



DX MONITOR

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Seattle deadline for next issue (the first in the Volume 55) – Monday 8/14 6 PM PLT (4 week break). IRCA is still looking for a new editor for **DXWorldWide-West**, **DX Test Coordinator** and backup **Editor-in-Chief**.

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2017 IRCA/NRC/DecalcoMania CONVENTION

IRCA will be hosting the 2017 **IRCA/NRC/DecalcoMania** Convention held Thursday August 17-Saturday August 19 (checking out on Sunday) at the Airport Plaza hotel, 1981 Terminal Way, Reno NV 89502. For reservations use phone number 775-348-6371 and request International Radio Club of America rate of \$100 per night plus tax (**although several have received an \$89.99/night rate**). Major credit cards accepted. (Attendees are encouraged to double up, share a room and save). Airlines serving Reno include Alaska, Allegiant, American, Delta, JetBlue, Southwest, United, and Volaris. Amtrak passenger train service is available as well. Registration fee (not including banquet) is \$25 payable to **Mike Sanburn**, PO Box 1256, Bellflower CA 90707-1256. Or, by PayPal (add \$1 to cover fee) **mikesanburn@hotmail.com** Include contact info and club affiliation(s) if any. Tentative schedule in this issue. Visitor's information can be found online at **www.visitrenotahoe.com**.

This year's **IRCA/NRC/DecalcoMania** convention in Reno 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**

It is the tradition of both IRCA and NRC to have a Saturday Night auction at their annual conventions. This August is no exception. If you are planning on attending Reno, if you are able to find any interesting and preferably radio/DX related items that can be donated it is always greatly appreciated. Perhaps raid the local thrift store for some radio station coffee mugs, or maybe there is that station T-shirt which no longer fits, some DX books which you have already read 10 times. Best if you can bring them directly to the convention hotel, but I can accept smaller and midsized items mailed via USPS to my PO Box (1256 Bellflower CA 90707-1256) Auction proceeds will be divided between the clubs and hopefully all attendees can leave with a little item or two for their shack. Thank for your time.

Mike Sanburn KG6LJU

2017 Madison-Milwaukee Get-Together

Our 24th annual get-together will be on Saturday, August 19 at our place in Oak Creek, Wisconsin, 801 E Park Blvd. By all means, go to the Reno convention the same weekend if you can, but if you can't, we offer an alternative. If you're travelling to view the eclipse, take in the get-together as part of your trip. E-mail me at **DXing2@aol.com** or phone me at 414 813-7373 if you'd like more information. **Tim Noonan**

NRC Log Underway

The latest NRC AM Log production is underway and preorders are being taken! Expect shipping in late August!

Order by snail mail by check or money order in US funds to National Radio Club, PO Box 473251, Aurora CO 80047-3251 or order using your Pay Pal account at **http://www.nrcdxas.org**

IRCA/NRC MEMBER USA Price \$26.95 Priority Mail, NON-MEMBER USA Price \$32.95 Priority Mail, MEMBER/NON-MEMBER Canada Price US\$39.25 Global Priority Mail, MEMBER/NON-MEMBER outside US/Canada Price US\$49.75 Global Priority Mail.

73, **Wayne Heinen**, Editor AM Radio Log



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**

DATES OF COLUMN: July 01, 15 2017 **Column data span:** June 17-July 15 2017, Data courtesy of **Stationintel.com**, FCC database and member contributions.

CALL CHANGES (2 columns combined)

FREQ	OLD CALL	CITY OF LICENSE	NEW CALL
1200	WMIR	Atlantic Beach, SC	WJXY
1230	KBNH	Burns, OR	KYQT
1260	KLGO	Elgin, TX	KTAE
1340	KVRH	Salida, CO	KGKG
1490	KQDS	Duluth, MN	KJOQ

FORMAT, SLOGAN AND SILENT STATUS CHANGES (2 columns combined)

FREQ	CALL	CITY OF LICENSE	NEW INFORMATION
540	KYAH	Delta, UT	adds unknown networks, old slogan: "Yah Radio 540-Talk and Travel", new: "Yah Radio 540"
590	WDIZ	Panama City, FL	was adult hits, now rock, old slogan: "96.3 Real Fun Beach Radio", new: "96 Rock"
630	WNEG	Toccoa, GA	old slogan: "WNEG-AM 630 Toccoa", new: "WNEG-AM 630/93.1 FM"
	KLEA	Lovington, NM	now silent
640	WMEN	Royal Palm Beach, FL	old slogan: "640 Sports", new: "640 The Hurricane"
680	WCBM	Baltimore, MD	old slogan: "Two Way Radio AM 680 WCBM", new: "Talk Radio 680 WCBM"
740	WDGY	Hudson, WI	was oldies, now classic hits, old slogan: "Oldies Radio", new: "WDGY The Original Rock n Roll Station"
790	KKON	Kealahakua, HI	now silent
900	WGAM	Nashua, NH	was sports, now oldies, old slogan: "ESPN New Hampshire", new: "WGAM Oldies Radio"
910	WRFV	Valdosta, GA	now silent
960	WABG	Greenwood, MS	old slogan: "The Awesome A-M", new: "Awesome AM WABG 960"
1060	KFOY	Sparks, NV	was Spanish sports, now Spanish CHR
1070	WFLI	Lookout Mountain, TN	was silent, now talk, was talk, now oldies
1090	WTSB	Selma, NC	was country, now talk
1190	KJJI	White Hall, AR	was silent, now urban gospel

1220	KLPW	Union, MO	was news/talk, now variety
	WSTL	Providence, RI	now silent
1230	WBBZ	Ponca City, OK	adds sports as secondary format
	WODI	Brookneal, VA	was sports, now new unknown format
1240	WJLX	Jasper, AL	now silent
	WNBZ	Saranac Lake, NY	now silent
	WOMT	Manitowoc, WI	was oldies, now adult contemporary
1250	WGAM	Manchester, NH	was sports, now oldies, old slogan: "ESPN New Hampshire", new: "WGAM Oldies Radio"
1260	WWVT	Christianburg, VA	was news/talk, now classical, jazz
1290	WNBN	Meridian, MS	now silent
	WJCV	Jacksonville, NC	old slogan: "WJCV Radio 1290", new: "WJCV Radio 1290/98.3 FM"
1330	WBCA	Watertown, MA	was silent, now Bloomberg Radio Network business news, adds slogan: "Bloomberg Radio"
1360	KWDJ	Ridgecrest, CA	old slogan: "Good Time Oldies", new: "Kool Gold"
1370	WQLL	Pikesville, MD	old slogan: "Q 1370", new: "Q 1370 Baltimore's Greatest Hits"
1380	WMJR	Nicholasville, KY	old slogan: "Real Life Radio", new: "Relevant Radio"
1400	WSTC	Stamford, CT	was silent, now news/talk, adds National Public Radio, adds slogan: "Fairfield County Public Radio"
	WCCY	Houghton, MI	was adult standards, now CHR, old slogan: "All Star Radio 1400", new: "The Lift 99.3"
	KXGF	Great Falls, MT	adds slogan: "98.3 FM Great Falls Sports Radio"
	KNNR	Sparks, NV	was regional Mexican, now talk
1430	KVHZ	Wasilla, AK	old slogan: "Khitiz 107 FM", new: "Khitiz 107.1"
1450	WBSR	Pensacola, FL	was unknown format, now contemporary Christian, adds slogan: "WOW Radio"
	KLZS	Eugene, OR	now silent
1480	KPHX	Phoenix, AZ	now silent
1490	WJOC	Chattanooga, TN	old slogan: "The Wonder Joy of Christ-WJOC", new: "The Talk of Chattanooga WJOC"
1510	WMEX	Boston, MA	now silent
	WLGN	Logan, OH	was oldies, now classic hits, old slogan: "Oldies 1510", new: "103.3 FM and 1510 AM Classic Oldies"
	KLLB	West Jordan, UT	now silent
1590	KVTR	Victorville, CA	was regional Mexican, now ranchera
	WSMN	Nashua, NH	adds slogan: "Nashua News and Talk"
1660	WBCN	Charlotte, NC	was talk, now classic rock, old slogan: "America's Pulse 1660", new: "94.7 Smoke"

MEMBER CONTRIBUTIONS (2 columns combined)

Andrew Brake sends along the following dated 7/1/17:

It seems that 1510 WMEX Boston went silent at 2200 GMT on 30th June. I listened to the last 75 minutes of the broadcast via the web stream. The last show was "Renegade Radio" presented by John Pica and Bryan Berner – normally on from 6-10am, the show had a special edition from 3-6pm (EDT) to mark the end of broadcasting. The show mentioned the silence was due to "the last day of the current station ownership". The WMEX radio stream will become a Renegade Radio stream, and after 2200, the station's web stream put out Renegade Radio highlights. There was no announcement – the programme just ended and was followed by a few minutes' silence before the highlights show started.

Towards the end of June evening talk programmes had been replaced with oldies music.

Wikipedia reports that the station lost its transmitter site, but the station audio in the final hours did not mention this and posts on RadioDiscussions.com indicates that a transmitter site is still available.

The FCC web site does not show any change.

Mike Sanburn sends along the following dated 7/10/17:

WFLI-1070 Lookout Mountain TN is back on the air. I posted the article on IRCA Facebook page yesterday about WFLI in Chattanooga (Jet FLI) being back on with only its second owner in decades.

(1st column) Thanks, Andrew for the late tip above! Well, the 4th of July holiday is just about upon us, I'm staying in the general area here in Laurel MD, since it's going to be hot this weekend in the 90's and may get rain Saturday and 4th of July, so will probably just watch fireworks, catch up on movies (seeing Despicable Me 3 and Baby Driver this weekend, saw Transformers last weekend), and otherwise just relax and vegetate in front of the TV, heh. My car was plowed into by a hit-and-run driver a week and a half ago on the Baltimore beltway (695-North) on west side of town by a semi that was pure white, left \$2500 damage on my driver's side and then took off, probably no insurance! I wasn't hurt except for a minor whiplash in neck which subsided the next day. Car is in the shop this week and should be done 6/30, I have a black Ford Focus as a rental car while it is being fixed. At least I can DX on a pretty good car radio, heh. Hopefully no accidents for anyone heading out this 4th of July weekend, enjoy wherever you go even if it's in front of the TV like me, or do some summer DX and report to your respective columns what you hear including this one! 73's. **Bob Wien**

(2nd column) Well, 4th of July has come and gone, now in the hot parts of July and August out here on the east coast. Convention is coming up soon, hope everyone there has a good time, I can't go unfortunately as I have to be ready to travel to Houston TX for testing on the James Webb Space Telescope anytime between now and October. 3 more weeks and I turn 57! Hope everyone has good DX, try some eclipse DX during the total solar eclipse on 8/21! 73's. **Bob Wien**



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

For June 2017... July 1 2017

NEW STATIONS LAUNCHED

600 QC Montreal CFQR Commercial. 10,000 watts days/5,000 watts nights. News-Talk. Tietolman and Tetrault Media. (currently in test mode).

CALL LETTER DATA

600 QC Montreal new Will become CFQR

AM TO FM CONVERSIONS GRANTED

610 AB Peace River CKYL Move to 94.9 from 610. Will operate with 62,000 watts (100,000 watts Max. ERP).
710 QC Parent-La Tuque CBF-19 Move to 99.9 from 710. Will operate with 50 watts.
990 NT Norman Wells CBDW Move to 99.9 from 990. Will operate with 50 watts.
1070 BC Clinton CBUU Move to 98.9 from 1070. Will operate with 50 watts.
1210 NL St John's VOAR Move to 96.7 from 1210. Will operate with 100,000 watts.

OWNERSHIP CHANGES GRANTED

610 BC Kamloops CHNL From NL Broadcasting to Newcap.
1230 BC Merritt CJNL From NL Broadcasting to Newcap.
1340 BC Ashcroft C1NL From NL Broadcasting to Newcap.
1400 BC Clearwater CHNL-1 From NL Broadcasting to Newcap.

DENIALS

1190 ON Brampton new Commercial. 1,500 watts (days)/68 watts (nights). Multilingual. Priya Datta. CRTC determined that Brampton cannot sustain a new station at this time.
ON Brampton new Commercial. 10,000 watts (fulltime). Multilingual. Antoine Karam. CRTC determined that Brampton cannot sustain a new station at this time.
1630 ON Ottawa new Commercial. 10,000 watts (days)/1,000 watts (nights). Multilingual. Antoine Karam. CRTC determined that Ottawa could not support an additional Ethnic station.



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

WDXR DEADLINES: Aug 11, Aug 25, Sept 8, Sept 22, Sept 29, Oct 6, Oct 13, Oct 20 and Oct 27. Please use Eastern Local Time.

REPORTERS FOR THIS ISSUE:

- (BB) **Bill Block**-Prescott Valley AZ **billblock@cableone.net**
R8, Wellbrook ALA1530LNP
(JCJ) **John Johnson**-2922 S Olivewood, Mesa AZ 85212 **John_Johnson@prodigy.net**
Icom IC-R75, Wellbrook ALA1530LNP
(MS) **Mike Sanburn**-PO Box 1256-Bellflower CA 90707-1256 **mikesanburn@hotmail.com**
Sangan DT 160

OF SPECIAL INTEREST

- 1480 KPHX **AZ**, Phoenix station is off the air due to loss of satellite feed of programming. (JCJ-AZ)
1110 KRDC **CA**, Pasadena 6/23 2017 caught legal ID "KRDC Pasadena-Los Angeles" with mentions of 99.1 FM and 1110 AM, Radio Disney Country. Seems the songs on heavy rotation get played as often as once an hour. (MS-CA)
1180 KLFP **TX**, Midland 7/6 over KERN, KOFI nulled. 0900 out of religious program with "Thank you for listening to our local Catholic radio station on 1180 AM, KLFP Midland, Odessa" ID into EWTN programming. New for me. (JCJ-AZ)
1330 KCKM **TX**, Monahans heard 6/23 at 2317 with "Your Oil Field Station KCKM." (BB-AZ)
1480 KHQN **UT**, Spanish Fork 7/14 good, alone. Local KPHX off the air. 0802 out of ethnic music with "This is Radio Krishna 1480 in Spanish Fork KHQN" ID. New for me. (JCJ-AZ)

Volume #54 ends with this issue. Below is the list of WDXR reporters to the volume along with the total tips reported and number of issues to which they reported. – Nancy 7/14 1900

REPORTERS TO WDXR VOLUME 54

Reporter	Total tips/number of issues
1. Bill Block	324/30
2. Rick Barton	162/22
3. Art Peterson	106/12
4. Jon Pearkings	97/18
5. John C Johnson	80/29
6. Glen Hansen	40/7
7. Nigel Pimblett	29/3
8. Dennis Vroom	12/3
Mike Sanburn	12/9
10. Ted Wendland	11/1
11. Nancy Johnson	9/6
12. Dennis Gibson	3/3
13. Martin Foltz	2/2
Mark West	2/2
15. Darrell Neft	1/1

Thank you everyone for your support to the column!



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 **N0UIHEric@aol.com**
CountyComm GP-5/SSB Gen 3, CountyComm High Sensitivity AM antenna

DOWN THE DIAL

- 540 KMLB **LA**, Monroe. 7/11 fair signal over WAUK. 0618 noted with local spots, agricultural report, Sean Hannity promo, "News radio Five-40 and 105-point-Seven FM" ID into *America's Morning News*. [EB-MO]
560 KLVI **TX**, Beaumont. 7/13 fair signal over WHBQ. 0525 noted with *America in the Morning*, local spots, Rush Limbaugh promo, "News, talk Five-60 KLVI Beaumont" legal ID at 0530 into Fox News Radio. [EB-MO]
WHBQ **TN**, Memphis. 7/6 fair to poor, mixing with other stations. 0359 with local spots, legal ID into sports headlines from NBC Sports Radio. [EB-MO]
WNSR **TN**, Brentwood. 7/6 fair to poor signal, mixing with KLVI, WHBQ. 0459 noted with local spots, "WNSR Brentwood, Nashville" jingle ID into sports headlines from CBS Sports Radio. Must have been on day power. [EB-MO]
570 WNAX **SD**, Yankton. 7/4 fair signal over WWNC. 0330 noted with local spot, call letters into local news. [EB-MO]
610 WAGG **AL**, Birmingham. 7/5 fair signal in KCSP null. 0510 noted with "Heaven Six-Ten" ID into an Urban Gospel format. [EB-MO]
640 WOI **IA**, Ames. 7/10 fair signal over CMBB, KWPN. 0440 noted with talk on advertising from the BBC. [EB-MO]
660 WFAN **NY**, New York. 7/9 fair signal over XEAR, ACI from WSM 650. 0205 noted with "The Fan" mention, "Sports radio 101-point-Nine FM and Sports Radio Sixty-Six WFAN" ID into talk on Major League Baseball. [EB-MO]
680 WMFS **TN**, Memphis. 7/10 fair to poor signal over other stations. 0457 noted with local spots, "ESPN 92-point-Nine" ID, AM/FM legal ID into *ESPN Sports Center All Night*. [EB-MO]
690 KGGF **KS**, Coffeyville. 7/7 fair to poor signal in KSTL null. 0619 noted with calls in promo. [EB-MO]
WQNO **LA**, New Orleans. 7/6 fair to poor signal in KSTL null. 0224 noted with the Holy Rosary broadcast. [EB-MO]
740 CFZM **ON**, Toronto. 7/6 good signal over KRMG. 0533 noted with local news and sports, "Zoomer Radio" ID, EDT time check, local spot and weather forecast. [EB-MO]
790 KXXX **KS**, Colby. 6/23 fair signal over WKRD. 0611 noted with Country format, "Premium Country Seven-90 K-triple-X" ID into local spot. [EB-MO]
WMC **TN**, Memphis. 7/9 fair signal over WKRD, WTSK. 0431 noted with a CBS Sports Radio update, promo mentioning ESPN Seven-90 and ESPN 92-point-Nine into local spots. [EB-MO]
820 WVSG **OH**, Columbus. 7/13 fair signal in WBAP null. 0548 noted with the Holy Rosary broadcast. [EB-MO]
860 WTZX **TN**, Sparta. 6/24 fair to poor signal, mixing with WSON. 0530 noted with "Country Gold Eight-60" ID into Classic Country format. [EB-MO]
900 CHML **ON**, Hamilton. 7/8 fair to poor signal over KFAL, XEW. 0440 noted with "AM Nine Hundred CHML" IDs in PSAs, local spot into C2C. [EB-MO]
910 KATH **TX**, Frisco. 7/6 fair signal through KVIS. 0541 noted with the Holy Rosary broadcast. [EB-MO]
950 WWJ **MI**, Detroit. 7/9 fair to poor signal, mixing with WAKM, WORD. 0211 noted with "News radio Nine-50 WWJ" ID into local news. [EB-MO]
1010 WINS **NY**, New York. 7/6 fair signal in CFRB null. 0318 noted with sports report, "Ten-Ten Wins" ID into local spots. [EB-MO]
WTZA **GA**, Atlanta. 6/23 fair to poor signal, mixing with WKJW, KXEN off. 0545 noted with Christian vocal music, "Vida diez-diez AM en Georgia" ID in Spanish. Must have been on day power. [EB-MO]
1020 KCKN **NM**, Roswell. 7/4 fair signal over KDKA. 0616 with prayers in Spanish, with choral and Contemporary Christian music in the background. [EB-MO]
1030 KFAY **AR**, Farmington. 7/12 fair signal over WBZ, WQSE. 0425 noted with station promos, "News, talk 10-30 KFAY" ID into *Red Eye Radio*. [EB-MO]
1070 WAPI **AL**, Birmingham. 7/12 fair signal over KHMO. 0405 noted with local spot into *Red Eye Radio*. [EB-MO]
1150 KCPS **IA**, Burlington. 6/24 fair signal over other stations. 0504 noted with local spots. [EB-MO]
1160 KSL **UT**, Salt Lake City. 7/4 fair signal in WYLL null. 0504 noted with ABC News, local spots, "KSL-FM Midvale, KSL Salt Lake City" legal ID into *America in the Morning*. [EB-MO]
1220 WLPO **IL**, La Salle. 7/8 fair signal, mixing with WHKW, WSLM. 0419 noted with "103-point-Nine WLPO" ID into a Classic Hits format. [EB-MO]
1230 KFJB **IA**, Marshalltown. 6/23 fair to poor signal over other stations. 0600 noted with "12-30 KFJB Marshalltown" legal ID into ABC News. [EB-MO]
1240 KBIZ **IA**, Ottumwa. 7/11 fair to poor signal, mixing with WENK, WTAX and other stations. 0500 noted with "12-40 AM, 102-point-Seven FM KBIZ Ottumwa" legal ID into ABC News. [EB-MO]
WTAX **IL**, Springfield. 7/12 fair to poor signal, mixing with KBIZ and other stations. 0430 noted with "News, talk 12-40 and 93-point-Five WTAX Springfield" legal ID into local spots. [EB-MO]

