

DX News

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From the Publisher: Hope summer is going well for all of our members! See you in a month!

NRC AM Log 38th Edition Sold Out: Wayne and his team are working on the 39th edition, coming this fall.

Madison-Milwaukee DX Get-together: It is almost time for this year's Madison-Milwaukee DX Get-together and this one is a milestone edition! The 25th annual Madison-Milwaukee Get-together for DXers and Radio Enthusiasts will be held on Saturday August 18 from 1:00 to 9:30 PM CDT. This year's location is Madison WI and, like two years ago the venue is beautiful and spacious Lake Farm County Park (4330 Libby Road, Madison WI 53711). Your hosts are Mark Taylor and Bill Dvorak, and we would be very pleased if you joined us in celebration of our long history. Interested? For more information or an invitation, e-mail Bill at dxerak@gmail.com or Mark at markpik@gmail.com (please include "Madison DX Get-together" in the subject line). Participation by NRC members is strong every year for this event, and this year should be no exception. We hope you can join us! See you on August 18!

IRCA Convention: The 2018 IRCA convention will be held at the Best Western Plus Charles Inn in St Charles MO on September 7 and 8 2018. The hotel is located at 1425 S Fifth Street in St Charles, NW of I-70 exit 229B, or the first exit west of the Missouri River, eight miles west of the Lambert St Louis International Airport. The room rate is \$104.99 a night for either a standard king or two queens. The phone number to call the hotel directly to make reservations for that weekend is (636) 946-6936 or toll-free at 1-888-274-0988. When calling to make the reservation, you must mention the code IRCA to get the rate. There is a block of 30 rooms reserved at that rate for each night for your choice of a single or double bed, your choice. Reservations must be made by August 7 2018. One note, if all the rooms for this block sell out, then the meeting room at the hotel will be complementary. Registration for IRCA members is \$0; registration for non-members is \$25 per person with free breakfast. There will be a

tentative radio tour of KCLC FM 89.1 at Lindenwood College in St Charles as well as another possible radio tour and a possible tentative radio tower visit. The annual Banquet is out of pocket and at Culpepper's, just down the street from the hotel at 3010 W Clay St, St Charles MO 63301 (burgers, catfish, broccoli alfredo pasta, chicken strips, etc – <https://www.culpeppers.com/Home>). Your host for the convention is Ken Hawkins. You can either email him at StLouisHerdFan@gmail.com or you can call him on this cell phone at (636) 577-4295. Registration and auction items can be sent to 4034 San Fernando Ln, St Charles MO 63304-2829.

Make your plans and reservations now for the 2018 IRCA convention as this will probably be one of the best! All DXers are welcome!

This year's IRCA convention will be an excellent chance to re-connect with old friends and to share DX stories. Speaking of sharing, we issue our annual call to action for those who wish to present a talk or paper during the convention. As you know, this can be as formal or informal as you want. To make it easier, we can provide you with audio-visual support, including slide-preparation and display.

If you're interested in sharing your experiences... or if you want to present questions for discussion that might lead to a better understanding of a particular aspect of your own DXing, please contact Mark Durenberger at Mark4@durenberger.com.

Volume 85 DX News Schedule

No	D'dline	Print	19	Aug. 17	Aug. 27
18	July 20	July 30	20	Sept. 7	Sept. 17

Membership Report

New Member: Welcome to Andy Anderson, Springfield, MO.

Renewing Members: Thanks for the ongoing support of Doug Beard; Samuel T Brainerd; Mike Clancy; Michael J. De Roo; Tom Dimeo; Kenneth L. Diehl; Kris Gray; James Hall; Michael Hunter; Christopher Roach; Caryn Sobel; and James T. Weber.

AM Switch

David Yocis, 9412 Ferry Landing Ct., Alexandria VA 22309, NRCDXNews@gmail.com

Canadian info – Compiled by Shawn Axelrod and Dan Sys

NRC AM Log updates from Wayne Heinen, amlog@nationalradioclub.org

Official changes from the FCC and CRTC

CALL CHANGES

- 940 WCSW WI Shell Lake – Call change to WXNK (June 1).
- 1070 WSCP NY Sandy Creek-Pulaski – Call change to WZUN (June 6).
- 1230 KCOQ CO Steamboat Springs – Call change to KTYV (June 1) and to KKSB (June 11).
- 1280 WJST PA New Castle – Call change to WUZZ (June 12).
- 1480 WUKB KY Neon – Call change to WNKW (June 1).
- 1490 WKVT VT Brattleboro – Call change to WINQ (June 19).
- 1580 WLAA FL Bithlo – Call change back to WNTF (June 1).
- 1600 WNTF FL Winter Garden – Call change to WLAA (June 1).



NEW STATION WATCH

- 960 CKNT ON Mississauga – New station, U1 2000/280, reported testing on the air.

STATIONS GOING DARK

- 1290 WNBC MS Meridian – License revoked by the FCC; station filed for license renewal in February 2012 with an application “signed” by the owner, whom the FCC has learned died on January 25, 2011. The FCC was not amused.

CONSTRUCTION PERMITS (CPs) FOR EXISTING STATIONS

CPs fully licensed and on the air:

- 1440 KODL OR The Dalles – CP for U1 1000/23, new site 45-37-12/121-05-59, is on the air.
- 1660 KWOD KS Kansas City – CP for new site 39-04-19/94-36-56 is on the air.

CPs built, awaiting final licensing:

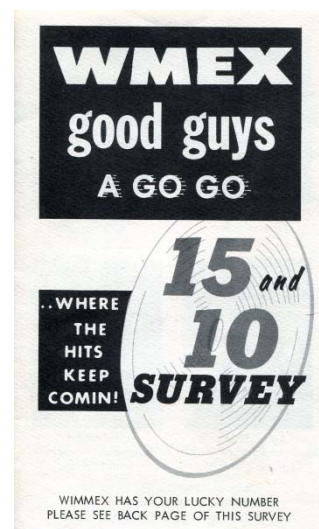
- 710 WAQI FL Miami – Granted program test authority for auxiliary operations with U4 30000/10000 from WQBA-1140 towers (alternate to U4 50 kW licensed site).
- 1070 WMIA PR Arecibo – Applies for license to cover CP for U1 510/2500, new tower at 18-27-32/66-45-20.

CPs granted:

- 790 KJRB WA Spokane – Granted CP, U1 4400/34.
- 1050 KJPG CA Frazier Park – Granted CP, D3 10000.
- 1060 KRCN CO Longmont – Granted CP, U1 50000/105, all at licensed day site.
- 1170 WFPB MA Orleans – Granted CP, D1 670.
- 1280 WWTC MN Minneapolis – Granted CP, U4 10000/15000, moving to 44-47-18/93-12-54.
- 1370 WIVV PR Island of Vieques – Granted CP, new tower at 18-06-06/65-28-15.
- 1380 KCIM IA Carroll – Granted CP, U1 500/28.
- 1410 KQV PA Pittsburgh – Granted CP, U1 5000/75, moving to 40-21-51/79-48-46.
- 1510 KGA WA Spokane – Granted CP, U2 50000/6000 (ch 45000).

Applications for CPs filed:

- 940 WGFP MA Webster – Applies for CP with U1 1000/6; licensed for U1 1000/4 and has applied for license to cover CP with a new high-efficiency broadband antenna system during the day, and this application will allow for the new antenna at night as well.
- 1430 WLTG FL Panama City – Applies for CP with U4 5000/93, correcting coordinates to 30-09-58/85-35-15; will use day pattern at night with reduced power.
- 1510 WMEX MA Boston – Applies for CP with 10000/100 (ch 2000), CoL to Quincy MA, moving to WBIX-1260 tower at 42-16-25/71-02-30.



SPECIAL TEMPORARY AUTHORITY (STA)

STAs granted:

- 590 KUGN OR Eugene – Granted STA, U4 1400/5000, night pattern during the day; failure of pattern switching equipment.
- 740 KCMC TX Texarkana – Granted STA, U1 250/250 from KTFS-940 tower; silent station has lost licensed site and intends to seek CP to make this STA permanent.
- 810 WKVM PR San Juan – Granted STA with U3 25000/25000, transmitter damaged in Maria.
- 850 WEEI MA Boston – Granted STA, parameters at variance, some support poles for the ground system have snapped at their base and need to be replaced.
- 880 WAMI AL Opp – Granted STA with U1 50/50, old site damaged and needs to broadcast.
- 910 KKBE NM Roswell – Granted STA with night parameters at variance, copper thieves.
- 1020 KCKN NM Roswell – Granted STA with U4 1000/1000, on auxiliary transmitter after fire.
- 1130 KBMR ND Bismarck – Granted STA, reduced day power (using U1 5000/24), fire in transmitter building.
- 1160 KRDY TX San Antonio – Granted STA, minor daytime parameters at variance.
- 1260 WMDG CA East Point – Granted STA with U1 100/52 from CP site (ex-1270 kHz, ex-Cartersville GA) due to city power restrictions; city is expected to approve full 5.1 kW day power by mid-summer.
- 1410 WHBT FL Tallahassee – Granted STA, U1 3500/18, transmitter problems.
- 1480 WVOI FL Marco Island – Granted STA with U1 250/250, lost tower in Hurricane Irma.
- WRCK NY Remsen – Granted STA, reduced power (using D1 100), transmitter problems.
- 1510 WMEX MA Boston – Granted STA, D1 1000, tower at 42-16-25/71-02-30; lost licensed site.
- 1530 KVOG GU Agaña – Granted STA, U1 150/150 from 20' vertical whip at 13-27-21 N/144-42-29 E, ongoing negotiations with landlord at licensed site.
- 1550 WUSP NY Utica – Granted STA, U1 175/3, transmitter problems.

Applications for STA filed:

- 990 WREJ VA Richmond – Applies for STA, D1 30 from 80m dipole at 37-47-47/77-20-00 during tower replacement.
- 1170 KJNP AK North Pole – Applies for STA, U1 4000/4000 from temporary inverted V dipole antenna during tower repairs.
- 1440 WWCL FL Lehigh Acres – Applies for STA, U4 1000/1000? with auxiliary transmitter after fire.

