



DX MONITOR

The official publication of the
International Radio Club of America

February 10 2018 – Volume 55 Number 23 – Edition 1765 – ISSN 899-9733

No DXWW this time. Seattle deadline, every Monday 6 PM PLT.

WRTH 2018 B17 updates

We have uploaded a pdf of updates to the B17 schedules in the International section of WRTH 2018. Visit **Updates** and click the "International Updates" link to download the file from the **WRTH** store.

If you haven't yet got your copy of WRTH 2018 then buy one NOW using this link (http://www.wrth.com/_shop/?product=wrth-2018).

Readers in North America can also order copies from **Amazon.com**. Please take a few minutes to give us your thoughts about WRTH on the **2018 Questionnaire**.

I hope you find the update useful. **Nicholas Hardyman**, Publisher

2018 IRCA Convention

The dates of the **2018 IRCA Convention** will be Friday September 7 and Saturday September 8 2018 at the **Best Western Plus Charles Inn in St Charles MO**. The registration fee is \$25.00 per person. Radio tours and the Saturday banquet site are TBA at this point. Ken Hawkins (stlouisherdfan@gmail.com). (More details as they become available. Set these dates now if you plan to attend – pb)

Bruce Portzer's Annual GetTogether

I'll be holding my annual DX get together on Saturday February 17 at 2 pm. Consider yourself invited, and be prepared to talk about AM, shortwave, or TV-FM DX with like-minded persons. Bring radio stuff for show-and-tell if you'd like.

It will be held at my house: 6546 19th Avenue NE in Seattle, 206-522-2521. Potluck snack food (liquid or solid) is welcome. See you there! **Bruce**



CANADIAN RADIO NEWS – Dan Sys

E-mail: sysdan@gmail.com

For January 2018, February 1 2018

DELETED FROM ISEDC DATABASE

540	QC	Senneterre	CBMM	40 watt rebroadcaster of CBVE 104.7 Quebec City. Flipped to 101.7 FM with 115 watts.
650	QC	Lebel Sur Quevillon	CBF-3	40 watt rebroadcaster of CHLM 90.7 Rouyn-Noranda. Flipped to 94.9 FM with 50 watts.
710	QC	Senneterre	CBF-1	40 watt rebroadcaster of CHLM 90.7 Rouyn-Noranda. Flipped to 95.9 FM with 115 watts.
860	BC	Williams Lake	CBRL	40 watt rebroadcaster of CBYK 94.1 Kamloops. Flipped to 92.1 FM with 275 watts.
1230	QC	Lebel Sur Quevillon	CBMK	40 watt rebroadcaster of CBVE 104.7 Quebec City. Flipped to 92.7 FM with 50 watts.
1450	BC	Fraser Lake	CIFL	50 watt rebroadcaster of CIVH 1340 Vanderhoof.
1480	BC	Fort St James	CIFJ	50 watt rebroadcaster of CIVH 1340 Vanderhoof.
	BC	Granisle	CHLD	50 watt rebroadcaster of CFBV 870 Smithers.
1490	BC	New Hazelton	CKBV	50 watt rebroadcaster of CFBV 870 Smithers.

OFF THE AIR

610 YT Whitehorse CKRW Official approval to flip to 96.1 was granted even though 610 went dark in Spring 2017 moving all operations to the former nested FM repeater at 96.1 (via temporary CRTC authorization)

PROPOSED AM TO FM CONVERSIONS

1450 BC Cache Creek CBKS Move to 93.5 with 143 watts (1,127 watts Max ERP).

PROPOSAL TO SHUT STATION DOWN

860 BC Ashcroft CBWA Will go dark if CBKS 1450 AM to FM flip in Cache Creek is approved. The new FM signal will cover both communities.

(Last minute from **Jon Peakins**)

600 BC Vancouver no call yet Sher-E-Punjab Radio's proposed Richmond transmitter site has been sold and the new owners are applying for rezoning for commercial development. They propose sharing towers with CKNW-980, with similar day and night patterns, but the South Surrey location requires an increase to 50,000 watts day and 20,000 watts night to deliver the same level of signal to most of their ethnic audience.



WESTERN DX ROUNDUP – Nancy Johnson – 2922 S Olivewood – Mesa AZ 85212-2923

E-mail: NancyJohnson@prodigy.net

WDXR DEADLINES: Feb 9, Feb 16, March 2, March 16, March 30, April 13. April 27 and May 11. Please use Eastern Local Time.

REPORTERS FOR THIS ISSUE:

(RB) **Rick Barton**-PO Box 5503-Peoria AZ 85385 desertmoon_dxshack@inbox.com

RF-2200, HQ-200

(BB) **Bill Block**-Prescott Valley AZ billblock@cableone.net

R8, Wellbrook ALA1530LNP

(JP) **Jon Peakins**-Edmonton AB jon@peakins.com

Sangean PR-D5 with 8" internal ferrite rod

(AWP) **Art Peterson**-Richmond CA awpeteronrpf@att.net

JRC NRD-545, Radio Plus Quantum ferrite loop, Bonito Boni-whip active antenna

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

Sangean DT 160

680 CJOB **MB**, Winnipeg heard 1/30 at 0825 with "680 CJOB." (BB-AZ)

780 KKOH **NV**, Reno 2/1 0900 "Reno's Morning News, on Newstalk 7-80, KOH." (RB-AZ)

900 ?KALI? **CA**, West Covina 1/31 before 1000 lots of Chinese singing, fading out with the sunrise, not surviving to hoped-for TOH ID, leaving my unID Spanish. Mean splash from local KKSF-910. (AWP-CA)

