

DX News

Serving DXers since 1933



Volume 72, No. 19 - February 14, 2005 (ISSN 0737-1659)

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From the Publisher . . . Issue #20 will be the one where we include "Address Service Requested" on the back cover of DXN (and in the future, all #10, 20, and #30 DXN's). If you have moved and have not sent us an address update (and you KNOW who you are, because you are receiving DXN's with those yellow forwarding stickers affixed by the USPS), get that update to the publisher in Topeka before Wednesday, February 16, to avoid costing your club seventy cents, which is what the USPS charges us per address update. And the USPS WILL charge us seventy cents for each forwarded copy of #20. If you move after that issue and forget to send an update, after a month you'll no longer receive DXN, as the USPS will stop forwarding DXN to your new address and will send it back . . . and we'll assume that you are no longer with us and cancel your subscription (unless you should come to life and complain that you aren't receiving DXN, of course).

David Jones - 1713 Martindale Drive - Springfield, TN 37172-3821, 384-1190 (area code?) is interested in forming a local Kentucky and Tennessee group of AM band listeners.

WHGT/WCBG-1590 . . . NRC members Dave Norment and Gerry Conkling recently visited the transmitter site of WHGT/WCBG-1590, Chambersburg, PA. They found no lights on the four towers, the doors removed from their hinges from two of the tower tuning houses, and the site generally deserted, with the station apparently

permanently off the air. Seems that workers trying to build a water tower literally a few feet from one of the towers were receiving RF burns; the city of Chambersburg wanted to shut the radio station down, but the station went to court over the matter. Dave said that the beginnings of a huge water tower were visible, but that no construction activity was evident.

DX Time Machine

From the pages of DX News:

50 years ago . . . from the February 12, 1955 DXN: Roy H. Millar, Issaquah, WA reported easy logging of the DX broadcast from CKLN-1240 on 1/31, 0321-0420, with QRM from KWJB and noted VOA-1140, Northern Luzon, Philippines, "rolling in" at local sunrise.

25 years ago . . . from the February 11, 1980 DXN: Chuck Hutton, Atlanta, GA purchased all available Radio Shack TRF's (12-655) in the SE USA and offered to sell them at the standard price of \$29.95, with profits going to the NRC. He also offered to install two ceramic filters in the IF stage for \$7 and to align the RF and IF for \$5.

10 years ago . . . from the February 13, 1995 DXN: John Bryant and Harold Cones published *The Zenith Trans-Oceanic, The Royalty of Radios* . . . Bill Hale reported that three AM stations were ranked first in their respective markets: KFBK-1530, Sacramento; WTMJ-620, Milwaukee; and WGN-720, Chicago.

Want news of DX and discussion online?

Join the NRC AM e-mail list! The list is a service of the National Radio Club and is free. This list is not a part of your *DX News* or DX Audio Service subscription. Discussions should be of technical nature, observations, and information on DX and Radio listening. Logs and discussion about receptions are welcomed. Announcements of DX tests and results are encouraged. How-to articles, FCC/CRTC actions, product reviews, and self-authored articles will also be welcomed.

There are two flavors of the AM List: Regular and Digest:

To subscribe to the Regular list (e-mails sent to you "live"), send a message to am-subscribe@nrcoxas.org. In the subject field put the word "subscribe" (without quotes). In the body of the message put your real name. To subscribe to the Digest list (a larger e-mail typically sent once a day, with every posting), send a message to am-digest-subscribe@nrcoxas.org. In the subject field put the word "subscribe" (without quotes). In the body of the message put your real name. It's that easy!

AM Switch

Bill Hale w_r_hale@sbcglobal.net
6124 Roaring Springs Drive
North Richland Hills, TX 76180-5552

Status changes in AM stations, supplied by the FCC and listeners

CALL LETTER CHANGES

| <u>Old Call</u> | | <u>New Call</u> |
|-----------------|-----------------|--------------------------------------|
| 680 WJCE | TN Memphis | WWTQ [now talk a format] |
| 970 KUPL | OR Portland | KCMD [with their new format: Comedy] |
| 1260 KFGQ | IA Boone | KFFF |
| 1310 WGH | VA Newport News | WCMS [another 3-letter call lost] |

GRANTS TO EXISTING FACILITIES

| | |
|-----------|--|
| 960 WGGT | FL Golden Gate - CP granted to change their city-of-license (CoL) to West Palm Beach with U5 500/250 plus a relocation of their transmitter site to N26-47-59 W80-04-33. |
| 1390 WLUA | SC Belton - Licensed for D1 1000/0, WLUA was granted nighttime authorization as U1 1000/17 at a new tower site. But then they filed for, and now have been granted the same U1 1000/17, but at another new tower site. This one is at N34-35-19 W82-32-17. By the way, The FCC lists WLUA as 'silent'. |

APPLICATIONS FROM EXISTING FACILITIES

| | |
|-----------|--|
| 1340 WCMI | KY Ashland - Applies to increase power to become U1 1000/1000. |
| 1600 KRVA | TX Cockrell Hill - Applies to increase daytime power to become U4 25000/930. |

AMENDMENTS TO CONSTRUCTION PERMITS SUBMITTED

| | |
|-----------|---|
| 910 WFDF | MI Flint - Licensed for U4 5000/1000, WFDF has a CP for U4 50000/1000. They also have a pending amendment asking for U4 50000/25000 with a CoL change to Farmington Hills, Michigan. This last amendment requests U4 50000/19000 from Farmington Hills. |
| 1280 WOWZ | VA Appomattox - Licensed for D1 1000/0, WOWZ has a CP for U1 5000/58. After that, they asked for U1 6000//17 along with a CoL change to Roanoke, Virginia, and . . . a frequency switch to 1290 kHz. This latest amendment requests U1 10000/17 from Roanoke on 1290. |
| 1600 WOKB | FL Winter Garden - Licensed for U4 5000/5000, WOKB has a CP for U1 2200/35. This amendment requests to become D3 4000/0 licensed to Ocoee, Florida. |

AMENDMENTS TO APPLICATIONS SUBMITTED

| | |
|----------|--|
| 730 NEW | TX Big Spring - Original application was for U4 500/500. This amendment requests U4 250/240. |
| 810 NEW | MN Wilton - Original application was for U7 1000/450 CH 1000. This amendment requests U7 1000/400 CH 1000. Wilton is about 5 miles west of Bemidji. |
| 820 NEW | MI Escanaba - Original application was for U4 1000/550. This amendment requests U4 2500/750. |
| 880 NEW | TX Sweetwater - Original application was for U4 5000/1000. This amendment requests U4 4000/1500. |
| 940 WGMY | MI South Haven - Licensed for U4 1000/5, WGMY has an application to move to Hudsonville, Michigan with D3 250/0. This amendment requests D3 300/0. |
| 960 WZRH | NC Dallas - Licensed for U2 1000/500, WZRH applied to raise daytime power with U4 2400/500. This amendment requests U4 10000/500. |
| 1080 NEW | WI Ashwaubenon - Original application was for U4 1000/2500. This amendment requests U4 250/3500. Ashwaubenon is a Green Bay suburb. |
| 1120 NEW | TX Manor - Original application was for U4 250/250. This amendment requests U4 250/220. |
| 1130 NEW | OR Mount Angel - Original application was for U4 3000/250. This amendment requests U4 7500/250. Mount Angel is just east of I-5 between Portland and |

| | |
|-----------|--|
| 1260 WSDZ | IL Belleville - Licensed for U4 20000/5000, WSDZ has an application to change the city-of-license to St. Peters with U4 20000/4000. This amendment requests U4 20000/1200 from St. Peters. |
| 1320 NEW | ID Inkom - Original application was for U4 1000/500. This amendment requests U4 800/650 on 1350 kHz. Inkom is on I-15 southeast of Pocatello. |
| 1350 WKCU | MS Corinth - Licensed for U1 700/52, WKCU applied for U1 1000/44. This amendment requests U1 900/44. |
| 1370 WGHC | GA Clayton - Licensed for D1 2500/0, WGHC had applied for D1 5000/0 CH 3800 with a change in CoL to Mount Holly, North Carolina on 870 kHz. This amendment requests D1 5000/0 CH 3800 on 870 from Mount Holly. |
| 1430 WEEF | IL Highland Park - Licensed for U4 1000/29, WEEF applied to move to Wheeling with U4 1000/230. This amendment requests U4 1000/250 from Wheeling. |
| 1530 WMBE | WI Chilton - Licensed for D1 250/0, WMBE had applied to move to 650 kHz with D1 250/0, then applied to move to 840 kHz with D3 20000/0. Now they've decided to still try for 840, but with D3 4500/0. |
| 1590 NEW | PA Kearsarge - Original application was for U4 500/500. This amendment requests U4 500/900. Kearsarge is an Erie suburb. |
| 1590 NEW | TX Kerrville - Original application was for U2 1000/250. This amendment requests U2 920/200. |

APPLICATIONS FOR NEW STATIONS

| | |
|----------|--|
| 770 NEW | AL Saraland - Applies for U13 32000/770 CH 32000. |
| 1340 NEW | MI Houghton - Applies for U1 1000/1000. |
| 1370 NEW | RI Charlestown - Applies for U4 2000/250. |
| 1400 NEW | CA Eureka - Applies for U1 1000/1000. |
| 1400 NEW | GA Ayleka - Applies for U1 1000/1000. |
| 1400 NEW | NV Tonopah - Applies for U1 1000/1000. [Close to "Area 51", hi.] |



APPLICATIONS FOR RECONSIDERATION

| | |
|-----------|---|
| 650 NEW | AZ Casa Grande - Initially dismissed, the owner requests to have their application for U4 250/250 returned to pending status. |
| 1010 KXEN | MO Festus-St. Louis - Initially dismissed, the owner requests to have their application to change the city-of-license to St. Louis only returned to pending status. |
| 1340 NEW | AZ Ajo - Initially dismissed, the owner requests to have their application for U1 250/250 returned to pending status. |
| 1340 NEW | AZ Nogales - Initially dismissed, the owner requests to have their application for U1 250/250 returned to pending status. |
| 1550 NEW | FL Bunnell - Initially dismissed, the owner requests to have their application for U2 9300/200 returned to pending status. |

APPLICATIONS FROM EXISTING FACILITIES DISMISSED

| | |
|-----------|---|
| 690 KRCO | OR Prineville - Their application to increase nighttime power and going directional has been dismissed. Station remains U1 1000/77. |
| 830 WACC | FL Hialeah - Their application to increase daytime power to 5 kW has been dismissed. WACC remains U4 1000/1000. |
| 890 KVOZ | TX Del Mar Hills - Application to decrease daytime power and going U4 has been dropped. Station remains U2 10000/1000. |
| 910 WFVR | GA Valdosta - Licensed for U2 5000/5000, WFVR had applied for U4 50000/5000 from Wellborn, Florida, then amended the application to read U4 35000/5000. The application for U4 50000/5000 has been dropped, leaving U4 35000/5000 from Wellborn on the books. |
| 1090 WCAR | MI Livonia - WCAR has applied for U2 1000/250 from Melvindale, Michigan and later for U7 1000/250 CH 250, but has dropped the CH application. |
| 1080 WNWI | IL Oak Lawn - WNWI had applied for U2 3000/650 which has been dismissed. They remain U2 3000/900 with a application for U2 3000/2600. |
| 1190 KMYL | AZ Tolleson - Their application to decrease both day and night power has been dismissed. KMYL remains U4 5000/250. |
| 1190 KDAO | IA Marshalltown - Application to increase nighttime power has been dropped. |

Station remains U1 250/20.

1190 **WSDE NY** Cobleskill - Application to add night service has been dropped. Station remains D1 1000/0.

1190 **WNWC WI** Sun Prairie - Licensed for D3 1000/0, WNWC has a CP to increase their power to become D3 4800/0. A later application for D3 4700/0 has been dismissed.

1200 **WGDL PR** Lares - Their application to add nighttime service with U1 1000/1000 has been dropped. WGDL remains D1 250/0.

1240 **KSOX TX** Raymondville - Application to raise daytime power has been dropped. KSOX remains U1 520/850.

1350 **WKCU MS** Corinth - WKCU applied for U1 1000/44 and later for U1 900/44. The application for U1 1000/44 has been dismissed.

