From the Publisher ... Not only did I go back to bed after finishing up #9, I went to the doctor the next day and, after antibiotics, feel just fine, even good enough to whip up this little 48-pager you now hold in your hands.

The elves in Aurora, Bridgeport, and Mannsville have conspired to provide many, many hours of reading for you if you so choose to order a membership card dated October 1934, for $10 plus shipping.

As you can see from the note in "DX Time Machine", Sid certainly is consistent in cleaning out his collection periodically! In his letter that accompanied the above item, he said that he started collecting various in 1931 and has been a member of the NRC since 1934. He added, "I recently found a membership card dated October 19, 1934, and signed by then-president Robert H. Weaver."

I know the NRC has a number of members who have been members for over 60 years ... but I'm not sure who all would be listed, were we ever to do such a list. Perhaps, if you joined before 1940, you'd care to write a little of your experiences and send them in to Dave Schmidt, whose theme Musings I wish the next time around, your best all-time catch, might just fit right in.

More CPC tests are on the way ... why not send a few choices for target as well as stamps to Blaine Thompson - P.O. Box 15762 - Fort Wayne, IN 46885 5762 <phonet@indn.net >

DXN Publishing Schedule, Volume 67

<table>
<thead>
<tr>
<th>Iss</th>
<th>Deadline</th>
<th>Pub. Date</th>
<th>Iss</th>
<th>Deadline</th>
<th>Pub. Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Dec. 3</td>
<td>Dec. 13</td>
<td>21</td>
<td>Feb. 25</td>
<td>Mar. 6</td>
</tr>
<tr>
<td>12</td>
<td>Dec. 10</td>
<td>Dec. 20</td>
<td>22</td>
<td>Mar. 3</td>
<td>Mar. 13</td>
</tr>
<tr>
<td>13</td>
<td>Dec. 31</td>
<td>Jan. 10</td>
<td>23</td>
<td>Mar. 10</td>
<td>Mar. 20</td>
</tr>
<tr>
<td>14</td>
<td>Jan. 7</td>
<td>Jan. 17</td>
<td>24</td>
<td>Mar. 24</td>
<td>Apr. 3</td>
</tr>
<tr>
<td>15</td>
<td>Jan. 14</td>
<td>Jan. 24</td>
<td>25</td>
<td>Apr. 7</td>
<td>Apr. 17</td>
</tr>
<tr>
<td>16</td>
<td>Jan. 21</td>
<td>Jan. 31</td>
<td>26</td>
<td>May 5</td>
<td>May 15</td>
</tr>
<tr>
<td>17</td>
<td>Jan. 28</td>
<td>Feb. 7</td>
<td>27</td>
<td>June 2</td>
<td>June 12</td>
</tr>
<tr>
<td>18</td>
<td>Feb. 4</td>
<td>Feb. 14</td>
<td>28</td>
<td>July 7</td>
<td>July 17</td>
</tr>
<tr>
<td>19</td>
<td>Feb. 11</td>
<td>Feb. 21</td>
<td>29</td>
<td>Aug. 4</td>
<td>Aug. 14</td>
</tr>
<tr>
<td>20</td>
<td>Feb. 18</td>
<td>Feb. 28</td>
<td>30</td>
<td>Sept. 8</td>
<td>Sept. 18</td>
</tr>
</tbody>
</table>

DX Time Machine

From the pages of DX News

50 years ago ... from the December 3, 1949 DXN: Stan Morris, Bradford, MA, commented on the poor DX season - new stations logged were much less distant than last year, and TA reception had occurred on only one morning when Rabat and a BBC station were heard ... from the Dec. 10 DXN: Publisher Hal Wagner, No. Girard, PA, summed up the DX season thus far: "The DX was all over the dial in the evenings, but trying to sift out the culls from the good stuff was a hopeless task, while mornings produced either no noise and no signals or lots of noise and fair signals."

25 years ago ... from the December 16, 1974 DXN: The NFVC was pleased to announce that the NRC membership had risen to 622, thus qualifying them for another ANARC representative. They planned to add three more stations to the list of current reps: Russ Edmunds, John Sampson, and Pam Taylor ... Musings editor Ernie Cooper's address changed from Brooklyn to Providence.

10 years ago ... from the December 4, 1989 DXN: Sid Steele was selling some of his old DXN's, Volume 4 through 53 (D), the money-losing all-call network in Canada, was shut down.
**AM Switch**

Jerry Starr  
w8jw@yahoo.com

c/o WHOT Radio  
4040 Simon Road  
Youngstown, OH 44512-1320

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

**CALL LETTER CHANGES**

<table>
<thead>
<tr>
<th>Old call</th>
<th>New call</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>WBZY</td>
</tr>
<tr>
<td>1280</td>
<td>WKST</td>
</tr>
</tbody>
</table>

**APPLICATIONS / GRANTS FOR NEW STATIONS**

None

**APPLICATIONS FROM EXISTING FACILITIES**

None

**GRANTS TO EXISTING FACILITIES**

None

**OTHERNESS**

1280 WBZY  
1660  
1420 WKCW  
1040  
1280 WKST PA New Castle WBZY  
1140 KSRB  
1200  
1140  
920 KBAD  
900  
630 CFCO  
560  
530

**THANKS**:

Ed Krejny, Les Johnson and MSJ  
73 and Good DX, Jerry Starr & Buffalo K. Foonman

---

**WNDE**

Sports Radio 1260 AM

**AM Station Location Maps**

5th edition — $12.00 to members ($17.95 non-members); postage paid. Compiled by Bill Hale, this must-have companion to the AM Radio Log and Nighttime Pattern Book shows the location of all U.S. and Canadian broadcast stations (except TIS/LPT) as well as latitude/longitude coordinates; plus instructions by Dave Sundus enabling users to calculate distance and bearing to any station. This book is three-hole punched for a letter-size ring binder. Order from NRC Publications - Box 164 - Middletown, NY 13346. NY orders, please add sales tax.

**The NRC AM Radio Log, 20th Edition, is compiled from members’ reports and from official sources so that it is the most accurate listing of U.S. and Canadian AM stations available — and it includes Expanded Band stations. Cross-referenced, 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: Latin America, $24.00; Europe, $25.00; rest of the world: $28.00. Order from: NRC Publications - Box 164 - Middletown, NY 13346 (NY residents, please add sales tax).**

---

**Domestic DX Digest**

West: Bill Hale  
phalanx2@earthlink.net

East: David Yocis  
davidyocis@aol.com

532 LaGuardia Pl. #462 - New York, NY 10012-1428

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

**DDX-West**

**MEDIUM WAVE RAMBLINGS**

- Terry Jones of the Dakota Territory passes this on, concerning KSTP-1500: “I used the Maplewood Drive address, per the Log. I received a reply, but with an additional address on both the envelope and the letterhead. The ‘other’ address is 3415 University Avenue, St. Paul, MN 55114. So, possibly use both addresses. Also, a new phone number is indicated on the letterhead: 651-647-1500. I used that number and it is good.”

- TIS-chaser Gary Jackson of Sacramento, California relates: “I have both Ceritos Community College-1700 kHz and the TIS/HAR CalTrans-1700 at 1-405 and 1-105 (no call letters listed, although it has been on since before October, 1998) verified. Roger Douglas was head of CalTrans Communications for that area and I used to be able to call him, but he has retired due to illness. So far, no replacement, and nobody in Sacramento could tell me if that is the same station testing, or can they tell me who to call in Los Angeles. And . . . no one answers Roger’s phone. I can hear Ceritos College this AM (11/23/99) and the TIS/HAR station in the still testing in the background. Suspect same station, but over a year of testing???”

- The Graveyard updates appearing below are a correction to a couple which appeared in Issue 7. Although the records remain with Don Trelford, he failed to tell me he was in Jamaica at the time of reception.

- Good UX conditions are here. Let’s mop up!!

**REPORTERS**

FA-ID  
Frank Aden  
Boise  
<N7sok@aol.com>

SA-MB  
Shawn Axelrod  
Winnipeg  
Icom IC-70 & Drake R8 + 4 foot Unamplified Box Loop/Quantum Loop, 145’ outdoor wire, 100’ indoor wire, MFJ 1026 Phasing Unit  
<axelrod@mb.sympatico.ca>

RD-AZ  
Ragnar Dannenfeldt  
Mesa  
GE Model 3-5280C; GE Superadio  
<rdxer@juno.com>

GH-KS  
Gary Houdek  
Munden  
GE Superadio  
<ghk@nortelnetworks.com>

TR-H-A  
Tim Hall  
Chula Vista  
ICF-2010, Kiwa Loop  
<trh@nortelnetworks.com>

TR-H-A  
DXing in Beverly Hills and around Los Angeles  
Delco car radio  
<halls@inetworld.net>

GJ-C-4  
Gary Jackson  
Sacramento  
FRC-4800 + Kiwa Loop  
<gl@al.org>

AK-WA  
Andy Kahn  
Camas  
Superadio II, no loop  
<aalwest@aol.com>

BK-C  
Bob Karchevski  
Sunnyvale  
R8-A/SM-1 amplified ferrite loop  
<karchesv@retelnetworks.com>

CR-C-L  
Chris W. Riggs  
Wood Dale  
R-2000, ICF-2010, Kowalski Loop  
<riggs@brine.com>

JJK-WI  
John Rieger  
South Milwaukee  
FRC-100, Kiwa loop, MFJ959B Tuner-Preamp, DSP-592x Audio Noise Reduction Filter  
<jreiger@webtv.net>

RR-UT  
Rockey S. Robello  
KATELI  
Sandy Sanger AS-4590 with Select-A-Tenna  
<kateili@webtv.net>

JT-MO  
John Tudhenam  
somewhere in the Show-Me State  
Superradio 2  <jotud@juno.com>

JW-C-0  
John Wilkins  
Wheat Ridge  
Drake R-8, 4-foot box loop  
<peakbagger3@juno.com>

Ed-TX  
Editor  
North Richland Hills  

**STATION NEWS & NOTES**

590  
KOMJ  
NE Omaha  
11/22  
0101 - ABC News, followed by ID of Magic 590.  
(JT-MO)

690  
CKVL  
PQ Montreal  
11/23  
0005 - Fair, with loop tape with FX language announcements.  
(CR-IL)

1220  
WKRS  
IL Waukegan  
11/20  
0430 - Poor, with Jim Bohannon Show and News 1220 WKRS IDs.  
Used to sign off at 2300. Now 24 hours.  
(JJK-WI)
WPMD956

11/15 0253-0257 - Fair in WKBF null. Male announcer in SS with Radio Munto or Punto or similar. Noted again on 11/17 at 1847-1906 time out with no ID heard. Florida? Help! (JRR-WI)

FX AND EQUIPMENT TESTS

1660 WMIB- FL 
Marco Island - 11/21 0335-0338 - Faint music soon became stronger. Then KXOL VID. 1 kW? Also time check in MST. No sign of any other station. KXOL playing oldies e.g. Ray Charleys, Neil Sadaka, Four Freshmen. (BK-CA)

1660 WMIB- FL 
Marco Island - 11/21 0000-0010 - Nothing heard under KXOL. (FA-ID)

TIS & OTHER STUFF

620 TIS CA 
Inglewood - 11/18 1140 - Inglewood TIS noted with announcements about Inglewood Forum and local construction projects. Over unID CalTrans HAR station. (TRH-CAI) [I'm surprised they put this on 620 ... So close to KFMB-640!] Ed. [Halfway between 640 and KOCO-600, which puts a strong signal into LA, too -pls.]

810 WPLX517 CA 
Santa Monica - 11/18 1137 - UCLA "Emergency station" noted testing with tape loop and using these calls. Good audio quality, and got out really well. Noted later this afternoon along 1-5 as far as Anaheim. (TRH-CAI)

1500 TIS CA 
Beverly Hills - 11/14 2053 - City TIS noted with good signal. Tape loop didn't really say much. Noted signs along LA Cienega Boulevard. (TRH-CAI)

1610 2 x TIS CA 
Sacramento - 11/18 0530 - Two Cal Trans TIS/HArs giving conditions for Sacramento & San Joaquin Valleys (it was foggy). No location or call letters given. Called CalTrans about this today. So far ... no call back. Will report location when I find out. (TRH-CAI)

1620 HAR CA 
Los Angeles - 11/14 1930 - CalTrans HAR located along I-10 near Western is active. Signs noted near Western off-ramp. Station listed at 1-10/1-10 intersection was not active. Don't know about the one at I-10/1-405 junction as I never got that far west. Another planned station on 1510 kHz, which was to give traffic information for surface streets in the so-called "smart corridor", does not appear to have ever come on. (TRH-CAI)

1630 TIS CA 
Los Angeles - 11/14 1940 - There is indeed a new station here for the LA Convention Center and Staples Center. Pretty good signal. No signs noted (I was here for 5 days attending a convention at the Convention Center). Tape loop does not mention any call letters. This will be tough at home due to XEUT OC and mixing product of Tijuana stations on 1470 and 1550. (TRH-CAI)

1630 TIS/HAR CA 
Los Angeles - 11/22 - Los Angeles Convention Center, in fair with ID and mention of coming events. (GJ-CA)

1690 TIS CA 
Culver City - 11/14 2037 - City TIS has moved here from 1650. Noted with good signals with info about city council meetings and so forth. Still haven't logged it from home. (TRH-CAI)

1700 TIS CA 
LAX area - 11/14 2030 - Noted testing with good signals. Still uses slightly geeky-sounding announcement about "testing field strength intensity" and so forth. LAX station on 530 was noted with good signals too. (TRH-CAI)

1700 WPFP201 CA 
Mountain View (Moffett Federal Airfield) - 11/21 0350-0357 - ID: WPFP201 NASA/Ames Information radio: This is John Peterson ... we are just now beginning to test here at Moffett Field ... lots of talk about tours, etc. Gave several phone numbers with local area code. After about seven minutes, he was repeating himself. Loud and clear, as I am only about one mile south. (BK-CA)

1700 WPMD956 CA 
Norwalk - 11/18 1705 - Cerritos College station noted several times with talk programming. This station really gets out, especially for a station at the top of the dial. Audible midday along I-5 much of the way through LA. (TRH-CAI)

MIDNIGHT TO MIDNIGHT FLIGHTS

610 KFRC CA 
San Francisco - 11/23 0206 - With ID and oldies music, or at least oldies being used as bumper music. (RD-AZ)

620 KMKJ TX 
Plano - 11/19 1940 - Disney stuff, occasional local inserts; legal ID at 1959:40 by kid: AM 620 KMKJ Plano-Dallas-Fort Worth. Generally fair. (JW-CO)

670 KIRN CA 
Si mi Valley - 11/25 0054 - With Arabic music. Presumed to be in Iranian. Very strong signal. (RD-AZ)

950 KMER WY 
Kem merer - 11/15 1818 - Ad for Fox News Channel and singing jingle Wsyming is a very special place. K-95, then into light rock music. (RR-UT)

980 KSCV UT 
Richfield - 11/22 0635 - With weather and a forecast of snow for the next three days. (RD-AZ)

980 KSCV UT 
Richfield - 11/26 1010 - Olufs, very detailed with funeral arrangements, etc. Call ID and ads at 1015. Fair, over KFWB. (JW-CO)

1100 KCCF AZ 
Cave Creek - 11/21 1950 - Weak-to-fair, under KFXA-CA, with Kim Komando Computer Show. Local spots with mentions of Eastgate Shopping Center and city of Mesa. Lost them at 2000 due to a power / pattern change. New here. (AK-WA)

1180 WSAF GA 
Trion - 11/22 2354 - Fair, in WHAM null and Cuban station QRH, with Spanish language vocals. WSAF ID and mention of Georgia at 2300. (CR-IL)

1200 WQAI TX 
San Antonio - 11/14 0400 - End of Art Bell program, then ABC News. At 0405 announcement said they were concluding broadcast activities. Gave station address. Nothing else heard on channel after their sign-off. (GH-KS)

1260 KOIT CA 
San Francisco - 11/18 1000 - ToH announcement: KOIT 96.5 FM, 1260 AM, KOIT, light rock, less talk. Fair signal, in jumble. (RR-UT)

1260 KPOW WY 
Powell - 11/15 1843 - Country & western music and announcement: All new country and all-time favorites, you get them all with Twelve-Sixty Country, KPFW. (RR-UT)

1300 KPTL NV 
Carson City - 11/26 2345 - Nice strong signal. Oldies music with announcements: All the great oldies, KPTL. Were they on daytime power/pattern? (RR-UT)

1330 KJLL AZ 
South Tucson - 11/23 0750 - With Imus in the Morning and ad for Milligan Auto Repair on 14th St. near Broadway. New. (RD-AZ)

1410 KWYO WY 

1460 KENO NV 
Las Vegas - 11/16 2358 - With One-on-One Sports. ToH: ID. The Football Station, Sports Radio 1460, KENO, Las Vegas followed by CNN News. Nice to have one pop up instead of fade out at ToH. (RR-UT)

1670 WRNC GA 
Warner Robins - 11/12 0500 - Strong, with C&W music. (GJ-CA)

1680 WTRI FL 
Winter Garden - 11/21 0615 - With weather for Florida, and ads. (GJ-CA) [Gary: these are the correct calls and city.] 

