

SEPTEMBER 4, 1993 - VOLUME 31 - NUMBER 1 - EDITION 993 - ISSN 0899-9732

\*\*\*\*\*  
**IRCA REPRINTS:** For a list of reprints send \$1.00 to: IRCA Reprints c/o Steve Ratzlaff 1885 E Bayshore Rd Space 90 E Palo Alto CA 94303  
\*\*\*\*\*

**EDITORS/POSITIONS** within IRCA that are currently vacant include: ANARC Representative, Election Committee Chairman and Graveyard DX Records Editor. Interested in one of these positions...contact Phil Bytheway...  
\*\*\*\*\*

**IRCA CONVENTION 1994:** IRCA President Phil Bytheway is now accepting the bids to host the 1994 IRCA convention. If you are interested, contact Phil for details and a bid form. Deadline for bids is October 15, 1993..  
\*\*\*\*\*

**RENEWALS & NEW MEMBERS:** This information will be listed the next issue. My computer will be down for a week and a half waiting for a part, also next issue will have the page numbers and index if I can work it out...  
\*\*\*\*\*

**IN THIS ISSUE:** NRC DX Tests page 1, Broadcasting Information page 2, DX Worldwide West page 4, Western DX Roundup page 5, Central DX Roundup page 8, Geomagnetic Indices page 9, Eastern DX Roundup page 10, IRCA DX Techniques page 12, Western DX Forum page 14, Eastern DX Forum page 15, Sportchannels IRCA page 16, Using the stereophonic decoder in your brain page 20, Drake R8 mods page 21 to page 30, Back page officers & dues  
\*\*\*\*\*

**NRD 525:** Digital readout noise has been reduced by 75 to 80 percent by building a new power supply for the readout. I may have a simpler solution that I am going to try. I am going to put a toroid transformer in place of the old readout transformer, this should be a much quieter power supply. I am also using a brass screen room that just fits over the receiver and this also works. The brass screen room may be the easiest one out of all of them to fix the readout noise. More to come.....  
\*\*\*\*\*

**DX:** Things seem to be picking up. I have had a fairly decent HET on the Japanese station on 774 kHz for about 2 weeks now around 0500 to 0600 PDT. Would be nice if they show up one of these mornings. Had to move all of my gear to the garage. Found out the house had aluminum in the walls to keep the heat in and out during the winter and summer. So this winter I will be in the garage all bundled up, no pot belly out there but mine. HI! Here is to a big DX season. May it be the best.....  
\*\*\*\*\*

**KCHJ**  
**1010 AM**

**National Radio Club DX TESTS**

WSEZ-1560 P.O. Box 26, Paoli, IN 47454 will conduct a DX TEST Sunday September 5, 1993 between 1:30 and 2:00 AM Eastern Daylight Time. The test will be run at 1000 watts and will include code Morse Code ID's. Our thanks and your reports to Todd Edwards.

WCEI-1460 306 Port St. Easton, MD 21601 will conduct a DX TEST Sunday September 5, 1993 between 2:30 and 3:00 AM Eastern Daylight time. The test will be run at 500 watts and will include code Morse Code ID's and Big Band Music.

WASB-1590 6675 Fourth Section Rd., Brockport NY 14420 will conduct a DX TEST Sunday September 5, 1993 between 4:30 and 5:00 AM Eastern Daylight time. The test will be run at 1000 watts and will include code Morse Code ID's and Contemporary Music.

WCEG-1530 P.O. Box 329, Middleboro MA 02346 will conduct a DX TEST Monday September 6, 1993 between 1:30 and 2:00 AM Eastern Daylight time. The test will be run at 1000 watts and will include code Morse Code ID's.

WEAM-1580 P.O. Box 766, Columbus GA 31902 will conduct a DX TEST Sunday September 19, 1993 between 12:30 and 1:00 AM Eastern Daylight time. The test will be run at 1000 watts and will include code Morse Code ID's and Black Gospel Music.

WVKO-1580 4401 Carriage Hill Lane Columbus, OH 43220 will conduct a DX TEST Saturday September 25, 1993 between 12:30 and 1:00 AM Eastern Daylight time. The test will be run at 250 watts and will include code Morse Code ID's.