- 1290 WHIO **OH**, Dayton. 7/5 fair signal over WIRL. 0525 noted with local news, EDT time check, "AM 12-90, FM 95-point-Seven WHIO" ID. [EB-MO]
 1300 WOOD **MI**, Grand Rapids. 7/2 fair to poor signal, mixing with other stations. 0500 noted with "WOOD Grand Rapids, WOOD-FM Muskegon, News radio Wood, 13-hundred AM and 106-point-Nine FM" legal ID into Fox News Radio. [EB-MO]
 1320 WCVG **KY**, Covington. 7/5 fair to poor signal, mixing with KELO in KSIV null. 0541 noted with *The Overcomer with Brother RG Stair*; confirmed by a check of the program's Web site. [EB-MO]
 1360 KMJM **IA**, Cedar Rapids. 7/5 fair to poor signal over KSCJ. 0652 noted with a Classic Country format, "Classic Country 13-60 KMJM" ID. [EB-MO]
 KSCJ **IA**, Sioux City. 7/13 fair to poor signal over WSAI. 0604 noted with CBS News and local spot. [EB-MO]
 1370 WSPD **OH**, Toledo. 7/7 fair signal over KDTH, KWRT. 0524 noted with "13-70 WSPD, and now at 92-point-Nine FM" IDs in promos, local spots. [EB-MO]
 1390 KCLN **IA**, Clinton. 7/2 fair signal over WGRB, WRIG, WTJS. 0620 noted with "Your home for ABC News is AM 13-90 KCLN" ID, local spot and weather forecast. [EB-MO]
 WRIG **WI**, Schofield. 7/2 fair signal mixing with WGRB, WTJS. 0547 noted with local spots, "AM 13-90 and 93-point-Nine FM" mention. Must have been on day power and pattern. [EB-MO]
 1410 WRMN **IL**, Elgin. 7/12 fair to poor signal, mixing with WING. 0534 noted with shopping show promo, "14-10 WRMN" ID. [EB-MO]
 1430 WYMC **KY**, Mayfield. 6/28 fair to poor signal through KZQZ. 0606 noted with "14-30 AM WYMC" ID into Oldies format. [EB-MO]
 1440 KTUV **AR**, Little Rock. 7/13 good to fair signal over WPRS, WROK. 0445 noted with Regional Mexican format, "La Que Manda, La Patrona" ID in Spanish. [EB-MO]
 1450 KQYX **KS**, Galena. 7/4 fair to poor signal, mixing with other stations. 0554 noted with Christian instrumental music, "14-50 the Dove" ID. [EB-MO]
 WLOH **OH**, Hamilton. 7/7 fair to poor signal, mixing with other stations. 0519 noted with "WLOH, 14-50 the Ticket" ID into local spots. [EB-MO]
 1480 WHBC **OH**, Canton. 6/24 fair to poor signal through WDJO, WJBM. 0550 with local spots, "News, talk 14-80 WHBC" ID into local feature story. [EB-MO]
 WLMV **WI**, Madison. 7/9 fair to poor signal, mixing with other stations. 0456 noted with local spots, "La Movida" ID in Spanish into a Regional Mexican format. [EB-MO]
 1510 KCKK **CO**, Littleton. 7/5 fair signal through WLAC. 0615 noted with "93-point-Seven FM" mention into a Classic Hits format. [EB-MO]
 1570 KBCV **MO**, Hollister. 7/6 good signal over WBGZ. 0602 noted with USA Radio News, promos, "Bott Radio Network" ID into *Insight for Living*. [EB-MO]
 1600 WAAM **MI**, Ann Arbor. 7/11 fair to poor signal in KATZ null. 0530 noted with "WAAM Radio 16-hundred" ID and "WAAM Radio 16-hundred-dot-com" mentions in promos. [EB-MO]
 1660 WQLR **MI**, Kalamazoo. 7/4 fair to poor signal, mixing with KRZI, KWOD. 0447 noted with "16-60 the Fan" ID in promo into local spots. [EB-MO]

CDXR REPORTER TOTALS FOR VOLUME 54

1. [EB-MO]	244/24	Eric Bueneman , Hazelwood MO	5. [MB-TX]	5/1	Mike Beu , Austin TX
2. [TN-WI]	12/7	Tim Noonan , Oak Creek WI	[NJ-AZ]	5/1	Nancy Johnson , Mesa AZ
3. [KDF-IL]	6/2	Karl Forth , Chicago IL	6. [TMJ-IL]	1/1	Tom Jasinski , Shorewood IL
4. [SP-WI]	5/5	Sheryl Paskiewicz , Manitowoc WI			

FLASHBACK

July 23 1966 issue of "DX Monitor" ... **Rick Evans** of Gary IN said his totals were 114/4 ... **Dallas McKenzie** of Wellington, New Zealand submitted an article on DXing in New Zealand ... **Bill Nittler** of Englewood CO mentioned this issue was the last one published in Colorado. // July 25 1991 issue of "DX Monitor" ... **RC Watts** of Louisville KY reported his DX from Barcelona, Spain ... **Tom Laskowski** of South Bend IN told about DXing on vacation in Texas, New Mexico, and Arizona with mention the dial filled with Mexican stations ... **Ernest Cooper** of Provincetown MA mentioned his DXing while in St Croix.

OPEN MIKE

Thanks to Eric we have a column. Eric gave his new CountryComm Ultralight quite a workout as noted in the massive list of loggings. Plus, Eric is way far ahead of anyone else as to reporting tips to CDXR. This column was typed 7-14-17. 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
 (PS-ON) **Paul Snider**, Welland ON, Canada
 ICOM IC-R75, Pixel RF Pro-1B loop, MFJ-1020C as a tuner

ACROSS THE DIAL

- 540 WWCS **PA**, Canonsburg – 6/27 2215 noted with *Game Night with Matt Perrault*, plenty of *SB Nation* promos and mentions, ads, "WWCS Canonsburg" legal ID and more *SB Nation* mentions. A fair to very poor signal was noted over a probable WLIE with plenty of ACI from CIAO 530 and WGR 550. (PS-ON)
 850 WKGE **PA**, Johnstown – 7/9 2155 heard this station occasionally over the last few weeks, but was unable to ID because their audio is horribly distorted; better signal tonight. Noted with an Adult Standards format featuring selections by Dean Martin and Chris DeBurgh, "850 WKGE Johnstown" legal ID at 2158. A fair at times to poor signal was noted over WKNR. (PS-ON)
 960 WFGL **MA**, Fitchburg – 7/4 2250 noted with a Contemporary Christian format featuring music by V. Rose and Shane and Shane, "Renew FM" ID, brief talk on marriage, possible ID at 2300 into *Songtime Radio*. A fair at times to very poor signal was noted over WFIR; confirmed by Web stream on Renew FM-dot-org. (PS-ON)
 970 WBGG **PA**, Pittsburgh – 7/13 0102 noted with ESPN promo, online flowers ad and a "970 WBGG" ID. Heard while trying to identify a mystery Fox Sports Radio station. A poor to very poor signal under a mostly nulled WDCZ. (PS-ON)
 1010 WSPC **NC**, Albemarle – 6/25 0559 noted with "It's 71 at the WSPC and WZKY Weather Center; I'm..." mention by a female announcer. The signal was noted mixing with CFRB, WINS, WPMH, WTZA, WWMC and unidentified stations with an Oldies format and ESPN Radio. (KK-VA)
 WWMC **NC**, Kinston – 6/25 0523 noted with "24 hours a day, we are Gospel 1010 and 92.9 FM" by a male announcer. The signal was noted mixing with CFRB, WINS, WPMH, WSPC, WTZA and unidentified stations with an Oldies format and ESPN Radio. (KK-VA)
 1040 WLJV **FL**, Boynton Beach – 6/25 0459 noted with a News/Talk format in Spanish, "This is WURN Boca Raton" quasi-legal ID for WURN 1020 by a female announcer in heavily accented English. The signal was noted mixing with WPBS, WSGH, WZSK and unidentified stations with Christian talk and a Country format. (KK-VA) (This station holds a CP to move to Miami, with WURN 1020 holding a CP to move from Kendall to Boynton Beach, and WMYM 990 holding a CP to move from Miami to Kendall, according to the 37th edition of the NRC Log – eb)
 WZSK **PA**, Everett – 6/25 0559 noted with "...stories of the hour, with news when you want, weather on the tens; this is Bedford County's News Station, News/Talk 1040 WZSK" ID by a male announcer into ABC News. The signal was noted mixing with WPBS, WSGH, WURN and unidentified stations with Christian talk and an Oldies format. (KK-VA) (Your Christian talker is likely WCHR Flemington NJ – eb)
 1050 WWGP **NC**, Sanford – 6/30 0505 noted with a Country format, "Florida Georgia Line right here on WWGP" mention by a male announcer. "1050 AM WWGP Sanford" legal ID by a male announcer at 0525, and this mention by a male announcer at 0540: "Proud to be Serving Central North Carolina since 1946 with Today's Best Country, WWGP 1010 AM". The signal was noted mixing with WBQH and unidentified stations with Christian talk, 1970s Oldies in English and vocal music in Spanish. (KK-VA)
 1070 WGOS **NC**, High Point – 6/30 0600 noted with "Esta es" by a female announcer in Spanish, "WGOS 1070 AM High Point/Greensboro" legal ID by a female announcer in heavily accented English. The signal was noted mixing with WFNI, WINA, WKOK and an unidentified Oldies station. (KK-VA) (Your unidentified Oldies station could be CHOK Sarnia ON – eb)
 WKOK **PA**, Sunbury – 6/30 0550 noted with "News Radio 10-70 WKOK" ID by a male announcer. The signal was noted mixing with WFNI, WGOS, WINA and an unidentified Oldies station. (KK-VA)
 1080 WWDR **NC**, Murfreesboro – 6/30 0506 noted abruptly on the air with "WWDR 1080, Classic R&B and Gospel for Murfreesboro" ID by a male announcer. The signal was noted mixing with WTIC, WWNL and unidentified stations with NBC Sports Radio (probably WHOO) and vocal music in Spanish. (KK-VA)
 1090 WHGG **TN**, Kingsport – 6/1 2305 on after sunset with a Contemporary Christian format, "97.3 Love FM" ID at 2314 and 2317. A fair at times to very poor signal was noted under WBAL, confirmed via Web stream at Love Radio-dot-FM. (PS-ON)

- 1150 WLOC **KY**, Munfordville – 7/5 2305 noted with a Country format, “Studio 101” ID, mention of a Fourth of July special, another “Studio 101” ID at 2316. A very poor signal was noted under CKOC, mixing with WAVO, an unidentified Oldies station and other unidentified stations. (PS-ON)
- WGBR **NC**, Goldsboro – 7/12 2135 I’ve been trying to identify this one for almost a week, but finally got it. Noted with a Classic Hits format, “Goldsboro’s Greatest Hits” mention at 2139. A very poor signal was noted mixing with WHBY under CKOC. (PS-ON)
- WAVO **SC**, Rock Hill – 6/22 2132 noted with Adult Standards format, call letters mentioned at 2138, “We are 1150 WAVO” ID by a female announcer at 2139, followed by possible ads into another music segment. A poor to very poor signal was noted, sometimes audible under CKOC. (PS-ON)
- 1240 WJEJ **MD**, Hagerstown – 7/3 2258 noted with Adult Standards format, “This is WJEJ Hagerstown, Maryland” legal ID at 2300, followed by time pips, EDT time check into CBS News. A very poor to poor signal in a mix of stations, confirmed via Tune-In Web stream. (PS-ON)
- WVTS **WV**, Dunbar – 7/6 2205 noted with possible news, a possible “WVTS” mention, “News/Talk 1240 WVTS” ID at 2211, “News Source WVTS” mention at 2222. A very poor signal was noted in a station mix. (PS-ON)
- 1330 WTRX **MI**, Flint – 6/29 2248 noted with *Ferrall on the Bench*, ad cluster including Little Caesar’s Pizza, Rocket Mortgage, Grainger, The Gap/Banana Republic stores and Geico, “WTRX Flint, a Cumulus station” legal ID at 2259. A fair to very poor signal was noted, mixing with WSPQ, WWRV and other stations, confirmed via Web stream at WTRX Sports-dot-com. (PS-ON)
- 1340 WLEW **MI**, Bad Axe – 7/3 0012 noted with Country format, “The Thumb’s Hottest Country, WLEW” ID at 0033 before fading; a possible jingle was later heard. A poor to very poor signal was noted in a mix of stations, confirmed via Tune-In Web stream. (PS-ON)
- WEXL **MI**, Royal Oak – 7/6 2128 noted with an Urban Gospel format, show promo, “Glory 1340” mention, “We are WEXL 96.7 FM, 1340 AM” ID at 2137. A very poor signal was noted under WLVL; confirmed via Tune-In Web stream. (PS-ON)
- 1400 WINC **VA**, Winchester – 6/30 2331 noted with a Washington Nationals post-game show, mention of the Washington Nationals Radio Network, Virginia ads and sports scores. No ID heard, but WINC is the only station on 1400 affiliated with the Washington Nationals Radio Network. A poor to very poor signal was noted in a mix of stations. (PS-ON)
- 1450 WLEC **OH**, Sandusky – 6/25 2358 noted with Adult Standards format, “Broadcasting from... WLEC Sandusky” legal ID at 2400 into the news. A very poor signal was noted, briefly above a mix of stations. (PS-ON)
- 1460 WRVK **KY**, Mount Vernon – 6/28 0018 noted with a mix of Country and Bluegrass music, “1460 WRVK” ID between songs at 0021. A poor to very poor signal was noted, mostly under WHIC in a station mix including CJOY. (PS-ON) (The “RV” in the call sign stands for Renfro Valley – eb)

UNIDENTIFIED

- 1070 0548:41 noted with Morse Code; I was not able to hear the complete message, but I do hear “KM”. The only “KM” I find on 1070 is WKMB Stirling, NJ. I’m unsure what I’m hearing or who is sending the Morse Code. (KK-VA) (Could it be a nearby Ham’s CW transmissions producing spurious emissions? As I have stated previously, the only Morse Code I’ve heard on AM has been during DX tests – eb)

EDITOR’S NOTES

Starting with Volume 55 Number 1, the deadline for EDXR will be pushed back from Thursday at 2000 ELT to Friday at 2359 ELT. August deadlines will be on the 11th and 25th. Thanks to Kraig and Paul, we have a column this fortnight to wrap up Volume 54. Thanks to all who contributed to EDXR in Volume 54! I look forward to more in Volume 55! 73 and good DX from NØUIH (The Florissant Valley Dial Twister)



DX WORLDWIDE – WEST – Temp: Phil Bytheway – 9705 Mary Ave NW – Seattle WA 98117-2334
E-mail: phil_tekno@yahoo.com all times UTC

Mondays 1201 PM PLT. All times UTC/GMT. We are looking for a new editor for this column, contact me if interested phil_tekno@yahoo.com.

TRANS-PACIFIC DX ROUNDUP

- 594 **AUSTRALIA** 3WV, Horsham. Man mentioning “ABC radio” 1134 6/6, fair strength. Murphy was also snoozing 1200 6/28, as this faded up to fair strength with fanfare and “ABC news” by man, followed by (oddly) ABC news. Also, old rock n roll //612 1208 7/9, poor strength, and not too big an offset from 612. (NHP-BC)
- JAPAN** JOAK, Tokyo, NHK1. Pips at 1100 6/5, man mumbling; poor strength, hardly heard at all over the last couple of months, unlike JOUB-774. (NHP-BC)
- 603 **NEW ZEALAND** Manukau, Radio Waatea. Island vocal music, poor strength 1205 6/21, //765 a few minutes later. Also, woman talking, very weak but //765, 1212 7/14. This has been fairly frequent the last couple of months, but never strong. (NHP-BC)
- 612 **AUSTRALIA** 4QR, Brisbane. Man in DU English, fair strength, 1214 6/6, //774. Also man talking DU English good strength 1208 6/28; had been IDed on hour at lesser strength with ABC news fanfare. Not a common visitor the last couple of months, weak if at all. (NHP-BC)
- 675 **NEW ZEALAND** Christchurch, Radio NZ National. Man in DU English //756 1226 7/15, then into jazzy music; fair strength for a short while. (NHP-BC)
- 702 **AUSTRALIA** 2BL, Sydney. Woman then man talking 1211 7/9, poor strength, //594 but leading it by over a second. (NHP-BC)
- 738 **AUSTRALIA** 2NR, Grafton. Female vocal //594 1211 6/12 poor strength. Also, woman talking, poor strength //612 with slight offset, 1207 7/9. (NHP-BC)
- 747 **JAPAN** JOIB, Sapporo. NHK2. Man in Japanese 1103 5/25 //774, fair strength. Man talking Japanese 1108 6/21, fair strength, though quite a bit of weak audio on this channel between 1105 and 1135. IDed for sure by //774 at 1130. Not bad for summer solstice, when there is a limited darkness path to Japan. (NHP-BC)
- 756 **NEW ZEALAND** Auckland, Radio NZ National. Man talking 1202 7/15, poor strength, continuing in and out for half an hour; not IDed until 1226 //675. (NHP-BC)
- 765 **NEW ZEALAND** Napier-Hastings Radio Kahungunu. Island vocals, poor strength, 1213 6/21, //603 which was fading away at this time. Also, woman talking, very weak but //603, 1212 7/14. (NHP-BC)
- 774 **AUSTRALIA** 3LO, Melbourne. Fading up during fanfare, then ABC news, Trump in Warsaw etc., good strength, 1201 7/6. (NHP-BC)
- JAPAN** JOUB, Akita, NHK2. Woman in Japanese with musical interlude, briefly at excellent level, and wiping out the splatter at 1118 6/13. Pretty good strength for so close to the solstice. Also heard with English lessons, fair strength 1114 6/12; good strength 1124 6/10 with man and woman in Japanese (if it wasn’t for splatter on this -75dBm signal, it would have been perfectly readable). Finally, was heard with man in Japanese 1140 7/15, fair strength. (NHP-BC)
- 828 **JAPAN** JOBB, Osaka, NHK2. Man in Japanese briefly topped out at excellent level 1121 5/14, IDed with various parallels. Also, woman talking, poor strength //774 1122 6/5. (NHP-BC)
- 837 **JAPAN** JOQK, Niigata, NHK1. Man talking //594 1113 6/13, poor strength; at 10kw, this is pretty good summer high latitude DX. (NHP-BC)
- NEW ZEALAND** Kaitaia/Whangarei, Radio NZ National. Woman talking 1205 6/9 //675, poor strength. (NHP-BC)
- 855 **AUSTRALIA** 4QO/4QB, Eidsvold/Pialba, ABC. Poor strength with man talking //774 1214 6/12. (NHP-BC)
- 891 **JAPAN** JOHK, Sendai, NHK1. Pips, man mumbling 1100 6/13, poor strength but definitely //594. (NHP-BC)
- 909 **NEW ZEALAND** Napier, ‘Star’. Slow vocal music //963, poor strength 1150 6/15. (NHP-BC)
- 963 **NEW ZEALAND** Christchurch, ‘Star’. Slow vocal music //909, poor strength, 1150 6/15. (NHP-BC)
- 972 **REP KOREA** HLCA, Dangjin. KBS Hanminjok Bangsong. Man and woman in Korean, excellent level 1139 5/14. Also two men in Korean 1137 5/16, briefly fair; last time heard as midsummer approached. (NHP-BC)
- 1017 **TONGA** A2Z, Nuku’alofa. This faded up to fair strength 1208 6/28, with man in island language; if any English, it was heavily accented. At 1209, choral song to strummed accompaniment which others have recorded before at Tonga s/off. The carrier at this point was quite thunderous. (NHP-BC)
- 1089 **JAPAN** JOHB, Sendai, NHK2. Penny whistle solo, poor strength, but punched through the splash //774 at 1125 5/11. (NHP-BC)
- 1116 **AUSTRALIA** 4BC, Brisbane. Woman saying “and now a sports update on 4BC”, good strength 1203 6/28. Also, man talking to another man on phone 1213 7/9, good strength with several 4BC mentions as it faded back down again. (NHP-BC)
- 1287 **JAPAN** JOHR, Sapporo, HBC. Woman talking rapidly in Japanese, then man, bits of music, maybe a commercial? 1109 5/16, briefly fair. (NHP-BC)
- 1323 **CHINA** Shuangyashan, CRI. Woman and man in Russian, good level, leading into an oriental flavored violin solo, 1145 5/11. Also heard weak but identifiable stringed music leading up to chimes and fanfare 1158-9 5/13; last time heard for the season. (NHP-BC)
- 1386 **JAPAN** NHK2 synchros. JOQC Morioka most likely? Man talking, poor strength //774 1130-1 5/11, both 774 and 1386 fading up nearly simultaneously. In comparison, extreme minimalist DX with man talking, very weak but //774 1143 5/15. (NHP-BC)