- 1140 KNWQ **CA**, Palm Springs 1/31 0200 news to syndicated talk show recapping political speech. (RB-AZ)
 1150 KSAL **KS**, Salina heard 1/29 at 2000 with "1150 KSAL Salina." (BB-AZ)
 1210 ?KHAT? **WY**, Laramie 1/26 0942 possible station heard with country music and mentions of 96.7 FM (translator?). Conditions this morning were unusual. St George UT station was in well at SRS, but KPRZ down in San Marcos CA was almost nil. (MS-CA)
 1240 KJAA **AZ**, Globe 1/28 0342 strong tonight with slogan "Jukebox 1240," live weather, mentions of Miami, AZ, song "Lover Please." (MS-CA)
 KNRV **CA**, Monterey 1/28 0243 coming out of Beatles "All My Lovin'" with call letters given during promo then right into Searchin For My Baby." (MS-CA)
 1250 KHIL **AZ**, Willcox 1/28 0519 trading places with KNEU for dominance in absence of Santa Barbara, CA. Call letters read by artist, country tunes by Ronnie Milsap, Hank Williams Jr, Jerry Reed, etc. (MS-CA)
 1260 KTRC **NM**, Santa Fe heard 1/28 at 0834 with "Talk 1260 KTRC." (BB-AZ)
 +1/30 2300 suddenly came up over the mumble-rumble with ID actually coming after the hour, at 2306, then to Thom Hartmann. (RB-AZ)
 1270 KBZZ **NV**, Sparks heard 1/30 at 0900 with "KBZZ 96.1 and 1270 The Buzz Sparks-Reno." (BB-AZ)
 KIML **WY**, Gillette heard 1/30 at 0852 with "News Talk KIML" then weather report. (BB-AZ)
 1350 KUBE **CA**, San Bernardino 1/30 2148 break from sports to group of local spots, back to Fox Sports Network. God ID at ToH "KUBE Fox Sports, Riverside." Excellent on RF-2200. (RB-AZ)
 1380 KHEY **TX**, El Paso 1/30 2115 love sports p-b-p (Aggies vs. Eagles). Strong and dominant most of the time, but sometimes fighting it out with KLPZ on the California/Arizona border. Good ID also heard from them at the time. A twofer. (RB-AZ)
 1450 KZNU **UT**, St George 1/29 0833 good with ID "KZNU The Gift That Keeps Giving." (MS-CA)
 1480 KQAM **KS**, Wichita 1/30 2100 ID, to silly political speech. At one point, had echo sound like another 1480 station was broadcasting the same speech. Good over the top of the channel's rumble. (RB-AZ)
 1490 KZZZ **AZ**, Bullhead City 2/1 1034 good but fadey with K-triple Z ID's and mention of their FM frequencies. (MS-CA)
 1520 KMPG **CA**, Hollister 2/1 1000 alone on frequency with articulated top of hour ID. (MS-CA)
 1580 CKDO **ON**, Oshawa 1/30 0942-0210 oldies including Canadian Contest, former Toronto DJ Keith Hampshire's "First Cut is the Deepest," despite not being required (CRTC) after midnight. First time heard since their 2006 move to 1580 when they were listenable on a car radio most winter nights. (JP-AB)
 1590 KVTA **CA**, Ventura 1/29 0955 coming out of PSA for fire safety, ID "Newstalk 1590 K-V-T-A." (MS-CA)
 KELP **TX**, El Paso 1/30 2025 talk radio program with people phoning in biblical questions to minister. Suddenly sank into the mumble-rumble at 2035 and gone. Perfect! Came back on just 2 minutes before the ToH with more of same, then good, clear ID by man on the hour. Solid S-9 on Hammarlund HQ-200, Slinky. (RB-AZ)
 1610 CHHA **ON**, Toronto 2/2 0155-0207 strong sometimes in Spanish with female announcer, male on ad 0206, music similar to Mexican Top 40, with "all around the world" the only English words heard in imaging at 0201:25. Been trying for 2 years on this normally dead frequency. (JP-AB)
 1640 KBJA **UT**, Sandy 1/30 0942 good over KDIA with string of ads including mattress discounter and LaCrosse supplier, back into talk show. (MS-CA)
 +3/31 0044 ID, several local spots. Excellent. (RB-AZ)
 1690 KDMT **CO**, Arvada 1/31 0945 good signal at SRS. (MS-CA)
UnID
 900 UnID 1/31 1000 a lot of soft mumbling before ToH, then apparent power increase at 1000, talk in Spanish inviting calls from California cities, mostly Bay Area cities. Could be KBIF, but last heard in Indian. Also, with splash from 910, BA folks wouldn't hear them, so has to be part of a network, No IDs unless before power boost. Any ideas? (AWP-CA)

Thank you to all the WDXR reporters this week! – Nancy 2/2 1900



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

RIDING GAIN

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

DOWN THE DIAL

- 810 WRUS **KY**, Russellville. 1/30 fair signal over KCSP. 0718 noted with calls, CST time check and local spots. [EB-MO]
 1200 KYOO **MO**, Bolivar. 1/30 fair to poor signal over WOAI, WRTO. 0823 with local spots, mentions of southwest Missouri and Area Code 417. [EB-MO]
 1220 WHKW **OH**, Cleveland. 2/1 fair signal over WLPO, WSLM. 0528 noted with David Jeremiah promo, "AM 12-20 and 14-40, the Word" ID. [EB-MO]
 1290 WCBL **KY**, Benton. 1/30 fair signal over WIRL. 0825 noted with PSA for the Marshall County Department of Health into a local sports report. [EB-MO]
 1410 WHLN **KY**, Harlan. 1/27 fair to poor signal over WING. 0553 noted with Adult Contemporary format, "14-10 WHLN" ID. [EB-MO]
 1490 WPNA **IL**, Oak Park. 1/28 fair to poor, poking through KDMO, KFTK and other stations. 0527 with announcement mentioning Area Code 312. [EB-MO]
 1670 WOZN **WI**, Madison. 1/30 fair to poor signal, mixing with CJEU. 0702 noted with "The Zone" ID into talk on University of Wisconsin sports. [EB-MO]
 CJEU **QC**, Gatineau. 1/30 fair to poor signal, mixing with WOZN. 0701 noted with announcements and light vocal music in French. [EB-MO]

FLASHBACK

50 Years Ago – February 10 1968 issue of "DX Monitor" ... **John Kalpus** of Milwaukee WI submitted an article on 1920's Canadian radio including XWA of Montreal ... **Brian Elder** of Burnaby BC received a verie from KOH 630 for state number 33 ... **Robert Jacoby** of Pomona CA told about his visit to KCMJ ... **Charles Grise** of West Lafayette IN received a verie from KXLY for state number 38. // **25 Years Ago** – February 6 1993 issue of "DX Monitor" ... Eleven (11) DX Tests were scheduled for the first part of February ... **Mike Sanburn** of Bellflower CA was looking forward to the 1993 IRCA Convention being held in Billings MT.