KGNM-1270 2414 S. Leonard Rd. St. Joseph, MO 64503 will conduct a DX TEST Monday September 27, 1993 between 1:00 and 1:30 AM Eastern Daylight time. The test will include code Morse Code ID's.

WQKR-1270 817 N. Broadway Portland TN 37148 will conduct a DX TEST Monday September 27, 1993 between 12:00 and 5:00 AM Eastern Daylight time. The test will include code Morse Code ID's.

KIOX-1270 P.O. Box 2340, Bay City, TX 77404 will conduct a test on Friday Morning October 1, 1993 from 1:00-1:30 AM Eastern Daylight Time. This test will consist of Tones and Morse Code ID's.



**All New, All Country**

# BROADCASTING INFORMATION

EDITOR: ROBERT WIEN 1309 DENTWOOD DR SAN JOSE CA 95118

DEADLINES: 2nd & 4th Saturdays.

Compiled: 08/15/93

Much of this information was compiled from M Street Journal, DXM, and various other sources.

CONSTRUCTION PERMIT ACTIVITY:

CA. Frazier Park KNOB-1050 not on air as prev. rptd. still CP

FACILITY & PARAMETER APPLICATIONS:

VA. Leesburg WAGE-1200 5000 days, ND

FACILITY & PARAMETER GRANTS:

AR. Helena KFFA-1360 90-N  
NV. Reno KQLO-920 4600/1000

CALL LETTER CHANGES:

AK. Fairbanks	KBCN-1300	becomes KAKQ
FL. Marco	WMIB-1480	becomes WODX
GA. Smyrna	WMYX-1550	requests WAZX
KS. Pittsburg	KSEK-1340	becomes KPHN
KY. Manchester	WWXL-1450	becomes WWLT
NJ. Pompton Lakes	WKER-1500	becomes WGHT
NY. Buffalo	WEER-970	becomes WNED
TN. Columbia	WQZZ-810	becomes WMRB
TX. Robstown	KROB-1510	becomes KGLF "Gulf"
UT. Provo	KFMY-960	becomes KOVO
VA. Winchester	WUSQ-610	becomes WNIW "News Talk"
WA. Olympia	KQEU-920	becomes KCPL
WI. Kaukauna	WQWM-1050	becomes WSGC

FORMAT CHANGES:

AL. Evergreen	WIJK-1470	was country//WPGG, now silent due to lightning & being forced off air
Tuscaloosa	WTNW-1230	was nx/talk, adds USA talk mgs
AZ. Tempe	KUKQ-1060	was modern rock, now rock//KUPD-FM
CA. Escondido	KSPA-1450	was SMN stds., now stds.
Fresno	KRTR-1340	was nx/talk, adds WWI Pat Buchanan
Oceanside	KCMC-1320	was stds., adds SMN stds.
Pasadena	KRLA-1110	was oldies, now R&B oldies (Hispanic-targeted 'low rider' oldies)
San Luis Obispo	KGLW-1340	was talk, adds USA talk mgs
CT. Hartford	WDRC-1360	was talk, stds., now Unis. stds. mostly, has scaled back talk except nights
West Hartford	WCCC-1290	was talk, now rock//FM
FL. Saint Augustine	WKLN-1170	was nx/talk, adds USA talk mgs
Zephyrillis	WPAS-1400	was AC, now JSN EZL, Unis. talk
GA. Alpharetta	WVNF-1400	was WAZX, SS, now c. Xtian//WNIV
Athens	WXAG-1470	was urban, now silent
Douglas	WGAU-1340	was full service AC, now EFM, MBS, Unis. talk
Valdosta	WDMG-860	was AC//FM, now JSN AC//FM
Warner Robins	WFVR-910	was silent, now travel info
Waycross	WRCC-1600	was C&W//FM, adds JSN C&W//FM
	WAYX-1230	was soft AC, adds USA talk mgs

FORMAT CHANGES (CONT.):