Extensions to previous STAs granted:

- 560 WNSR TN Brentwood – Granted STA extension, U1 1125/75 from licensed night site.
- 580 WIBW KS Topeka – Granted STA extension, night parameters at variance.
- 710 WAQI FL Miami – Granted STA extension, U4 30000/10000 from WQBA-1140 towers.
- 780 KNOM AK Nome – Granted STA extension, reduced power.
- 790 WAXY FL South Miami – Granted STA extension, U3 25000/25000, Cuban QRM.
- KJRB WA Spokane – Granted STA extension, night parameters at variance.
- 820 WWLZ NY Horseheads – Granted STA extension, U1 4100/210.
- 870 KJMP CO Pierce – Granted STA extension, U1 300/80.
- WQBS PR San Juan – Granted STA extension, U1 1250/1250.
- 900 WNMB SC No. Myrtle Beach – Granted STA extension, D1 50, 200' LW, 33-50-05/78-47-03.
- 910 WRKL NY New City – Granted STA extension, U1 250/200.
- 950 KFSA AR Fort Smith – Granted STA extension, U3 500/500, night pattern 24 hours.
- 960 WELI CT New Haven – Granted STA extension, parameters at variance or U1 5000/1250.
- 1080 WHOO FL Kissimmee – Granted STA extension, U1 1500/11 from WAMT-1190 tower.
- 1090 KAAV AR Little Rock – Granted STA extension, night parameters at variance.
- 1150 KKNW WA Seattle – Granted STA extension, parameters at variance.
- 1260 WRIE PA Erie – Granted STA extension, parameters at variance.
- 1280 KFRN CA Long Beach – Granted STA extension, parameters at variance.
- 1330 WBGW IN Evansville – Granted STA extension, U1 5000/250.
- KKPZ OR Portland – Granted STA extension, parameters at variance.
- 1350 WOYK PA York – Granted STA extension, parameters at variance or U1 5000/250).
- 1370 WLTH IN Gary – Granted STA extension, U1 1000/125 from licensed day site.
- 1340 WROD FL Daytona Beach – Granted STA extension, U1 250/250 from WPUL-1590 tower.
- 1380 KCIM IA Carroll – Granted STA extension, U1 300/250.
- 1410 WHAG MD Halfway – Granted STA extension, parameters at variance.
- 1430 WLTG FL Panama City – Granted STA extension, U5 5000/1000.
- 1450 WJET PA Erie – Granted STA extension, reduced power (unspecified).

1480 KPHX AZ **Phoenix** – Granted STA extension, D1 90, 100' longwire at 33-35-39/112-05-08.
 WSPY IL **Geneva** – Granted STA extension, U1 125/125, longwire at 41-51-11/88-19-38.
 1580 WPJK SC **Orangeburg** – Granted STA extension, D1 500 from CP tower.
 1660 KWOD KS **Kansas City** – Granted STA extension, operation from CP site.

Applications to extend previous STAs filed:

790 KJRB WA **Spokane** – Applies to extend STA, night parameters at variance.
 850 WKGE PA **Johnstown** – Applies to extend STA, U1 2500/2500.
 890 KJME CO **Fountain** – Applies to extend STA, U1 1250/145.
 910 WSRP NC **Jacksonville** – Applies to extend STA, U1 5000/1000.
 930 KSDN SD **Aberdeen** – Applies to extend STA, U1 1250/250.
 1070 WMIA PR **Arecibo** – Applies to extend STA, operation from CP tower.
 1080 WKAT FL **Coral Gables** – Applies to extend STA, U4 50000/20000, Cuban QRM.
 1110 WVJP PR **Caguas** – Applies to extend STA, U1 500/500 from temporary antenna.
 1230 WDWR FL **Pensacola** – Applies to extend STA, U1 250/250 from temporary antenna.
 KRRF UT **Murray** – Applies to extend STA, U1 20/20, folded unipole 40-43-14/111-54-07.
 WNIK PR **Arecibo** – Applies to extend STA, temporary tower at licensed site.
 1270 KZTQ NV **Sparks** – Applies to extend STA, U1 13000/1250 or night params. at variance.
 1400 WJET PA **Erie** – Applies to extend STA, U1 700/700.
 1410 WING OH **Dayton** – Applies to extend STA, U1 5000/1250.
 1420 KGIM SD **Aberdeen** – Applies to extend STA, U1 650/58 from KSDN-930 tower.
 1440 WWCL FL **Lehigh Acres** – Applies to renew STA, U4 9900/4700, Cuban QRM; STA lapsed years ago as station erroneously believed it didn't have to renew.
 1540 KZMP TX **University Park** – Applies to extend STA, reduced night power (unspecified).
 1580 WVZN PA **Columbia** – Applies to extend STA, temporary longwire antenna.
 WPJK SC **Orangeburg** – Applies to extend STA, D1 500, temporary antenna at CP site.

SILENT STATIONS

Formerly silent stations informing the FCC that they are back on the air:

690 KRGS CO **Rifle** – Silent May 5, on the air May 28.
 790 KKON HI **Kealahou** – Silent June 30, 2017; back on the air June 11.
 870 WQBS PR **San Juan** – Silent Sept. 28, 2017, on the air with STA May 4.
 880 WAMI AL **Opp** – Silent June 23 (2017), on the air with STA May 30.
 1240 WVSL NY **Saranac Lake** – Silent (as WNBZ) June 17, 2017, on the air June 4.
 KRAL WY **Rawlins** – Silent Sept. 8 (2017), on the air with STA May 18.
 1260 WMDG GA **East Point** – Silent (as 1270 kHz Cartersville) May 16, 2017, on the air with STA May 11.
 1350 KCOX TX **Jasper** – Silent Feb. 15, on the air June 1.
 1360 WHJC WV **Matewan** – Silent Nov. 21, 2017, on the air June 14.
 1450 WMFJ FL **Daytona Beach** – Silent Sept. 12, 2017, on the air Oct. 11, 2017, but for some reason not taken off the FCC silent list until June 21.
 1480 WVOI FL **Marco Island** – Silent June 26, 2017, on the air May 7 with STA.
 WRCK NY **Remsen** – Silent June 21, 2017, on the air June 28 with STA.
 1490 WVGB SC **Beaufort** – Silent Sept. 11, 2017, on the air with reduced power Mar. 29.
 1550 KWRN CA **Apple Valley** – Silent Nov. 18, 2017; back on the air June 8.
 WUSP NY **Utica** – Silent June 21, 2017, on the air June 28 with STA.
 1560 WWYC OH **Toledo** – Silent Apr. 16, back on the air June 20.
 WBYM PR **Bayamon** – Silent Sept. 25, 2017; back on the air June 14.
 1570 WQTW PA **Latrobe** – Silent Dec. 15, 2017; back on the air June 7.
 1590 WRXB FL **St. Pete Beach** – Silent Nov. 15, 2017; back on the air June 8.

Stations informing the FCC that they are silent:

990 WBTE NC **Windsor** – Silent June 15, litigation over tower site and equipment.
 1020 KCKN NM **Roswell** – Silent June 11, transmitter fire, waiting for OK from fire inspector before using STA (as above).
 1090 KBOZ MT **Bozeman** – Silent June 1, financial difficulties.
 1230 KOBB MT **Bozeman** – Silent June 1, financial difficulties.
 1270 WHGS SC **Hampton** – Silent May 24, longstanding technical and financial issues.
 1290 WCBL KY **Benton** – Silent May 12, transmitter problem, awaiting parts.
 1390 WPLM MA **Plymouth** – Silent June 7, ongoing problems with pattern.
 1400 KWNA NV **Winnemucca** – Silent May 22, financial issues.
 KSRR UT **Provo** – Silent June 8, financial difficulties, station is for sale.
 1490 KFKB WA **Forks** – Silent Dec. 5, 2017, has lost licensed transmitter site.
 1580 WHLY IN **South Bend** – Silent May 21, fire at transmitter site.