OPEN MIKE

Thanks to **Eric Bueneman** we have a column this week. This column was typed 2-2-18. 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:

- (KK-VA) **Kraig Krist** (KG4LAC), Manassas VA
 Winradio G33DDC software-defined receiver, Wellbrook ALA1530S+ Imperium loop
 (RW-MD) **Robert Wien** (KG6RJW/3), Laurel MD **wienbob@aol.com**
 2011 Ford Fusion car radio

ACROSS THE DIAL

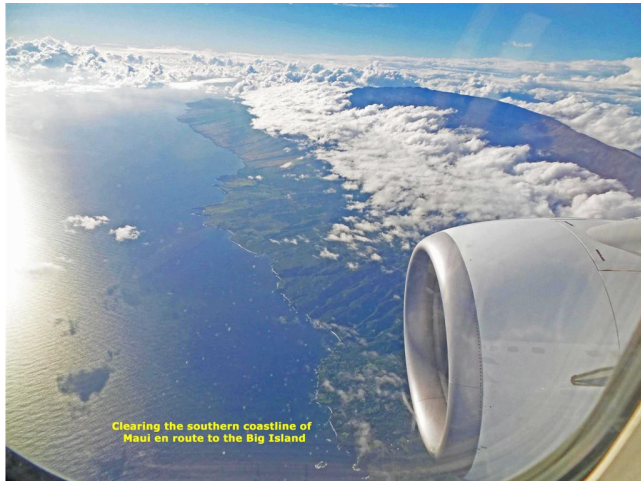
- 1110 WKQA **VA**, Norfolk – 1/26 1714 noted with "This is WKQA Norfolk, serving Eastern Virginia and North Carolina with 50,000 watts of power" legal ID by a male announcer. The signal was noted mixing with WBT and an unidentified station with vocal music. (KK-VA)
 1130 WPYB **NC**, Benson – 1/26 1728 noted with "WPYB AM 1130" ID by a male announcer. The signal was noted mixing with WBBR, WCLW and unidentified stations with Talk and '80s formats. (KK-VA)
 WCLW **NC**, Eden – 1/26 1708 noted with "This is Gospel 1130 WCLW" ID by a male announcer. The signal was noted mixing with WBBR, WPYB and unidentified stations with Talk and '80s formats. (KK-VA)
 1190 WAFS **GA**, Atlanta – 1/25 1745 noted with Atlanta traffic report and ID. A good signal was noted, briefly atop the mess on 1190; first time noted in Laurel. (RW-MD)

EDITOR'S NOTES

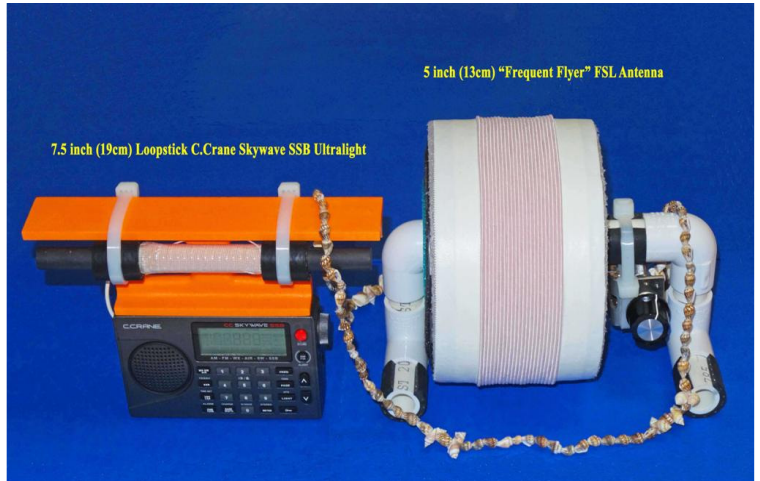
Thanks to Kraig and Bob for their logs in this issue. When I was living in metro Atlanta from 1988 to 1992, 1190 was Classical-formatted WGKA. The WAFS calls debuted in the market on 920 in 1989 as a Moody Bible Institute station. 73 and good DX from NØUIH, the Florissant Valley Dial Twister.



December 2017 Kona, Hawaii Ultralight DXpedition
Long-Range Travel Excitement with a TSA-Friendly FSL Antenna
 By Gary DeBock, Puyallup WA, USA January 2018



Clearing the southern coastline of Maui en route to the Big Island



7.5 inch (19cm) Loopstick C.Crane Skywave SSB Ultralight

5 inch (13cm) "Frequent Flyer" FSL Antenna

From December 17-20 I had the chance to chase Pacific island and Asian DX from an ocean side beach alongside my motel in Kona on the west coast of the Big Island of Hawaii. My DXing gear was a new 7.5" (19cm) loopstick C.Crane Skywave SSB Ultralight radio and a TSA-friendly 5" (13cm) diameter "Frequent Flyer" FSL antenna. This was a compact FSL specifically designed to fit in hand-carry luggage, and pass easily through airport security checkpoints. Despite the compact size, it provides inductive coupling gain roughly comparable to that of a 4 foot (1.3m) air core box loop. The modified portable was able to track down several "big gun" TP's all by itself at S9 levels, but the 5" FSL made all the difference in digging out the weaker stations. Because of RFI in my motel room all my DXing was done at an ocean side lounge area on the Royal Kona Resort property – a somewhat curious arrangement that drew some stares from those who had never been fortunate enough to get hooked on ocean beach transoceanic DXing.

Of course Hawaii is much closer to several exotic Pacific island stations than the North American west coast, so checking out the signals and formats of stations like 540-2AP in Samoa, 621-Tuvalu, the newly rejuvenated 846-Kiribati on Christmas Island, 1017-A3Z in Tonga, 1098-V7AB in the Marshalls and 1440-Kiribati on Tarawa was a high priority. All of these are routine DX catches in Hawaii, although during December they usually had only a couple of hours after our local sunset before getting hammered by overwhelming signals from the Far East.

