



DX MONITOR

The official publication of the
International Radio Club of America

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IRCA welcomes: **Joseph Borg** – Aylesbury, Buckinghamshire, UK and **Richard Lewelling** – Dallas GA. Next Seattle deadline **Monday 6/25/18 6 PM PLT** – pb.

2018 IRCA Convention

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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 is **free** for IRCA members or \$25 for non-members 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. 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. 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

WRTH Bargraph Frequency Guide A18 – Now Available – Buy your CD or Download today!

We are delighted to announce the availability of the new WRTH Bargraph Frequency Guide for the A18 season. The CD contains the complete, and monitored, A18 international broadcasts on LW, MW and SW, and fully updated domestic shortwave, displayed as a pdf colour bargraph. There are also other pdf and xls files to help you get the most out of the Bargraph. All these files are also available on a downloadable Zip file.

If you have not yet got your copy of WRTH 2018 then why not buy one now. Readers in the USA can also buy from **Amazon.com**.

The CD and Download are only available from the WRTH site. Visit our website (http://www.wrth.com/_shop) to find out more and to order a copy. I hope you enjoy using this new Frequency Guide.



BROADCASTING INFORMATION – Robert J Wien – 14051 Belle Chasse Blvd #415 – Laurel MD 20707
 E-mail: wienbob@aol.com Phone: 301-477-3733 Column Deadlines: Saturdays

DATE OF COLUMN: June 02 2018 **Column data span:** May 19-June 02 2018, Data courtesy of **Stationintel.com**, FCC database and member contributions.

CALL CHANGE

FREQ	OLD CALL	CITY OF LICENSE	NEW CALL
1000	WKDE	Altavista, VA	WGVY

FORMAT, SLOGAN AND SILENT STATUS CHANGES

FREQ	CALL	CITY OF LICENSE	NEW INFORMATION
730	KULE	Ephrata, WA	adds slogan: "La Estacion De La Familia"
910	KIYU	Galena, AK	was silent, now variety and news/talk, adds secondary network National Public Radio
	WSRP	Jacksonville, NC	was silent, now regional Mexican, adds slogan: "La Grande 1000"
1050	KJBN	Little Rock, AR	adds urban gospel as secondary format
1100	WWWE	Hapeville, GA	adds slogan: "Real 1100 AM"
1110	WSLV	Ardmore, TN	old slogan: "Cat Country", new: "Cat Country 1110-105.1"
1120	WXJO	Douglasville, GA	adds slogan: "Heaven AM1120-FM 104.5"
1250	KKDZ	Seattle, WA	was unknown format, now ethnic, old slogan: "KZIZ Radio Punjab", new: "KKDZ Radio Punjab"
1270	WHGS	Hampton, SC	now silent
1340	KTPI	Mojave, CA	was adult standards, now news/talk, old slogan: "Magic 1340 AM", new: "News Talk 1340"
	KSID	Sidney, NE	old slogan: "1340 The Fort", new: "95.7 and 1340 The Fort"
1350	WEGA	Vega Baja, PR	was silent, now Spanish religion, adds slogan: "Radio Vision Hispana"
1370	WGHN	Grand Haven, MI	was ESPN Radio Network, now Westwood One Good Time Oldies, old slogan: "Sports Radio 1370 and 94.9", new: "Oldies 94.9"
1380	KOSS	Lancaster, CA	was talk, now classic hip hop, old slogan: "NewsTalk 1380", new: "Old School 93.5"
1400	KWNA	Winnemucca, NV	now silent
1410	WMYR	Fort Myers, FL	changes city of license from Fort Meyers to Fort Myers
1450	WLAY	Muscle Shoals, AL	was variety, now country, old slogan: "The Sound", new: "Shoals Country"
	WWHK	Myrtle Beach, SC	was classic hip hop, now classic country, old slogan: "G 105.5", new: "105.5 Hank FM"
1460	KTKC	Springhill, LA	was adult standards, now Spanish religion, adds slogan: "Red De Radio Amistad"
1550	WZUM	Braddock, PA	adds slogan: "Pittsburgh Jazz Channel"
1580	WSRF	Fort Lauderdale, FL	changes city of license from Ft Lauderdale to Fort Lauderdale
	WHLY	South Bend, IN	now silent
1370	WGHN	Grand Haven, MI	was ESPN Radio Network, now Westwood One Good Time Oldies

Very short column this time around due to the Memorial Day weekend. We're getting pounded here with rain today in Laurel, Ellicott City MD was flooded last weekend again for the 2nd time in 3 years. That town is 15 miles north of where I live. DX slowing down with the summer season approaching also, but be sure to send in your tips to your respective column editors. 73's. Bob Wien



CANADIAN RADIO NEWS – Dan Sys
E-mail: sysdan@gmail.com

For May 2018, compiled June 1 2018

- BRANDINGS**
- 880 AB Edmonton CHQT From i880 NEWS to GLOBAL NEWS RADIO.
- DELETED FROM ISEDC DATABASE**
- 610 AB Peace River CKYL Flipped to 94.9 FM. Authorized three month simulcast period has expired.
- STATIONS IN NON-COMPLIANCE**
- 1410 QC Montreal CJWI Granted short term license renewal until August 31 2020 due to issues of non-compliance.
1040 QC Saint Constant CJMS Granted short term license renewal until August 31 2020 due to issues of non-compliance.
- GOING OFF THE AIR**
- 860 BC Ashcroft CBWA Will go dark when CBKS 1450 Cache Creek flips to 93.5. The new FM signal will adequately cover both communities.
- PROPOSED TECHNICAL CHANGES**
- 1350 ON Brampton CFKA Relocate transmitter. Power will remain 1000 watts (days)/45 watts (nights).



WESTERN DX ROUNDUP – Nancy Johnson – 2922 S Olivewood – Mesa AZ 85212-2923
E-mail: NancyJohnson@prodigy.net

WDXR DEADLINES: June 22, July 13, July 27, August 10, August 24, Sept 7, Sept 21, Sept 28, October 5 and October 12. Please use Eastern Local Time.

