News

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From the Publisher: A full issue this month, the summer DX doldrums notwithstanding, thanks to Bruce Conti's article on USB isolators something worth

Please don't forget to check the deadlines for our summer issues. There can be good summer DX, especially on the less crowded GY channels and those relatively close-by but unheard domestic stations. Don't forget to let us all know what you're hearing!

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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.

DXChange: Free for the asking: NRC AM Radio Log editions 30, 32, 34, and 36. Contact John Wilkins at peakbagger3@juno.com.

NRC AM Log 38th Edition Sold Out: And now Wayne's energies turn to preparing the 39th edition, coming soon. As you can see from this issue's AM Switch, there are a lot of changes going on, so you can keep your 38th Edition up to date here. Check out Interim AM Switch on e-DXN.com weekly when DX News does not publish.

IRCA Convention: The 2018 IRCA convention will be held at the Best Western Plus Charles Inn in St. Charles, MO on September 7 & 8. 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 fee is only \$25 per person with and Gary Wilt. 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 radio tower visit. Banquet is out of pocket and the place will be announced at a later date, possibly soon. 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. Bueneman will also be assisting with tours. Please make your plans and reservations now for the 2018 IRCA convention as this will probably be one of the best!

Here's the annual *call to action* for those who wish to present a talk or paper during the convention. It can be as formal or informal as you like, and we can provide audio-visual including slide presentation support, display, to make it easier. If you're interested in sharing your experiences, of if you want to present questions for discussion that might lead to a better understanding of your own DXing, contact Mark Durenberger please Mark4@durenberger.com.

NRC-AM Listserve: To be added to the [NRC-AM] Google Group listserve, 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.

Volume 85 DX News Schedule

<u>No</u>	D'dline	<u>Print</u>	<u>No</u>	D'dline	<u>Print</u>
17	June 22	July 2	19	Aug. 17	Aug. 27
18	July 20	July 30	20	Sept. 7	Sept. 17

Membership Report

Rejoining Member: Welcome back to Larry Fussell, Brewton, AL.

Renewing Members: Thanks for the ongoing support of Steve Chappell; John Connor; Lee Freshwater; Robert Galerstein; Ronald Goldie; Timothy R. Hall; Thomas Holmes; Kraig Krist; Richard L. Lucas; Kenneth Lyon; Ronald J. Musco; John Rieger; Tom Walsh; Jon Weinbrum;

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

1000 WKDE VA Altavista – Call change to WGVY (May 14).

1350 KUBE CA San Bernardino – Call change to KPWK (May 11).

1430 WXAM KY Buffalo – Call change to WLCB (May 21; had these calls from 1974-1987)

1550 KZDG CA San Francisco – Call change to KGMZ (May 1).

NEW STATION WATCH

740 App WA Redmond – Application for new station, U4 10000/10000, dismissed.

780 CP UT Draper – **CP** for U4 1000/250 is scheduled to expire on June 9.

1580 KWLO UT Springville – CP for new station, U1 1000/380, is on the air; station is diplexed with KOVO-960 at 40-12-22/111-40-11.

STATIONS GOING DARK (OR NOT)

610 CKYL AB Peace River – Silent and deleted; has moved to FM.

680 WA2XPA PR Arecibo – Station deleted; the FCC concluded in November 2016 that AM "boosters," originally authorized as experimental technology, are no longer experimental and therefore must be licensed after competitive application for a new AM station. This licensee recently dropped its appeal of the decision.

1540 WYCL OH Niles – Cancelled license reinstated; this station and WHTX-1570 were to be sold in 2012, but the sale fell through in 2013 and litigation ensued. In a settlement, the buyer was to get the licenses, but the FCC never approved the transfer because of the seller's unpaid fees. In February 2018, the seller surrendered the licenses rather than pay the outstanding fees, but the buyer successfully persuaded the FCC to reinstate them.

1570 WHTX OH Warren – Cancelled license reinstated; see WYCL-1540 above.

CONSTRUCTION PERMITS (CPS) FOR EXISTING STATIONS

CP fully licensed and on the air:

590 WARM PA Scranton – CP for U4 1800/430, adjusted coordinates 41-28-39/75-52-33, is on the air

630 WMAL DC Washington – CP for U4 10000/2700, new site 39-08-02/77-18-14, is on the air.

680 WAPA PR San Juan – CP for U1 10000/9500, adjusted coordinates 18-24-16/65-56-52, is on the air.

1010 KIND KS Independence – CP for new site 37-15-42/95-45-59 is on the air.

1270 KTFI ID Twin Falls – CP for U1 5000/860, new site 42-32-36/114-28-14, is on the air.

1290 KDMS AR El Dorado – CP for U1 500/120, new site 33-14-14/92-39-54, is on the air.

1360 WQVN FL North Miami – CP for U1 9300/400, new site 25-50-22/80-11-23, is on the air.

1450 WTRO TN Dyersburg – CP for U1 700/700, new site 36-04-06/89-19-58, is on the air.

CPs built and awaiting final licensing:

940 WGFP MA Webster – Applies for license to cover CP for new antenna, same site.

1150 KEIB CA Los Angeles – Applies for license to cover CP to adjust night pattern.

1190 WCRW VA Leesburg – Granted program test authority for CP with U4 50000/1200.

1260 WMDG GA East Point – Applies for license to cover CP for U1 5100/52, <u>ex-1270 kHz</u>, ex-Cartersville GA, new site 33-41-47/84-28-29.

1660 KWOD KS Kansas City – Applies for license to cover CP for new site 39-04-19/94-40-58.

CPs granted:

810 WACC FL Hialeah – CP granted for U4 4100/1000.

930 WMGR GA Bainbridge – CP granted for D1 5000.

1080 KCNM MP Saipan – CP granted for U1 500/500.



- **1110 WOMN LA Franklinton** CP granted for D4 50000 (ch 14000) <u>on 1100 kHz</u>, new site 30-32-37/90-00-14, replaces prior expired CP.
- **1360** WGBN PA McKeesport CP granted for U2 1000/1000, moving all to current night site.
- **1400 WWTM AL** Decatur –CP granted for D1 270 on 1390 kHz, CoL to Mooresville AL, new site at 34-40-20/86-48-22.
- **1480** WSAR MA Fall River CP granted for U4 25000/5000, replaces expired CP.
- **1580 KCHA IA Charles City** CP granted for U1 490/10, correct coordinates to 43-03-11/92-40-13.
- **1660 WGIT PR Canovanas** CP granted for new site 18-24-17/65-56-48.

Amendments to pending applications filed:

- **1470** WTTR MD Westminster Has application for U1 523/535; amends to U1 300/35.
- **1480 KPHX AZ Phoenix** Has application for U1 640/25 at a new site (33-23-21/111-59-53); last issue we reported amendment to U5 950/320 at the same new site; now corrected to U4.

Applications for CPs filed:

- **940 KWBY OR Woodburn** Applies for CP with U1 10000/200, adjust coordinates to 45-10-34/122-50-57.
- **1040 KLHT HI Honolulu** Applies for CP to build new tower 600 feet to the southwest at 21-20-06/157-53-37, remains U1 10000/10000.
- 1150 KEIB CA Los Angeles Applies for CP to adjust night pattern.
- **1250 WGAM NH Manchester** Applies for CP with U1 670/100, adjust coordinates to 43-00-38/71-30-15.
- **1320 WDDV FL Venice** Applies for CP to adjust night pattern.
- **1460 WPON MI Walled Lake** Applies for CP with U4 670/175, to replace old CP that expired.
- **1500 WAKE IN Valparaiso** Applies for CP with U4 250/8 (ch 190), CoL to Hobart IN, new site 41-32-20/87-17-59.
- **1550 CBSI-8 QC La Romaine** LPRT applies to move to 99.9 MHz FM.

SPECIAL TEMPORARY AUTHORITY (STA)

STAs granted:

- **710 KEEL LA Shreveport** Granted STA, reduced power (using U4 1000/1000), transmitter problems.
- **730 WUMP AL Madison** Granted STA, U1 50/50, auxiliary transmitter being used.
 - **KDAZ NM Albuquerque** Granted STA, D1 250, vandalism at the north tower.
- **920 WNJE NJ Trenton** Granted STA, U1 250/250, problem with antenna tuner.
- 970 WNNR FL Jacksonville Granted STA, U1 250/41, lost tower in Hurricane Irma.
- **1160 WBQN PR Barceloneta-Manati** Granted STA, U1 1250/1250, lost tower in Hurricane Maria.
- **1240 KRAL WY Rawlins** Granted STA, U1 50/50 from temporary slant wire at 41-47-04/107-15-47; has lost licensed site and needs to broadcast to maintain license.
- **1440 KUPR TX Amarillo** Granted STA, U2 1000/1000, failure of the 5 kW transmitter.
- **1450** KHIT NV Reno Granted STA, reduced power (using U1 400-500), causing QRM to diplexed stations at full power.

Applications for STA filed:

- **590 KUGN OR Eugene** Applies for STA, U4 1400/5000, night pattern in the day.
- **880 WAMI AL Opp** Applies for STA, D1 50, CP (to Maplesville AL) will not be ready before silent station needs to broadcast in June.
- **910 KKBE NM Roswell** Applies for STA, night parameters at variance, copper thieves.
- **1260 WMDG GA East Point** Applies for STA, to operate here as per CP but with lower power (ex-1270 kHz Cartersville GA) until local zoning issues are resolved.
- **1370** WCOA FL Pensacola Applies for STA, U3 2000/2000, antenna switching problems.
- **1480 WVOI FL Marco Island** Applies for STA, U1 250/250, lost tower in Hurricane Irma.
- **1510 WMEX MA Boston** Applies for STA, D1 1000 from WBIX-1060 tower at 42-16-25/71-02-30; has lost licensed site and needs to broadcast to maintain license.

Extensions to previous STAs granted:

- **540 WETC NC Wendell-Zebulon** Granted STA extension, parameters at variance.
- **567 KGUM GU Agaña** Granted STA extension, parameters at variance.
- **590 WJMS MI Ironwood** Granted STA extension, U1 5000/250.