NRC AM Log Updates

- 560 WFRB MD **Frostburg** – Format to C&W (ex-TLK); slogan to "Willie 106.7 & 560," drop nets.
- 570 WWNC NC **Asheville** – Delete // WMXF-1400.
- 610 WSNB CT **Torrington** – Group to Grp=Talk of Connecticut (ex-Grp= The Talk of Connecticut). (RM)
- WTEL PA **Philadelphia** – Slogan to "610 ESPN."
- 620 KTAR AZ **Phoenix** – Slogan to "Arizona Sports 98.7."
- 630 WMFD NC **Wilmington** – Slogan to "ESPN Wilmington," add // W269DF-101.7, delete Grp= ESPN Wilmington.
- 640 WMFN IL **Peotone** – Format to Polish (ex-SS:MEX); slogan to "Polski FM," add // WCPY-92.7.
- 720 KDWN NV **Las Vegas** – Slogan to "The New 101.5FM/720AM The Talk of Las Vegas," adds // K268CS-101.5.
- 740 CFZM ON **Toronto** – Format to AC/OLD:TLK (ex-NOS/TLK); slogan to "Zoomer Hits of the 60s 70s & 80s." (SK)
- 800 WCHA PA **Chambersburg** – Slogan & Group to Grp=Oldies 96.3.
- 810 WMGC TN **Murfreesboro** – Adds // W287DK-105.3. (FCC)
- 850 WAXB CT **Ridgefield** – Slogan to "B 94.5."
- WYLF NY **Penn Yan** – Adds // W230CZ-93.9. (FCC)
- WKVL TN **Knoxville** – Format to SPT (ex-C&W); slogan to "Rocky Top Sports," delete networks, add // W267CK-101.3; delete Grp= Genuine Country.
- 880 KLRG AR **Sheridan** – Format to REL (ex-GOS). *Station is Silent*
- WPEK NC **Fairview** – Networks to ESPN; slogan & Group to Grp= ESPN Asheville.
- CHQT AB **Edmonton** – Slogan to "Global News Radio."
- 910 KKSF CA **Oakland** – Format to TLK (ex-SS:SPT); slogan to "Real Talk 910," networks to WW1.
- WSRP NC **Jacksonville** – Slogan to "La Grande 1000," adds // WRTG-1000.
- 920 WEZZ AL **Brantley** – Adds // W293DL-106.5. (FCC)
- KLMR CO **Lamar** – Format to NWS/TLK/SPT (ex-C&W); slogan to "News Radio 920," networks to A/AGt/CS/SRN/WW1.
- 940 WXNK WI **Shell Lake** – Format to Rock (ex-TLK); slogan to "Ink 92.7," delete networks.
- 970 WYSE NC **Canton** – Networks to FSR.
- 980 WDDO GA **Perry** – Slogan and Group to Grp=Shining The Light.
- 1000 KFLG AZ **Bullhead City** – Slogan & Group to Grp =K-Star 99.3.
- WRTG NC **Garner** – Slogan to "La Grande 1000," adds // WSRP-910.
- WGVY VA **Altavista** – Format to OLD (ex-TLK); slogan to "102.1 The Groove," adds // W271DB-102.1.
- 1010 WSPC NC **Albemarle** – Adds // W297CE-107.3. (FCC)
- 1050 KJBN AR **Little Rock** – Format to REL/CCR:UC/GOS (ex-REL/CCR).
- WLYQ WV **Parkersburg** – Adds // W234DC-94.7. (FCC)
- 1070 WFRF FL **Tallahassee** – Slogan & Group to Grp= Radio Fe.
- 1080 KOAN AK **Anchorage** – Slogan & Group to Grp= Alaska's Conservative Talk FM 95.1 AM 1080 (ex-Grp= Hot Talk FM 95.1 AM 1080).
- WOKT KY **Cannonsburg** – Slogan & Group to Grp=WALK-FM.
- 1100 WWWE GA **Hapeville** – Format to UC:TLK/OLD (ex-UC:OLD/TLK); slogan to "Real 1100."
- 1110 WSLV TN **Ardmore** – Slogan to "Cat Country 1110 & 105.1."
- WMUX WV **Hurricane** – Slogan & Group to Grp=WALK-FM (ex-Grp= St. Paul Radio).
- 1120 WKAJ NY **Saint Johnsville** – Slogan to "Outlaw Country," networks to USA/WW1. (SK)
- 1130 WHHW SC **Hilton Head Island** – Format to OLD (ex-AOR); slogan to "FM 96.1 1130 AM The Island."
- 1140 WLOD TN **Loudon** – Group to Grp=Pure Country. (CR)
- 1150 KNMM NM **Albuquerque** – Format to VAR:Music (ex-SPT); slogan to "Best Mix of New Mexico Music."
- WMNY PA **New Kensington** – Slogan to "Radio Dhoom."
- 1170 WSOS FL **Saint Augustine Beach** – Slogan & Group to Grp=Oldies 103.9.
- 1180 KOFI MT **Kalispell** – Format to CLR/TLK (ex-OLD/TLK); delete slogan; networks to A/JBo/C2C.
- 1210 WILY IL **Centralia** – Slogan to "The Legendary 1210."



1220 WAYE AL **Birmingham** – Slogan & Group to Grp= 98.3 1220 1500 La Jefa.
 KGIR MO **Cape Girardeau** – Slogan to "ESPN SE Missouri," adds // KMAL-1470; delete Grp= ESPN SE Missouri.
 WLSA VA **Big Stone Gap** – Format to GOS/REL (ex-REL); slogan to "Where Love Sounds Different," drop networks.
 1230 KKSJ CO **Steamboat Springs** – Format to NWS/TLK (ex-AC); slogan to "NewsTalk," networks to A/P/WW1/DR/JBo.
 WTSV NH **Claremont** – Networks to ESPN.
 KCUP OR **Toledo** – Format to NWS/TLK (ex-TLK); slogan to "NewsTalk K-Cup," networks to SRN.
 1240 WSYX ME **Millinocket** – Format to AC/NOS (ex-SPT); slogan to "94.9 The Mountain," add // WSYX-FM-94.9; delete networks.
 WJTN NY **Jamestown** – Adds // W267CN-101.3. (FCC)
 1250 KKDZ WA **Seattle** – Format to Asian (ex-Asian/Indian); slogan to "Radio Punjab," adds // KZIZ-1560.
 1290 WFBG PA **Altoona** – Networks to Fox/JBo/Ing/P/WW1/DR/C2C. (PS)
 1300 KLER ID **Orofino** – Slogan to "Clearwater Country."
 1310 WISE NC **Asheville** – Networks to FSR.
 1340 KTPI CA **Mojave** – Format to NWS/TLK (ex-TLK/NOS); slogan to "NewsTalk 1340."
 WAGN MI **Menominee** – Adds // W261DM-100.1. (FCC)
 KSID NE **Sidney** – Slogan to "The Fort."
 WKGN TN **Knoxville** – Adds // W268BP-101.5. (FCC)
 KOLE TX **Port Arthur** – Format to ETH/Brokered (ex-UC).
 1350 KSRO CA **Santa Rosa** – Adds // K233CM-94.5. (FCC)
 WNLK CT **Norwalk** – Format to REL/GOS/Brokered (ex-Brokered/GOS); Group to Grp= 1350 Radio. (SFDLBF)
 WBML GA **Warner Robins** – Slogan & Group to Grp=Praise 95.5. (FCC)
 WEZS NH **Laconia** – Adds // W277DJ-103.3. (FCC)
 KRAP MO **Washington** – Format to AC (ex-SPT); slogan to "Westplex 107.1," drop nets.
 WEGA PR **Vega Baja** – Slogan to "Radio Visión Hispana."
 1360 WDRC CT **Hartford** – Slogan & Group to Grp= Talk of Connecticut. (RM)
 1370 WKMC PA **Roaring Spring** – Format to CLR (ex-OLD); slogan to "Classic Hits 96." (SK)
 1380 KOSS CA **Lancaster** – Format to Classic Hip Hop (ex-TLK); Group to Grp= Old School 93.5 (ex-Grp= NewsTalk 1380); delete networks.
 KCIM IA **Carroll** – Format to CLR (ex-AC/OLD).
 WPHM MI **Port Huron** – Format to NWS/TLK/SPT (ex-SPT); networks to A/BNN/Ns/SRN/DR/C2C. (JJR)
 WYSH TN **Clinton** – Slogan to "Classic Hit Country," add // W266AM-101.1; delete Grp= Classic Hit Country.
 1400 WSTC CT **Stamford** – Format to REL/GOS/Brokered (ex-OLD); Group to Grp= 1350 Radio. (SFDLBF)
 WNEX GA **Macon** – Slogan & Group to Grp=Shining The Light.
 KART ID **Jerome** – Networks to C. (TV)
 WTSL NH **Hanover** – Format to HipHop (ex-SPT); slogan to "Hot 97," add // W248DA-97.5; delete Grp= The Upper Valley's Sports Station, delete networks.
 WMXF NC **Waynesville** – Format to SPT (ex-TLK); networks to ESPN, delete // WWNC-570; slogan & Group to Grp= ESPN Asheville.
 WGAP TN **Maryville** – Group to Grp=Pure Country (ex-Grp= Classic Hit Country). (CR)
 1410 WHAG MD **Halfway** – Group to Grp=Oldies 96.3 (ex-Grp= FM 96.3 Good Time Oldies).
 1420 WRSA VT **Saint Albans** – Format to BIZ (ex-OLD); networks to BNN.
 1430 WNEL PR **Caguas** – Slogan to "Radio Tiempo."
 1450 WMVG GA **Milledgeville** – Adds // W283CZ-104.5. (FCC)
 WTHU MD **Thurmont** – Format OLD (ex-NWS/TLK); slogan "Cool 1450 AM," drop nets.
 WHRY WI **Hurley** – Adds // W275CR-102.9. (FCC)
 1460 KTKC LA **Springhill** – Format to SS:REL (ex-NOS); slogan to "Red de Radio Amistad."
 WEEN TN **Lafayette** – Adds // W248CX-97.5. (FCC)
 1470 WMMW CT **Meriden** – Slogan & Group to Grp= Talk of Connecticut. (RM)
 KMAL MO **Malden** – Slogan to "ESPN SE Missouri," add // KGIR-1220; delete Grp= ESPN SE Missouri.
 1480 WSAR MA **Fall River** – Slogan to "The Legendary – NewsTalk Sports."
 1490 KTEL WA **Walla Walla** – Format to NWS/TLK (ex-SPT); Group to Grp=Fox News 1490 & 99.7 (ex-Grp= ESPN Walla Walla); networks to Fox/CMP/JBo/BRR/RER.

- 1500 WQCR AL **Alabaster** – Group to Grp= 98.3 1220 1500 La Jefa.
 1510 WYEC IL **Macomb** – Format to TLK/SPT (ex-CCR); slogan & Group to Grp=Macomb News Now 104.7.
 1550 WITK PA **Pittston** – Add // W234CY-94.7. (FCC)
 KCOM TX **Comanche** – Add // K261EZ-100.1. (FCC)
 1560 KZIZ WA **Pacific** – Add // KKDZ-1250.
 1580 WTCL FL **Chattahoochee** – Slogan & Group to Grp= Radio Fe.
 WZKY NC **Albemarle** – Adds // W277DK-103.3. (FCC)
 KWLO UT **Springville** – Format to C&W (New on Air) (MR); slogan to "Your Country Classics." (JW)
 1590 WHPY NC **Clayton** – Slogan to "Fellowship Radio." (CR)
 1590 WABV SC Abbeville – Format to SS:REL (still listed Silent by FCC); slogan to "Radio Inspiration," delete networks.