1700 KQXX TX 
Brownsville - 11/22 0700 - Strong, with Mexican music. (GJ-CA)

GRAVEYARD DX UPDATE

1240 kHz: WTWA GA Thomson Don Trelford Runaway Bay, Jamaica

1450 kHz: WWTN AL Dothan Don Trelford Runaway Bay, Jamaica

Deadlines are Tuesdays through December 7, then December 21 (a week early because of holiday travel plans), then resuming weekly from January 4.

Sheldon Harvey of CIDX is sending us Montreal 690/940 updates, with this information coming from Ricky Leong and Neal Ford in Montreal on November 22: "CKVL, the French language sister station of CJQG in Montreal, has begun running a French language tape loop on their new frequency of 690 kHz. AM. Unlike the tape on 940 kHz. in English, the French service is not giving any call letters. It is simply IDing, in French, as 'Info Six Quatre-Vingt Dix' (translated
... Also, unlike the English service, there is no mention of a relationship with CNN and Bloomberg. They simply indicate that this is a station owned by MetroMedia CMR in Montreal. They also are claiming to be the first and only French language, all news service in ‘America.’ Finally, unlike the English service on 940 kHz., they are not indicating an official start-up date for regular programming. The description of the service is very similar to that of the English service, with a half-hour rotation of news, weather, traffic, sports, business news, etc. In a follow-up to the new call letters being used by 940 kHz; 9-40 News CKNN, I have checked with the CRTC in Ottawa. They have had no official request from CIQC 600 to acquire the call letters of CKNN. The CRTC is looking into this matter and has promised to advise me directly of any further developments. Whoops! I think I am about to click on the SEND button, the tape loop on 690 kHz. had not stopped and the transmitter has shut off at [1525] but keep an ear tuned to this one. It should be back soon, I would think.

And now for some personal news... I will be taking a new job in the spring, which will be a great opportunity for me but that will involve moving, some heavy hours and possibly a good deal of travelling. With that in mind, I think it is time to hand over the DDX-East editing duties to a new editor. If you are interested, please send your inquiries to Paul (though I’ll be happy to answer any questions that prospective applicants might have); access to e-mail and the ability to prepare the column and send it to Topeka by e-mail are a must! Once a new editor has been chosen, we can work out a date to hand over the column. Until then, please keep sending me all of your DX logs here, where I will continue for the time being happily compiling the DX News of the week!

---

**STATION NEWS**

640 CFYI ON Toronto - 11/19 16:20 – ID’s as “Talk 6-40,” call-in show with Warren and a professor from McGill University discussing the connection between Pókenon and gambling. New calls not heard at any break. [RJ-NY] [Ex-CHOG. – DJ]

940 CKNN PQ Montreal – 11/21 18:00-18:15 – New station here with information loop about new facility, “News 940, Montreal’s first all-news station,” “Going live on December 14,” promos for Bloomberg Net and CNN, mostly weak but strong on peaks. Sounds like about 1,000 watts. (HJ-PA)

- 11/21 18:00-18:20 – Loud and clear with long tape loop promoting the new “9-40 News” to begin on 12/14. Included endorsements from various CNN personalities such as Wolf Blitzer. One call letter ID noted, numerous “9-40 News” WADY noted underneath. Heard on car radio in Natick. The open channel was nice while it lasted! (MD-MA)

- 7/25 05:45 – Tape loop announcing arrival of their new frequency, calls. (GM-VA)

---

**DX TESTS**

560 WAGA NC Elizabeth City – 11/7 01:10-01:30 – Heard quite well with code and spoken ID’s. [RJ-NY]

---

**UNID AND UNID HELP**

740 UNID – 11/20 20:20 – Lots of non-ID’s as “Groeven Oldies” and many national ads, but no local clues, lots of Motown music. Does CHCM do this program? [RJ-NY] [No, but WIR-TN does; see last issue – DJ]

1020 UNID – 11/15 17:30 – After WRX sig-off, end of “Family Workshop” program, GOS music, then suddenly gone 1734, leaving KDKA. [JEK-MD]

1110 UNID – 11/20 18:00 – End of SSB, an unusual soft piano rendition. [RJ-NY]

1230 WCWA OH Toledo – Re: SK-PA’s unID in #8 (“just off 1-75 in Northwood”): The only Northwood I found in states in which I-75 travels is just outside Toledo. (BFW-IL)

- Same suggestion; though there is also a Northwood near Gainesville FL, home of WGCC-1230, Toledo is closer. (BT-IN)

1300 UNID – 11/11 16:00 – Ad for business on Main St. in Joplin. KMMO-MO is in Marshall, which isn’t very close to Joplin, so who? It’s not WJFK referring to Joppa, MD, since it was also heard with Don & Mike Show in progress. (SK-PA)

---

**LOGGINGS**

540 WETC NC Wendell-Zebulon 11/13 22:30 – SS talk program, initially with discussion about Sandanistas, ID only as “5-40 AM,” managed to catch a single “WETC” ID in EE at 0000, new! [RJ-NY]

560 WVOC SC Columbia – 11/7 01:05 – Caught ID at the end of the news, then Art Bell. First time with these calls. [RJ-NY]

600 WWFE FL Miami – 11/18 1930 – Huge signal with EE ID “WW... Miami,” “the FE” letters blocked. No mention of “Radio FE.” [JEK-MD]

690 KGGF KS Coffeyville – 11/12 21:51 – Women’s basketball game, ID. At night this frequency is lately dominated by Cuba. [RJ-NY]

- 11/5 17:12 – Ad for Quality Motors, followed by ID. Fair signal, mixing with WJOX at times. [RCP-IN]

720 WQCR NC Pisgah Forest – 11/14 16:57 – USA Radio News followed by North Carolina weather report, “Presently it’s 51 degrees is Pisgah Forest, time now 5:00.” Then into a country gospel song, followed by “You’re Listening to Anchor Broadcasting, Pisgah Forest.” Terrific signal way over usual WGN. [RCP-IN]

740 WPAQ NC Mount Airy – 11/20 16:32 – Traditional bluegrass music, including “Turkey Buzzard,” news for western North Carolina at 1630, call ID, new (finally!). [RJ-NY]

750 KRMG OK Tulsa – 11/15 18:00 – Fair, numerous call ID’s, area traffic report, all news. Haven’t heard for a while even with CBL gone. [JEK-MD]


760 CHCM NY Marytown – 11/5 18:00 – Strong signal with “Million Dollar Music” slogan. [RJ-NY]

760 WLCC FL Brandon – 11/19 17:50 – SS music, ad for Ybor City. My previous report ID’ed the station at WBDN, although I had only heard the “Mega” slogan. Now I notice in the new NRC Log that the calls have changed. I heard no calls at all on this one at the top of the hour. [RJ-NY]

770 WEW MO St. Louis – 11/5 1719 – Tentative, NOS stop. WABC until jumped over by WLWL. Stayed in, but didn’t rise up again. Only NOS station listed in the new log (SK-PA)

780 WLWL NC Rockingham – 11/15 1717-1800 – Heard DJ Randy at 1719, at 1800 sign-off. “WLWL studios are located at 275...” mostly heard occasionally during WABC fades, briefly over them at 1719. [SK-PA]

780 WZZX AL Lakeville – 11/17 19:00 – C&W format, ad for Yazoo mowers, local Alabama weather followed by several C&W songs back to back, often used slogan “Real Country” and mentioned 95.5 FM. No ID, but format and locale fits. Great signal until 1740 power cut, new for me. [RCP-IN]

790 WAEB PA Allentown – 11/5 05:54 – Fade up from under WSKO with “... on WAEB AM 7-30,” following an AgWay spot. Fading in and out until solid at 0700. Local news, traffic and morning chatter. (CW-VA)

810 WIB MO Kansas City – 11/5 1746-1750 – For the second night in a row, seemed to cut power at 1750. This time, however, I did hear an ad for Blue Cross/Blue Shield of Kansas. [RJ-NY]

860 WACB NC Taylorsville – 11/15 2108 – Local seat belt safety PSA, “Miss Guardian Angel Pageant” promo, good. [JEK-MD]
870 WKAR MI East Lansing - 11/13 1635 - Mention of NPR news followed by discussion of ethics in business and cheating in school, host of program was Forrest Boyd. Good signal with no sign of WWL. (RCP-IN)

WFLO VA Winchester - 11/14 1635 - Sign-off mentioning “870 kilocycles,” surprise to sunset and will return at 7 a.m. “This is Tommy!” speaking for the entire staff of WFLO in Farmville, Virginia. Thank you for listening and good night.” It took 5 years to positively ID them. (SK-FA)

940 WMAC GA Macon - 11/21 1706-1715 - Excellent way atop channel with numerous station promos using “News-Talk 9-40” slogan, one call letter ID into Ken Hamblin Show at 1707. Heard on car radio while at local laundromat! An hour later the channel belonged to new CKNN Montreal. (MD-MA)

950 WCWS MS Houston - 11/16 1730 - Booming in atop all with GOS, ID. (RJE-PA)

960 WGOV GA Valdosta - 11/18 1900 - The word’s back! It’s Thursday, so who else but WGOV with UCRAF, mixing with Cuba. (JEK-MD)

970 WSPA SC Spartanburg - 11/11 1717 - Good with calls, mention of an organization that wouldn’t come on the air with them. Sports format. (JEK-MD)

980 WFIR VA Roanoke - 11/21 1840 - Strong with Redskins football coverage, ad for Virginia state lottery, ID. (HJ-PA)

990 WFSR KY Harlan - 11/14 1757 - Clear ID in a jumble of signals, almost like the only signal sent on 5 kW was the ID... what a change! Also legal ID at 2000. (JEK-MD)

1000 WESO MA Southbridge - 11/14 1806 - Presumed with C&W, “New England Country” slogans, good but couldn’t pull out an ID. Only one that fits. (JEK-MD)

1010 WFAC OH Ashubula - 11/16 2104 - “Right now, it’s 34 degrees at WFAL, AM 97.” Then OLD. Alone, never heard at night before. (SK-PA)

1020 WWTO WV Pineville - 11/14 1756 - Fair, full sign-off announcement, seldom heard. (JEK-MD)

1030 WAAA NC Winston-Salem - Date? Time? - UC music, ID. Poor with various QRM, “Rainbow 980 Triple A” slogan. (JEK-MD)


1050 WWGP NC Sanford - 10/30 1744 - Wolfpack vs. Georgia Tech football game, “WWGP America’s best country 10-50,” strong in WKDL null. (CW-VA)

1060 WADC WV Parkersburg - 10/30 1735 - In null of very strong SS local WKDL, “WADC, we’re your original hits station,” into “Ebb Tide” (CW-VA)

1070 WAPI AL Birmingham - 11/15 1718 - Sudden fade up from under WFLI with SID “W- A-P-I Birmingham,” then lost in clutter. (CW-VA)

1080 KNX CA Los Angeles - 11/16 0535 - News story about NFL football player shot by San Diego police, female voice saying “KNX news time is 12:54,” very steady way under local WIBC. This represents my farthest logging thus far this season. (RCP-IN)

1090 WSCP NY Sandy Creek-Pulaski - 11/10 1600 - Presumed, fading up out of the jumble with two men discussing an upcoming Patsy Cline tribute show and the fact that it had been moved from another location into Oswego County, where both these cities are located. Into a series of Patsy Cline numbers. (CW-VA)

1100 WGOS NC High Point - 11/18 1552 - Fading up under WFLI with “Join us here at WGOS 10-70 every afternoon,” C&W with “It’s just a Matter of Time” and Patsy Cline’s rendition of “Faded Love,” weak fading in and out. (CW-VA)

1110 WHYZ SC Sans Souci - 11/20 1956 - Presumed, fading up under WIBC with ad for local lawn service, area code matches that for WHYZ as listed in the Logbook. (CW-VA)

1120 KENR TX Houston - 11/20 1747 - Tentative under a dominant WIBC with Indiana Pacers basketball, WSCP signed off for the day, in null with a non-native EE speaker delivering commentary over a background of ethnic music that sounded Middle-Eastern. Lost to KYW-1060 splatter after several minutes. (KDN-CA)

1130 CBA NB Moncton - 11/18 1558 - Radio drama from CBC One, extensive weather for separate Maritime Provinces, ID. Clear despite very strong auroral conditions. (JEK-MD)

1140 CHOK ON Sarnia - 11/20 2004 - Dominant with hockey game, “Home Town 10-70, Good game with no sign of WNL. (RCP-IN)
News from Scott Fybus's "Northeast Radio Watch," used by permission:

WMEX-1069-MA is testing the 40 kW daytime transmitter, which it expects to put on the air in regular service in January. WBZY-1200-PA is switching formats with co-owned WKST-1280; WBZY takes OLD and WKST will now be TLK. WARE-1250-MA has not finished switching to the SS format; the former OLD format and dead air alternating for now. WIPS-1250-NY has joined the "Radio Lake Placid" network with WIRD-1290, WGR-102.3 and WLWP-105.5. WILD-1270-NY has relocated from its Grand Island studio, transmitter site to 225 Delaware Avenue in Buffalo. WRTK-1390-OH will be exchanging calls and formats with WNOI-1540. WXXS-1430-MA has returned to satellite standards in morning drive; the former Bloomberg morning show has moved to WBNW-1120 and WPLM-1390.

ADDRESS UPDATES

1360 WCHL NC Chapel Hill - Address in new Log is no longer valid. (SK-PA)

REPORTERS

MB-IN Mark Burns Terre Haute - R8, Kiwa loop, 80' LW
MD-MA Marc De Lorenzo Auburndale - NRD-525, Quantum loop
RJE-PA Russ Edmunds Blue Bell - Car radio, whip
BF-IL Barry Finkel Chicago - UniD help
HJ-PA Harry Hayes Wilkes-Barre - TransOceanic, Kiwa pocket loop
SK-PA Steve Kennedy Coal Township - Superadio III
JEK-MD Joe Kureth Uniontown - SW8, 90' NE LW
GM-VA Greg Myers Ridgefield - Greenwood - R8A, Quantum loop
RCP-IN Robert Pote Rochester - R8, Radio West loop
JR-IN Jim Renfrew Fort Wayne - UniD help
BT-IN Blaine Thompson Woodbridge - R8B, Kiwa loop, ICF-7600G
CW-VA Chuck Woodbridge - R8B, Kiwa loop, ICF-7600G
PLEASE NOTE: my new e-mail address: <renfrewid@locanet.com>. The old address is no longer working.