IL. Shelbyville	WSHY-1560	was oldies, now country//WYDS
IN. Greensburg	WTRE-1330	was country, adds JSN country
KS. Wichita	KFH-1330	was oldies, now MBS, WWI, FTP, CBS talk
KY. Manchester	WHLT-1450	was WWXL, s. gospel//FM, now s. gospel
LA. Lake Charles	KAOK-1400	was nx/talk, adds USA talk mgs.
New Orleans	WTIX-690	was stds., now talk
MA. Boston	WSSH-1510	was silent, now SS (tropical)
Framingham	WKOX-1200	was country//WCLG, now nx, SMN Real C&W (remains nx/talk 4-9 AM)
Haverhill	WHAV-1490	was AC, talk, now JSN oldies, talk
Lowell	WLLH-1400	was AC, SS, now stds., SS
MS. Vicksburg	WBIX-1490	was WOTA, silent, now country
MO. Brookfield	KGNG-1470	was religion, now silent, expected to return to air at TBD
Cape Girardeau	KAPE-1500	was nx/talk, adds USA talk mgs.
NJ. Pompton Lakes	WGHT-1500	was WKER, soft AC, now oldies
NC. Spring Lake	WWKG-1450	was WCIE, silent, now CHR "Hot 1450"
OH. Columbus	WMNI-920	was country, adds SMN Real country
Toledo	WTOD-1560	was trad. C&W, now country//WKKO
PA. Johnstown	WJAC-850	was SMN country, now SMN Real C&W
SD. Watertown	KWAT-950	was soft AC, now CBS talk, AC (AC AM's only, only CBS net is Gil Gross)
TN. Elizabethton	WITM-1520	was silent, now EZL//WKPT upon sale
Loudon	WLOD-1140	was country gold, adds USA talk AM's
TX. El Paso	KFNA-1060	was nx/talk, adds USA talk mgs.
Houston	KNUZ-1230	was oldies, now Unis. CNN nx, WWI talk
UT. Provo	KOVO-960	was KFMV, modern rock//KXRK, now stds., FTP talk
WA. Olympia	KCPL-920	was KQEU, AC, now classic rock "Capitol"
WI. Kaukauna	WQWM-1050	was religion, now SGC Xtian country
NS. Halifax	CJCH-920	was AC, now classic rock
PE. Summerside	CJRW-1240	was oldies, now country "Country 1240"

J.D. Stephens of Huntsville, AL. passes on the following info:

AL. Huntsville	WTAK-1000	now sim. with new FM WTAK-FM 106.1, format (AOR) and calls same, still daytimer, uses slogan "Valley's Rock & Roll"
AR. Little Rock	KBIS-1010	Westinghouse, owner of WINS-1010 NYC. & KBIS, have decided to take KBIS off air and surrender its license, and then plan to increase WINS's coverage area, this action date TBD.
NE. Omaha	KOIL-1290	will swap dial positions with KKAR-1180 on 8/1, KKAR moving to 1290, KOIL to 1180, KOIL will be put up for sale, both stations will sim. until KOIL is sold.

Ye editor passes on the following info:

CA. San Francisco	KFRC-610	has been sold, new owners have drop- ped AM nostalgia format in favor of sim. f/KFRC-FM, this appears to be permanent, this as of 8/12 at 8 PM PLT.
-------------------	----------	--

Nothing much going on here, DX has improved somewhat, but still very slow, getting to the fall soon, should be better. 73's.

## IRCA Foreign Logs

The IRCA has published nine volumes of the IRCA Foreign log. Each volume contains several hundred actual tips that were reported to the DXWW sections during an entire year, compiled and retyped in a book format. In addition, special features include: articles on foreign DXing (volumes 6, 7 and 8), utility lists (volumes 7 and 8), shortwave parallels (volume 8) and BCB propagation (volumes 6, 7 and 8). The IRCA Bookstore still has volumes 3, 4, 6, 7 and 8 of the IRCA Foreign Log available for \$2.50 each (overseas airmail add \$2.50/book). Order your copy today from: IRCA Bookstore, 9705 Mary Ave NW, Seattle WA 98117