New Groups

- Grp= 1350 Radio – WNLK-1350, WSTC-1400, W276AV-103.1 (SFDLBF)
 Grp= ESPN Asheville – WPEK-880, W225CJ-92.9, WMXF-1400
 Grp= Fox News 1490 & 99.7 – KTEL-1490, K259CR-99.7, K231CT-94.1
 Grp= K-Star 99.3 – KFLG-1000, K270CI-101.9, K257FM-99.3
 Grp= Macomb News Now 104.7 – WLMD-104.7, WYEC-1510, W226CH-93.1
 Grp= Oldies 103.9 – WSOS-1170, W280EY-103.9, W239CN-95.7
 Grp= Praise 95.5 - W238CG-95.5, W258AP-99.5, WBML-1350
 Grp= Pure Country – WGAP-1400, WLOD-1140, W290DJ-105.9 (CR)
 Grp= Radio Fe – WFRF-1070, WTCL-1580, W222AW-92.3
 Grp= Shining The Light – WNEX-1400, WDDO-980, W226BZ-93.1



Group Name Change and Update

- Grp= NewsTalk 1380 becomes Grp= Old School 93.5
 Grp= Old School 93.5 – KQAV-93.5, KOSS-1380, K296GX-107.1, K272FI-102.3

Group Updates

- Grp= Keep Boldly Believing the Word – Adds K262DG-100.3 Georgetown
 Grp= News Information and the Arts – Adds W268CZ-101.5 Northampton and Deletes W245BK-96.9 Amherst
 Grp= The Upper Valley's Sports Station – Is now WTSV-1230, W232DN-94.3, W233CC-94.5

Group Name Changes

- Grp= 98.3 La Jefa becomes Grp= 98.3 1220 1500 La Jefa
 Grp= Hot Talk FM 95.1 AM 1080 becomes Alaska's Conservative Talk FM 95.1 AM 1080
 Grp = Oldies 96.3 True Oldies Channel becomes Oldies 96.3
 Grp= Power 97.5 WLX becomes Grp= The Superstation

Deleted Groups

- Grp= 620 The Buzz (W257CS & W243DK Deleted from WDNC)
 Grp= Classic Hit Country
 Grp= ESPN SE Missouri
 Grp= ESPN Walla Walla
 Grp= ESPN Wilmington

Thanks to Shawn Axelrod, Bill Hale, FCC Database (FCC), Marc DeLorenzo, Charles Reh (CR), Tore Vik (TV) Ron Musco (RM), Steve Kennedy (SK), Mike Riordan (MR) Scott Fybush Dave Lang Bill Feidt (SFDLBF), John J Rieger (JJR) Paul Snider (PS) John Wilkins (JW).

Unreported Domestic Stations

Two new stations reported to DDXD this issue, for the first time since at least Volume 67 (1999-2000), both new on the air: CKNT-960 and KWLO-1580. Since we added KWLO to the unreported list last issue, the total number of currently licensed stations in the United States and Canada that haven't been reported to DDXD in that timeframe drops to 375. The full list was last printed in issue 84-18, and we'll print an updated list as space permits over the summer. Can you log and report one next issue?

Domestic DX Digest – West

(Interim) David Yocis, 9412 Ferry Landing Ct., Alexandria VA 22309, NRCDXNews@gmail.com

For loggings of U.S. and Canadian stations by DXers in Central/Mountain/Pacific time zones

All times are Eastern Local Time (ELT)

REPORTERS

- GH-OK** **Glenn Hauser, Enid** – Mostly DX-398 with internal antenna only or PL-880; NRD-545 with ALA-330S inside E-W or inside randomwire N-S; Nissan stock caradio as specified; IC-R75 with E-W longwire.
- JW-CO** **John Wilkins, Wheat Ridge** – Drake R-8, 4-foot box loop.

DX LOGGINGS

- 570 WNAX SD Yankton** – 6/2 1400 – Pronounced SAH of 200/minute, or 3 1/3 Hz, between WNAX on daytime groundwave (449 miles) and KLIF. Consistent with MW Offset list showing KLIF as 3 Hz low in 2010 and KLIF 0.78 Hz high as of March. **(GH-OK)**
- 1110 KTEK TX Alvin** – 6/21 0736 – With KFAB nulled, this one presumed with financial talk program, mixing with KVTT's South Asian music. **(GH-OK)**
- 1130 KLEY KS Wellington** – 6/2 1318 – Still SNAFU going into a fifth month. 6/7 1757 – Carrier is not cutting off now, but the rapid clicking goes on. **(GH-OK)**
- 1440 KPUR TX Amarillo** – 6/9 0859 – Legal ID: "You're listening to the all-new CBS Sports Radio on 1440 AM KPUR Amarillo-Canyon," followed by, of course, CBS Sports. Fair at best as the band was fading out. **(JW-CO)**
- 1450 KGIW CO Alamosa** – 5/31 0848 – State Farm ad, weather forecast, then into a Bob Seger song. Fair in QRM. **(JW-CO)**
- KVSI ID Montpelier** – 5/25 0742 – Call letter ID and into a Sinatra song. Fair in the group. **(JW-CO)**
- 1490 KRTN NM Raton** – 6/4 0732 – ID as "Country Classics ... AM 1490 KRTN," and then faded. Briefly fair in KCFC null. **(JW-CO)**
- 1500 KJIM TX Sherman** – 6/9 2136 – Presumed with Texas Rangers baseball vs. Colorado. Official sunset for KJIM in June is 2145. **B(GH00K)**
- 1520 KKXA WA Snohomish** – 5/31 0712 – Area ads, then C&W music after a "K-X-A" ID. Fair-good, occasionally topping KOKC. **(JW-CO)**
- 1580 KQFN AZ Tempe** – 5/31 0659 – Legal ID for AM and 2 FM's, "Arizona's new home for (football?)" and into sports talk. Rough in QRM. **(JW-CO)** *Web site has the slogan "Arizona's new home for sports."* – DY
- KWLO UT Springville** – 6/14 0802 – Legal ID spoken slowly: "KWLO Springville-Orem-Provo, Your Country Classics," followed by segued older C&W tunes. Heard no ads or live announcements in an hour's worth of monitoring, although the same canned ID was noted two or three more times. Generally fair, mixing occasionally with KAMI, which runs the same format; no sign of nearby KFCS. New here, UT #48. **(JW-CO)**

NOAA Space Weather Outlook

Issued June 18, 2018 – For the period June 18-July 14, 2018

<http://www.swpc.noaa.gov/products/weekly-highlights-and-27-day-forecast>

Solar activity is expected to be at very low levels with a slight chance for C-class flares from 18 Jun-01 Jul with the return of old Region 2712 (N15, L=176). Very low levels are expected for the rest of the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at high levels on 28 Jun-10 Jul due to CH HSS influence.

Geomagnetic field activity is expected to be at unsettled to active levels on 18-19, 24-25, and 27-30 Jun with G1 (Minor) storm levels expected on 18 Jun and 28-29 Jun due to recurrent CH HSS activity.

Visit the NRC on Facebook: <https://www.facebook.com/groups/509246815818550/>



Domestic DX Digest – East

Mike Brooker, 99 Wychrest Avenue, Toronto ON M6G 3X8 (Canada), patria1818@yahoo.com

For loggings of U.S. and Canadian stations by DXers in Eastern/Atlantic time zones

All times are Eastern Local Time (ELT)

REPORTERS

- JF-NJ** Joseph Fela, South Plainfield – SuperRadio II.
HJH-PA Harry Hayes, Wilkes-Barre – Grundig S350, ALA 1530 loop in attic.
TLK-FL Terry Krueger, Clearwater – NRD-535, IC-R75, ICF-7600 GR, roof dipole, active loop.
PS-ON Paul Snider, Welland – Elad FDM-S2, Pixel Pro 1B loop, MFJ-1020C tuner.
JW-PA Jim Weber, Oyster Point – Grundig S350.
MKB-ON Mike Brooker, Toronto – Grundig YB-400PE, Sony SRF-39FP, C Crane CC Skywave, Panasonic RF-2200.

Follow me on Twitter! @patria1818 DX-related tweets will be hash-tagged #MWDX.

Friend me on Facebook! www.facebook.com/keval.mike

COMING SOON TO A RADIO NEAR YOU

- 960 CKNT ON** Mississauga – 6/21 0545 – Much-anticipated (NOT!) near-local noted testing with classical music, announcements by woman mentioning test transmissions and phone 647-501-1700 or email cknt960@gmail.com to report interference. It's certainly taken long enough for this station (format will be news-talk) to get on the air before the CRTC would have canceled their construction permit. (MKB-ON)

UNID

- 1240 unID --** – 6/4 0643 – Someone pointing NNE/SSW with Mexi format, bits and pieces heard past 1100 through June 12 checks. Logical choice is WKIQ, Eustis, FL but they are listed (and shoddy website) as Christian Spanish. This one spun Julio Preciado "Mentira de Amor" and "Un Siglo de Amor" by the band Tierra Cali, neither Christian artists. No commercials, but male seemingly "La --- 12-40 AM" after every couple songs. Faded after 0700. WFSX Fox Sports Ft. Myers, presumably WZCC Cross City (Classic Rock), and the ever-present WPAX, Thomasville, GA way-off frequency on 1240.103 co-channel. Heard again same time range with a definite "Que Buena" though not sure if a slogan. Could I suppose also be "La Mega 1240" as the slogan. Anyone closer to Orlando able to confirm WKIQ is no longer Spanish Christian, the Que Buena format flipped here, ex WLAA-1600? (TLK-FL)
- unID --** – 6/10 0631 – In with all the others on 1240, someone with Classic Country. Bubbled up for a moment with George Strait's "Baby Blue." Then on June 12, 0654 with Keith Whitley "I'm No Stranger to the Rain" segued to "Islands In the Stream" duet by Dolly Parton and Kenny Rogers. Nothing I see that fits the format from Florida, and points NNW. WCNC, Elizabeth City, NC or WLSC, Loris, SC? (TLK-FL)