1566 **REP KOREA** HLAZ, Jeju, FEBC. Man in Chinese 1203 5/11, briefly excellent level. Note that this isn't the Japanese pattern that points to North America (unless they hit the wrong switch in the control room). In fact, the broadcast did show a boost at 1230, but only from non-existent to weak, due to local sunrise about the same time. Also, sudden fade up to good level with man and woman in Chinese, following usual sequence with both of them speaking in unison at 1100 5/14. Also man heard at similar strength in Chinese 1111 and 1123. Pretty much the last time this heard with reasonable audio as summer approached. (NHP-BC)

ODDS AND ENDS (via IRCA eGroup)

170701. Sean Gilbert has just posted on the WRTH Facebook group:

WRTH A17 Broadcasting Schedules Update file is now available for free download from www.wrth.com. The PDF file contains the changes to the transmission schedules of International and Clandestine/Target broadcasters. <https://www.facebook.com/groups/wrthgroup/>

THANKS TO THIS REPORTER

NHP-BC **NICK HALL-PATCH**, Victoria BC nhp@ieee.org

Drake R8, RFSpace NetSDR; RFSpace SDR-14 running DX Fishbarrel program; north FLG-100 antenna, west FLG-100 antenna, 1m indoor box loop, 14m sloper, DXP-3 phasing unit.



DX WORLDWIDE – EAST – Brandon Jordan – PO Box 338 – Rossville TN 38066
E-mail: bdjorda@gmail.com all times UTC

Deadline – Sunday Midnight Central Time.

*** TRANS-ATLANTIC DX ***

1278 **IRAN** IRIB Radio Kermanshah. JUL 15 2350 – man and woman in Farsi talk, string instrument music interludes, Quranic chants. Booming signal currently into Carbonear. Also hearing Radio Payam on 1188 kHz and IRIB Tabriz on 1026 kHz from Iran with good signals. [Willie-NF]

*** PAN-AMERICAN DX ***

570 **CUBA** Radio Reloj CMBD Santa Clara, Villa Clara. JUL 6 0627. Noted with time signals, news items, "Radio Reloj" ID in Spanish and "RR" IDs in Morse Code. Fair to poor signal under WNAX. [Bueneman-MO]

580 **MÉXICO** XEMU, Piedras Negras, Coah. JUL 11 1033 noted with national news in Spanish. Fair to poor signal over WIBW and WILL, splash from KFNS 590. [Bueneman-MO]

640 **CUBA** Radio Progreso CMBB Guanabacoa, Ciudad de la Habana. JUL 10 0838 noted with light vocal music, ID and talk in Spanish. Fair to poor signal, mixing with WOI, splash from WSM 650. [Bueneman-MO]

650 **MÉXICO** XETNT, Los Mochis, Sin. JUL 14 1117 – Los Mochis ad at tuneby, so XETNT as expected. [Hauser-OK]

710 **MÉXICO** XEDP, Ciudad Cuauhtémoc, Chih. JUL 14 1112 – Low German preacher about Jesus, a dead giveaway for XEDP as logged with him many times before. Now it's on-frequency with no het, while I had noticed the 710-minus het in bedtime bandscan circa 0600 UT. By 1125 recheck he's done, over to a female DJ in Spanish, plus "La Ranchera de Cuauhtémoc" jingle. This one is listed as only 100 watts at night; yeah, sure. As previously researched, they switch between two different transmitter sites, one of which is significantly off-frequency. [Hauser-OK]

770 **MÉXICO** XEREV, Los Mochis, Sin. JUL 14 1126 – "Sinaloense" state song, 1127 ID for "Grupo Chávez Radio, su radiodifusora local, la voz de esperanza"; 1128 TC for 5:29; "Los Cuarenta", rock music. This is XEREV also in Los Mochis. The "40" brand has dropped "Principales", which was really a cumbersome translation for "Top". We should not assume that La Voz de Esperanza is a real station name now although they did utter that. [Hauser-OK]

800 **MÉXICO** XEROK, Ciudad Juarez, Chih. JUL 6 1011 noted with national news with a story mentioning Guadalajara in Spanish. Fair to poor signal through KQCV. [Bueneman-MO]

950 **CUBA** Radio Reloj synchros. JUL 10 0915 noted with time signals, news items and "Radio Reloj" IDs in Spanish and "RR" IDs in Morse Code. Fair to poor signal, mixing with WAKM and WWJ. [Bueneman-MO]

1050 **MÉXICO** XEG, Monterrey, NL. JUL 10 0722 noted with "Ahora, La Ranchera de Monterrey" mention into Ranchera music in Spanish. Fair signal over US stations. [Bueneman-MO]

1180 **CUBA** Radio Rebelde synchros. JUL 6 0954 noted with talk in Spanish, followed by vocal music accompanied by guitar. Good signal over WGAB on day power, no sign of WHAM. [Bueneman-MO]

1570 **MÉXICO** XERF Ciudad Acuña, Coah. JUL 10 0810 noted with Nortefía music, "La Poderosa" ID and local ads in Spanish. Fair to poor signal in WBGZ null. [Bueneman-MO]

CONTRIBUTORS

[Bueneman-MO]

Eric Bueneman, NØUIH, Hazelwood MO, USA

County Comm GP-5/SSB Gen 3 Ultralight receiver, County Comm high sensitivity AM (LW/MW) antenna

[Hauser-OK]

Glenn Hauser, ENID OK, USA

DX-398 with internal antenna only or PL-880; NRD-545 with ALA-330S inside E-W or inside random wire N-S; ICR-75 with E-W longwire;

FRG-7 with NW-SE short wire

[Willie-NF]

Allen Willie, VOPC1AA, Carbonear, Newfoundland, Canada (GC=47°44'15N 53°11'46W) (grid GN37J)

ICOM R-75 w/183m random wire to SE @ 135°

73, Brandon



DX WORLDWIDE – II – Bruce Portzer – 6546 19th Ave NE – Seattle WA 98115
E-mail: bportzer@comcast.net All times UTC unless noted otherwise

ASIA AND PACIFIC

ALASKA: "I happen to tune nearby KIEL-FM in Loyal OK as Ron Myers is talking about the 'Mission Alaska' project of Radio 74 Internationale, trying to raise money to put a 50 kW AM station on the air before the Construction Permit expires next January. Needs to get work done on the antenna site this summer before everything freezes; but still raising funds of \$150K to purchase the land. It's for 50 kW on 1200 kHz from Chugiak Alaska which Wikipedia shows is 32km northeast of downtown Anchorage. More about it here: <https://www.radio74.net/alaska-project-brochure> which talks about this to bring Adventist/3ABN programming to Alaska. The NRC AM Log shows 1200 as "K#8 Chugiak AK U1 50000/9600 new not on air." (Glenn Hauser, OK, DXLD Yahoo Group)

AUSTRALIA: 4WK Toowoomba (City) 1359 kHz was approved in a recent variation for Toowoomba/Warwick Radio License Area Plan to shift to FM, so the channel will become even clearer. If you have not already QSLed the AM outlet, I would suggest sooner rather than later. (Sam Dellit, ICDX 22 June)

1656 Melbourne area, maybe Radio Rhythm the Chinese station at Sunnybank has only a carrier on air 2300 24/5 by Brisbane member John Smith. 1692 kHz hearing some ethnic on the frequency no ID which doesn't help, but it's out there. Ian Baxter, has DFed this to maybe Radio Symban just outside of Canberra, so stay tuned. (ADXN June 2017)

3YB 882 to move to FM. The change to due to occur in the last quarter of 2018. 3YM [?] 882 kHz MW will be doing a frequency swap with Vision Australia (part of old RPH network) for their 94.5MHz FM freq. More info here: <http://www.3yb.com.au/articles/3yb-to-move-to-fm/>. (Ian in mwmasts yg 6/7-2017)

FIIJ: Radio Fiji 1 on 558 verified with an e-mail QSL from Arthur Rounds, Operations Department, based on my recording of their MW broadcast from an SDR receiver in Tauranga NZ. Arthur says that 558 KHz is currently operating at reduced power of 2 KW but FBC planning to return to 10KW soon with new MW transmitters. FBC will also add a new English service on a frequency to be announced. (Bruce Churchill USA via Glenn Hauser's DXLD Yahoo Group)

HAWAII: 670 KPUA Hilo granted STA, reduced power (using U1 1000/1000) due to transmitter issues. 1460 KHRA Honolulu license cancelled June 1 at licensee's request. (NRC DX News)

NEW CALEDONIA: 666 and 729 are permanently silent. (Stu Forsythe via Theo Donnelly)

NEW ZEALAND: Wellington Access Radio has moved from 783 kHz to FM on 106.1 MHz. This move means that we have a rare clear DX frequency available. An extract from the Radio Spectrum Management register shows that the license for 783 kHz was cancelled on 16 May 2017, it still had a year to expiry. (Paul Rawdon, ICDX 3 June)

A new Nautel NX5 5000 watt transmitter has been inaugurated for Rhema's 1251 AM frequency in Auckland. It replaced the previous transmitter that had served Rhema in Auckland for over 20 years. ('Frequency' newsletter May 2017 via BC)

PAKISTAN: New 100 Kilowatt transmitter commissioned in Larkana Radio Pakistan. Pakistan Broadcasting Corporation (PBC) has up-graded its 12-year old 10 kilowatt medium wave transmitter with a new 100 kilowatt transmitter in Larkana enabling listeners to get stronger and clearer transmission in Larkana Division and beyond. The project was completed at a cost of 63.150 million rupees. The successful completion of the project is attributed to the relentless efforts of PBC's technical team, guidance of Director Engineering and support of Director General.

Meanwhile, transmission from 100 kilowatt medium wave transmitter at PBC Mirpur has also been ensured at optimum power to counter the Indian propaganda.

Lately, India escalated media warfare against Pakistan through its radio stations operating from the Indian Occupied Kashmir. The old 100 Kilowatt medium wave transmitter of PBC Mirpur [936 kHz?] procured in 1996 was operating on low power due to aging and complex technical defect. A technical team of the PBC engineers rectified the fault and now transmission covers areas across Line of Control. (PBC website via mediumwave.info/10/4-2017)

PHILIPPINES: Paul Ormandy reports that DWNX 1611 is on air and is audible. // to 91.1 FM. See <https://en.wikipedia.org/wiki/DWNX>. (Stu Forsythe, 26 June)

EUROPE, AFRICA, AND THE MIDDLE EAST

CLANDESTINE (ALGERIA): 1550 Polisario Front, Rabouni, ALG, doesn't seem to carry the Castilian lang. segments anymore, or then they're broadcast at completely different times. The morning broadcast (opening at 0700?) closes at 1300 while the evening one runs 1700-2300. (Carlos Gonçalves, mediumwave.info 8/5-2017)

CLANDESTINE (SYRIA): Hello DXers, Yesterday 29-5-2017 around 19:30 I noticed a new radio station on 1350 KHz. The station gave ID as Radio Al Kul (kul in Arabic means All). Checked online and reached their web site <http://www.radioalkul.com>.

According to their web site they are a Syrian news radio with up to the minute news about Syria and Syrians through a network of reports. They transmit on FM 95.5 MHz in Aleppo and Idleb in Syria and on Nile Sat satellite frequency 12562 Vertical 27500. Parts of Aleppo is already under the control of ISIL. They have a live stream on their website as well... I checked the programs on 1350 and it is matching the online stream.

They are transmitting from 19:30 to 21:00, of course the transmitting place is unknown but before they went on air TWR from Gavar was on with the usual programs. The program content is mainly music and news on top of the hour and :30 of the hour as well. Here's a recording of part of the transmission of 29-5-2017: <https://app.box.com/s/v2ytww4hcz2d5pqca37j1hr5h66mc4x7> I sent them a reception report but didn't get any reply. (Tarek Zeidan, Cairo, Egypt, dxld yg (30/5-2017)

FRANCE: Apparently summarizing French sources as follows: No broadcaster has filed a serious application for using 162 kHz, so the carrier will remain silent, ie without program audio in AM. For the plain time signal application the output has now been adjusted to 1100 kW, with wrist watches for this system being mentioned as primary reason for still running so much power. <http://radioforum.forenmynip.de/read.php?8773,1269879,1420479#msg-1420479>. (Kai Ludwig, DXLD)

GREECE: Iliada Radio (ex. RS Amaliadas) has returned to the air on 1584 kHz with 1 kW. (WRTH online 22.4.2017)

IRAN: Jyrki Hytönen, Finland informs that Radio Khorasan-e-Razavi, Birjand is now operating on 963 kHz (ex-603) and Radio Iran, Birjand has moved to 558 kHz. (via Mauno Ritola ARC, 13.5.2017)

ISRAEL: On the first day of operation of new public broadcaster 'Kan' 531 kHz is noted carrying Reshet Bet [Network B] //657 kHz instead of Reshet Alef/Reshet Moreshet [Network A/Heritage Network] as previously.

The broadcaster continues to ID on air as 'Kol Yisrael, Reshet...' [Voice of Israel, Network....] They don't seem to have got their webstreams up and running yet (the foregoing observations were made via a web SDR in Israel); the new Kan website at www.kan.org.il is only hosting an audio stream of continuous music interspersed with occasional 'Kan' IDs. (David Kernick, DXLD 15 May)

Kol Israel, program B, Reshet Bet has been criticized by the government and Kol Israel will be closed. On May 14th 657, 1080 and 1458 kHz channels have been heard by remote receiver in Israel. See special article in this issue of MV-Eko. (Mauno Ritola, Bengt Ericson, ARC 14.5.2017)

ITALY: Amica Radio Veneta, Padova is heard on the new frequency of 1206 kHz (ex.594 kHz). Good reception in Austria. (Patrick Robic and Christopher Ratzer ARC 29.6.2017)

KOSOVO: Radio Kosovo is back on 549 kHz, but with very low power, probably under 1 kW. (Karel Honzik ARC 19.4.2017)

LITHUANIA: Radio Baltic Waves International is now using a new 75 kW transmitter on 1386 kHz located at Viesintos. (Ydun's Medium Wave Info 21.4.2017)

MOROCCO: 207 SNRT-AI Watania channel, Azilal, is silent for a little over a month. My logged obs. of co-ch. RUV dated 6th April indicates Azilal was off on 06APR, and remained so up till now. Good news for me... perhaps not good news for other DXers trying to receive Morocco. (Carlos Gonçalves, mediumwave.info 8/5-2017)

NETHERLANDS: Radio Seagull is broadcasting on 747 kHz from the radioship Jenni Beyton in Harlingen harbor. Last weekend other low power stations used that frequency: Groeistad Radio, T-Pot, Radio Babylon, Radio 0511 and Radio Emmeloord en Different 747 AM. The stations made a complaint to the Dutch Agentship Telecom. All stations are licensed for a max. PEP of 100 W, but Seagull was using 2 kW. Later Radio Seagull has turned down the power. This matter will be discussed on the Radio Day 2017 (May 20th) in Harlingen. This day special broadcasts will be made on 747 kHz. More info on <http://www.radioday.nl>. Info from (Willem Prince-Haren via Ydun's Medium Wave Info 3.5.2017)

Groot Nieuws Radio, AM 1008 KHz. Flevoland – The Netherlands goes off-air. The last powerful AM outlet 1008 KHz. in The Netherlands will leave the airways as from September the first this summer. The actual user, the Christian broadcaster Groot Nieuws Radio, has lost in an adjudication to keep the Flevoland transmitter in operation. Groot Nieuws Radio asked the Dutch organization Autoriteit Consument en Markt (ACM) – Authority for Consumer and Marketing, to do a decision. Groot Nieuws Radio has a hiring contract until September 2017. The broadcasting organization says in a statement to be disappointed in the decision of the ACM. Also AM should be needed to reach the whole of the Netherlands, instead of distribution via DAB+, internet, interactive television and the analog kabelnetworks, according to the Christian broadcaster. NOVEC, the owner and exploration company of the transmitter site near Zeewolde – Flevoland, wants to dismantle the 207 meter high broadcasting masts in favor of an electrical windmill power project. Also the company says that maintenance of the masts is needed. After that an exploration will be too expensive or will not have an effectiveness.

The transmitters site Flevoland is in use since 1980. It was the main transmitter site of The Netherlands, consisting two transmitters with a maximum output from 600 Kw, to distribute the first two programs of the Dutch public radio. Earlier called Hilversum 1 and 2, later Radio 1 and 2. In 1985 Radio 2 was replaced by Radio 5. Frequencies are 1008 KHz. and 747. The last one was switched off definitely September the first 2015. Commercial users where hiring airtime on the 1008 KHz. since 2004. Groot Nieuws Radio is allowed to use 1008 until 2020. They will probably have to look for a different possibility. But at last, a nationwide coverage of an AM broadcasting location in The Netherlands will be ending at the end of August this year.

