not slide up and down on the rubber plumbing coupler. Whether 1", 2" or 3" J & J tape is used for this pattern, the tape pattern should extend throughout the 4" height of the rubber plumbing coupler, as shown in the bottom left photo on the previous page.

Note: It is common for the Russian surplus ferrite rods to have minor bends and angles, but when lining up the ferrite rods in a cylindrical sleeve, try to ensure that each rod has maximum contact with the J & J tape, and that the ferrite rod angles do not create a major gap with the adjacent ferrite rod. Ferrite rods with severe bends (typically quite rare) should not be installed in the antenna.

**7.** Take the first 140 mm x 8 mm ferrite rod, and stand it vertically against the J & J tape pattern, flush with the bottom of the plumbing coupler (see bottom left photo on the previous page). Press the ferrite rod into place on the adhesive tape. In the same way, carefully install the next ferrite rod closely adjacent to the first one, and continue this tight pattern until as many rods as possible are installed vertically, flush with the bottom of the plumbing coupler. When finishing up the last few rods in the sleeve, ensure that they also are vertical, and that the last rod will make a tight fit with the first one (using the rods' minor bend angles to your advantage, if necessary). Because of small differences in the ferrite rods or rubber plumbing coupler, the completed sleeve may contain anywhere from 63 rods up to 68 rods.

**8.** With the assembly still standing on the flush edge, install another pattern of J & J tape tightly around the completed ferrite sleeve's lower 4 inches, adhesive side out. Use this tape pattern to attach a single layer of the Oatey 4" x 4" foam spacer material, cut to fit the exact circumference of the ferrite sleeve. When completed and laid flat, the assembly should resemble the photo at right.

**9.** With the assembly laid flat as in the photo at right, insert a scrap piece (12" or longer) of 3/4" PVC pipe in one side of the PVC "Tee" fitting at the far edge of the inner core PVC pipe. Then rotate



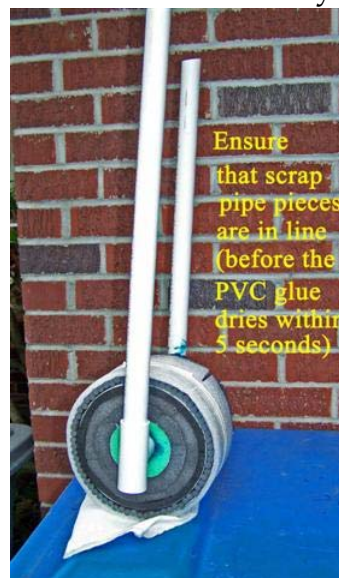
this "Tee" fitting until the end of the scrap piece of 3/4" PVC pipe lays on the table, to the upper right of the antenna assembly. In the same way, insert another scrap piece (12" or longer) of 3/4" PVC pipe in one side of a remaining PVC "Tee" fitting, and lay this scrap pipe in front of the antenna assembly, parallel and lined up with the scrap PVC pipe in back of the antenna assembly (refer to photo at left).

Note: PVC gluing operations should always be conducted outdoors (because of strong PVC glue fumes). It is also advisable to practice PVC gluing operations with scrap PVC pipe and fittings, prior to completing the PVC frame assembly in the following steps. In each of the following steps, read over all assembly instructions

thoroughly before starting each step, and know exactly what you need to do to complete the step before applying glue. Be ready to line up the scrap pieces within 5 seconds (before the glue dries), according to the instructions. Always have some wet rags or paper towels available for PVC glue cleanup, prior to starting each frame assembly step.

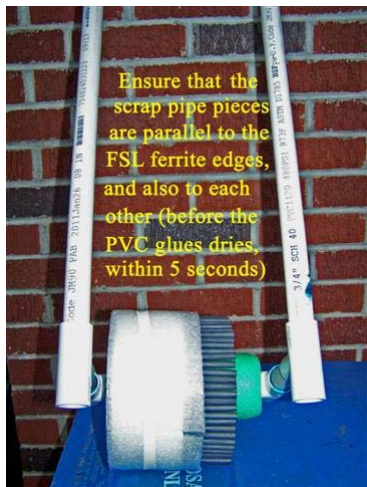
**10.** Working outdoors, ensure that the parts in the above photo are laid on a flat table in the same orientation, with PVC glue and cleanup material nearby. Grasp the far edge of the FSL assembly with one hand and push in the Fun noodle core material around the PVC pipe with the other hand, to provide about 3/4 inch of PVC pipe for gluing purposes (as shown by the photo above). While this section of PVC pipe is still exposed, quickly brush on PVC glue throughout its length, and also apply glue to the center opening of the "Tee" fitting that will mate with it (see photo above). Using one hand on each side of the frame assembly, push the center opening of the "Tee" fitting onto the exposed section of PVC pipe until it bottoms out, and within 5 seconds of mating these pieces (while continuing to push in the "Tee" fitting to maintain the bottomed-out position) rotate the scrap PVC pipe section in front so that it exactly lines up with the scrap PVC pipe section in the back of the assembly (refer to the photo at right). Maintaining the pushing pressure on the frame assembly, hold the two scrap pipes in this lined-up position for at least 15 seconds before releasing the pressure (this will allow time for the PVC glue to dry).