LICENSE RENEWALS GRANTED

| | | |
|--------------------------------|-----------------------------|-------------------------------|
| 560 KETO MO Springfield | 1190 KPHN MO Kansas City | 1400 KJFF MO Festus |
| 610 KCSP MO Kansas City | 1220 KOMC MO Branson | 1400 KSIM MO Sikeston |
| 630 KJSL MO St. Louis | 1220 KGIR MO Cape Girardeau | 1420 KRLL MO California |
| 680 KFEQ MO St. Joseph | 1230 KVAS MO Joplin | 1420 KBTN MO Neosho |
| 690 KSTL MO St. Louis | 1230 KLWT MO Lebanon | 1430 KKOZ MO Ava |
| 710 KCMO MO Kansas City | 1230 KWIX MO Moberly | 1430 KAOL MO Carrollton |
| 750 KBNN MO Lebanon | 1240 KLIK MO Jefferson City | 1450 KYLS MO Fredericktown |
| 770 WEW MO St. Louis | 1240 KNEM MO Nevada | 1450 KOKO MO Warrensburg |
| 800 KREI MO Farmington | 1240 KFMO MO Park Hills | 1450 KQYX MO Joplin |
| 830 KOTC MO Kennett | 1250 KBTC MO Houston | 1450 KWPM MO West Plains |
| 850 KFUO MO Clayton | 1260 KSGF MO Springfield | 1490 KDMO MO Carthage |
| 870 KAAO MO Bethany | 1270 KGNM MO St. Joseph | 1490 KDRO MO Sedalia |
| 900 KFAL MO Fulton | 1270 KOZQ MO Waynesville | 1490 KTTR MO Rolla |
| 930 KWOC MO Poplar Bluff | 1280 KDKD MO Clinton | 1510 KMRF MO Marshfield |
| 950 KWOS MO Jefferson City | 1280 KYRO MO Potosi | 1520 KRHW MO Sikeston |
| 960 KZIM MO Cape Girardeau | 1290 KALM MO Thayer | 1530 KPCR MO Bowling Green |
| 980 KMBZ MO Kansas City | 1300 KMMO MO Marshall | 1530 KMAM MO Butler |
| 990 KRMO MO Cassville | 1320 KSTV MO Clayton | 1550 KSFT MO St. Joseph |
| 1010 KCHI MO Chillicothe | 1330 KUKU MO Willow Springs | 1550 KLFJ MO Springfield |
| 1010 KXEN MO Festus-St. Louis | 1340 KXEO MO Mexico | 1560 WMBH MO Joplin |
| 1030 KCWJ MO Blue Springs | 1340 KLID MO Poplar Bluff | 1560 KLTJ MO Macon |
| 1050 KSIS MO Sedalia | 1340 KSMO MO Salem | 1560 KTUI MO Sullivan |
| 1070 KHMO MO Hannibal | 1340 KIDS MO Springfield | 1570 KLEX MO Lexington |
| 1090 KEXS MO Excelsior Springs | 1350 KWMO MO Washington | 1580 KTGR MO Columbia |
| 1100 KKLL MO Webb City | 1360 KMRN MO Cameron | 1580 KESM MO Eldorado Springs |
| 1120 KMOX MO St. Louis | 1360 KELE MO Mountain Grove | 1580 KNIM MO Maryville |
| 1140 KPWB MO Piedmont | 1380 KSLG MO St. Louis | 1590 KMOZ MO Rolla |
| 1170 KUGT MO Jackson | 1390 KJPW MO Waynesville | 1600 KATZ MO St. Louis |
| 1190 KRFT MO DeSoto | 1400 KFRU MO Columbia | |

NORTH OF THE 49TH PARALLEL

The CRC has approved the application of CKKC-880 Nelson, BC to move to 106.9 MHz with 920 Watts.

HEAR AND THAR

Reported to be off the air: KXLQ-1490 Indianola, Iowa, WTRI-1520 Brunswick, Maryland and WSMN-1590 Nashua, New Hampshire;

Thanks to Shawn Axelrod, Perry Crabill, Deane McIntyre, Wayne Heinen,

GRAVEYARD DX UPDATE

* indicates record held by DXer from North America (excluding Alaska)

1230 kHz: Miles

WMLR TN Hohenwald Ron Bailey Shelby, NC 339

1340 kHz:

KSID NE Sidney Wayne Heinen Aurora, CO *140

1400 kHz:

WZAZ FL Jacksonville Ron Bailey Shelby, NC 339
 WPRY FL Perry Ron Bailey Shelby, NC 372
 WLTA GA Alpharetta Ron Bailey Shelby, NC 173

Expiring? Time to renew? Not sure when? Need to call or e-mail someone or join the listserv? Check the back page - it's all right there!

1450 kHz:

KVSL AZ Show Low Wayne Heinen Aurora, CO 473
 WLEC OH Sandusky Ron Bailey Shelby, NC 434
 KSQP SD Pierre Wayne Heinen Aurora, CO 397

1490 kHz:

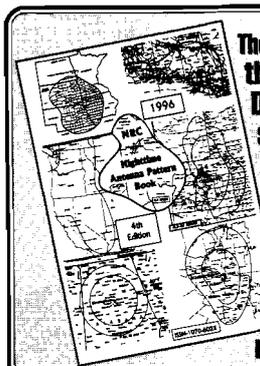
WANA AL Anniston Ron Bailey Shelby, NC *264
 WRLD GA West Point Ron Bailey Shelby, NC *263
 WFKY KY Frankfort Ron Bailey Shelby, NC 276
 WTUP MS Tupelo Ron Bailey Shelby, NC *409
 WTCS WV Fairmont Ron Bailey Shelby, NC 304
 WSGB WV Sutton Ron Bailey Shelby, NC 242

| | | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| TOTALS: | 1230 | 1240 | 1340 | 1400 | 1450 | 1490 | TOTAL |
| Les Rayburn Birmingham, AL | 14 | 10 | 13 | 10 | 10 | 9 | 66 |

New! IRCA Mexican Log, 9th Edition, 2003-'04

The 9th Edition of 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 log has been completely updated from the 2002 edition and carefully cross-checked by several IRCA members. This is an indispensable reference for anyone who hears Mexican radio stations. Size is 8 1/2" x 11" and three hole punched for easy binding. Prices: NRC/IRCA members - \$9.50 (US/Canada/Mexico/seamail), \$10.50 (rest of the Americas airmail), \$11.00 (Europe/Asia airmail), \$11.50 (Australia/New Zealand airmail). Non-members: add \$2.50 to the above prices.

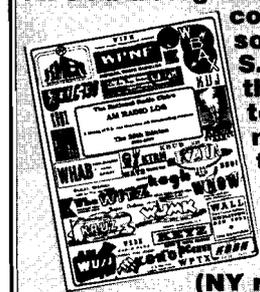
To order the IRCA Mexican Log from the IRCA Bookstore, send the correct amount in U. S. funds payable to Phil Bytheway to:
IRCA Bookstore - 9705 Mary Ave. NW - Seattle, WA 98117-2334



The NRC Nighttime Antenna Pattern Book, 5th Edition is the perfect mate to the NRC AM Log, as the NPB provides DX'ers with up-to-date maps of all (except Class IV) stations with nighttime operations. Convenient to use: 3-hole punched for standard binders. Still only \$16.95 to U. S. and Canadian members; \$22.95 to U. S. and Canadian non-NRC members. Airmail to members in Europe (except Italy): \$29.00. All others, please contact us for exact pricing. Order from: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents, please add sales tax)

The NRC AM Radio Log, 25th Edition,

including cross-referenced listings from 530-1700 khz., is compiled from both listeners' reports and official sources, making it the most accurate listing of U. S. and Canadian AM stations available. Unbound, three-hole punched for standard binders. \$19.95 to U. S. members; \$25.95 to U. S. non-NRC members; to Canadian members, \$23.00 (\$29.00 to non-NRC members). Airmail to members in western Europe (except Italy) and Australia, New Zealand, and Japan: \$29.00. All others contact us for exact prices. Order from: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents, please add sales tax).



Domestic DX Digest

West: **Bill Dvorak** westdogs@aol.com

501 Algoma St. - Madison, WI 53704-4812

East: **Ginnie Lupi** DDXD-E@nycap.rr.com

PO Box 4404 - Clifton Park, New York 12065-0853

(Division line is
between East and
Central time zones)



DX Catches in the U. S. and Canada, with 24-hr. ELT

DDXD-West

From the Vast Westland

- Happy Valentine's Day to all! Valentine's Day is one holiday that all DXers faithfully observe. It is the day when we spend much time and money trying to convince our spouse or significant other that we love her/him more than we love our radio!
- **Rick Turner** continues his journey through the band from his new location in Bemidji MN. This week he reports on 790-850 kHz. In one logging, 820 CHAM, Rick reported a pending format change which has come to be— see "Station News" below.
- This from **John Rieger**: "Very nice two days of DXing with TWO new ones. The less than good conditions have been replaced by a band full of possibilities!" So, despite solar flares, longer day-time hours and slowly eroding late winter conditions, there are still plenty of opportunities for great DX. If you are hearing good DX, please report it to your DDXD or IDXD editor.
- Thanks to all contributors for your continued support! 73 Bill

Reporters

- DBJ-TN** David B. Jones, Springfield. Drake R8B, Quantum QX Pro antenna.
DP-HI Dale Park, Honolulu. Sangean ATS-818CS, Terk AM1000 loop.
DP-HI* Dale Park DXing in East Honolulu with Honda car radio.
GH-KS Gary Houdek, Munden.
JJR-WI John J. Rieger, South Milwaukee. Icom IC-R75, Kiwa loop, MFJ-959B tuner-preamp.
JV-KY John F. Vervoort, Madisonville. Grundig Yacht Boy 400PE.
JW-CO John Wilkins, Wheat Ridge. Drake R-8, 4-foot box loop.
RT-MN Rick Turner, Bemidji. Radio Shack TRF-12-655, Select-A-Tenna 514.
WH-CO Wayne Heinen, Aurora <amradiologbook@aol.com>. Drake R8B N/S flag and a E/W flag (Between the Honey Locust & Aspen trees) SuperPhaser II and a few random wires & QuickRecorder on the PC.
Ed.-WI Your editor, Madison. Drake R8B, Quantum QX Pro loop.

Station News

- 680 **WWTQ TN** Memphis. Per Memphis Business Journal, station is dropping its format and the WJCE ("The Juice") callsign 1/28 and switching to liberal talk WWTQ, using the slogan "Progressive Talk 6-80." The station will feature the Air America Radio Network. (DP-HI)
- 820 **CHAM ON** Hamilton. 1/30 0118. C&W music, then "820 Cham is under construction, tune in tomorrow to see the final result." Sounded like a joke promo. Strong signal, with WBAP nulled. (RT-MN) (The next day 1/31 at 0820, the station switched to classic Country with the slogan "820 Cham the Legend", confirmed by listening to their internet stream. The promos leading up to the change were mildly humorous, featuring a worksite supervisor talking over construction noise. Ed.-WI)
- 1320 **KXYZ TX** Houston. According to a posting on the NRC list, station changed formats on 2/1 to business news and talk, "BizRadio 1320", to air seven days a week 0700-1900 ELT. The posting went on to say: "The purpose of this e-mail to let you know that BizRadio 1320 will be a DXer friendly station and will verify all correct reception reports received..." and is very interested in both local and distant reports. Reception reports from Houston high-rises are of special interest. The following address was given: BizRadio 1320, 3050 Post Oak Blvd Suite 1680, Houston TX 77056 attn QSL Dept. This address was only for reception reports covering BizRadio programming (0700-1900 ELT), and DXers should not send reports to the KXYZ's owners, Multicultural Radio Broad-



casting Inc. For now, e-mail reception reports could not be handled, but they hope to set up an address for this purpose in the future. (The balance of KXYZ's programming is ethnic, apparently Asian language.) (Ed.-WI)