REPORTERS FOR THIS ISSUE:

- (RB) **Rick Barton**-PO Box 5503-Peoria AZ 85385 desertmoon_dxshack@inbox.com
Grundig Satellit 5000/205 (stock loop), Panasonic RF-2200 (stock loop) RS SW-2000629, HQ-180A, HQ-200, outdoor Slinky and Terk loop
- (JCJ) **John Johnson**-2922 S Olivewood, Mesa AZ 85212 John_Johnson@prodigy.net
SDRplay RSPduo, Wellbrook ALA1530LNP
- (JP) **Jon Pearkins**-Edmonton AB jon@pearkins.com
Sangean PR-D5

OF SPECIAL INTEREST

- 610 CKYL **AB**, Peace River 5/25 2355, 5/26 0250, 0340 no sign of them despite hearing CHNL, KOJM and tentative KONA and KRTA, confirming CKYL's deletion from ISEDC (govt.) database as permanently off the air after recent simulcast FM power increase. (JP-AB)
- 600 KOGO **CA**, San Diego 5/21 0115 long string of local spots to ID "6-hundred ko-go," then to Coast to Coast program. Very good reception, nearly alone on channel, over very faint co-channel interference, on barefoot portable. (RB-AZ)
- 610 ?KRTA? **OR**, Medford 5/26 0346 continuous Mexican music replacing KOJM as the station under CHNL. (JP-AB)
?KONA? **WA**, Kennewick-Richland-Pasco 5/26 0250 likely the talk programming under CHNL and KOJM. (JP-AB)
- 670 KLTJ **CO**, Commerce City on 6/4 0715 religious lectures by man to good ID by man at 0726. Steady, good S-9 signal. (RB-AZ)
KMZQ **NV**, Las Vegas 5/21 0700 news to Hugh Hewitt Show, very good and steady. (RB-AZ)
- 690 KRGS **CO**, Rifle 6/8 0100 out of ESPN promo with "KRGS serving Rifle, Parachute, Glenwood Springs and surrounding area. KRGS 690 AM" into ESPN programming. Alone with others nulled. KRGS was most likely on with daytime power. First time heard. (JCJ-A)
- 730 CHMJ **BC**, Vancouver 5/31 and several times since, conspicuous by their absence, usually with CKDM all alone, confirming reports that CHMJ is on low power for days at a time for transmitter and tower work due to damage from 2016 fire. (JP-AB)
CKDM **MB**, Dauphin 5/31 0059-0103 faded up with C&W in tightest null of CBX-740 slop. (JP-AB)
- 760 KFMB **CA**, San Diego 6/6 at 0800 with ID by man "San Diego's talk and breaking news." Very good and completely covering the channel. (RB-AZ)
780 KKOH **NV**, Reno 5/21 0730 "Here on KKOH dot com." (RB-AZ)
- 980 K SVC **UT**, Richfield 6/7 0840 Jim Bohannon morning news program. Local spots, "Utah Air National Guard," ad spots naming several Central and Southern Utah cities. Good ID finally came at the top of the hour to (nice to hear) completely local news program after the hour. (RB-AZ)
- 1140 KGEM **ID**, Boise 6/7 0058 "on 11-40 K-Gem." Good, barely over a lot of co-channel mumble rumble. Just a minute later, completely buried by Mexican national anthem (of course the ID on the Mexican station was lost during a deep fade thanks to Murphy and his law). (RB-AZ)
- 1180 KERN **CA**, Wasco-Green Acres 5/23 0945 political talk radio program, over/under co-channel KLFP. (RB-AZ)
- 1360 KACT **TX**, Andrews 6/2 good under local KPXQ 0100 with "1360 KACT Andrews" legal ID. KACT may have been on daytime power as this is the first time heard. (JCJ-AZ)
- 1540 KMPC **CA**, Los Angeles 6/6 0145 dialogue with man, woman in Korean. Man in English with good ID "Radio Korea," "Maximum power, 50,000 watts, KMPC." (RB-AZ)
- 1590 KELP **TX**, El Paso 6/6 at 0130 suddenly came up out of the mumble-rumble with man preaching. Monitored long enough to catch ID, local refs. Strong over the top of co-channel jumble on barefoot Grundig 5000. (RB-AZ)
- 1680 KGED **CA**, Fresno 6/1 2218 local spots, good ID by man to "Lars Larson Show." Good pre-sunset with barefoot RF-2200. (RB-AZ)

Thank you for sending in your catches WDXR reporters! – Nancy 6/8 1900



CENTRAL DX ROUNDUP – John C Johnson – 2922 S Olivewood – Mesa AZ 85212-2923
E-mail: John_Johnson@prodigy.net CDXR reports ONLY: cdxr@ircanline.org

RIDING GAIN

[EB-MO] **Eric Bueneman**, Hazelwood MO NOUIHEric@gmail.com
CountyComm GP-5/SSB Ultralight receiver, Grundig AN-200 tunable loop

DOWN THE DIAL

- 810 WHB **MO**, Kansas City. 5/31 fair to poor signal over WGY. 0322 noted with *ESPN Sports Center All Night*, local spots, "WHB" jingle. [EB-MO]
1230 WTKG **MI**, Grand Rapids. 6/5 fair to poor signal, mixing with other stations. 0532 poked through the mess with call letters. [EB-MO]
1330 WBGW **IN**, Evansville. 6/5 good signal over KNSS, KPTY. 0525 noted with end of *Focal Point, Focus on the Family* promo, "AM 13-30" mention, *Mission Network News*, feature on focusing on the Christian's relationship with Jesus Christ, mention of Proverbs 31 Ministries, promos and legal ID at 0530. [EB-MO]
1520 KOLM **MN**, Rochester. 6/4 fair over KOKC, KRHW. 0535 with "CBS Sports Radio" jingle, "Sports radio 15-20 the Ticket" ID into local spots. [EB-MO]
1590 KDEX **MO**, Dexter. 6/7 fair to poor signal, mixing with KMOZ, WAIK. 0659 noted with call letters in sign-on announcement. New in the logbook; this completes 1590 in the Show-Me State in my logbook. [EB-MO]

FLASHBACK

50 Years Ago – June 15 1968 issue of "DX Monitor" ... **Patrick Martin** of Seaside OR told of his visits with **Bill Block** and **Theo Donnelly** ... **Jon E Pearkins, Jr** of Burnaby BC visited CJVI, CFAX, CKDA, and CHUB ... **Michael B Northam** of Beaverton OR was selling his National NC-109 so he could buy an HQ-160 ... **Larry B Godwin** of Littleton CO visited KLAQ 1600. // **25 Years Ago** – June 12 1993 issue of "DX Monitor" ... **Mike Sanburn** of Bellflower CA said he heard Dr

Demento mention he received a record from **Frank Merrill** to play on the air. "My Ken L Ration" by the Flying Saucers ... **Dale Park** of Honolulu HI was looking forward to the Billings MT IRCA Convention and visiting Yellowstone National Park and Jackson WY.