**11.** Remove the scrap pieces of pipe from the PVC "Tee" fittings, and glue





the two 4" long PVC pipes in their place (in one end of each of the two "Tee" fittings), making sure that the pipe sections are bottomed out in the "Tee" fittings, and that both 4" pipes are facing in the same direction (like the scrap pieces in the bottom right photo on the prior page).



**12.** Rotate the assembly on the work table so that the 4" pipes are visible on the left and right side of the ferrite sleeve (see photo at left). Roll the ferrite sleeve slightly closer, so that the 4" leg pipes are pointing directly at your eyes. Take the two scrap pieces of PVC pipe and insert them (without glue) in one end of each of the two remaining "Tee" fittings. Have PVC glue and cleanup material ready, before proceeding with the following steps.

**13.** (Refer to photo at left) Apply PVC glue to end of the left side 4" pipe, and to the center opening of one of the "Tee" fittings. With the scrap PVC pipe facing upward, push the center opening of the "Tee" fitting onto the end of the 4" pipe so that it bottoms out in the fitting, ensuring (within 5 seconds of mating these pieces) that the scrap PVC pipe is exactly parallel to the left (flush) side of the ferrite sleeve assembly (see photo at left).

**14.** (Refer to the photo above.) Apply PVC glue to the end of the right side 4" pipe, and to the center opening of the remaining "Tee" fitting. With the scrap PVC pipe facing upward (as in the photo), push the center opening of the "Tee" fitting onto the end of the 4" pipe so that it bottoms out in the fitting, ensuring (within 5 seconds of mating these pieces) that the scrap PVC pipe is exactly parallel to the other scrap pipe, and the right side of the ferrite sleeve assembly (see photo above left).

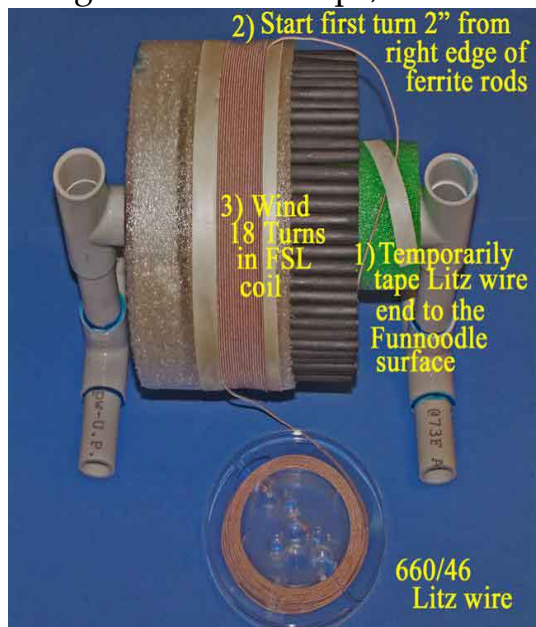
**15.** Remove the scrap PVC pipes from the two "Tee" fittings, and glue two 2 1/2" PVC pipes in the end openings of both "Tee" fittings. Ensure that all four short pipes bottom out in the end openings of the "Tee" fittings, and use cleanup material to remove any excess glue. This completes the assembly of the FSL antenna's basic PVC frame (see photo at right). Keep the assembly outdoors for several hours, to allow sufficient time for the PVC glue fumes to vent out.

**16.** Bring the assembly indoors, and stand the PVC frame upright on the two "legs." Ensure that the single layer of Oatey foam spacer material is wrapped tightly around the ferrite sleeve, with no gap at the ends (this foam material can be unwrapped and stretched slightly, if necessary, to fill any minor gap between the ends).

**17.** Using either 1", 2" or 3" Johnson & Johnson waterproof tape, tightly wrap a turn of tape over the foam material directly above the exact center of the ferrite rods, with the adhesive side out (if you are using the 1" wide tape, use two overlapping turns of tape, for a total



width of 1 3/4"). It is important that this tape is wrapped tightly, to secure the ferrite sleeve in a tight cylindrical pattern.