DX Tests

- 1530 **KFBK- CA** Sacramento. 1/24 0238. Tried for. Heard bits of a woman talking but otherwise too much KREA 1540 splash plus local QRM to make out anything. Later learned from IRCA's Les Rayburn that KFBK was actually off the air during the scheduled test due to transmitter damage that probably occurred the night before. (DP-HI)
- 620 **UNID** Presumed, Tentative, UnID
The unID reported last week is very likely XESS in Ensenada, BCN, Mexico, per a couple of sources. They were heard running Westwood One NOS format in December, and are apparently still doing so. Now, if they would just ID! (JW-CO)
- 860 **UNID** 1/25 1900. Family Radio programming, ID as "Family Radio." Any ideas? (DBJ-TN)
- 550 **KTSA TX** Regular DX Loggings (times in ELT)
San Antonio. 1/21 2205. Surfaced out of news, "AM 550 KTSA San Antonio's" Hadn't been heard here in years. (WH-CO)
- 590 **WVLK KY** Lexington. 1/27 2204. "It's 19 degrees at your official weather station, Newstalk 5-90 WVLK", then at 2205: "Newstalk 5-90 WVLK- depend on it." Good signal until lost to an unID music format station. (JV-KY)
- 620 **WTMJ WI** Milwaukee. 1/26 2111. "Newsradio 6-20 WTMJ" jingle ID. Poor signal. NEW. (JV-KY)
- 620 **CKRM SK** Regina. 1/27 0809. Brief weather forecast, followed by a local ad; "Giveaway for Kids"(?) promo at 0811, then into C&W music at 0812. Generally fair in KTAR null. (JW-CO)
- 620 **KMNS IA** Sioux City. 1/29 0458. Multiple PSA's "Imus in the Morning and always Sioux land's most comprehensive news coverage on News Talk 620 KMNS Sious City" to ABC News. A new one for me. (WH-CO)
- 620 **KMKI TX** Plano. 1/29 0800. Taped for the collection: "Radio Disney AM 620 KMKI Plano-Dallas-Ft Worth." Another rare Disney call sign ID. (WH-CO)
- 650 **CKRM SK** Saskatoon. 1/30 0700. Poor in WSM null with local news. (JJR-WI)
- 680 **CJOB MB** Winnipeg. 1/29 0734. Very poor; "CJOB" in mess with 2-3 others. Very rare. (JJR-WI)
- 740 **KCBS CA** San Francisco. 1/25 0400. ToH ID to CBS News mixing with KTRH, KRMG and KVOR. (WH-CO)
- 740 **KBRT CA** Avalon. 1/26 2000. Out of one REL to another TOH ID. Usually good this time of year. (WH-CO)
- 750 **CKJH SK** Melfort. 1/29 0732. Poor; slogan "Oldies CK-750" into Elvis song. (JJR-WI)
- 780 **KKOH NV** Reno. 1/27 1930. Briefly under WBBM. "NewsTalk 780 KKOH Reno." (WH-CO)
- 790 **WAYY WI** Eau Claire. 1/27 0105. Up briefly with "Your station for NASCAR, WAYY" followed by ESPN theme; was fighting it out with unID C&W station, possibly Canadian. No sign of KFGO. (RT-MN)
- 790 **WAYY WI** Eau Claire. 1/28 0600. Faded up with full TOH ID to ABC News. (WH-CO)
- 790 **WMC TN** Memphis. 1/27 0300. ESPN "Sports Center", ID as "ESPN Radio", Memphis mentions. (DBJ-TN)
- 790 **KFGO ND** Fargo. 1/27 0810. CBS news, then into "The KFGO Traffic Watch." (RT-MN)
- 790 **CIGM ON** Sudbury. 1/27 2007. "Today's Country, The Most Music, CIGM" into Gretchen Wilson's "When I Think About Cheating." Over semi-nulled KFGO. (RT-MN)
- 800 **CHAB SK** Moosejaw. 1/28 0100. Beach Boys song, followed by "We're your memory button, CHAB." (RT-MN)
- 800 **CHAB SK** Moose Jaw. 1/29 0730. Fair, no CKLW. Station promo, calls. (JJR-WI)
- 800 **WVAL MN** Sauk Rapids. 1/28 1200. "Minnesota's Country Legend, AM 800 WVAL Sauk Rapids-St. Cloud" into CBS news. (RT-MN)
- 800 **WDUX WI** Waupaca. 1/28 1745. C&W music, ID "Classic Country 800 WDUX", weather, then disappeared suddenly. Probably went to nighttime power. (RT-MN)

- 800 CKLW ON Windsor. 1/28 2100. "Talk Radio AM 800 CKLW" into the Larry King Show. Taking turns with CHAB, WVAL and a tentative PJB. (RT-MN)
- 810 WGY NY Schenectady. 1/29 0105. "Newstalk Radio 810 WGY" into ABC news. Good signal with WHB nulled. (RT-MN)
- 810 WHB MO Kansas City. 1/29 0200. "Sports Overnight America" and promo for "the Superbowl only on Sportsradio 810 WHB." Good signal with WGY nulled. (RT-MN)
- 810 CKJS MB Winnipeg. 1/29 1405. Female reading possibly the news in an unknown language followed by jingle-like ID in English, "CKJS." Someone broadcasting CBS news underneath. (RT-MN)
- 820 WBAP TX Fort Worth. 1/30 0100. Numerous local news reports, ending with the phrase "This is —, WBAP news." Good, with CHAM nulled. (RT-MN)
- 830 CKKY AB Wainwright. 1/14 0200. Taped a rare callsign ID "Cat Country is CKKY AM 830 Wainwright" for my collection. (WH-CO)
- 830 WCCO MN Minneapolis. 1/31 0100. "Imagination Theater" then "The most listened to station in the Twin Cities and Minnesota...eight-three-oh, WCCO, Minneapolis-St. Paul" into news. Not as strong a signal as I expected. (RT-MN)
- 840 KTIC NE West Point. 2/1 1800. ID "KTIC West Point, a Nebraska Rural Information Station", into ABC news followed by C&W music. Disappeared about 1815. (RT-MN)
- 840 WHAS KY Louisville. 2/1 1903. News/weather, ID "Newsradio 84, WHAS", followed by "The Rick Pitino Show." Heard on car radio while driving in Bemidji. (RT-MN)
- 850 KOA CO Denver. 2/2 0100. "Fifty thousand watt voice of the west, Newsradio 850 KOA Denver" into news. Very good signal. (RT-MN)
- 850 WWJC MN Duluth. 2/2 1300. "Through The Bible Radio" followed by "Information with a Christian perspective, this is WWJC Duluth" into news. Fair signal. (RT-MN)
- 910 WLTP OH Marietta. 1/29 0647. Poor; "3 day forecast on Talk Radio 910 WLTP." Alone. NEW! (JJR-WI)
- 940 KIXZ TX Amarillo. 1/25 1834. "Glenn Beck weekdays 9 to 11 on Newsradio 9-40 KIXZ", this following an ad for Street Toyota in Amarillo. NEW. (JV-KY)
- 1040 WPBS GA Conyers. 1/21 1700. Religious talk, music, ID as "Praise 1040." (DBJ-TN)
- 1040 WPBS GA Conyers. 1/25 0702. Poor. Slogan "Praise 1040, Atlanta's Christian Choice." No WHO. Urban GOS. NEW! (JJR-WI)
- 1150 KXTA CA Los Angeles. 1/23/05 2357. Local sports talk show with phone number 1-866-690-1150; ads, woman with quick ID "KXTA Los Angeles," into sports update. Heard just a few days before switching to liberal talk and usurping the KTLK callsign from its sister progressive talk station in Santa Barbara. Poor. (DP-HI*) (According to 100000watts.com, the switches that Dale described in last week's DDXD-W went off on 2/3, right on schedule. KXTA became KTLK, while KTLK 1340 Santa Barbara changed calls to KIST. Ed.-WI)
- 1150 WCRK TN Morristown. 1/25 0738. Poor; calls heard in fade-up. Rare! (JJR-WI)
- 1150 KWKY IA Des Moines. 1/29 0639. Poor; calls, popped in-and-out. Not heard in some time. (JJR-WI)
- 1170 WWVA WV Wheeling. 1/251045. News, local weather, ads. ID as "The Big One, Newsradio 1170 WWVA." Rare this time of day. (DBJ-TN)
- 1170 KFAQ OK Tulsa. 1/29 0636. Poor. Calls into news program. First time heard since call change from KVOO. (JJR-WI)
- 1190 WSDQ TN Dunlap. 1/25 0736. Fair, no WOWO. Weather, calls, ads, local news. (JJR-WI)
- 1190 KPHN MO Kansas City. 1/25 1802. Radio Disney mention. KPHN is the only Radio Disney affiliate on 1190, according to the AM Log. Poor to fair signal. NEW. (JV-KY)
- 1210 KGYN OK Guymon. 1/25 0731. Poor, no WPHI. Calls, Oklahoma Network News. (JJR-WI)
- 1240 KCCR SD Pierre. 1/29 0921. Program note for "KCCR Outdoor Show", sponsored by Carl's Bait Shop; area weather, and then faded. Briefly good atop the jumble. (JW-CO)
- 1260 CFRN AB Edmonton. 1/16 2300. Surfaced with "... on Edmonton's Sports Radio, Team 1260" and sports programming. (WH-CO)
- 1260 WMUU SC Greenville. 1/25 1748. "You are tuned to WMUU AM 12-60." Poor signal. NEW. (JV-KY)

- 1270 WLIK TN Newport. 1/25 0648. Poor. Auction-type show, calls. Alone. (JJR-WI)
- 1300 WTIR FL Cocoa Beach. 1/24 2334. Mentions of 407 area code and Orlando, then at 2337 a singing WTIR ID. Fair signal. NEW. (JV-KY)
- 1320 KCTC CA Sacramento. 1/15 2033. "You've found Sacramento's Music of your Life AM 1320 KCTC" and NOS. (WH-CO)
- 1320 WCOG NC Greensboro. 1/24 2347. Radio Disney mention. This is the only Radio Disney outlet on 1320 kHz in the AM Log. Very poor signal with splatter from local WTLT. NEW. (JV-KY)
- 1360 KSCJ IA Sioux City 1/30 0646. Poor in fade up with calls, ads. Rare. (JJR-WI)
- 1380 KBWD TX Brownwood. 1/16 0800. Jingle ID "AM 1380 KBWD Brownwood" to ABC News. (WH-CO)
- 1450 KYLS MO Fredericktown. 1/26 0200. Oldies music, ID as "Classic 1450 KYLS. (DBJ-TN)
- 1480 WGUS GA Augusta. 1/24 2323. "The Southern Gospel station 14-80 WGUS." Fair signal. (JV-KY)
- 1490 KTTR MO Rolla. 1/19 2300. "News talk KTTR FM St. James and KTTR AM 1490 Rolla" to ABC News. (WH-CO) (John Wilkins, Wheat Ridge CO, reported this one, too, back on 1/7. Does the station have a direct pipeline to the Denver area? Ed.-WI)
- 1530 WCKY OH Cincinnati. 1/20 0005. Seldom-heard station with new calls. ABC News and slogan "WCKY, The Revolution of Talk Radio". (GH-KS)
- 1550 WLOR AL Huntsville. 1/30 0636. Poor over others. GOS programming with calls. (JJR-WI)
- 1580 WLIJ TN Shelbyville. 1/25 0723. Poor, QRM from WTTN, WPGC. Calls. (JJR-WI)
- 1660 WFNA NC Charlotte. 1/15 0700. Sports program, promo for Charlotte NBA team, brief WFNA ID. (DBJ-TN)

DDXD-East

REPORTERS

- JLB-NY Jerry Bond, Rochester - Hammarlund HQ-140-XA, 3-foot loop antenna.
- MKB-ON Mike Brooker, Toronto - Grundig YB-400PE; Panasonic RF-2200.
- SC-ON Saul Chernos, Burnt River - Sangean ATS909 with three 1,000-foot longwires.
- MC-NJ Mike Clancy, Jersey City - DX-396.
- BC-PA Bruce Collier, York - Drake R8B, 375'NE BOG phased against 240' N/S wire with MFJ 1025.
- PC-VA Perry Crabill, Winchester - Drake R8, Kiwa Loop, 100' wire.
- JF-ON Jeff Falconer, Clinton - AOR AR7030+, 130' east EWE / 130' west EWE-1026 phaser, etc.
- WJH-MD Bill Harms, Elkridge - R8B, Home Brew K9AY.
- RJ-NC Russ Johnson, Lexington - Icom R75, Long Wires.
- IEN-GA Ira Elbert New, III, Watkinville - Drake R8B 135' N/S Wire.
- IEN*GA Ira Elbert New, III, Watkinville - Sangean ATS 909.
- PEW-SC Powell Way, Columbia - Radio in 1996 Ranger.
- NJW-ON Niel Wolfish, Burnt River - AOR-7030+ and longwires.
- LW-NY Leslie Wood, East Meadow - Sony ICF 2010 and RS Loop.