The term "chase DX" was a little misleading for this trip, since I was pretty much swamped with huge Asian signals from 0730-1030 UTC every evening – to the point where sunrise TP-DXing was foregone because my digital recorders were already becoming maxed out. The stampede of Asian signals every evening resulted in pretty wild snarls with the Pacific Island DU's, as well as potent mixes of Japanese, Chinese and Korean stations. South Korean "Beehive" jammers added to the confusion on 801, 819 and 855, while two Chinese stations and the NHK1 Synchros were fighting it out on 837. Trying to sort out and identify all the Chinese stations was impossible in the confusion, and even the idea of sending out some type of coherent daily TP-DXing summary seemed impossible because of the large number of wild Asian recordings. Several frequencies were so snarled that even the recordings didn't help. The only strategy that could work was to "record like mad" in Hawaii, and then upon return home write up a detailed summary after extensive file review.

After all the dust had settled, the overall results from this lightweight DXpedition went well beyond expectations, with reception of several Asian stations which apparently hadn't been heard on the west coast of North America for quite a few years – and a few which don't seem to have been heard there at all (the South Korean jammers on 801 and 855, and the relatively new 1611-DWNN). The freedom of DXing with a highly portable FSL antenna allows a DXer to quickly set up almost anywhere to follow exceptional propagation – and the west coast of the Big Island certainly delivered it during this trip! Even though the "Frequent Flyer" FSL is relatively compact and lightweight, Hawaii's ocean-boostered propagation kicked in like a turbo boost, making it seem like I was on the east coast of Asia at times. After carrying my portable DXing gear down to the ocean beach each evening, I enjoyed three of the most exciting TP-DXing sessions anyone could ever hope for.

The loggings and recordings listed below include several powerful stations which maxed out the Ultralight portable's bar-graph S-meter, which are identified with a double asterisk (**). For anyone feeling bored with his AM-DXing hobby, I strongly recommend a trip to Hawaii as the ultimate, permanent cure!

- 540 **SAMOA** 2AP, Apia, 5 kW. Christian worship music at a fairly good level through the T-storms at 0751 on 12/17, but not nearly as strong as in April <https://dreamcrafts.box.com/s/bgnooywkpnt3et7vcnxx0wmx3gdin1o2>.
- 558 **UnID** Japanese-sounding intonation for a few seconds at 0933 on 12/18, but a little too much Maui splatter to be sure <https://dreamcrafts.box.com/s/7mijy4ayyz2xpjll9e893i46ud31138z>.
- 603 **REP KOREA** HLSA, Hwaseong, 500 kW. Modest-level Korean male conversation and American classic pop ("I'd Love You to Love Me," by Lobo) at 0922 on 12/20 <https://dreamcrafts.box.com/s/0wc2ljb23siw9xalnrsdqk5mtt70p900>.
- 612 **JAPAN** JOLK, Fukuoka, NHK1, 100 kW. Japanese male and female speech at 0920 on 12/20, but not a good performer for the power level <https://dreamcrafts.box.com/s/6hefy6p87kc8hrm69wai6lo2wncwc40x>.
UnID Female-voiced English speech and unusual music at 0904 on 12/18; Chuck and Mauno have suggested ABC (4QR) as a possible source, and although no other Australian stations showed up during the trip, that seems like the most likely possibility <https://dreamcrafts.box.com/s/wap9svgfchami7n4s1iop4z2z5cjjgki>.
- 621** **CHINA** (Heilongjiang?) This prolific station was one of three powerhouses (along with North Korea and Tuvalu) which made the frequency a snarling mess on most evenings. It seemed to get a major boost whenever it was competing with Tuvalu, such as at 1002 on 12/18 <https://dreamcrafts.box.com/s/w4ulfpkb1dbwou2rrjg3ncpnar56mrrar>. When it was all alone it was somewhat more sedate, as at 1010 on 12/18 <https://dreamcrafts.box.com/s/7yjilvl4v0vbp8fqskagxtz48ql62e5t>.
- ** **DPR KOREA** Pyongyang BS/Voice of Korea, Chongjin, 500 kW. The buzzing transmitter of North Korea's Japanese service had serious power, snarling both Tuvalu and China at times. The usual North Korean music was played, with robotic Japanese announcers voicing adulation of Kim Jong Un and his ancestors. This typical music was at 0850 on 12/20 <https://dreamcrafts.box.com/s/rhfkf381csgtohluxt3e97tj79fshh>. ID in Japanese by lady at 0951 on 12/20, followed by the usual ancient music <https://dreamcrafts.box.com/s/7cz1yookph18wqi0o9ycckz135eypc50>.
- ** **TUVALU** Radio Tuvalu, Funafuti, 5 kW. This station had very strong signals until around 0800 on most evenings, when it began to be pestered by Chinese and North Korean co-channels. It also came down with a garbled audio issue on December 18th, which continued to get progressively worse until I left Hawaii. Sign off time is still around 1006, but by that time it ran the gauntlet of powerful Asian co-channels during the December propagation. Local employment offers read by the usual lady announcer at an S9 level at 0750 on 12/18. This was the last undistorted audio signal recorded from the station during this trip; after this the audio went "south" <https://dreamcrafts.box.com/s/8w8ht0f9k2j87d0k77ho23msxoidqgy6>. Guest speaker in Japanese-accented English, followed by local island-type music at 0835 on 12/18 – the first sign of audio distortion <https://dreamcrafts.box.com/s/izdocq942897mvdxoax0jksufztnh46d>. Full Radio Tuvalu sign off routine at 1003 on 12/18, but with some China QRM initially. Tuvalu's signal prevails during the national anthem, but the audio distortion is quite noticeable. The carrier apparently stays on for over a minute after the audio stops <https://dreamcrafts.box.com/s/2po3xafysydiwa6suvpljn0xau5i31uq>.
- 630 **UnID** While trying for the Cook Islands (Rarotonga) I came across this weak Christmas music with English speech at 0742 on 12/17. This could just as easily be a west coast domestic station playing the "exotic" to fool a hopeful DXer, though. Walt says this station is a notorious underperformer <https://dreamcrafts.box.com/s/530lvqc33py6081jy17qrjwy0ms9mn5c>.