- 610 WIOD FL Miami Granted STA extension, U4 10000/10000, Cuban QRM.
- 710 KXMR ND Bismarck Granted STA extension, U4 4000/4000 as in CP.
- **810** WRSO FL Orlovista Granted STA extension, U1 5000/100.
- 930 KLUP TX Terrell Hills Granted STA extension, parameters at variance.
- 970 KUFO OR Portland Granted STA extension, parameters at variance.
- 1030 WDRU NC Creedmoor Granted STA extension, D3 35000.
- 1080 WUFO NY Amherst Granted STA extension, D1 1000 from WECK-1230 tower.
- **1160 WVNJ NJ Oakland** Granted STA extension, parameters at variance.
- **1220** WSRQ FL Sarasota Granted STA extension, D1 150, vertical wire at 27-19-19/82-24-27.
- **1230** KTRF MN Thief River Falls Granted STA extension, parameters at variance.
- 1240 WALO PR Humacao Granted STA extension, U1 1000/5000, Dom. Rep. QRM.
- **1260** WCHV VA Charlottesville Granted STA extension, U1 1250/625.
- 1320 WDDV FL Venice Granted STA extension, U4 5000/250, day pattern at night.
- 1370 WWCB PA Corry Granted STA extension, U1 1000/125.
- **1430** WTMN FL Gainesville Granted STA extension, reduced day power (unspecified).
- 1440 KEYS TX Corpus Christi Granted STA extension, U1 1000/69 as in CP.
- **1450** WLAY AL Muscle Shoals Granted STA extension, U1 60/60, LW at 34-44-13/87-42-15.
- **1470** WTZE VA Tazewell Granted STA extension, reduced power (unspecified).
- **1550 WRHC FL Coral Gables** Granted STA extension, U1 1800/125 from CP cite (Doral FL).
 - **WSRY MD Elkton** Granted STA extension, parameters at variance.
 - **KRZD MO Springfield** Granted STA extension, U1 10/10, 130' LW at 37-09-06/93-17-49.
- 1590 WVNA AL Tuscumbia Granted STA extension, D1 2000, FM tower at 34-40-27/87-42-48.

Applications to extend previous STAs dismissed:

- 990 KZZB TX Beaumont Dismissed STA extension, station is silent.
- **1010 KIND KS Independence** Dismissed STA extension, CP is on the air (as above).

Applications to extend previous STAs filed:

- **560** WNSR TN Brentwood Applies to extend STA, U1 1125/75 from licensed night site.
- 710 WAQI FL Miami Applies to extend STA, U4 30000/10000 from WQBA-1140 site.
- **780 KNOM AK Nome** Applies to extend STA, reduced power (unspecified).
- **790 WAXY FL South Miami** Applies to extend STA, U4 25000/25000, Cuban QRM.
- 820 WWLZ NY Horseheads Applies to extend STA, U1 4100/250.
- 870 WQBS PR San Juan Applies to extend STA, U1 1250/1250.
- 900 WNMB SC North Myrtle Beach Applies to extend STA, D1 50, 200' longwire antenna.
- **910 WRKL NY New City** Applies to extend STA, U1 250/200.
- 950 KFSA AR Fort Smith Applies to extend STA, U3 500/500, night pattern 24 hours.
- **1080** WHOO FL Kissimmee Applies to extend STA, U1 1500/11 from WAMT-1190 tower.
- **1150 KKNW WA Seattle** Applies to extend STA, parameters at variance.
- **1260** WRIE PA Erie Applies to extend STA, U4 5000/1250, day pattern 24 hours.
- **1280 KFRN CA Long Beach** Applies to extend STA, reduced power.
- **1340 WROD FL Daytona Beach** Applies to extend STA, U1 250/250, tower 29-09-16/81-01-20.
- **1370** WLTH IN Gary Applies to extend STA, U1 1000/125.
- **1410 WHAG MD Halfway** Applies to extend STA, parameters at variance.
- **1420** KRIZ WA Renton Applies to extend STA, U1 250/125 from KYIZ-1620 tower.
- **1430** WLTG FL Panama City Applies to extend STA, U5 5000/1000.
- **1460 WKHZ MD Easton** Applies to extend STA, day parameters at variance.

SILENT STATIONS

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

- 1160 WBQN PR Barceloneta-Manati Silent Sept. 20 (2017), back on the air with STA Apr. 18.
- 1170 WCXN NC Claremont Silent Aug. 24 (2017), back on the air Apr. 20.
- 1340 KOLE TX Port Arthur Silent Aug. 28 (2017), back on the air Apr. 27.
- **1410 KQV PA Pittsburgh** Silent Dec. 31 (2017), back on the air May 12.
- 1480 WDXW AL Bridgeport Silent (as WVOV) May 1 (2017), back on the air Apr. 19.
- **1490 WSTP NC Salisbury** Silent Oct. 1 (2017), back on the air May 1.
- **1560 KKAA SD Aberdeen** Silent Oct. 31 (2017), back on the air Feb. 15.

Stations informing the FCC that they are silent:

- **690 KRGS CO Rifle** Silent May 5, transmitter failure.
- **880 KLRG AR Sheridan** Silent Apr. 5, transmitter failure.
- 900 WABY NY Watervliet Silent May 14, financial problems.



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- 1090 KVOP TX Plainview Silent Apr. 25, transmitter being replaced.
- 1160 WAIX NY Mechanicville Silent May 14, financial problems.
- **1240 WPTR NY Schenectady** Silent May 14, financial problems.
- 1300 WFFG FL Marathon Silent May 8, landlord dispute, has lost access to transmitter site.
- **1350** KCOX TX Jasper Silent Feb. 15, lack of staffing.
- **1360 WHCG GA Metter** Silent Mar. 22, transmitter circuit board damaged in teardown of old transmitter building.
- **1500 WAKE IN Valparaiso** Silent Apr. 10; has lost licensed transmitter site.
- **1560 WWYC OH Toledo** Silent Apr. 16, transmitter problems.
- 1570 WIGO GA Morrow Silent Apr. 26, tower collapsed.
- **1580 WDAB SC Travelers Rest** Added to silent list May 16, no details available.
- 1690 WMLB GA Avondale Estates Silent May 14, looking for buyer.

COORDINATE CORRECTION

- **1170 WFDL WI Waupun** Applies for CP to correct coordinates to 43-38-34/88-43-25.
- **1340** KACH ID Preston Applies for CP to correct coordinates to 42-07-28/111-50-45.

NRC AM Log updates

- **560 WGAN ME Portland** Slogan to "News Radio," adds // W288CU-105.5; delete Grp= Newsradio WGAN.
 - WFRB MD Frostburg Adds // W294CF-106.7. (FCC)
- **580** KTMT OR Ashland Slogan to "The Game," networks to CS/Jr.
- **590 WWLX TN Lawrenceburg** Slogan & Group to Grp= The Superstation (ex-Grp= Power 97.5 WLX).
- **620 WDNC NC Durham** Slogan to "The Ticket," networks to CS/PRN/Jr; delete Grp= 620 The Buzz.
- 630 WAIZ NC Hickory Slogan to "Oldies 105.9 FM." (BH) (Corrects last issues typo)
- 630 WJAW WV Saint Marys Adds // W225CW-92.9 (ex-// WJAW-FM-100.9). (FCC)
- **640 WMFN IL Peotone** Format to SS (ex-NONE).
- **750 KXTG OR Portland** Slogan & Group to Grp=102.9 & 750 the Game.
- 810 WYZI GA Royston Adds // W262DB-100.3. (FCC)
 - **WYRE MD Annapolis** Delete Grp= KHZ Radio.
- **860** KNUJ MN New Ulm Adds // K247CU-97.3. (FCC)
- 900 WNMB SC North Myrtle Beach Slogan to "95.5 The Drive."WATK WI Antigo Delete slogan.
- 910 KURY OR Brookings Adds // K287CF-105.3 (ex-// K281CM-104.1). (FCC)
- **WAVL** PA Apollo Format to TLK/SPTwknd (ex-TLK/SPT); networks to SRN/WW1/Ing/WW1/CMP/WW1/FSR/C2C
- **920 WHJJ RI Providence** Adds // W284BA-104.7. (BC)
- **940 KIXZ TX Amarillo** Networks to USA/Tx/SRN/P/WW1.
- 970 WAMD MD Aberdeen Delete Grp= KHZ Radio.
 - WYSE NC Canton Slogan & Group to Grp=Wise Sports (ex-Grp= WISE 1310 & 970).
 - WATH OH Athens Format to CLR (ex-CLR:TLK); networks to C/Oh/WW1
 - KTTO WA Spokane Adds // K291CO-106.1. (FCC)
- **990** WLDX AL Fayette Adds // W246DJ-97.1. (FCC)
- 1080 KFXX OR Portland Delete // KZGD-1390.
- **1090 WBAF GA Barnesville** Slogan to "Dixie 104.9," adds // W285FK-104.9.
- **1110** WTIS FL Tampa Format to SS:Tropical (ex-OLD). (TK)
 - WSLV TN Ardmore Adds // W286DF-105.1. (FCC)
- **1130 WBBR NY New York** Networks to BNN/Ns. (SK)
- **1150 KNMM NM Albuquerque** Format to TBA (ex-SPT); adds // K271CP-102.1, delete networks. (FCC)
- **1170** KLOK CA San Jose Slogan to "Radio Zindagi."
- 1220 WAYE AL Birmingham Slogan & Group to Grp=98.3 La Jefa.
- **1230** KWG CA Stockton Slogan to "Relevant Radio."
 - WECK NY Cheektowaga Slogan & Group to Grp=Buffalo's Very Own. (FCC)
 - WBBZ OK Ponca City Slogan to "Hometown Radio." (GH)
- **1240 WATN NY Watertown** Networks to C/P/SRN/WW1/RER.
- **WJNC** NC Jacksonville Format to NWS/TLK (ex-NWS/TLK/SPT); slogan to "The Talk Station-It's Smart Radio"; networks to Fox/JBo/Ru/P/CMP/C2C.

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WBEJ TN Elizabethton – Adds // W300CC-107.9. (FCC)
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WDNE WV Elkins – Adds // W260DG-99.9. (FCC)

1250 WKBL TN Covington – Format to GOS (ex-OLD); delete slogan and networks.

1270 WILE OH Cambridge – Format to C&W (ex-SPT); slogan to "Nash ICON 1270 & 107.9," networks to WW1.

1290 WPCF FL Panama City Beach – Slogan to "93.1 Play FM."

WNIL MI Niles – Slogan to "The Voice."

1300 WRDZ IL La Grange – Slogan & Group to Grp=Polskie Radio.

1310 KMKY CA Oakland – Slogan to "Radio Mirchi."

WISE NC Asheville – Slogan & Group to Grp=Wise Sports (ex-Grp= WISE 1310 & 970).

WSLW WV White Sulphur Springs – Slogan to "NewsTalk 97.3."

1320 KOFA AZ Yuma – Slogan to "KAWC."

KSCR OR Eugene – Slogan to "Willamette Valley's Hits."

1340 KYNS CA San Luis Obispo – Slogan & Group to Grp=Alt 93.7.

WDSR FL Lake City – Format to TLK (ex-C&W); slogan to "The Talker," delete // W238BW-95.5.

KQDE MT Evergreen – Format to AC (ex-Hip Hop); slogan to "Magic 97.9."

WMBO NY Auburn – Networks to WW1. (SK)

KUOW WA Tumwater – Slogan & Group to Grp=News & Information Station (ex-Grp= 94.9 FM Seattle News & Information).