UNID AND PRESUMED

- 690 UNID — — - 1/4 1830 - "The University Network, Los Angeles, California, presents Dr. Gene Scott." Reception fair, then faded into static. (MC-NJ) (Editor's Note: A check of Dr. Scott's website (www.drgenescott.com) suggests that Mike might have heard The Caribbean Beacon, Anguilla, British West Indies.)
- 850 WRBZp NC Raleigh - 1/6 2143 - Presumed with talk, discussion of NFL playoffs, on ESPN Sports Central. "ESPN 850, The Buzz" liners. (LW-NY)
- 880 WPiPp NC Winston-Salem - 1/25 1730 - Ad for Allied Steel, weather lows in the 30's, spot with web address for station but unclear. Carrier cut immediately, which matches their sunset sign/off pattern change. (WJH-MD)
- 1170 WCTFp CT Vernon - 1/26 1530 - Family Radio's Open Forum Program hosted by Brother Harold Camping, who is widely heard on WYFR. One of the topics was manic depression and its connection with the spiritual, physical, and mental. Phone calls requested at 1-800-322-5385, and a "Family Radio" spot at 1600. No call heard but presumed to be WCTF based on programming and loop

direction. (WJH-MD)

1710 UNID — — 1/21 2220 - Vocal hymns and religious music. No sign of Lubavitcher pirate or carrier during Jewish Sabbath. No talk. Suspect same as 1/22 logging but not sure. (SC-ON)

Pirate MA — — 1/22 1837 - Man speaking French in excited tone. At 1904 a woman takes phone calls in a highly mellow tone, with "Allo, Bonsoir" and a phone number beginning with 617-265 and ending in something close to 2005 (my calls do not go through). Lots of hang-ups for some reason. Alone, as if Lubavitcher pirate's carrier absent. Usually it leaves carrier on during the Jewish Sabbath. First six digits of phone check to Dorchester, where a lot of the Haitian pirates are located. Others heard on the X-band at same time but all are relogs and I focused on 1710. Conditions strongly auroral block out west and south, leaving east very strong and clear. New. (SC-ON)

Pirate MA — — 1/28 1900 - Possibly Radio Nouveaute. Poor-fair through an open carrier. The programming consisted of announcers in French and music. Listened for about 1.5 hours and did not hear an ID. Several carriers noted, some of the stronger ones on 1709.975, 1709.982, 1709.994, 1710.010 and 1720.020. (The strongest, the open carrier, was on 1709.975.) (NOTE: measured frequencies are +- 0.005, subject to re-calibration and they drifted somewhat.) (WJH-MD)

STATION LOGGINGS

520 WGOP MD Pocomoke City - 1/17 1654 - Oldies music, ABC News. Commercial for Armstrong Electric Company of Pocomoke. Fair, mixing with WLIE. Heard years ago as WDMV. (LW-NY)

560 WQAM FL Miami - 1/5 1840 - "Sports radio 560 WQAM" ID. Talk, discussion about NFL playoffs, Dolphins past year and new head coach. (LW-NY)

WSNR TN Brentwood - 1/27 0658 - Ad for the Daily News Journal. Heard ID as follows - male announcer "Sporting News ... Nashville..." singing jingle as "Sporting News Radio 5-60 WSNR". Fair in the channel mix. (WJH-MD)

WIND IL Chicago - 1/27 0700 - Male announcer, named Lee Scott, with temperature reading of 19 degrees, time check for 6 AM, and ID as "5-60 WIND," into news. Fair in the mix. (WJH-MD)

580 WTAG MA Worcester - 1/6 2034 - Dr. Laura show, under and over Cuban. "News talk 580 WTAG" IDs. (LW-NY)

620 WKHB PA Irwin - 1/23 1247 - Male announcer with Polka Marathon Program, requesting sponsors, and ID as "KHB" in between polka selections. Good on the NW leg of the K9AY with presumed WSNR nulled. (WJH-MD)

WSNR NJ Jersey City - 1/23 1700 - Song "You Can Drive My Car," chimes, ID slogan by female, chorus singing theme song which included slogan, ID by male announcer as calls "WSNR" and slogan, and news by female announcer at 1701. All was in Russian. The signal was fair to good, but rough because the skywave was trying to poke through but couldn't quite stay. (WJH-MD)

640 WCRV TN Collierville - 1/26 2029 - Popped in for a few seconds with a quick WCRV ID, nothing else heard! (WJH-MD)

WGOC TN Blountville - 2/1 1805 - Bluegrass music, then liner "you're listening to bluegrass with Tim White (which matches website), so turn up your radio and take the knobs off", into another song, announcer out (presumably Mr White) dedicating song to Parson Blanton, into Alison Krauss "Baby Now That I've Found You", then into liner "we listen to Tim White's bluegrass at ??? lawnmower shop - we turn it up REAL loud 'cause we got the mowers runnin....then female "Shut up, ??, the bluegrass show's on" - back to male "that was the little lady". Entertaining stuff anyway! Faded into mess at 1815. Best on N/S wire alone. New! (BC-PA)

710 WAQI FL Miami - 1/20 2100 - Lottery numbers in Spanish, but TOH ID in English. "WAQI Miami, Fort Lauderdale" and "Radio Mambi La Grande". (IEN*GA)

720 WGSE GA Hogansville - 1/20 1759 - Heard with formal sign off mentioning they were a division of Clear Channel. (JLB-NY)

800 WDSCSC Dillon - 1/26 1828 - ID by a male as "The message is in the music on your favorite station WDSC-AM, WPFM-AM, WGSS-AM" into a gospel song. Over all. (WJH-MD)

WKBC NC North Wilkesboro - 1/27 0804 - CBS News, local weather, ID by man as

"WKBC News," followed by local news. Over WCHA and others. (WJH-MD)

850 WXJC AL Birmingham - 1/26 1738 - Gospel music, male announcer with "WXJC Caravan Show," dozen rose give-away, scriptures about love. Over the mix. (WJH-MD)

880 WRRZ NC Clinton - 1/25 1700 - ID by man in English "This is WRRZ 8-80" into a singing ID for "WRRZ." Talk by a male in Spanish. He mentioned Musica and Mexicana. Fair to good with some interference from a nulled WCBS. Heard a short sign off in English at 1729. (WJH-MD)

WPEK NC Fairview - 1/25 1745 - Al Schultz Show. Spot for programs tomorrow morning. Did not mention call letters. Gave slogan as "8-80 AM the revolution, Asheville's progressive talk station". (WJH-MD)

WBKZ GA Jefferson - 1/25 1745 - Gospel music, annual women fellowship program at a local Baptist church, birthday for Isaac, bible study this weekend, studio phone numbers 369-1186 and 548 8800. Frequent mentions of 8-80 on the radio dial, and talk about Georgia locations. More or less in the clear after WPIP signed off. Listened again on 1/27 1815 and heard the slogan "Z 8-80." (WJH-MD)

KGHT AR Sheridan - 1/25 1800 - ID by a male announcer as "Let your works glorify your Heavenly Father. The Kingdom Gospel for today. KGHT AM 8-80 Sheridan" into SRN News. Over WBKZ and WCBS. (WJH-MD)

900 CHML ON Hamilton - 1/20 1809 - Fair over jumble. With a local furniture store commercial Mexico something... "CHML AM 900 your news talk leader." (PEW-SC)

WKKV TN Knoxville - 1/22 2100 - Preaching and gospel music. Weak signal buried in the static. "WKKV Knoxville, Tennessee. Knoxville's best!" (IEN-GA)

910 WPFB OH Middletown - 1/29 1822 - under graveyard-like jumble with local weather, slogan "the voice of the Mid-Miami Valley, 910 WPFB". Listed at only 100 watts night, assuming they're not cheating! (MKB-ON)

920 WHJJ RI Providence - 2/1 1720 - Ad for Empire Diamonds in the Empire State Building, then liner "Talkradio 920 WHJJ" into program with female host, which matches their website. New! (BC-PA)

930 WDLX NC Washington - 1/19 1818 - Weather forecast for Eastern North Carolina, followed by sports talk. Mention of affiliate WITN TV Channel 7 in Washington. New. (LW-NY)

WTAD IL Quincy - 1/29 0715 - alone with weather / road report for the Tri-cities on "Talk Radio 930, WTAD" into local news until WLBL took over frequency. Seldom heard here. (JF-ON)

940 WCPC MS Houston - 2/1 1930 - Heard beginning of Mississippi State Bulldogs Basketball game, WCPC is matched on the website. In and out w/WMAC, CINW, which was phased. New! (BC-PA)

WMAC GA Macon - 2/1 1933 - Calls in and out of Accuweather forecast "On newstalk 940, WMAC", mixing with CINW and WCPC. CINW phased. New! (BC-PA)

950 WGOV GA Valdosta - 1/19 1901 - creaming the usual suspects (WWJ, WIBX, WROC) with top of hour ID: "AM 95 WGOV Valdosta" amid non-stop hip-hop/urban songs. (MKB-ON)

970 WDAY ND Fargo - 1/29 0724 - alone on frequency with NOS music, format change? (JF-ON)

1000 WNSI AL Robertsdale - 1/23 1842 - Sporting News Radio program. During a break heard a male announcer with a hard freeze warning - lows in the 20's highs in the 50's and ID as WNSI AM and FM. Poked through WYBT and the mess. (WJH-MD)

WYBT FL Blountstown - 1/23 1856 - Talk by a female announcer in between oldies selections as "You are listening to WYBT. My name is Allison. Blountstown-Bristol with the best in golden oldies." Generally topping the channel. Over WNSI and a Latin (presumed Colombia). (WJH MD)

1040 WPBS GA Conyers - 1/22 1735 - Christian music. Good signal. "Praise 1040, Atlanta's Christian Choice". (IEN-GA)

1050 WFSC NC Franklin - 1/22 1835 - Oldies. Good signal that would fade from time-to-time. "We're Franklin's first voice, 1050 WSFC". (IEN-GA)

- 1060 **WMCL IL** **McLeansboro** - 1/19 1744 - Good signal and using the slogan "the legendary WMCL." (JLB-NY)
- WXNC NC** **Monroe** - 1/19 1829 - Heard using the slogan "the conversation station" before going into CNN News. They stayed in until 1930 - apparently on day power. (JLB-NY)
- 1080 **KRLD TX** **Dallas** - 1/19 1815 - Heard with ID and news leading up to "traffic and weather together on the 8's." (JLB-NY)
- 1150 **WMDB FL** **Daytona Beach** - 1/23 2145 - Popped with a Debt Relief of America ad and an ID by a male announcer as Newstalk WMDB. Mixing with a Spanish station playing jazz selections. (WJH-MD)
- WELC WV** **Welch** - 1/27 0930 - Syndicated religion program from Christian University, spot request sponsors of religion programming on "11-50 WELC". On top. (WJH-MD)
- CJRC PQ** **Gatineau** - 1/29 0703 - under partially-nulled CKOC with FF news, sports (lead item being the talks - or lack of them - to end the NHL lockout), winning Ontario and Quebec lottery numbers. (MKB-ON)
- 1170 **KFAQ OK** **Tulsa** - 1/28 2359 - Jerry Doyle Talk show, local ads, and a female announcer who gave an ID as "You are listening to KFAQ, Tulsa's News Center. I'm Audra Lee. Your top local stories in just a moment. First the latest from Fox News." Heard the ID and other bits during WWVA's breaks. Thanks to Jerry on #mwdx for the ID assistance. (WJH-MD)
- 1190 **WAFS GA** **Atlanta** - 1/22 0636 - "Thank you for listening to WAFS." (RJ-NC)
- 1210 **WQLS AL** **Ozark** - 1/22 0658 - fighting KOKK with gospel music and ID. (NJW-ON)
+ 1/25 1842 - Heard with promo for Family Reunion Fest at Albany, GA Civic Center and then ID and taking phone calls. (JLB-NY)
- KOKK SD** **Huron** - 1/22 0703 - ABC news, Dakota News Network news, commercial for Gary Zell's Auto Glass, ID by woman and C&W; over WQLS with no sign of WPHT. (NJW-ON)
- 1230 **WNAW MA** **North Adams** - 1/22 1822 - Auroral conditions that an hour ago wiped out all skywave give way to very strong signals to the east. Weather (calling for 19 to 23 inches of snow), calls and Sundown, by Gordon Lightfoot. New. (SC-ON)
- WSBB FL** **New Smyrna Beach** - 1/23 1912 - Calls, "Memories 1230." Previously heard several times, this one really gets out. Moderate auroral conditions. (SC-ON)
- 1240 **WRTA PA** **Altoona** - 1/31 1808 - surfaced over graveyard hash with local weather, promos for Penn State basketball and www.wrta.com web site. (MKB-ON)
- 1250 **WYKM WV** **Rupert** - 1/17 1751 - On top of the frequency with "your country-WYKM" slogan. (JLB-NY)
- 1260 **WXCE WI** **Amery** - 1/22 0723 - Mention of northwest Wisconsin, ad for Son Auto & Water Sports on Highway 63 in Clear Lake, another ad mentions Amery. New. (SC-ON & NJW-ON)
- 1290 **CFRW MB** **Winnipeg** - 1/22 0728 - Mostly over top of CJBK with Ann Murray song, and "CFRW: the music is on us" jingle. Followed by more oldies by Canadian artists April Wine and Bobby Curtola. Naturally, after waiting 28 years to finally hear this one, it appeared again the next morning at almost the same time! (NJW-ON)
- 1300 **WTIR FL** **Cocoa Beach** - 1/22 1700 - Clear legal ID for WTIR Cocoa Beach. (RJ-NC)
- 1360 **KRWC MN** **Buffalo** - 1/22 0719 - Ad for Bank West in Hanover, mentions of Buffalo and Monticello, and "KWRC AM 1360 jingle." New. (SC-ON)
- KKBJ MN** **Bemidji** - 1/23 0729 - Coast To Coast breaks or ends, "KKBJ, we are Rush Limbaugh, we are Dr. Laura, we are talk radio..." Later ad for First national Bank of Bemidji. New. (SC-ON)
+ 1/23 0733 - local spots and weather and CST time check during break in "Coast To Coast" show. (NJW-ON)
- WCGL FL** **Jacksonville** - 1/24 1800 - Lots of church announcements, many for Jacksonville, one is the Southside Church of God in Christ at 398-1625, and some mention area code 904. "Victory AM 1360." (SC-ON)
- 1380 **WBTK VA** **Richmond** - 1/24 0830 - Logged for the record. Heard promo for an upcoming program and several ID's. Good through the mess. (WJH-MD)
- 1400 **WTSL NH** **Hanover** - 1/20 2333 - ID in mess. New. (SC-ON)