- 657** **DPR KOREA** Pyongyang BS, Kangnam, 1500 kW. The usual west coast North Korea big gun was often troubled by Honolulu splatter but pretty strong when it broke through, as at 0857 on 12/18 <https://dreamcrafts.box.com/s/unaxxl72uzejpa59plxo2w3sonzdfqox>.
- 666** **JAPAN** JOBK, Osaka, NHK1, 100 kW. Predictably strong with Japanese male conversation //675 at 0918 on 12/20; because 594 was covered with Honolulu splatter, this and 729 were the strongest NHK1 stations <https://dreamcrafts.box.com/s/5sm6pogm45wuukbgvvhb8q9i8klpyqh5>.
- 675 **JAPAN** JOVK/JOUG, Hakodate/Yamaguchi, NHK1, 5 kW/5 kW. Very good signal for these lower-powered relays at 0915 on 12/20 <https://dreamcrafts.box.com/s/kz267eu3w8ev2a0vodqxc9iw4927y94>.
UnID-TP Asian language co-channel mixing with NHK1 synchros at 1003 on 12/19; sounds like Chinese or Vietnamese <https://dreamcrafts.box.com/s/l7jxb9q34pgeslfn8ftn5rpbhikxofxr>.
- 729 **JAPAN** JOCK, Nagoya, NHK1, 50 kW. Very good signal with Japanese female speech at 0856 on 12/20; slight trace of a Chinese co-channel was heard underneath at times <https://dreamcrafts.box.com/s/5huzbw1mmbc2jy8gx5hojjyqb577ppi>.
- 747** **JAPAN** JOIB, Sapporo, NHK2, 500 kW. This was the strongest Japanese station overall, usually with local-like signals and never any co-channels. These NHK2 English lessons at 0913 on 12/19 were at typical strength <https://dreamcrafts.box.com/s/5v5byw2vzvw7azxhzrgsz6j591qwtxyv>.
- 774** **JAPAN** JOUB, Akita, NHK2, 500 kW. Plenty strong, but not quite up to its 747 parallel's level. This Japanese stock market report at 0833 on 12/18 was at its usual strength <https://dreamcrafts.box.com/s/p9aiqrhx4ji22gwc7nehalybl46cetj0>.
- 783 **CHINA** (Voice of Straight?) Good signal with Chinese opera every night around 0900. This female-voiced opera was at 0916 on 12/19 <https://dreamcrafts.box.com/s/2fajh29wb6givv89f0sl30iwszqmuz9l>. Male-voiced opera at good strength at 0914 on 12/18 <https://dreamcrafts.box.com/s/6hg82m62pvgryla5fw7cyrvw0ezdaipq>.
- 801 **DPR KOREA** Pyongyang BS, Hwadae, 500 kW. This was the weakest of the five North Korean stations received, and it was often pestered by the South Korean "Beehive" jammer on the frequency. It was strongest at 0842 on 12/20 with this ancient vocal music <https://dreamcrafts.box.com/s/e4kr0asg24d1ujyk74zztcdbd8aepazh>.
REP KOREA Jammer South Korean "Beehive" jammer mixing with Pyongyang BS' female vocal music at 0928 on 12/18. This was the usual strength of the North Korean station (pretty anemic), and also the usual strength of the jammer <https://dreamcrafts.box.com/s/dlc8dtzzm38x43fva84wcsy1bkl5lf4r>.
UnID-TP (Guam?) During a fade in the Pyongyang BS/Jammer signal this apparent Christian-format female vocal music was received at 0931 on 12/18, but there was nothing definite to determine identity <https://dreamcrafts.box.com/s/26c2k3bqxnv0s0qhabsg9xx8518jukdd>.
- 819** **DPR KOREA** KCBS, Pyongyang, 500 kW. Far and away the strongest North Korean station, and one of the top three Asian signals on the band each evening (along with 747-JOIB and 981-CNR1). Bizarre, ancient music and stern monologs were common, along with weird girl-group choral numbers at overpowering strength [like this one from the Moranbong Band ("Your Bosom is the Best")* at 1035 on 12/19 <https://dreamcrafts.box.com/s/gj2deffl7mjuzqr5tocsro100sfhqll9>. "Let's Defend Socialism," originally by the Pochambo Electronic Ensemble** (another girl group) building in strength at 0823 on 12/20 <https://dreamcrafts.box.com/s/h0kksa2xxmb8ql3ofqalo7j9o4yt1y3q>. Ancient music, ID and 3+1 time pips at 0930 on 12/20 (both the country's TOH and the time pips are on the half hour) <https://dreamcrafts.box.com/s/v7q9eniu9qq1f27rbq97v4c9zbn2eha>. (* Video at <https://www.youtube.com/watch?v=3nVEo-R38-I>. **Video at <https://www.youtube.com/watch?v=Bl0OPH7kpCs>. Thanks to Chris Kadlec for the information and links)
- REP KOREA** Jammer South Korean "Beehive" jammer mixing with KCBS in between songs at the 22 second point (just after the female vocal music) at 0853 on 12/18 <https://dreamcrafts.box.com/s/1ueov463q72ht02yq6zi5kcyidnwc4n9>.
- 837 **CHINA Mix** Two Chinese stations were fighting it out on this frequency almost every evening, such as at 0937 on 12/20. Occasionally they were joined by the NHK1 synchros <https://dreamcrafts.box.com/s/biyl925kesbsgwhij39x149lsv7xjs6>.
JAPAN NHK1 Synchros. Female Japanese speech mixing with Chinese at 0946 on 12/18 around the 2:00 point in the recording <https://dreamcrafts.box.com/s/euzbecedflx35p4qz3z5i2j3dypv20bh>.
- 846 **KIRIBATI** Radio Kiribati, Christmas Island, 10 kW. This newly rejuvenated station had awesome signals, and was overall the strongest Pacific island station received. Of all the Pacific island DU's it faded in at the earliest time after sunset, and maintained its strength even during strong Asian propagation – as long as it managed to transmit without its signal dropping out. Unfortunately this seemed to be a pretty common occurrence while I was in Kona. Island-type music at typical S9 strength at 0735 on 12/18 <https://dreamcrafts.box.com/s/sb6liuetjmx0fdghwqedi9x5splos1n>. This segment at 0620 UTC on December 17th features 6 signal dropouts within one minute <https://dreamcrafts.box.com/s/shppg3c3yuhz4fzvnkhkkgvzamg4s6do>. This segment at 0944 UTC on December 18th is even worse – 9 dropouts in 90 seconds <https://dreamcrafts.box.com/s/vxzvw9x8wc9hwqgj4xye2b12fzbtbtsk>. After a prolonged 846 transmitter dropout it seemed like the programming time delay between the distant 1440-Kiribati on Tarawa Island and the new 846-Kiribati on Christmas Island would change. On December 17th I recorded two different time delays – 19 seconds, as in the following recording (the MP3 starts out on 846 at 0635, switches to 1440 at the 1:02 point, then switches back to 846 at the 1:34 point, with a 19-second time delay evident between the 1440 and 846 programming (846 lags behind) <https://dreamcrafts.box.com/s/leyyz3kj8aarsu4gwp24czdwp0onbk22>. Later on the same evening there was a 36 second time delay between 1440 and 846, with this MP3 starting off on 1440 at 0645, and switching to 846 at the 11 second point <https://dreamcrafts.box.com/s/0w1an6509xvgow2aq9i7lxfyfhx1gend>.
- 855 **DPR KOREA** Pyongyang BS, Sangwon, 500 kW. Medium-strength North Korea station playing the usual ancient music and stern monologs, complete with its own South Korean jammer at times. This female Korean speech was at 0832 on 12/20 <https://dreamcrafts.box.com/s/34r4oayh63kxxigc6hisu3t5bfhz1yeb>.
REP KOREA Jammer. "Beehive" jammer having the edge over Pyongyang BS' ancient music at 0948 on 12/18; this was the most prolific South Korean jammer in Kona, although not anything close to the old 1053 noisemaker <https://dreamcrafts.box.com/s/taes67fcgw8rdymhdh9n93mmt7x7r3k>.
- 864 **UnID TP-Mix** Apparent mix of Japanese male and Korean female (KBS?) speech at 1017 on 12/19, but nothing definite to nail down either one <https://dreamcrafts.box.com/s/is6djygeafwu3ny04em5a97ce8sskb6t>.
- 873 **JAPAN** JOGB, Kumamoto, NHK2, 500 kW. A rather modest performer for the power level, it had a weak Chinese co-channel at times, such as during this Japanese stock market report at 0904 on 12/18 <https://dreamcrafts.box.com/s/bgkq9nkxhs4exoeu0izd45n1cwg7nbl>.
- 891 **JAPAN** JOHK, Sendai, NHK1, 20 kW. Good performance for the power level, but broadcasting on an already occupied frequency (snarling with KBS in Busan) <https://dreamcrafts.box.com/s/9189zf266ul3qkwk59n7inbyzrms33ym>.
REP KOREA HLKB, Busan, KBS, 250 kW. The strongest South Korean station, but usually in a snarling mix with NHK1's JOHK, as at 1023 on 12/19. KBS usually had the edge, however <https://dreamcrafts.box.com/s/9189zf266ul3qkwk59n7inbyzrms33ym>.
- 909** **UnID-CHINESE** Bizarre chanting by children in apparent Chinese at a very strong level at 0956 on 12/18; Chris Kadlec says this may be from CNR6 (1000 kW) in the Hakka dialect <https://dreamcrafts.box.com/s/Osiozv0ojkty9ocy0gzl40bnfrp7qxp0>. A somewhat extended version of the above recording is linked below, with various other TP's mixing in at times <https://dreamcrafts.box.com/s/ze1djtse64rzemp4q0aeehqlw24n6xg4>.
- 918 **CHINA** China Shandong, 200 kW. Half hour time pips (4+1?) and Chinese ID at 1:00 into the recording at 1029 on 12/19, but generally mixing with an UnID Japanese station <https://dreamcrafts.box.com/s/6vo2vgwdev2jzm6vnovu2ddkucaxwojm>.
UnID-JAPAN Japanese intonation by female speaker at 1029 on 12/19, but nothing definite to determine which one of four Japanese stations is in the mix with Shandong <https://dreamcrafts.box.com/s/6vo2vgwdev2jzm6vnovu2ddkucaxwojm>.
- 981** **CHINA** CNR1 Synchros, Changchun/Nanchang, China, 200 kW/200 kW. This was one of the three strongest Asian signals during the trip (along with 747 and 819), with awesome strength every night after about 0800. It was easily capable of running S9+ on the modified Ultralight alone, and never allowed a trace of any co-channel. Top of the hour CNR ID and Chinese news at S9+ strength at 0900 on 12/18 <https://dreamcrafts.box.com/s/ajtu6lmchs7e8fjgom3bg6lsbclrc0s6>. Chinese news and conversation at local-like strength at 0955 on 12/20 <https://dreamcrafts.box.com/s/x00iyrjggt216zew0ckscmcc3jgmcphh>.
- 1008 **JAPAN** JONR, Osaka, 50 kW. Fast-paced Japanese conversation by man and woman at 0857 on 12/19 <https://dreamcrafts.box.com/s/9a7d2m5wj3v5i1gyppcab8b8j7y0hwm>.
- 1017 **TONGA** A3Z, Nuku'alofa, 10 kW. Female native language speech at a very good level at 0858 on 12/19 <https://dreamcrafts.box.com/s/j6n0mh0afz5h35cpspcbymp2p8xsma4e7>. Somewhat weaker through the T-storms on 12/17 at 0734 <https://dreamcrafts.box.com/s/hyusuqyu12t8gyxh75goxwkw5xt7u8r>.
- 1053 **CHINA** (Hubei?) One of the stronger Chinese stations, capable of hitting S7 at times. It would usually snarl with JOAR, occasionally dominating the frequency <https://dreamcrafts.box.com/s/4a36b4o75jryao2oxpzdgi6t89nw9vd>.
JAPAN JOAR, Nagoya, 50 kW. This Japanese commercial stations was one of the stronger ones (after 1134 and 1440), but almost always in a mix with China <https://dreamcrafts.box.com/s/18ogwd1ov669aios0nphc759xu77x8>.
- 1098 **MARSHALL ISLANDS** V7AB, Radio Marshalls, Majuro, 25 kW. This station was very strong in Kona with its island music every night, and rarely had any Asian co-channels. S9 Island music and native language speech (and possible ID) across the 0700 TOH on 12/17 <https://dreamcrafts.box.com/s/plc05sfu6nffulhpaq64v4nzs2jzm7ow>. Equally strong island music and native speech at 0813 on 12/18 <https://dreamcrafts.box.com/s/9se2sxv5nx0x56hja0hy4h911vwdmd61>.