LOGGINGS

- 850 WKGE PA** Johnstown – 6/12 2006 – Ads for ABC 23 TV and weather from Fox 8. ID's as "WWGE-1400". Began a Jim Croce tune. Good signal, mostly alone. (HJH-PA)
+++ - 6/11 0252 – Fair signal with IDs as WWGE; playing oldies such as "What Kind of Fool Am I" and "One Fine Day." (JW-PA)
- 950 WROL MA** Boston – 6/6 0200 – Running what sounded like a conservative talk show, ads including for items available from WROL.com and a European trip available through the Catholic church. WROL call letter ID also given. Generally dominating 950, but shouldn't be hearing them at all (after local sunset). (JF-NJ)
- 990 WDCX NY** Rochester – 6/1 0301 – All alone on this frequency for a bit; religious ballad gives way to nice ToH ID that included "For God and Country" slogan. Then back to more religious music while other stations begin to become audible. (JW-PA)
- 1070 WNCT NC** Greenville – 5/30 2328 – Oldies music, "... Beach, Boogie and Blues" slogan at ToH, "Thank You for Letting Me Be Myself Again" by Sly and the Family Stone. Fair to poor with CHOK. Not often heard here. (PS-ON)

- 1100 WHLI NY **Hempstead** – 6/4 0130 – Also noted on 6/5 and 6/6 around this time with rock oldies and WHLI IDs, fighting WTAM. Not aware of WHLI having unlimited status. **(JF-NJ)**
- 1160 WCCS PA **Homer City** – 6/4 0506 – “WCCS” call letter ID in multiple station jumble at this time. **(JW-PA)**
- KRDY TX **San Antonio** – 6/4 0625 – San Antonio local store ads mentioning 210 area code, back to America's First News audio feed. **(TLK-FL)**
- 1190 WWIO GA **St. Marys** – 6/6 0625 – "Jane Brown State Farm Insurance, on Hwy 40 in Kingsland" local spot, into contemporary Christian vocals. **(TLK-FL)**
- 1220 WKTZ FL **Jacksonville** – 6/5 0657 – End of block Christian quack preacher, into another and lots of American Family Radio mentions. Really big signal post-sunrise briefly, considering the power. **(TLK-FL)**
- 1230 WCMC NJ **Wildwood** – 6/5 0455 – Quality oldies music with WMID ID at this time for // WMID-1340 Atlantic City. **(JW-PA)**
- WCRO PA **Johnstown** – 6/5 0535 – In and out for the last half hour. Frequent local weather reports with K.C. Kantz; chilly 49 degrees in Somerset this morning. **(JW-PA)**
- 1240 WSNJ NJ **Bridgeton** – 6/5 0602 – Bubbled up in the 1240 graveyard stew with very clear male "... 12-40 AM, WSNJ" ID, then lost. Nice, not just NJ to Florida, but at 1 kW U1. **(TLK-FL)**
- 1250 WMTR NJ **Morristown** – 6/8 0004 – In well at times, call sign ID at this time. One of the few that powers up at night. **(JW-PA)** *5000 watts day, an unusual 7000 night, U4 (separate day and night directional patterns) per NRC Log. Mike.*
- WLEM PA **Emporium** – 6/6 0534 – Moderately readable after 0500 power-up, nice "Emporia's Radio Station, WLEM" ID at this time. **(JW-PA)**
- 1320 WJAS PA **Pittsburgh** – 6/15 0500 – “WJAS Pittsburgh” ID at this time with weak signal. **(JW-PA)**
- 1330 WEBY FL **Milton** – 5/30 0707 – Quick signal up from presumed day power/pattern, man with weather, including Pensacola current temperature. **(TLK-FL)**
- 1360 WQVN FL **North Miami** – 5/30 0657 – Haitian kreyol screaming over kompa beats, 0701 heavily-accented man "WQVN, Miami" and into gospel kreyol vocal. Weaker co-channel WHNR present. **(TLK-FL)**
- 1370 WLOP GA **Jesup** – 5/28 0645 – Southern accented female reading local ad with 912 area code, then another, "... R&R Auto Sales, 2849 Savannah Highway, Jesup." Briefly in and over WCOA. **(TLK-FL)**
- 1380 WAOK GA **Atlanta** – 5/28 0650 – Black male and female hosting callers on urban issues. Parallel station web stream. Way under my local WWMI. **(TLK-FL)**
- 1390 WEOK NY **Poughkeepsie** – 6/10 0600 – Call letter ID on the hour in nice jumble with WRSC and others. WLAN completely nulled. **(JW-PA)**
- WSPO SC **Charleston** – 5/28 0701 – Tune-in to male "AM 13-90, WSPO... FM 101.1, The Holy City... station" ID into Urban gospel. Checking the Wiki entry for Charleston, indeed the city slogan is The Holy City. **(TLK-FL)**
- 1470 WLOA PA **Farrell** – 5/28 2245 – "Stronger (What Doesn't Kill You)" by Kelly Clarkson, "Uncovered" program (call-in show), "1470 WLOA" ID at 2249 into "Piano Man" by Billy Joel. Poor to very poor in station mix. **(PS-ON)**
- WVOL TN **Berry Hill** – 6/17 2251 – Heard mention of gospel music in the mix, indeed were playing various musical styles of urban gospel, "WVOL, Berry Hill, Nashville" ID at 2303 into more music. Fair at times to very poor in station mix. // to Tune In stream. **(PS-ON)**
- 1570 WFRL IL **Freeport** – 6/14 2043 – C&W music, clear WFRL ID into "Cherokee Fiddle" by Johnny Lee. Poor to very poor in station mix with religious station (possibly WFUR). // to Tune In stream. Thought I heard this one the other night, but wasn't sure because usuals WFLR and WVTL have a very similar call sign. **(PS-ON)**
- WLRS IN **New Albany** – 6/5 2203 – In SS with Mexican style music by male and female, "El Poder" slogan at 2207, more music, brief talk between every two songs. Fair at times to very poor in station mix including WWCK, WBGX, unidentified oldies station and others. // to Tune In stream. **(PS-ON)**
- WPTW OH **Piqua** – 6/12 2354 – "Sexual Healing" by Marvin Gaye, "Classic hits, 98.1 WPTW" FM-only ID at 2258, "Fooled Around and Fell in Love" by Elvin Bishop. Poor to very poor in station mix including WBGX and probably WWCK. // to Tune In stream. **(PS-ON)**

- 1590 WCSL NC Cherryville** – 5/28 0402 – Promo for radio advertising into C&W music. Running parallel to internet feed. More ads at 0503 with mention of Mt. Holly (nearby town) then more country music. In here and there during this hour. **(JW-PA)**
- WHPY NC Clayton** – 5/31 1957 – Vocal religious music, male announcer with biblical quote, "Thank you for listening to Fellowship Radio 1590 WHPY Clayton, North Carolina" ToH ID into Viewpoint program. Fair at times to poor in station mix. **(PS-ON)**
- 1680 WOKB FL Winter Garden** – 5/27 1250 – Good mid-day signal with Caribe-accented female in passing. Logged at A.L. Anderson Park, Tarpon Springs on the ICF-7600GR. **(TLK-FL)**

World Cup 2018 Broadcasts

There doesn't seem to be an English-language radio broadcast network in the United States for the 2018 FIFA World Cup soccer tournament, but games are broadcast in Spanish on the Fútbol de Primera (FDP) network:

<http://www.fdpradio.com/donde-escucharnos/> (6/22/2018)



710	KBMB-AZ	1340	WWFL-FL	93.9	KINT-FM-TX	102.5	KQSE-CO
810	WSYW-IN	1360	KKMO-WA	94.1	KLNO-TX	102.7	KQHM-TX
840	WRYM-CT	1380	WWNT-NC	94.5	KSEH-CA	102.9	WMKB-IL
850	KEYH-TX	1410	WRJD-NC		KTUN-CO	103.1	KLUN-CA
880	WIJR-IL	1440	KTUV-AR	94.7	KLOB-CA		KDLD-CA
	KWIP-OR		WMVB-NJ		KYSE-TX	103.9	WTOB-FM-SC
	WMDB-TN	1460	WQXM-FL	94.9	KXTT-CA	104.1	KJOR-CA
900	WJWL-DE		WXEM-GA		KQUR-TX	104.3	KXSE-CA
	WCLM-MD		KZUE-OK	95.5	KAIQ-TX		KLQB-TX
910	KOXR-CA		KBZO-TX	95.7	KSEC-AR	104.5	KKFG-NM
	WOLI-SC	1470	WWBG-NC	95.9	KXXZ-CA	105.3	WZSP-FL
970	KXTA-ID	1480	KSBQ-CA		KZHM-NM	105.5	KDDK-LA
990	KTKT-AZ		WTOX-VA	96.1	KALN-NM	105.9	KSSA-KS
	WMYM-FL	1490	KXLQ-IA	96.3	WXNY-FM-NY		KRZY-FM-NM
1020	WLVJ-FL		KLNT-TX	96.7	KOYE-TX	106.1	KNEX-TX
	KMMQ-NE	1500	WQCR-AL	96.9	WFAJ-VA		KPQP-TX
1030	WNOW-NC	1540	KGLA-LA	97.1	KTSE-FM-CA		KXHM-TX
	WGSF-TN	1600	KGST-CA		KBCQ-FM-NM	106.3	KOLL-AR
1040	WURN-FL		WAOS-GA	97.5	KLYY-CA		KBMG-WY
	WSGH-NC		KTUB-UT	97.7	KCYI-LP-OK	106.5	KLNV-CA
1130	WLBA-GA	1650	KSVE-TX	98.3	WFXO-AL	106.7	WPPN-IL
1160	KCTO-MO			98.5	KTJM-TX		KMEZ-LA
1200	WRTO-IL	87.7	KFLZ-LP-TX	98.7	KZAM-TX	106.9	KDVA-AZ
1230	WESX-MA	91.1	KAQF-NM	99.1	KXTA-FM-ID		WZZS-FL
1240	WNVL-TN	91.7	KOBH-NM	99.7	KHLT-FM-KS	107.1	KVVA-FM-AZ
	KRDM-OR	92.1	KCMT-AZ	100.5	KBDR-TX		KSSE-CA
1250	KZER-CA		KJMN-CO	101.1	KNVO-FM-TX		KSSD-CA
1280	WTMY-FL	92.3	KIJN-FM-TX		KFUR-LP-UT		KHIT-FM-CA
1300	WBZQ-IN	92.7	KRRN-AZ	101.7	KNTE-TX		KSES-FM-CA
	WJDA-MA	93.1	KRJN-CO	101.9	KLBN-CA		KSSC-CA
	WNQM-TN	93.7	KXZM-CA	102.1	KRNV-FM-NV		WURN-FM-FL
1310	WTIK-NC		KXFS-TX	102.3	KDUT-UT		WEDJ-IN
1320	WVNZ-VA						

It's not clear if all stations carry all the games; the only station on the list audible on my car radio at 0830 ELT today (6/22), WCLM-900, was in fact carrying the Brazil-Costa Rica game live – DY.