- 1440 **WMVB NJ** **Millville** - 1/23 0800 - Gospel Music. Male announcer spoke about the music and gave an ID as "WMVB and WSNJ" in between selections. Slight slop from 1430 and 1450 and QRM from another station. (WJH-MD)
- 1450 **KFIZ WI** **Fond du Lac** - 1/28 1828 - on top for a few minutes ending CNN News into local news "Continuing news from News Talk 1450, KFIZ". New! (JF-ON)
- 1470 **WLAM ME** **Lewiston** - 1/23 0600 - "1470 WLAM" ID, ABC News. (LW-NY)
- WLMC SC** **Georgetown** - 1/24 1754 - Partial calls (WL...), SC ad and gospel music. New. (SC-ON)
- 1480 **WSDS MI** **Salem Township** - 1/19 1755 - I finally bagged this one using the slogan "classic country WSDS" leading up to a John Denver song. (JLB-NY)
- WGUS GA** **Augusta** - 1/24 1832 - "You found your new home for southern gospel music ... Augusta ... WGUS." New. (SC-ON)
- 1490 **WAZL PA** **Hazleton** - 1/22 1823 - Heard this with such a strong signal I thought it was semi local WBTA. They used the slogan "the all new WAZL" before playing a Tom Jones tune. (JLB-NY)
- 1500 **WBZI OH** **Xenia** - 1/24 roughly 0700 - Forgot to note time of sign-on mentioning WBZI, WEDI and Town & Country Broadcasting. NEW. (SC-ON)
- 1510 **WLKR OH** **Norwalk** - 1/17 1708 - Heard with ID, oldies and using slogan "oldies 1510." (JLB-NY)
- WDRF SC** **Woodruff** - 1/22 0721 - Ad for Patton's Pharmacy in Woodruff, SC. "Real Country 1510." (RJ-NC)
- 1530 **WCKY OH** **Cincinnati** - 1/20 2110 - Parody skit describing George Bush's second Inaugural parade, then "This is Air America Radio - Jerry Springer tomorrow morning, 9 to noon, on 15-30, WCKY, the revolution of talk radio". This station is back to its original call letters, which it switched with WSAI around 1986. (PC-VA)
- 1550 **WXOL OH** **Delaware** - 1/24 1922 - "WXOL La Quinta" ID, in SS, playing Mexican music. I wonder if this is the same "La Quinta" I heard last winter, even though WXOL are relatively new calls. Relog from many years ago. (SC-ON)
- 1550 **WBSC SC** **Bennettsville** - 1/25 1816 - Heard with S. Carolina lottery news, local spots, then sports talk. (JLB-NY)
- WLOR AL** **Huntsville** - 1/25 1900 - On top with ID and "jammin' 1550" slogan. (JLB-NY)
- 1570 **CFAV PQ** **Laval** - 1/23 0530 - FF program, "Radio Nostalgie, CFAV, Laval" ID, into Neil Diamond tune. Good, new. (LW-NY)
- 1580 **WLIJ TN** **Shelbyville** - 2/1 0708 - fighting off WPGC with ID at end of local weather: "at WLIJ Radio Park the temperature is 41 degrees", into twangy traditional C&W. (MKB-ON)
- TIS, HAR
- 910 **WPYT547 NY** **Rochester** - 1/22 1702 - "NY State Department of Transportation Highway Advisory Radio" and calls in loop tape. Auroral conditions at sunset blanket skywave completely and enhance closer-in stations (see 1230 WNAW and Boston pirate loggings). Very weak but alone. New. (SC-ON)
- 1620 **TIS MD** **Arbutus** - 1/24 1334 - Reporting for the record. This TIS, located at the University of Maryland Baltimore County (UMBC), has been testing here for several months. There is no call listed for it in the FCC database, but the application file number is 0001508295. The 8-second long message by a man announces a test broadcast on a loop tape that is 2:11 long, there is silence for 2:03. Good signal here in Elkridge, but can get overwhelmed at night. (WJH-MD)

Problems, Problems?

We can't solve all your woes, but we can solve your *DX News* problems. Torn, soiled, partially-printed, MIA, or worst of all, delivered in a USPS plastic baggie? No need to return the copy - just end a postcard to NRC - 2840 SE Illinois Ave. - Topeka, KS 66605, or e-mail to <plsBCBDXER@aol.com> and a replacement copy will be mailed free. Missing a back issue? Replacement copies from Vol. 56 on, to current NRC members only, are sent for the cost of first-class postage. You joined in the middle of the year and need to fill out a volume? Send \$1.00 per copy (postage paid). Quantities can be sent at the Media Mail rate.

See? No problem!

International DX Digest

Foreign DX Catches. Times are UTC; for ELI, subtract 5 hrs.

Transatlantic DX

- 153 ALGERIA *Chaîne 1*, Bechar FEB 1 0549 - Man in presumed Arabic. [Perkins-NJ]
 162 FRANCE *France Inter*, Allouis FEB 1 0503, 0534 - Man in French. [Perkins-NJ]
 171 MOROCCO *R.Méditerranée Int'l*, Nador FEB 1 0610 - Man and woman in French. Parallel and a little clearer and stronger on 9575 kHz. [Perkins-NJ]
 183 GERMANY *Europe 1*, Felsburg/SaarLouis FEB 1 0502, 0535 - Woman in French. [Perkins-NJ]
 216 FRANCE *R.Monte Carlo*, Roumoules FEB 1 0501, 0536 - Man in French, mentioned Paris. [Perkins-NJ]
 234 LUXEMBOURG *RTL Beidweiler* FEB 1 0536 - Two men in French. [Perkins-NJ]
 252 IRELAND *RTÉ R.1* Clarkstown FEB 1 0538, 45 - Man in English, slow Irish music. [Perkins-NJ]
 252 ALGERIA *R.Alger Int'l*, Tipaza FEB 1 0602-0609 - Man and woman in French. [Perkins-NJ]
 756 SPAIN *R.Euskadi*, Bilbao FEB 4 2350 - Fair; talk in Spanish, the low end of the band active with strong hets at 531, 549, 558, 585, 621, and 639 kHz, all signals from Spain. [Conti-NH]
 783 MAURITANIA *R.Mauritanie*, Nouakchott FEB 5 0055 - Good; string music parallel an equally strong 4845 kHz signal, both signed off at 0100, leaving a weak unID at 783 kHz likely from Spain. [Conti-NH]
 1107 SPAIN *RNE* synchros FEB 5 0010 - Good with adjacent 1110 WBT nulled; discussion between a man and woman in Spanish, 1116 SER also local-like at times, and a strong het noted at 1098 likely from Spain. [Conti-NH]
 1179 SPAIN *SER* Valencia FEB 1 0519 - Man in Spanish. [Perkins-NJ]
 1359 SPAIN *RNE* Madrid FEB 1 0515 - Man in Spanish. [Perkins-NJ]
 1503 IRAN *IRIB* Bushehr FEB 2 0057-0103 - Tentative; singing or chants. [Perkins-NJ]
 1521 SAUDI ARABIA *BSKSA* Duba FEB 2 - Silent strong S9+5 carrier came on just before 0157. Koran or Call to Prayer at about 0256. Man in Arabic at 0259:30 and ID at 0300. [Perkins-NJ]
 1521 SPAIN *SER* Castellón FEB 1 0512 - Man in Spanish parallel 1575 kHz. [Perkins-NJ]
 1548 FRANCE *RMC Info*, Strasbourg JAN 29 0415 - Presumed; a strong het against 1550 domestics, brief audio not enough for ID. [Conti-NH]
 1548 KUWAIT *R.Sawa*, Kuwait City FEB 2 0136-44 - Middle Eastern pop music with heavy bass rock beat, man and woman in Arabic; ID 0143:30. [Perkins-NJ]
 1557 FRANCE *France Info*, Nice JAN 29 0325 - English pop/rock vocal, then a woman in French; a good, at times excellent signal, despite 1560 WQEW *R.Disney* slop. [Conti-NH]
 1575 SPAIN *SER* 2 x 2 kW synchros FEB 1 0506-09 - Man in Spanish parallel 1584 kHz. [Perkins-NJ]
 1584 SPAIN *SER* 2 x 5 kW synchros FEB 1 0506-09 - Man in Spanish parallel 1575 kHz. [Perkins-NJ]
 1593 unID FEB 2 0109-0133 - Middle East? Man and woman with news in American English. Is there a VOA station here now? [Perkins-NJ] VOA Kuwait.

Pan-American DX

- 555 ST.KITTS & NEVIS *ZIZ Radio*, Basseterre JAN 24 0420 - Robin Lustig with BBC news parallel 5975 and 6135 kHz. Best signal I've heard from this station. [Perkins-NJ]
 770 CUBA *R.Rebelle*, unknown location JAN 21 0545 - Music and Spanish talk parallel 5025. WABC New York off and on testing with music. Believe this is in Pilón? [Chernos-ON]
 770 VENEZUELA *YVKK R.Nacional*, Valencia JAN 21 0528 - *Radio Nacional* ID, talk mentions Venezuela. WABC New York off and on testing with music. [Chernos-ON]
 1110 VENEZUELA *YVQT R.Carúpano*, Carúpano FEB 5 0030 - *R.Carúpano* ID and sports commentary, noted while nulling WBT for 1107 and 1116 Spain reception. [Conti-NH]

Contributors

Saul Chernos, Toronto ON; Sangean AT5909, three 1,000-ft longwires, Radio Shack loop. <schernos@sympatico.ca>
 Bruce Conti, Nashua NH; R8B, MWDX-5, 15/23/15-m Ewe antennas east and south.
 Wells Perkins, Scotch Plains NJ; Watkins-Johnson HF1000, 365-ft not-terminated Beverage at 46°. <swl_ka2hpu@hotmail.com>

73 and Good DX!

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Rolling Your Own: building antenna splitters that perform better than most commercial units

By John Bryant and Bill Bowers

About nine months ago, Bill Bowers and I began what became a rather thorough study of signal splitters. From the beginning, we had hoped to develop a splitter design for homebrewing that would perform as well or better than the rather expensive units currently available on the commercial market. Our first steps were to purchase the three two-port splitters currently available in North America and for Bill to take them through a sophisticated series of tests. The three units tested were:

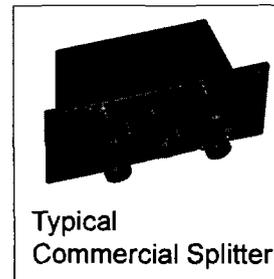
- 1) **Model MC-102**, Stridsberg Engineering (www.stridsberg.com). The 2004 retail price was \$65 plus S&H.
- 2) **Model SP-1**, RF Systems, available from several hobby sources around the world. Our test unit was purchased from Universal Radio (<http://www.universal-radio.com/catalog/preamps.html>) The retail price in 2004 was \$89.95 plus S&H.
- 3) **Model ZSC-2-2** Mini-Circuits. Our unit was purchased directly from the Mini-Circuit sales office in Missouri (phone: 718-934-4500) for \$52.95 plus S&H in 2004.

Those initial tests were widely published in May 2004 as "An Evaluation of Commercially Available Signal Splitters." In brief, the findings were that all three units were quite adequate signal splitters and that - for all but the most demanding applications - we recommended selecting commercial units based on price and availability. We also noted that the Mini-Circuits Model ZSC-2-2 out-performed the other two units, at least slightly, in every single test. It was also the least expensive, at \$52.95 for the two-port version.