**18.** Refer to the photo at left. Using a short scrap piece of waterproof tape, temporarily tape the end of the 660/46 Litz wire length to the top surface of the Funnoodle material. Leaving 10" of wire to be used for one of the variable capacitor leads, start the first turn of the Litz wire coil 2" from the right edge of the ferrite rods, as shown in the photo. Temporarily place your finger at this spot to hold the wire, and begin winding the Litz wire in a straight pattern perpendicular to the ferrite rods (ensuring that there are no kinks or gaps), as shown in the photo at left. Tightly wind 18 turns of Litz wire in a neat pattern around the waterproof tape, rotating the ferrite sleeve assembly if

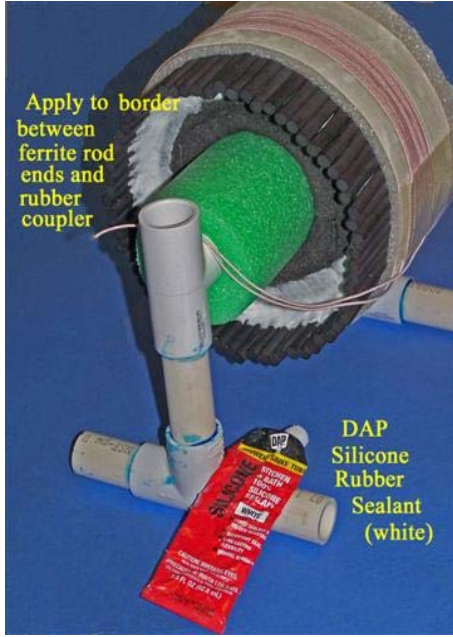
necessary to maintain wire tension. When the 18-turn coil is finished it should be positioned roughly above the center of the ferrite rods, as shown in the photo above.

**19.** Refer to the photo at right. When 18 full turns of Litz wire have been wound, extend the final turn three inches past the start of the first turn. Secure the coil with a horizontal strip of Scotch "Extreme" tape, then turn the Litz wire back over the coil to return alongside the other end



(see photo on previous page). Secure this last turn with another strip of "Extreme" tape, cutting the wire 10" long.

**20.** (Optional) For maximum antenna survivability in rough DXpedition environments a coat of silicone rubber sealant may be added on the sides of the ferrite sleeve, where the ferrite rod ends meet the rubber plumbing coupler (see photo at left). This will provide additional protection for the ferrite rods, and enable the FSL to survive sharp horizontal bumps to the PVC frame (the soft inner core material will already protect the antenna from sharp vertical bumps). For those choosing to add this protection, it should be done outdoors, prior to installation of the variable capacitor. Have some cleanup material ready, and allow sufficient time for the silicone sealant to cure before proceeding to the next step.



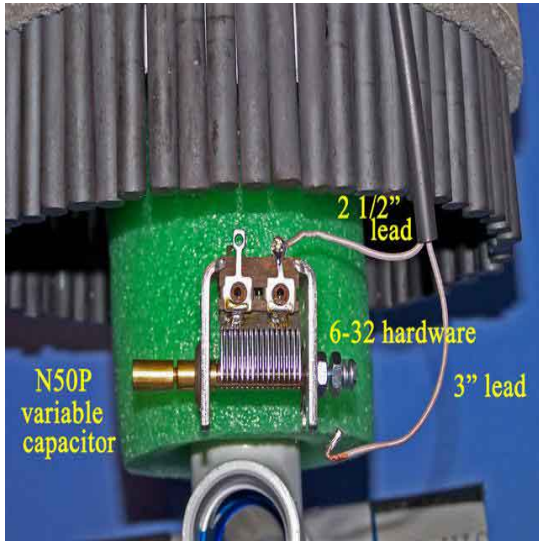
**21.** Refer to the photo at right. Take the 2" long section of shrink tubing, and run the two Litz wire ends through it. Push the shrink tubing along the Litz wires until it touches the edge of the Scotch "Extreme" tape surface. In this position, the shrink tubing will protect the Litz wires from the sharp edges of the ferrite rods (in the sleeve assembly) during future operation.



**22.** Rotate the ferrite sleeve assembly until the Litz wire's starting (and end) point is at the top, as shown in the photo at right. Ensure that the shrink tubing is still pushed as far as possible up to the Extreme tape edge, then using sharp diagonal cutters (so that the Litz wire insulation does not unravel), cut the lengths of the two Litz wires to 2 1/2" and 3" past the edge of the shrink tubing.

**23.** Temporarily bend the Litz wire ends away from the antenna assembly to avoid solder drips and scorch marks. Pre-tin the ends of both Litz wires with a hot soldering iron, so that at least 1/2" at the end of both wires is covered with solder in a straight pattern.

**24.** Refer to the photo at left. Position the variable capacitor in the position shown, on top of the Funnoodle's outer edge. After making a secure connection solder the 2 1/2" Litz wire lead to the terminal shown, ensuring that there are no shorts to the variable cap frame. Prepare the end of the 3" Litz wire lead as shown, so that it will fit securely between the 6-32 nuts when the screw is tightened in a clockwise pattern.