MEMBERSHIP RENEWALS

Don't forget that your subscription expiration date is on the back cover. Renewals go to NRC Headquarters, P.O. Box 473251, Aurora CO 80047-3251. Rates are on the back page. Order publications at the same time – only one check is necessary.

DX Toolbox

Shawn Axelrod, 30 Becontree Bay, Winnipeg R2N 2X9 (Canada) amandx@mymts.net

Greetings once again from the Heart of the Continent and welcome to the DX Tool Box Column number 104.

Radio Videos:

Climbing a tower. A really big tower. <https://www.youtube.com/watch?v=INbKYq0G9nU>

Taking down a tower <https://www.youtube.com/watch?v=vx4k9gXAZEM>

Slip Sliding Away

This year I again received the list of Canadian AM radio stations to check for the NRC AM Radio Log. I did notice something rather quickly. That was that there were fewer stations yet again to update. There were only 232 lines of stations to proof read for changes. I looked back through the years and found this:

2011	329 stations
2012	317 stations
2013	300 stations
2014	276 stations
2015	261 stations
2016	256 stations
2017	245 stations
2018	232 stations

At this rate my checking will be measured in minutes and not hours sadly enough. There are also 20 stations on the list with AP's or CP's to go to FM. It may well be that by 2022 or so there will be less than 200 AM radio stations left in Canada from coast to coast to coast. Prince Edward Island is already AM radio free. Other provinces and territories may not be far behind. The CBC seems to be on "a kick" of converting its relay stations to FM from AM. The network seems to be willing to spend between \$50,000.00 and \$120,000.00 per station to go to FM for what they call "economic reasons" due to old AM equipment being in need of replacement. And so it goes.

Bits and Bites from the NRC listserv:

Below is a series of posts Gary did over a period of several days. Great information on a radio.

From: Gary DeBock, Puyallup WA

Re: The XHDATA D-808 portable

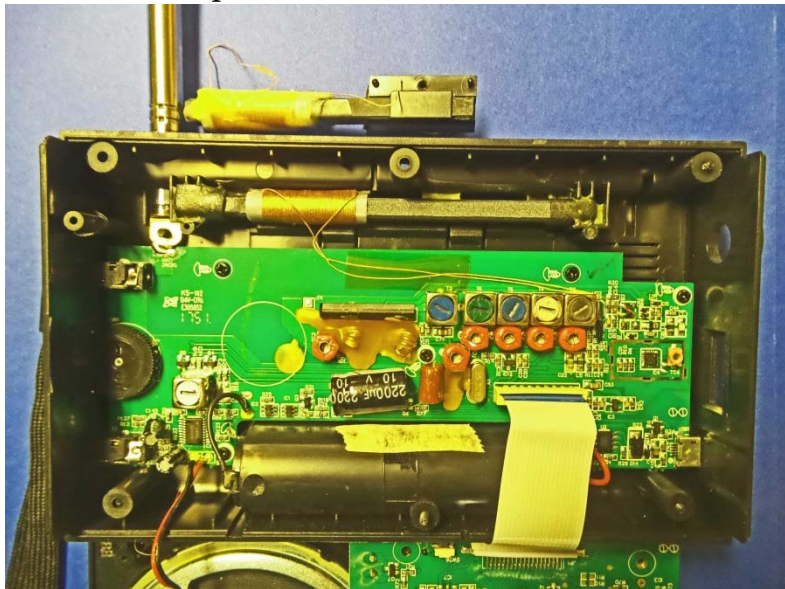
The XHDATA D-808 portable is an FM-AM-SW-SSB-AIR band model which has already been the subject of many excellent reviews. Until recently the model was not marketed to North American purchasers, but recently a couple of Chinese sellers have started soliciting North American buyers via eBay listings.

My own interest in the model was in comparing its AM Band performance to that of the best performing Ultralight radios-- specifically the CC Skywave and Skywave SSB models. Although the D-808 is slightly larger than the 20 cubic inch limit for Ultralight radios, its size and weight make it very convenient to take along as a "travel portable," specifically as an SSB-enhanced model capable of checking transoceanic station carrier strength on exotic ocean beaches. The Skywave SSB model can also do that-- but at a \$169.99 list price, compared to the \$112.86 (plus \$10 shipping) cost of the D-808. In addition, none of the published D-808 reviews seemed to have any information about internal components like the loopstick, or Si4735 DSP chip.

My first test was to compare the stock Skywave SSB model with the D-808 in fringe AM station reception. The Skywave SSB model has a reputation of being one of the most sensitive Ultralight radios, but the D-808 clearly outperformed it on both low band fringe station (550-KARI) and high band fringe station (1700-City of Auburn TIS) reception. The D-808 couldn't quite hang with a 7.5" loopstick Skywave model, but that only made me curious about how the same modification could enhance the D-808. So it was time to disassemble the D-808, and find out why its loopstick was such a superior performer.



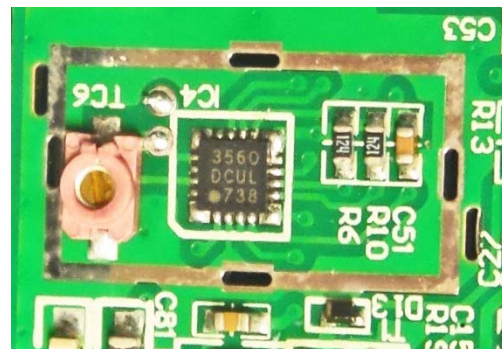
The D-808 loopstick (detailed photo at left) is 3.7/8" (98mm) long, while that of the CC Skywave SSB model (pictured above the D-808 cabinet, in the photo) is only 2 3/4" (70mm) long. Other



reviewers have noted the excellent performance of the D-808 on the AM band, and this is probably one of the main reasons. The SSB mode operates very similar to that of the Skywave SSB in providing a quick check of carrier strength on weak AM band targets-- the LSB mode can be set to +55, and the radio tuned to different frequencies to check fringe station carrier strength. This can provide a real-time check of propagation changes during time-limited propagation openings for live ocean beach DX'ing with Ultralight radios or other portables (or with the D-808 itself, if desired). The Si4735 DSP chip (detailed photo below right) has markings of "3560, DCUL, .738" and

provides a wide range of AM bandwidth choices for the Medium Wave DX'er (6K, 4K, 3K, 2.5K, 2K, 1.8K and 1K). These perform very well, and as with the other DSP-enhanced portables, the narrowest bandwidth (1K) provides the most sensitive AM band reception.

Those considering a purchase of the D-808 should be advised that its type 18650 Li-ion 3.7v battery is not commonly available at most stores, and that Postal regulations supposedly forbid shipping these batteries through the mail. One of the eBay sellers (harelan ecommerce) did manage to ship me two of the standard XHDATA type 18650 batteries through the mail (along with two new D-808 models) but if your seller won't do this, you can still purchase the batteries on eBay. Some of the 18650 batteries sold on eBay have a flat positive terminal which won't contact the D-808 cabinet's positive battery connector terminal, but in such a case you can simply insert a #8 lockwasher in between the two, and the arrangement will be very secure. From that point on you can simply recharge the battery with a USB terminal connector.



The new portable does have Longwave coverage from 150-450 kHz, although with the MW-oriented loopstick you may need to be next door to an NDB to benefit from it. There is a very effective 7.5" Longwave loopstick that was developed for the Tecsun PL-380 model that should work great in the D-808, though, with the related technical article posted at <http://www.mediafire.com/file/845snah2h4ek9z9/7.5inLWLS.doc/file> With the enhanced Longwave loopstick, SSB capability and multiple DSP filtering options, the model could well become the traveling portable of choice for NDB-DX'ers.

For those interested, a detailed internal photo of the D-808's Digital and RF circuit boards is found below, right. Its construction very similar to that of the CC Skywave, the D-808 separates into two main circuit boards, connected together by a plug-in ribbon cable. One strange quirk is that the Si4735 DSP chip is located on the RF board (close to the center right edge). The Si4735 DSP chip is also used in the Eton Traveler III Ultralight radio, and although that model lacks the multiple DSP filter selections of the D-808, it has been the subject of highly successful 7.5" loopstick transplant modifications-- proving that such enhanced Medium Wave and Longwave loopsticks will perform very well in the new, Si4735 chip- powered D-808.

Disassembly of the D-808 model is fairly straightforward in comparison to the CC Skywave models, and the technician doesn't need to memorize a detailed reassembly protocol in order to perform a routine loopstick transplant operation. Neither C.Crane nor XHDATA are likely to show any sympathy to someone botching up an antenna transplant, so you need to be confident that that your skills are superior to those of the company technicians before taking the plunge. In the CC Skywave and CC Skywave SSB models various parts fit together like a puzzle, but the D-808 isn't like that. It should prove to be a fairly popular model for enhanced MW and LW loopsticks.