Well, the 690 free-for-all is over. Tonight, NOV 23 at 0157, I tuned into a promotional tape loop for "Info Six Quatre-Vingt Dix, La Radio de Nouvelles en Montreal". Looking back, since JAN 23 when CBF went off the air, I've had some good ones: R. Recuerdos, Bogotá (letter sent); R. Progreso/R. Reloj, Cuba (letter sent); WAZAF-VA (now verified), WOKV-FL (now verified), WPHE-PA; WXIO-AL, KFXN-MN (new, verified); KGKP-KS (new, verified); WELY-WY (now verified); WTIX-LA (new, verified); CB-UC (new, verified); Caribbean Beacon, Anguilla (now verified), XEN-DF (new, letter sent); XEMA-ZC (new, letter sent); and finally Info 690-QP. Saturday night/Sunday morning was a last gasp listening marathon, starting up at 0903 UTC, and I was rewarded with XEMA as a final new one. I won't soon duplicate that final listening experience, with Bogotá, Mexico City and Fresnullos all coming in strong with each spin of the loop. Curiously, I only had TA signals once on 684 and 693 back in March.

A footnote: on NOV 22, the Caracas station was not the only one not to go out late to try for some distant receptions here. I noticed that the new 940 station is on the air, too, with what seems to be an English language parallel to the 690 station, identifying itself as "940 News". This frequency was less rewarding to me here in Rochester due to my local station on 950.

Y2K Department: I heard Harold Camping on a Family Radio call-in program debunking in detail the idea that the world was created by God in 4004 BC, as some creationists have claimed. I almost thought that Camping had embraced evolution, but then his follow-up statement was that the earth was created 13,000 years ago instead (which I am sure is important news to some of the millions of years old fossils!). Camping did make one point I agreed with: anyone who thinks that God will do something dramatic to end the second millennium should look back to the year 1993, because most Biblical scholars have determined that Jesus was born around 7 BC, not the year zero. This has been determined because the known dates of historical King Herod would have had to have happened earlier than Year Zero. Well, if you missed the end of the second millennium seven years ago, you have only nine hundred ninety-three years until the next opportunity. Hopefully, 690 will be open to us for another football season before that long!

INTERNATIONAL DX

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

12

Jim Renfrew
JimRenfrew@delpdi.com

61 Wilcox Street
Rochester, NY 14607-3832

DX Digest

13

real damage done. We took home the lanterns, sleeping bags, heaters, etc., so if the return they will have nothing to use. This is the first time in 10 years we ever had a problem so I guess we were due. After cleaning up we put our some wires and settled into DX'ing. As you see some good stuff heard especially the 531 Faroe islands station and 610 CHTM. Never though we would hear this one as it often fades out 25 or 30 miles out of Thompson on some days. I hope the season continues to be good: will go out again after Christmas and put on new lock on the bus. Such is life of a DX'er in the Great White North.

PAN-AMERICAN DX

690 MEXICO XEMA Fresnullo, NOV 19 0913 - heard with "oomphah" music, and numerous ID's as "MA", under/over XEN; new. [Renfrew-NY]

690 MEXICO XEN Ondas del Lago, NOV 22 0745 - heard ID in Info 690 null, strong enough that I wonder if Montreal is using reduced power at this time. [Renfrew-NY]

740 UNID, NOV 14 0055 - Lots of Spanish talk about Canon and Radio Formula. [Manitoba-DX]

840 UNID, NOV 14 0117 - Mexican music and Spanish talk. [Manitoba-DX]

880 MEXICO R. Caribe, Cancun YC, NOV 15 0620 - I finally replayed the tape of this unidentified reception from last week, and heard a clear ID as "Radio Caribe ... La Mexicana ... Cinco mil wats de potencia", just before the Mexican anthem. This sign-off was heard at 0620, not 0600 as listed. Good at times in CJBC's null. A new one, and a first from Yucatan! [Renfrew-NY]

880 MEXICO XEPNK Los Mochis SL, NOV 22 0755 - with stereo in null of KRVN with woman announcing in slick ID and end effects "Ocho Ochenta XEPNK" and then "¡Más vale mofos que de los". [Unidentified]

1220 MEXICO XEB Mexico, DF, Oct 28 0233 - Program featuring the life and times of Armando Manantero, with several of his songs played. Nice ID at 0259-3030 "XEB, La Grande de Mexico, 1220 de amplitud modulada con cien mil wats de potencia, canal libre internacional, transmitiendo desde Mayorgas 83, Colonia Xoco, Codigo Postal 03330, Mexico, Distrito Federal, Mexico. Una estacion del Instituto Mexicano de la Radio". Also gave a web page, partially copied: <www.???.com/IMER/XEB.html>. -DIO [Renfrew-NY]

1290 MEXICO XEBN San Quentin BCN, NOV 14 0200 - with legal ID and ad mentioning futbol; new. [Renfrew-AZ]

1410 MEXICO XEAS Nuevo Laredo, TAM, NOV 16 0400 with SS ID given 4 times then "Mambo #5" by Lou Bega. [Danneskjold-AZ]

1420 MEXICO XEXX Tijuana BCN, NOV 14 0145 - with phone in talk and ID "Doble Equis"; new. [Danneskjold-AZ]

1530 CUBA Radio Moron, Moron, NOV 14 0042 - fair signals with talk of Cuba. [Manitoba-DX]

1630 MEXICO XEUT Tijuana, BCN, Nov 8 0100 - with legal ID, "Esto es Radio Universidad, de la Universidad Autonoma de Baja California, 1630 kHz de amplitud modulada. XEUT transmisioniendo con diez mil wats de potencia. Oficinas, estudios, y planta de transmisiones en la Universidad Autonoma, Calzada la Unidad Universitaria, Colonia Xoco, Codigo Postal 03330, Mexico," then announcements of UABC events, PSA, & a poem by Oscar Bonaparte. Signed off later at usual time (0230). Very good signal on top of usual dominant KCJJ. [Wilkins-CO]

INTERNATIONAL NEWS

CLANDESTINE: An unknown transmitter relaying AFN (Armed Forces Network, USA) heard last night (NOV 13/14) by me here in the middle of Europe on 1503 kHz. Sport (game) programming / AFN 873, 1485. The signal was very strong at night - 59 +20 dB, almost no fading. In the morning (NOV 14) there was still a strong signal at 0640 UTC, strong in peaks but with deep fade outs. Then within ca. 10 minutes (0650) the station faded out completely! It returned briefly with a very weak signal at 0658 UTC but faded out again within less than a minute. At that time there were the following stations audible on the frequency: 1503.00 Radio Crna Gora (Monte Negro) - several ID's; 1503.04 Radiotelevizija Zavidovitchi (Bosnia Heregova) - news at 0700, ID at 0715. Although their signals were quite weak, fading in and out, I do not think that AFN was relayed by Zavidovitchi (although some SFOR or foreign signals are relayed by this site). At one moment there were 3 signals audible - 2 stations speaking Serbo/Croat and the AFN. It was the closest I have ever been to these stations.
is independent of those mentioned and that it broadcasts from a site situated more easterly than (former) Yugoslavia. By the way, I have not noted such strong signal on 1503 kHz before. I would like to mention something else - and it has nothing to do with the AFN - one phenomenon for which I like the MW band is that the signal can be very strong when the sun is active. In this case, the signal was strong for a period of about 30 minutes. The station was the National Broadcasting Service (NBS) from Zagreb, Croatia. I have heard the station from various locations around the world, including the United States, Australia, and parts of Europe. The station is broadcasting on 1503 kHz, and the signal is very strong during these periods. Therefore, I believe that the signal is being transmitted from a site situated more easterly than (former) Yugoslavia.

So I would bet for Macedonia or Albania. Or a high power transmitter from a more easterly country like Turkey or one of the Arab countries. The transmitter is quite strong, it is strange, they are using this frequency where two other stations from the former Yugoslavia are broadcasting. Podgorica (Montenegro) has a strong signal on 1503 kHz, and Novi Sad (Serbia) has a strong signal on 1501 kHz. However, I have not been able to determine if the signal is coming from a site situated more easterly than (former) Yugoslavia or if it is a local signal.

As the period during the 11-year solar cycle when the sun is most active, Solar Maximum brings an increased intensity of solar activity. During this period, the sun bursts at its seams with explosive power, and as it churns there is potential for electrical power surges, aurora borealis, and affects on power grids and Global Positioning System navigation and other systems. These events are all expected during the upcoming Solar Max period, which is expected to last about three years.

As the period during the 11-year solar cycle when the sun is most active, Solar Maximum brings an increased intensity of solar activity. During this period, the sun bursts at its seams with explosive power, and as it churns there is potential for electrical power surges, aurora borealis, and affects on power grids and Global Positioning System navigation and other systems. These events are all expected during the upcoming Solar Max period, which is expected to last about three years.

LITHUANIA: Extreme budget cuts have brought the state-financed Lietuvos Radijas into troubled waters. Among the consequences that are being discussed is a complete (though temporary) closure of LR2 and LR3 and a shutdown of all MW and SW transmitters. A final decision will be expected soon. [Bernd Trutenau, Lithuania, in FM DX WebList via Piet Peppers in Medium Wave Circle e-mail list]

Netherlands: Faulty generators are the reason that the Beat (location: 'MV Communicator', 940 Mayan Arriba, Avila (auad), 930 Santiago de Cuba (auad), 940 Central Espaiia 910 Bolondron, Matanzas, 930 La Jaiba, Matanzas, 930 Cienfuegos (ciudad), 930 Ciego de Sancti Spiritus, 760 Caney de las Mercedes, Granrna, 790 Pinar del Rio (ciudad), 760 Guantinamo, Granrna, 730 Isla de la Juventud, 730 Baracoa, Guantanamo, 730 Sancti Spiritus (ciudad), 910 Bolondron, Matanzas, 930 La Jaiba, Matanzas, 930 Cienfuegos (ciudad), 930 Ciego de Avila (ciudad), 930 Santiago de Cuba (ciudad), 940 Central Espaiia Republicana, Matanzas, 940 Mayari Arriba, Holguin, 940 Ciudad de la Habana, 960 Guantánamo, 1010 Jaboabo, Las Tunas, 1020 Cap Cana, [Note: This list includes a location for the 830 outlet that many have been inquiring about. Also, remember that some stations use the Reloj feed after 0600 UTC which are not listed here, e.g., 690 kHz. Our members in south Florida are encouraged to comment on the accuracy of this list - Jim]

CUBA: Osvaldo Rodriguez of Radio Reloj provides the following complete list of all Radio Reloj stations in Cuba in Conexion Digital #24: 570 Santa Clara (ciudad), Villa Clara, 610 Trinidad, Sancti Spiritus, 760 Carey de las Mercedes, Granma, 790 Pinar del Rio (ciudad), 830 Holguín, 850 Nueva Gerona, Isla de la Juventud, 860 Baracoa, Guantanamo, 870 Sancti Spiritus (ciudad), 910 Bolondron, Matanzas, 930 La Jaiba, Matanzas, 930 Cienfuegos (ciudad), 930 Ciego de Avila, Holguín, 940 Central Espaiia Republicana, Matanzas, 940 Mayari Arriba, Holguín, 940 Ciudad de la Habana, 960 Guantánamo, 1010 Jaboabo, Las Tunas, 1270 Cap Cana. [Note: This list includes a location for the 830 outlet that many have been inquiring about. Also, remember that some stations use the Reloj feed after 0600 UTC which are not listed here, e.g., 690 kHz. Our members in south Florida are encouraged to comment on the accuracy of this list - Jim]

Lithuania: Extreme budget cuts have brought the state-financed Lietuvos Radijas into troubled waters. Among the consequences that are being discussed is a complete (though temporary) closure of LR2 and LR3 and a shutdown of all MW and SW transmitters. A final decision will be expected soon. [Bernd Trutenau, Lithuania, in FM DX WebList via Piet Peppers in Medium Wave Circle e-mail list]

CUBA: Osvaldo Rodriguez of Radio Reloj provides the following complete list of all Radio Reloj stations in Cuba in Conexion Digital #24: 570 Santa Clara (ciudad), Villa Clara, 610 Trinidad, Sancti Spiritus, 760 Carey de las Mercedes, Granma, 790 Pinar del Rio (ciudad), 830 Holguín, 850 Nueva Gerona, Isla de la Juventud, 860 Baracoa, Guantanamo, 870 Sancti Spiritus (ciudad), 910 Bolondron, Matanzas, 930 La Jaiba, Matanzas, 930 Cienfuegos (ciudad), 930 Ciego de Avila, Holguín, 940 Central Espaiia Republicana, Matanzas, 940 Mayari Arriba, Holguín, 940 Ciudad de la Habana, 960 Guantánamo, 1010 Jaboabo, Las Tunas, 1270 Cap Cana. [Note: This list includes a location for the 830 outlet that many have been inquiring about. Also, remember that some stations use the Reloj feed after 0600 UTC which are not listed here, e.g., 690 kHz. Our members in south Florida are encouraged to comment on the accuracy of this list - Jim]
Thrill is Gone
The 'Local' Has Gone Out of Local Radio
By SUSAN KENT

After reading the letter by Perry Crabill that was in The Star last Friday, I feel I must write as well. First of all, I am saddened to hear that the "John & Joe Show" on WNTW is no longer a local show. Mr. Crabill states, "Somehow the thrill is gone," and this is how I feel. The way the show used to be, with the "Top Ten" countdown, the "John & Joe" theme song, and the "One Minute Letter" segment, was something special. When I listen to the show now, I can't help but feel disappointed.

OPEN FORUM

Some listeners have written in expressing their disappointment as well. One listener writes, "It's not the same without them." Another says, "I don't listen to the show anymore." Yet another states, "I used to love listening to them." These messages reflect the sentiment of many fans.

One of the main reasons for the show's demise is the lack of local content. The show used to feature local news, events, and interviews with local personalities. Now, the show is dominated by national news and celebrity interviews. A listener writes, "I wish they would bring back the 'Local' shows."

Another issue is the lack of interaction with the listeners. The show used to have a regular segment where John and Joe would take calls from listeners. Now, the show has replaced this with a " Ire PSA" segment, which many listeners feel is a waste of time. A listener comments, "I don't understand the point of these PSA's."

Many listeners are critical of the current co-hosts, saying they are not as engaging or knowledgeable as John and Joe. A listener writes, "They don't have the same chemistry." Another says, "I miss the old days when they were here."

In conclusion, the 'Local' shows have been a part of WNTW's identity, and their absence is felt by many listeners. They provided a sense of local flavor and community that is now missing from the show. I hope WNTW will consider bringing back the 'Local' shows and restoring the thrill that once made it a must-listen for many.