<https://www.grootnieuwsradio.nl/k/n663/news/view/101311/86103/groot-nieuws-radio-uitspraak-acm-stelt-teleur.html>. (Willem Prins, mediumwave.info) 1008 kHz Grootniews Radio, Zeewolde, will stop transmissions from the 1st of September 2017. (Willem Prins, Ydun's Medium Wave Info 5.6.2017)

PORTUGAL: The WRTH 2017 brings incorrect information about Antena 1: Meia-Légua (Faro) 720 is off the air; Miramar 720 is no more. Now, the situation of those two is not new, so it should have been taken into consideration before the material was sent to the WRTH back in 2016. (Carlos Gonçalves, mediumwave.info 8/5-2017)

REUNION: Réunion has stopped transmissions on 666 [St Pierre] and 1215 kHz [St André] a few months ago due to budgetary reasons. Thanks for the info from René-Paul Grondin. (Mauno Ritola in WRTH fb group 15 June)

SERBIA: Radio Beograd 1 has a transmitter at Sjenica broadcasting on 1602 kHz. A group of DXers from Czechia and Slovakia visited the area and heard this transmitter. (Karel Honzik, Czechia 8.5.2017). ARC reporter Svetomir Cuckovic lists the power as 0.5 kW in WRTH 2017. (ARC)

SOUTH AFRICA: Yesterday a local non-radio friend (non-SWL, non DXer) told me he had noticed the overnight BBC WS relay was back on Radio Today 1485, at least for the past two nights. I checked last night (June 11), and sure enough they switched over to the BBC WS at 2301. I don't know how long they have been back, or how long they are back for. Only monitoring will resolve the latter question. 1485 South Africa, Radio Today, 1485. Marks Park, Johannesburg Jun 11 2017 Sunday. 2255-2315. usual music at tune in. Switched over to BBC WS relay at 2301. News, into History Hour talking about the 1967 (six-day) war in the Middle East. Johannesburg sunset 1523. (Bill Bingham, Johannesburg RSA, dxld)

UKRAINE: Ukrayni Radio, program 1 is broadcast 03-2100. Frequencies used are: 549 Luch, Nikolaev; 837 Kharkov, Taranovka; 873 Krasny Yar (a new transmitter in the Donetsk area; 1278 Odessa, Petrivka and 1431 Mikolaiev Luch. Some of the transmitters are used for Foreign Service 1600-2000. Reports to: tsekhanovskyy@nrcu.gov.ua. (Ullmar Qvick 26.6.2017 via ARC)

UNITED KINGDOM: We are pleased to announce that Ofcom have informed us that our application for an AM license has been approved and that a license will be awarded.

Tracey Crouch MP with Bob Lawrence

This is the end of – or a further step in – a process started by Bob Lawrence in 2010 and enthusiastically supported by Tracey Crouch MP. We thank them both and further thank the many other people who have helped along the way.

The basis of our application was that our traditional heartland was Essex and Suffolk, where the signal from our ships made first landfall and that we wished to entertain on AM, an audience that we have not been able to serve in this way since 1990.

We said that this audience may hear music radio of a style they remember and in some cases presented by the same people they remember.

That in essence is what we intend to do.

We can now announce that our AM frequency will be 648 kHz with a power of 1000 watts. This is ERP or simply the power radiated by the aerial.

A transmitter was imported from the Continent a few days ago and is now being modified to suit the frequency. There are further hurdles, but as you can see progress is being made. (Caroline press release via Mike Terry, mwxd, 2 June)

WESTERN HEMISPHERE

LATIN FREQUENCY OFFSETS reported by Arctic Radio Club members.

1039,994 HJAL Radio Tropical, Barranquilla on 20.3 at 0258. (Jan Edh)

1140,239 OCY4C RPP, Pilcomayo on 17.3 at 0000. (Jan Edh)

1270,029 HJAR La Cariñosa, Cartageña on 24.3 at 0130. (Jan Edh)

1319,942 OAU7W Radio TV Peru Juliaca on 16.3 at 2359. (Jan Edh)

1439,989 HJNZ Colmundo, Medellin on 19.3 at 0458 (Thomas Nilsson)

1439,992 HCDF1 Radio Panorama, Ibarra, "Radio Panorama desde Ibarra para el mundo" on 23.3 at 0358. (SIM with thanks to Fredrik Douren)

1469,993 HJTB Ondas del Ibaque w/Radio María ID on 21.3. (Thomas Nilsson)

1509,720 OCV4J Radio Tarma, Tarma on 16.3 at 2359. (Jan Edh)

1509,726 OAX4J Radio Tarma, Tarma. On 24.3 at 0000. (Jan Edh)

ARGENTINA: Radio Selva, Partido de la Matanza, Buenos Aires, heard on 1709.805 kHz at 0506 on 21 March. (Fredrik Douren, Arctic Radio Club mv-eko 10 April via DXLD) Identified as "Radio Selva AM 1710" at 0431 on 25 March when frequency measured at 1709.814.

(AN, Arctic Radio Club mv-eko 27 March via World of Radio 1875, DXLD)

LR9 Radio America is definitely out of the air and these days the frequency of 1190 KHz is free, thus becoming a true "DX channel". Radio América stopped transmitting because it lost its license and was taken away by the National Communications Entity (ENACOM), which is dependent on the National Government.

A public tender for the award of the license has recently been carried out and will soon begin operating on the 1190 KHz Radio Profile, which will also be broadcast from the Autonomous City of Buenos Aires. The goal of Perfil is to launch a predominantly news radio in 2017. An idea that has been exploring for four years in FM format and inspired by the world's oldest news radio: the New York City AM 1010 Wins (from the periodically prestigious CBS), which turned fifty Years as news radio in 2015 and has been the inspiration for hundreds of news radio stations around the world.

The idea of a radio 100 x 100 news is linked to the history of Radio América itself. The entrepreneur Eduardo Eurnekian had acquired it in 1989, baptizing it with that name. Before it had been called Radio Antártida, Radio Malvinas Argentinas and, in its foundation in 1929, Radio Fénix. (Arnaldo Slaen, via mwcircle)

BONAIRE: "The Bonaire Power Up project will increase TWR's Latin America broadcast signal from 100,000 to 450,000 watts. This will double the potential listening audience in Latin America from 50 million to 100 million people and blanket Cuba with the Spanish programs. Thanks to many volunteers, much construction was completed in 2016. TWR hopes to purchase the transmitter in 2017. Contact: tklingbe@twr.org." (Fellowship of European [Christian] Broadcasters, e-mail-newsletter 29 May 2017 via Dr Hansjoerg Biener, mediumwave.info)

"After many months of upgrades and new construction at our Caribbean station on the island of Bonaire [in 2016], we are preparing to install a 450,000-watt transmitter. With it, we will reach farther and stronger with programs in Spanish and several other languages across not only the entire nation of Cuba but also large portions of Venezuela, Colombia, Brazil, and other countries of the Caribbean and Latin America. TWR will produce more programs in Cuba to give our Cuban listeners the spiritual food they are hungry for. We will also have a strategic reach into some of the world's remaining unreached people groups of the Amazon region. God's provision through our generous donors has allowed us to come very close to meeting our goal of \$3.8 million."

(<https://www.twr.org/project/powerup> via Dr Hansjoerg Biener, mediumwave.info 29/5-2017)

COLOMBIA: 890 HJCE Cadena Radial Vida, Bogotá – As previously mentioned, Cadena Radial Vida has taken over this frequency from Radio Continental/Radio Todelar. The station has its own programming separately from the other stations of the chain. (Jan Edh, ARC 27.3.2017)

1110 HJEW Tropicana FM, Cali, first "1110 AM", since March "Tropicana FM"

1120 HJGH 24 Horas Radio, Bucaramanga, ex Bésame (since April). Format Música Romántica.

1260 HJNO Bésame, Duitama, ex Oxígeno (since March). "Torre Forte Radio" (rlg)

1300 HJLD Bésame, Pereira, ex Q'hubo Radio (since March)

(All info from Pentti Lintujärvi, SDXL Facebook group via Mauno Ritola, ARC)

1580 HJQT Wepa Radio, Bogotá, ex Verdad Radio. This station is an on-line web station, now relayed on MW. Belongs to Radiopolis group. W: <http://www.wepa.com.co>. (Rafael Rodríguez via Mauno Ritola, WRTH 17.6.2017)

DOMINICAN REPUBLIC: HIC80 Radio Juventus Don Bosco, Santo Domingo heard with religious music at 0200 on 1 March. Frequency measured at 1639.991. La Voz de Yuna, Bona heard at the same time on 1669.993. (Thomas Nilsson, Sweden, Arctic Radio Club mv-eko 13 March, 2017, via DXLD)

EL SALVADOR: 1500 YS.. Radio Peniel, San Salvador, new station. (Humberto Molina via Mauno Ritola, WRTH 20.6.2017 via ARC)

GUADELOUPE: 640 Guadeloupe Première (formerly RFO), Point-à-Pitre has stopped transmissions due to budget reasons, replaced by FM. (mw masts via NRC IDXD 24.6.2017 via ARC)

MEXICO: It wasn't immediately obvious to me that the Grupo Radioescucha Argentino Wordpress article related to stations in Ciudad de México. I eventually pieced the clues together! Today a shakeup of stations in that city (owned by Radio Centro) takes place.

690 Previously La 69, now a combination of Radio Centro AM and El Fonógrafo.

790 Previously Formato 21 – as far as I can tell the 50kW TX will be switched off today.

1030 Previously Radio Centro – as far as I can tell now the 50kW TX will be switched off today.

1110 Previously Radio Red – now a combination of a new News service and Formato 21.

1150 Previously El Fonógrafo – as far as I can tell the 50kW TX will be switched off today.

The Mexican source was SDP Noticias. I hope that other DXers – possibly Raymie – could confirm this.

(Dan Goldfarb, mw masts yg via mediumwave.info 21/5)

VENEZUELA: YVMR Deportiva Barquisimeto 690, Barquisimeto has returned to the AM band with a new name. It now belongs to "Circuito AM Center". The station was heard with a variety of musical styles – llanera, tropical – and identifications. This is good news as the station had been off the air for many months. (Via Mauno Ritola, WRTH 20.6.2017, translation Christer Brunström, ARC)

PUBLICATIONS

The Domestic Broadcasting Survey by Anker Petersen. A great list: <https://playdxblog.blogspot.it/2017/04/come-scaricare-il-domestic-broadcasting.html>. (Giampiero Bernardini, DXLD)

SEOUL CHINESE AM SKYWAVE BANDSCAN VIDEO: This is the final bandscan video in a series of three. It's a collaboration between myself and Ryan Grabow, owner of a wonderful bandscan video channel. All the recordings are my own and the full translations in this video are courtesy of my friend Jingshen with the simpler ones by myself. This includes some of the major Chinese stations heard nightly in Seoul. The first video is the local Seoul dial (daytime and night) and the second is Japanese and Korean skywave. All this audio can be found in my three-hour audio documentary with a 115-page guide.

<https://www.youtube.com/watch?v=Ecwvs-JwR98>

Additionally, here are the first two videos: Seoul Local: <https://www.youtube.com/watch?v=5UMMQIhYrA>,

Japan/Korea: https://www.youtube.com/watch?v=Tue_bJ7xrHs

(Chris Kadlec, Seoul AM Radio Listening Guide <http://www.beaglebass.com/dx/seoul/>)

RADIO STATIONS IN THE UNITED KINGDOM – NEW EDITION FOR 2017. BDXC-UK's guide to MW, FM and DAB radio across the British Isles, by frequency and station name. Prices (include postage): UK £4, Europe £7, 10 Euros or 7 IRCs; Rest of World £8, \$US 12 or 8 IRCs. Special offer: Two copies only UK £7; Europe £10 or 15 Euros. Please send all orders (UK cheques/Postal Orders payable to "British DX Club") to: British DX Club, 19 Park Road, Shoreham-by-Sea, BN43 6PF (\$ or € – cash or Paypal only). All prices above include postage. Paypal payments to bdxc@bdxc.org.uk. Payments also welcome by bank transfer at no extra cost – please email for details. (May BDXC-UK Communication)



DXpeditions – Phil Bytheway – 9705 Mary NW – Seattle WA 98117-2334
E-mail: phil_tekno@yahoo.com

Masset DXpedition

170702. I've just returned from Masset where I spent some quality time DXing. As opposed to my normal MW DXing, the day time was devoted to SW listening (posted elsewhere). With very short nights, I simply didn't get up for any active DXing (that would be about 04:00 local). Instead, what I did was to record TOH during the entire time with one Perseus recording via a 270 deg BOG, while the other Perseus was fed by my SW DKAZ. This way, it'll be interesting to compare the two. I've already briefly tested a few channels, and here's a taste of what was heard:

- 891 **AUSTRALIA** 5AN, Adelaide. 1201 6/19. Quite strong at this time with an interview program. Co-channel presumed 4TAB from Townsville, Queensland (5 kW) with sporting type program, but only for a minute before Adelaide returned. Nice ID for ABC Adelaide at approximately 1202. So far during this trip, MW propagation has been fair, at best, favouring DU. I've also compared my 750' BOG aimed 270 degrees to my SW DKAZ. Although a very nice performer, the DKAZ still isn't up to the BOG's ability to pull in the weaker stations. At times, though, it does excel!
- 1386 **NEW ZEALAND** Auckland, Radio Tarana. 1159 6/19. Nice EZL Hindi music at good level. Much better on the DKAZ (which is better positioned for NZ) compared to my West BOG.
+1154 6/22, 'Hear us anywhere in the world.... You're just a click away from Tarana, your Indian radio' and good level. I did a comparison between my west BOG at 270 degrees and my SW DKAZ. On the BOG, I can hear both Japan and Tarana at about equal levels. Not so with the DKAZ, where only Tarana is audible. An interesting comparison!
- 1566 **BENIN** TWR. 1566.001, 0527 6/30. Presumed logging with hints of audio, sometimes at almost fair level. Listed as Twi/Akan in EiBi, and then into English for 15 minutes. Grayline should be passing through Parakou at exactly 0533. Also measuring the transmitter about 1 Hz high. Quick check on other frequencies did not yield anything tonight (my first night after spending 4 days in Gwaii Haanas, off the grid and without any electronics!). Gone when rechecked at 0542.
- 73, from **Walt Salmaniw**, Victoria, BC

TWO DXERS AND THE ECLIPSE

There's been a lot of chatter in the Ham newsletters and the scientific community about RF-signal measurements during the August 21st eclipse. But not much has appeared in the "DX" newsletters. In the hope of stimulating an exchange about proposed listening methodologies, we want to share the eclipse-monitoring plan of two DXers... Nick Hall-Patch and myself.

We plan to take advantage of a technology that wasn't available during the last major eclipse: the Software-Defined Radio (SDR). To give all signals an equal chance, the Medium-Wave antennas used will be high-gain omni-directional. The SDR listening posts at Nick's Victoria British Columbia home and my cabin in North-Central Minnesota will be connected by a balanced wire-pair, with the separated antennas forming a Very-Long-Baseline Eclipse-Catcher Array ("VLBECA"). RF measurements will be taken from 9.01 kHz through 66.666 MHz in 1.1-Hz increments.

For connectivity between us to form the VLBECA, we will use pair 3 (green/white) of special Cat-5 cable with pink jacketing. (From our recent desert DXpedition we found the pink outer jacket to be the best color for optimal velocity factor in the Cat-5, and we were already aware that an odd-numbered pair would maintain better polarity.)

The exact distance between our two locations is 1,359.37 miles (or 2187.69395328 kilometers if you're Canadian). Since there are a lot less miles than kilometers along the VLBECA, we chose to save money by buying the connecting cable by the mile rather than the kilometer, and that meant purchasing our Cat-5 in the United States.

Further input on velocity factor from the National Bureau of Standards (NBS) led us to choose *stranded* rather than solid wire for the Cat-5. This created some contention between Nick and myself, since stranded copper is more expensive. However, when we realized the Cat-5 route took us through the Bakken Oil Fields of North Dakota, we knew the superior mechanical performance of stranded wire would provide additional integrity against rough handling.

For Cat-5 pair 3 termination consistency on the two ends, we asked for bids for a pair of 2.2:1 matching transformers that would match the Cat-5's native 110-ohm impedance to the 50-ohm input of the 273 dB-gain RF amplifier. However no one could meet our specifications. So we ended up using the Western Electric 111C "repeat coil" since this device is known to significantly reduce Group Delay <https://www.jmu.edu/wmra-eng/archive/repeatcoil.pdf>

To guard against inaccuracies in the eclipse schedule, we agreed to begin recording at both monitoring stations at 0301 UTC July 27th, and to conclude at 1921 UTC, September 31st. For the SDRs, 5600 Terabyte storage devices were acquired from Best Buy.

Since we will be measuring signals expected to be at the very limits of receiver noise performance, we spent a good deal of time thinking about continuous battery power since, because of possible eclipse-schedule inaccuracies, we don't want to stop the recordings during the above period, lest we miss something. Fortunately we were able to negotiate access to the battery rooms of the phone companies at our respective locations. For Nick, that's **BC Telus** (formerly BC Tel; formerly the Victoria and Esquimalt Telephone Company and the New Westminster and Burrard Inlet Telephone Company) and, for me, the **Upsala MN Telephone Company** (formerly the Upsala MN Telephone Company). Connectivity to these battery rooms will use fabric-covered lamp cord acquired from Mark Connelly. We believe the color of the lamp cord fabric will *not* impact the Group Delay.

Once the recordings have been made (assuming there really IS an eclipse) Nick and I will meet in Salt Lake City Saturday October 7th late afternoon to review all the recordings, and we plan to publish our results here and in QEX on Sunday October 8th.

Please let us know if you think we've missed anything in our planning. Nick and I are both "elderly" and we want to get this eclipse *right* so we don't have to wait for the next one.

Cheers! **Mark Durenberger**, mobile



SPORTCHANNELS IRCA – Compiled by: Eric Bueneman (NØUIH)
E-mail: n0uiheric@gmail.com

Welcome to another edition of SportChannels! On the US side of the border, soccer season is under way, while football season has started north of the border. A guide on where to tune for coverage of the CFL and Major League Soccer, along with Boston Red Sox baseball throughout New England, wraps up Volume 54. English language flagship stations are in **boldface** type, French, Portuguese and Spanish language flagships in **boldface italics**, Spanish language affiliates in *italics*.