After receiving an inquiry from Mark Roberts concerning the new XHDATA D-808's FM-DX'ing sensitivity, I decided to run a detailed comparison with the Tecsun PL-380-- one of the Si4734



DSP chip models which gained top FM-DX'ing honors in the 2015 Ultralight Radio Shootout review. In my very mediocre Puyallup Valley location (surrounded by hills on 3 sides), I checked three FM fringe stations which have a reputation for being tough FM catches.

The new XHDATA is a very sensitive performer on the FM band. In direct comparison with the PL-380 it outperformed the Tecsun in the reception of the low-powered 95.3 KGY in Olympia, WA, 100.3 CKQQ in Langley, BC, and 106.5 KWPZ in Lynden, WA. The D-808 had 95.3 KGY at a weak level, while the PL-380 had nothing at all. On 100.3 the D-808 had CKQQ at a good level (plus an UnID Spanish station under it) while the PL-380 had only CKQQ at a fair level. On 106.5 the D-808 had KWPZ at a good level, while the Tecsun had it at a fair level. FM selectivity was identical in the two models. The D-808 benefits greatly from its 26" (66cm) whip antenna, compared to the PL-380's 21.75" (55cm) antenna. In addition the D-808's RDS capability really augments the model's FM-DX'ing sensitivity, adding an extra dimension to the entire experience. FM-DX'ers can order with confidence!

I've ordered (and received) two of the D-808 models from the following eBay listing <https://www.ebay.com/itm/XHDATA-D-808-Portable-Digital-Radio-FM-stereo-SW-MW-LW-SSB-RDS-Air-Band-LCD/263589135532?hash=item3d5f2304ac:g:gzgAAOSwCBFaxd8G> The delay time in receiving the model was about 4 weeks, so it isn't a quick process. Somehow the seller got away with shipping me two of the type 18650 3.7v Lithium-Ion batteries through the mail, although USPS regulations supposedly forbid this. Who am I to complain? The batteries can also be purchased via eBay, if he won't continue including them, and you can't find them locally.

The C.Crane Skywave SSB model is also a great performer for the size, although its relatively short loopstick (66mm vs. 96mm) causes it to fall short of the D-808 in AM sensitivity, as well as in FM sensitivity. At a \$169.99 list price (plus shipping), it also falls quite a bit short of the new D-808 in affordability. It performed very well in my recent DX'pedition to the Cook Islands, but almost any portable would probably perform like a champion in such an enhanced environment. In any case, I was curious how the CC Skywave SSB model and XHDATA D-808 would stack up against each other with exactly the same Medium Wave antenna-- a 7.5 inch transplanted loopstick (originally designed for the Tecsun PL-380 model).

After a new XHDATA D-808 model was "supercharged" with one of these high-performance loopsticks (a very easy process to perform, in comparison to the same, nerve-wracking operation on the ultra-compact Skywave), the two hot-rodded portables assembled for a high-noon Shootout in the reception of two ultra-weak daytime DX stations-- the SeaTac airport TIS on 530 kHz (15 watts at 17 miles) and the 1700-City of Auburn TIS (15 watts at 11 miles). Both models needed to absolutely max out their volume levels in order to receive these ultra-weak stations. The SeaTac Airport TIS was received by the 7.5" loopstick CC Skywave SSB model for the first 19 seconds in the following MP3, and the new 7.5" loopstick XHDATA D-808 model received the same very weak station for the next 30 seconds (recorded within a few seconds of each other)

<https://dreamcrafts.box.com/s/f3otu59k92e7rfletc093n9uehf0pawl> The next test was in the reception of the 1700-City of Auburn TIS station (another super-weak station). Once again, both models needed to absolutely max out their volume levels. The 7.5" loopstick CC Skywave SSB received the station for the first 22 seconds, while the 7.5" loopstick XHDATA D-808 received it for the next 32 seconds <https://dreamcrafts.box.com/s/mucugek9f4rqpn3us6nlpb6nbp5iqdc>

The overall judgment (in my opinion) was that although both models were fairly competitive in actual signal quality delivered, the CC Skywave definitely suffers because of its relatively wimpy audio amp in the 1700-Auburn competition. The D-808 seems to throw in some extra noise in the 530-SeaTac reception, although the signal quality didn't seem to be improved with the higher noise level. Someone could say that that the CC Skywave had superior reception of 530-SeaTac, simply because of the lower level of background noise. In any case, since the weak-signal reception capability of the two models seems to be roughly similar (except when the Skywave's wimpy audio amp throws in the towel), the overall verdict must be that the new D-808 is the value winner in the "supercharged" SSB travel DX'ing portable class. For the 1% of the MW-DX'ing community that still has the interest and capability to modify portables in this way, I would strongly suggest that you devote your resources to the new XHDATA D-808. Besides the much lower price, superior FM reception and powerful audio amp, it also provides decent Longwave performance (after you transplant the 7.5" MW loopstick into the model, that is). The next wacky operation scheduled here is a 7.5" Longwave loopstick transplant into the D-808-- which quite possibly could nail down a reputation as the best SSB-enhanced NDB-DX'ing travel portable on the planet.



From: Ira Elbert New III

Re: Sticky Radio

The outside of my Grundig G8 is sticky or perhaps tacky... I cannot seem to get rid of it and as a result, dust and whatnot stick to it constantly. Anyone else experience this? Any advice on cleaning? Thanks! Bert

From: Brett Saylor

Re: Sticky Radio

Bert, This issue has become widespread on radios of this vintage from Eton/Grundig, and has been discussed on various websites and message forums. Before you pick a method, do some research on the issue, like this thread: <https://swling.com/blog/tag/sticky-radios/> - some of the methods will remove the rubber coating down to the bare plastic, while others will just take off the stickiness. When I used alcohol and a cloth on my E1, for example, it removed the paint, while Greased Lightning Orange Power on my E10 and E100 was gentler and just removed the sticky coating. Veggie Wash actually made the stickiness worse for me. I suspect that specific radios may respond differently based on how the coating was originally applied. Also be careful when using liquids on the radio case - I had issues on my E100 where the cleaner seeped into the case and made the radio stop working until it dried out. Liquid can get in through speaker grill holes and openings around knobs and switches. I don't think having these solvents on the internal electronics is good for long-term reliability!

From: Ed Muro

Re: Sticky Radio

Certain plastics break down like that. It's unfortunate but I have seen that happen to steering wheels on cars.

From: Shawn Axelrod

Re: Sticky Radio

Not sure how this would work but I have used something called Goo Gone Original to remove sticky stuff on all sorts of things. It is not abrasive but try a bit first to see how it goes

73 for this time Shawn

Remember On A Clear Day You Can Hear Forever

International DX Digest

Bruce Conti, 46 Ridgfield Drive, Nashua NH 03062-1174, contiba@gmail.com

For loggings of outside the U.S. and Canada

All times are Universal Coordinated Time (UTC)

TRANS-ATLANTIC DX

855 **SPAIN** *RNE1* Murcia et al. JUN 9 0100 – Good; Andrea Motis Joan Chamorro cover of "My Favorite Things" up to hour marker and time checks into news, "Radio Nacional de España, servicios informativos," parallel 1107 kHz. [Conti-NH]

PAN-AMERICAN DX

530 **CUBA** *R.Enciclopedia*, La Habana-Villa María MAY 26 1245 – Excellent on the ICF-7600GR at A.L. Anderson Park, Tarpon Springs. [Krueger-FL]

1220 **CUBA** *R.Caribe*, La Fé JUN 5 1101 – Female "Radio Caribe... Isla de la Juventud, Cuba." Then into kiddie program with kids and children's music, co-channel WKTZ. So the replaced or fixed transmitter is still working. [Krueger-FL]



CONTRIBUTORS

Bruce Conti WPC1CAT, Nashua NH; WiNRADiO Excalibur, Intona USB 2.0 Hi-Speed Isolator, MWDX-5, variable termination Super/Ewe antennas 15 x 23-m at 60° northeast and 180° south.

Terry L. Krueger, Clearwater FL; IC-R75, NRD-535, longwires, active loop.

73 and Good DX!

TWR's Bonaire Facility Gets 440,000 Watt Makeover

James E. O'Neal, *Radio World*, May 14, 2018 (via Bill Hale)

<https://www.radioworld.com/news-and-business/twrs-bonaire-facility-gets-440000-watt-makeover>

In an era when most operators are reluctant to spend even very modest sums maintaining AM broadcast facilities, a southern Caribbean Island medium-wave broadcaster has “gone for the gold,” rebuilding its transmission facility and boosting power nearly five-fold from 100 kW to 440 kW.

The rebuild was more of a “second coming” for the 800 kHz facility, located in Bonaire, an island that is part of The Netherlands, situated about 100 miles off the Venezuelan coast. The station is owned and operated by Trans World Radio, one of the world’s largest evangelical media organizations.

According to Lauren Libby, TWR’s president and CEO, the station went on the air in 1963 at the 500,000-Watt level, but costs associated with operating and maintaining a high-power tube-type rig eventually forced a cutback to 100 kW in 1998.

He explained that the decision to boost the station’s power to near its original level was made a few years ago when the need was recognized for a large regional station in Latin America to supplement the small FM operations on the air in that region.

“We also had a lot of people in Cuba asking us if we could increase the power to cover the island with Christian programming,” said Libby. “One of the primary motivations was to bring hope and encouragement to Cuba, Venezuela [and] to the whole Latin American region — even down into Brazil — to provide quality Christian programming. Its purpose is basically to encourage people, and to give hope in a world where hope is a pretty precious commodity. That’s why we increased the power.”

The superpower move didn’t happen overnight, though.

“This was almost a \$4 million project and it began about four years ago,” said Libby. “We had supporters from the U.S., Europe and Latin America. Actually, about 10 percent of the donations came from Latin America, which is remarkable when you look at the economy in many of these countries.

“I had people tell me that we would never accomplish it; it will never happen. But it did happen. It’s an amazing story — literally almost one miracle right after another.”