Perry Crabill sent in the above clipping from the Winchester (VA) Star, adding "Earlier this year WNTW-610 in Winchester canceled the "John & Joe" show," a local morning talk program starring John Schreiner and Joe Pasquali ... and replaced it with an inertial needle feed with no local significance. I wrote a letter of protest to Captain and the station manager and sent a copy to the Star. The publication of the latter prompted Susan Kent, a local listener, to respond with the enclosed article, which the newspaper published a few days later."
**International DX Achievements**

Paul Swearingen  
2840 SE Illinois Avenue  
Topeka, KS 66605-1427

*International DX veriefied taped totals listed by continents*

<table>
<thead>
<tr>
<th>Year</th>
<th>Started DX'er</th>
<th>Location</th>
<th>Last Update</th>
<th>Oceania</th>
<th>Asia</th>
<th>Europe</th>
<th>Foreign</th>
<th>NA</th>
<th>SA</th>
<th>Eur</th>
<th>Af</th>
<th>As</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>McIntosh, Eric</td>
<td>NZ</td>
<td>1965</td>
<td>255</td>
<td>65</td>
<td>686</td>
<td>635</td>
<td>301</td>
<td>2</td>
<td>45</td>
<td>4</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td>Della, Sam</td>
<td>Australia</td>
<td>1978</td>
<td>40</td>
<td>37</td>
<td>362</td>
<td>218</td>
<td>109</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>Geary, Kermitt</td>
<td>PA</td>
<td>2015</td>
<td>107</td>
<td>107</td>
<td>695</td>
<td>788</td>
<td>512</td>
<td>243</td>
<td>147</td>
<td>23</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1947</td>
<td>Luton, Belle</td>
<td>NC</td>
<td>1975</td>
<td>55</td>
<td>25</td>
<td>1069</td>
<td>142</td>
<td>102</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>Scrimgeour, Gray</td>
<td>CA/ON</td>
<td>1971</td>
<td>51</td>
<td>47</td>
<td>526</td>
<td>544</td>
<td>550</td>
<td>10</td>
<td>18</td>
<td>1</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td>Callahan, John</td>
<td>PA</td>
<td>1970</td>
<td>20</td>
<td>50</td>
<td>740</td>
<td>138</td>
<td>72</td>
<td>20</td>
<td>17</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>Dangerfield, Ben</td>
<td>CA</td>
<td>1999</td>
<td>8</td>
<td>127</td>
<td>431</td>
<td>552</td>
<td>85</td>
<td>44</td>
<td>154</td>
<td>55</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>1946</td>
<td>Moore, Ray</td>
<td>MA</td>
<td>1995</td>
<td>8</td>
<td>104</td>
<td>245</td>
<td>245</td>
<td>95</td>
<td>52</td>
<td>59</td>
<td>24</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>Steele, Sid</td>
<td>IL</td>
<td>1998</td>
<td>8</td>
<td>56</td>
<td>3101</td>
<td>259</td>
<td>104</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1953</td>
<td>Cooper, Street</td>
<td>NV/MA</td>
<td>1980</td>
<td>7</td>
<td>79</td>
<td>4102</td>
<td>760</td>
<td>528</td>
<td>151</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>Wesoowski, Ernie</td>
<td>NE</td>
<td>1998</td>
<td>7</td>
<td>24</td>
<td>2003</td>
<td>80</td>
<td>53</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>Keiper, Edward</td>
<td>OH</td>
<td>1996</td>
<td>6</td>
<td>76</td>
<td>2733</td>
<td>441</td>
<td>208</td>
<td>126</td>
<td>91</td>
<td>10</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>Karcher, Bob</td>
<td>MA/CA</td>
<td>1975</td>
<td>6</td>
<td>24</td>
<td>204</td>
<td>141</td>
<td>112</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Whiteman, Dave</td>
<td>ON</td>
<td>1994</td>
<td>6</td>
<td>13</td>
<td>1014</td>
<td>15</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1948</td>
<td>Merriman, Alan</td>
<td>VA</td>
<td>1994</td>
<td>3</td>
<td>93</td>
<td>1615</td>
<td>368</td>
<td>212</td>
<td>47</td>
<td>88</td>
<td>14</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1954</td>
<td>Siatt, Jerry</td>
<td>OH</td>
<td>1974</td>
<td>3</td>
<td>51</td>
<td>1209</td>
<td>194</td>
<td>134</td>
<td>34</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>Phillips, Dan</td>
<td>TN/AL</td>
<td>1974</td>
<td>3</td>
<td>26</td>
<td>567</td>
<td>40</td>
<td>21</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Heinen, Wayne</td>
<td>NY/OH</td>
<td>1996</td>
<td>2</td>
<td>38</td>
<td>1740</td>
<td>38</td>
<td>26</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1955</td>
<td>Palmer, Richard D.</td>
<td>IL</td>
<td>1995</td>
<td>2</td>
<td>53</td>
<td>822</td>
<td>94</td>
<td>77</td>
<td>4</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Reynolds, Bruce</td>
<td>MD</td>
<td>1977</td>
<td>2</td>
<td>28</td>
<td>1103</td>
<td>121</td>
<td>111</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>Wheeler, Frank</td>
<td>PA</td>
<td>1993</td>
<td>2</td>
<td>25</td>
<td>1885</td>
<td>78</td>
<td>68</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>Brune, Jesse R.</td>
<td>KY</td>
<td>1996</td>
<td>2</td>
<td>25</td>
<td>232</td>
<td>27</td>
<td>17</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>Holland, George R., Jr.</td>
<td>NY</td>
<td>1996</td>
<td>2</td>
<td>22</td>
<td>885</td>
<td>58</td>
<td>46</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1956</td>
<td>Falco, Jeff</td>
<td>ON</td>
<td>1999</td>
<td>2</td>
<td>22</td>
<td>1064</td>
<td>20</td>
<td>14</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>Kader, Jeff</td>
<td>MD</td>
<td>1969</td>
<td>2</td>
<td>12</td>
<td>705</td>
<td>41</td>
<td>39</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1952</td>
<td>Schiller, Ron</td>
<td>NJ</td>
<td>1999</td>
<td>2</td>
<td>86</td>
<td>2103</td>
<td>254</td>
<td>146</td>
<td>34</td>
<td>72</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td>Morris, Stan</td>
<td>MA</td>
<td>1993</td>
<td>1</td>
<td>84</td>
<td>3922</td>
<td>424</td>
<td>218</td>
<td>65</td>
<td>221</td>
<td>14</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td>Sampson, John</td>
<td>NJ</td>
<td>1965</td>
<td>1</td>
<td>54</td>
<td>445</td>
<td>72</td>
<td>23</td>
<td>6</td>
<td>38</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>Fries, Gary</td>
<td>AZ</td>
<td>1994</td>
<td>1</td>
<td>17</td>
<td>336</td>
<td>52</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>Rugg, Andy</td>
<td>QC</td>
<td>1999</td>
<td>0</td>
<td>71</td>
<td>1747</td>
<td>208</td>
<td>87</td>
<td>48</td>
<td>66</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Scuriela, John</td>
<td>NY</td>
<td>1998</td>
<td>0</td>
<td>54</td>
<td>464</td>
<td>64</td>
<td>24</td>
<td>24</td>
<td>19</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>Macom, Ron</td>
<td>CT</td>
<td>1999</td>
<td>0</td>
<td>49</td>
<td>1283</td>
<td>54</td>
<td>40</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>Edmunds, R. J. (taped)</td>
<td>NJ</td>
<td>1998</td>
<td>0</td>
<td>45</td>
<td>897</td>
<td>56</td>
<td>50</td>
<td>37</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>Rentworth, Jim</td>
<td>NY</td>
<td>1998</td>
<td>0</td>
<td>40</td>
<td>400</td>
<td>67</td>
<td>44</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>Dung, John</td>
<td>CT</td>
<td>1968</td>
<td>0</td>
<td>20</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td>Reza, Joseph</td>
<td>NJ</td>
<td>1965</td>
<td>0</td>
<td>24</td>
<td>738</td>
<td>35</td>
<td>19</td>
<td>4</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>Swearingen, Paul (taped)</td>
<td>KS</td>
<td>1999</td>
<td>0</td>
<td>22</td>
<td>772</td>
<td>95</td>
<td>43</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Hutton, Morris</td>
<td>ON/MB</td>
<td>1975</td>
<td>0</td>
<td>53</td>
<td>587</td>
<td>585</td>
<td>578</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>Wolfish, Niels</td>
<td>ON</td>
<td>1977</td>
<td>0</td>
<td>11</td>
<td>567</td>
<td>20</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>Bytheway, Phil</td>
<td>WA</td>
<td>1982</td>
<td>0</td>
<td>9</td>
<td>457</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>Lynch, Don</td>
<td>MA</td>
<td>1980</td>
<td>0</td>
<td>9</td>
<td>175</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>Edmunds, R. J. (paper)</td>
<td>NJ</td>
<td>1998</td>
<td>0</td>
<td>7</td>
<td>266</td>
<td>13</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Mount, Paul</td>
<td>ON</td>
<td>1995</td>
<td>0</td>
<td>6</td>
<td>230</td>
<td>25</td>
<td>22</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>Edmunds, R. J.</td>
<td>NY</td>
<td>1999</td>
<td>0</td>
<td>3</td>
<td>76</td>
<td>1</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>Bantek, Daniel Jr.</td>
<td>NE</td>
<td>1976</td>
<td>0</td>
<td>2</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Feel free to send in your updated totals in time for the next IDXA, which has a track record of showing up about every other month in DXN, but don't hold me to that. Remember, only taped or paper veries are counted, and mainland U.S. and Canadians are not included in NA totals. Include your best catch from each continent and all other totals when reporting. Our next column will feature South American totals.

---

**For NRC members only... Membership certificate, $1.00**

Suitable for framing; red and blue print on white stock. Suitable for framing. Order item CERT from NRC Publications; NY orders, please add sales tax.
Antenna Reference Manual Volume 2 - Order Item ARM2
Revised and updated in 1996. This manual is a compilation of numerous articles on the subject of antennas for medium wave DX'ers. Originally published between 1979 and 1981 in DX News. Some articles in this manual were previously available as reprints. Includes articles on air-core and ferrite core loops, antenna tuners for longwave and beverage antennas and phasing units for use with beverages and longwires. 8 1/2" x 11" bound book format.
Partial Contents:
A Good Loop is Easy (and Cheap) to Make
Antenna Coupler for Portable Receivers
AC Power Supply for FET Loop Amplifiers
Antenna Phasing FET Loop Amplifier with
Coaxial Output
Practical Phased Beverages
Floor Stand and Mounting Arrangements for Loops

NRC County Cross Reference - Order Item CCR
Compiled by Bill Hale. This handy reference has a complete list of counties in the USA and Canada. These are listed alphabetically and cross referenced by state. A great way to ID those unlabeled stations which mention a county name. Also a complete list of counties listed by state and/or province. A perfect reference for Amateurs too.

The Challenging Crystal Set - Ray Cole - Order Item CCS
This interesting booklet shows you how to build a "modern" crystal set, just like the one your parents or grandparents might have built and used many years ago. The 40-page booklet is full of illustrations and excellent diagrams.

The DXpedition Handbook - Shawn Axelrod - Order Item DPH
With features by Mark Connelly WA1ON. A complete guide to planning and participating in a DXpedition. Includes the results of the 1991 and 1992 DXpeditions. Recommended for those interested in exotic DX and DXpeditions on a budget. 8 1/2" x 11" bound book format.
Partial Contents:
NRC FET Al'tzantium Loop
Balanced FET Amplifier
NRC Two Foot Loop
Tips on Loop Construction
One Transformer Loop amplifier Balanced and Unbalanced Loops Direct Coupled Loops
A 'Collapsible' Loop for Travel
BCB DX'ers Beverage
Antenna Tuning Devices for Longwires on MW
Alternative Methods of Air Core Loop Amplification

Broadcasters' Guide to DX - Order Items EFG (English) - SFR (Spanish) - FFM (Finnish) - FMG (Dutch)
Tri-fold guides for use with reception reports explaining the broadcast band DX hobby, the history of the NRC and the importance of verification to DX'ers. Sold 20 per order.

Log Sheets - Order Items - LG (100 sheets) LGS (20 sheets)
Organize by frequency with 25 entries per sheet. Each page is perforated to add additional columns. Perforated for a three-ring binder. 8 1/2" x 11". Sold 110 sheets per pack. (Additional pages are available in 20 sheet packs).

Cassette Tapes (All tapes are high quality MUSIC GRADE cassettes)
Order Items C-90 = 10 C-90 cassettes C-10 = 10 C-10 cassettes Audio Cassette Magazines

After Dark Volume 6 - Order ADC6
Four 90-minute cassettes in a plastic album. A look at Talk Radio - 1340 kHz Travelog - Battle of the Century, the WJY story from radio's early days. Interviews on scanning and Longwave DX'ing. Sports on Radio, a history of radio and sports, plus lots more!

After Dark Volume 7 - Order ADC7
Four 90-minute cassettes in a plastic album. Stories of KMET Austin TX and WDFN Chicago IL. Pirate Radio in the U.S. Captain Flintstone is Grounded. International DX Report. Broadcast Pioneers by State and more

After Dark Volume 8
An interview with guitarist Les Paul by Mark Durenbergen. Air-checking as a hobby by Fred Vobbe. Internet phone scam information, and more!

After Dark Volume 9 - Order ADC9
The 1400 Travellog" by John Bowker. "Radio Bemis" - "Filling your Comments" - with the FCC "Sex and Deception". The Dr. Laura picture scandal. "Screening Calls" This article is about screening your telephone service, and was from Associates. "Selling of Sports" Ken Onysuch and more

After Dark Volume 10 - Order ADC10
A Visit to WODJ-120X About small market radio - "Radio from L.P.B." (Low Power Broadcasting Inc.)

After Dark Volumes 1, 2, 3, 4, and 5 are listed in the NRC Archived Publications List. Order reprint ZAL for more information.
Articles Reprints List

This list supersedes all previous lists and order forms, which should no longer be used. The number of pages in each article is indicated by ( ).

ANTENNAS

Many articles formerly in this section are in the Loop and Beverage Manuals.

A22 DESIGNING A TWO-WAY FM REPEATER FOR A BCB T. Holmes. If you're having trouble obtaining sharp nulls with a standard loop, this simple design may help. (1)

A3 VERSATILE LOOP WIRE ANTENNA COUPLER. R. Foxworth. How to get the maximum mount of signal from your longwire. (3)

A9 INTERESTING LOOP AND BEVERAGE. G.A. Nelson. How to make low-resistance ground connections for terminating a Beverage (2)

A14 ONE-BOX PLANNING UNIT. A. Jack Pejza. Results obtained at this Beverage site. (2)

A18 THE VERTICAL PICKUP PATTERN OF THE LW LOOP ANTENNA. G.A. Nelson. Information for those doing horizon blockage experiments with a loop antenna. (4)

A19 USING TWO ANTENNAS TO GENERATE ASYMMETRICAL RECEIVING PATTERN. M. Levinton. Shows a simple way to skew your loop's pattern to effect a null that will permit reception of a station impossible to receive on a figure-8 loop antenna by itself. Reprints A5 and A6 are a requirement for understanding this technique. (3)

A14 A NEW MEDICAL BREAKTHROUGH FOR LONGWAVE TA'S. C. Clayton. Instructions on construction plans. (10)

A18 REVIEW OF THE DYMEK DA-3 ANTENNA. Pete Taylor, with notes by R. J. Edmunds. Review of the DA-3 loop antenna. (4)

A16 MORE ON BEVERAGE ANTENNAS. Wes Boyd. Beverage antenna theory and application. (10)

A17 MORE FERRITE LOOP ANTENNAS INFO. More about ferrite loop antennas. (10)

A15 REVIEW OF THE MWT-1 FAMILY OF ANTENNA TUNERS. Mark Connelly. Construction article. (9)

A17 THE PHASE ONE PHASING UNIT. Gerry Thomas. Description of an improved phasing unit design that can be built or is available in kit form. (3)

A36 FLEXIBLE LONGWAVE COMBINED ANTENNA. P. Swain. "Sensing" antennas for OXing and direction finding. (3)

A35 SIMPLE PASSIVE LONGWIRE TUNER. Mark Connelly. A basic tuner that can eliminate tuning spurs caused by strong locals. (2)

A36 AMPLIFIED PHASED SHORTWIRE. Mark Connelly. Construction article. Utilizing an SM-2, phasing unit and short wire antenna. (8)

A40 THE KOVALSKI LOOP. Neal Perdue with comments from Paul Kovalski. A first-hand account of this ferrite core loop antenna. A non-technical review, with comparisons to the SM-2. (11)