KSGT WY Jackson – Slogan & Group to Grp=KJAX Country 93.5 (ex-Grp= Newstalk 590 AM & 92.1 FM).

1360 WHBG VA Harrisonburg – Adds // W295CP-106.9; delete // W267BA-101.3.

1370 KIOL KS Iola – Adds // K257GM-99.3. (FCC)

WGHN MI Grand Haven – Format to OLD (ex-SPT); slogan to "Oldies 94.9," nets to WW1.

WKMC PA Roaring Spring – Networks to WW1 (SK); adds // W241CQ-96.1. (FCC)

WDXE TN Lawrenceburg – Slogan to "The Legend," adds // W290DL-95.3.

KJCE TX Rollingwood – Slogan to "Talk 1370." (GH)

1380 WKJG IN Fort Wayne – Adds // W265CY-100.9; delete Grp= 106.7 The Fan.

KCNW KS Fairway – Adds // K241CU-96.1. (FCC)

1390 WFBL NY Syracuse – Networks to WW1. (SK)

1400 WVAE ME Biddeford – Format to AC/EZL (ex-NWS/TLK); slogan & Group to Grp=The Bay (ex-Grp= Newsradio WGAN), delete networks.

WWGE PA Loretto – Format to NOS (ex-AC).

WATW WI Ashland – Networks to SRN/TRN/WW1/Ru/P/C2C.

1430 WLCB KY Buffalo – Format to C&W (ex-SPT); slogan to "Abe 93.7," adds // W229DB-93.7; delete networks.

1450 WLAY AL Muscle Shoals – Format to C&W (ex-VAR); slogan to "Shoals Country."

WWXL KY Manchester – Format to CLR (ex-SPT); slogan to "Classic Hits," drop nets.

WWHK SC Myrtle Beach – Format C&W (ex-SPT); slogan "Classic Country Hank 105.5."

1460 WKHZ MD Easton – Format to SS (ex-CLR); delete Grp= KHZ Radio.

KDMA MN Montevideo – Adds // KDMA-FM-93.9.

1470 WXAG GA Athens – Slogan to "The Mood, The Light." (PS)

WGNR IN Anderson – Format to REL (ex-SS:REL); adds // WGNR-FM-97.9; delete slogan. (PS)

1480 WDXW AL Bridgeport – Format to CCR (was Silent) (ex-SPT); drops nets.

WFLN FL Arcadia – Adds // W283DB-104.5. (FCC)

WKGC FL **Southport** – Format to VAR (ex-SS/JAZZ).

WUKB KY Neon – Slogan & Group to Grp=Sunshine Radio.

WSAR MA Fall River – Slogan to "NewsTalk1480." (SK)

WIOS MI Tawas City-East Tawas – Adds // W295CU-106.9. (FCC)

1490 KDRS AR Paragould – Slogan to "iRock 103.7."

WBAE ME Portland – Format to AC/EZL (ex-TLK); slogan & Group to Grp=The Bay, drop networks.

KDRO MO Sedalia – Adds // K267CO-101.3. (FCC)

WDUR NC Durham – Format to ETH (ex-UC); slogan to "Jazbaa FM."

KTSN TX Austin – Slogan & Group to Grp=Sun Radio 103.1.

WXTG VA Hampton – Slogan to "101.9 Hampton-Newport News Radio," adds // W270DA-101.9, delete // WXTG-FM-102.1.

WIKE VT Newport – Format to CLR (ex-C&W); slogan to "The Notch."

1500 WQCR AL Alabaster – Slogan & Group to Grp= 98.3 La Jefa.

WAYS GA Macon – Slogan to "The Fan."

1530 WVBF MA Middleborough Center – Format to TLK (ex-TLK/Reading Service).

1550 KXEX CA Fresno – Format to SS:MEX (ex-SS:REL); slogan to "Juan 1550," drop nets.

KGMZ CA San Francisco – Format to SPT (ex-ETH/Indian); slogan to "95.7 The Game," adds // KGMZ-FM-95.7.

WNZF FL Bunnell – Slogan & Group to Grp=Newsradio 1550 AM and 106.3 FM.

WCLY NC Raleigh – Format to AOR (ex-SPT); slogan to "That Station," drops nets.

WZUM PA Braddock – Slogan to "Pittsburgh's Jazz Channel."

WHIT WI Madison – Slogan to "Hank AM 1550 and 97.7 FM."

1570 WUBG MA Methuen – Slogan to "Big 105.3, the Bay State's biggest hits." (BC)

1580 WLIJ TN Shelbyville – Format to C&W/CLR (ex-C&W); slogan to "Today's Country & Yesterday's Rock."

1590 WAIK IL Galesburg – Format to OLD (ex-NWS/TLK/SPT/NOS); networks to A/Bf/Agt, slogan to "Oldies 1590." (PS)

WGGO NY Salamanca – Format to CLR (ex-TLK); slogan & Group to Grp= 98 Rocks (ex-Grp= The Answer), delete networks.

New Groups

Grp= 98 Rocks – WQRS-98.3, WGGO-1590, W294AW-100.5

Grp= 98.3 La Jefa – WAYE-1220, WQCR-1500, W252BE-98.3

Grp= 102.9 & 750 the Game – KXTG-750, K275CH-102.9, K221BI-92.1

Grp= Alt 93.7 – KYNS-1340, K229AK-93.7, K265FI-100.9

Grp= Buffalo's Very Own – WECK-1230, W263DC-100.5, W275BB-102.9

Grp= KJAX Country 93.5 – KJAX-93.5, KSGT-1340, K242BU-96.3

Grp= Newsradio 1550 AM and 106.3 FM – WNZF-1550, W292DE-106.3, W235CW-94.9

Grp= Sun Radio 103.1 – KTSN-1490, K276EL-103.1, K241DA-96.1

Grp= Sunshine Radio – WUKB-1480, W247DD-97.3, W278BK-103.5

Grp= The Bay – WBAE-1490, WVAE-1400, W296CZ-107.1, W228EE-93.5

Group Changes

Grp= 99.3 Guess FM Classic Hits – Adds K268DA-101.5 Memphis

Grp= Fox News 1450 – Adds K299BY-107.7 St George

Grp= GEM 104 FM – Adds W258DJ-99.5 Hazelton

Grp= La Poderosa drops WA2XPA-680 Synch Relay Deleted

Grp= Newstalk 590 AM & 92.1 FM – Drops KSGT-1340 & K242BU-96.3 Jackson WY

Grp= The Arrow 1340 – Adds W265DP-100.9 Augusta

Group Name & Translator Change

Grp= ESPN 1310 970 & 97.3 becomes Grp= Wise Sports – WISE-1310, WYSE-970, W275CP-102.9

Group Name Changes

Grp= 94.9 FM Seattle News & Information Becomes Grp= News & Information Station

Grp= Power 97.5 WLX becomes Grp= The Superstation

Deleted Groups

Grp= ESPN Fort Wayne

Grp= 620 The Buzz (W257CS & W243DK Deleted from WDNC)

Grp- KHZ Radio

Grp= Newsradio WGAN

Thanks to Shawn Axelrod, Bill Hale (BH), FCC Database (FCC), Eric Bueneman, Bruce Conti (BH), Terry Krueger (TK), Paul Snider (PS), Steve Kennedy (SK), Paul Snider (PS), Bruce Conti (BC), Glenn Hauser (GH).

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.



Domestic DX Digest – East

Mike Brooker, 99 Wychrest Avenue, Toronto ON M6G 3X8 (Canada), <u>patria1818@yahoo.com</u> For loggings of U.S. and Canadian stations by DXers in Eastern/Atlantic time zones

All times are <u>Eastern Local Time</u> (ELT)

REPORTERS

JF-NJ Joseph Fela, South Plainfield – SuperRadio II

TF-NH Tony Fitzherbert, Campton – Grundig S450 DLX, Grundig AM 200 loop HJH-PA Harry Hayes, Wilkes-Barre – Grundig S350, ALA 1530 loop in attic

KK-VA Kraig Krist, Manassas – Winradio G33DDC SDR, Wellbrook ALA-1530S+ Imperium

Loop

TLK-FL Terry Krueger, Clearwater – NRD-535, IC-R75, roof dipole, active loop

REH-ON Charles Reh, Leamington – ELAD FDM-S2 SDR, Wellbrook ALA-1530LNP 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

FORMAT FLIP

1110 WTIS

FL

Tampa – As of April 30 (per Wiki, while I just noticed it as of 5/2 0640), the placeholder automated Oldies flipped to automated Spanish Tropical as I suspected would eventually happen given the ownership. No liners or ads, presumably another placeholder for an upcoming dedicated Spanish format. Not parallel 680 WGES (Spanish gospel) or 1550 WAMA (Mexi-tunes) sister stations, and still // the 101.1 FM downtown Tampa translator. Separate EE and SS male canned ID's separated by a song or two around ToHs, no clear slogan culled yet; "Tu nueva radio" though. And the owners still refuse any web presence for 1110. I'm sure nobody's listening, still, despite the mighty signal for a D1. (TLK-FL)

PIRATE/BOOTLEG

1710 ---- LA Baton Rouge – 5/6 0636 – Radio Reten lo que Tienes, fair-poor in passing with Spanish preacher. (TLK-FL)

UNID

690 unID -- 5/4 0627 – In multi-station mix (CKGM, WQNO, Cuban R. Progresso, UNID rock and religious talk) male with mention of "WBGQ". WBGQ is an FM station on 100.7 in Tennessee. Unsure what I'm hearing. **(KK-VA)**

1600.28 unID -- - 5/12 0631 – Big het pointing roughly N/S. Not present at 0608 check on May 15. **(TLK-FL)**

LOGGINGS

620 WSNR NJ Jersey City – 4/27 0500 – Mixing with other talk and singing, male "AM 6-20 WSNR. This is AM 6-20 WSNR Jersey City" ToH ID. **(KK-VA)**

Peotone – 4/27 0500 – In WHLO/WWJZ/WCRV mix with Spanish singing, station promo in EE: "WMFN 6-40 AM has available a few good hours of air time for good programs to serve the community. Radio is better than ever and ... audience that listens to what you say. To learn more about this exciting radio broadcasting opportunity by calling WMFN 6-40 AM at 248 557 3500. You're listening to 6-40 AM WMFN ... Chicago." Heard the same repeated more than once during the time I listened. Wonder if they'd be interested in airing my "Forgotten Song" segment? First time heard since the station moved from Zeeland, MI. (KK-VA) They still have a Michigan area code. 248 is suburban Detroit, a long way from their former MI city of license. Mike.