OPEN MIKE

Thanks to Eric we have a column this week. I have added an SDRplay RSPduo to the radio room. Check out WDXR for my newest loggings. This column was typed 6-8-18. 73, John



EASTERN DX ROUNDUP – **Eric Bueneman (NØUIH)** – 631 Coachway Lane – Hazelwood MO 63042-1347
E-mail: n0uiheric@gmail.com
DEADLINES: Friday 2359 ELT

TUNING THE DIALS THIS ISSUE:

(PS-ON) **Paul Snider**, Welland ON, Canada paulisnider@yahoo.ca
Elad FDM-S2 software-defined receiver, Pixel RF Pro-1B loop, MFJ-1020C as a tuner

ACROSS THE DIAL

- 1070 WNCT **NC**, Greenville – 5/30 2328 noted with Oldies format, including a tune by Sly and The Family Stone, "Beach, Boogie and Blues" ID at 2400. A fair to poor signal was noted, mixing with CHOK; not heard often here. (PS-ON) (This form of Oldies is known as Beach music, a format unique to the Carolinas – eb)
- 1470 WLOA **PA**, Farrell – 5/28 2245 noted with a Gold-based Adult Contemporary format, including songs by Kelly Clarkson and Billy Joel, *Uncovered* phone-in feature, "1470 WLOA" ID at 2249. A poor to very poor signal was noted in a mix of stations. (PS-ON)
- 1570 WLRS **IN**, New Albany – 6/5 2203 noted with a Regional Mexican format, featuring music by a male and female artist, "El Poder" slogan at 2207, more music and brief talk between every other song. A fair at times to very poor signal was noted in a mix of stations, including WBGX, WWCK, an unidentified Oldies station and others. Confirmed via Tune-In Web stream. (PS-ON)
- 1590 WHPY **NC**, Clayton – 5/31 1957 noted with vocal Christian music, Scripture reading by a male announcer, "Thank You for Listening to Fellowship Radio 1590 WHPY Clayton, North Carolina" legal ID at 2000 into *Viewpoint*. A fair at times to poor signal was noted in a mix of stations. (PS-ON)

EDITOR'S NOTES

Thanks to Paul for his logs in this issue! Summer is a great time to make sure our antennas are hooked properly to our receivers; it's also a great time to do maintenance in the shack to prepare for the upcoming DX season. 73 and good DX from NØUIH, the Florissant Valley Dial Twister



DX WORLDWIDE/TROPICAL BAND DX – **Brandon Jordan** – PO Box 338 – Rossville TN 38066
E-mail: dxwww.irca@gmail.com
all times UTC

Deadline – Sunday Midnight Central Time.

*** TROPICAL BAND DX ***

- 2850 **DPR KOREA** KCBS, Pyongyang. MAY 25 1200 – Military music, all female choruses. Barely threshold at 1130, now fair/good. [RB-AZ]
- 3320 **SOUTH AFRICA** Radio Sonder Grense, Meyerton. MAY 25 0430 – Program with symphonic classical music. Poor/fair w/some T-Storm static. [RB-AZ]
- 3925 **JAPAN** Radio Nikkei 1, Chiba-Nagara. MAY 25 1110 – Excellent // on 6055 man and woman in Japanese, a program with chamber music. Fair/good. [RB-AZ]
- 3945 **JAPAN** Radio Nikkei 2, Chiba-Nagara. MAY 25 1220 – with pop vocal, woman presenter. Fair. [RB-AZ]
- 3985 **REP KOREA** Echo of Hope, Hwaseong. MAY 25 1140 – Man with (listed Korean) monologue and buried under jamming station. Considering recent current events, interesting South Korea still has stations in opposition to North Korea and the DPRK still jams broadcasts from the ROK. [RB-AZ]
- 4055 **GUATEMALA** Radio Verdad, Chiquimula. MAY 25 1045 – Traditional religious music solo on piano. Good but choppy signal. [RB-AZ]

CONTRIBUTOR

RB-AZ **RICK BARTON**, Peoria AZ
RS SW-2000629, Satellit 750 with various outdoor wires, World Traveler Longines Symphonette 4597 portable with Terk advantage loop, County Comm GP-5/SSB Gen 3 Ultralight receiver, County Comm high sensitivity AM (LW/MW) antenna

73, Brandon



DXpeditions – **Phil Bytheway** – 9705 Mary NW – Seattle WA 98117-2334
E-mail: DXM.EiC@gmail.com

QH11 - Lubec, Maine over Memorial Day

6/6. My wife and I visited Quoddy House near Lubec, Maine for the Downeast Birding Festival over Memorial Day weekend. Nobody who knows anything about radio goes to Quoddy House without putting up an antenna and giving DXing a try.

I put up a 160' DKAZ pointing 100 deg. and am working through Perseus wav files from May 26-28. So far the highlights are Bolivia on 960, Mozambique on 1206 and about 20 Brazilians.

Conditions were not the greatest but anything is better than listening from my noise-ridden, non-coastal Alexandria VA home.

You can see and hear what I heard at this webpage: http://realmonitor.com/am_logs_qh11.php

Bill Whitacre – Alexandria VA

Cook Islands DXpedition-- Australian/NZ Loggings and MP3's – Gary DeBock

6/7. All recordings made with a 7.5" loopstick CCrane Skywave SSB Ultralight <https://dreamcrafts.box.com/s/oeph12ru7ejk31saxdq2tjix9db0ros>

This is the second group of Australian and New Zealand MW station loggings made during our April 8-13 trip to Aitutaki in the Cook Islands – a location with superb sunset skip propagation to New Zealand. As a result over 100 Kiwi station recordings were made during the trip, which have been taking some time to sort out.