The data developed during those tests established the current state-of-the-art for the next design cycle. Those same results are presented in this article along with the test results for the new design that we suggest for DXers who wish to "roll their own" and save a good bit of "radio money" in the process.

Why Do I Need a Signal Splitter, Anyway?

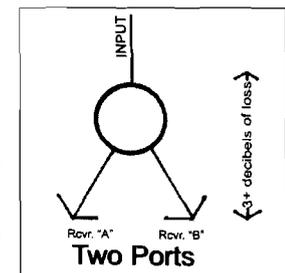
In recent years, increasing numbers of radio hobbyists have wished to attach multiple receivers to the same antenna. This need may stem from a group wishing to share a single antenna on a DXpedition, or it may be from a single hobbyist wishing to operate two or more receivers simultaneously from the same antenna. In any case, many of us have found that simply using a stub of wire to hook the antenna ports of several receivers to the same antenna is an invitation to all sorts of problems. One of the funnier problems can occur if one of several receivers hooked together presents significantly lower impedance to the antenna than do the others. Years ago, when Mitch Sams, Kirk Allen and John Bryant first "shared" a beverage antenna, Kirk and John spent a frustrating half-night wondering why Mitch's old receiver was so much superior to their more modern gear: they eventually realized that Mitch's old receiver was literally sucking up all of their DX! A second common occurrence when hooking multiple receivers together is the fact that spurious radiations/local oscillator signals from one receiver can use the common antenna lead as a pathway to enter the other receivers; this can cause serious but difficult to recognize interference, strange "signals," etc. For all of these reasons and more, if you wish to operate two or more receivers - simultaneously - from one antenna, you will need to use a device called variously, an *antenna splitter*, a *signal splitter* or a *power splitter*: when referring to a receiving antenna device, most people use these three terms interchangeably.



Typical Commercial Splitter

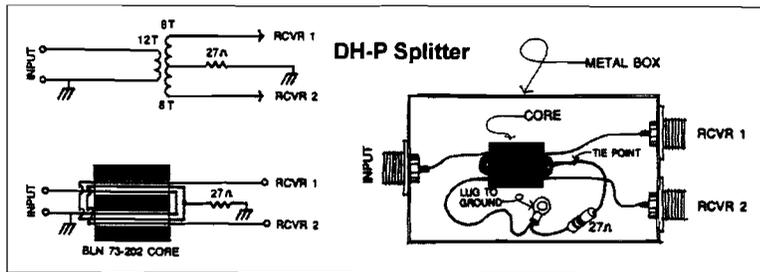
What the Heck Are They?

The first antenna splitters that many of us saw were rather expensive and complex devices built with vacuum tube technology. These devices were usually purchased as used-surplus from government surplus property outlets and often support 8 or 16 receivers simultaneously and contained sophisticated RF amplifiers, as well. In more recent times, smaller-scale splitters have become available commer-



cially, intended for both the professional and serious hobbyist markets. The most commonly available splitters are 2-port, unamplified units. However, 4-port units, either with or without solid state amplifiers, are also available and two of the three splitter manufacturers produce a bewildering array of splitters suited for many professional communications uses. Military and intelligence agencies are known to have contracted with manufacturers to produce modern units with at least as many as 32 ports. These have recently appeared on the used-surplus market, as well.

Most signal splitters are based on a fundamental building block which is a transformer-like device that accepts a single signal stream and splits it into two identical parts that are each (by the laws of physics) diminished in strength by about 3 dB, minimum. Usually, these transformer-like devices consist of a ferrite core with windings of fine wire; this building block may be diagrammed as an upside-down capital letter "Y." Antenna splitters that offer four output ports contain three "building blocks" arranged in a cascade fashion, where the first unit splits the signal into two halves, which are then fed into a second rank of two splitters; those second rank splitters divide the half signals into halves again, creating four identical signals of further diminished strength. Since each transformation/splitting incurs about 3 dB of loss, it is easy to see why most splitters of four output ports or more include RF amplification.



The "DH-P" Homebrew Splitter

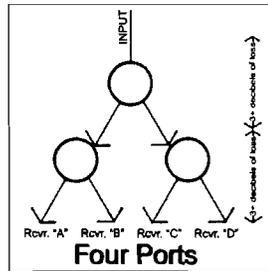
The so-called DH-P homebrew splitter first surfaced in an article the early 1980s by Down Under DX enthusiast Sam Dellitt. The article was first published in *DX Australia* and later reprinted in Canada's *CIDX Messenger*; a version of it was also featured in an article in the *Proceedings of Fine Tuning* (Proc. 1989, article F-12, p.5) by Nick Hall-Patch. The original core used by Sam has not been available for years and, in the *Proceedings* article, Nick suggested using the "binocular" core, BLN 73-202 by Amidon. This latter core is the one used in the tests shown later in this article. The wire is #30 or #32 varnished magnet wire which requires a bit of a delicate touch; unfortunately, larger wire sizes won't fit through the holes enough times to create the proper turns count for this design.

The New "BB" Homebrew Splitter

As you will note in the test results presented later, John Bryant's twenty year-old DH-P splitter, a veteran of numerous DXpeditions, performed surprisingly well. In fact, it out-performed both the RF Systems and Stridsberg units at most frequencies! The performance of the DH-P splitter formed the base line for Bill's design development and testing cycles. He hoped to be able to out-do the older homebrew and approach the outstanding performance of the Mini-Circuits splitter.

Both Bill and I tend to favor winding cores that are about 1" in diameter or more. The ease of winding these larger cores more than offsets the small additional cost. However, after several series of design/testing, Bill was rather surprised to find that, for this application, smaller cores were clearly superior! From that point, Bill focused on designing a splitter based on Amidon's FT-50J, a toroidal core of about Ω " outside and 0 " inside diameters.

Several additional design/testing cycles lead Bill to a winding pattern and turns count quite similar to the DH-P homebrew splitter. The winding design that Bill suggests is a 21 turn "primary" from the antenna side of things. That winding is to be laid on the core first in an evenly distributed pattern around the circumference of the toroid. The secondary coil is 14 bil-filar turns, also distributed evenly around the toroid (imagine a twisted pair of one red and one blue wire.) From the two ends, one red and the opposite blue are tied together and grounded through a 27 Ohm resistor. You have just created a 28-turn secondary with a center tap to ground through the resistor. The remaining red and blue wire

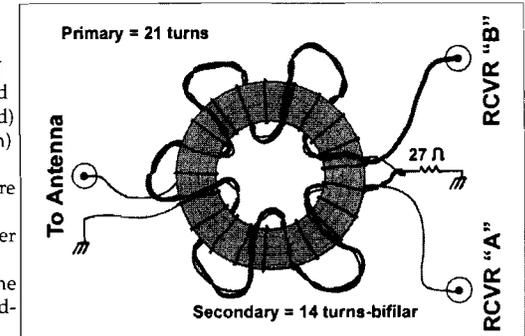


go, one each to the center conductor of the two output ports. Please be sure to follow the wiring diagram with particular care: John managed to connect the wrong red and blue wires together on four-out-of-four of the first prototype splitter series!

"BB" Splitter Fabrication

Core: Amidon FT-50J
Wire: #30 awg Kynar insulated
Primary: 21 Turns (evenly distributed)
Secondary: 14 Turns (refer to diagram)
NOTES:

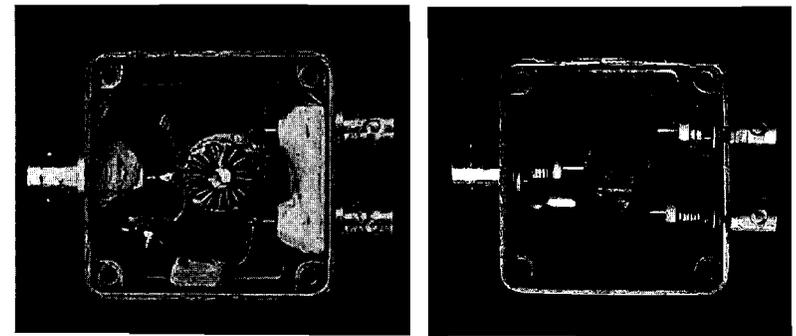
- 1) Count as a turn each time the wire goes through the hole.
- 2) It is often handy to secure each layer of winding with "super" glue.
- 3) Use about one twist per inch for the bifilar winding. Total length of each winding: about 20."



"BB" Splitter Transformer Pictorial Mount in RF-tight metal enclosure

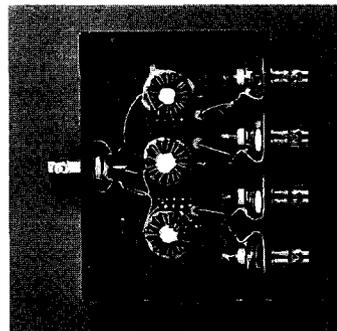
The "BB-2" Splitter: Two Port Unit

For splitters and most other accessories in the signal stream, it is necessary to use RF-tight metal enclosures to minimize the intrusion of stray RF and unwanted noise. John favors the die-cast cast aluminum boxes by Hammond that are available from many electronics outlets, including Mouser (www.mouser.com). The box shown above is the Hammond 1590LB, their smallest box at 2"x2"x1". It cost \$7.22 from Mouser in 2005. The beautiful satin-black powder-coated version, #1590LB-BK costs \$2.50 more. The BNC chassis-mount connectors, also from Mouser, did not come with ground lugs, so John utilized 3/8" diameter ring connectors from automotive electrical systems (note the grounding lug on inside left of box.) Note also that John has glued a small piece of Bakelite (1/2"x1/2"x1/4") on the bottom of the Hammond box to serve as a insulating mounting platform for the wound core. The white substance on the interior of the right-hand box is an epoxy paste made by Protective Coating Company of Allentown, PA, USA. The white version is marketed as "PC-11" while a dark gray version is sold as "PC-7." (Google: PC-7 epoxy) John now applies this to the backside of most chassis mounts to stabilize them permanently. Unlike "super" glue and numerous other fixes, neither PC-7 nor PC-11 have ever failed in the field.



The "BB-4" Splitter: Four Port Unit

It is possible, of course, to fabricate four-port splitters using somewhat larger Hammond boxes. However, it is often possible to find new or slightly used four-port splitters intended for VHF bands, but utilizing standard BNC connectors. Such was the case with the box and ports on the left. John obtained five of these beauties new for just over \$5.00 each through an on-line auction: less than the cost of the BNC connectors alone. The three transformers are mounted to perf board and, in turn the perf board is mounted to 0 " stand-offs with PC-11 epoxy paste. The resistors for each of the splitters



The "BB-4" Splitter: Four Port Unit

may be seen end-on, directly to the right of each core. Total cost for this particular 4-port splitter was under \$10.00, a 80 to 90% savings of "radio money."

THE TESTS

Rolling your own splitters is all well and good, but the our real concern, of course, is distributing precious DX signals *equally* to two or four receivers *with as little loss and as little coupling from one receiver to another as possible*. The only way to clearly determine our success or failure in this effort was to run a series of comparative bench tests exactly as we had done in our previous article on commercial splitters. The test equipment used was: HP-4192A, LF Impedance Analyzer; HP-11048C, Thru-put 50 Ohm terminator; AG-04192-61001, Power splitter-50 Ohm; and Fluke-8505A RF multimeter. The test voltage was 0.10Volt RMS. The test instrumentation covered the

frequency ranges, 150 kHz. to 13 MHz, so our 11 test points fell within that range. We believe that it is safe to extrapolate the results up to 15 or 20 MHz. to cover most of the bands of interest to our readers.

The following characteristics were measured over a range of frequencies from 150 kHz. to 13 MHz.: Antenna Impedance Match, Receiver Impedance Match, Signal Isolation, Impedance Isolation and Signal Attenuation. The test data from our previous article on commercial splitters are included for comparison purposes. The two "proof of design" splitters that were bench tested here are the two shown previously in this article.