**25.** Install (in this order) a 6-32 lock washer and two 6-32 nuts on the 6-32 x 3/8" screw, as shown in the photo at left. Install the screw in the variable cap frame by turning it a few turns clockwise in the position shown, leaving enough space between the nuts for attaching the prepared end of the 3" Litz wire. Finally, pull this prepared Litz wire end down over the 6-32 screw shaft in the space between the nuts, and ensure that the wire will make a solid connection when the screw is tightened (use needle nose pliers if necessary, to crimp the lead tightly against the screw shaft). Finally, tighten the screw

securely against the variable cap frame, ensuring that the Litz wire lead is permanently secured.

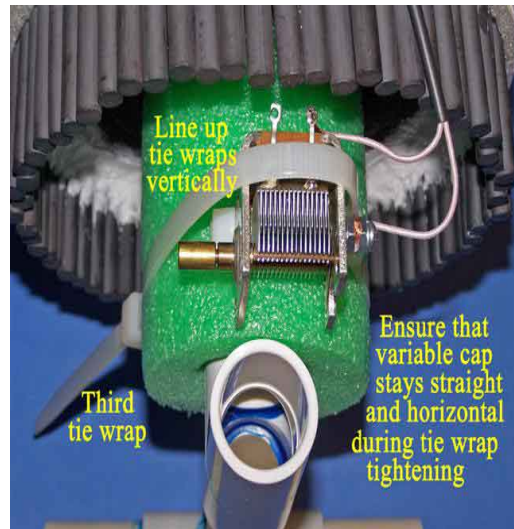
**26.** Refer to photo at right for the following step. Take two of the 18" plastic tie wraps and pass the end of one tie wrap through the eye of the other, as shown (so that the plastic teeth engage). Place this pair of tie wraps under the variable cap frame as shown, and while holding the right side tie wrap eye up against the variable cap frame, push the left side tie wrap eye flush up against the left side of the variable cap frame, so that the two tie wrap eyes make a tight fit against the variable cap. After this has been done, temporarily remove the tie wrap assembly and neatly cut off the two excess lengths of tie wrap material. Then place the short tie wrap assembly back under the variable cap frame.



**27.** Refer to the photo at the left for the following step. Take the remaining 18" tie wrap and insert its end up through the right side tie wrap eye (as shown in the photo) for a length of 11", passing the tip in between the Litz wires and over the top of the variable cap, as shown



**28.** Refer to the photo at the right for the following step. Wrap the 18" tie wrap around the Funnoodle surface and pass its tip through its eye, ensuring that the tie wrap is lined up vertically with the short tie wrap assembly under the variable cap frame, with both of these items 1/4" from the inner edge of the variable cap frame. Ensure that the outer edge of the variable cap frame is flush with the edge of the Funnoodle edge, and that the variable cap stays in a horizontal position when the tie wrap is



tightened. Tighten the tie wrap slowly, making sure that the variable cap's horizontal and vertical alignment stays straight (reposition the variable cap if necessary during tightening, since it can be easily moved along the Funnoodle surface when the tie wrap is still relatively loose). Check the two pictures at right and below to ensure that your front and side alignment stays correct, and continue to slowly tighten the tie wrap until the variable cap is held securely in place.

**29.** After the variable cap is secured tightly against the Funnoodle surface, turn the shaft of the variable cap through a complete rotation cycle to ensure that there are no obstructions to prevent free rotation during operation. When the plates are fully open the variable cap plates may temporarily brush up against the Funnoodle surface, but this will not affect the antenna's operation (shallow sections of the Funnoodle surface can be easily removed with sandpaper, if necessary). After ensuring that the variable cap is perfectly aligned and operates smoothly, bend down the remaining variable cap upper terminal (next to the one soldered with a Litz wire) over the plastic tie wrap to lock the variable cap in place. Finally, cut off the excess tie wrap length.



knob rotates freely. Cut four 1 3/4" lengths of 5/8" I.D. rubber air hose, ensuring that the cut lines are neatly vertical. Take scissors and cut each of these 1 3/4" long sections in a straight line lengthwise, trimming away any loose rubber pieces along the edges. Then use the Duro Super Glue packets to glue these four 1 3/4" long rubber air hose lengths to the PVC frame legs as shown, ensuring that no glue runs down the sides or bottom of the rubber hose sections. These short air hose sections will be used as rubber leg grips, providing superior protection for the FSL when the antenna is used on slippery or wet surfaces. This completes construction of the 7" FSL antenna.

**30.** Refer to the photo at right for the following step. Install the variable cap control knob on the variable cap shaft and tighten the setscrew securely, ensuring that the



**Testing and Operation.** This antenna is designed to provide a high-gain inductive coupling boost to all portable radios having a loopstick, and unlike other similar-sized antennas, it will provide a very substantial signal boost even to full-sized portables like the ICF-S5W and RF-2200. As designed, it will provide this inductive coupling boost on all frequencies from 490-1710 kHz, with signal gain approximately equal to that of a full-sized 4' air-core box loop. Because of the lower noise pickup of the ferrite sleeve, however, it will typically outperform the 4' box loop in the signal-to-noise ratio of weak DX signals. All four 7" FSL test models here were compared with such a 4' box loop and found superior in weak-signal daytime DX reception (MP3's are available on request).