Libby noted that the power boost would not likely have been possible without the advances that have been made in broadcast technology, though, citing the greater than 90 percent efficiency of the Nautel solid-state transmitter selected for the project, and also the ability to operate with a much smaller staff.

“With the efficiencies now, you’re able to do it at a cost that is doable at that kind of power level,” he said. “Technology has moved forward. Back in the day TWR had close to 100 people doing live radio out of Bonaire. With today’s technology you’re able to do it in a more cost-effective and labor-effective environment.”

In addition to Nautel, Libby lauded the efforts of Tom King and Kintronic Labs in achieving the upgrade. “Kintronics did a superb job of creating the antenna solution,” he said.

King said the project was done in phases as funding became available.

“It started with the construction of new tuning houses at the tower bases, and they also had to prepare a room in the transmitter building where the old transmitter had been,” he said. “We started work on the RF system in early 2017, and this was shipped and installed and they went on the air with it in July, using their existing 100 kW transmitter.”

The next step was the ordering of the Nautel transmitter, which occurred in spring of 2017. Delivery took place in December, with installation following in the transmitter building space vacated by the removal of the tube-type big rig.

“I went down to the island with my youngest son in January to do final pattern adjustments,” said King. “They went to full-power operations and had a dedication ceremony on the 30th of January.”

The new transmitter feeds a previously-installed multi-pattern directional antenna system, allowing the station to target specific audiences during different times of day.

“In 1999, we implemented a totally new antenna array for them,” King said. “It consisted of four 450-foot towers in a ‘box’ configuration, with the long side of the array going east-west to produce a broadside pattern going north and south. They also have a separate ‘Caribbean’ pattern with one tower driven and the others acting as parasitic elements.”

Hands-down, at its current power level approaching half a million Watts the facility is now the most powerful medium-wave outlet in the Western Hemisphere.

Asked why the originally licensed 500,000 Watt operating power wasn’t replicated, Wendell Lonergan, head of broadcast sales at Nautel, said that with off-the-shelf hardware, the medium-wave transmitter coming closest to delivering the original 500 kW wallop is the NX400 model.

“The NX400 is rated at 400 kW,” said Lonergan. “However, all of our transmitters have a 10 percent overhead, and TWR decided to go with this model. Otherwise, they would have had to purchase two units and combine them, which would be considerably more expensive. This is a group that runs on donations and they have to have a critical eye as to operating costs. With a transmitter that’s more than 90 percent efficient and running MDCL (modulation-dependent carrier level), this filled the bill and they’re very happy with it.”

Even so, the TWR Bonaire station is the island electric utility’s single biggest customer.

“We used to have our own diesel generators when we were running both the 500,000 Watt medium-wave transmitter, as well as operating shortwave transmitters,” said Libby, explaining that the station’s power plant had been taken out of service several years ago after the tube-type rig was retired and shortwave broadcasting from the island ceased.

“We are now looking at putting in a standby generator,” he remarked.

One of the more unusual aspects of the transmitter installation is that the station’s operators, assisted by volunteers, did the work themselves.

“This is a bit unusual for a transmitter of this size,” said Nautel’s Lonergan. “However, they had witnessed the NX100 100 kW transmitter installation and had come [to Nautel’s facility] for training on the NX400. I was at the site later and it was a ‘world class’ installation.”

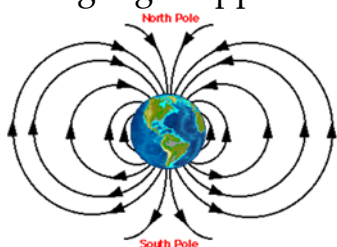
Lonergan said the only real glitch encountered in the project was in getting the transmitter to the site in time for the planned dedication. “Bonaire is not exactly the shipping center of the universe. We had to put our logistics people into overdrive to make the promised delivery date on time, but they did it.”

The NX400 transmitter comprises a power supply cabinet weighing upwards of 5,000 pounds, along with four other units with combined weights of 5,200 pounds. The transmitter was shipped in eight crates from Nautel’s Nova Scotia, Canada facility to Bonaire in a single freight container.

TWR’s Libby said enhanced power and coverage not only help spread Christian programming to a wide area but are useful in other ways.

“When you get into an emergency situation, there’s nothing that beats medium-wave,” he said. “For instance, when the hurricanes came across the Upper Antilles we were on the air every night with weather, encouraging [those affected] and talking to people throughout the region live on the air. The Netherland Antilles government says whenever there’s a disaster, just tune to 800 AM because that’s where you can get information. That was one of the reasons that we did what we did [with respect to the power increase] – to allow the Dutch government to be able to talk to the Caribbean all the way from Saba to Aruba. You need this kind of power in the daytime if you’re going to do that.”

Trans World Radio is one of the largest media organizations in the world, based on the number of countries its signals reach and the number of languages broadcast on a daily basis. Libby noted that they broadcast to 190 countries in more than 230 languages every day, and overall coverage and language support exceed that of the BBC World Service and the Voice of America.



Geomagnetic Indices

Geomagnetic Summary May 2018

Via Phil Bytheway – Tabulated from email status daily (K = 0000 UTC).

Date	Flux	A	K	Space Weather	16	70	4	2	no storms
5/ 1	68	3	1	no storms	17	69	10	2	no storms
2	67	4	0	no storms	18	69	4	1	no storms
3	67	4	2	no storms	19	70	3	1	no storms
4	68	4	1	no storms	20	69	3	0	no storms
5	68	20	5	minor, G1	21	70	3	1	no storms
6	67	31	5	moderate, G2	22	71	6	2	no storms
7	70	17	3	no storms	23	73	9	2	no storms
8	70	14	2	no storms	24	74	4	1	no storms
9	70	16	4	no storms	25	76	3	0	no storms
10	70	12	2	no storms	26	73	4	2	no storms
11	70	16	4	no storms	27	75	4	1	no storms
12	70	10	2	no storms	28	77	4	1	no storms
13	71	8	2	no storms	29	75	4	1	no storms
14	70	5	2	no storms	30	75	4	2	no storms
15	70	4	2	no storms	5/31	77	12	3	no storms

Sx – Solar Radiation Storm Level / Gx – Geomagnetic Storm Level / Rx – Radio Blackouts Level.

From the *DX News* archives

(Usually) compiled by Ron Schiller.

Ron's feeling under the weather this week, but here are a few highlights from the *DX News* archives on e-DXN.com:

75 Years Ago – From the June 19, 1943 issue of *DX News*: Bill Gabriel, Jr. reported that WJSV Washington, D.C. changed calls to WTOP. Jim Wedewer's shortwave column noted that the BBC had opened a new frequency, 15070 k/cs, for morning overseas broadcasts. Ray Edge in Buffalo noted that the Buffalo Police Department had set up a new FM transmitter on 37500 k/cs, working in conjunction with their AM transmitter on 2422 k/cs. The NRC was not planning on a convention due to wartime issues, but Ray offered to host members at his home in Buffalo over Labor Day weekend if there was any interest.

50 Years Ago – From the July 6, 1968 issue of *DX News*: IDXD editor Gordon Nelson reported that DX conditions were poor in the U.S. Northeast for all but Caribbean and Central American paths, with no trace of the East and South African stations reported in prior years, due to higher absorption levels. However, Mike Silvera in Jamaica reported deep South American reception in June, and Mike Bugaj reported from Iceland that Brazilians had been popping up steadily since the beginning of June after a horrible May.

25 Years Ago – From the June 28, 1993 issue of *DX News*: IDXD editor Jim Renfrew thanked contributors such as Mark Connelly who mailed their loggings on a 5.25-inch floppy disk. The Voice of America was testing its new transmitter in São Tomé e Príncipe on 1530 kHz. Morris Sorensen reported hearing CFTR-680 Toronto's new all-news format. Todd Roberts in South Carolina reported "KDAB" testing from Las Vegas, NV on 1660 kHz.

10 Years Ago – From the July 21, 2008 issue of *DX News*: The printing of *DX News* was moved from Topeka to Watertown, NY, and Wayne Heinen took over membership and correspondence duties, as Paul Swearingen looked to retire as publisher. John Malicky was preparing to host the NRC's 75th Anniversary convention in Pittsburgh August 29-31. CKPT-1420 Peterborough ON went silent after moving to 99.7 MHz FM.

Ron Schiller, St. George UT – NRC Member since 1952 (off and on). Send any comments, criticisms, or suggestions to me at rschiller28@gmail.com.

Some more odds and ends that didn't fit on page 1:

The NRC's New Internet Home: Don't forget the new NRC internet address has been updated to www.nationalradioclub.org. Lots of content here, and you can join or renew your membership, order publications online, and check out all the other features of the site. This doesn't replace www.e-dxn.com, which is still your source for the electronic version of *DX News* and other members-only content.

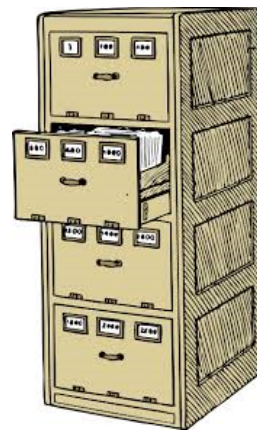
Help Wanted: Still looking for a DDXD-West editor, and a College Sports Networks editor. Contact David Yocis, NRCDXNews@gmail.com for info about either position.

NRC-AM Listserve: To be added to the [NRC-AM] Google Group listserv, moderated by Russ Edmunds, just e-mail Wayne Heinen at his new address amlog@nationalradioclub.org from the email that you wish to subscribe to the list with, and he'll get you added.

NRC Reprints and Books

We have many reprints available of articles from past issues of *DX News*. There is a full list of articles available and prices at <http://nationalradioclub.org/catalog/reprints/reprints.html>

And there are plenty of antenna and receiver books available as well, that collect some of our most important and useful past articles on these topics. Come check out what's available. For books, check out <http://nationalradioclub.org/catalog/books/books.html>.



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To read tips: go to www.twitter.com and search for #mwdx

To send tips, write a tweet (140 characters max) and include the tag #mwdx

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