The original Cook Island plan had been to investigate every MW frequency during sunset skip over five days, but extra Polynesian dinners scheduled by my wife ate up some serious time, causing several frequencies to go unrecorded. Despite this the greater portion of the MW band was indeed checked during sunset skip propagation, resulting in the greatest number of DX recordings I've ever made during any DXpedition. All of these sunset skip loggings were made with a hand-held 7.5" loopstick CCrane Skywave SSB model on the Aitutaki lagoon beach.

Whereas the Kiwi stations dominated the sunset skip sessions, the Australian MW stations dominated at sunrise, especially on frequencies like 576, 594, 693, 918 and 1566 – all of which had exotic South and Southeast Asian target stations. 693-3AW and 1566-3NE even had the same "Overnight Australia" program running each morning, managing to foul up two priority frequencies with the same long-winded announcer each session (although 693-Bangladesh had enough power to silence him at times). 918 also had an Oz talk program fouling up the frequency (presumably 4VL) along with RNZ and Shandong, but Cambodia did finally break through with its National Anthem on 4/12. Overall the experience of DXing down under was a big thrill at sunrise, though, with long range South Asian propagation that North American DXers can only dream about!

630 **AUSTRALIA** 4QN, Townsville, 50 kW. Oz big gun was easy to hear in the null of Radio Cook Islands' open carrier at 1500 on 4/12 with trumpet fanfare and ABC news at the TOH; it was also easy copy in RCI's null (with RNZ) every evening

<https://dreamcrafts.box.com/s/ceiaw26agqd4h15jv0j0xipexd7oryy6>.

NEW ZEALAND RNZ National, Napier-Hastings, 10 kW. 5+1 time pips and female announcer mixing with 4QN in the null of Radio Cook Islands' open carrier at 1500 on 4/12; this station was the dominant co-channel of RCI in the evening

<https://dreamcrafts.box.com/s/ceiaw26agqd4h15jv0j0xipexd7oryy6>.

- 639 **AUSTRALIA** 2HC, Coff's Harbour, 5 kW. Local ads (mentioning the suburb "Umarra" at 1:08) and "100.5 FM, 639 AM" ID at 1:18
<https://dreamcrafts.box.com/s/cgv1vb0g8twz4vl6j8660hdjj53d1mmx>.
- 657 **NEW ZEALAND** Star, Wellington/Tauranga, 50/10 kW. A real powerhouse with its Christian programming each evening, its signal tapered off somewhat around sunrise, allowing Pyongyang and AIR (Kolkata) to sneak through on 4/12. This signal (at 1651 on 4/12) starts off with the Asians nulled for a few seconds (after AIR had hit its peak), with Star's Irish-accented preacher hitting an S9 level briefly
<https://dreamcrafts.box.com/s/3o4kd9pkall7oyrzzhy0n2hnx3o8ypfx>.
- 675 **NEW ZEALAND** RNZ National, Christchurch, 10 kW. Another evening powerhouse with a traffic report during the rush hour at 0630 on 4/12
<https://dreamcrafts.box.com/s/o7fldq2j27j3xdpfnwn7yienzn11kq9l>.
- 693 **AUSTRALIA** 3AW, Melbourne, 5 kW. This was the major pest for Bangladesh reception (and much more troublesome than Radio Sport). This recording of the "Overnight Australia" program at 1703 on 4/10 was during a mix with news from Bangladesh, and features multiple promotions (initially) for the 3AW smart phone and the 3AW app (I don't think I'll apply for these!)
<https://dreamcrafts.box.com/s/39r5556vdg04sasruqfqqkyr8wkm7v>.
- NEW ZEALAND** Radio Sport, Dunedin, 5 kW. Usually dominant around 1600 daily, only to lose out to 3AW and Bangladesh as 1700 approached. This Yankee-accented program (Fox Sports News relay) was at 1608 on 4/10
<https://dreamcrafts.box.com/s/e921kcqxn063geffbjq3t6hq97131vey>.
- 702 **AUSTRALIA** 2BL, Sydney, 50 kW. The Oz big gun had a rough time going up against Kiwi Magic in the Cooks. Here it was at almost equal strength (with male-female conversation under Magic's "See You Later, Alligator") at 0740 on 4/9
<https://dreamcrafts.box.com/s/j4xkzd773528d4ekr3ibjw184j5hev0i>.
- NEW ZEALAND** Magic, Auckland, 10 kW. Magic's flagship station ruled the frequency each evening, with awesome signals around the Kiwi sunset, such as at 0730 on 4/10 with this very creative oldies song medley ID
<https://dreamcrafts.box.com/s/n0bnhm6yay3w0nwbj7mez8foxuo7tzb>.
- 729 **NEW ZEALAND** Radio Sport, Whangarei, 3 kW. Dominant over a real crowd at 1648 on 4/13 with Yankee-accented Fox Sports News relay
<https://dreamcrafts.box.com/s/ykyl4b029h1xyqn0vea1w8ttz0nk7peh>.
- 738 **AUSTRALIA** 2NR, Grafton, 50 kW. Dominant over Magic (a pretty rare occurrence in the evening) at 0745 on 4/9 with male speech
<https://dreamcrafts.box.com/s/synliotkd983zc7ch57rcx84xwsuwaw>.
- NEW ZEALAND** Magic, Christchurch, 5 kW. The usual sunset skip leader on the frequency, with strong music //702 over 2NR at 0731 on 4/10
<https://dreamcrafts.box.com/s/vp58j5scujemjzn59ua6tebzk7c56awl>.
- 756 **NEW ZEALAND** RNZ National, Auckland, 10 kW. This was one of the strongest RNZ signals each evening, although for some reason it never was recorded. Usually at equal strength with its 567 and 675 parallels.
- 765 **NEW ZEALAND** Radio Kahungunu, Napier-Hastings, 2.5 kW. This Maori-language overachiever was competitive with its 603 parallel on most evenings, but like 756-RNZ accidentally went unrecorded (most likely due to an unscheduled Polynesian dinner).
- 774 **AUSTRALIA** 3LO, Melbourne, 50 kW. The Oz big gun was a potent presence during most sunrise sessions, such as at 1611 on 4/9 (booming in over NZ's Radio Sport)
<https://dreamcrafts.box.com/s/krxsxdkps64zbnlmm0m0wuoeivqmp4yd>.
- NEW ZEALAND** Radio Sport, New Plymouth, 5 kW. Yankee-accented Fox Sports news relay almost at equal strength with 3LO at 1612 on 4/9, but usually way under the Oz big gun around sunrise
<https://dreamcrafts.box.com/s/5xqrmvw1n3866u2rotzqx9oa3wa4o8z>.
- 792 **AUSTRALIA** 4RN, Brisbane, 25 kW. Not very impressive for the power level on most mornings, usually in a lackluster mix with NZ's Yankee-accented Radio Sport (such as at 1614 on 4/9, playing music //576)
<https://dreamcrafts.box.com/s/eg72jxaf03tdxu4i70vbg52231ixckn5>.
- NEW ZEALAND** Radio Sport, Hamilton, 5 kW. Dominant over a weak 4RN with Fox Sports News relay at 1615 on 4/9
<https://dreamcrafts.box.com/s/6pdsb8j64gdm67882rwh1jhy8eikco2>.
- 810 **AUSTRALIA** 2BA, Bega, 10 kW. Female speech //774 (along with RNZ and a possible KGO) at 0850 on 4/10
<https://dreamcrafts.box.com/s/1opl0zzodp01jhbfu2sv2o0fzqyttghd>.
- NEW ZEALAND** RNZ National, Dunedin, 10 kW. Male speech //819 in a three station mix at 0850 on 4/10; co-channels were 2BA and a possible KGO
<https://dreamcrafts.box.com/s/1opl0zzodp01jhbfu2sv2o0fzqyttghd>.
- 819 **NEW ZEALAND** RNZ National, Tauranga, 10 kW. Strong signal all alone with male conversation //810 at 0848 on 4/10
<https://dreamcrafts.box.com/s/qa751yhwxlosyi1po1zqqdrbzd7e047>.
- 828 **AUSTRALIA** 3GI, Sale, 10 kW. Female and male speech //774 way under NZ's TAB Trackside at 0835 on 4/10
<https://dreamcrafts.box.com/s/t73cumjyelggt9d9gk94nyu23lv3wzol>.
- NEW ZEALAND** TAB Trackside Radio, Palmerston North, 2 kW. You can almost smell the horses as the low power TAB Trackside leaves the Aussie 3GI way down in the dust at 0835 on 4/10
<https://dreamcrafts.box.com/s/t73cumjyelggt9d9gk94nyu23lv3wzol>.
- 837 **AUSTRALIA** 4RK, Rockhampton, 10 kW. Female speech //774 in a mix with RNZ at 0840 on 4/10
<https://dreamcrafts.box.com/s/nx22gapusqquzotjoo87317itbmf9hkv>.
- NEW ZEALAND** RNZ National, Whangarei/Kaitiaki, 2.5/2 kW. Male speech //819 in a mix with 4RK at 0840 on 4/10
<https://dreamcrafts.box.com/s/nx22gapusqquzotjoo87317itbmf9hkv>.
- 846 **NEW ZEALAND** Newstalk ZB, Masterton, 2 kW. The usual co-channel in the null of Radio Kiribati (on Christmas Island), it was at a fairly strong level with female and male speech //1035 at 0833 on 4/10
<https://dreamcrafts.box.com/s/4lxwj5239ug4rsdwzju2k7136zv7h67f>.
- 855 **NEW ZEALAND** Rhema, Hamilton, 2 kW. "Focus on the Family" promo and commercial ads at 0830 on 4/10, followed by the "Focus" program in Yankee-accented English
<https://dreamcrafts.box.com/s/s0xxgqxg94043ycr861gjjkaotgltw3>.
- 864 **NEW ZEALAND** Newstalk ZB, Invercargill, 10 kW. Modest signal with female speech //1035 over a weak co-channel at 0827 on 4/10
<https://dreamcrafts.box.com/s/1385lejmf7f82qu2wc61bfxn1dsbabzvj>.