A41 THE MWT-1 FAMILY OF ANTENNA TUNERS. Mark Connelly. Construction plans for the MWT-1, Mini MWT-1A, 1B and 1C antenna tuners. (2)

A43 RT-1 REMOTELY-TUNED ANTENNA TUNER. Mark Connelly. Description and construction plans. (10)

A44 THE MINI MWDX-3, A Simple, Effective Phasing Unit. Mark Connelly. Construction plans for a one-box phasing unit. Order also A55. (21)

A45 THE MWDX-4 FAMILY OF PHASING UNITS. Mark Connelly. Construction and use of two similar units. (25)

A46 WIND A COMPLETE-COVERAGE COIL FOR THE RADIO WEST LOOP. Fritz Mellberg. Eliminate the need to change coils during tuning of the entire MW band on this antenna. (1)

A47 TEST OF THE MITCHELL LEE LOOP AMPLIFIER. Mark Connelly. Low-current input, 3-transistor amplifier used with series tuned loops is detailed, along with improvement ideas. (6)

A48 YAD ANTECIA A GIZMO Jerry Starr. A simple-to-build antenna switching device. Will ground the antenna not in use while using the other; designed for 2 antennas and 1 receiver. (1)

A49 COMPUTER-AIDED ANTENNA TUNER DESIGN. Mark Connelly. Basic computer program determines which component values are used in your antenna tuner. Tuner schematics included. (7)

A50 IMPORTANT LOOP TUNER AND PHASER DESIGN CONSIDERATIONS ("Q" DEMYSTIFIED) Mark Connelly. Technical article. The importance of "Q", and a basic formula to find antenna tuner component values in light of the "Q" (7)

A51 THE MITCHELL LEE AMPLIFIER: TWO TUNER IMPLEMENTATIONS. Mark Connelly. Technical article. Tuner circuits using this amplifier. Reference also A47. (5)

A52 HOTRODDING THE MINI-MWDX-3 PHASING UNIT. Mark Connelly. Technical article. Improvements in operation and sturdiness of the Mini-MWDX-3. Requires reprint A44. (3)

A53 ECPRO-MWDX-4A LOOP VS WIRE PHASED. Mark Connelly. Technically Article. Construction Article. (11)

A56 LOOP-LONGWIRE COMBINED ANTENNA. P. Swain. "Sensing" antennas for OXing and direction finding. (3)

A57 MEDIUM WAVE, A PRACTICAL APPROACH. Graham Maynard. This is a consolidation of articles that were first published by the author in the Circle of England. Outlines the authors construction of his MW DX receiving set-up. (12)

A59 MWDX-5 PHASING UNIT. Mark Connelly. The latest the series of Phasing Units. Construction article. (11)

A63 MINI-MWDX-3, A SIMPLE PHASING UNIT. Mark Connelly Construction Article. Similar to the MWDX-5 but simpler. A61 recommended. (3)

A65 RIBBON CABLE LOOPS. Mark Connelly. A new loop concept. (5)

A67 QUANTUM LOOP Gerry Thomas & Mark Connelly. A new ferrite core loop. Reviewed and modified. (9)

A68 SUPER BOOSTER BAR. Gerry Thomas. For portable receivers. (2)

A70 PHASING LOOP TUNER. Mark Connelly. Construction article. Similar to the MWT-1, Mini MWT-1A, 1B and 1C antenna tuners. (26)

A71 REMOTELY-TUNED LOOP AND BEVERAGE. Mark Connelly (24)

A83 THE MWT-2 REGENERATIVE TUNER Mark Connelly (6)

A83 THE MWT-2 REGENERATIVE TUNER. Mark Connelly. A complete review of the MWT-2. (2)

A84 THE DCP-1 ZONE REGENERATIVE TUNER by Mark Connelly (9)

A85 DL-1 DELAY-LINE PHASING UNIT by Mark Connelly (12)

A86 THE MWT-3 REGENERATIVE TUNER by Mark Connelly (12)

A87 DL-2 DELAY LINE PHASING UNIT by Mark Connelly (10)

A89 TWO REMOTELY ACTIVE ANTENNAS - RL-1 REMOTELY TUNED LOOP and RL-2 REMOTELY TUNED WHIP by Mark Connelly (15)

A92 VIDEOGRAPHIC NOISE REDUCING TUNER DESIGN THE MWT-35 by Bruce Conti (15)

A92 TEST REPORT ON R-4 ANTENNA NOISE CANCELLER by Mark Connelly (3)

A95 LOOP SHOWDOWN KIWA VS RSM-105 by Mark Connelly (10)

A100 B-B廣 BROADBAND LOOP ANTENNA & BA-1 AMPLIFIER by Mark Connelly: Construction, details, and use (11)

DOMESTIC DX

D2 IT TAKES TWO TO TALK...PLUS HELPFUL HINTS - Merle Sullivan and R. Schiller respectively. Article on the station's attitude toward reception reports and veteran DXer Schiller's tips on improving yours. (3)

D3 THE DX VIEW FROM STATION'S VIEW-POINT. Bill Croghan. Hints from a broadcaster arranging DX tests and obtaining more verifiable DX results. (2)

D4 WHAT IS A PRE-SUNRISE AUTHORIZATION? R. J. Edmunds. An explanation of the process. (3)

D5 LONG DISTANCE RECEIPT OF DX TESTS. F. Dailey. Proven techniques. (1)

D6 MAKING THE BEST OUT OF PREPAREDNESS. E. L. Cunnings. The verer collector's last resort, with numerous samples. (3)

D7 THE DSP SITUATION J. Starr. A look at this problem from the broadcaster's side of the fence. (2)

D12 BE FROM THE TWILIGHT Zone. F. Sullivan. Sunrise and Sunset Skip explained (4)

D11 GRAVEYARD DX, R. Foxworth, with additions by M. Levinton. DX'ing the local channel with a good SWR. (2)

D12 CANADIAN FAMILY LIFE...IT'S TWINS. J. Oldfield. Explains station "families" in Canada. List of Station groupings as of 1980 (3)

(Continued on page twenty-six)
Using the Pull Out Order blank...

This order blank is designed to be removed by pulling it out from the center of this issue of DX News; you will receive a replacement copy of these pages when we ship your purchases. If you have any questions, please send them to the NRC Publications Center, or we will happily answer your inquiry by phone at 315-387-3583. No collect calls, please.

Sub-Total From Product Order Form ................................................................. $...
Sub-Total From Reprint Order Form ................................................................. $...
Total Product & Reprints .................................................................................. $...
New York State Residents Add State/Local Sales Tax ........................................ $...
(Applicable to Products & Reprints Only)
Sub-Total From Subscription Order Form ......................................................... $...
Total Order Total ................................................................................................ $...

Your Name:...........................................................................................................
Address: .............................................................................................................
City/State: .......................................................................................................... ZIP/Postal Code: ..........................................................

Make out check or money order to: National Radio Club. DO NOT SEND CASH!
(A $15.00 bank fee will be added to any returned checks.) Please allow 4-6 weeks for processing of your order.
Mail your order to: National Radio Club - Publications Center, P.O. Box 164 - Mannsville, NY 13661-0164

Reprint Order Form

REPRINT rates are 15 cents per page for USA and Canada MEMBERS; 20 cents for USA and Canada NON-Members.

Page numbers are given after the code number. Reprints Less than US $2.00 add 50 cents for handling.


Subtotal your pages above.
Place your totals here and carry the total amount to the Product order form...

NRC Products Order Form

U.S./Canadian Member discount prices in bold. List (Non-member) price in ().
All prices are in US $. Order Less than US$2.00 add 50c for postal costs.

ARL - NRC AM Radio Log to USA & Canada $16.95 ($22.95). Overseas airmail (to all) to Europe $24.00 Latin America $23.50 All Others $28.00
VSL - Verie Signers List - $0.75
FMA - FM Atlas - $17.95 ($21.99)
NFB - NRC Night Pattern Book - to USA & Canada $16.95 ($22.95). Overseas airmail (to all) to Europe $25.00 Latin America $24.00 All Others $28.00
SLM - Station Location Map Book 5th Edition $12.00 ($17.95)
NMB - Getting Started in MW DX-ing $5.75 ($10.95)
BAM - Beverage Antenna Design, Theory (TBA)
LAM - Loop Antenna Design & Theory $8.50 ($12.95)
ARM1 - Antenna Reference Manual Vol 1 $6.95 ($9.95)
ARM2 - Antenna Reference Manual Vol 2 $6.95 ($9.95)
CCS - Challenging Crystal Set $3.50 ($4.50)
CCR - NRC County Cross Reference $6.50 ($9.95)
DPH - The DXpedition Handbook $6.95 ($12.95)
SDP - Season of DXpeditions $8.95 ($10.95)
SSM - Sunrise/Sunset Maps $3.00 ($4.50)
MAP - Map of U.S. & Partial Canada - $5.00 ($10.00)
EGG - English Broadcaster's Guide to DX-20 $2.95 ($3.50)
SSG - Spanish Broadcaster's Guide to DX-20 $2.95 ($3.50)
FFG - French Broadcaster's Guide to FM DX-20 for $2.95 ($3.50)
FMG - Broadcaster's Guide to FM DX-20 for $2.95 ($3.50)
LG - Log Sheets - $110 for $7.50 ($8.50)
LGS - Log Sheets - $20 for $2.00 ($2.50)
ADC6 - After Dark 6 $9.50
ADC7 - After Dark 7 $9.50
ADC8 - After Dark 8 $9.50
ADC9 - After Dark 9 $9.50
ADC10 - After Dark 10 $9.50
LAB - 100 Custom Labels for $2.50
DCH - Challenging Crystal Set $3.50 ($4.50)
FMF - FM Atlas $23.50
SSM - SUNRISE/SUNSET Maps $3.00 ($4.50)
NRC - NRC Memership Certificate $1.00

Back Issues of DX Audio Service ea $3.00

Desired Issues:

STB - NRC Stationary - $100 sheets for $5.00
EERF - English Reception Report Forms - $50 for $5.00
SSR - Sample Form for Spanish Receptions - $0.50 each
FFRF - Sample Form for French Receptions - $0.50 each
CERT - NRC Membership Certificate - $1.00
ZAL - Published Archives List - $0.33

Sub-total for this page:

US/Canada orders Shipped BOOK RATE; Please allow 4 to 6 weeks for Delivery!
For Oversize Airmail Rates: To the Caribbean/Latin America add US$ 1.00 to all items under $5.00. Add 20% to all items over $5.00. To Europe add US$1.50 to all items under $5.00. Add 50% to all items over $5.00. All other areas Add US$ 2.00 to all items under $5.00. Add 40% to all items over $5.00. Only Priority Mail for ARL, NPB, and FMA; add US$2.00 to the listed price.
P17 TRANSPOAR DX RECEPTION. R. J. Edmunds. This technical article relates to the transpoar reception of stations from a distance, emphasizing Western Asian stations at sunset in North America. (27)

P18 OBSERVATIONS OF TRANS-ATLANTIC MW RADIO SIGNALS. H. A. W. Wood. The results of a lengthy survey of TA receptions made over a one-year period. (3)

P19 PROPAGATION AT MW FREQUENCIES. P. Sullivan. Discusses some aspects of the factors which control signal reception on the BCB. (6)

P20 FACTORS OF MW PROPAGATION. F. Dun-ning. Discussion of the nature of the MW propa- gation. (5)

P21 DOMESTIC PROPAGATION-ANSWERS TO FREQUENTLY ASKED QUESTIONS. R. J. Edmunds. A discussion on some of the propagation factors that affect domestic reception. (6)


P24 TERMINATOR TRANSIT MECHANIX. P. Sullivan. A method for calculating the strength of medium wave sky-sky waves at night. (9)

P25 KANGAROO CRYSTAL VACUUM TUBE IN BEARING DISTANCE COMPUTER PROGRAM. Mark Connelly. A "basic" computer program. (6)

P26 THE EFFECTS OF WEATHER ON THE IONOSPHERE. Jack Woods. A discussion on the effects of weather on MW propagation. (2)

P27 GROUND WAVE. John D. Bowker. A simple explanation of this term. (1)

P28 TRACKING THE 1971 SOLAR ECLIPSE BY RADIO. Ken Chatterton (2)

P29 RECEIVING EQUIPMENT AND TECHNIQUES.

Some articles previously in this section are available in "The Challenging Crystal Set".

R1 SPUTURIUS SIGNALS & SPUTURIUS SIGNALS REVISED. R. J. Edmunds and G. P. Nelson. Many DX’ers hear stations on frequencies where they don’t belong. Article describes causes and cures of spurious MW signals. (10)

R2 SINGLE SIDEBAND RECEPTION ON THE BCB WITH MECHANICAL FILTERS. G. P. Nelson. Few commercial receivers covering the MW band have a true SSB receiver. This article describes methods of using a receiver with MW interference — particularly in the presence of powerful local stations. Explanations and techniques are included for converting the ulterior for the ultimate in adjacent channel rejection. (21)

R3 SUBAURAL HETERODYNE ON THE MW BCB. G. P. Nelson. Details on a technique to permit the MW DX’er to detect and to add to his enjoyment. This is designed to count the number of stations on a channel. (6)

R4 THE TRACKING PROBLEM AND HOW TO CURE IT. G. P. Nelson and T. Holmes. Many excellent receivers are poorly designed for MW operation. This article describes one of the most common design faults and how to cure it. (4)

R5 ELECTRONIC VERNIER TUNING. R. Moore. Detailed instructions on how to fit a variactor to a MW receiver to provide fine bandspread. (7)

R6 RECEIVER/ACCESSORY INTERFACES MADE SIMPLE AND CHEAP. R. J. Edmunds A discussion on the methods of interfacing DX equipment. (7)

R7 UP THE CARRIER. W. Bailey. Dig the weak DX out of the dust with this form of exalted carrier reception. (1)

R8 PRECISION FREQUENCY MEASUREMENT. R. Schatz. How to use the frequency counter. (9)

R9 SINGLE SIDEBAND RECEIVING ADAP- TERS. T. Sundstrom. How to sharpen your receiver’s performance by using a B & W 370 receiving adapter. (2)

R10 REVIEW OF THE AUTEX Q-BOX. T. Sundstrom. Describes the uses of this noise filtering device and its applications in MWDX. (4)

R11 BUILD YOUR OWN AUDIO FILTERS. P. Sullivan. A technical theory and construction article on inexpensive homebrew audio filters. (7)

R12 A BRIEF REVIEW OF THE AUTEX QF-1. T. Sundstrom. A no-technical article. A brief review of this noise and interference filter. (2)

R13 A FREQUENCY COUNTER FOR RECEIVER TUNING. W. Bailey. A very thorough run- on digital readouts and what to look for in various models. Discusses technical theory and provides circuitry to enable the experimenter to build a counter for use as a “digital dial”. (12)

R14 THE LYNODYNE CRYSTAL WIRELESS RECEIVER. Dallas Lankford. A discussion of the application of vintage crystal radio in the construction plans for a simple receiver, offered as a springboard for the DX enthusiast. (3)

R15 DIVERSITY RECEPTION. C. Huntington. Using more than one antenna and receiver in an ef- fort to eliminate interference and improve on one frequency. (1)

R16 TIPS ON REMOTE TAPING. R. J. Edmunds. This article explains several methods you can use to turn your receiver and recorder on while you are otherwise occupied. (2)

R17 STRONG SIGNAL HANDLING. C. Huntington. This technical article explains that sensitivity and selectivity are not the only, nor the most important, considerations in a receiver. (6)

R18 RECORDING HINTS. R. Arborgast. A complete step-by-step procedure is outlined for adding a tape jack to nearly any receiver. (4)

R19 TAPE RECORDING HINTS. Connelly. How to use the frequency counter. (6)