- 1) In a location free from RF noise, place the FSL antenna in a secure position on a flat surface, away from metal tables and other large electrical conductors.
- 2) Position your portable radio about 4" in front of the FSL coil for the initial test.

- 3) Tune in a weak signal (the weaker the better) at the low end of the AM band on your portable radio. It is important that the signal is just above the noise level, to demonstrate the effectiveness of the antenna.
- 4) SLOWLY tune the FSL antenna's variable cap until the antenna's resonant frequency matches that of the portable radio. Looking at the variable cap plates can give you a rough idea of the FSL's tuned frequency, with its plates about half open on a center-band (1000 kHz) frequency. The FSL's tuning sharpness is much greater than that of a typical air-core loop, and best results are obtained only when the FSL's variable cap is carefully zeroed in on the correct frequency. When zeroed in on the weak station's frequency, the FSL should give a VERY great inductive coupling boost.
- 5) After the correct frequency is matched, slowly vary the portable radio's distance from the FSL coil to determine the distance for the best inductive coupling boost. This is also a fairly sharp adjustment, which will provide excellent results when optimized.
- 6) FSL performance can be increased by placing the antenna on a non-conducting stand up off of a table, such as on a PVC-framed base for DXpedition or shack usage. Information on such PVC bases and a protective "rain hood" PVC assembly may be obtained from the author.

Conclusion. This 7" FSL antenna project will introduce you to an astonishing antenna, hopefully providing you with a major boost in your hobby excitement and satisfaction. Good luck in your construction, and in raking in the DX upon completion!

73 and Best Wishes,  
Gary DeBock

## *Pro Sports Networks*

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### **Network listings for professional sports play-by-play coverage**

Here is National Hockey League (NHL) flagship information from Internet searches. I looked for networks, and below are all those I found. Many sites did not list the names of the announcers. Please send me any additions and/or corrections that you find. I am not sure what games the NHL Radio Network broadcasts. (\* – Denotes last year's broadcasters.)

Anaheim Mighty Ducks	830	KLAA-CA	Steve Carroll, Dan Wood
Atlanta Thrashers	680	WCNN-GA	Dan Kamal
Boston Bruins	98.5	WBZ -MA	Dave Goucher, Bob Beers
Buffalo Sabres	550	WGR -NY	Rick Jeanneret, Harry Neale
Calgary Flames	960	CFAC-AB	Pete Maher, Mike Rogers
Carolina Hurricanes	99.9	WCMC-NC	*Chuck Kaiton, John Forslund
Chicago Blackhawks	720	WGN -IL	*John Weideman, Troy Murray
Colorado Avalanche	950	KRWZ-CO	*Norm Jones, Marc Moser
Columbus (OH) Blue Jackets	97.1	WBNS-OH	George Matthews, Bob McElligott
	102.5	WWCD-OH	
Dallas Stars	1310	KTCK-TX	Ralph Strangis, Daryl Reaugh
	104.1	KTCK-TX	
Detroit Red Wings	97.1	WXYT-MI	Ken Kal, Paul Woods
	1270	WXYT-MI	
Edmonton Oilers	630	CHED-AB	Jack Michaels, Bob Stautffer, Rob Brown
Florida Panthers	560	WQAM-FL	Randy Moller
Los Angeles Kings	1150	KTLK-CA	Nick Nickson, Daryl Evans
Minnesota Wild	1130	KFAN-MN	Bob Kurtz, Tom Reid, Kevin Falness
Montreal Canadiens	990	CJAD-QC	(EE) Rick Moffat, Sergio Mornesso
	730	CKAC-QC	(FF) Marty Macguire, Dany Dube
Nashville Predators	102.5	WPRT-TN	Tom Callahan, Pete Weber, Terry Crisp
New Jersey Devils	660	WFAN-NY	*Matt Loughlin, Sherry Ross
New York Islanders	88.7	WRHU-NY	*Chris Kig, various Hofstra U. b'casting students
New York Rangers	1050	WEPN-NY	*Kenny Albert, Bob Wischusen, Dave Maloney
Ottawa Senators	1200	CFGO-ON	(EE) *Dave Schreiber, Shaun Van Allen