First Report from April 2018 Kona TP DXpedition – Craig Barnes – Wheat Ridge CO (aka The TP Desert)

6/9. I spent 5 days on the Kona Coast of Hawaii (the Big Island) from April 14 to April 19 2018. I stayed at the Kona Isle Condominiums. The condominium complex was selected due to the availability of a series of picnic tables sited about 50 ft from the shore. I used a "Frequency Flyer" Turbocharged Tecsun PL-380 and 5 inch FSL generously provided by Gary DeBock. These two pieces of equipment are clear difference makers. I DXed both in the evening and in the early morning.

Here are the first series of recordings of the DXpedition (Many thanks to Gary for editing these recordings!!) More to come!

- 621 **TUVALU** T2U2, Funafuti. An excellent recording, with island music at a good level
<https://dreamcrafts.box.com/s/z3as4h4cexkg6ospxfqpe1map6iedljc>.
- 1017 **TONGA** A3Z, Nuku'alofa. The fast-talking DU English station under Tonga is most likely 2KY, an Australian horse racing station
<https://dreamcrafts.box.com/s/rxiqpy3s1ri4jl852een5ptpgp4h8xkj>.
- 1098 **MARSHALL ISLANDS** V7AB, Majuro. Excellent island music at a strong level, with Newstalk ZB making things interesting in the beginning
<https://dreamcrafts.box.com/s/l1dd7uapi84lyso0vo487lytdw1xgbgb>.
- 1224 **NEW ZEALAND** TAB Trackside Radio, Invercargill. Another excellent recording. I've chosen the strongest part (near the end) of the 2 kW Kiwi station
<https://dreamcrafts.box.com/s/eiluwynqiyptwz7h6ke8dcai1fhtbr>.
- 1386 **NEW ZEALAND** Radio Tarana, Auckland. Good strength recording (I've chosen the strongest part, near the end)
<https://dreamcrafts.box.com/s/apyk5qt7201yecoiahdrvrvv623i4c4s>.
- 1440 **KIRIBATI** T3K1, Radio Kiribati, Betio. Great recording, with lots of speech from the usual female announcer and island music at the end
<https://dreamcrafts.box.com/s/ewb8o6m8ygsdjj4gajkeduc4gd616w2y>.



SPORTCHANNELS IRCA – Compiled by: Eric Bueneman (NØUIH)

E-mail: n0uiheric@gmail.com

Welcome to another edition of SportChannels! Football season is getting under way north of the border, and soccer season is under way throughout North America. We also have the Milwaukee Brewers' radio network list and a couple of minor league baseball tips. Network flagships and primary stations are in boldface type.