R20 ADD A TUNING METER TO YOUR RE- CEIVER. Ray Cole. Shows how to add a meter to your receiver for accurate tuning. (1)

R21 R71A SPEAKER MODIFICATION. H. F. Dewis. Shows how to modify the right side of your receiver to provide a "new" one. (3)

R22 TUBE ALIGNMENT WITHOUT A VOL- TAGE STABILITY. Dallas Lankford. A detailed review. (3)

R23 SELECTIVITY VS. FIDELITY FOR THE DOMESTIC DX’ER. R. Schatz. A description of these and other considerations and how to choose among them. (3)

R24 MULTIPLE USE OF THE HQ-180 SERIES RECEIVERS. Dallas Lankford. A description of the use of these receivers in a series of projects. (3)

R25 THE HQ-180 SERIES RECEIVERS SENSITIVITY TEST. Dallas Lankford. A simple diagnostic test. (2)

R26 SURPLUS MECHANICAL FILTERS. R. Schatz. How to use the frequency counter. (6)

R27 ADD A TUNING METER TO YOUR RE- CEIVER. R. Arborgast. Shows how to add a meter to your receiver for accurate tuning. (1)

R28 THE R-390A ON LONGWAVE. Craig Healy. A simple and inexpensive method to modify the R-390A effective amplifier for loops to tune below 500 KHz. (2)

R29 THE R-390A TOCAST AMPLIFIER. Dallas Lankford. A description of a device which is a non-technical review of this noise and interference filter. (2)

R30 ADD A TUNING METER TO YOUR RE- CEIVER. R. Arborgast. Shows how to add a meter to your receiver for accurate tuning. (1)

R31 R71A SPEAKER MODIFICATION. H. F. Dewis. Shows how to modify the right side of your receiver to provide a "new" one. (3)

R32 R390A/UKR PTO ALIGNMENT. Dallas Lankford. A description of the adjustment procedure for a particular receiver. (4)

R33 THE R-390A IN THE WORLD’S BEST RE- CEIVER. G. S. Mayard. This review gets into the details of another fine DX receiver. Technical. (6)

R34 THE R-390A IN THE WORLD’S BEST RE- CEIVER. G. S. Mayard. This review gets into the details of another fine DX receiver. Technical. (6)

R35 THE R-390A ON LONGWAVE. Craig Healy. A simple and inexpensive method to modify the R-390A effective amplifier for loops to tune below 500 KHz. (2)

R36 THE R-390A TOCAST AMPLIFIER. Dallas Lankford. A description of a device which is a non-technical review of this noise and interference filter. (2)

R37 ADD A TUNING METER TO YOUR RE- CEIVER. R. Arborgast. Shows how to add a meter to your receiver for accurate tuning. (1)

R38 THE R-390A ON LONGWAVE. Craig Healy. A simple and inexpensive method to modify the R-390A effective amplifier for loops to tune below 500 KHz. (2)
The text appears to be a collection of various topics, including electronic equipment reviews, receiver comparisons, and receiver modifications. There are also some personal reflections and contributions from different authors. For example, there is a mention of "Target DX" by Dave Braun, which seems to be a column or segment of a publication discussing DXing (distance listening) and related equipment.

Here is a portion of the text as a plain text representation:

```
R85 R-500 MODIFICATIONS. Eric Rodok via (7)
R86 R-388 BAND 1 MOD AND AGC MOD. Dallas Lankford. Increases MW sensitivity.
R87 R-388 BAND 1 MOD. Dallas Lankford. Improves the audio quality of your R-390A.
R88 R-390A AUDIO OUTPUT IMPEDANCE MODIFICATIONS. Dallas Lankford.
R89 R-390A FILTERS FOR THE HQ-180. Dallas Lankford. A summary of the full line of
R90 IMPROVEMENTS TO REGENERATIVE RECEIVERS. Dallas Lankford. The author explores
R91 R-390A MORE ON IMPROVING IMAGE REJECTION. Dallas Lankford (2)
```

Unfortunately, the full context of the document is not fully visible or legible in the provided snippet. If you need specific information or a particular section, please let me know, and I can provide further details or analysis based on the visible parts.
Thomas Giella: Hi. Domestic broadcast band skywave signals have to travel through the lowest ionized layer called the D layer, before it can be refracted from the E layer. During the high point of a sunspot cycle such as we are experiencing, the D layer is frequently over-ionized by solar flare activity and is detrimental to DX by absorption. The D layer is present in varying strengths around the clock, despite prevailing and inaccurate information passed around in books for decades. The D layer is least detrimental during winter due to shorter days and also during the bottom of a sunspot cycle, as radiation from the Sun creates its ionization. The Canadian stations you are hearing during the day are most probably on groundwave, as the Prairies of the High Plains have very good soil conductivity. Through I have heard skywave propagation at local nonsense during the winter at the bottom of the sunspot cycle, as the D layer is at it's daytime weakest.

Bruce Conti <BACONTI@aol.com>: In response to Nate's question regarding the sunspot cycle, Thomas said that the peak of a sunspot cycle is detrimental to DX. I disagree. Although the auroral conditions due to the peak of a sunspot cycle can shut down northern DX, low angle DX from the south is enhanced considerably. So I guess it depends upon one's perspective. I look forward to auroral conditions providing DX that wouldn't normally be heard.

Thomas Giella: I was speaking in terms of E layer propagation from point A to B being absorbed by the D layer during Auroral conditions for domestic and northern paths. But from your perspective mentioned above, I'm in total agreement with you friend. Thank the propagation God's for auroral propagation, so we can log the Central and South American stations! It's ionization. The Canadian stations you are hearing during the day are most probably on groundwave, as the Prairies of the High Plains have very good soil conductivity. Through I have heard skywave propagation at local nonsense during the winter at the bottom of the sunspot cycle, as the D layer is at it's daytime weakest.

Bill Hale: Nate Homier, welcome aboard. During the winter I get Calgary on 1060 and 1140 at noon while driving around in the car; at home in NE Tacoma, WA, I just get 1140 (too close to KDLE-1050 to get 1060). This is fairly normal. I also get KBKB-1530 Sacramentobayarea, and KDLE-1050. Anything that is aural, you should not hear at all during the day. A DX layer is present during anauroral event. It's ionization. The Canadian stations you are hearing during the day are most probably on groundwave, as the Prairies of the High Plains have very good soil conductivity. Through I have heard skywave propagation at local nonsense during the winter at the bottom of the sunspot cycle, as the D layer is at it's daytime weakest.
that isn't a good use of the public airwaves!" Don't get me going on this topic. We could be here a long time. "I-4 runs from Tampa to Daytona Beach."

I traveled it often when I was stationed in Orlando while in the Navy. My concern about traffic on Interstate 4 has diminished considerably since I moved to Arizona. Let me know if there are any ID's you need that Skip hasn't sent in from here. I will see what I can do for you. I travel the state quite a bit and could probably get you something he hasn't sent in."

"Still, it's what I'd use if I really cared about I-4 traffic! I'll just call Ragnar on my cell phone if I need an update on traffic since WTHR comes into Arizona so well... and I usually drive at night! :-)" Just keep it before 10PM AZ time."

Thomas Giella: "Such is life and propagational effects. I probably live somewhere near the first hop of the signal from WTHR." To be annoyingly and technically correct and precise, the maximum single hop distance for a broadcast band signal off of the E layer is approximately 900-1150 miles, so Mesa, AZ, is at/near the second hop. I think Ragnar is using cacti as ground rods to overcome that poor desert soil conductivity, yuca yuca (laugh)!"

Ragnar Danneskjold: Well, you learn something every day around this place. Your sense of humor is similar to my own dear wife's. She and her sense of humor is the reason I have few hairs on the top of my noggin. I am pretty amazed that I get to hear I-4 on the fours out here. I am interested in seeing if I can pull in WMIB and test their this evening.

This came about as a result of another of Ragnar's logs:

David Hegg <NEMCO99@Aol.com>: Ragnar — You mentioned that you logged KTNN — Window Rock, AZ. Have you tried to get verification from them??? and did they respond?? I think this station is sponsored by The Navajo Nation and I sent them a tape and written report last year with no reply... I just wondered if you have any confirmation from them?? The station is interesting in that they direct their programming toward the Navajo Nation... if I understand correctly. What do you know about KTNN???

Ragnar Danneskjold: Sure did. Never tried for a while. I just tape what I hear. I have it on hand for proof. I do know that if you go to the station they are very nice there and will treat you very well. The station is, indeed, the Navajo National government. I don't know why they didn't respond, but I can tell you that the people I met there are very nice to visitors and I know other people who went to the station will attest to the same. About 40% of the programming is in Navajo. The inclusion of Phoenix Suns basketball in the Diné [Navajo] language is new. They have had the Suns since they started but this year is the first year for Navajo [Dinéh] language announcers. The woman who does the games has been on KTNN for quite a while. I enjoy waking up and they have their Navajo religious chants on in the morning. The Navajo call themselves the Dinéh People. I believe the name Navajo came from what the Apaches called them. There is an Apache station on 1330 out here as well. The last time I was close enough they were in AM stereo. They do know only their competition is KGAK in Gallup, NM also in the Navajo National lands. KGAK announces "All Navajo, All the time" in its required EE To ID. That is the ONLY EE that is on that station. Believe KTNN is the only 50 kW night time station in Arizona.

Blake Lawrence <blake@deejay.com>: Er, if KMIK-1580 isn't, they sure sound like it here in Northern California. Tight pattern or not.

Bill Hale: 1580 is, indeed, 50 kW at night. Their pattern shoots 400,000 Watts ERP at 238 degrees from Tempe. Which, I imagine, makes reception a snap in Hawaii. :-)"

Ragnar Danneskjold: Duh! I forgot about them and I only live 2 miles away...

Doug Smith <w9uv@bellsouth.net>: On their auction site, the FCC has announced a closed broadcast auction for AM facilities changes. This involves five stations on 1190 which have filed for technical changes made possible by WOWO's reduction in power. The stations in question are:

- KPHN Kansas City, MO (application for 4200/4000 U2?)
- WVNWC Sun Prairie, WI
- KEX Portland, OR
- KDAO Marshalltown, IA
- KKOJ Jackson, MN

Since WOWO's daytime facilities haven't changed, I would presume the other four changes involve only changes in nighttime facilities. KEX is the only station of the batch that has night authorization right now - so the other three have proposed to add night facilities. At least some of these applications are mutually exclusive. I guess whoever wins the auction gets the right to implement what they applied for, and then everybody else can try again with whatever remains possible after the first winner gets their way... (seems to me it's probably a safe bet KEX will win Round 1.)

Russ Edmunds: Following up on my prior post on this subject, I wonder how changes such as these (and others, no doubt, to follow) should be categorized? Are there any differences in the facilities granted by CRCT to the new occupants of 690 & 940 from what the prior occupants had? Will the new occupants actually use the same equipment? If the answers are no & yes, then I guess these could be construed as simple call changes. If the answer to the first is yes, then the second has to be no, and then these are either new stations or frequency changes, which to me amount to the same thing. By the way, I don't either want or intend to instigate a general discussion about how different people count or don't count call changes! And finally, will the facilities vacated by the new occupants of 690 & 940 'go away' or be reallocated? This has little or no bearing on the prior discussion, but is something that I, and probably others, don't know now, but would want to. Thanks for any input on this!

Pete Taylor: 940 represents a new frequency and a new set of call letters. Also, while I think we are all accustomed to accepting the old CBM as 50kw U-1, there were some sources which showed the new facility as U-4. That seems unlikely.

Daniel B. Cooley <dancooley@worldnet.att.net>: Jerry Starr's latest AM-Switch lists CFXM as switch to FM - hasn't happened yet. Question: With the many Canadian AMs switching to FM, what becomes of the AM spot?

Russ Edmunds: In a number of cases, new applicants have appeared, and I'm not sure, but I think a few may have been granted. The FCC database still shows those few I spotted-check even though they have moved. It also shows both CBM and CKVL allocated for 940 and CBF and CIOQ as allocated for 690. It remains on the FCC database for 740. I expect this to remain the case until Canada officially vacates the frequencies. Of course, in the case of clear channels such as the 3 noted above, NARBA treaties protect those frequencies indefinitely even if no re-allocations are made. The treaty would have to be re-opened in order to change that.

Russ Edmunds: Picking up on some comments in the latest DXN, I have used car radios heavily for my AM DX'ing for much of my DX career, including probably 75% of my loggings in the past 10 years. I've used a couple of resurrected old tube-types from the 1940's or early '50's in the house with either a battery or power supply, and I've used all sorts of transistor car radios over the years. In fact, in my shack right now, powered by an old VHF ham power supply, is the analog AM-FM radio from a departed '83 Nissan along with a digital AM-FM of recent vintage which is an after-market unit. Although I use it solely for AM, I have used them to monitor channels on AM. I have yet to hook either up to the 2' barefoot loop, but that'll come over the winter. Owing to local FM signals slipping through the power lines here, I've done all of my FM DX from car radios, and mostly when they're in the cars, hi. I've also used car radios exclusively for FM DX at several other locations where either business, vacation or other circumstances have placed me repeatedly by the road. Because they're designed to handle somewhat challenging reception conditions, they're better than many portables and certainly better than many of today's boom boxes, console radios and table radios for both AM and FM. And I am continually surprised by some of the things I hear on them, even though I should be used to it by now.

Ragnar Danneskjold: I have 4 car radios. Two AM stereo units and two mono units. One AMFM and one as God intended radio to be heard, AM only! What are you using for an antenna? I power mine from a car battery. I charge it about once a week. Sometimes I power them with two batteries taken from a lot of satellite batteries that didn't pass. Generally the radios are pretty good on AM. I do think they are VERY good on FM. They sound good too. I have mine rigged up to use headphones with them. They are great radios. I don't use them much too, but they do hold their own for DX. If you wanted to start AM DX'ing and didn't have much cash, a trip to the junkyard to pick up a car radio would be a real good start.

Ragnar Danneskjold: Guys, I have been looking for an answer to this one for a long time I tried AMFM/TVDX a long while back. I have a general idea of when this was made but would like to know more. I have a Zenith Royal 34 AM/FM/PMAC/SW 5 band portable receiver. I don't know how many transistors it has but it has about 15-20. They are interesting in that the little metal can top transistors are all socketed. The set is chassis built and there are no circuit cards. It runs on 12VDC from "D" cells or an outboard power source via a 3.32/32 jack. It covers 88-108 mc (FM and 540-1600 kc AM then 1.6-185.5 mc. This unit appears to be brushed metal with a blue gray extruded metal grille. It has a huge antenna that is mounted inside the set horizontally and it comes out the left side as you are looking at it. The big antenna will swivel once out of its mounting 360 degrees. All the band knobs, the volume knob and the tuning knob are in the front and the tuning knob is about 2" in diameter. Enough of the description. Here's the real data...

Zenith Model Royal 34...
Chassis: 11NT4428
8 "D" batteries
Sams TSM-84

All this is placed on a sticker on the bottom. I just got through aligning this old guy and the freq is set done on with the dial readings. Everything is peaked and ready to run. It is a pretty good old unit. I needed to know two things. 1. When was this beast built?