ANTENNA IMPEDANCE MATCH2: This is the impedance that will terminate the coax lead-in cable from the antenna. The RG-58 has a characteristic impedance of approximately 50 Ohms and if the antenna port of the splitter has an impedance other than 50 Ohms, part of the signal will be reflected back to the antenna. The greater the impedance of the antenna port differs from 50 Ohms, the greater will be the signal loss. The amount of loss is rather complex and the total loss also depends on the length and attenuation of the coax. This impedance was measured at the antenna port with all receiver ports terminated in 50 Ohms, resistive. *The ideal splitter would present 50 Ohms at the antenna port.*

| Antenna Impedance Match | | | | | | | | |
|-------------------------|-------|---------|-------|-------|----------|-------|-------|------|
| MC-102 | SP-1 | ZSC-2-2 | DHP-2 | BB-2 | ZSC-4-3B | BB-4 | | |
| F | Z | Z | Z | Z | Z | Z | Z | Z |
| MHz | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 0.15 | 25.02 | 24.97 | 55.22 | 57.05 | 55.73 | 43.83 | 48.28 | |
| 0.25 | 25.01 | 24.97 | 54.73 | 57.28 | 55.68 | 45.87 | 48.28 | |
| 0.5 | 25.02 | 24.98 | 54.77 | 57.79 | 55.66 | 46.97 | 48.30 | |
| 1.0 | 25.04 | 25.00 | 54.86 | 58.99 | 55.79 | 47.43 | 48.40 | |
| 1.5 | 25.05 | 25.01 | 54.97 | 60.23 | 55.98 | 47.92 | 48.55 | |
| 2.0 | 25.06 | 25.01 | 55.08 | 61.45 | 56.21 | 48.22 | 48.75 | |
| 2.5 | 25.06 | 25.01 | 55.19 | 62.71 | 56.69 | 48.43 | 48.91 | |
| 3.0 | 25.06 | 25.00 | 55.28 | 64.03 | 56.70 | 48.57 | 49.15 | |
| 5.0 | 25.01 | 24.95 | 55.58 | 70.28 | 58.07 | 48.83 | 50.33 | |
| 10.0 | 24.72 | 24.65 | 55.63 | 91.37 | 64.10 | 48.44 | 55.19 | |
| 13.0 | 24.40 | 24.33 | 55.23 | 107.0 | 69.41 | 47.88 | 59.06 | |

RECEIVER IMPEDANCE MATCH: *This impedance, in an ideal splitter, should also be 50 Ohms to match the 50 Ohm impedance of the receiver antenna terminal. The mismatch here is not quite as important as there is usually a very short cable between the splitter and the receiver. Further, The 50 Ohm input impedance of the receiver is often fairly well defined over a certain bandwidth. This measurement was made at a receiver port when the other receiver port and the antenna port terminated in 50 Ohms, resistive.*

It may not be perfect ...

but the NRC AM Log is, simply, the best there is because of your contributions. Why not make the next edition even better? Send all corrections and changes to

Wayne Heinen - 4131 S. Andes Way - Aurora, CO 80013-3831, or amradiolog@nrcdxas.org. Thanks!

| Receiver Impedance Match | | | | | | | |
|--------------------------|-------|---------|-------|-------|----------|-------|-------|
| MC-102 | SP-1 | ZSC-2-2 | DHP-2 | BB-2 | ZSC-4-3B | BB-4 | |
| F | Z | Z | Z | Z | Z | Z | Z |
| MHz | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 0.15 | 71.45 | 70.33 | 48.52 | 44.74 | 48.75 | 39.15 | 62.40 |
| 0.25 | 80.42 | 81.20 | 48.52 | 44.84 | 48.74 | 42.44 | 62.33 |
| 0.5 | 85.53 | 90.31 | 48.54 | 48.24 | 48.73 | 44.24 | 62.30 |
| 1.0 | 89.03 | 94.43 | 48.60 | 45.73 | 48.81 | 45.05 | 62.52 |
| 1.5 | 91.12 | 95.69 | 48.65 | 46.37 | 48.90 | 45.57 | 62.88 |
| 2.0 | 92.35 | 96.18 | 48.17 | 46.98 | 49.02 | 45.97 | 63.30 |
| 2.5 | 93.11 | 96.43 | 48.75 | 47.60 | 49.04 | 46.27 | 63.75 |
| 3.0 | 93.57 | 96.58 | 48.80 | 48.24 | 49.30 | 46.46 | 64.33 |
| 5.0 | 94.20 | 96.69 | 48.92 | 51.17 | 50.22 | 46.78 | 67.24 |
| 10.0 | 93.34 | 95.41 | 48.78 | 60.35 | 53.89 | 46.34 | 79.93 |
| 13.0 | 92.46 | 93.94 | 48.42 | 66.36 | 57.02 | 45.71 | 91.01 |

SIGNAL ISOLATION: *The local oscillator of a receiver radiates back out the antenna connection and thus into the splitter. To prevent one receiver's oscillator from interfering with the signal going into the other receiver connected to the splitter, it is desirable to have as much signal isolation as possible. The larger the signal isolation, the better. For this test, the attenuation, from a 50 Ohm source connected to a receiver port, was measured at another receiver port. All receiver ports and the antenna port were terminated in 50 Ohms, resistive.*

| Signal Isolation | | | | | | | | |
|------------------|-------|---------|-------|-------|----------|-----------|------------|-------|
| MC-102 | SP-1 | ZSC-2-2 | DHP-2 | BB-2 | ZSC-4-3B | BB-4 far* | BB-4 near* | |
| F | a | a | a | a | a | a | a | |
| MHz | -db | -db | -db | -db | -db | -db | -db | |
| 0.15 | 11.58 | 11.29 | 39.85 | 32.43 | 25.85 | 53.90 | 31.93 | 24.83 |
| 0.25 | 15.06 | 14.55 | 39.89 | 33.75 | 25.91 | 57.44 | 32.00 | 24.98 |
| 0.5 | 18.93 | 19.40 | 39.89 | 32.75 | 25.92 | 60.71 | 32.02 | 25.00 |
| 1.0 | 22.01 | 24.46 | 39.56 | 29.55 | 25.88 | 60.54 | 32.04 | 24.93 |
| 1.5 | 24.10 | 27.38 | 39.15 | 27.25 | 25.79 | 58.90 | 32.07 | 24.80 |
| 2.0 | 25.64 | 29.37 | 38.62 | 25.50 | 25.04 | 57.38 | 32.07 | 24.59 |
| 2.5 | 26.85 | 30.85 | 38.02 | 24.09 | 25.45 | 56.03 | 32.06 | 24.31 |
| 3.0 | 27.85 | 32.01 | 37.42 | 22.88 | 25.21 | 54.83 | 32.03 | 23.99 |
| 5.0 | 30.25 | 35.24 | 35.13 | 19.47 | 24.01 | 51.28 | 31.79 | 22.48 |
| 10.0 | 32.09 | 37.55 | 31.05 | 15.10 | 20.79 | 46.00 | 30.73 | 18.97 |
| 13.0 | 32.05 | 36.43 | 29.40 | 13.72 | 19.19 | 43.96 | 30.72 | 17.43 |

* BB-4 "near" was measured between ports 1 & 2 (same core). BB-4 "far" between ports 1 & 4 (different core)

IMPEDANCE ISOLATION: *The antenna input impedance of a receiver with a "coax connection" is nominally 50 Ohms when it is tuned to the incoming signal. Some receivers show an impedance as low as 10 Ohms at frequencies other than the one to which the receiver is tuned. This 10 Ohm load at one receiver port of the splitter can upset the impedance seen at the other port. Here again the ideal splitter would continue to present 50 Ohms impedance even when the other port is loaded with 10 Ohms. This measurement was made at one receiver port as the impedance at one of the other receiver ports was reduced from 50 to 10 Ohms, resistive.*

| Impedance Isolation | | | | | | | |
|---------------------|-------|---------|-------|-------|----------|-------|-------|
| MC-102 | SP-1 | ZSC-2-2 | DHP-2 | BB-2 | ZSC-4-3B | BB-4 | |
| F | Z | Z | Z | Z | Z | Z | Z |
| MHz | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 0.15 | 73.88 | 72.89 | 48.51 | 44.96 | 48.51 | 39.10 | 48.11 |
| 0.25 | 81.58 | 83.18 | 48.51 | 47.86 | 48.50 | 42.48 | 48.10 |
| 0.5 | 85.76 | 91.98 | 48.53 | 45.28 | 48.52 | 44.25 | 48.11 |
| 1.0 | 89.12 | 94.83 | 48.58 | 45.93 | 48.61 | 45.05 | 48.22 |
| 1.5 | 91.19 | 95.83 | 48.64 | 46.58 | 48.73 | 45.58 | 48.41 |
| 2.0 | 92.39 | 96.25 | 48.70 | 47.22 | 48.86 | 45.98 | 48.62 |
| 2.5 | 93.12 | 96.47 | 48.75 | 47.85 | 49.01 | 46.28 | 48.86 |
| 3.0 | 93.56 | 96.60 | 48.80 | 45.51 | 49.19 | 46.46 | 49.14 |

| | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|
| 5.0 | 94.17 | 96.69 | 48.92 | 51.44 | 50.14 | 46.78 | 50.62 |
| 10.0 | 93.28 | 95.35 | 48.82 | 59.68 | 54.04 | 46.33 | 56.15 |
| 13.0 | 91.99 | 93.89 | 48.49 | 64.56 | 57.14 | 45.70 | 60.12 |

SIGNAL ATTENUATION: This tabulates the attenuation of a signal, from a 50 Ohm source, as it passes from the antenna port of the splitter out through one of the receiver ports. The other receiver port(s) are terminated in 50 Ohms, resistive. The attenuation of a signal when it is split 2 ways, by an ideal splitter, would be 3db, when split 4 ways is 6 db, etc. Refer to Appendix for a description of the methods of measuring these important values

| F MHz | Signal Attenuation | | | | | | | |
|----------|--------------------|------------------|---------------------|-------------------|------------------|----------------------|------------------|--|
| | MC-102 a -db | SP-1 a -db | ZSC-2-2 a -db | DHP-2 a -db | BB-2 a -db | ZSC-4-3B a -db | BB-4 a -db | |
| 0.15 | 3.52 | 3.52 | 3.10 | 3.10 | 3.07 | 6.39 | 6.16 | |
| 0.25 | 3.51 | 3.53 | 3.10 | 3.11 | 3.08 | 6.31 | 6.17 | |
| 0.5 | 3.52 | 3.53 | 3.10 | 3.14 | 3.09 | 6.29 | 6.18 | |
| 1.0 | 3.52 | 3.53 | 3.11 | 3.23 | 3.10 | 6.27 | 6.21 | |
| 1.5 | 3.52 | 3.53 | 3.12 | 3.31 | 3.11 | 6.25 | 6.23 | |
| 2.0 | 3.53 | 3.53 | 3.13 | 3.39 | 3.12 | 6.22 | 6.25 | |
| 2.5 | 3.53 | 3.54 | 3.14 | 3.46 | 3.13 | 6.21 | 6.28 | |
| 3.0 | 3.53 | 3.54 | 3.15 | 3.53 | 3.14 | 6.20 | 6.30 | |
| 5.0 | 3.54 | 3.55 | 3.18 | 3.86 | 3.18 | 6.19 | 6.44 | |
| 10.0 | 3.55 | 3.57 | 3.24 | 4.88 | 3.30 | 6.18 | 6.91 | |
| 13.0 | 3.56 | 3.58 | 3.27 | 5.58 | 3.40 | 6.18 | 7.27 | |

DISCUSSION

We were gratified with the test results. First, considering Impedance Matching to both the antenna and the receiver, below 5 MHz, the BB-2, the BB-4 and the DHP-2 performed considerably better than the Stridsberg and RF Systems units. The new BB homebrew design was somewhat better than the older DHP unit and even out-performed the Mini-Circuits unit at some frequencies. The same general results were obtained when testing for Isolation: both homebrew designs substantially out-performed the Stridsberg and RF Systems splitters and the new BB designs actually outperformed the really excellent Mini-Circuits design, in a number of instances. Finally, in the important Signal Attenuation test, The homebrew units proved superior to the commercial units in many instances.

Although all three commercial units out-performed the homebrew units as the test frequency climbed above 5 MHz., the differences in both Isolation and Signal Attenuation, even at 13 MHz, amounted to a worst-case of 2.3 dB. for the DHP design, .13 dB. for the BB-2 and less than a full dB for the BB-4.

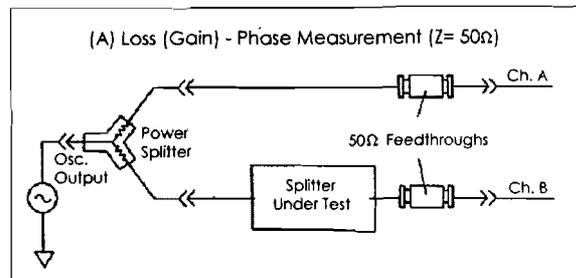
Almost certainly, the performance of these units could be improved in several ways. It is possible that both Isolation and Attenuation could be improved by using slightly larger boxes. This is particularly true in the case of the BB-4. The VHF splitters used very small cores and thus the boxes that John obtained so cheaply were less than .75 inch deep. These small tolerances between the larger FT-50 cores and the box may have caused some capacitive coupling. The tight quarters also prevented John from arranging the three cores at 90 degrees from each other as is standard practice. It would be better to arrange the BB-4 cores at 90 degrees (O _ 1 as viewed from above.) Our design goal was to create a homebrew unit that would perform at LW, MW and SW frequencies. If our goal was to only serve the shortwave frequencies - 3 to 30 MHz. - a different core material might have improved performance above 5 MHz.