CANADIAN FOOTBALL LEAGUE

BRITISH COLUMBIA LIONS Scott Rintoul, Giulio Caravatta, Web: bclions.com

1040 CKST Vancouver, BC only

CALGARY STAMPEDERS Mark Stephen, Greg Peterson, Web: stampeders.com

770 CHQR Calgary, AB only

EDMONTON ESKIMOS No play-by-play personnel information available, Web: esks.com

630 CHED Edmonton, AB only

HAMILTON TIGER CATS No play-by-play personnel information available, Web: ticats.com

1150 CKOC Hamilton, ON only

LES ALOUETTES DE MONTREAL English: Rick Moffat, Davis Sanchez, French: Jean Saint-Onge, Jacques Dassault, Web: montrealalouettes.com
690 CKGM Montreal, QC (English) **98.5 CHMP Longueuil, QC** (French)

OTTAWA REDBLACKS English: A.J. Jakubec, Jeff Avery, French: Marc Legault, Denis Piché, Web: ottawaredblacks.com
1200 CFGO Ottawa, ON (English) **104.7 CKOF Gatineau, QC** (French)

SASKATCHEWAN ROUGH RIDERS No play-by-play personnel information available, Web: riderville.com
620 CKRM Regina, SK only

TORONTO ARGONAUTS Mike Hogan, Jeff Johnson, Web: argonauts.ca
1050 CHUM Toronto, ON only

WINNIPEG BLUE BOMBERS Bob Irving, Doug Brown, Web: bluebombers.com
680 CJOB Winnipeg, MB only

MAJOR LEAGUE SOCCER

The following teams do not offer radio play-by-play coverage: **CHICAGO FIRE, ORLANDO CITY SOCCER CLUB, PHILADELPHIA UNION and TORONTO FOOTBALL CLUB**

The following teams have their English language play-by-play coverage available only on the Web: **LOS ANGELES GALAXY, NEW YORK RED BULLS**
The following team has their Spanish language play-by-play coverage available only on the Web: **NEW YORK RED BULLS**

ATLANTA UNITED FOOTBALL CLUB No English or Spanish play-by-play personnel information available, Web: atlutd.com

AM
1130 WLBA Gainesville, GA
1460 WXEM Buford, GA
1600 WAOS Austell, GA

FM
92.9 WZGC Atlanta, GA

COLORADO RAPIDS No play-by-play personnel information available, Web: coloradorapids.com
950 KKSE Parker, CO only

COLUMBUS CREW SOCCER CLUB English: Neil Sika, Dwight Burgess, Spanish: Juan Valladares, Web: columbuscrewsc.com
102.5 WWCD Baltimore, OH (English) **103.1 WVKO-FM Johnstown, OH** (Spanish)

DISTRICT OF COLUMBIA UNITED No play-by-play personnel information available, Web: dcunited.com
1580 WJFK Morningside, MD **106.7 WJFK-FM Manassas, VA**

FOOTBALL CLUB DALLAS No English or Spanish play-by-play personnel information available, Web: fcdallas.com
1270 KFLC Benbrook, TX (Spanish) **100.7 KWRD-FM Highland Village, TX** (English)

HOUSTON DYNAMO No English language play-by-play personnel info available, Spanish: Daniel Mejia, Lester Gretsche, Web: houstondynamo.com

AM
610 KILT Houston, TX
650 KIKK Pasadena, TX
1010 KLAT Houston, TX

FM/HD
95.7 KKHH-HD3 Houston, TX

SPORTING KANSAS CITY Nate Bukaty, Matt Lawrence, Jillian Carroll, Web: sportingkc.com
810 WHB Kansas City, MO only

LOS ANGELES GALAXY Spanish: Rolando Gonzalez, Armando Arguayo, Web: lagalaxy.com
1220 KTMZ Pomona, CA **1330 KWKW Los Angeles, CA**

MINNESOTA UNITED FOOTBALL CLUB Callum Williams, Kyndra de Saint Aubin, Web: mnufc.com
1500 KSTP Saint Paul, MN only

MONTREAL IMPACT No English or French play-by-play personnel information available, Web: impactmontreal.com
690 CKGM Montreal, QC (English) **98.5 CHMP Longueuil, QC** (French)

NEW ENGLAND REVOLUTION English: Brad Feldman, Paul Mariner, no Portuguese language PBP info available, Web: revolutionsoccer.net
1570 WMVX Methuen, MA (Portuguese) **98.5 WBZ-FM Boston, MA** (English)

NEW YORK CITY FOOTBALL CLUB No play-by-play personnel information available, Web: nycfc.com
660 WFAN New York, NY **101.9 WFAN-FM New York, NY**

PORTLAND TIMBERS English: Jake Zivin, Ross Smith, no Spanish play-by-play personnel information available, Web: timbers.com
750 KXTG Portland, OR (English) **93.5 K228EU Portland, OR** (relay of KGDD 1150)
1150 KGDD Portland, OR (Spanish) **102.9 K275CH Gresham, OR** (relay of KXTG 750)

REAL SALT LAKE No play-by-play personnel information available, Web: rsl.com
700 KALL Salt Lake City, UT only

SAN JOSE EARTHQUAKES English: Ted Ramey, Joe Cannon, Spanish: Carlos Cesar Rivera, Web: sjeearthquakes.com
680 KNBR San Francisco, CA (English) **1370 KZSF San Jose, CA** (Spanish)

SEATTLE SOUNDERS FOOTBALL CLUB English: Keith Costigan, Kasey Keller, no Spanish language PBP personnel info available, Web: soundersfc.com
1360 KKMO Tacoma, WA (Spanish) **97.3 KIRO-FM Tacoma, WA** (English)

VANCOUVER WHITECAPS No play-by-play personnel information available, Web: whitecapsfc.com
1040 CKST Vancouver, BC **1410 CFTE Vancouver, BC** (select games)

MAJOR LEAGUE BASEBALL – AMERICAN LEAGUE EASTERN DIVISION

BOSTON RED SOX (added to information in 54-34 – courtesy of Karl Zuk) Web: www.weei.com/shows/red-sox-baseball

AM	1280 WPKZ Fitchburg, MA	1480 WCFR Springfield, VT	96.3 WFXW Walpole, NH
550 WDEV Waterbury, VT	1300 WPNH Plymouth, NH	1490 WGCH Greenwich, CT	99.3 WKTK Farmington, ME
620 WZON Bangor, ME	1310 WLOB Portland, ME	1490 WMRC Milford, MA	99.7 WNTK New London, NH
830 WCRN Worcester, MA	1320 WCVR Randolph, VT	1490 WIKE Newport, VT	100.1 WHOU-FM Houlton, ME
860 WSBS Great Barrington, MA	1350 WINY Putnam, CT	FM	101.3 WCPV Essex, NY
980 WOFX Troy, NY	1370 WDEA Ellsworth, ME	92.7 WQDY Calais, ME	101.5 WZEI Meredith, NH
1010 WCNL Newport, NH	1380 WSYB Rutland, VT	93.5 WEEY Swanzey, NH	103.1 WZLO Dover-Foxcroft, ME
1080 WTIC Hartford, CT	1390 WEGP Presque Isle, ME	93.7 WEEI-FM Lawrence, MA	103.7 WVEI-FM Westerly, RI
1120 WKAJ Saint Johnsville, NY	1400 WILI Willimantic, CT	93.9 WLVB Morrisville, VT	104.9 WBOQ Gloucester, MA
1230 WNAW North Adams, MA	1400 WTSL Hanover, NH	93.9 WWOD Woodstock, VT	105.5 WBYA Rockland, ME
1230 WMOU Berlin, NH	1420 WBEC Pittsfield, MA	95.3 WALZ Machias, ME	105.5 WVEI Easthampton, MA
1240 WSYY Millinocket, ME	1420 WBSM New Bedford, MA	95.9 WPEI Saco, ME	107.7 WTPL Hillsboro, NH
1240 WFTN Franklin, NH	1440 WVEI Worcester, MA	96.1 WDEV-FM Warren, VT	
1270 WTSN Dover, NH	1480 WSAR Fall River, MA	96.3 WEII Dennis, MA	

Another volume is in the books; when this column makes its Volume 55 debut, we'll be into football season south of the US-Canadian border, that means NFL network lists, starting with the AFC North and NFC North. 73 and play hard from the Florissant Valley Dial Twister.



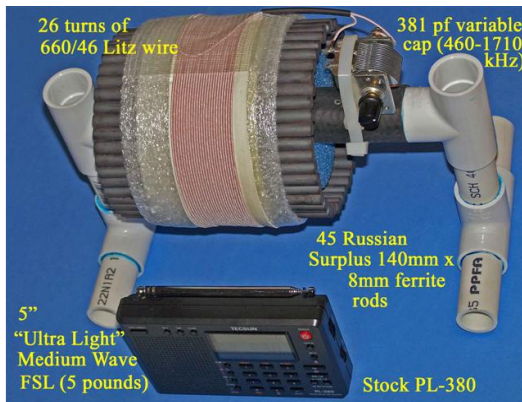
ULTRALIGHT NEWS – Phil Bytheway – 9705 Mary NW – Seattle WA 98117-2334
E-mail: phil_tekno@yahoo.com

3.5 Inch (89mm) “Frequent Flyer” FSL Antenna
Compact MW-DXing Gain at Home or on Long Range Vacations
By Gary DeBock, Puyallup WA, USA July 2017



Introduction: Graham Maynard’s description of the “Ferrite Sleeve” antenna in early 2011 kicked off a torrent of experimentation among interested hobbyists, most of whom were searching for maximum DXing gain boosts. It was quickly discovered that this new type of antenna had a unique capability to provide exceptional gain from an extremely compact size – so long as the builder didn’t mind the “side effects” of concentrated weight and cost. Heavy and costly FSL antennas soon proved to be superior for high-gain DXing in extremely tight spaces, such as at narrow ocean cliff turnoff sites (where they managed to carve out a niche in the all-new sport of ocean cliff transoceanic DXing). But the vast majority of DXers have neither the interest nor the ability to construct and use such monster FSL antennas, let alone set up at a wild ocean cliff site. Given the fact that the antenna still had the unique ability to provide concentrated DXing gain, though, would a smaller model be able to provide a similar performance breakthrough in an all-new mission – as a DXing gain booster after long-range airline travel?

Strict Design Requirements: In order to succeed in this new mission a compact FSL would need to be both lightweight and high gain, and offer performance clearly superior to any antenna its size. It would not only need to have a non-subversive appearance (allowing it to routinely pass through airport TSA security checkpoints), but also need to fit easily within hand-carry luggage – after having been packed securely inside a matched-size plastic tote. All of the construction parts would need to be readily available for purchase. And finally, despite the FSL antenna’s reputation of “breaking the bank,” it would need to be of reasonable cost for most hobbyists to build, in a rugged, simple design offering both ease of construction and long-term DXing enjoyment. These were the guiding objectives in the “Frequent Flyer” FSL antenna project – the major experimental effort here this past winter.



Tweaking an Old Classic: In 2012 a full “Heathkit-like” construction article was published for a 5 inch “Ultra Light” FSL antenna – a simple but effective design using 45 of the 140mm x 8mm ferrite rods in a model designed to be built for under \$99 (see photo above). The weak-signal performance of that compact model was found to be roughly comparable to that of a 4 foot (1.2 meter) air core box loop, and quite a few of those FSL’s were built around the world (to the delight of the eBay ferrite sellers, who soon doubled their asking price for that particular size of ferrite rod).



The introduction of the higher sensitivity 1162/46 Litz wire in early 2014 opened up some new design possibilities in compact FSL antennas, however. It had already been proven that a smaller FSL using the higher sensitivity 1162/46 Litz wire could match the weak-signal performance of a somewhat larger model using the 660/46 Litz wire, as long as the other components were the same. Upon testing and tweaking, it was found that the original 5 inch FSL antenna introduced in the 2012 article could be shrunk down to a 3.5 inch diameter size with no performance loss (ie roughly equivalent to that of a 4' air core box loop), so long as it used the upgraded 1162/46 Litz wire, and was augmented by slightly longer ferrite rods.

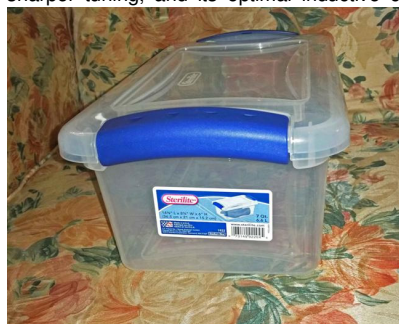
The compact 3.5 inch (89mm) diameter would presumably offer a non-subversive profile to airport security screening agents, and could fit very well inside hand-carry luggage when protected by a matched-size plastic tote (see photo at left). All of the construction parts used in this new "Baby FSL" design were readily available, and although the 2012 model's construction cost of \$99 couldn't quite be matched, at around \$150 this new antenna was probably within financial reason for most DXers – especially for those looking for a simple, convenient way to enjoy high sensitivity MW-DXing during long range vacations. The advantage of packing away a compact, high gain antenna that can be immediately set up and used within a motel room (or out on its balcony) has the potential to add some serious hobby fun during exotic vacations – as Craig Barnes and I both found out in a major way during our April 2017 Hawaii DXpeditions to Princeville, Kauai and Kona on the Big Island.

Three "Frequent Flyer" FSL Designs: During winter experimentation three different airport-friendly models were developed, and this model (see photo at right) was designed to be the intermediate "workhorse model" with a combination of high gain, readily available parts and reasonable cost. The Hawaii DXpeditions were conducted with airport-friendly 5 inch (127mm) FSL models using the Russian 100mm ferrite bars, which unfortunately are no longer available from any source. Only five of those models were made, but this model matches them in weak-signal DXing performance. An "economy model" using the commonly available Russian 62mm x 12mm x 4mm ferrite bars and 660/46 Litz wire was also developed, and depending upon demand, that model may also be the subject of a future construction article. Its weak signal performance is somewhat less favorable than this model's, but it can be constructed for around \$65 US, using commonly available parts.



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Project Overview: This construction article provides step-by-step information for assembly of a compact, high-performance Medium Wave FSL antenna suitable as a weak signal gain booster while DXing either at home locations or after long range air travel. The construction procedures are not particularly difficult, although strict attention to detail and the use of the recommended components is necessary to obtain the designed level of performance. Proper soldering of the 1162/46 Litz wire requires a 60 watt (or larger) soldering iron or gun, and careful attention to the assembly instructions. Proper soldering of the variable cap connections also requires skill, and should not be attempted by those lacking any experience. Use of the smaller and cheaper 660/46 Litz wire (or other smaller diameter Litz wire) will result in a reduced level of performance. Substitution of the ferrite rods and/or variable capacitor may also result in reduced performance, and is not recommended. Although this compact antenna is capable of performance roughly comparable to that of a 4' (1.22m) air core box loop, the FSL antenna has much sharper tuning, and its optimal inductive coupling range to the radio also changes along with the frequency. Practice and skill in optimizing both of these adjustments are very important in getting the best DXing performance from any FSL antenna (some tips will be included in this article).



The PVC plastic frame has been carefully designed so that the model will fit within a matched-size plastic tote packed inside hand-carry luggage during air travel, and substitutions in the PVC frame components and/or dimensions will probably upset this design feature. The matched-size plastic tote (pictured at left) is a Sterilite 14 3/8" L x 8 1/4" W x 6" H (36.5 cm x 21 cm x 15.2 cm) model. It is a tough, high quality but inexpensive container designed to provide maximum protection for the antenna during rough air travel. For those builders who plan to use the FSL for travel DXing, securing this particular plastic tote should be a high priority. In cases where a builder cannot find this item, the author has stockpiled many of them, and can provide one at cost to any builder who is unable to locate one.

As a final caution, although this antenna has a good track record of passing through TSA security checkpoints at local airports, it is impossible to guarantee that every security inspector will routinely allow the model to pass through every security checkpoint worldwide. Security levels and the quirks of individual inspectors may change without notice. Documentation such as an amateur radio license or a (well-worn) copy of these assembly instructions may well convince a suspicious inspector that this is indeed a radio antenna.



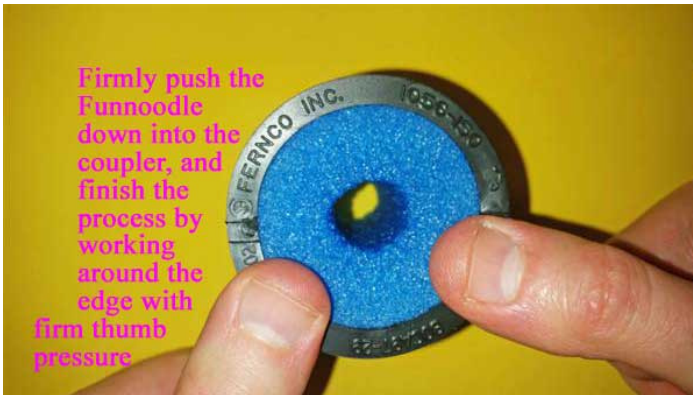
Construction Parts Required: The following components are necessary to assemble the antenna. Those items marked with an asterisk (*) have been stockpiled by the author, and WHILE SUPPLIES LAST are available at cost (including shipping) to those who cannot find them after a serious search. The 160mm ferrite rods are typically ordered from the Ukraine, and builders in North America can expect a significant delay in receiving them (from 20 to 30 days). Typically about 10% of these ferrite rods have obvious bends or twists which make them undesirable for a project like this. Ordering a few additional rods to compensate for this issue is recommended.

- *A) 4 inch (102mm) long section of 2.25 inch diameter Funnoodle swimming floatation aid (available at Walmart Stores) <http://www.jakks.com/funnoodle-products.html>
- *B) Fernco Part No. 1056-150, 1 1/2 inch x 1 1/2 inch (38mm x 38mm) plumbing coupler, available at Home Depot <https://www.fernco.com/dimensional-drawings/plumbing/flexible-couplings/stock-couplings-1056/1056-150>
- C) 27 Russian surplus 160mm x 8mm ferrite rods, 400 permeability (available from eBay seller "Alexer1" at <http://www.ebay.com/itm/30-pcs-Vintage-Ferrite-Rod-8mm-x-160mm-For-Crystal-Radio-/192185405777?hash=item2cbf249151:g:DREAAOSwNuxXaCFE>)
- *D) Oatey 4 inch x 4 inch (102mm x 102mm) foam closet spacer (available at Home Depot) <https://www.oatey.com/2372333/Product/N/Oatey>
- E) 35 feet (10.6m) of 1162/46 Litz wire (available from eBay seller Mkmak222 at <http://www.ebay.com/itm/Litz-wire-1162-46-for-Amateur-Crystal-Radio-coil-Single-layer-insulation-100-/151156887668?hash=item2331a71074:g:aTOAAOxyTjNSdFIQ>)
- *F) Rite Aid 1 inch x 10 yards (25mm x 9.1m) waterproof tape roll
- *G) Scotch brand 1.88 inch x 21.8 yard (48mm x 20m) "Extreme" type strapping tape roll
- *H) (Optional) Johnson & Johnson 3 inch x 10 yards (76mm x 9.1m) waterproof tape roll
- *I) Radio Shack 1 inch (25mm) molded hexagonal control knob (with setscrew)
- J) Midnight Science (Xtal Set Society) 365mm 8:1 drive variable capacitor <http://www.shopping-cart.midnightscience.net/products/365-8-1-variable-capacitor-632cf9a8-46ca-4d46-b15f-7aa9abd9bee8>
- *K) 6-32 x 3/8" screw, two 6-38 nuts, and one #6 solder lug
- *L) Three 14 inch (355mm) long 120 pound (54.5 kg) test plastic tie wraps
- *M) Two 1/2 inch Schedule 40 PVC "Tee" fittings
- *N) Two 1/2 inch Schedule 40 PVC "Elbow" fittings
- *O) 8.5 inch (216mm) long section of 1/2 inch Schedule 40 PVC pipe
- *P) Four 1.75 inch (44mm) long sections of 1/2 inch Schedule 40 PVC pipe
- *Q) Two 1 inch (25mm) long sections of 1/2 inch Schedule 40 PVC pipe
- *R) 2 inch (51mm) long section of 1/8 inch (3mm) diameter shrink tubing
- *S) 8 inch (203mm) long section of 5/8 inch (15mm) inner diameter rubber heater hose

Miscellaneous: 60 watt (or larger) soldering iron or gun, 60/40 resin core solder, superglue, PVC glue, a 1" high circular spacer 2" in diameter (see Step #), screwdrivers, diagonal cutters and scissors. The Sterilite 7 quart (6.6 liter) plastic tote (pictured on Page 3) and standard hand carry luggage will be necessary for those who plan to travel with the antenna by air.

STEP-BY-STEP CONSTRUCTION – FERRITE SLEEVE

1) Refer to the photo at right. Take the Fernco plumbing coupler (Part B) and remove the two metal hose clamps and paper label (they will not be used in this project). Using water, soap and rags, clean off any adhesive residue from the label still on the side of the plumbing coupler. With diagonal cutters, snip off any protruding rubber tabs on the ends of the coupler which might interfere with ferrite rod placement, or flat stacking of the coupler on a table. Finally, remove any label from the side of the Funnoodle (Part A) and insert it into the side of the plumbing coupler, as shown in the photo. Squeeze and push the Funnoodle until it is in the position shown in the photo.



2) Refer to the photo at left. Place the open end of the plumbing coupler flat on a table, and push the Funnoodle as far down as possible with flat hand pressure. Then work around the edge of the plumbing coupler, using firm downward thumb pressure on alternating sections of the Funnoodle, until it reaches the position shown in the photo. Check the other edge of the plumbing coupler to ensure that it has a similar appearance, and if not, use firm thumb



pressure on either side of the Funnoodle until both of its sides have a similar flat appearance. Ensure that neither edge of the Funnoodle extends past the edge of the plumbing coupler.

3) Refer to the photo at right. Place the plumbing coupler flat on a table, with the lettering side up (NOTE: This lettered side typically isn't completely flat, and should never be placed on a table or spacer during the ferrite sleeve construction). Tightly wrap two turns of the 1 inch (25mm) waterproof tape (Part F) evenly spaced in the positions shown, with the adhesive side out. Do not allow the turns to cross over each other, and ensure that the overlapping sections in the two turns are lined up with each other, as shown in the photo (NOTE: It is important that these turns be tightly wound, in order to securely hold the ferrite rods during the sleeve construction).