CANADIAN FOOTBALL LEAGUE

BRITISH COLUMBIA LIONS 1040 CKST Vancouver, BC Web: bclions.com

CALGARY STAMPEDERS 770 CHQR Calgary, AB Web: stampeders.com

EDMONTON ESKIMOS 630 CHED Edmonton, AB Web: esks.com

HAMILTON TIGER-CATS 1150 CKOC Hamilton, ON Web: ticats.ca

LES ALOUETTES DE MONTREAL (French) 98.5 CHMP Longueuil, QC Web: montrealalouettes.com

MONTREAL ALOUETTES (English) 690 CKGM Montreal, QC Web: en.montrealalouettes.com

OTTAWA REDBLACKS No radio outlet noted Web: ottawaredblacks.com

SASKATCHEWAN ROUGHRIDERS 620 CKRM Regina, SK Web: riderville.com

TORONTO ARGONAUTS 1050 CHUM Toronto, ON Web: argonauts.ca

MAJOR LEAGUE SOCCER

The following MLS teams do not have radio play-by-play coverage of their games:

COLUMBUS CREW, DISTRICT OF COLUMBIA UNITED, LOS ANGELES GALAXY, PHILADELPHIA UNION, REAL SALT LAKE, TORONTO FOOTBALL CLUB

The following MLS team has radio play-by-play coverage only on the World Wide Web:

NEW YORK RED BULLS Web: newyorkredbulls.com

The following MLS teams have radio play-by-play coverage:

ATLANTA UNITED FOOTBALL CLUB (English) 92.9 WZGC Atlanta, GA Web: atlutd.com

ATLANTA UNITED FOOTBALL CLUB (Spanish) Web: atlutd.com/espanol/

1130 WLBA Gainesville, GA (simulcast)

1460 WXEM Buford, GA (simulcast)

1600 WAOS Austell, GA

CHICAGO FIRE (Spanish) 1200 WRTO Chicago, IL Web: chicago-fire.com

COLORADO RAPIDS (English) 950 KKSE Parker, CO Web: coloradorapids.com

FOOTBALL CLUB DALLAS (Spanish) 1270 KFLC Benbrook, TX Web: fcdallas.com

HOUSTON DYNAMO (English) 610 KILT Houston, TX, 650 KIKK Pasadena, TX Web: houstondynamo.com

HOUSTON DYNAMO (Spanish) 1010 KLAT Houston, TX Web: houstondynamo.com/dynamospanol/

LOS ANGELES FOOTBALL CLUB (English) 710 KSPN Los Angeles, CA Web: lafc.com

LOS ANGELES FOOTBALL CLUB (Spanish) 980 KFVB Los Angeles, CA Web: lafc.com/espanol/

MINNESOTA UNITED FOOTBALL CLUB Callum Williams, Kyndra de Saint Aubin, Jamie Watson (English) 1500 KSTP Saint Paul, MN Web: mnufc.com

MONTREAL IMPACT (English) 690 CKGM Montreal, QC Web: impactmontreal.com/en/

MONTREAL IMPACT (French) 98.5 CHMP Longueuil, QC Web: impactmontreal.com

NEW ENGLAND REVOLUTION Brad Feldman, Paul Mariner (English) 98.5 WBZ-FM Boston, MA Web: revolutionsoccer.net

NEW ENGLAND REVOLUTION (Portuguese) 1570 WMVX Methuen, MA Web: revolutionsoccer.net

NEW YORK CITY FOOTBALL CLUB (English) 91.5 WNYE New York, NY Web: nycfc.com

NEW YORK CITY FOOTBALL CLUB (Spanish) 1280 WADO New York, NY, 92.7 WQBU Garden City, NY Web: nycfc.com/espanol/

ORLANDO CITY SOCCER CLUB (English) 740 WYGM Orlando, FL/96.9 W245CL Deltona, FL Web: orlandocitysc.com

ORLANDO CITY SOCCER CLUB (Spanish) 990 WDYZ Orlando, FL Web: orlandocitysc.com/espanolportugues/

PORTLAND TIMBERS (English) 750 KXTG Portland, OR/102.9 K275CH Gresham, OR Web: timbers.com

PORTLAND TIMBERS (Spanish) 1150 KGDD Portland, OR/93.5 K228EU Portland, OR Web: timbers.com

SAN JOSE EARTHQUAKES (English) 680 KNBR San Francisco, CA Web: sjeearthquakes.com

SAN JOSE EARTHQUAKES Carlos Cesar Rivera (Spanish) 1370 KZSF San Jose, CA Web: sjeearthquakes.com

SEATTLE SOUNDERS (English) 950 KJR Seattle, WA Web: soundersfc.com

SEATTLE SOUNDERS (Spanish) 1360 KKMO Tacoma, WA Web: soundersfc.com/espanol/

SPORTING KANSAS CITY (English) 810 WHB Kansas City, MO Web: sportingkc.com

SPORTING KANSAS CITY Diego Gutierrez, Ale Cabero, Raul Villegas, Alonso Cadena (Spanish) 1480 KCZZ Mission, KS Web: sportingkc.com

VANCOUVER WHITECAPS (English) 1040 CKST Vancouver, BC, 1410 CFTE Vancouver, BC Web: whitecapsfc.com

MAJOR LEAGUE BASEBALL

AMERICAN LEAGUE – CENTRAL DIVISION

MINNESOTA TWINS: Jon Peakins reports that the Twins' games are also carried on 1300 KGLO Mason City, IA.