670 WWFE FL Miami – 5/4 0505 – In WSCR mix with Spanish songs and talk, male "This is WWFE 6-70 AM Miami" ID in EE. **(KK-VA)**

730 WZGV NC Cramerton – 5/11 0459 – In multi-station mix with typical ESPN radio programming. A bit maddening as ESPN WMNA was a brief second behind

- WZGV causing an echo effect. "This is Charlotte's sports information source. WZGV AM ESPN 7-30 Cramerton-Charlotte" ToH ID. (KK-VA)
- WLTQ SC Charleston 5/11 0425 Presumed in multi-station mix with praying and male mentioning Catholic radio and EWTN. Only EWTN I see on 730 kHz is WLTQ. (KK-VA)
- WLIL TN Lenoir City 5/11 0533 In mix of WZGV, WMNA, WTNT, WLTQ, UNID preaching, French, rock & roll, Gospel screaming, contemporary songs and Cuban R. Progresso with station promo "...on the 'Cowboy Corner.' Saturday mornings at 6AM on the legendary WLIL radio 7-30 AM and 102.7 FM." New station for me. (KK-VA)
- **740 WPAQ NC Mount Airy** 5/11 0542 In multi-station mix (CFZM, WMBG, UNID religious preaching, talk, other singing and Cuban R. Angulo with "Seventy-four WPAQ" jingle. **(KK-VA)**
- **760 WETR TN Knoxville** 5/18 0524 Mixing with WJR and UNID Spanish station, male "Talk radio 92 point 3 and AM 7-60" slogan. **(KK-VA)**
- **820 WVSG OH Columbus** 5/4 2205 Presumed over UNID Spanish (likely Cuba) with EWTN talk show "Open Line." Local pest CHAM off. QSLed in 1976 as WOSU, when they were the Ohio State University NPR affiliate. **(MKB-ON)**
- 900 WCLM MD Laurel 5/8 0700 Over CHML Hamilton, ON with Spanish AC and legal ID with call letters in SS. Slogan: "America Novecientos." Format didn't seem any different than when they were WILC. Previously logged as WILC in November 1990. (REH-ON)
- 1060 WLNO LA New Orleans 5/16 0600 Urban gospel with legal ID: "WLNO New Orleans" followed by what sounded like the number 2 in Morse code (••---). Quickly lost to WILB Canton OH sign on. Runs 245 watts at night but I'm unsure if they're still using their STA longwire or if the construction permit is up and running. Previously logged as WNOE in October 1962 back when they were 50,000 watts and would boom in at sunset. (REH-

ON) They have a pending application to cover their CP for U1 10000/245. – DY

- WOKT KY Cannonsburg 5/23 0701 Silent station back on the air. Over in-state rival WKJK Louisville and WNWI Oak Lawn, IL with legal ID by male: "Walk-FM, a Positive Alternative Radio Station. WKAO Ashland, WVRR Point Pleasant, WPJW Hurricane, WPJY Blennerhassett, WMUX Hurricane, WOKT Cannonsburg online around the world at walkfm.org." The website sounded like it had been dubbed in to replace the old WONS site. This was followed by a lady: "Walk-FM is thankful for the support of the Hupp Auto Center in Tuppers Plains, Ohio. Their phone number is 740-667-3177. They're also online at huppautocenter.com". Previously logged as WYHY in June 2014 and as WONS in December 2016. Per that ID, WMUX-1110 Hurricane, WV is also back on the air after being silent for close to a year. WOKT-1080 and WMUX-1110 are the only AMs on the WALK-FM net. (REH-ON)
- **1150 WMNY PA New Kensington** 5/6 2200 Asian music, call letter ID at top of hour. Weak to fair with many others. **(HJH-PA)**
- 1170 WWTR NJ Bridgewater 4/20 1907 Briefly atop with Oriental music sung by shrill voiced female performer, soon gone. No WWVA or WWLE, not bad for 600 watts nondirectional. I remember this station as very directional 1000-watt WBRW with full service programming for the Somerville-Raritan area; the station's four towers were easily seen from CNJ trains as they left the Somerville station. (TF-NH)
- 1210 WJNL MI Kingsley 5/1 0150 Talk program noted with a person giving his life history. Never did figure out what the topic was. Seemed to give three AM frequencies, including 1110 and 1210. Gave the WJML call letters and mentioned northern Michigan. Wonder if they were running the full 50 kw. In/out with WPHT, who seemed noticeably weaker than normal. (JF-NJ)
 - +++ 4/29 2225 Ads, "...WJML..." ID at 2227, CBS news update, weather report "From the WJML weather center..." Fair to poor under WPHR. // to 1110 WJML Petoskey, MI. Probably not on full day power. (PS-ON)
- **1230 WTSV** NH Claremont 4/22 1910 Very seldom heard here, sports talk, soon lost to WGUY. (TF-NH)
- **1240 WSYY ME Millinocket** 4/16 1917 CBS Sports feed, ads for Geico, Napa Auto Parts, New Start Tax Relief, a funeral payment plan, "Sports Radio WSYY" ID, back to CBS feed, soon lost to WEZR. **(TF-NH)**

- WSKI VT Montpelier 4/22 1920 Atop frequency for 15 minutes with CBS Sports feed, ID as "AM 1240 WSKI, Washington County's Sports Leader." (TF-NH)
- Bridgeport 5/4 0759 Only 111 miles and 5 kW but still a toughie with almost no signal to the south. 60s and 70s light oldies mixing with WGL Fort Wayne, IN, WPGP Pittsburgh and CJYE Oakville, ON. Legal ID: "Introducing 1250 MeTV Music. Playing 10,000 songs in a row. WJMK Bridgeport." Into "Precious and Few" by Climax. Format change from Catholic. Previously logged as WWBC in May 1962, WXOX in March 1964, WTCX in January 1984, WKNX in March 1997 and as WHHQ in November 2014. The first four were
 - WMTR NJ Morristown 5/6 0449 Decent ID at this time and a bit later, "Classic Oldies WMTR" slogan. This station has been audible periodically under WPGP in Pittsburgh the past few mornings. (JW-PA)

logged when the station was licensed to Bay City, MI. (REH-ON)

- **1260 WFTW FL Fort Walton Beach** 5/14 1707 Good, with Michael Savage proclaiming how vital he is to talk radio, break with local ads. Very good on barefoot ICF-
 - 7600GR portable during a two-hour power outage, which unfortunately I didn't get around to the radio until 10 minutes before the power came up, Duke Energy's automated voicemail update started 45 homes impacted due to fallen branches. At least I've a better idea where all the noise comes from now. (TLK-FL)
- **1270 WTLY FL Tallahassee** 5/14 1713 Fair, with Taco Bell ad, into local barber and other black community businesses with 850 Area Code. Logged barefoot ICF-7600GR during the power outage. **(TLK-FL)**
 - WACM MA Springfield 4/28 2100 ID as "WACM Springfield, Gold Oldies Radio." Mention 100.1 FM. Start of Wolfman Jack Show. Good, alone. (HJH-PA)
- **ME Gardiner** 4/24 2000 Way atop with instrumental music, PSA for recycling electronics, then Bob Bittner with "Mondays through Fridays, great memories like this are on WJYE, Gardiner-Augusta." Outstanding signal for 40 watts night power. With no interference 40 watts can travel forever! Wonder what Bob is doing with this station on weekends. **(TF-NH)**
- **1400 WSTC** CT Stamford 5/13 2200 Heard mention of 88.9 and Stamford and other frequencies in clutter. This is present most nights lately. (HJH-PA)
 - WCYR ME Veazie 4/24 1956 Atop frequency with C&W music, nice ID as "WCYR, Bangor's country music" into more music. (TF-NH)
- **1410 WING OH Dayton** 5/19 2224 ID as "WING, ESPN 1410". "You're listening to Cincinnati Baseball" and "Reds Radio Network." Fair signal. **(HJH-PA)**
- **1450 WNBP MA Newburyport** 4/20 1940 Atop frequency for a couple of minutes with financial talk (station simulcasts WRCA-1330 with Bloomberg business feed), before fading under several sports talk stations. **(TF-NH)**
 - WKIP NY Poughkeepsie 5/10 2058 Rising above mess for several minutes with Mark Levin show then promo for Rush Limbaugh with WKIP IDs. (HJH-PA)
- **1460 WIFI** NJ Florence 5/13 1954 Strong with others. ID as "Victory AM 1460, WIFI". Willingboro and Trenton mentioned on ID into Fox News. (HJH-PA)
 - WVOX NY New Rochelle 4/18 1930 Ad for Manor Tree Company at 914-718-xxxx (Westchester County area code) followed by traffic report for New England Thruway (which bisects New Rochelle), soon gone, new for me here, good for 500 watts! (TF-NH)
- **1470 WXAG GA Athens** 5/2 2155 Slower urban contemporary music, very clear "The Mood, The Light" slogan at 2155, more music. Fair at times to very poor in station mix. **(PS-ON)**
 - **WGNR IN Anderson** 5/2 2314 Christian rock in English, Moody Radio & WGNR mention at 2315, more music. Fair at times to very poor in station mix including WNYY and others. // WGNR 97.9 stream on moodyradio.org. Used to be Radio Moody Español. **(PS-ON)**
- **1490 WGCH CT Greenwich** 4/20 1928 Financial talk, local ad for a business with a 914 area code, mentions of Greenwich, soon gone. **(TF-NH)**
 - **WCCM MA Haverhill** 4/20 1931 Spanish talk with two hosts, atop frequency, only SS talk station on 1490 in this part of the country. **(TF-NH)** *Note change of calls from WCEC on April 3. DY*
- 1570 WISP PA Doylestown 5/12 2240 Religious program with a man and woman speakers. Matched with internet broadcast. Only audible periodically. (JW-PA)

- VA Rocky Mount 5/8 0300 Decent ID at this time and again at 0327, with "You WYTI have a choice in Rocky Mount, WYTI 1570 AM and 104.5 FM" station promo. (JW-PA)
- Galesburg 5/5 2335 Oldies, weather report, "Oldies 1590" slogan, more 1590 WAIK IL music including "Mony, Mony" by Tommy James & the Shondells, "WAIK" ID at 2345, more oldies. Fair at times to very poor in station mix. (PS-ON)
 - VA Richmond 5/9 0130 Mostly atop (by a lot) relaying WNRN-91.9 WFTH Charlottesville. Heard ID as WNRN at least three times and mentions of Virginia. Music played seemed to be a softer rock of some such. While trying to find the WFTH website, all that would come up was the WNRN website. Full time relay? (JF-NJ)
 - +++ 5/7 2217 Assorted music styles, "...WNRN..." ID at 2235, more music, another WNRN ID at 2245. Not heard very often here, pretty good for 19 watts. Fair at times to very poor, mostly under WAKR. // to WNRN stream on Tune In. (PS-ON)
- LA Golden Meadow 5/6 0639 Male canned "KLEB...and KLRZ 100.3..." ID into **1600 KLEB** Zydeco tune. Co-channel WKWF Key West (sports talk) and WPOM Riviera Beach (Haitian kreyol). This one occasionally surfaces briefly as my local sunrise nears. (TLK-FL)
 - Bedford 5/21 0614 Over usual WAAM/WWRL mix with "...featured here WAYC on AM 1600 WAYC" station promo. (MKB-ON)
 - **Jersey Shore** 5/2 2243 "News Talk 104.1..." slogan at 2244, Jim Bohannon WEJS Show. Poor to very poor mostly under WWRL. (PS-ON)
- **1630** WRDW GA Augusta 5/6 2103 Alone with "ESPNAugusta.com" slogan. Fair to weak. (HJH-PA)
- **1680 WPRR** MI Ada – 4/28 2325 – IDs followed by ad for Grand Rapids Public Relations Dept. Had local call in program. Fair to strong signal. (HJH-PA)
- Berwyn 5/12 0616 Ads for downtown Chicago businesses on 3rd Ave., **1690 WVON IL** another on 33rd St. Male "AM 16-90" into public affairs program regarding local elections. Parallel station stream. Must have been on day power. Some co-channel from soon-to-be-gone (sadly) Atlanta-area WMLB with their eclectic music blend. (TLK-FL)