Place a 1 inch (25mm) high circular spacer of approximately 2 inch (51mm) diameter flat on a table, as shown in the photo. (NOTE: My own spacer for this step was a 5 yard roll of Rite Aid 1 inch wide waterproof tape, although you can also use any circular spacer of the same size, such as a cut up piece of wood, or the plastic top of a food container. Ensure that the spacer is completely flat, and that it is no larger than 2 inches (51mm) in diameter.)

Finally, place the prepared plumbing coupler assembly centered on top of the spacer, as shown in the photo.

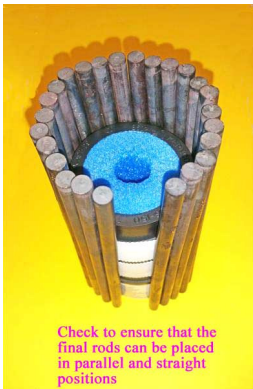


4) Refer to the photo at left. Select a perfectly straight ferrite rod (Part C) to start off the ferrite sleeve assembly. This rod will be used as a guide for all the following rods. Ensure that this rod is flat on the table in a straight up vertical position, then press it firmly against the two strips of adhesive tape.

(NOTE: Most of these ferrite rods have some minor imperfections, but you can compensate for routine minor bends by rotating the rods before placement on the tape so that all of the bends are pointing in the same direction (outward). The next step will instruct you how to accomplish this. The key point is to avoid large gaps between the ferrite rods.)

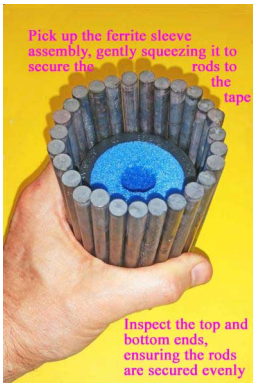
5) Refer to the photo at right. In order to compensate for minor bends in the rods, before placing another rod up against the tape, first place the lower end of the new rod next to the end of the adjacent rod, and check to see if there would be any major gap between the rods in that position. If not, go ahead and press the new rod firmly against the tape, flat on the table and as close as possible to the adjacent rod. If your first check reveals that there would be a serious gap, rotate the new rod until such a gap disappears, then press the rod firmly into place on the tape, as close as possible to the adjacent rod. If the new rod is so seriously bent that it can't be rotated into a good position adjacent to the previous rod then it should be rejected for this project (fortunately, these really nasty rods are pretty rare).





6) Refer to the photo at left. As the ferrite sleeve nears completion check to ensure that the remaining open gap has parallel sides. If not, check both the top and the bottom of the ferrite rod assembly for major gaps between rods which may be causing the problem. You can usually solve this issue by replacing any problem rods, and ensuring that each rod is placed tightly up against both adjacent rods throughout its length.

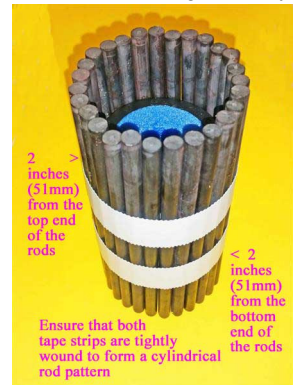
7) Refer to the photo at right. Place the final ferrite rods into place in the sleeve, ensuring that all of them will have firm contact with both of the tape strips. The antenna's design is for 27 of the ferrite rods to fit on the rubber plumbing coupler, and if your rods have been placed in straight positions without any major gaps you should be able to fit 27 of them within the sleeve while in contact with both strips of tape. If you have received a large number of bent rods but have done your best to follow directions you may possibly end up with only 26 rods in your ferrite sleeve, but this will not affect performance of the antenna. On the other hand, if you have been lucky enough to receive a large number of extremely straight rods you may even end up with a slight gap after installing 27 rods in the sleeve. In such a case simply rotate the rods to spread out the small gap evenly around the cylindrical assembly of rods (this situation will also not affect the performance of the antenna).



After the last ferrite rods have been installed make a final check of your sleeve assembly, ensuring that all of the lower ends of the rods were placed flat against the table (they should all be evenly lined up in a circle), and that there are no major gaps between any of the rods. During this final check hold the ferrite sleeve assembly as shown in the photo to the left, in order to avoid having individual rods fall off from the tape strips. As you lift the assembly off of the table the 1 inch (25mm) circular spacer should stay on the table, since it is of a smaller diameter than the ferrite sleeve.

8) Gently squeeze the ferrite sleeve assembly as shown in the photo at left (which will help to secure the individual rods to the two tape strips). Pick up the assembly as shown, and make a final check that the individual rods are all in contact with the edge of the plumbing coupler when the assembly is squeezed, and that none of them are being pushed up out of place (in such a case, remove the "floating" rod and rotate the remaining rods to even out the open space among the rods). Make a final check, ensuring that the bottom end of the rods (which were on the table during assembly) are all lined up with each other. This will be the edge of the ferrite sleeve facing the DXer during the antenna's operation, so it is important that the rods on this side have a straight and tidy appearance.

9) Refer to the photo at right. Place the ferrite sleeve back down on the table, with the lined-up rod ends downward (as they were during its construction). After ensuring that the rods are all still in a cylindrical pattern wrap a new, tight turn of the 1 inch (25mm) waterproof tape (Part F) around the sleeve assembly, adhesive side out, in the top position shown. Then carefully wrap another evenly-spaced turn of the 1 inch (25mm) waterproof tape tightly around the ferrite sleeve assembly in the lower position shown, also with the adhesive side out. The outer edge of each of the tape strips should be about 2 inches (51mm) from the edge of the rods. Do not allow the turns to cross over each other, and ensure that the overlapping sections in the two turns are lined up with each other, as shown in the photo. (NOTE: It is important that these turns be tightly wound, in order to securely hold the ferrite rods in their cylindrical pattern until the Litz wire coil is wound around them).

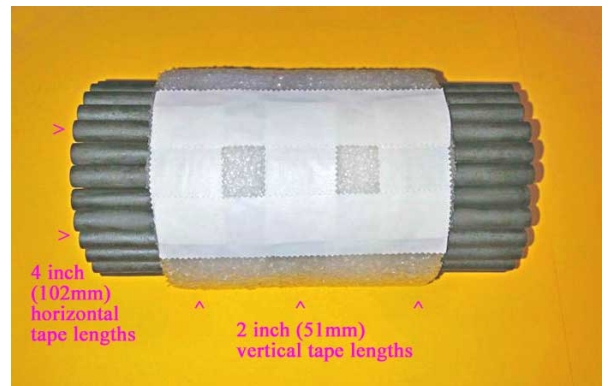


10) Refer to the photo at left. Take the Oatey 4 inch x 4 inch (102mm x 102mm) foam closet spacer pack (Part D) and remove the label and internal staple. Unroll the foam, and cut a straight 4 inch (102mm) horizontal edge in the foam at a position where there is at least 10 more inches of undamaged (ie no staple holes or other imperfections) foam following. In order to wrap an undamaged layer of foam around the ferrite rod assembly. Place the ferrite sleeve assembly down on the Oatey foam in the position shown, so that the precut horizontal edge of the foam is lined up with the edge of one of the ferrite rods. Pull the Oatey foam strip tightly around the ferrite sleeve assembly centered on the ferrite rods. Finally, after one complete, tightly wound wrap of the foam has been completed, press the foam down tightly against the two tape strips, and cut another horizontal edge in the foam to match up with the original horizontal edge at the exact point where the foam starts to cross over. The resulting appearance of the foam strip will resemble the photo below.



11) Refer to the photo at left. Ensure that the two horizontal edges of the foam meet evenly together, without any gaps or overlaps. If necessary, re-stretch the foam (to eliminate any slight gaps) or trim away any overlapping areas so that the foam edges meet neatly together when they are pressed as shown in the photo.

12) Refer to the photo at right. While pressing the foam edges together as shown in the previous photo, lock the edges in place with three short (2 inches, or 51mm) vertical



lengths of 1" (25mm) waterproof tape as shown in the photo. Place these three vertical lengths on the left edge, center and right edge of the foam strip, centered on the line where the ends of the foam strip meet together. Then place two more 4 inch (102mm) lengths of the waterproof tape in a horizontal pattern as shown, over the ends of the three vertical tape lengths. (NOTE: If you have the 3 inch wide waterproof tape (Part H), instead of this process you can simply place a 4 inch x 3 inch (102mm x 76mm) strip of this tape centered over the line where the two foam edges meet up. This will securely lock the foam strip in place). This completes the assembly of the ferrite sleeve – place it in a secure location until it is installed in the PVC frame in Step 19.

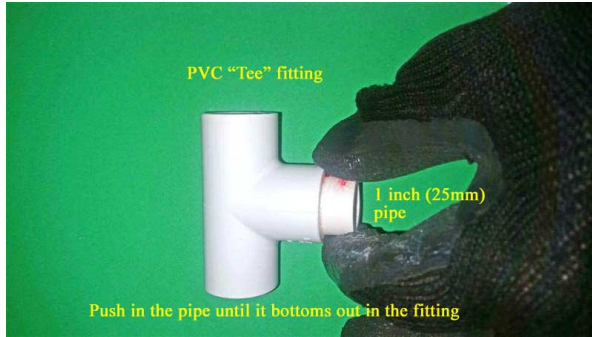
PVC FRAME CONSTRUCTION

The following steps will instruct you in building the antenna's 1/2 inch Schedule 40 PVC frame. Along with the PVC fittings specified in the Parts List you will need to purchase PVC glue to construct this frame (an item which cannot be shipped through the mail), and also cut the pipe to the dimensions specified in the Parts List. For those who have never worked with PVC glue, here are a few general guidelines.

Ensure that your PVC glue container comes with a brush that will fit inside the 1/2" PVC fittings. If your glue can is 8 fluid ounces (237ml) or smaller, it almost certainly will have the suitable size of brush for this job. On the other hand, if your glue can is larger than 8 fluid ounces it probably has too large of a brush.

There are many different types of PVC glue, but my own recommendation is for the type shown in the photo at right (Oatey All-Purpose Cement, 8 fluid ounce size, available at Home Depot stores). This type of glue gives you a few extra seconds of set-up time before it starts to grip, providing a chance to correct any initial problems in pipe positions if you work quickly. It also has a whitish color like PVC itself, so it doesn't look messy in a project like this.

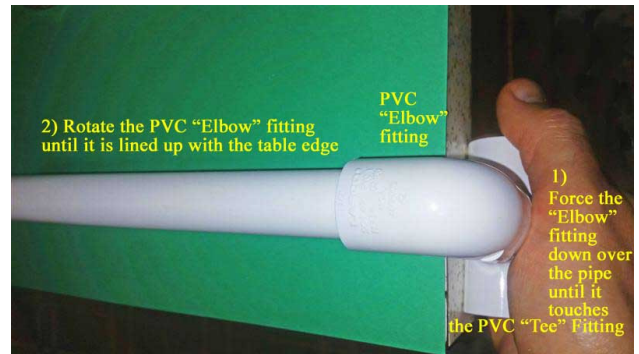
Because PVC glue has very strong fumes you should either work outdoors or in a well ventilated area. Before gluing a piece of PVC pipe into a fitting you should always do a "dry run" (without glue) to ensure that the pipe will insert smoothly into the fitting. If not, sand the edge of the pipe until it does insert smoothly. The time to discover that your pipe has a rough edge is not when you are trying to glue it into a fitting! In addition, each fitting has openings with slots designed to securely hold the ends of pipes when glue is used. Although most of the photos below show only one hand, after applying glue always use both hands to force the ends of pipes into these fitting openings until the pipes "bottom out" in the slots.



13) (NOTE: When working with the short lengths of PVC pipe (1.75 inch and 1 inch, or 44mm and 25mm) always wear a glove on the hand that is inserting the pipe into a fitting, to protect your skin from the pipe edge as you twist the fitting in place.) Refer to the photo at left. Take a 1 inch (25mm) long pipe (Part Q) and apply glue to one of its edges, and also apply glue to the inside of a PVC "Tee" center opening. Using a twisting motion, force the pipe into the fitting until it bottoms out. Wipe away any excess PVC glue (and also do this after each of the following frame assembly steps).

14) Repeat the previous step for the other 1 inch (25mm) PVC pipe and the other PVC "Tee" fitting.

15) Read through this entire step before performing any action. Refer to the photo below right.



Temporarily insert the 8.5 inch (216mm) long length of pipe (Part O) into one of the openings in an "Elbow" fitting (Part N) as shown in the photo, to use as a guide for alignment in this step (but do not apply glue). In this step you will glue a PVC "Elbow" fitting to the pipe stub extending from one of the previously glued "Tee" fittings, and ensure that these two fittings are at an exact perpendicular angle with each other. You will need to use a table (or countertop) with a right angle as a guide for this step. After glue is applied to the flat edge of the "Tee" fitting will be held against the side of the table (or countertop) as shown in the photo, while the "Elbow" fitting will be rotated to an exact perpendicular angle with it, based on the perpendicular edge of the table (or countertop). The first step after glue is applied will be to "bottom out" the pipe stub from the "Tee" fitting up into the "Elbow" fitting (which will make the two fittings touch together, since the stub is too short to fill the open space), and the second step will be to rotate the "Elbow" fitting to an exact perpendicular angle with the "Tee" fitting.



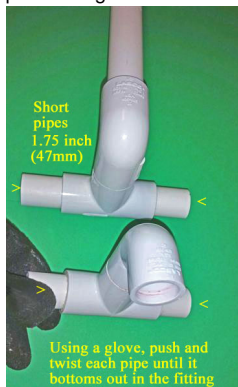
Set up the following items on your table or countertop, in the positions shown in the photo. Apply PVC glue to the bottom opening of the "Elbow" fitting, and also to the short stub extending up from the "Tee" fitting. Perform the following steps within 7 seconds: Force the "Elbow" fitting down over the stub from the "Tee" fitting until it bottoms out, and then (while holding the side of the "Tee" fitting firmly against the side of the table or countertop) rotate the pipe extending from the "Elbow" fitting until it is parallel with the edge of the table. After removal of the long pipe section from the "Elbow" fitting, the final appearance of the assembly should resemble the photo at left.

16) Repeat the preceding step with the other set of PVC "Elbow" and "Tee" fittings (including the short stub). Once again insert the long pipe section into one of the openings in the "Elbow" fitting (without glue), and use the long pipe as a guide for proper perpendicular alignment of the fittings, as described in the previous step. Once again, the final appearance of the assembly should resemble the photo at left.

17) Refer to the photo at right. Apply glue to the remaining "Elbow" opening in one of the previously prepared assemblies and also to one side of the 8.5 inch (216mm) long piece of pipe (Part O). Then, using a twisting motion, push the pipe section all the way into the "Elbow" opening until it bottoms out. The resulting appearance of the assembly should resemble the photo at right.



18) Refer to the photo at left. Take the four remaining 1.75 inch (47mm) short pipe sections (Part P) and glue them into the four remaining "Tee" openings in the previously prepared fitting assemblies, as shown. While wearing a glove to protect your skin from the short PVC pipe edges, apply glue to both the "Tee" opening and one side of the short piece of pipe, and push the pipe all the way into the opening (with a twisting motion) until it bottoms out. Repeat this process for the remaining three openings in the "Tee" fittings. When properly completed, all four of the extending short pipe stubs should be of equal length, as shown in the photo.

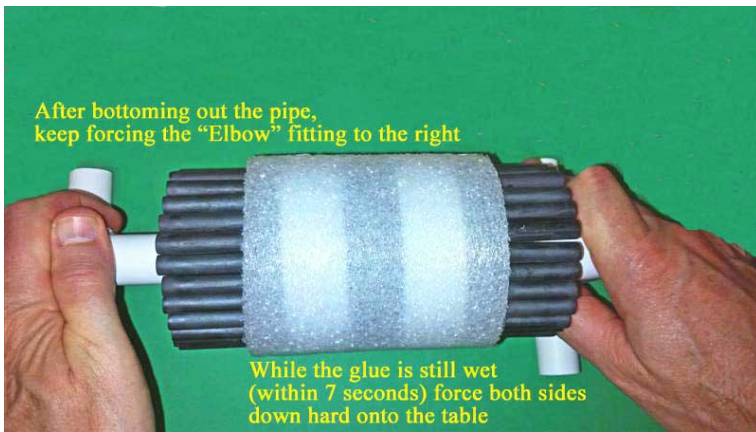


19) Refer to the photo at the at the right. Take the previously prepared ferrite sleeve assembly, and using a twisting motion, carefully insert the unglued side of the 8.5 inch (216mm) long pipe section into the hole in the center of the Funnooole in the ferrite sleeve assembly. Continuing the twisting

motion, slowly and carefully work the end of the pipe through the Funnooole until it exits the other end of the ferrite sleeve assembly (this will be a fairly snug fit, and it is desirable to keep it that way). After the step has been completed, lay out the two sides of the PVC frame as shown in the photo.

20) Read through this entire step before performing any action. This final step of the PVC frame assembly will be to glue both sides of the frame together, and in order to ensure that both sides of the frame will be completely flat on the table, it will be necessary to use a completely flat table as a guide while the final glue bond sets. Ensure that your table is completely flat before using is as a gluing platform in this action.





LITZ WIRE COIL AND VARIABLE CAP INSTALLATION

21) (Note: The following step may be performed with either the 1 inch (25mm) waterproof tape (Part F) or the 3 inch (76mm) waterproof tape (Part H). Use of the 3" tape will make the Litz wire coil installation much easier, but the 1 inch tape is perfectly acceptable as long as the instructions in this step are carefully followed.) If you are using the 1" tape, refer to the photo at right. Starting at the point on the ferrite sleeve where the foam is taped together, start a tight wrap of the 1" tape around the ferrite sleeve assembly, adhesive side out. Position this tape so that the outer edge is 1/2 inch (12 mm) from the edge of the Oatey foam (all around the ferrite sleeve).

Continue this process until one entire tight turn is wrapped, then continue to wind a short (2 inches, or 51mm) overlapping section. Cut the tape on top of the previously taped portion of the Oatey foam. Begin a second tight wrap of the 1" tape adjacent to the first wrap, and continue this process until the entire second turn is



22) Refer to the photo at right. Position the ferrite sleeve assembly so that the evenly lined up ferrite rods (which were flat on the table, during the sleeve assembly) are on the right side. Take your reel of 1162/46 Litz wire (Part E) and position it alongside the ferrite sleeve assembly as shown, so that the wire can be unwound freely as the sleeve is rotated upward (in the manner shown). After measuring off 7 inches (178mm) of Litz wire to use as a pigtail for the variable cap connection, start a tight turn of Litz wire running around the sleeve 1/2 inch (12mm) from the edge of the waterproof tape, as shown in the photo. After this one turn is securely on the tape (and evenly spaced all around, measuring from the waterproof tape border) tape the end of the Litz wire to the ferrite rods, as shown. The Litz wire point where the coil begins (and the pigtail veers off) should be near the bottom of the sleeve, where the Oatey foam strip ends are taped together.



Cut the Litz wire at this point. In order to protect the end of this Litz wire from any damage in the following steps, use a short piece of waterproof tape to secure this end to the ferrite rods (like the first turn was secured).

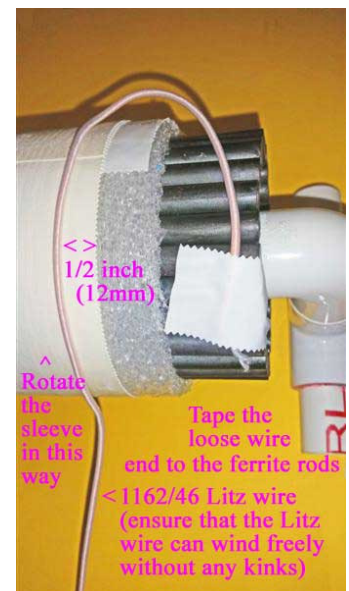
The first part of this step will be to apply PVC glue to the two spots shown in the photo above (the remaining end of the 8.5 inch/216mm pipe, and the remaining "Elbow" opening in the left frame assembly). Then, all within 7 seconds, the long pipe will be pushed into the "Elbow" opening until it bottoms out, and both sides of the entire PVC frame assembly will be forced down onto the completely flat table so that both sides of the antenna's frame end up completely flat, and aligned with each other (as shown in the photo at left). Ensure that your table is free of any debris before performing this step.