- 1134** **JAPAN** JOQR, Tokyo, 100 kW. Far and away the strongest Japanese commercial station, this broadcaster ran roughshod over the presumed KBS co-channel. Fast-paced conversation and rock music was at S9+ strength at 0945 on 12/20
<https://dreamcrafts.box.com/s/vuz44h2ei0bxrl2e006jg1q2em27mduz>.
- 1134 **UnID** (KBS?) Weakly audible under the Japanese big gun at times, such as at 0943 on 12/20
<https://dreamcrafts.box.com/s/2y4m3s7afd80lhjp80qh0pboovcj6fi5>.
- 1143 **JAPAN** JOBR, Kyoto, 20 kW. Japanese male speech at 0941 on 12/20 <https://dreamcrafts.box.com/s/r3bmd1326uzyskhztajp714p786qr1up>.
UnID-CHINESE Chinese female speech in a mix with JOBR at 0942 on 12/20; unable to check 738 for Taiwan parallel (Maui semi-local on 740)
<https://dreamcrafts.box.com/s/o5gfabu4quvb71zw0hn1rkgs494w25pf>.
- 1386 **JAPAN** NHK2 Synchron (4 stations) Very good level Japanese female speech at 1033 on 12/19
<https://dreamcrafts.box.com/s/byfpni35jh5trm6gk8zq1quq7bur60u>.
- 1431 **UnID-TP** A fairly strong Asian station was on this frequency at 0855 on 12/18, playing vocal music in apparent native language at first, before switching to English for "O Holy Night" <https://dreamcrafts.box.com/s/c387erhd4d60nvwo06s6yzmm47it5m3z>.
- 1440 **KIRIBATI** Radio Kiribati, Bairiki, Tarawa, 10 kW. Somewhat weaker than its rejuvenated 846-Christmas Island parallel (which has variable programming delay times, as explained above), this home transmitter could hold down the frequency until around 0800 every night, after which it was usually hammered by JOWF in Sapporo. Despite this it often put up a good fight until its new sign off time of 1009, and it continues to use the loud 1000 Hz tone right before the power is cut (an awesome aid for DXers hoping to ID the station through heavy QRM). Typical island language speech and strength level at 0830 on 12/18, just as it is starting to get jumbled by JOWF (a Japanese female "Sapporo desu" ID is at 25 seconds)
<https://dreamcrafts.box.com/s/7kc0bmbzt0beglp6saca5xc6cb6sipi2>. Full sign off routine at 1005 on 12/19, including the National Anthem and the 1000 Hz tone before the power is cut. The tone gets through the JOWF QRM like a DXer's dream
<https://dreamcrafts.box.com/s/79v68rumi2mcmamxgu1vy5rwn989z4bp>.
- 1512 **UnID-CHINA** At least one female-voiced Chinese station (and possibly another) is in this mix at 0913 on 12/20
<https://dreamcrafts.box.com/s/4lynixbrlq1ffq96j52h35jewckn3jzi>.
- 1593** **CHINA** CNR1, Changzhou, 600 kW. After 981 this was the strongest Chinese station, but it could never quite shake off its pesky NHK2 co-channel. This Chinese female speech was mixing with NHK2 English lessons at 1003 on 12/20 <https://dreamcrafts.box.com/s/py5yq9vhrbu8bryhhahjd12de84peljz>.
JAPAN JOTB/JOQB, Matsue/Niigata, NHK2, 10 kW/10 kW. Surprisingly strong for their power, these stations often jumbled up CNR1's programming. This Japanese stock market report was at 0845 on 12/19, before the usual CNR1 fade in around the Chinese sunset
<https://dreamcrafts.box.com/s/9y99u05zu54vprn71p0c0o95woe8jn1z>.
- 1602 **JAPAN** NHK2 Synchron (multiple 1 kW stations). Japanese stock market report at fair strength (with slight echo effect) at 0849 on 12/19
<https://dreamcrafts.box.com/s/trh3tmo2jqir5ya7tbs13gf6rksjomp>.
- 1611 **PHILIPPINES** DWNX, Naga City, Luzon, 5 kW. (Thanks to Hiroyuki Okamura, Satoshi Miyauchi and Mauno Ritola for ID help) Received at 0855 on 12/19, this station was a mystery until the Japanese friends matched the advertising format with that of a new, unlisted station which just came on the air in the Philippines. The propagation apparently got a major boost during sunset at the transmitter
<https://dreamcrafts.box.com/s/s12yozghmuy3bwm9ionb79gfev85bjsa>.