Musings of the Members Dave Schmidt, 49 N. Sumner Street, York PA 17404, NRCMusings@aol.com

Denny Adkins dxdenny0948@yahoo.com

Further observations on the state of out "hobby." There was a time when I grew morose with the coming of the summer months and the decline of all of that great WINTER DX. No more. With the advent of the Internet my heart sings with a continual feast of Continental favorites. Nothing is out of reach. What was difficult is now common, regular. The San Franciscans, 560 KSFO, 810 KGO. 640 KFI Los Angeles, 580 KMJ Fresno and many others. A question arises: Is it ethical to pluck information from, for example, 570 KVI Seattle and report it for verification? I think not. An old pro would perceive the falsification. I'm a DX purist. Strict veracity. But the Internet surely ENHANCES the thrill of our "hobby" to exciting new dimensions. Yea SUMMER DX!

Confirmed DXer

Phil Bytheway, 9705 Mary NW, Seattle WA 98117-2334, phil_tekno@yahoo.com

Report your verifications to the NRC eGroup and they will appear here, or send them directly to me at the above address. Next deadline: 7/19/18 1 PM PLT. pb

- **AR**, Hot Springs. PPC in 27 days for f/up. V/s Edward Vega, President. (JW-CO)
- UT, Spanish Fork. PPC in 42 days from Christopher Warden, Director. (JW-CO) 1480 KHQN

John Wilkins, Wheat Ridge CO (JW-CO)

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 <u>Eastern Local Time</u> (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.

- JJR-WI John J. Rieger, South Milwaukee Icom IC-R75, MFJ-959B tuner, preamp, Kiwa loop, Sangean ATS-909X stock.
- JW-CO John Wilkins, Wheat Ridge Drake R-8, 4-foot box loop.

DX LOGGINGS

- **690 KTSM TX El Paso** 5/2 0626 Poor with I-Heart app, "News Radio 690 KTSM," talk. Alone. (JJR-WI)
- 910 KPOF CO Denver 5/2 1805 Presumed with "Kyrie Eleison" and then Christian service in English. (GH-CO)
- 1060 KIJN TX Farwell 5/3 2133 Contact info in Spanish with a 605 phone number (which is South Dakota), then KIJN calls and P.O. Box 458, Farwell TX 79325. SSB tuning eliminates the characteristic fast SAH from thus always below-frequency station against anything else. 10 kW daytime runs all night, but still legal at this time as May sunset is 2145. (GH-OK)
- 1130 KLEY KS Wellington 5/24 0829 Still SNAFU as in prior issues. (GH-OK)
- **1200 KPSF CA Cathedral City** 5/11 0747 Presumed with Bloomberg Financial Report; soon faded. Fair/poor in WOAI null. **(JW-CO)**
- **1270 KSCB KS Liberal** 5/15 0832 News, weather and ads for southwest Kansas and the Oklahoma panhandle; into local sports talk program at 0837. On top with a fair signal. (JW-CO)
- 1300 WLXG KY Lexington 5/2 0600 Poor though alone, with ESPN hype, legal ID, mention of 92.5. No usual WOOD. (JJR-WI)
- **1380 KHEY TX El Paso** 5/12 0859 Fox Sports in progress; legal ID at ToH, followed by "Total Access Radio Show" from the Texas Motor Speedway (racing news). Fair signal with no sign of usual KOTA. **(JW-CO)**
- **1400 WGIL** IL Galesville 5/2 0634 Very poor "on WGIL" out of nowhere, to RFD Illinois (farm news), in tight WRJN null. (JJR-WI)
- **1420 KULY KS Ulysses** 5/17 0821 Garden City ads and a program note for sister station KBUF-1030; into "The Get Up and Go Show" at 0823 with chit-chat by man and woman; KULY call letter ID a few minutes later. Fair signal and alone on the frequency. **(JW-CO)**
- **1480 KBXD TX Dallas** 5/2 0713 "This is KBXD 1480 Dallas" ID and into Spanish religious music. Fair signal. (**JW-CO**)
- 1570 KAKK MN Walker 4/30 0548 Poor though atop with calls, 70s/80s classic hits. (JJR-WI)
- **TN** Shelbyville 4/30 0607 Poor in fade-up over a weak CKDO, "Today's country and yesterday's rock WLIJ." Certainly a format flip never heard Elton John's "Honky Cat" on WLIJ before! Website and Facebook not updated. (JJR-WI)

Unreported Domestic Stations

One new station reported to DDXD this issue, for the first time since at least Volume 67 (1999-2000): WXAG-1470. We also add newly licensed KWLO-1580 to the list of (as yet) unreported stations, so the total number of currently licensed stations in the United States and Canada that haven't been reported to DDXD in that timeframe holds at 376. 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?

International DX Digest

Bruce Conti, 46 Ridgefield 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

- ROMANIA R.Romania Actualitati, Luton (Boldur) APR 8 0242 Music, I assume in Romanian, "What Took You So Long?" by Emma Hinton in English, male announcer, more music, 0255 heard "Celebration" by Kool & The Gang fairly clearly. Very poor, but audible at times with lots of slop from WJR on 760 kHz. Parallel to Tune In stream. My farthest TA thus far. [Snider-ON]
- 783 **MAURITANIA** *R.Mauritanie*, Nouakchott MAY 8 0600 Poor; Koran through the hour. MAY 14 0600 Good; Koran. Transmitter site sunrise 0631 UTC. [Conti-NH]
- 855 **SPAIN** *RNE1* Murcia et al. APR 29 0100 Fair; marker with Spain and Canaries time checks, "Son las dos, la una en Canarias," into news, "Radio Nacional de España, servicios informativos," parallel 1107 and 1152 kHz. [Conti-NH]
- 1062 ITALY Rai Radiouno synchros MAY 10 0358 Poor; pre sign-on test tones. [Conti-NH]
- 1215 **UNITED KINGDOM** *Absolute Radio* synchros APR 29 0100 Fair; "Dream On" by Aerosmith. MAY 10 0358 Fair; long ad string including Britain's Got Talent. [Conti-NH]
- 1566 **UNITED KINGDOM** *Premier Christian Radio*, Guildford MAY 10 0358 Poor; ad string in English, then heard choir music into talk, so presumed Premier. [Conti-NH]

PAN-AMERICAN DX

- MEXICO XETX Nuevo Casas Grandes, Chih. MAY 12 1131 National anthem; 1134 ID for AM and XHTX 90.5 FM; mentioned usual address at Jesus Urueta 502 and "La Ranchera de Paquime" slogan; a flowery prayer-like song followed the ID; finally, some ranchera music at 1139. Fair/good signal and all alone. [Wilkins-CO]
- MEXICO XEGS Guasave, Sin. MAY 12 1132 National anthem in progress; ID at 1133 (poor copy); noted later with local concert ad at 1141; self promo for Grupo Chavez Radio, then into more oompah music. Fair while KNML was in a long fade. [Wilkins-CO]
- 1060 **MEXICO** XERDO *La Raza 1060*, Reynosa, Tamps. MAY 15 1014 Male "La Raza 1060" into Mexi-tune. [Krueger-FL]
- 1210 **CUBA** *R.Reloj*, unknown site MAY 4 1057 Still here. Very poor, occasionally beeping off-time through *R.Sancti Spíritus* and other detritus. I first spotted this one in March 2016. And so it continues. Suspect central to eastern Cuba and low (1 kW) power. [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. Paul Snider, Welland ON; Elad FDM-S2, Pixel Pro 1B loop, MFJ-1020C as tuner.

John Wilkins, Wheat Ridge CO; Drake R8, 4-foot box loop.

73 and Good DX!

<u>The NRC's New Internet Home</u>: Don't forget the new NRC internet address has been updated to <u>www.nationalradioclub.org</u>. 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 <u>www.e-dxn.com</u>, which is still your source for the electronic version of *DX News* and other members-only content.



Follow @NRCDXNews on Twitter!

Twitter can be used to disseminate hot MW DX tips to the DX community

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

Pro Sports Networks

Barry Finkel, 10314 S. Oakley, Chicago IL 60643-2409, <u>bsfinkel@att.net</u>

Here is the Colorado Rockies network list. The lists for the Los Angeles Angels and San Francisco Giants have still not been updated.

Colorado Rockies (EE) (2018) Jerry Schemmel, Jack Corrigan

<u>Colorado Rockies (SS)</u> (2018) Salvador Hernandez, Javier Olivas, Carlos Valdez

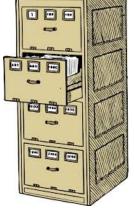
https://koanewsradio.iheart.com/featured/colorado-rockies/content/2018-02-28-rockies-radio-network-affiliate-stations/ (05/25/2018)

610	KCSR-NE	1140	KNAB-CO	1450	KBFS-SD	100.3	KSBK-CO
	KNML-NM	1210	KGYN-OK		KVOW-WY	101.7	KSKE-FM-CO
690	KOAQ-NE	1240	KFBC-WY	1470	KKTY-WY	101.9	K270AL-CO
730	KLOE-KS	1260	KPOW-WY	1490	KNAM-CO	102.3	KSPK-FM-CO
850	KOA-CO	1290	KOWB-WY			103.1	KYDT-WY
920	KLMR-CO	1340	KTMM-CO	87.7	KSHW-WY	104.1	KNAB-FM-CO
930	KIUP-CO	1350	KDZA-CO	94.1	K231BQ-CO	105.7	KPMX-CO
	KRKY-CO	1400	KRLN-CO	94.5	KCGC-CO	106.1	KNFO-CO
1010	KSIR-CO	1440	KRDZ-CO	95.5	K238AB-CO	107.3	KQZR-CO

From the *DX News* archives

Compiled by Ron Schiller.