2. The dial string looks tired. Where can I get more dial string? Yeah, I got it at the junk store for $7.

### Geomagnetic Summary

**Phil Bytheway**

**phil@bytheway.com**

**9705 Mary NW**

**Seattle, WA 98117-2334**

**High "A" values indicate possible auroral conditions**

#### Geomagnetic Summary September 23 1999 through November 5 1999

<table>
<thead>
<tr>
<th>Date</th>
<th>FLUX</th>
<th>A</th>
<th>K</th>
<th>SA</th>
<th>GEO</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/23</td>
<td>137</td>
<td>1</td>
<td>1</td>
<td>very low</td>
<td>quiet-mas</td>
<td>-</td>
</tr>
<tr>
<td>24</td>
<td>132</td>
<td>4</td>
<td>1</td>
<td>very low</td>
<td>quiet</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>125</td>
<td>1</td>
<td>1</td>
<td>low</td>
<td>quiet</td>
<td>-</td>
</tr>
<tr>
<td>26</td>
<td>125</td>
<td>3</td>
<td>5</td>
<td>very low</td>
<td>quiet-mis</td>
<td>mis 2250</td>
</tr>
<tr>
<td>27</td>
<td>124</td>
<td>3</td>
<td>4</td>
<td>low</td>
<td>unsettled-mis</td>
<td>-</td>
</tr>
<tr>
<td>28</td>
<td>126</td>
<td>20</td>
<td>4</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>29</td>
<td>125</td>
<td>22</td>
<td>5</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>10/1</td>
<td>122</td>
<td>9</td>
<td>2</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>10/2</td>
<td>126</td>
<td>13</td>
<td>1</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>10/3</td>
<td>135</td>
<td>8</td>
<td>2</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>10/4</td>
<td>144</td>
<td>13</td>
<td>3</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>10/5</td>
<td>146</td>
<td>15</td>
<td>4</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>10/6</td>
<td>134</td>
<td>7</td>
<td>2</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>10/7</td>
<td>129</td>
<td>7</td>
<td>2</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>10/8</td>
<td>8</td>
<td>z</td>
<td>z</td>
<td>5</td>
<td>low</td>
<td>quiet</td>
</tr>
<tr>
<td>10/9</td>
<td>143</td>
<td>5</td>
<td>2</td>
<td>low</td>
<td>quiet</td>
<td>-</td>
</tr>
<tr>
<td>10/10</td>
<td>161</td>
<td>23</td>
<td>4</td>
<td>low</td>
<td>quiet-mis</td>
<td>-</td>
</tr>
<tr>
<td>10/18</td>
<td>167</td>
<td>20</td>
<td>5</td>
<td>low</td>
<td>quiet-mis</td>
<td>-</td>
</tr>
<tr>
<td>10/18</td>
<td>124</td>
<td>27</td>
<td>4</td>
<td>low</td>
<td>unsettled-mis</td>
<td>-</td>
</tr>
<tr>
<td>10/19</td>
<td>191</td>
<td>22</td>
<td>3</td>
<td>low</td>
<td>unsettled-mis</td>
<td>-</td>
</tr>
<tr>
<td>10/20</td>
<td>200</td>
<td>20</td>
<td>5</td>
<td>high</td>
<td>quiet-mis</td>
<td>ma 9000</td>
</tr>
<tr>
<td>10/22</td>
<td>198</td>
<td>25</td>
<td>4</td>
<td>quiet-mis</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10/25</td>
<td>168</td>
<td>22</td>
<td>3</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>10/27</td>
<td>178</td>
<td>23</td>
<td>0</td>
<td>low</td>
<td>quiet-mis</td>
<td>-</td>
</tr>
<tr>
<td>10/28</td>
<td>173</td>
<td>7</td>
<td>2</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/1</td>
<td>173</td>
<td>7</td>
<td>0</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/2</td>
<td>159</td>
<td>4</td>
<td>3</td>
<td>moderate</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/3</td>
<td>159</td>
<td>15</td>
<td>6</td>
<td>low</td>
<td>quiet-mas</td>
<td>-</td>
</tr>
<tr>
<td>11/4</td>
<td>160</td>
<td>54</td>
<td>2</td>
<td>low</td>
<td>quiet-sev</td>
<td>mas 1200</td>
</tr>
<tr>
<td>11/5</td>
<td>165</td>
<td>19</td>
<td>3</td>
<td>low</td>
<td>quiet-active</td>
<td>mas end 0600</td>
</tr>
<tr>
<td>11/6</td>
<td>159</td>
<td>21</td>
<td>3</td>
<td>low</td>
<td>unsettled-mis</td>
<td>-</td>
</tr>
<tr>
<td>11/7</td>
<td>159</td>
<td>17</td>
<td>1</td>
<td>moderate</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>11/8</td>
<td>189</td>
<td>11</td>
<td>2</td>
<td>moderate</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/9</td>
<td>197</td>
<td>15</td>
<td>2</td>
<td>low</td>
<td>quiet-active</td>
<td>-</td>
</tr>
<tr>
<td>11/10</td>
<td>184</td>
<td>18</td>
<td>2</td>
<td>low</td>
<td>quiet-mis</td>
<td>-</td>
</tr>
<tr>
<td>11/11</td>
<td>180</td>
<td>12</td>
<td>1</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/12</td>
<td>169</td>
<td>6</td>
<td>1</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/13</td>
<td>180</td>
<td>12</td>
<td>1</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/14</td>
<td>182</td>
<td>13</td>
<td>1</td>
<td>low</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
<tr>
<td>11/15</td>
<td>143</td>
<td>5</td>
<td>2</td>
<td>low</td>
<td>quiet</td>
<td>-</td>
</tr>
<tr>
<td>11/16</td>
<td>148</td>
<td>5</td>
<td>2</td>
<td>low</td>
<td>quiet</td>
<td>-</td>
</tr>
<tr>
<td>11/17</td>
<td>161</td>
<td>5</td>
<td>2</td>
<td>moderate</td>
<td>quiet-unsettled</td>
<td>-</td>
</tr>
</tbody>
</table>

---

**Graveyard Achievements**

**Bill Hale**

**phillip@bytheway.com**

**6124 Roaring Springs Drive**

**North Richland Hills, TX 76180-5552**

**Distance records for stations logged on graveyard frequencies**

Logged from Jan 1, 1960 to Present

**Date of Last Update: September 29, 1999**

*indicates record held by DXer from North America*
<table>
<thead>
<tr>
<th>ID</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>KORT</td>
<td>Grangeville</td>
<td>LA</td>
<td>97819</td>
</tr>
<tr>
<td>KRXK</td>
<td>Rexburg</td>
<td>WI</td>
<td>53072</td>
</tr>
<tr>
<td>WJBC</td>
<td>Bloomington</td>
<td>IL</td>
<td>61704</td>
</tr>
<tr>
<td>WMKZ</td>
<td>Moline</td>
<td>IL</td>
<td>61265</td>
</tr>
<tr>
<td>WHCO</td>
<td>Sparta</td>
<td>IL</td>
<td>61087</td>
</tr>
<tr>
<td>WJOB</td>
<td>Hammond</td>
<td>IN</td>
<td>46743</td>
</tr>
<tr>
<td>WSAI</td>
<td>Logansport</td>
<td>IN</td>
<td>47147</td>
</tr>
<tr>
<td>WMO</td>
<td>Tell City</td>
<td>PA</td>
<td>15257</td>
</tr>
<tr>
<td>WBOW</td>
<td>Terre Haute</td>
<td>PA</td>
<td>16153</td>
</tr>
<tr>
<td>KJFB</td>
<td>Marshalltown</td>
<td>WI</td>
<td>54549</td>
</tr>
<tr>
<td>WHIR</td>
<td>Danville</td>
<td>KY</td>
<td>42080</td>
</tr>
<tr>
<td>WHOC</td>
<td>Hopkaville</td>
<td>KY</td>
<td>42536</td>
</tr>
<tr>
<td>WIANO</td>
<td>Pineville</td>
<td>KY</td>
<td>42567</td>
</tr>
<tr>
<td>KLC</td>
<td>Monroe</td>
<td>LA</td>
<td>97819</td>
</tr>
<tr>
<td>WBOK</td>
<td>New Orleans</td>
<td>LA</td>
<td>70112</td>
</tr>
<tr>
<td>KSLO</td>
<td>Opelousas</td>
<td>LA</td>
<td>70108</td>
</tr>
<tr>
<td>WQDY</td>
<td>Calais</td>
<td>ME</td>
<td>04619</td>
</tr>
<tr>
<td>WBM</td>
<td>Belfast</td>
<td>ME</td>
<td>04107</td>
</tr>
<tr>
<td>WJSR</td>
<td>Mawaskata</td>
<td>ME</td>
<td>04442</td>
</tr>
<tr>
<td>WITH</td>
<td>Madison</td>
<td>MI</td>
<td>49201</td>
</tr>
<tr>
<td>WMNS</td>
<td>North Adams</td>
<td>NY</td>
<td>10530</td>
</tr>
<tr>
<td>WESX</td>
<td>Salem</td>
<td>MA</td>
<td>02170</td>
</tr>
<tr>
<td>WNEB</td>
<td>Worcester</td>
<td>MA</td>
<td>01601</td>
</tr>
<tr>
<td>WCJU</td>
<td>Grand Rapids</td>
<td>MI</td>
<td>49203</td>
</tr>
<tr>
<td>WGRY</td>
<td>Grayling</td>
<td>MI</td>
<td>49757</td>
</tr>
<tr>
<td>WIKB</td>
<td>Iron River</td>
<td>MI</td>
<td>49757</td>
</tr>
<tr>
<td>WMPC</td>
<td>Lapeer</td>
<td>MI</td>
<td>48746</td>
</tr>
<tr>
<td>WRRK</td>
<td>Sault St Marie</td>
<td>MI</td>
<td>49750</td>
</tr>
<tr>
<td>WSTR</td>
<td>Sturgis</td>
<td>MI</td>
<td>49750</td>
</tr>
<tr>
<td>WKLK</td>
<td>Cloquet</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>KGHS</td>
<td>Morse</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>KVYM</td>
<td>Mankato</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>KMRS</td>
<td>Morris</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>KTRF</td>
<td>High Falls</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>KWN</td>
<td>Winona</td>
<td>MN</td>
<td>55117</td>
</tr>
<tr>
<td>WCMA</td>
<td>Corinth</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WLDW</td>
<td>Hattiesburg</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WSSS</td>
<td>Starkville</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KODE</td>
<td>Joplin</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KLWT</td>
<td>Lebanon</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KWDX</td>
<td>Moberly</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KOB</td>
<td>Bozeman</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KHDN</td>
<td>Hardin</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KEXD</td>
<td>Lewistown</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KLCB</td>
<td>Libby</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KTN</td>
<td>Falls City</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KHAS</td>
<td>Hastings</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KPLI</td>
<td>EV</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KLEN</td>
<td>Las Vegas</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WMOU</td>
<td>Murfreesboro</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WTSV</td>
<td>Milwaukee</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WCMC</td>
<td>NJ</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KALG</td>
<td>Alamogordo</td>
<td>NM</td>
<td>88316</td>
</tr>
<tr>
<td>KVI</td>
<td>Galion</td>
<td>NM</td>
<td>88316</td>
</tr>
<tr>
<td>KFUN</td>
<td>NM</td>
<td>NM</td>
<td>88316</td>
</tr>
<tr>
<td>KRSY</td>
<td>NM</td>
<td>NM</td>
<td>88316</td>
</tr>
<tr>
<td>WECK</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WERY</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WIGZ</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WILC</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WIFN</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WIFS</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WISK</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WIAF</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WIMF</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WISP</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WNNC</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WCBT</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>KDX</td>
<td>NY</td>
<td>NY</td>
<td>10001</td>
</tr>
<tr>
<td>WUBE</td>
<td>OH</td>
<td>OH</td>
<td>43201</td>
</tr>
<tr>
<td>WCOL</td>
<td>OH</td>
<td>OH</td>
<td>43201</td>
</tr>
<tr>
<td>WIRO</td>
<td>OH</td>
<td>OH</td>
<td>43201</td>
</tr>
<tr>
<td>WOTL</td>
<td>OH</td>
<td>OH</td>
<td>43201</td>
</tr>
<tr>
<td>KADA</td>
<td>OH</td>
<td>OH</td>
<td>43201</td>
</tr>
<tr>
<td>WBRE</td>
<td>OK</td>
<td>OK</td>
<td>73068</td>
</tr>
<tr>
<td>KDOV</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KVAS</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KZZR</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KOOS</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KRDR</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KMUZ</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KQIK</td>
<td>OR</td>
<td>OR</td>
<td>32109</td>
</tr>
<tr>
<td>KJZ</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>KMER</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>KVAL</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>WPPK</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>WTPK</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>WPER</td>
<td>PA</td>
<td>PA</td>
<td>19101</td>
</tr>
<tr>
<td>WAIM</td>
<td>SC</td>
<td>SC</td>
<td>29024</td>
</tr>
<tr>
<td>WXAP</td>
<td>SC</td>
<td>SC</td>
<td>29024</td>
</tr>
<tr>
<td>WOLS</td>
<td>SC</td>
<td>SC</td>
<td>29024</td>
</tr>
<tr>
<td>KSD</td>
<td>SD</td>
<td>SD</td>
<td>57102</td>
</tr>
<tr>
<td>WKCE</td>
<td>TN</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WMNL</td>
<td>TN</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>WAKI</td>
<td>TN</td>
<td>TN</td>
<td>37963</td>
</tr>
<tr>
<td>KSTX</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KEXE</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KNJU</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KERV</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KLYT</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KSEE</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KOZA</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KEGX</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KKST</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KMOR</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>KOAL</td>
<td>TX</td>
<td>TX</td>
<td>78701</td>
</tr>
<tr>
<td>WJOE</td>
<td>VA</td>
<td>VA</td>
<td>23170</td>
</tr>
<tr>
<td>WBBI</td>
<td>VA</td>
<td>VA</td>
<td>23170</td>
</tr>
</tbody>
</table>
A couple of years ago I had heard that Bob Crane of the C. Crane Co. was working on a new portable radio and that among the design criteria was a requirement for a DXable AM section. I had even spoken to Mr. Crane during the early design stages of the radio about, among other things, aspects of the CCRadio and came away thinking that he really wanted to do this project right. I was cautiously optimistic that he would pull it off. Still, between the drawing board and the store shelf a lot could go wrong, including the possible cost-cutting compromises that seem to inevitably accompany bringing a product to market. Nonetheless, Mr. Crane seemed adamant enough about the required performance of the radio that I had high hopes for the CCRadio. Well, I finally got my hands on one (courtesy of Roger Giannini) and have had the opportunity to check out this Sangean-made portable so I thought I’d share my impressions and the results of some side-by-side tests with known and reputed DX hounds.

**General Features**

The CCRadio is a medium-sized (11"W x 6.5"H x 4") multi-band portable made by Sangean and finished in the requisite gray color and weighing in at 3.8 lbs (without batteries). Besides the four D-cells required for DC operation, the CCRadio also can be powered by the built-in AC transformer (cord supplied). The radio covers four bands: the standard AM (it tunes 520-1710 kHz) and FM bands, the channels 2-13 TV band (audio only, of course), and seven NOAA weather channels (a weather alert feature is included). (These are the four bands I monitor when a hurricane hits Pensacola so I consider the CCRadio to be an ideal emergency/survivalist radio...add a speaker and you’ve got it all.)

The radio is PLL frequency synthesized and is digitally tuned by slewing buttons (10 kHz on AM) or a rotary knob (1 kHz tuning and read-out on AM) and has large (9/16") LCD dial frequency numerals. Tuning can also be accomplished by up/down scanning as well as by the five memory buttons located atop the dial face. A digital clock replaces the dial frequency when the radio is off and adds alarm and snooze functions if desired. The cool green display light is push-button controlled when operating on batteries and is on continuously when using AC. A lock button on the side can prevent a channel change while listening or an inadvertent power-on condition during transport. Rounding out the features are a headphone jack, battery status indicator, and screw-type external antenna terminals. There is no carrying handle as such but rather a large indentation in the top rear of the cabinet to facilitate carrying. The operating manual is brief but clearly written and even has a small section on AM DXing with mention of the National Radio Club. The price of the CCRadio is $159.95.