	104.7	CKOI-ON	(FF) *Jean-Phillip Bertrand, Alain Sanscouter
Philadelphia Flyers	610	WIP-PA	*Tim Saunders, Chris Therien
Phoenix Coyotes	910	KGME-AZ	Bob Heethuis, Tyson Nash
	1510	KFNN-AZ c	
Pittsburgh Penguins	105.9	WXDX-PA	Mike Lange, Phil Bourque, Bob Grove
Saint Louis Blues	1120	KMOX-MO	*Chris Kerber, Kelly Chas
San Jose Sharks	98.5	KFOX-CA	*Dan Rusanowsky, Jamie Baker
	102.1	KFOX-CA	
	95.7	KGMZ-CA e	
Tampa Bay Lightning	620	WDAE-FL	Dave Mishkin, Phil Esposito
Toronto Maple Leafs	640	CFMJ-ON	*Dennis Beyak, Joe Bowman, Jim Ralph
Vancouver Canucks	1040	CKST-BC	Rick Ball, Dave Tomlinson
Washington Capitals	1500	WFED-DC	John Walton, Ken Sabourin, Mike Vogel, Jonathan Warner
Winnipeg Jets	1290	CFRW-BC	Brian Munz, Shane Hnidy

Buffalo Sabres 2011/2012 Rick Jeanneret, Harry Neale

<http://sabres.nhl.com/club/page.htm?id=36509> (10/09/2011)

550	<u>WGR-NY</u> f	1340	WKSX-NY	1490	WBTA-NY	96.5	WCMF-NY
950	WROC-NY	1410	WDOE-NY			101.5	WMXO-NY

Colorado Avalanche 2011/2012 -Norm Jones, Marc Moser

<http://avalanche.nhl.com/club/page.htm?id=32592> (10/09/2011)

950	<u>KRWZ-CO</u>	1340	KTMM-CO	1490	KNAM-CO	100.5	KRSJ-CO
960	KNEB-NE f	1400	KWUF-CO			103.1	KYDT-WY
1010	KSIR-CO	1440	KRDZ-CO	97.1	KZBR-CO	106.1	KNFO-CO
1300	KCSF-CO	1450	KBFS-SD				

Columbus (OH) Blue Jackets 2011/2012 George Matthews, Bob McElligott

<http://bluejackets.nhl.com/club/page.htm?id=48232> (10/09/2011)

930	WEOL-OH	1270	WILE-OH	1390	WBLL-OH		WMRN-OH
940	WCIT-OH	1320	WLOH-OH		WMPO-OH	1520	WQCT-OH
970	WATH-OH	1330	WFIN-OH	1410	WING-OH		
990	WTIG-OH		WELW-OH	1430	WCLT-OH	97.5	<u>WBNS-OH</u>
1240	WHIZ-OH	1350	WARF-OH	1450	WMOH-OH	100.9	WJAW-OH
1250	WCHO-OH	1360	WMOV-WV	1490	WBEX-OH	102.5	<u>WWCD-OH</u>
1260	WNXT-OH				WMOA-OH		

Los Angeles Kings 2011/2012 Nick Nickson, Daryl Evans

<http://kings.nhl.com/club/page.htm?id=40822> (10/09/2011)

1150	<u>KTLK-CA</u>	1240	KMET-CA	1450	KPTR-CA	1520	KVTA-CA
1220	KLOA-CA	1380	KOSS-CA				

Minnesota Wild 2011/2012 Bob Kurtz, Tom Reid, Kevin Falness

<http://wild.nhl.com/club/page.htm?id=51619> (10/09/2011)

740	KVOX-ND		KWSN-SD	1400	KMHL-MN	1490	KQDS-MN
790	KFGO-ND f	1240	WMFG-MN		WBIZ-WI	1570	KAKK-MN
860	KNUJ-MN	1250	KCUE-MN	1410	KRWB-MN		KVTK-SD
930	KSDN-SD	1260	KROX-MN	1440	KKXL-ND		
1070	KVKK-MN	1270	KWEB-MN	1450	KBUN-MN f	94.5	WELY-MN
1130	<u>KFAN-MN</u>	1320	KOZY-MN		WELY-MN	95.3	WXXZ-MN
1170	KOWZ-MN	1340	KDLM-MN	1460	KDWA-MN	103.5	KUAL-MN
1230	KGHS-MN	1370	KSUM-MN		KKAQ-MN	105.5	KRBI-MN
	KWNO-MN	1390	KXSS-MN f	1480	KAUS-MN		

Montreal Canadiens (FF) 2011/2012 Marty Macguire, Dany Dube

<http://www.cogeco.ca/cable/corporate/cgo/about/radio.html> (10/10/2011)

730	<u>CKAC-QC</u>	96.9	CKOI-QC	102.9	CFOM-QC	105.7	CFGL-QC
		98.5	CHMP-QC	103.9	CIME-QC	106.9	CKOI-QC
92.5	CKBE-QC	100.1	CJEB-QC	104.7	CKOI-QC	107.7	CKOI-QC
93.7	CFGE-QC	101.3	CIME-QC				

Nashville Predators 2011/2012 Tom Callahan, Pete Weber, Terry Crisp

[http://predators.nhl.com/v2/ext/pdf/2011-12\\_RadioAffiliatesBroadcastSchedule.pdf](http://predators.nhl.com/v2/ext/pdf/2011-12_RadioAffiliatesBroadcastSchedule.pdf) (10/10/2011)