75 Years Ago – From the May 15, 1943 issue of *DX News*: With so many NRC members serving in the Military (WWII was ongoing), a column called "Yanks in the Ranks" was initiated to print letters from active NRC servicemen stationed all over the world. WDAY-970 ND, one of the few Western "W" stations was noted by Iowa's Len Kruse. FO8AA-6975 Tahiti was logged in DC by SW columnist Jim Wedewer. A complete Canadian BC & SW list is available for ten cents from the "Controller of Radio" (DOT), Ottawa. Bill Gabriel of Ohio opined that KWEW has never verified for anyone as far as he knew!



50 Years Ago – From the May 25, 1968 issue of *DX News*: The Governor of Nebraska, Norbert Tremann, authored a letter welcoming NRC Conventiongoers to the state! Buffalo, NY's Ralph Johanns claimed that while Canadians verified at over 99%, US stations needed more 'education' in the verification process. Frank Merrill, Jr updated his log to show 2600 heard from his Michigan shack. Richard Wood in HI logged his first stateside GY: KVEN-1450 CA on his Hammarlund SP600. Pete Taylor-MA caught seldom reported CKLD-1230 Thetford Mines, PQ, CAN at their signoff. Ken Chatterton-NYS berated those who opposed the use of prepared cards for veries.

25 Years Ago – From the May 31, 1993 issue of *DX News*: Ontario, CAN's Laurence Kearley sent in a bandscan from his stay at a Holiday Inn in Halifax, NS using his Sony ICF & a Palomar Loop. The elusive RFO St. Pierre & Miquelon-1375 was among his findings. 1490 Graveyard Achievements was highlighted by reception in Finland of XEMS-TAMS, MEX @ 5,321 miles. Mike Hawk's FM DX Column included Mike Jezerski's "4,13 Tropo Event" in St Augustine, FL, featuring 3 Houston loggings @ 849 miles.

10 Years Ago – From the June 16, 2008 issue of *DX News*: Tulsa's Bruce Winkelman lamented that 4 locals were now using IBOC! Mark Connelly-MA logged SEVEN Brazilians in late April. Neil Kazaross-IL tentatively heard 2BL-702 Sydney, AU, his best non X-bander in IL, tho he had previously positively IDed them in WI. Contrast that with the achievements of fellow Illini DXer Hilding Gustafson who verified 40 Down Under stations in the 40s & 50s. Obviously it was a much different DX world back then!

Available for the cost of postage: hard copies 2010-2017 complete DX News & 2011/2 VHF/UHF Digest (14 issues).

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

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 103.

As the regular DX season begins to fade I will take some time to ask you the readers if there is anything you would like to see covered in this column. It is a bit of a freewheeling column with less structure than the others in *DX News*, so let me know what might work for you. I will put one restriction on ideas and it's: No technical stuff unless you are contributing them yourself. I am NOT a technical person at all and I will live within my limits. And as always please help support the other columns in DXN as without your contributions there would be nothing to publish.

Radio Videos:

Fessenden and radio: His story leading up to the first radio broadcast:

https://www.youtube.com/watch?v=YdlMHYHMM8Y

Secret Life of Machines – The Radio: https://www.youtube.com/watch?v=2roG4jIjvEk

Best DX Catch (per Watt of Power)

Here is a reply to my last column from John Reed in Shawnee, OK:

I saw your note about miles/watt DX catches. I used to monitor the MEDFER band way back when. Here are some miles/watt catches I found in my old logs:

- 1. ABC Hilton Head, SC. That was 928 miles from me when I lived in Ponca City, OK for a rating of 9280.
 - 2. WM Prescott, AZ, 803 miles for a rating of 8030.
 - 3. MIN Aitkin, MN, 630 for a rating of 6300.
 - 4. D Englewood, CO 450 miles for a rating of 4500.

I have many more, but they are all closer than these.

The MEDFERs were a lot of fun, but sadly all that went away when the AM expanded band opened up. 73, John, KA5QEP

Bits and Bites from the NRC listsery:

From: James Niven, Austin TX

Re: New DX-AM style FCCDB Excel Spreadsheet

Here is a link to my 2018 version for AM

https://www.dropbox.com/s/og0hj92iz4xte1e/2018-04-08-DB-DXAM%20Format.xlsx?dl=0

I am following in the footsteps of what Bill Nollman put together for FM, but this is the AM version. I have used the FCC web site data and it now has format and slogan of these stations where known from my database. Database source is primarily StationIntel, but also DX News, NRC Emails and many other sources. I will update as needed, as I am still working on my linking FCC data to my database to streamline the process.

Hint: look for the two tabs at the bottom to go to the listing itself under AM. – Shawn

From: Pete Taylor Re: Hawaii DX

Time is HST (UTC minus 10) since this is meant to reflect what you would more than likely hear if you were there and not what you would necessarily hear from the Mainland. Except as noted, all loggings are between 8:30-10:30pm local time. Please note there are no Kauai loggings; the time share we were in was hopelessly overwhelmed by QRN. This was disappointing because I was looking forward to comparing reception with what I heard in Poipu in 1984. My wife, a DX-398 and a Gary DeBock FSL went to Kailua-Kona, Kaanapali (Maui) and Lihue (Kauai) 3/29-4/16. There was no DX from Kauai because of overwhelming QRN.

Strongest U.S. stations every night from both places: 580-KMJ, 1460-KION, 1110-KBND (usually //KPNW-1120 w/Coast to Coast AM), and 1580-KBLA.

The post relates to reception of domestic stations. Unanticipated loggings:

630 – KIDD (strange variety of semi classical music)

- 630 CHED 4/3 9pm, Maui
- 640 Unknown under KFI (probably KYUK)
- 660 KTNN (chanting) and CFFR
- 790 KABC
- 850 KICY abrupt carrier cut mid-hymn 9pm 4/10 from Maui

16

850 – OC 8:55p, Maui (perhaps KICY w/early signoff or prep for pattern change)

860 – K-Talk, KPAM or KTRB (maybe it was K-Pam)

890 – KBBI 4/6 9pm, Maui

910 – SS, KKSF?

920 - SS?

960 - CFAC Jets Network, 4/10, 8p Maui

970 – KFBX Fairbanks w/wx, 4/3 9pm Maui

1140 – CHRB mixed with KHTK

1150 - KEIB LA

1170 – KLOK Asian, 4/11 8p, Maui

1320 – KIFM Sacto. ESPN

1380 - CTC, presumed KTKZ

1550 – Asian (either KZDG or KRPI)

1600 – KVRI (Asian)

1600 - UNID - ESPN

Non Domestic Loggings

612 – 4QR Brisbane. Fair in both Kona and Maui.

621 – TUVALU. Reasonable strength in Kona and good on Maui 4/4 5am but only a het on Kauai.

666 – Japanese 4/4 5am, Maui (JOBK Osaka)

747 – JOIB Sapporo even with UNID 4/4 5am, Maui

774 – 3LO Melbourne & JOUB Akita mixing it up 4/4 5am, Maui

846 – KIRIBATI. I have no notes indicating I ever heard this station from anywhere

963 - Very loud 4/4 5am but I didn't hang around long enough to ID it

972 – HLCA very loud 4/4 5am, Maui

1017 –TONGA. Good in Kona but mixed with an excitable 2KY on Maui. I think I heard JJ in there too (JOLB Fukuoka)

1044 – CHINA. Changzhou presumed with JJ programming. Very loud 4/4 5am Maui

1098 – V7AB MAJURO. Gangbusters in Kona but barely even a het on Maui (KFAX loud).

1350 – UNID Asian. Sounded Japanese but Hiroshima has only 20kw.

1440 – KIRIBATI. Very strong in Kona but not a peep from it in Maui. From Kona, ABC news 4/1 9pm followed by hymn-like chorale. At 9:37p, weather and tides by soft-spoken lady in English followed by ID. Very strong level.

1440 – JOWF Sapporo. Good level with kiddies program 4/11 5am.

1548 – 4QD Emerald fair 3/31 10p, Kona

1593 – Chinese fair 4/11 5am. Changzhou presumed. 4/4 5am, Maui.

Other expected regulars: 670-KBOI, 680-KNBR, 710-KIRO, 720-KDWN, 730-CHMJ, 750-KXTG, 770-KTTH, 780-KKOH, 820-KGNW, 840-KXNT, 930-CJCA, 950-KJR, 980-CKNW, 1010-CBR, 1050-KTCT, 1060-CKMX (under KIPA), 1070-KNX, 1090-sports, 1100-KFAX sometimes, 1120-KPNW, 1160-KSL, 1190-KEX, 1300-KAPL, 1410-CFTE, 1510-KGA w/Asian under (KSFN?), 1530-KFBK (w/someone under), 1560-KNWZ, 1590-KLIV, 1640-religion (probably KDIA).

For the record, there are Hawaiians on 550 570 590 650 670 690 740 760 830 880 900 940 990 1040 1060 1080 1110 1210 1240 1270 1370 1420 1500 1540 1570.

Both Kailua-Kona (Big Island) and Kaanapali (Maui) are on the West side of their islands. Also, our rooms in both places were facing South/Southwest which was desirable because I was seeking stations in those directions. This was not favorable for Mainland station receptions but that seemed not to be a problem.

The dial was very porous the night of 4/11 on Maui. Also, there was something on just about every domestic frequency while driving around Poipu, Kauai the night of 4/15.

It was fun. Thanks to Gary DeBock for his creation. For the record, TSA people at airports in Kona and Kahului were mystified and took 10-15 minutes to explore before letting the FSL through. Having the descriptive booklet helped. As for Hawaii, all stations were heard in all three locations. KWAI-1080 is the weakest of the 5 kW stations. KIKI-990 has a bad hum. KNUI-550 is poorer in all locations than KMVI-900. In Kaanapali (NW corner of Maui), the mid-island stations (KNUI KCIK KMVI KAOI KEWE KUAU) don't do a great job. Many Honolulu stations are louder.

From: Gary DeBock

Re: Hawaii DX

Thanks very much for the extremely detailed transoceanic DX reports from Hawaii, Pete. These are far and away the most extensive North American DX logs every compiled by a "Frequent Flyer" FSL antenna user in Hawaii (and there have been 5 trips so far to the Aloha

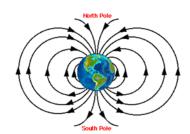
state, including two from yours truly). In the Cook Islands I wasn't really trying for North American DX, but several stations did show up as I was checking sunset skip to New Zealand. 1070-KNX, 1160-KSL, 1170-KFAQ and 1640-KDIA all come to mind. Of course the Hawaiian stations were all potent in the Cook Islands, and several of them wiped out nearby TP-DX frequencies. Thanks again for the outstanding DX logs from Hawaii (and from your European and Caribbean cruises, earlier)!