Royal Kona Resort Motel (and my DXpedition Partner)

SPECIAL FEATURE

The Japan Radio Museum

By Nick Hall-Patch

A visit to the city of Matsumoto on a recent visit to Japan led to a serendipitous discovery. Matsumoto is a bit off the beaten track, especially for the first time tourist in Japan, but is well known for its historical black castle. In fact, there are many other reasons to go there: the train ride up from Nagoya is very scenic in itself and the town is situated in a valley with views of Japan Alps. Although a couple of the better known museums involve a short train ride out of town (trains are easy to come by in Japan), it is otherwise a pleasantly walkable city.



Photo 1 – an autumn view from (as it turned out) the front of the Japan Radio Museum.

On my way to meet friends Hiroo Nakagawa, Hiroyuki Okamura, and Fumiaki Minematsu for a DXpedition on the Japan Sea, I stopped in Matsumoto for a couple of days. I was lucky enough to be there as the autumn leaves were changing, and on a morning walk in town came across the Yohashira shrine, surrounded by trees in full autumn color. So, out came the camera. The shrine is bordered on one side by a small river, Metoba-gawa, and one last photo was of the trees and the gate leading to the shrine taken from the narrow street on the other side of the river (photo 1).

The roads alongside the river are interesting enough in themselves, but, as I turned around, I discovered just how interesting, for there was the Japan Radio Museum (photo 2). No, it's not in the English language guidebooks, although I found later that there are brochures for it in the tourist office in the train station. But it is only open from 1 to 5pm, so I went off on other tourist related missions until then.