AMERICAN LEAGUE WESTERN DIVISION

OAKLAND ATHLETICS: Add 1550 KGMZ San Francisco, CA to the network

NATIONAL LEAGUE – CENTRAL DIVISION

MILWAUKEE BREWERS (via Tim Noonan) Broadcaster and Web information in *DX Monitor* Volume 55 Number 31

AM
550 WSAU Wausau, WI
570 WMAM Marinette, WI
580 WKTY La Crosse, WI
590 WJMS Ironwood, MI
620 WTMJ Milwaukee, WI
940 WFAW Fort Atkinson, WI
960 WTCH Shawano, WI
1100 WISS Berlin, WI
1150 WHBY Kimberly, WI
1230 WCLO Janesville, WI
1240 WJMC Rice Lake, WI
1240 WOMET Manitowoc, WI
1310 WIBA Madison, WI
1330 WHBL Sheboygan, WI
1350 WPDR Portage, WI
1360 WTAQ Green Bay, WI
1400 WRDB Reedsburg, WI
1430 WBEV Beaver Dam, WI
1450 KFIZ Fond du Lac, WI
1450 WRCO Richland Center, WI
1490 WIGM Medford, WI
1550 WEVR River Falls, WI
1590 WPVL Platteville, WI

FM
92.3 WRLS-FM Hayward, WI
92.7 W224DE Janesville, WI (1)
92.7 WDUX-FM Waupaca, WI
93.9 WDOR-FM Sturgeon Bay, WI
94.3 WQPC Prairie du Chien, WI
95.1 W236CO Marshfield, WI (2)
96.1 W241CJ Shawano, WI (3)
96.5 WHOH Rhinelander, WI
96.7 K244FM La Crosse, WI (4)
97.5 WTAQ-FM Glenmore, WI
98.3 W252DR Oshkosh, WI*
98.3 WCQM Park Falls, WI
99.7 WWIS-FM Black River Falls, WI
99.9 WSAU-FM Rudolph, WI
103.3 W277CV Milwaukee, WI (5)
103.5 W278AU Appleton, WI (6)
106.1 WACD Antigo, WI
106.3 W292DR Wrightstown, WI (6)
106.3 WEVR-FM River Falls, WI
106.7 WATQ Chetek, WI
107.3 WNXR Iron River, WI
107.7 W299CD Richland Center, WI (7)

Relays: 1) WCLO 1230, 2) WSAU 550, 3) WTCH 960, 4) WKTY 580, 5) WTMJ 620, 6) WHBY 1150, 7) WRCO 1450, Note: * denotes Brewers' list has the frequency listed as 98.7 MHz

MINOR LEAGUE BASEBALL

ERIE SEAWOLVES (AA-Detroit Tigers, no play-by-play personnel information available) **1330 WFNN Erie, PA**

MEMPHIS REDBIRDS (AAA-Saint Louis Cardinals, Steve Selby) **560 WHBQ Memphis, TN, 87.7 WPGF-LP Memphis, TN**

SPRINGFIELD CARDINALS (AA-Saint Louis Cardinals, no play-by-play personnel information available) **98.7 KWTO-FM Springfield, MO**

That will wrap up another edition of SportChannels for this edition, and for Volume 55. Thanks to Tim Noonan and Jon Pearkins for their contributions in this edition! In the first edition of SportChannels for Volume 56, we'll be getting started with football season south of the border; kicking off the NFL station lists will be the AFC West and NFC West. I hope to see some of you in Saint Charles in September! 73 and play hard from the Florissant Valley Dial Twister.



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USB Isolators/Ground Loop Eliminators for Software Defined Radio Applications

by Bruce Conti – May 2018

Intro to USB

USB stands for Universal Serial Bus. It's an internationally standardized specification designed for easy plug-and-play 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.

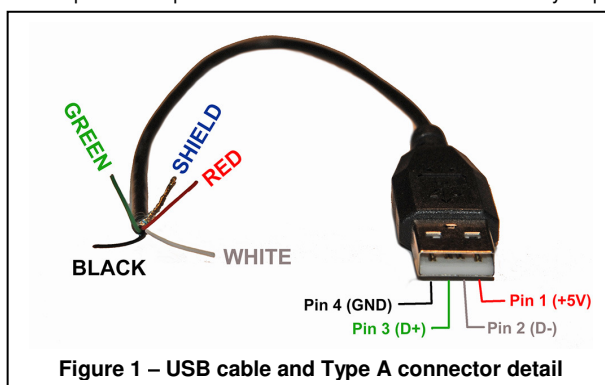


Figure 1 – USB cable and Type A connector detail

The typical USB 2.0 high speed cable for connecting a SDR receiver peripheral to a host computer consists of four wires (see Figure 1). 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 DXpedition. 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 and host computers.

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. See Figures 2 and 3 for details.

Parts List

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

Construction

1. Cut the USB extension cable in half. De-jacket 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 µf 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, ie 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.

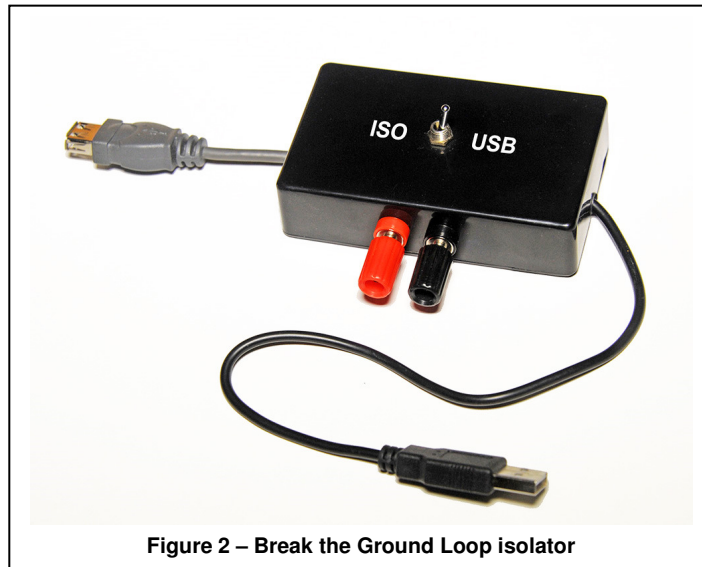



Figure 2 – Break the Ground Loop isolator



GEOMAGNETIC INDICES – Compiled by: *Phil Bytheway*
 E-mail: phil_tekno@yahoo.com

Geomagnetic Summary May 1 2018 through May 31 2018

Tabulated from status daily (K @ 0000 UTC).

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

Gx – Geomagnetic Storm Level

Rx – Radio Blackouts Level

Sx – Solar Radiation Storm Level

Antenna Reference Manual Volume 3 (ARM3)

This manual is a compilation of numerous articles on the subjects of antennas, phasing, impedance matching and RF amplification for medium wave DXers. Some of the articles have been published in **DX News** between 1999 and 2004. Some articles were formerly available as reprints. 8 1/2" X 11" bound book format.