From: Ben Dangerfield, Wallingford PA Re: Wall Street Journal on AM Radio

Just came across an article in the May 19/20 WSJ "Off Duty" section titled "Road After Dark" in which the writer has discovered the wonders of AM clear channel radio, while travelling from LA to North Carolina. He found CBW-990 and KNX among others He mentioned WSM and the "Grand Ole Opry" and others whose distance amazes him. Also WLW and how in the mid-1930's they temporarily used 500 kW on an experimental basis. I too remember hearing WLW then at that power). So someone today has just discovered what we DX'ers have known for decades! He says the wonder of AM radio is like "reaching into the dark with a fishing pole and trying to catch a big one." Well, I guess it is!

73 for this time Shawn

Remember On A Clear Day You Can Hear Forever



Geomagnetic Indices

Geomagnetic Summary April 2018

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

Date	Flux	A K	S	pace Weather	Date	Flux	A K	S	pace Weather
4/ 1	69	5	1	no storms	16	69	3	1	no storms
2	68	5	1	no storms	17	69	4	2	no storms
3	68	4	0	no storms	18	71	6	1	no storms
4	69	5	2	no storms	19	71	3	0	no storms
5	66	9	2	no storms	20	73	47	3	moderate, G2
6	67	4	1	no storms	21	77	12	1	no storms
7	67	5	2	no storms	22	76	5	2	no storms
8	68	5	2	no storms	23	74	6	2	no storms
9	69	10	4	no storms	24	73	5	2	no storms
10	69	18	3	no storms	25	71	4	1	no storms
11	69	14	2	minor, G1	26	69	4	2	no storms
12	70	9	3	no storms	27	69	6	2	no storms
13	70	9	2	no storms	28	70	4	1	no storms
14	70	6	2	no storms	29	71	4	1	no storms
15	71	6	2	no storms	4/30	70	6	1	no storms

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

NOAA Space Weather Outlook

Issued May 21, 2018 – For the period May 21-June 16, 2018 http://www.swpc.noaa.gov/products/weekly-highlights-and-27-day-forecast

Solar activity is expected to be very low throughout the period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach very high levels on 05-07 Jun with high levels expected on 02-04 and 08-13 Jun. Moderate flux levels are expected for the remainder of the outlook period.

Geomagnetic field activity is expected to reach G2 (Moderate) geomagnetic storm levels on 02 Jun and G1 (Minor) storm levels are expected on 01 Jun due to the influence of a recurrent, negative polarity coronal hole/high speed stream. Active conditions are expected on 23 May and 03-05 Jun.

USB Isolators/Ground Loop Eliminators for Software Defined Radio Applications By Bruce A. Conti, May 2018

Intro to USB

USB stands for Universal Serial Bus. It's a standardized specification designed for easy plug-andplay hot connection between peripherals and a host computer. In other words, the USB connection can be safely plugged in and unplugged from the peripheral and host without powering down the device or computer.

USB data transfer rates, specified in bits per second (bps), are low speed 1.5 Mbps, full speed 12 Mbps, high speed 480 Mbps, super speed 5 Gbps, and 'super speed plus' at 10 to 20 Gbps. The USB 1.1 data rate is specified for low and full speeds. USB 2.0 can operate at low, full, and high speeds, but not all USB 2.0 devices are capable of high speed. USB 3.0 supports data transfer rates up to super speed, 3.1 to 10 Gbps, and 3.2 to 20 Gbps super speed plus. Software defined radio (SDR) receivers covering LW, MW, and SW, such as the Microtelecom Perseus and WiNRADiO Excalibur, typically require USB 2.0 high speed. Some of the extra wideband SDR's for FM broadcast spectrum capture such as the Elad S2 and S3 units may require USB 3.0 super speed.

The typical USB 2.0 high speed cable for connecting a SDR receiver peripheral to a host computer consists of four wires. The power from the host is via red (+5 VDC) and black (ground) wires. The differential data lines of the USB serial interface are green (D+) and white (D-). The more expensive high-end USB 2.0 high speed cables are typically shielded, sometimes including a ferrite bead at each cable end for common mode choking of RF emissions. Cheaper cables may not have a black wire, instead using the shield as the power supply ground. The cheapest USB 2.0 low/full speed cables aren't shielded, and may only consist of three wires, combining the data return line and power supply ground via the same wire - stay away from these! Maximum high-speed cable length is specified at 5 meters to limit 'round-trip delay between host and peripheral. If the host sends an instruction to the peripheral and it doesn't receive a reply in time due to excessive cable delay, then USB operation will fail.

The USB 2.0 high speed power supply voltage specification is +5 VDC nominal, +5.25 maximum, and minimum +4.40 at the peripheral to allow for voltage drop across the cable. A low power peripheral requires up to 150 mA of current (0.75 watts at 5 volts). A high-power USB 2.0 peripheral can draw as much as 500 mA (2.5 watts at 5 volts), while a USB 3.0 device may demand 900 mA (4.5 watts at 5 volts).

The standard USB 2.0 connector at the host computer is Type A; pin 1 = +5 VDC, pin 2 = D-, pin 3 = D+, pin 4 = ground. While a Type B connector with the same pinout but different style is common for peripheral connection, the type of connector used by a SDR can vary in pinout, shape, and size between several standard types. There are also multiple grades of connectors from cheap consumer types to heavy-duty industrial. Industrial strength connectors for general electronics applications are constructed with higher reliability contacts specified for at least 1,500 mating cycles. Additionally, the locking tactile feel of a high retention industrial connector ensures proper insertion and prevents it from coming loose.

The USB Ground Loop Problem

I learned that the USB ground loop problem existed after stumbling upon a number of pro audio websites and blogs that discuss this as a major problem in the recording industry. According to my internet research, numerous issues involving artifacts and dynamic range of digital audio can be traced to USB ground loops. So USB isolators/ground loop eliminators are extremely popular among audiophile and pro audio circles. They talk about vibrant soundstage and deeper blackness when describing the improved audio performance achieved by breaking the USB ground loop. Then I connected the dots between the pro audio reports and recently experienced computer noise issues during a group DX'pedition. It was one of those "Ah ha!" moments.

A ground loop may actually exist between an SDR and computer, or between the antenna and computer, via the USB cable. The result is a higher noise floor. As indicated earlier, audio performance may also be impacted by a USB ground loop, so it shouldn't be thought of solely as a receiver RF noise issue.

Think of this differently than an antenna noise problem. Ground loop currents can introduce noise not only through the SDR RF input, but also in the computer audio. The USB isolator breaks a ground loop between the computer and SDR. *After judiciously reducing noise at the antenna which remains mission critical in any DX setup*, breaking the USB ground loop may provide an additional 3 to 6 dB of headroom and improve audio clarity, which could make the difference between observing a weak signal and hearing audio. Testing with the WiNRADiO Excalibur SDR and a laptop computer proved it out, however results may vary with different SDR's.

Break the Ground Loop Construction Project

One simple solution to breaking a USB ground loop and reducing noise is to disconnect the often dirty +5 VDC power at the USB output of the host computer. Note that this does not completely isolate the USB between the host computer and SDR because the D+ and D- data lines will still be connected. Ground loop currents may yet flow through the data lines, so results could be insignificant to nil but worth trying for the cost savings versus purchase of a USB isolator. This project also allows the USB power from the host computer to be replaced by an external low-noise power supply via the binding posts which may prove to reduce noise for SDR's that aren't powered by a separate supply.

Parts List

- (1) short-length USB 2.0 type A male to USB 2.0 type A female high-speed extension cable
- (1) double pole double throw on/on toggle switch
- (1) red binding post
- (1) black binding post
- (1) non-polarized ceramic bypass capacitor, 0.1 μf
- (1) small plastic project box

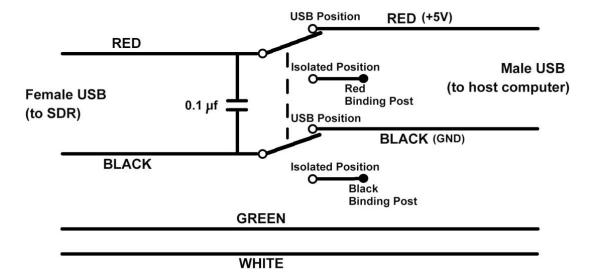
Construction

- 1. Cut the USB extension cable in half. Dejacket a few inches of the outer insulation from each half of the cable.
- 2. If the cable is shielded, cut away the shield to expose the internal wires. There should be four internal wires; red, black, green, white.
- 3. Drill holes of appropriate size for mounting the switch and two binding posts in the project box
 - 4. Cut two slots on the sides of the project box to accommodate the USB cable ends.
- 5. Solder the USB cable red wire of the female end (peripheral SDR) to the common terminal of one switch, solder the USB cable red wire from the male end (host computer) to one of the on positions, and wire the red binding post to the other on position. Refer to the schematic diagram.
- 6. Follow the same wiring procedure for the USB cable black wires and binding post to the remaining switch.
- 7. Solder the $0.1~\mu f$ bypass capacitor between the black and red wires of the switch common terminals.
- 8. Solder the green wire from the cable female end to green of the male end, then solder white to white.
- 9. Complete assembly by marking USB/isolated switch positions appropriately, secure the cables and close the box.

Installation and Operation

- 1. Plug the USB isolator into the host computer and into the USB cable of the SDR.
- 2. Set the switch to the USB position.
- 3. If the SDR requires USB power, i.e. the SDR doesn't have its own external power supply, then an external +5V low-noise power supply must be connected to the binding posts.
 - 4. Power up the SDR and start the SDR software as you would normally.
 - 5. Once the SDR is in operation, toggle the switch from USB to isolated position.





Note: If the SDR has its own separate power supply (not powered by USB), this start-up procedure must still be followed. In most cases, the +5V from the USB host computer is required to initialize the USB circuitry of the SDR. Without +5V, the SDR may fail to start up properly. Once the SDR is powered up and operating, then the switch can be toggled to the isolated position.

The short length of USB extension cable is used to simplify wiring and prevent miswiring. Alternatively, bulkhead/panel mount male and female connectors can be mounted on the project box for a cleaner more professional looking unit, but extra caution must be taken not to miswire the connector pins. It's much easier and less confusing to take advantage of the color-coded wires of the halved cable.

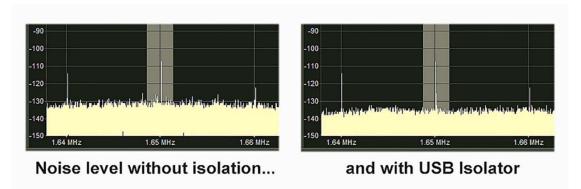
If this homebrew USB ground loop breaker reduces the noise floor by 3 dB or more, awesome! You've saved yourself hundreds of dollars. If it doesn't produce the desired results, then a true USB isolator might be necessary to get the job done. Read on

Intona USB 2.0 Hi-Speed Isolator

The USB isolators used in pro audio are typically only full speed (12 Mbps), Analog Devices ADuM chip-based designs, not fast enough for SDR applications. The high speed (480 Mbps) isolators are much more expensive as they require more elaborate circuitry. Found and purchased the Intona USB 2.0 Hi-Speed Isolator (https://intona.eu/en/products), pricey but not too far out of reach, and it works! Reduced the noise floor by 3 to 6 dB. This could make a huge difference in trying to dig out weak signal DX on clear frequencies such as 828 South Africa or 1206 Mozambique, or in my case getting audio from weak transpacific signals at dawn. The Intona is plug and play. Simply insert the unit between the host computer and SDR with high speed USB cables, then power up the SDR normally.