910	WMRB-TN		WMLR-TN b		WCSV-TN	103.8	WTNC-KY
1050	WWIC-AL		WMSR-TN a			105.1	WALV-TN a
1230	WCDS-KY b	1340	WBGN-KY	97.7	WZZN-TN b		
	WHOP-KY	1400	WHUB-TN a	98.5	WMRB-TN		
	WAKI-TN b	1490	WKRO-IL	102.5	<u>WPRT-TN</u>		

Ottawa Senators 2011/2012 -Dave Schreiber, Shaun Van Allen

<http://senators.nhl.com/club/page.htm?id=49156> (10/10/2011)

600	CKAT-ON	1200	<u>CFGO-ON</u> Ef	88.1	CHLK-ON	104.7	<u>CKOI-ON</u> F
				96.7	CHVR-ON		

Phoenix Coyotes 2011/2012 Bob Heethuis, Tyson Nash

<http://coyotes.nhl.com/club/page.htm?id=32904> (10/10/2011)

600	KVNA-AZ	910	<u>KGME-AZ</u>	1230	KATO-AZ		
610	KNML-NM f	980	KNTR-AZ	1340	KIKO-AZ	106.7	KPPV-AZ
780	KAZM-AZ f	1130	KQNA-AZ	1510	<u>KFNN-AZ</u> c		

Pittsburgh Penguins 2011/2012 Mike Lange, Phil Bourque, Bob Grove

<http://penguins.nhl.com/club/page.htm?id=67163> (10/10/2011)

560	WFRB-MD		WTIV-PA	1450	WTBO-MD	96.7	WLLF-PA
590	WMBS-PA		WVNT-WV		WFRA-PA	103.3	WKQL-PA
680	WISR-PA	1260	WRIE-PA		WQWK-PA	103.9	WLSW-PA
850	WKGE-PA	1280	WJST-PA	1460	WMBA-PA	104.3	WKNB-PA
920	WMMN-WV f	1290	WFBG-PA	1490	WMGW-PA	105.7	WOBG-WV
970	WBGG-PA	1300	WWCH-PA			105.9	<u>WXDX-PA</u>
1050	WMSG-MD	1390	WNIO-OH	92.5	WQMU-PA	106.3	WCDK-OH
	WLYC-PA	1400	WWGE-PA f	96.3	WKQW-PA	106.5	WDSN-PA
1230	WBVP-PA	1430	WEIR-WV				

San Jose Sharks 2011/2012 -Dan Rusanowsky, Jamie Baker

<http://sharks.nhl.com/club/page.htm?id=46578> (10/10/2011)

630	KIDD-CA	1340	KATA-CA	1490	KRKC-CA	98.5	<u>KFOX-CA</u>
950	KAHI-CA		KFIG-CA			102.1	<u>KFOX-CA</u>
970	KESP-CA		KFPT-CA	92.1	KKDV-CA	105.3	KHTK-CA
1140	KHTK-CA		KOMY-CA	95.7	<u>KGMM-CA</u> e		
1260	KXBX-CA	1440	KVON-CA	96.1	KKXS-CA		

Tampa Bay Lightning 2011/2012 Dave Mishkin, Phil Esposito

<http://lightning.nhl.com/club/page.htm?id=50527> (10/10/2011)

620	<u>WDAE-FL</u>	1350	WDCF-FL	1450	WSRQ-FL	1530	WENG-FL
770	WWCN-FL	1380	WSLE-FL		WSTU-FL		
		1390	WFHT-FL		WWJB-FL		

Washington Capitals 2011/2012 John Walton, Ken Sabourin, Mike Vogel, Jonathan Warner

<http://capitals.nhl.com/club/page.htm?id=69030> (10/10/2011)

740	WRNR-WV	1340	WHAP-VA	1450	WTHU-MD	1460	WTKT-PA
910	WRNL-VA	1370	WVIE-MD		WNOS-NC	1500	<u>WFED-DC</u>
1050	WBRG-VA						

NHL Radio Network 2011/2012

<http://www.nhl.com/ice/page.htm?id=26455> (10/10/2011)

550	WGR -NY	780	KAZM-AZ	950	KKFN-CO	1200	CFGO-ON
560	WEBC-MN	790	KFGO-ND	960	CFAC-AB	1210	CFYM-ON
570	WTNT-DC	800	CHAB-SK		KNEB-NE	1230	KYVA-NM
600	WCHT-MI	820	KCBF-AK		WEAV-NY	1240	KRDO-CO
610	KARV-AR	850	WEEU-PA	980	WTEM-DC		WJON-MN
	WFNZ-NC	920	WMMN-WV	990	CKGM-QC	1250	WEAE-PA
	KNML-NM	930	KWOC-MO	1010	WQYK-FL	1260	WWRC-DC
620	WDNC-NC		WSFZ-MS	1040	CKST-BC	1270	WXYT-MI
660	WFAN-NY	940	CJGX-ON	1170	KPUG-WA		WQKR-TN