As we noted in the article on commercial splitters, we were both surprised at the impedance characteristics exhibited by both the Stridsberg MC-102 and RF Systems SP-1 in the tests of Antenna Impedance Match, Receiver Impedance Match and Impedance Isolation. In some cases, these mismatches reached 100%. However, *the measured signal losses of all five 2-port units and the two 4-port splitters are very nearly equal*, reminding us again how forgiving receiving-only devices are of mismatches.

If your "radio time" is extremely limited, you may want to invest in one or more of the commercial splitters covered by our earlier testing. If you have just a modest amount of time, rolling your own signal splitters is child's play that you can do as "busy work" while also involved with other activities. John wound his twenty transformers during his wife's driving shifts across Arizona and New Mexico recently and fabricated the splitters themselves while watching various year-end football bowl games; he estimates that he was saving about \$40 per hour of "work," building five of the 4-way splitters and five of the 2-way models. Give it a try.... its fun rolling your own!

APPENDIX

To measure the insertion loss of the splitter, the oscillator output of the HP-4192A LF Impedance Analyzer was fed into a power splitter that split the signal *two equal parts*. One of the resulting signals passes through a 50 Ohm feedthrough and goes directly to Channel A. The other signal goes to the antenna terminal of the splitter under test and the signal from a receiver output



terminal goes through a 50 ohm feed-through to Channel B of the HP-4192A. The HP-4192A compares the signals from A and B and calculates and displays the signal loss resulting from the signal passing through the splitter.

END NOTES

- 1 Although the enclosure for the two-port unit was aluminum and magnetically neutral, there is still some possibility of capacitive coupling between the windings and the enclosure at higher frequencies, so an insulating block/mounting pedestal is a reasonable idea. The enclosures for the four-port units that John built were heavy-gage sheet steel and, therefore, even more likely to cause some degradation of performance were the cores not separated from the enclosure with an insulating block. It is interesting to note that Mini-Circuits is very careful to isolate the cores from their aluminum enclosures and to arrange them in an arrangement that generates the least interaction between them: at 90 degrees (O _ 1 as viewed from above.) They also maintained the shortest possible leads from component-to-component by placing all ports on a single surface of the enclosure and mounting the printed circuit board directly to the rear ends of the chassis-mount BNC ports. Each of these design decisions could contribute to the outstanding and relatively broad-banded performance of the Mini-Circuits splitters.
- 2 The measured values of Z were actually complex, not purely resistive. The impedance phase angles were, however, very small in most cases, and we feel that including those angles would have been more confusing than helpful. For instance, the largest impedance phase angle for the Mini-Circuit ZSC-2-2 was less than 2 degrees over the entire frequency range. For all practical purposes, the tabulated values of Z can be considered resistive.

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DX'ing 'smart', with shared tips and requests by NRC members

Welcome to another edition of Target DX! This time, the focus is on Pre-Sunrise Authority (PSRA) and Post-Sunset Authority (PSSA), both of which have been topics of recent discussion on the listserv. Remember to send your questions or your suggestions for future topic-oriented columns to me either via the NRCDXAS listservs, by off-line email or by regular mail!

Back in the 1950's and early 1960's, there were essentially four basic types of operations permitted - full (or unlimited) time, daytime, limited time and shared time. The first two being somewhat obvious, I'll start with the third. Limited time operations were granted to a small number of stations which were authorized to operate on schedules which were less than full time but more than daytime. Most of these were on designated Clear Channels, where a second station, usually at a large distance from the first, was permitted to operate during the day, but were required to sign off at a specified time each month, usually determined by the time of local sunset at the first station, rather than at their own local sunset. Conversely, the Limited Time stations were often required to sign on at times other than their local sunrise, depending upon the location of the co-channel station they were required to protect. The fourth type of operation covered situations where two or more stations within a close geographical area were licensed to the same frequency and permitted to share hours of operation. Sometimes these stations utilized the same technical facilities, while other times, they did not.

Another group of stations, by virtue of their proximity to stations on the Canadian border and by operation of treaty, were required to either reduce power and/or change antenna pattern prior to local sunset in

order to provide protection from interference to those Canadian stations. These were designated as 'Canadian-Restricted' operations. Similarly, there was also another group of stations which provided similar protections to specified co-channel US stations. This group was designated as 'Critical Hours' operations. Both differed from the previously mentioned Limited Time stations in that they were not always required to leave the air to avoid creating interference as the Limited Time stations were.

Each of the various groupings other than full time were brought about at various times in an attempt to increase the number of stations available on each frequency, as well as the number of hours they could operate. This is of course the same force which has driven many subsequent changes we have seen over the years, which included the introduction, in the late 1960's, of Pre-Sunrise Authority. (It should be noted, however, that no additional Limited Time stations could be licensed after 1954, nor any new daytime stations after December, 1987.)

The original idea behind the PSRA was to permit daytime stations, whose local sunrise in midwinter could be 8:00 AM local time or later, to sign on as early as 6:00 AM with reduced power until their actual local sunrise time so as to be able to better serve their communities. The rationale behind the PSSA, which came a few years later, was similar, in that local sunset in some parts of the country in midwinter could be as early as 4:00 PM. The PSSA permits operations for a period of up to two hours after local sunset. In the interests of objectivity, it must be mentioned that morning and evening drive time are the two most lucrative times of the day for most stations. As with many general rules, there are several exceptions as dictated either by international treaty, or by specific requirements protecting co-channel fulltime stations on the clear channels. In addition, protected stations were permitted to contest PSRA or PSSA authorizations, which frequently led to formal hearings and additional engineering studies.

PSRA's and PSSA's were often assigned not just to daytime-only stations, but to a number of fulltime stations as well. If a fulltimer had an authorized nighttime power of less than the 500 watt maximum for PSRA and PSSA, or if it were directional at night in such a way as its coverage under a nondirectional 250 or 500 watt PSRA or PSSA would cover a greater area than the directional nighttime pattern would at greater power, then they would opt to use these programs. Similarly, when the FCC granted nighttime operations to the majority of daytimers a number of years ago, the majority of those stations retained the use of their former PSRA and PSSA authorizations.

In both cases, powers for these additional hours of operations are calculated by the FCC based on a number of interference factors, and in some cases, there are also limitations on hours beyond those stated above. The absolute maximum permissible power under either program is 500 watts. Today, stations not need to apply for either PSRA or PSSA, nor are they required to use them when they are issued. In the earlier years of both programs, however, stations were required to apply for their authorizations, providing engineering data proving that they could accomplish it without causing interference. All stations choosing to use these extended authorizations *are* required to notify the FCC of their intended use, and, in all cases where the authorized power is less than the smallest of their normal daytime, Critical Hours or Canadian-Restricted authorized power, to document *how they intended to achieve the reduced power level*.

This last follows some of the recent discussion on the listserv as to the problems which caused some stations to choose not to use their PSRA or PSSA, or else to use higher powers than authorized. With many stations authorized for PSRA or PSSA powers of less than 10 watts, this wasn't the only problem, because even if a station could reasonably obtain the correct power, its coverage often was so marginal that using it didn't pay to use it. Today, a similar situation exists with regard to many of the night powers authorized for former daytime stations.

A major problem for DX'ers is that the FCC has not produced any public records of the authorized powers and/or stations for PSRA and PSSA operation in many years. This is further complicated by several factors: 1) as additional new stations or station changes become operational, a number of PSRA and/or PSSA powers for other stations must be recalculated; 2) not all stations have chosen to use these authorizations, some not notifying the FCC of their intentions; 3) no formal rules appear to have been made concerning PSRA's and PSSA's for those former daytime stations later granted small nighttime powers; and 4) many station owners and operators do not understand nor even know the requirements of these authorizations, and therefore do not properly comply with them. The result is that many DX'ers report stations as operating outside of normal daytime hours with day power when a number of these may in fact be legally operating with a PSRA or PSSA.

Given the considerations noted above, it will usually not be possible to determine what conditions actually apply in many cases.

One result is a change in the way DX'ers must approach sunrise and sunset DX. The main consequence is that in many cases neither a sign-on or sign-off announcement nor anthem will be heard from many stations at their local sunrise or sunset times. On the other hand, however, there may be more of these available at 6:00 am local time and at two hours past local sunset. Of course, with the

addition of low power nighttime operations for many stations, there are a lot fewer sign-ons and sign-offs in general. It is also undeniable that all of these situations contribute greatly to increasing the number of stations to wade through at any given time to find the ones we're searching for, but such is the nature of DX today. It has become somewhat more difficult to plan one's DX sessions than it used to be, and more of a case of being fortunate enough to be in the right place at the right time, which is, after all, one of the basics of the hobby which has always been a factor.

As can be seen from the foregoing discussion, it is often nearly impossible to say with certainty that a given station is operating illegally with daytime facilities unless the reception is either prior to 6:00 am at the station or more than 2 hours past its local sunset. Further, like many aspects of the hobby, these situations can provide DX for some and more pests for others, as can also be said of the confusion on the part of station personnel which sometimes may result in illegal operation.

I'd like to thank Jerry Starr and Wayne Heinen for providing me with some of the details of how the programs worked initially and also as to how these programs were affected by subsequent authorizations. - RJE

Musings of the Members

Thoughts from NRC members ... the opinions expressed in this column are those of the individual writer and do not necessarily reflect those of the editors, publishers, or the National Radio Club, Inc.

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Times are local per Muse; submit double-spaced only.

Here is the NRC column which is almost as exciting Big Ben's Birch Beer (available in 5 colors, which include Red, White and Blue). We'll have some of that at the convention, on which we will have an announcement on it VERY SOON! When sending your items along, please make sure that they're radio and DXing related. That, and sending them to us, are all we ask. Here we go:

Rick Turner-2800 Bemidji Avenue N.-Bemidji, MN 56601-2347 <rturner@paulbunyan.net>

Hi everyone. The month of January resulted in a pretty good start to my DX logbook here. Totals for the month are 53 stations heard in 3 countries, 16 states and 3 provinces...I was saddened to hear of the death of longtime DXer DON TRELFOED, and my sympathies and condolences go out to his family...Congratulations and good luck to DAVE SCHMIDT, who took over the Broadcast Technology column in Popular Communications, replacing BRUCE CONTI who deserves a big thank you for a job well done...Noticed in DXN 74-14 that there is a pending application for a new radio station here in Bemidji on 1300. Great, just what I need, a third station that will effectively wipe out five more frequencies. Oh well, such is life...Hope that the DX gods smile on all you. 73s.

Dave Schmidt - P O Box 3111 - Scranton, PA 18505

If you still use regular mail to send along reports to us, we sometimes 'hold them over' for an issue, depending on the content. If it's anything that is more 'generic' then we try to save it for when we don't get any reports via regular mail or Email. I still think back on the days when Ernie Cooper would TYPE on stencils page after page of Musings! I don't know if anyone is into recording their DX these days but has anyone tried the mini disc for their DX storage? Since tape has pretty much gone by the wayside at most stations, I've noticed many are using the Sony Mini Disc units for production and even some, playing commercials! The one I've had the best luck with is a Sony JE440 (now the JE470, goes for about \$150). A pack of 5 discs, that hold about 4 hours of audio per disc, go for less than \$10 a pack at most of the bigger stores. They also offer many small pocket-size units, which I've found on Ebay for under \$50 (they generally go for \$150+ new). I'm still working on getting some skywires up here; weather plus work really gets in the way sometimes but we'll get there. WB3XN made a bried return during the first month of February for some touch up measurements; the temporary license for it runs out on 2/15 so to those who got it, congrats! We had a problem with the signal setting off house alarms in the immediate area of the tower so that sort of shot down our chance for a early morning DX test. We need to hear from you.....yes, YOU!

Flash Alert Postcard System

Can't access the Internet to find out about last-minute DX tests? Join Les Rayburn's Flash Alert System to receive notice about late-notice tests and special events. Just send Les 10 or more self-addressed postcards, and he'll be sure to keep you up-to-date and even notify you when you're down to five cards. Send your cards to Les Rayburn - 100 Centerview Drive, Suite 11 - Birmingham, AL 35216-3748. It's almost as good as being wired!