ARM3 Contents:

All Articles by Mark Connelly WA1ION unless noted

BBL-1 Broadband Loop Antenna (Parts a & b)

Pennant Antenna with Remote Termination Control

Flag Antenna Construction and Test Results

Three Loop Antenna Array with Electrically-Rotatable Nulling

Phased Spaced Active Whips and Broadband Loops

Medium Frequency Amplifier Circuits Compared

TMB-1 Tri-Mode Buffer Amplifier Box

DXP-3 DXpedition Phasing Unit

Superphaser-2 Phasing Unit

FCA-1 Feedline Coupling Adaptor

New Termination Control Method for Flag, Pennant, and similar Antennas

Fabricating Impedance Transformers for Receiving Antennas (John Bryant)

Broadband Receiving Antenna Matching

Passive Broadband Phasing

Price: **IRCA/NRC Member USA** \$11.95, Non-Member USA \$16.95. Other countries write for quote sales@nrcdxas.org.

Loop Antenna Design and Theory (LAM)

Revised and updated in 1996, this manual is a compilation of numerous articles on the subject of design and theory of the loop antenna that have appeared through the years in **DX News**. This book gives detailed information on the theory of operation, construction and maintenance of a loop antenna. Serves as an enhancement to Antenna Reference Manuals Volume 1 and 2. 8 1/2" X 11" bound book format.

LAM Contents:

- Multi-Rod Ferrite Loop Antennas
- Loop Antenna Theory and Practice
- Loop Distortion Why get Skewed?
- High Dynamic Range Balun Loop
- The Hot Rod- Ferrite Loop Antenna
- High Precision Direction Finding
- What's Wrong With Present Day Loop Antennas?
- Roll Your Own! (Loop)
- Long Wave Converter Detail
- Pattern Controlled Loops
- BFE-C Loop Amplifier Card
- Loop Antenna Sensitivity
- High Performance Loop Amp

Price: **IRCA/NRC Member USA** \$9.95, Non-Member USA \$13.95. Other countries write for quote sales@nrcdxas.org.

Antenna Reference Manual Volume 1 (ARM1)

8th Printing Digitally Enhanced and Updated for 2005! This book features the plans for the original NRC 4' FET Altazimuth loop antenna. Revised in the Spring of 2005 with digitally enhanced drawings and updated material sources! This manual also contains other articles on the subject of antennas for medium wave DXers, most were originally published between 1969 and 1974 in **DX News**. Includes articles on air-core and ferrite core loops, antenna tuners for longwire antennas and antenna couplers. This is the original book which has been available for over 20years. 8 1/2" X 11" bound book format.

ARM-1 Contents:

- NRC FET Altazimuth Loop
- Thoughts on FET Loop Construction
- Tips on Loop Construction
- Balanced and Unbalanced Loops
- A 'Collapsible' Loop for Travel
- Antenna Tuning Devices for Longwires
- The Hawk Loop
- Balanced FET Amplifier
- NRC Two Foot Loop
- One Transistor Loop amplifier
- Direct Coupled Loops
- BCB DXers Beverage
- 'Bob Flick' Loop Antenna Coupler
- Alternative Methods of Air Core Loop Amplification

Price: **IRCA/NRC Member USA** \$8.95, Non-Member USA \$11.95. Other countries write for quote sales@nrcdxas.org.

Antenna Reference Manual Volume 2 (ARM2)

5th Printing Updated and Digitally Enhanced For 2005! This manual has also had digitally enhanced drawings and updated material sources added in the Spring of 2005. This manual is a compilation of numerous articles on the subject of antennas for medium wave DXers. Originally published between 1974 and 1981 in **DX News**. Some articles were formerly available as reprints. Includes articles on air-core and ferrite core loops, antenna tuners for longwire and Beverage antennas and phasing units for use with Beverage antennas and longwires. 8 1/2" X 11" bound book format.

ARM2 Contents:

- A Good Loop is Easy and Cheap to Make
- The "Harley Loop"
- Whip Antenna Coupler for Portable Receivers
- The Wedge Loop
- AC Power Supply for FET Loop Amplifiers
- Antenna Phasing
- FET Loop Amplifier with Coaxial Output
- Practical Phased Beverages
- Phasing Unit Construction and Use
- More on Phased Beverages
- Phasing Unit Design Modifications
- More Thoughts on Beverages
- Floor Stand and Mounting Arrangements for Loops

Price: **IRCA/NRC Member USA** \$8.95, Non-Member USA \$11.95. Other countries write for quote sales@nrcdxas.org.

Order from NRC, PO Box 473251, Aurora CO 80047-3251 or www.nrcdxas.org. Colorado residents, please add 3.5% sales tax. Please state club affiliation when ordering.

Medium Wave Circle Offering

We now have available for purchase a downloadable zip file of Sony ICF2001D/2010 information, via our website shop at <http://www.mwcircle.org/shop.htm>.

We are now in the process of uploading volumes of Medium Wave News older than 3 years, in pdf format, to our archive at http://www.mwcircle.org/member_archive.htm. This information is publicly available at no charge – so far we've archived volumes between 2003 and 2011, although as time permits we hope to upload all the older copies we have on file, right back to 1953. Other freely available information are the UK All Time Lists at http://www.mwcircle.org/member_alltime.htm.

Our Facebook Group which can be reached here: <https://www.facebook.com/groups/mediumwavecircle/>.

THE INTERNATIONAL RADIO CLUB OF AMERICA
PO Box 60241, Lafayette LA 70596
<http://www.ircaonline.org>

The **IRCA** is a non-profit organization devoted to the hobby of hearing distant stations on the Broadcast Band (510-1720 kHz). **DX Monitor**, the official publication of the IRCA, is published in "soft" form 35 times a year (weekly from November through March, twice monthly from April to November.) **DX Monitor** contains members' loggings, articles on radio stations, receiver reviews, technical articles, DX tips, and other material of interest to Broadcast Band DX hobbyists.



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MEMBERSHIP DUES

- Worldwide \$5 (for the first year)
- Worldwide \$0 (subsequent years – ie renewal)

Make checks and Money Orders in US funds payable to IRCA.

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