It isn't perfect. Discovered an open carrier at approximately 488 kHz intervals; 731.9, 1219.9, 1707.9 kHz, etc. It's a very quiet spike like an open carrier, no noise, buzzes, or blips. My guess is that it's related to the galvanic isolation 5VDC to 5VDC internal switching power supply frequency, although adding bypass capacitors to filter out the noise was unsuccessful. The Intona also has a Xilinx Spartan XC3S50A FPGA on each side, so the clock frequency could be the source unless it's synchronized with the switcher frequency. To remove USB jitter, a primary cause for concern in pro audio applications, the FPGA on the host computer side unpacks the USB data for the isolators, and then the FPGA on the peripheral SDR side repacks/reclocks the USB data. Since USB communication is bidirectional, the same repacking is done from the SDR to host. Apparently, this also eliminates latency problems encountered when isolating USB data, a limiting factor in cheaper USB 2.0 full speed devices. Serial data isolation is through Si8660 6-channel digital isolator chips.

The Intona is manufactured in Germany. It's available in consumer and industrial grade models for under \$400 from U.S. distributor Kitsune HiFi (KitsuneHiFi.com) and Canada distributor L'Atelier Audio (atelier-audio.com).



iFi iGalvanic 3.0

The iFi iGalvanic 3.0 USB isolator (ifi-audio.com) is promoted as the world's first USB 3.0 galvanic isolation device. The iGalvanic 3.0 meets USB 3.0 standards with USB 3.0 connectors and it operates up to super speed 5.0 Gbps. (USB 3.0 connectors have more pins/wires than USB 2.0, but the USB 3.0 connectors are backward compatible with USB 2.0 cable connectors.)

Like the Intona USB 2.0 Hi-Speed Isolator, the iFi iGalvanic 3.0 uses an internal switching power supply to provide isolation between the host computer 5V USB power and the device, resulting in RF noise spikes at regular intervals. The iFi and Intona USB isolators are designed primarily for professional audio applications. Although extremely effective at elimination of ground loop hum and noise issues at audio frequencies, apparently the designers don't pay much attention to RF noise

Initial tests show that the iGalvanic 3.0 isn't as good as the Intona USB 2.0 Hi-Speed Isolator, perhaps due to the higher operating speed and higher current power supply required for USB 3.0.

The iGalvanic 3.0 internal switching power supply is noisier than the Intona USB 2.0 especially at frequencies above 20 MHz.

iFi iDefender 3.0 and iPower 5V

The iFi iGalvanic 3.0 USB isolator was purchased as part of a package deal for under \$400 from Music Direct that included the iDefender 3.0 Ground Loop Breaker and iPower 5V (www.musicdirect.com/accessories/iFi-Nano-iGalvanic30iDefender30iPower-Bundle). The iDefender 3.0 operates similarly to the "Break the Ground Loop Construction Project" by disconnecting the USB 5V power from the host computer and replacing it with a low noise external power supply, in this case the iPower 5V. The iDefender 3.0 automatically switches from USB power to the external low noise power source when that external power is applied via a micro USB connector on the iDefender. The iPower 5V power supply has an audio band noise floor spec of 1 µV utilizing active noise cancellation technology with a "super-silent" 12 element output array. The iDefender 3.0 and iPower 5V combo would be an ideal alternative for those who aren't equipped to build the homebrew project.

Installation of the iDefender 3.0 and iPower 5V on the output of the iGalvanic 3.0 isolator eliminated much of the switching power supply noise of the iGalvanic, bringing it closer to the performance level of the Intona. As of this writing, the iFi iGalvanic 3.0, iDefender 3.0, and iPower 5V package deal is probably the only USB 3.0 super speed isolation available in the under \$400 price range, but if the SDR only requires USB 2.0 high speed then definitely get the Intona.

Ciunas Audio USB-HUB

While test and documentation for this article were well underway, I became aware of another candidate for SDR applications; the USB-HUB from Ciunas Audio in Ireland (www.ciunas.biz). It uses an internal battery to provide USB 5 volts on the isolated peripheral side instead of a 5 VDC to 5 VDC switch mode power supply as used in the Intona and iFi units. The up side is that it eliminates switching power supply noise. On the down side, it will only run for 8 to 10 hours before the battery needs to be recharged which is unacceptable for overnight automated SDR operation that can exceed 14 hours. However, the USB-HUB will run continuously on an included external trickle charger.

"The ISO-HUB is powered directly from Lithium Phosphate battery, no voltage regulators which impose their own noise signature," said John Kenny at Ciunas. "The high speed USB isolation is achieved through a chip dedicated to this purpose rather than FPGA's, and finally the isolated USB signal is reclocked/reformed to remove the USB jitter that all isolators introduce. All is housed in an aluminum case for RF shielding, and there are 4 isolated high speed USB 2.0 output ports, not one."

The USB-HUB sells for twice the cost of the Intona; \$746 in U.S. dollars, and it's only available direct from the manufacturer with no North American sales reps. Ciunas Audio contacted me after reading news in a shortwave bulletin about my USB isolation investigation. A unit was reported to be under test by a SDR user (WiNRADiO and SDRSpy), and Ciunas Audio promised to forward the test results to me. That was months ago and still no test results have been promulgated, so the performance of this unit for SDR applications remains unknown but promising.

Epilogue

Highly recommended for AM HF (LW, MW, SW) hardcore SDR DX'ing: Combination of the Intona USB 2.0 Hi-Speed Isolator with either the homebrew USB ground loop breaker or the iFi iDefender 3.0 Ground Loop Breaker and iPower 5V installed on the peripheral side of the Intona. This eliminates much of the Intona switching power supply/clock noise in the higher frequencies of shortwave, but the 'open carrier' signals at 488 kHz intervals, three of which are in the broadcast band, still show up. Not a problem. It's the best performing device found so far in the emerging technology of USB ground loop/noise elimination devices.



As more and more peripherals are requiring high speed and super speed USB data rates, the development of USB isolation devices is trying to catch-up. One to watch in the under \$100 price range is the HiFiMe High Speed USB Isolator (https://hifimediy.com/high-speed-usb-isolator-480Mbps) using the recently developed Silanna ICE08USB chip for data isolation. The HiFiMe high speed isolator was announced nearly a year ago, perhaps prematurely as it has yet to become available, currently listed as delayed.

Another worth considering at \$199.99 is the CoolGear USB 2.0 High Speed 480 Mbps Isolator Adapter (http://www.coolgear.com/product/usb-isolator-high-speed). It's the first I've found to use the new Silanna chip. Promoted as "the first of its kind to fully support USB 2.0 480 Mbps data transfer speeds," little else is known about the performance of this isolator. It can be powered by USB or an external supply if like other designs an internal switch mode supply generates RF noise.

The design of USB isolation devices is driven primarily by the pro audio market, where demand is increasing for higher speed USB to operate higher sample rate DAC's and processors. So, it's expected that in the future more high-speed and super-speed USB isolation devices will become available at lower cost for SDR noise reduction applications. Otherwise early adopters of the technology unfortunately will find that the choices are limited and the entry price is steep, but well worth the investment for hardcore DX'ing not to mention the added benefits of improved audio.

73 and Good DX!

FCC Silent Station List

118 stations on the FCC web site as of May 25, 2018 – often less than 100% accurate.

110	blations on the i ex	CVVCD	51tc as of 111ay 20, 2	010 0	rich lebb than 100 /c	accui	atc.
580	KANA-MT		WQII-PR	1360	WHCG-GA		WBSG-PR
690	KRGS-CO	1160	WAIX-NY		WHJC-WV	1520	WTHE-NY
730	WLTQ-SC		WBYN-PA	1370	WIVV-PR		WRSJ-PR
74 0	KCMC-TX	1170	WKFL-FL	1380	WAGS-SC	1530	WOBX-NC
750	WBMD-MD	1180	WVLZ-TN	1400	WZAZ-FL		WZTE-PA
790	KKON-HI	1190	KJJI-AR		WRON-WV		KVOG-Guam
810	WYRE-MD		KNEK-LA	1410	WIQR-AL	1540	WKDG-AL
	WKVM-PR	1210	WDGR-GA	1420	WUKQ-PR		WJZI-IN
820	WTNW-TN		WLRO-LA	1430	WNEL-PR		WKXG-MS
850	KHLO-HI	1220	KLBB-MN	1450	WZGX-AL		WDCD-NY
870	WQBS-PR	1230	WRJX-AL		WCOX-AL		WIBS-PR
880	WAMI-AL		KLXR-CA		WMFJ-FL	1550	KWRN-CA
	KLRG-AR		WMAF-FL		KIKR-TX		WUSP-NY
900	WABY-NY	1240	WULA-AL	1460	KHRA-HI		KNSH-TX
910	KLCN-AR		WVSL-NY		WATD-MA	1560	WWYC-OH
	WSRP-NC		WPTR-NY		WPON-MI		WBYM-PR
	KWDZ-UT		KRAL-WY	1470	KAIR-KS	1570	WIGO-GA
940	KCOE-OR	1260	KBHC-AR	1480	WVOI-FL		WQTW-PA
990	WRFM-IN	1270	WMDG-GA		WRCK-NY	1580	WDAB-SC
	KZZB-TX	1280	WCPM-KY		WQTM-NC		WVOZ-PR
1000	WJBW-FL	1290	WJBI-MS		KNTB-WA	1590	WRXB-FL
	WCMX-MA	1300	KROP-CA	1490	WIRB-AL		WABV-SC
1050	WBVG-NY		WFFG-FL		WSYL-GA	1600	WXMY-VA
1060	WGSB-NC		WOSW-NY		WVGB-SC	1620	WDND-IN
1080	KCNM-MP		KLLS-TX		KJNT-WY	1660	WGIT-PR
1090	KVOP-TX		KKOL-WA	1500	WKIZ-FL	1690	WMLB-GA
	WUVI-VI	1330	WSPQ-NY		WAKE-IN		WIGT-VI
1100	WCGA-GA	1340	KJMU-OK		WQMS-MS	1700	WRCR-NY
1130	WALQ-AL	1350	KCOX-TX		WGHT-NJ		
1140	WMMG-KY		KUSG-Guam	1510	WMEX-MA		

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