Finally, apply PVC glue to the two spots shown in the photo at the bottom of the previous. Perform the following steps within 7 seconds: insert the end of the long pipe into the "Elbow" fitting until it bottoms out, and while continuing to force the "Elbow" fitting to the right, force both sides of the PVC frame assembly down hard onto the flat table. The left side of the frame will rotate until it is completely flat on the table (aligned with the right side), and the glue will set in this optimal position. This completes the assembly of the PVC frame.



also tightly wrapped and has a 2 inch (51 mm) overlapping section, as described above. Then slide this wrap up against the first wrap with the zigzag edges interlocking, as shown in the photo. Ensure that there are no gaps or overlaps between the two tape wraps. Finally wrap a tight third turn (as shown in the photo), once again placing it up against the second wrap with the zigzag edges interlocking, without any gaps or overlaps. During the winding of the Litz wire coil, ensure that these three tape strips remain in these interlocking positions adjacent to each other, without any gaps or overlaps.

If you are using the 3" waterproof tape for this step, the process is much easier. As in the photo shown at left, simply wrap one turn tightly, adhesive side out, positioning it in the center of the Oatey foam wrap. After making one tight turn overlap a 2" section on top of the taped section of the Oatey foam, and then cut the tape with a straight horizontal edge.



24) Refer to the photo at right. Place a 4 inch (102mm) long strip of Scotch "Extreme" brand strapping tape (Part G) across the Litz wire curve made in the previous step, as shown in the photo. Position this strapping tape strip in the position shown, and then place a 4 inch (102mm) long strip of the 1 inch (25mm) waterproof tape along the lower border of the strapping tape to secure it to the coil (as shown). Ensure that these tape strips do not extend past either the left or right edges of the Oatey foam strip (trim their ends, if necessary).

This completes the winding of the Litz wire coil. The two pigtails will be connected as part of the variable capacitor installation.

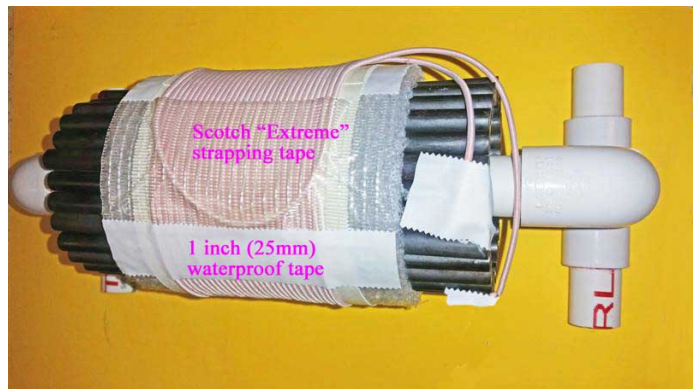
25) Refer to the photo below. Take the 6-32 hardware parts (Part K) and pre-assemble them as shown in the photo. Thread one 6-32 nut all the way up to the



head of the screw tightly, then place a 6-32 soldering lug next to it (on the screw). Finally, thread another 6-32 nut on the end of the screw for only a couple of turns, as

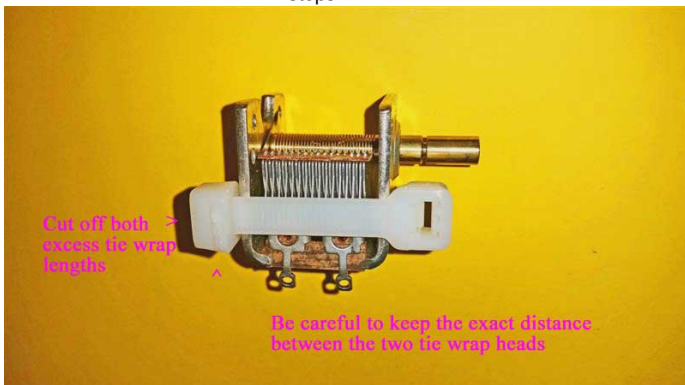
shown (this assembly will be installed on the variable cap in the next step). Unwrap the variable capacitor (Part J) and give it a visual inspection, checking for smooth rotation throughout its tuning range, and ensuring that all of its plates are straight and parallel when rotated. Finally, cut a 3.25 inch (82mm) length of the 5/8 inch (15mm) inner diameter rubber heater hose (Part S), and cut a straight line in it lengthwise along the entire length.

26) Refer to the photo at right. Take the previously prepared 6-32 hardware and install it on the variable capacitor in the position shown. After tightly securing the screw, nuts and soldering lug to the variable cap chassis, grip the soldering lug with needle nose pliers and bend it slightly away from the variable cap chassis, as shown. In addition, slightly bend the indicated variable cap soldering terminal, as shown.



27) Refer to the photo at left. Take the 3.25 inch (82mm) length of the 5/8 inch (15mm) inner diameter rubber heater hose (Part S) and install it on the long pipe in the antenna's PVC frame, as shown. Note that the length of this rubber hose will be slightly longer than the length of open space on the PVC pipe, so that the rubber hose will compress the Funnooodle edge to reduce unwanted rotation of the ferrite sleeve. After placing the rubber hose in place on the pipe ensure that that it is straight, with the gap pointing up (as shown). Finally, pull the upper edges back slightly to add a few drops of super glue to lock the rubber hose in place on the pipe.

28) Refer to the photo at right. Take two of the 14 inch (355mm) 120 pound (54.5 kg) test plastic tie wraps (Part L) and run the end of one tie wrap through the head of the other, as shown. Place this assembly on top of the variable cap in the position shown, and continue running the end of the tie wrap through the head of the other until the two tie wraps bracket the variable cap in the position shown. After reaching this position, be careful not to change the relative position of the two tie wrap heads in the following steps.



29) Refer to the photo at the right. Using diagonal cutters carefully cut off the excess lengths in the two tie wraps, taking care not to change the position of the two tie wrap heads (which was adjusted to exactly bracket the width of the variable cap). This short piece will be used to lock the variable cap in place alongside the rubber hose.

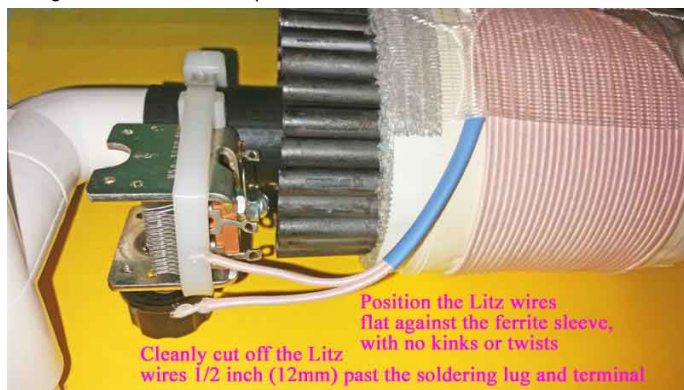
30) Refer to the photo at right. This is a simplified photo to show how a third plastic tie wrap will be used to securely mount the variable cap to the antenna frame. The previously

prepared short tie wrap assembly will be placed in between the variable cap and the rubber hose length, as shown. The end of the third tie wrap will first be passed downward through the opening in the previously prepared short assembly, then wrapped around the bottom of the variable cap. Finally, this end of this third tie wrap will be passed through the head of the same tie wrap (as shown), and finally pulled tight over the top of the PVC pipe and rubber hose to lock everything in place. The final tightening of this third tie wrap will be done gradually, to ensure that the variable cap has a perfectly straight vertical and horizontal alignment.



31) Read through this entire step before performing any action. Refer to the photo at right for most of the following steps. While holding the variable cap in your hand position the previously prepared short tie assembly on top of the variable cap as shown in the photo on previous page and at right (the bracket position). Move these parts under the PVC frame up against the rubber hose, and while holding these parts in this position, pass the end of the third tie wrap through the opening in the previously prepared short tie wrap assembly (as shown in the photo on previous page). Push the tie wrap through this opening until only 3 inches (76mm) of length remains, then pull the end of the third tie wrap under and around the variable cap, as shown in the photo at left. Finally, pass the end of this third tie wrap through the head of the same tie wrap, as shown in the photo to the left. While slowly tightening this third tie wrap position the variable cap in the position shown at left, ensuring that the third tie wrap is lined up with the short tie wrap assembly both in front and in back of the variable cap. The variable cap should be perfectly aligned both vertically and horizontally in the position shown, and there should be at least 1/4 inch (6mm) of open space between the variable cap's rotating plates and the PVC frame when the plates are fully opened. When all of these positioning steps have been fully completed, tighten the third tie wrap securely.

32) Refer to the photo at right. Position the ferrite sleeve assembly as shown, and taking care not to unravel the Litz wire lead ends, remove the tape strips that are attaching the Litz wire leads to the ferrite rods. Using sharp scissors cut the two Litz wire lead ends neatly and evenly as shown in the photo, as close as possible to the original ends of the wires. Ensure that there are no frayed wires or insulation unraveling on the end of either lead (if so, cut off another short amount of wire until a clean cut is made). Take the 2 inch (51mm) length of 1/8 inch (3mm) shrink tubing (Part R) and pass the end of the longer Litz wire lead completely through it, as shown in the photo. Then take the end of the other Litz wire lead, and carefully pass it through the shrink tubing as well (as shown). Finally, position the shrink tubing as shown in the next photo.



Cleanly cut off the Litz wires 1/2 inch (12mm) past the soldering lug and terminal. Position the Litz wires flat against the ferrite sleeve, with no kinks or twists.

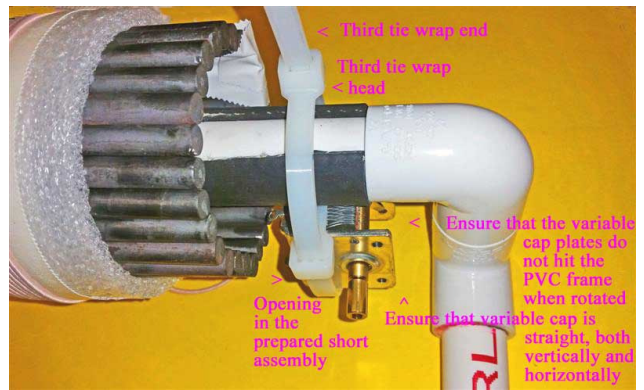
to protect the antenna from any excess solder during the next steps. Using your soldering iron, pre-tin (melt a small amount of solder) on the variable cap soldering lug and the variable cap terminal shown in the photo. While soldering ensure that no excess solder drips into other areas of the antenna.



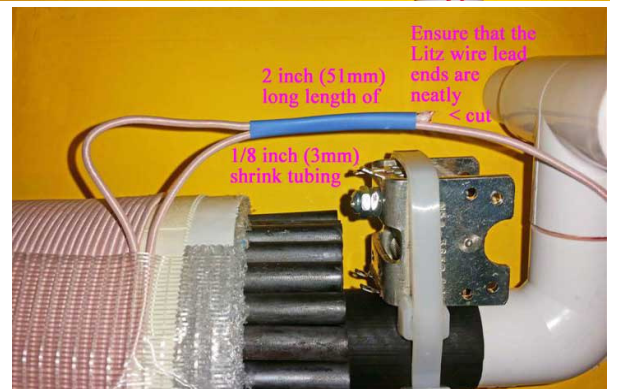
Use a 60 watt (or larger) soldering iron or gun! Both leads should have bright, shiny, cylindrical lead ends for at least 1/3 inch (8mm).

of solder onto the clean end of your soldering iron on gun, and then hold it in steady contact with the end of a Litz wire lead for about 20 seconds, after which the solder should begin to melt around the Litz wire leads in contact with the soldering iron. At this point add more solder and work the soldering iron around the circumference of the Litz wire end, observing the solder melt more of the individual leads, until finally the soldering iron has been in contact with all sides of the Litz wire end, and all of the individual leads are melted together with bright, shiny solder for a length of at least 1/2 inch (12mm). Using diagonal cutters, make a very short cut at the end of the lead to confirm that the solder has melted all the individual Litz wire leads together, and that a bright, shiny cylindrical pattern has been formed at the end of the Litz wire lead for a length of at least 1/3 inch (8mm), as shown in the photo. Repeat this process for the other lead, as shown in the photo.

36) Refer to the photo at right. Position the Litz wire leads as shown, flat against the ferrite sleeve assembly with no kinks, twists or sharp turns. Using the soldering iron (with a clean tip) and needle nose pliers (to protect your fingers from the heat), grip the Litz wire with the pliers and hold its end up against the pre-tinned soldering lug installed on the variable cap. Melt enough solder to make a strong electrical connection, then hold the Litz wire in place with the pliers as the solder cools (which will take about 10 seconds, depending on your air temperature). Repeat the above procedure to solder the other Litz wire lead to the variable cap terminal, as shown in the photo. Ensure that no solder drips onto other parts of the antenna, and that these two connections are well separated from each other, with both having bright, shiny solder joints, as shown in the photo.



Third tie wrap end. Third tie wrap head. Ensure that the variable cap plates do not hit the PVC frame when rotated. Ensure that variable cap is straight, both vertically and horizontally. Opening in the prepared short assembly.



Ensure that the Litz wire lead ends are neatly cut. 2 inch (51mm) long length of 1/8 inch (3mm) shrink tubing.

33) Refer to the photo at left. Ensure that the shrink tubing has been moved to the position

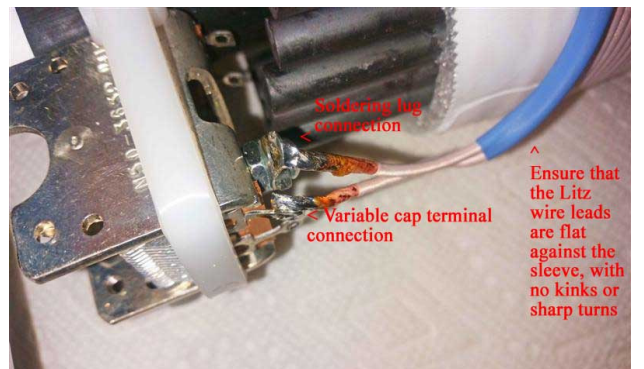
shown, and then press the two Litz wires flat against the bottom of the ferrite sleeve with the ends passing over the variable cap (as shown). Ensure that there are no twists, kinks or sharp bends in the Litz wires, then cut the Litz wires cleanly with sharp scissors (as in the previous step) 1/2 inch (12mm) past the soldering lug and variable cap terminal (that was bent outward in Step 26). As you cut the Litz wires take care to ensure that the individual wires and insulation do not unravel.

34) Refer to the photo at right. Place a rag or other cloth under your work area

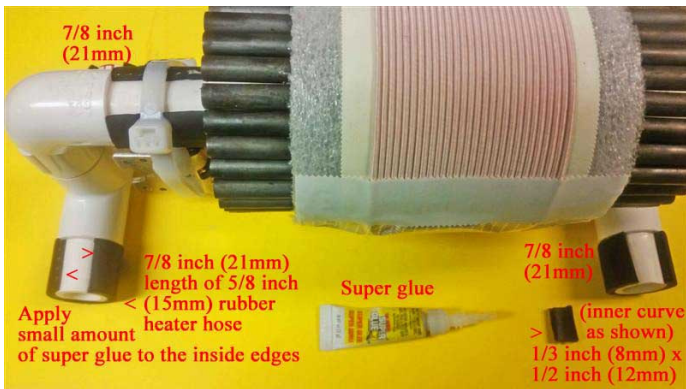
35) Read through this entire step before performing any action. (NOTE: It is essential to use a 60-watt (or larger) soldering iron or gun to provide enough heat to thoroughly melt solder around the individual leads in 1162/46 Litz wire. Attempts to use a smaller, pencil-type soldering iron to do this will invariably result in substandard Litz wire connections, and greatly reduced performance. Properly soldering the 1162/46 Litz wire also causes a large amount of unhealthy smoke to be released, and this operation should always be performed outdoors if possible, with a fan blowing the smoke away from the worker.) Refer to the photo at left. Position the two Litz wire ends as shown, above the protective surface covering the other parts of the antenna. Using your 60 watt (or larger) soldering iron or gun and a wet sponge, carefully melt a decent amount



Soldering lug. Previously bent variable cap terminal.



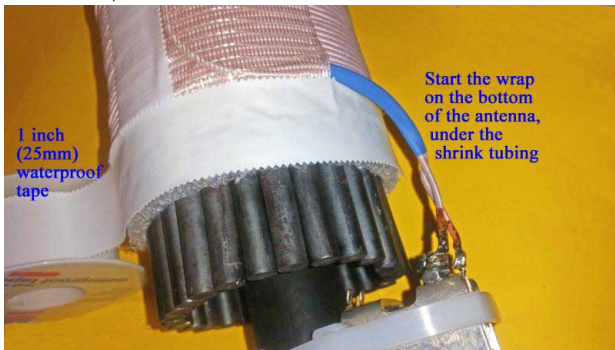
Soldering lug connection. Variable cap terminal connection. Ensure that the Litz wire leads are flat against the sleeve, with no kinks or sharp turns.



section of the ferrite sleeve is still on the bottom of the antenna (as shown) before performing this step. Refer to the photo at right. Position the antenna as shown, then temporarily push the ferrite sleeve a short distance away from the left side of the antenna (this is the side with the uneven arrangement of ferrite rod ends). Take the previously prepared short section of rubber hose and apply a small amount of super glue to the inner (concave) section, as shown. While pushing the ferrite sleeve back from the PVC pipe insert the short length of rubber hose into the position shown, so that it is in the center of the pipe and one of the ferrite rods (rotate the sleeve slightly to position it against a single ferrite rod, if necessary). Press the rubber hose section firmly against the PVC fitting edge until the glue sets. (Note: This rubber hose section will prevent unwanted rotation of the ferrite sleeve, and provide some protection against accidental bumps during airline travel).

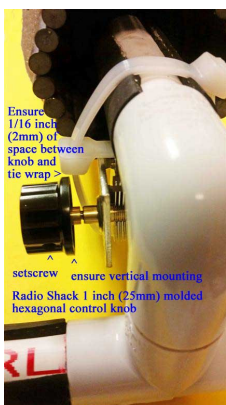
37) Refer to the photo at left. Take the remaining length of 5/8 inch (15mm) inner diameter rubber heater hose (Part S), and while taking maximum care to cut perfectly straight edges, carefully prepare four 7/8 inch (21mm) long lengths of the rubber hose to be used as anti-slip grips on the antenna's "legs." After cutting these four short lengths cut a straight line lengthwise in each length as shown, and then wrap the four lengths of rubber hose around the short PVC stubs extending from the "Tee" fittings on the antenna's base. Ensure that all four rubber hose lengths are straight in position, and that their edges are flush with the edges of the PVC stubs (if not, prepare new rubber hose sections until you are satisfied). When satisfied that all four rubber hose lengths have acceptable appearance, apply a small amount of super glue to their inside edges to lock them in place. Only a couple of drops on each edge should be sufficient to provide a solid bond (do not allow any glue to seep out of the edges). Finally, cut a 1/3 inch x 1/2 inch (8mm x 12mm) section of rubber hose as shown in the lower right corner of the photo. Ensure that the inner line made by the curve is running lengthwise, as shown in the photo.

38) Note: Ensure that the taped



39) Refer to the photo at left. Position the antenna as shown. Take the 1 inch (25mm) roll of waterproof tape and start a single wrap at a position under the shrink tubing, as shown. This single wrap should be tightly wound with the adhesive side down, with the inner edge running alongside the outer edge of the first Litz wire turn (as shown). Continue this process until one complete turn has been wrapped, and then cut the tape after a short overlapping section has been formed under the shrink tubing.