Upon returning that afternoon, I paid the admission fee of 500yen (about US\$5) and was able to meet the museum's curator Tadanobu Okabe. Fortunately, Okabe-san speaks English considerably better than I speak Japanese, so I was able to ask him about some of the exhibits. The Japan Radio Museum is a small building with two floors, containing mostly consumer electronic equipment from the 1920's through to the 1970's. Although it is crowded with exhibits, these are apparently only a small portion of what is in the collection. There are a total of 1500 tube radios, 400 transistor radios, 100 radio phonographs through to later audio equipment, 60 TV receivers, and even home appliances, mostly in storage. This collection, allows one to see the progress from the early years when vacuum tube receiver designs from other parts of the world were adapted for the Japanese market, up through the period when Japan began to lead the world in new designs. Outside of early imported technology, you will see primarily Japan's contributions to the march of technology. The museum regards the 20 years from 1935 to 1955 as the golden era of Japanese radio, but there are also exhibits from later years as technological development moved away from vacuum tube AM radios. The days of transistor radios, a worldwide market established by the Japanese, are well represented.

On the first floor there is the permanent exhibition with radios dating from 1924 through to 1976, while on the second floor there are held special exhibitions taken from the larger collection. At the time I was there the second floor was showing equipment from 1918 through to about 1930, of both imported and Japanese radio gear. I am sorry that I was not able to read Japanese, as much of the brochure for the special exhibition and the signage itself were in Japanese only.



Photo 2 – the Japan Radio Museum

Often, Japanese radios would have their trade name marked in English lettering, and I was a little surprised to see a couple of National radios from the 30's in an area otherwise dominated by Japanese equipment. Then it was explained to me that "National" was a trade name of the Matsushita Corporation, later to identify as Panasonic, and, as some might remember, sometimes combined with the National name.

Although I took many photographs, I discovered later that the very detailed website <http://www.japanradiomuseum.jp/index-e.html> has much better photography, and is worth a visit in itself even if you can't get to Matsumoto. There is a great deal of Japanese radio history written up, as well as the photographs, plus it references the entire collection, not just what is out on display, so it is a very informative site. Portions of the site are principally in Japanese, but with the photos and with bits of English scattered throughout, you can get quite an accurate idea of what the museum is all about.

One photo I could not find on the web site was that of a fine box loop antenna, so I'll include one that I took, incongruously placed against a display of miniature television sets (photo 3).

I especially liked the information found at <http://www.japanradiomuseum.jp/tousen-e.html> which describes how in the early 1930's, Japanese broadcasters needed a "high quality and low priced radio set". Tokyo Central Broadcast Station (JOAK) held a contest, specifying an AC set design of two tubes exclusive of the rectifier tube. A second contest was held in 1931, and a couple of the winners of that competition are in the museum's collection.

JOAK still exists today, and is heard in many parts of the world by DXers, who are now often using software designed radios, so the technology used by its listeners has come a long way from those early contests. The museum displays a poster of JOAK from 1925, complete with a schedule from that era (photo 4). There are also cards from JONK, the NHK1 station that still broadcasts from nearby Nagano.



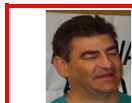
Photo 3

Of course, Japanese inventiveness in developing radio circuitry did not end in the '70s, as DXers' can attest from their familiarity with such now historic radios as Panasonic's RF-2200, and Sony's ICF2010, along with the cleverly designed SRF-59 series of Walkmans. I understood that these radios are beyond the museum's present time frame. We'll have to see what happens as time moves on.

Directions for getting to the museum are in a Japanese-only map on the website. However, although the museum may not be known to the average passer-by in Matsumoto, the nearby Yohashira shrine will be, and that is clearly marked in Japanese on the map. The tourist office in the train station has English speaking staff, and will also be able to help. If you are adventurous enough to visit Matsumoto, then it will not be too much of a challenge to find it. Both the city and the museum are well worth a visit.



Photo 4



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

Geomagnetic Summary January 1 2018 through January 31 2018
Tabulated from status daily (K @ 0000 UTC).

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

Gx – Geomagnetic Storm Level

Rx – Radio Blackouts Level

Sx – Solar Radiation Storm Level

Beverage and Longwire Antennas Design and Theory (BAM)

This manual is a compilation of numerous articles on the subject of design and theory of the beverage and longwire antennas that have appeared through the years in **DX News**. Some articles are available as reprints. This book gives details information on the theory of operation, construction and maintenance of a beverage antenna. Serves as an enhancement to Antenna Reference Manuals Volume 1 and 2. 8 1/2" X 11" booklet format.

BAM Contents:

The Coolum Beach Beverage 1983
Beverage Basic Theory
The Florida Beverage
The Care and Feeding of the Wave Antenna

A Non-Resonant Longwire Remote From Earth Ground
Two-Wire Phased Antennas
Analysis of the Beverage Antenna

Price: **IRCA/NRC Member USA** \$8.95, Non-Member USA \$12.95. Other countries write for quote sales@nrctxas.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@nrctxas.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@nrctxas.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@nrctxas.org.

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

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.

CLUB OFFICERS AND CONTACT INFORMATION

President: Bruce Portzer, 6546 19th Ave NE, Seattle WA 98115 e-mail: portzerbt@gmail.com (all proposals, suggestions and gripes go here)

Secretary-Treasurer: Lynn Hollerman, PO Box 60241, Lafayette LA 70596
e-mail: lynnhollerman@yahoo.com – (dues, address changes, IRCA mailing list sign-ups)

Board of Directors: Bill Block – billblock@cableone.net, Dennis Gibson – wb6tnb@yahoo.com, Stephen S Howe – showe@albany.edu, John C Johnson – John_Johnson@prodigy.net, Patrick Martin – mwdxer@webtv.net, Mike Sanburn – mikesanburn@hotmail.com and Robert Wien – wienbob@aol.com

Publishing Committee: Temporary Editor-in-Chief: Phil Bytheway, 9705 Mary Ave NW, Seattle WA 98117-2334
e-mail: DXM.EiC@gmail.com (all material for publication goes here).

MEMBERSHIP DUES
Worldwide \$10

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

All dues and address changes go to: **IRCA, PO Box 60241, Lafayette LA 70596**

Pay electronically with PayPal – add \$1 to the price above. Go to www.paypal.com, then send your dues to ircamember@ircaonline.org – contact Lynn Hollerman for more information.

Sample copies of DX Monitor are available at DXM.EiC@gmail.com

For information on **subscribing to the IRCA mailing list** at Hard-Core-DX, a group e-mail service, contact the moderator, Lynn Hollerman at lynnhollerman@yahoo.com.

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