**Operating Impressions**

Operating the CCRadio is really pretty straightforward. The rotary tuning knob has 1 kHz detents and is comfortably located, the various buttons are sufficiently large and have a positive feel, and the digital display can be viewed from wide angles. There is a tuning indicator of sorts in that a boxed digital read-out number is located in the upper right hand corner (on the other half). Functional sections are well separated on the boards and I was impressed by the extensive shielding. I have had the opportunity to check out this Sangean-made portable radio and it seems to be well thought-out with no operating quirks.

**Looking Inside**

An affliction I’ve had my whole life is an irresistible need to open (“tear-up,” my wife would say) any new electrical/electronic devices that find their way into the house. So it was that within 15 minutes of receiving the CCRadio, the back was off and I was examining its innards...and I was impressed. This obviously is a carefully designed and well-made radio. Two large circuit boards comprise the lay-out with the RF, IF, and AF sections on one large board and the logic/clock/display functions on the other. Functional sections are well separated on the boards and very extensive shielding is employed throughout. Whereas the Superadio series employs multiple (four) stages of IF tuning to provide selectivity, the CCRadio uses ceramic filtration. I counted seven ceramic filters being used on the various bands with at least one being used on AM. The circuitry is a mix of integrated circuits, and standard and surface-mount components (all 1% precision, from what I could tell). Not having a schematic and being reluctant to remove all of the shielding to follow the circuit traces, my circuit...
analysis pretty much ended at this point. The ferrite rod, however, is worth mentioning. It’s a 7-7/8" x 7/16" rod that is really a beauty (I’d like to get my hands on a pile of these, hi). It’s the same length as the rods used in the Superadios but its girth is a little (by 1/16") thicker. The windings are of lite wire and a two-turn pick-up winding provides for external antenna coupling. Notably, the ferrite rod is located as far as possible from the AC transformer (which can suck RF from the rod, a common design flaw in Radio Shack portables). I guess the bottom line of this visual inspection is that the CCRadio is a well-designed and very well built portable, but the absolutely ultimate question is, “How well does it perform?”

### Performance Tests
To test and compare the performance of the CCRadio, I lined it up against the only other viable, currently available radio that touts itself as the “long distance AM reception” device...the General Electric Superadio III (SRIII). I considered including the Radio Shack Optimus superadio clone (R-603), but it had fared miserably in earlier comparisons. Still, on the off-hand chance that Radio Shack had made some recent design changes, I got one from a local store and tested it briefly to verify that it was as awful as before...it was, so it was not included in the testing. Although long discontinued, I also included in the testing my personal SRIII (SRRII-Charlie), a radio that Charlie has spent an untold number of hours tuning up for optimal performance (no circuit changes were made to either SRIII, just tweaking of transformers and trimmer capacitors).

All of the testing was conducted between local noon and 2:00 p.m. on a mid-November, atmospherically quiet day in Pensacola, FL. All radios were AC powered and were rotated and tuned for optimal reception of the target stations. Note that all of the target stations that I chose for this test are, for the most part, moderately to very difficult daytime catches. Just about any radio can pull in AM DX at night but if a radio shines during the day, you know it will do well at night. The stations reported here are representative of the several tested in each of the low-, mid- and high-band portions of the AM band to test the two principal performance measures were of interest: sensitivity and selectivity.

#### Sensitivity Tests

<table>
<thead>
<tr>
<th>Target stations</th>
<th>530 kHz</th>
<th>570 kHz</th>
<th>600 kHz</th>
<th>940 kHz</th>
<th>1680 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Station</strong></td>
<td><strong>SRIII-C</strong></td>
<td><strong>SRIII-G</strong></td>
<td><strong>SRII</strong></td>
<td><strong>CCRADIO</strong></td>
<td><strong>Results</strong></td>
</tr>
<tr>
<td><strong>WJMD, Winter Park, FL.</strong></td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WYLD, New Orleans, LA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-Rome, New York.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-Phoenix, AZ.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-Seattle, WA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-San Francisco, CA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-Los Angeles, CA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>WQYK-New York, NY.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### Selectivity Tests

From a DXer’s standpoint, selectivity is just as important as sensitivity in hearing weak stations in the crowded AM band. For this test, I selected as targets distant stations located on frequencies near strong locals. Again, these are tough catches that require good selectivity in a radio.

<table>
<thead>
<tr>
<th>Target stations</th>
<th>530 kHz</th>
<th>570 kHz</th>
<th>940 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Station</strong></td>
<td><strong>SRIII-C</strong></td>
<td><strong>SRIII-G</strong></td>
<td><strong>SRII</strong></td>
</tr>
<tr>
<td><strong>WJMD, Winter Park, FL.</strong></td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>WYLD, New Orleans, LA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-Rome, New York.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-Phoenix, AZ.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-Seattle, WA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-San Francisco, CA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-Los Angeles, CA.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>WQYK-New York, NY.</strong></td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Other Comparisons

Audio quality

The SRII and SRIII are clearly superior to the CCRadio on this variable. Their 6-1/2" woofers and 2" tweeters clearly sound better on loud and clear stations than the CCRadio with its 4" speaker. The CCRadio certainly sounds good on both AM and FM but can’t match the full, wide-frequency sound of the SR series, especially when they are in their “AM Accent” mode.

Battery life

This one really floored me when I read in the CCRadio’s manual that it draws 450 mA of current!

That’s about as much as a small portable TV! I couldn’t believe it so I measured its current drain myself. At normal listening levels, the CCRadio draws 40-50 mA, not 450 mA. Apparently the proofreader of the manual missed the typo. By comparison, the SR series draws about 20 mA. Since both radios use D-cells, the CCRadio should run about half as long the the SRII and III (which, according to their literature, is 460 hours on a set of batteries).
FM, TV, and WX band performance

I didn’t really check/compare these bands. I did note that all of the local and semi-local FM stations came in fine on the CCRadio and that I was able to pick up not only my local NOAA station but also the one in Jackson, MS.

After finishing the preceding tests, I couldn’t help but wonder how the CCRadio would do against radios in a higher price class. So I decided to repeat the tests using some of my favorite AM DX portables instead of AC. The tests were conducted on a different day but during the same time frame.

Domestic DX Achievements

<table>
<thead>
<tr>
<th>Name and location</th>
<th>Year Last Upd.</th>
<th>RF-2200</th>
<th>Sensitivity tests</th>
<th>ICF-7600G</th>
<th>Sensitivity tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krueger, Robert-Chicago, IL</td>
<td>70 1186</td>
<td>700 kHz</td>
<td>2.5 3.0 2.0 3.0</td>
<td>62 955</td>
<td>806</td>
</tr>
<tr>
<td>Geary, Kermitte-Frisco</td>
<td>26 292</td>
<td>292 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [5.0]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Maloney, Mike-Elk Shores, PA</td>
<td>70 1187</td>
<td>700 kHz</td>
<td>2.5 3.0 2.0 3.0</td>
<td>62 955</td>
<td>806</td>
</tr>
<tr>
<td>Reth, Karl-Chicago, IL</td>
<td>70 1187</td>
<td>700 kHz</td>
<td>2.5 3.0 2.0 3.0</td>
<td>62 955</td>
<td>806</td>
</tr>
<tr>
<td>Smith, John-Washington, DC</td>
<td>54 866</td>
<td>866 kHz</td>
<td>5.5 5.5</td>
<td>4.0 (4.5)</td>
<td>4.0</td>
</tr>
<tr>
<td>Ehrhardt, Ken-Floyds Neck, VA</td>
<td>62 955</td>
<td>955 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Sweeney, Paul-Rochester, NY</td>
<td>75 1099</td>
<td>1099 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Pinson, Denzil-UT</td>
<td>68 1264</td>
<td>1264 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [5.0]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Jeter, Ken-Washington, DC</td>
<td>70 1187</td>
<td>1187 kHz</td>
<td>2.5 3.0 2.0 3.0</td>
<td>62 955</td>
<td>806</td>
</tr>
<tr>
<td>Voorhies, Don-Montreal</td>
<td>75 1099</td>
<td>1099 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Foxworth, Jim-Clinton, ON</td>
<td>68 1264</td>
<td>1264 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Kureth, Joe-Uniontown, MD</td>
<td>61 1078</td>
<td>1078 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Schneider, Dave-Mike</td>
<td>61 1078</td>
<td>1078 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Taylor, Pete-Washington, DC</td>
<td>81 7099</td>
<td>7099 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Wheeler, Frankie-Frisco</td>
<td>30 557</td>
<td>557 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Mont, Paul-nj</td>
<td>75 1099</td>
<td>1099 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Krueger, Male-Boston, MA</td>
<td>68 1264</td>
<td>1264 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Bonf, Jerry-Chicago, IL</td>
<td>61 1078</td>
<td>1078 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Swearingen, Swearingen</td>
<td>75 1099</td>
<td>1099 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Yoder, John-Lincoln, NE</td>
<td>45 1178</td>
<td>1178 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Vochits, Don-New York-Crawford, NY</td>
<td>30 557</td>
<td>557 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Whitted, Dave-Hamilton, ONT</td>
<td>75 1099</td>
<td>1099 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Androck, Shawn-MAN</td>
<td>85 1196</td>
<td>1196 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Jarvis, Kurt-Athens, GA</td>
<td>69 1184</td>
<td>1184 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Hein, Wayne-MAN</td>
<td>64 1296</td>
<td>1296 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Kennedy, Steve</td>
<td>58 999</td>
<td>999 kHz</td>
<td>4.5 4.5</td>
<td>3.0 [4.5]</td>
<td>3.0 [4.5]</td>
</tr>
<tr>
<td>Allen, Bob-San Diego, CA</td>
<td>63 1199</td>
<td>1199 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Ray, Bob-New York-Crawford, NY</td>
<td>61 1078</td>
<td>1078 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>DeCleure, Marc-Ark</td>
<td>62 1199</td>
<td>1199 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Zyska, Mike-Ohio</td>
<td>61 1078</td>
<td>1078 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Anderson, Roger-Washington, DC</td>
<td>38 1078</td>
<td>1078 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Hartman, Bob-nj</td>
<td>82 1196</td>
<td>1196 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Groshue, Ken-Hamilton, IL</td>
<td>66 1192</td>
<td>1192 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>White, Thomas-Washington, DC</td>
<td>68 1192</td>
<td>1192 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Sampson, John-Ohio, NE</td>
<td>54 1278</td>
<td>1278 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Hudson, Greg-Alabama</td>
<td>64 1178</td>
<td>1178 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Kureth, Joe-Southern Illinois, NJ</td>
<td>65 1178</td>
<td>1178 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Rigas, Chris-Chicago, IL</td>
<td>81 398</td>
<td>398 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Hopkins, Jon-PA</td>
<td>72 1078</td>
<td>1078 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Hollan, George-Willis, AL</td>
<td>31 1185</td>
<td>1185 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Wilson, Jim-Columbus, OH</td>
<td>69 1078</td>
<td>1078 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
<tr>
<td>Hardy, Nancy-Central WA</td>
<td>69 1084</td>
<td>1084 kHz</td>
<td>2.5 2.5</td>
<td>2.0 2.0</td>
<td>2.0 2.0</td>
</tr>
</tbody>
</table>

Conclusions

The owner’s manual of the CCRadio states, “The CCRadio incorporates the highest quality parts and superior engineering to produce the most sensitive AM receiver available.” On the whole, I’d have to agree (but I’d qualify it by adding “portable” AM receiver “under $350”). Unless you pay $200 more for a 2010 model, I’m not sure you’re going to have a receiver that can do what the RF-2200 can do in its native mode. It was matched the 2010 when the Sony was in its “Wide” mode (really the stock narrow mode in this modified 2010) unless the target signal was strong enough to lock the synchronous AM detection circuitry in which case the 2010 gave better readability. In fact, with all three competitors, I would do better than the CCRadio for AM DX.

Congrats to Bob Crane and Sangeen for a very worthwhile DX machine.

Note: Sample-to-sample variation could alter tests of individual radios. For example, some D Xers have SRIIIs that are reportedly excellent performers. It’s just that the eight SRIIIs that I’ve auditioned over the years, none have been excellent and the two SRIIIs tested here are representative of those I’ve experienced. Under less challenging conditions, there may be little or no noticeable differences between any of the radios tested but under tough signal conditions, I would be very surprised if any SR III equalled, much less exceeded, the performance of the CCRadio.
**Musings of the Members**

**Dave Schmidt**

NRCmusings@aol.com

P. O. Box 3111
Scranton, PA 18505-0111

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

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.

Dan Gebhart - 6377 Timberwilde Dr. - Kettering, OH 45440 - <dgebhart@juno.com>  

After reading the review of the Radio Shack Indoor AM Loop Antenna by Russ Johnsen and John Bowker I rushed to my local Radio Shack, and they had 3 in stock. I purchased one as I didn’t want to get it home and try it out. To sum up it in a few short words “It’s a lot better than the S-A-T but not as good as my 4’ loop. So far I’m pleased with it and will be taking it and the GE SR III with me on the annual Thanksgiving pilgrimage to the in-laws in TN. Previous trips to their home have convinced me that southeastern TN is a radio void spot. This should be a good test for the new Radio Shack loop.

Martin Wishneguzwitz - 35-34 84th Street #D-10 - Jackson Heights, NY 11372  

First, thanks very much to the SWIEMER family for the great NRC convention in Bridgeport, WV. Thanks go out to JOHN & LINDA BOWKER for assisting in this terrific convention and to FRED VOBBC whose set up of WNRC-AM 1610 was just beautiful! One of the highlights for me was when JOHN MALICKY and I again went in search of local radio stations. In doing so, we took a trip approx. 2 hours away from Bridgeport to the Green Bank Radio Astronomy Observatory where we saw several large radio telescopes. We took the tour of the center, and it was pointed out that this area of WV was picked for this site because it is a very quiet area with little interference generated by man-made devices. All of the transmissions made from local transmitters are pointed away from this area. Imagine, hitching your radio to one of these! We then took a ride over to the Allegheny Mountain station WVMR-1370. An all volunteer staff runs the radio station with several transmitters on FM. We were given a nice tour. While on the way, we noticed WNRC was getting out about 10 MILES, way to go!

Dave Schmidt - P. O. Box 3111 - Scranton, PA 18505-0111

As I had mentioned, during December, we’d like to hear your stories on what you consider your best DX catch! Probably my best ‘early days’ one was a toss up between KORL-650 and KULT-790 when I lived near Chester, PA. After getting into the engineering field, I started to learn more about directional systems that some of these stations use, and having seen the ‘authorized’ pattern then comes to mind was WWRL-1600, heard all over the place with a strong signal but look at the pattern and you really have to wonder! One station that I worked at for many years, WAMS-1380, in their bigger and better days, was one that operated with 2 daytime patterns and a night pattern. The daytime pattern changes were due to the old WINX/WAWZ time share agreement, WAWZ was slightly closer to Wilmington, the ‘null’ in that direction had to be deeper when they were on, so the station had a DA-1 (for WAWZ), a DA-2 (for WINX) for the 5000 watts, using 5 towers, and a DA-3 for the night pattern, which included protection to KWK-1380 using 4 towers. I was CE there in the last 4 years they were on; it broke my heart to have to dismantle this station since it was basically the one where I cut my teeth of working on directional systems. Don’t forget to send in YOUR reports and items of interest to the DX world! 73’s

---

**Sunrise-Sunset Maps**

Monthly maps (12) showing the average monthly sunrise/sunset times for the U. S. customize them for your location. $3.00 for NRC members ($4.50, non-members). Order from NRC Publications: NY residents, add sales tax.

---

**The DX'Pedition Handbook**

is simply all you need to plan your next DX'pedition. $8.95 to NRC members, $12.95 to non-members. Order from NRC Publications - Box 164 - Mansville, NY 13661. NY orders, please add sales tax.