40) Refer to the photo at right. In the same way, start a second wrap of the 1 inch (25mm) waterproof tape around the other side of the ferrite sleeve, starting on the bottom of the antenna at the position shown. Once again wind this turn tightly, adhesive side down, with the inner edge running alongside the outer edge of the last Litz wire turn. Once again, cut the tape after making a short overlapping section on the bottom of the antenna. If desired, trim the outer edge of this second wrap to be even with the edge of the Oatey foam wrap.

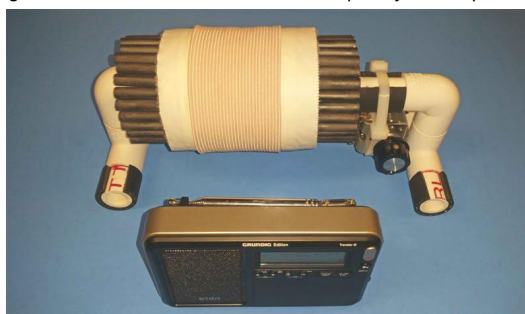


41) Refer to the photo at left. Position the antenna as shown, then take the Radio Shack 1 inch (25mm) molded hexagonal control knob (Part I) and loosen the setscrew until the variable cap tuning shaft can be inserted into the center slot of the control knob, as shown. Position the control knob so that it is in a straight position (completely vertical) at least 1/16 inch (2mm) away from the edge of the plastic tie wrap, then tighten the setscrew. Tune the variable cap throughout its range, and ensure that the control knob will not rub against the tie wrap edge at any variable cap setting. If necessary, loosen the setscrew and position the control knob outward a slight distance until you can be sure that it will never rub against the tie wrap. This completes the assembly of the antenna.

INITIAL TESTING

This antenna is a simple, High-Q tank circuit with the variable capacitor connected in parallel across the Litz wire coil. As long as the assembly instructions have been carefully followed and the recommended construction materials have been used, the chance of any problems is very remote. The compact performance advantage of this antenna is related to its High-Q tank circuit, which optimizes one selected frequency to an exceptional degree. Because of the High-Q tank circuit the tuning is extremely sharp, however, and this can require a few practice sessions to master. The variable capacitor has an 8:1 vernier drive system which assists somewhat in this effort, but careful tuning is still necessary to obtain the design level of inductive coupling performance (roughly equivalent to that of a 4 foot/1.22 meter air core box loop).

For the initial test the antenna should be placed outdoors on a non-conductive table, in an RF-noise-free environment during the hours of daylight (preferably around local noon). Ensure that your portable radio has fresh batteries, and that you go after extremely weak daytime DX signals on different frequencies across the band. Because of the sharp tuning system FSL operating experts usually pre-set the variable capacitor to the approximate desired frequency (based on the position of the variable cap plates) prior to fine tuning the antenna to match the radio's frequency. With operating practice, you will also gain skill using this method.



- 1) Place the FSL antenna in a secure position on a flat surface (an elevated wooden or plastic table), away from metal tables and other large electrical conductors.
- 2) Position your portable radio about 2" in front of the FSL coil for the initial test, as shown in the photo on the previous page.
- 3) Tune in a weak signal (the weaker the better) on the low end of the AM band on your portable radio. It is important that the signal is just above the noise level, to demonstrate the effectiveness of the antenna.
- 4) Make sure that the antenna's variable cap is set for the low band (plates fully meshed). SLOWLY tune the FSL antenna's variable cap knob clockwise until the antenna's resonant frequency matches that of the portable radio. When zeroed in on the weak station's frequency, the FSL should give a VERY great inductive coupling boost. Depending upon how far your weak low-band signal is from the low band start frequency (530 kHz), you may need to tune the variable cap clockwise for a short or longer time until you hear the powerful inductive coupling boost when the frequencies match up.
- 5) After the correct frequency is matched, slowly vary the portable radio's distance away from the FSL coil to determine the distance for the best inductive coupling boost (while keeping the radio parallel with the FSL antenna, as shown in the previous photo). This is also a fairly sharp adjustment, which will provide excellent results when optimized.
- 6) Repeat the above procedures for a very weak middle band DX station (800-1100 KHz). Remember to pre-set the variable cap plates about two thirds open before starting the SLOW clockwise tuning search for the powerful inductive coupling boost.
- 7) Looking at the variable cap plates can give you a rough idea of your FSL's tuned frequency, with its plates half open at 650 kHz, two thirds open at 800 kHz, and three fourths open at 1000 kHz. Memorizing a few of these settings will make it easy for you to pre-set your FSL's variable cap before the fine tuning.
- 8) On the high band, it is normal for the FSL to tune more sharply than on the low band. In addition, on the high band the optimal inductive coupling distance between the FSL coil and the portable radio is much shorter than on the low band (as little as 1-2 inches, or 25-50mm). Optimal inductive coupling distances on the low band (around 530 kHz) can be as great as 10 inches (25cm).
- 9) Ferrite rod FSL models (such as your antenna) can provide powerful inductive coupling boosts off the sides of the ferrite sleeve, as well as in the front and back. Often this off-the-side boost is superior to the front and back boost. Once the FSL is tuned and the optimal inductive coupling distance is known, move the radio the same distance off to the side of the antenna, with the radio's loopstick lined up with one of the ferrite rods in the FSL sleeve. You may enjoy a superior inductive coupling boost.
- 10) The FSL's tuning sharpness is much greater than that of a typical air-core loop, and best results are obtained only when the FSL's variable cap is carefully zeroed in on the correct frequency. When the best inductive coupling distance is also found, the resulting signal boost from your new FSL antenna is competitive with that of a much larger (4 foot, or 1.22 meter) air core box loop. Practice and skill in optimizing both of these adjustments will provide excellent DXing results with your new antenna.
- 11) When satisfied that your new FSL antenna is operating satisfactorily, read over the "Operating Tips" section below.



OPERATING TIPS

This antenna is designed to provide a high-gain inductive coupling boost to all portable radios having a loopstick, and unlike other similar-sized antennas, it will provide a very substantial signal boost even to full-sized portables like the ICF-S5W and RF-2200. As designed, it will provide this inductive coupling boost on all frequencies from 515-1750 kHz, with signal gain approximately equal to that of a full-sized 4 foot (1.22 meter) air-core box loop. Because of the sharper tuning and lower noise pickup of the FSL antenna design, however, it will occasionally outperform the 4' box loop in the signal-to-noise ratio of weak DX signals – especially for weak DX stations adjacent to strong local transmitters received in outdoor environments (on a PVC base). Operator skill in optimizing both the sharp tuning and inductive coupling distances is essential in obtaining this level of performance.



An FSL antenna's DXing performance can be increased by placing the antenna on a non-conducting stand up off of a table, such as on a PVC-framed base for DXpedition or shack usage. Information on such PVC bases may be obtained from the author.

Although the design of this antenna (with the internal variable cap) can allow it to continue operating during periods of light rain, during such weather it is far preferable to place the antenna inside of its matched-size plastic tote, as shown in the photo at left. While protected in this way the antenna can operate in all but the most severe weather.

During DXpeditions when it is essential to have immediate, powerful inductive coupling boosts from an FSL antenna, a Sony ICF-2010 SSB spotting receiver can be used as an FSL tuning aide. After tuning in a weak DX station the ICF-2010's signal strength LED display can be viewed as the FSL is tuned, and the red LED lights will quickly light up when the frequencies are matched. This process can usually be done within a couple of seconds, no matter how far off the FSL was from the new frequency. The system is also effective in periods of total darkness. After the FSL is optimized for the new frequency an Ultralight radio may be tuned to receive the FSL's inductive coupling boost, if desired.

FSL antennas are curious items to the general public, and while operating in local parks or ocean cliff turnouts you may be approached by various visitors requesting an explanation of what the contraption is. Do your best to stay friendly and cooperative, even when they are interfering with once-in-a-lifetime transoceanic DX at an ocean cliff site (yes, this has actually happened). ©

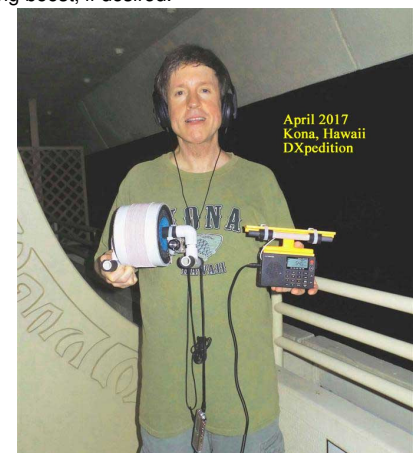
TRAVEL DXING

This antenna was primarily designed to provide the capability of high-gain MW-DXing after long range air travel, especially in environments where large external antennas are forbidden (such as exotic oceanfront motels). In such a mission the compact, rugged design should match the challenges of air travel very well. The variable cap is mounted in a secure inner location. The ferrite rods are cushioned by the rubber plumbing coupler and inner foam, as well as by the Oatey foam wrap and PVC frame. Since the design start frequency is 515 kHz, even in a worst-case scenario where a few rods are broken in a concrete fall the remaining sleeve inductance should be sufficient to keep the tuning range across the entire broadcast band, with little or no change in gain performance.

During air travel it is strongly recommended that the antenna be packed in the matched-size plastic tote, and carried in hand-carry luggage. So far, here (on the west coast of North America) these compact FSL antennas have quickly and easily passed through airport TSA checkpoints 7 times (with Craig Barnes and myself), with only one quick question having been asked about their function. As mentioned previously, a well-worn copy of these assembly instructions and/or an amateur radio license should be sufficient documentation to convince a puzzled inspector.

Finally, congratulations on the successful construction of your new FSL antenna, and best wishes in tracking down lots of exciting new DX in the coming years!

Sincerely, **Gary DeBock** (in Puyallup WA, USA)





DX FORUM – Richard C Evans – 3908 Grand Oak Ave Apt 4 – Indianapolis IN 46237
E-mail: REvans5435@yahoo.com

DEADLINES: Saturdays

Deadline: 8/12

Eric Bueneman (N0UIH), 631 Coachway Lane, Hazelwood, Missouri 63042-1347

WQQW 1510 Highland IL has made another format flip, this time from Classic Country to Adult Standards. This is the third format the station has had in two years, after Regional Mexican and Classic Country. Classic Country can still be heard locally on KQQZ 1190. The last station in the St Louis area to program this format was WQQX 1490 (now KFTK). Speaking of KQQZ, the station and sister station KZQZ 1430 have switched news affiliation to USA Radio. KMOX 1120 has not been broadcasting in digital format for six months now; they have apparently dropped digital service, leaving KFUE 850 (a staunch "HD" supporter) to carry on this failed technology. WSDZ 1260 is the latest AM station to be relayed by an FM translator; the station and its Conservative Talk format is now simulcast on K236CS 95.1 St Louis MO (a 99-watt relay). Sister station KXFN 1380, with primarily health and medical talk, will also be getting a relay, in the form of a new 99-watt FM translator on 105.3. This one may be tough to hear because of semi-local WAOX out of Staunton IL. The 104.5 translator for KXEN 1010 has been tough to hear because of another semi-local, KSLQ out of Washington MO. Last month, I purchased a County Comm GP-5/SSB Ultralight receiver from Universal Radio, and joined the trend of Ultralight DXing. I've concentrated on DXing the domestic AM stations, but have heard a handful of Cubans and Mexicans. The receiver also has shortwave in AM and SSB mode, as well as FM broadcast band. The FM section is good, hearing the local FM relays of AM and HD2 signals, as well as regional 50,000 watt and 100,000 watt FM stations. A call change was noted on the receiver: ex-local WTZA 1010 Atlanta GA (it was WGUN when I lived there) was noted 6/23 at 0545 ELT with Christian music and "Vida 1010 AM en Georgia" ID in Spanish. A new station was added to the log on 7/6 in the form of WNSR 560 Brentwood TN at 0459 ELT with local ads, legal ID in the form of a jingle into sports headlines from CBS Sports Radio. They were apparently on day power; I thought for a while I had WQAM Miami FL. June 29 marked 25 years since I returned to the St Louis area from the Atlanta area; as of July 6 2017, 1,693 stations have made it into the logbook. 73 from the Florissant Valley Dial Twister.



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

Geomagnetic Summary June 1 2017 through June 30 2017

Tabulated from daily status (K @ 0000 UTC).

Date	Flux	A	K	Space Wx										
6/ 1	76	7	3	no storms	6/11	74	17	3	minor, G1	6/21	74	4	2	no storms
2	78	5	1	no storms	12	75	8	3	no storms	22	74	6	2	no storms
3	78	9	1	no storms	13	75	8	1	no storms	23	74	5	2	no storms
4	78	3	1	no storms	14	74	5	1	no storms	24	74	9	3	no storms
5	79	5	2	no storms	15	77	4	0	no storms	25	74	11	2	no storms
6	75	5	1	no storms	16	74	24	5	minor, G1	26	74	7	2	no storms
7	76	4	2	no storms	17	75	15	3	minor, G1	27	75	5	0	no storms
8	74	5	1	no storms	18	75	10	2	no storms	28	72	4	1	no storms
9	74	5	1	no storms	19	74	5	1	no storms	29	72	5	1	no storms
6/10	75	4	1	no storms	6/20	74	3	0	no storms	6/30	72	4	2	no storms

Gx – Geomagnetic Storm Level

Rx – Radio Blackouts Level

Sx – Solar Radiation Storm Level

2017 Convention Schedule (tentative)

Thursday, August 17 2017

Note: All meals are on your own funds, including the banquet

Guests arrive by air, train, bus and cars – Airport Plaza Hotel, 1981 Terminal Way, Reno NV 89502 (775-348-6371 or 1-866-599-6674)

Late afternoon – early convention registration in hotel lobby

17:00 Dinner at near-by restaurants (see enclosed maps)

Friday, August 18 2017

Breakfast

09:00 Meeting room opens – Convention registration continues

10:20 Assemble for car pools for the KKOH tour

10:30 Leave for KKOH tour

11:00 KKOH tour (1 hour max)

12:00 Lunch (near KKOH – A&W/McDonalds/other)

13:00 KPLY 630, KHIT 1450, and +5 FMs tour (near KKOH)

17:00 Dinner (Outback nearby-Hotel Buffet-Texas Roadhouse-other)

19:00 Discussion groups (topics TBD)

23:00 Meeting room closes – Good night

Saturday, August 19 2017

Breakfast

09:00 Meeting room opens – Convention registration continues

10:30 Gather for Kimmie Candies tour

11:00 Kimmie Candies tour

12:00 Lunch

13:00 Gather for tower tour(s)

13:15 Leave for tower tour(s)

15:00 Discussion group (topic TBD)

16:30 IRCA business meeting in meeting room

17:00 NRC business meeting in meeting room

18:00 Banquet (Black Bear Diner)

20:00 Auction in meeting room

23:00 Meeting room closes – Good night

Sunday, August 20 2017

Breakfast

12:00N 2017 gathering ends.

Full Color IRCA Letterhead

Full color 8.5 x 11 MS Word 2007 file with the current IRCA logo. Send email to phil_tekno@yahoo.com to get yours today! Great for verification requests.

IRCA Slogans List (January 2017)

This completely revised Slogans List includes radio slogans from the US and Canada (over 4500). The 2017 IRCA Slogans List is posted on the IRCA website for all to download. The link is: <http://www.ircaonline.org/slogans.htm>

For those preferring a hard copy, one can be ordered from the IRCA.

Prices: **IRCA/NRC members** – \$7.25 (US), \$8.50 (Canada) \$10.00 (México), \$10.75 (rest of the world). **Non-IRCA members** – add \$1.00.

IRCA TIS/HAR LIST (Winter 2016)

The **IRCA TIS/HAR LIST** lists all US and Canadian TIS/HAR stations, by frequency, including call letters, state (province,) city, county, licensee, address, coordinates, expiration date and dates of DXM/DXN reports/sources. It has been updated with FCC data, DXM, DXN and DXer reports, and on-line listings through March 1 2016.

The 2016 IRCA TIS/HAR LIST is posted on the IRCA website for all to download. The link is: http://www.ircaonline.org/TIS_2016.pdf.

For those preferring a hard copy, one can be ordered from the IRCA.

Prices: **IRCA/NRC members** – \$9.50 (US), \$11.00 (Canada) \$12.50 (México), \$14.00 (rest of the world). **Non-IRCA/NRC members** – add \$2.00.

IRCA Mexican Log, 20th Edition (Winter 2015)

The **IRCA MEXICAN LOG** lists all AM stations in Mexico by frequency, including call letters, state, city, day/night power, slogans, schedule in UTC/GMT, formats, networks and notes. The call letter index gives call, frequency, city and state. The city index (listed by state, then city) includes frequency, call and day/night power. The transmitter site index (listed by state, then city) tabulates the latitude and longitude of transmitter sites. This is an indispensable reference for anyone who hears Mexican radio stations. Size is 8 1/2" x 11".

Prices: **IRCA/NRC members** – \$9.50 (US), \$11.00 (Canada) \$12.50 (México), \$14.00 (rest of the world). **Non-IRCA/NRC members** – add \$2.00.

A DXers Technical Guide, 4th Edition (Spring 2004)

In its nearly 200 pages you will learn about the principles underlying the design of successful receivers, antennas and receiving accessories, find reviews of the best commercially available DXing equipment in different price ranges, as well as detailed instructions for building one's own antennas and other DXing aids. Although it focuses on the technical backdrop to medium wave DXing, it will also be of interest to serious shortwave listeners and low band radio amateurs.

Prices: **IRCA/NRC members** – \$15.00 (US), \$16.50 (Canada) \$18.00 (México), \$20.00 (rest of the world). **Non-IRCA/NRC members** – add \$2.00.

Sunrise/Sunset Maps

12 maps showing 15 minute sunset and sunrise times for the US and 12 maps showing hourly sunset and sunrise times for the World. Explanation includes use of the maps and examples of DX made possible by knowledge of SR/SS times.

Prices: **IRCA/NRC members** – \$2.25 (US), \$3.00 (Canada) \$3.50 (México), \$4.50 (rest of the world). **Non-IRCA members** – add \$1.00.

IRCA Reprints

The IRCA maintains a large file of articles that have appeared in past issues of **DX Monitor**. These articles cover a wide variety of topics, including: antenna theory and construction, tips for the foreign BCB DXer, how to improve your DXing skills, history of DXing and broadcasting, lists of stations by subject, construction projects and receiver modification, receiver reviews, medium wave propagation, and more. Copies are available for a nominal charge. Price for the complete list is \$1.00.

Also from the IRCA. "IRCA REPRINTS ON CD"!!! 648 Reprints. The entire set, now on one CD. Categories include: Antennas, Domestic, Foreign, History, DX Lists, Receivers and Receiver Modifications, and Technical. Check out the table of contents at: <http://ircaonline.org/2004ReprintList.htm>.

Prices: **IRCA/NRC members** – \$10.00 (US), \$11.00 (Canada) \$11.50 (México), \$12.50 (rest of the world). **Non-IRCA/NRC members** – add \$2.00.

"DX Monitor" on DVD

IRCA's regular bulletin "**DX Monitor**" Volumes 1 through 50 in .pdf format on 2 DVDs. Re-live the days gone by and re-introduce yourself to the former members who helped make the IRCA great!! NOTE: You will NEED a DVD reader to open the .pdf files. These files were TOO LARGE to use regular CD's.

Prices: **IRCA/NRC members** – \$15.00 (US), \$16.00 (Canada) \$16.50 (México), \$17.50 (rest of the world). **Non-IRCA/NRC members** – add \$2.00.

To order from the IRCA, send the correct amount (in US funds payable to **Phil Bytheway**) to: **IRCA, 9705 MARY NW, SEATTLE WA 98117-2334**. Or, order through PayPal [add \$1.00] to email: phil_tekno@yahoo.com (Phil Bytheway). Please state club affiliation when ordering.

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 \$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 phil_tekno@yahoo.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.

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