1310	WTZN-PA	1430	WNAV-MD	1520	WLUV-IL	97.1	WXYT-MI
	WGH -VA	1450	KBUN-MN		WDMN-OH	100.5	WTLX-WI
1320	WTSJ-VT		WLEC-OH	1550	KXEX-CA	100.9	WJAW-OH
1330	CJYM-ON		WMAJ-PA	1600	KEPN-CO	101.3	KARV-AR
1370	WGHN-MI		WPSE-PA	1660	WFNA-NC	104.3	KKFN-CO
1380	KRKO-WA		WSNO-VT			104.5	WGFX-TN
1390	KXSS-MN	1460	WBNS-OH	92.7	KASR-AR	105.5	KRDO-CO
1400	WCCY-MI	1480	KRAE-WY	94.1	CIMG-ON	107.7	WTPL-NH
	WSLB-NY	1490	WDND-IN	96.1	KSLK-CA		
	WWGE-PA		WMOA-OH	96.7	WXZO-NY		

a This station will not broadcast all of the Predators' games; see the web page for the schedule.

b The Predators' web page lists "TBD" for the entire schedule for these four stations.

c Conflict station (when the flagship station cannot broadcast the NHL game)

d RESERVED [currently unused]

e 95.7 KGMZ-CA will carry the San Jose Sharks ("trimulcast") when there is no conflict with Oakland Athletics games.

f This station is also listed on the NHL Radio Network.

E English language

F French language

## NOAA Space Weather Outlook

Issued October 18 – For the period October 19-November 14, 2011

Solar activity is expected to be predominantly low with a chance for an isolated M-class event for October 19-November 1 due to the number of active regions as well as the return of old Region 1302 (N12, L=280, class/area Fkc/1300 on September 24), which produced two X-class flares and numerous M-class flares during its previous disk transit. Though initially very active, old Region 1302 decayed and became much less flare productive by the time it exited the solar disk on October 5. As of the issue date of this report (October 18) old Region 1302 was just beginning to rotate onto the solar disk and appears to be a likely source for occasional C-class flares and may pose a slight threat for M-class flares. Solar activity is expected to decline to very low to low levels for the remainder of the interval from November 2-14. As always during this time of the cycle there is also a chance for unexpected flux emergence which could elevate solar activity levels.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at background levels for most of the outlook interval with the exception of October 28-November 1 when an increase to high levels is expected due to recurrence.

Geomagnetic field activity is expected to be quiet for October 19-27, generally unsettled for October 28-30, quiet for October 31-November 2, unsettled for November 3-5, quiet for November 6-10, unsettled for November 11-13, and quiet for November 14. The increases to unsettled levels are expected due to recurrence from coronal hole driven high speed solar wind streams.

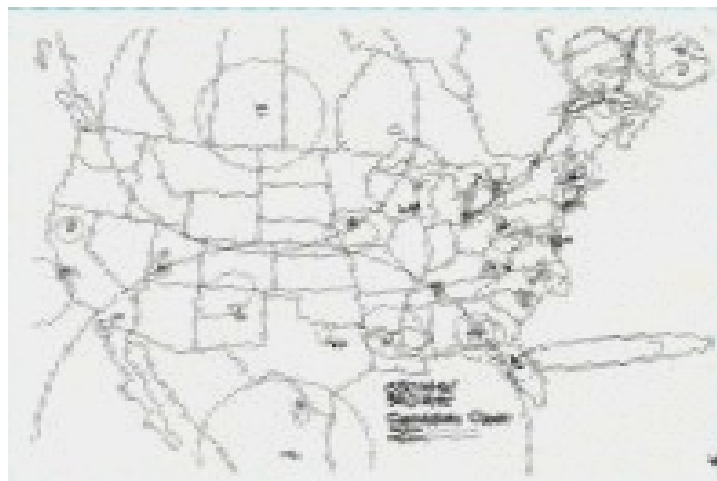
(From <http://www.swpc.noaa.gov/ftpdir/weekly/WKHF.txt>)

## The NRC Antenna Pattern Book

The sixth edition of the NRC AM Station Antenna Pattern Book now for the first time includes daytime and "graveyard" antenna patterns.

The station list is based on the 26th Edition of the NRC AM Radio Log updated as of 11/1/2005.

Stations in the Lower 48 and Canada, plus Mexican stations in states bordering the U.S. and other easily heard stations are included. Alaska and Hawaii are found in a separate section.



To order: \$16.95 to NRC members (US/Canada); \$22.95 to US non-members; \$28.50 to Canada non-members and all overseas. Canadian orders: PayPal or postal M.O. only. Colorado residents add 3.5% sales tax.

**National Radio Club, P.O. Box 473251, Aurora CO 80047-3521**

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