PAT MARTIN P.O. BOX 843 SEASIDE, OR 97138

# DX Worldwide - West

Time: UTC phone (503) 861-3185

DEADLINES: 9/4, 9/18

DX continues to be somewhat slow here in the Northwest. By the number of reports, I guess it has been slow for everyone else. Hopefully by Fall, CX will be better. Some information in DXers Calling-The bulletin of DX Australia-some low powered NZers are on: 1YR-1188-Rotorua with 400W, 1XU-810-Auckland-1KW-Access Radio, and 4XS-1575-Dunedin with 2.5 KW, was testing in July and should be operating by early Aug. Address for 4XS:375 King Edward St. South-Dunedin. Address for 1XU is P.O. Box 5609-Wellesley St.-Auckland.All this info VIA Arthur Cushen and Walter Singleton. A nice tip from Tim Hall on WWRV-530, too.

## PAN-AMERICAN DX ROUNDUP

- 530 TURKS AND CAICOS, "WWRV" 7/31 0730-0915 poor to good thru TIS QRM with SS rel. mx and some preaching and ID at 0900 as "WWRV AM 1330" New Turks and Caicos #2 (TRH-CA)  
+Hrd again weakly under phased out Astoria TIS with bits of rel. talk in SS at 0930 on 8/17.(PM-OR)

## TRANS-PACIFIC DX ROUNDUP

- 540 WESTERN SAMOA, Apia-good over all at 0703 8/23 with Choral s/off man in Samoa before s/off. Best hrd in a while. (PM-OR)  
639 FIJI, Lautoka-Radio Fiji-weak in KFI slop with man in presumed Fijian and Island mx at 0717 8/23 (PM-OR)  
702 AUSTRALIA, Sydney-2BL-fair o/u Radio Pacific(with tel.talk), soft MOR mx and TC at 0729 8/23. (PM-OR)  
756 NEW ZEALAND, Auckland-1YA-DU accented man after EZL type song,fair to poor at 0735 8/23. (PM-OR)  
765 UNID, bits and pieces of rr mx, prob. NZ, but too weak to tell, 0738 8/23. (PM-OR)

## THANKS TO THESE REPORTERS

- TRH-CA TIM HALL-350 G STREET #F-1-CHULA VISTA, CA 91910-4559  
ICF-2010 and KIWA Loop  
PM-OR YOUR EDITOR  
Drake R8, Term. 200' SW/NE LW, Ground system and Phaser



**KJJR 880 AM**

DENNIS D. BEE  
General Sales Manager

Box 880 - Whitefish MT 59937  
406-862-5598 • 406-755-2298  
FAX 406-862-5566



Trey Yant

Account Executive

4614 S.W. Kelly Ave.  
Portland, OR. 97201  
(503) 223-1441



Midwest Communications of Iowa, Inc.

LOU ANN BOLKEMA

5151 Maple Drive  
Des Moines, Iowa 50317

5



# WESTERN DX ROUNDUP

Nancy Hardy  
2301 Pacific Avenue  
Aberdeen, WA 98520-4527

★ PRODIGY  
FMFT21B

DEADLINES FOR WDXR TIPS: Sat. Sept. 4, then each Monday beginning Sept. 20. PLEASE USE EASTERN TIME.

## REPORTERS FOR THIS ISSUE:

- (pb) Phil Bytheway-9705 Mary NW-Seattle, WA 98117  
R-70, KIWA loop
- (LG) Larry Godwin-2390 Clydes Dale Lane-Missoula, MT 59801  
Hammarlund HQ-150, Sanserino air-core box loop & KIWA loop
- (TRH) Tim Hall-350 G St. #F-1-Chula Vista, CA 91910  
ICF-2010, KIWA loop
- (GJ) Gary Jackson-7735 Center Parkway-Sacramento, CA 95823
- (GL) Gary Larson-2806 Lincoln-Burbank, CA 91504
- (PM) Patrick Martin-P.O. Box 843-Seaside, OR 97138  
Drake R8, 1500' E. Bev., term. 200' SW LW, phasing unit,  
ground system
- (RJO) Rod O'Conner-P.O. Box 3488-Kodiak, AK 99615
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118  
GE Superadio, GE long-range portable, SM-2

## OF SPECIAL INTEREST

- 560 KVOK AK, Kodiak came back on the air 7/15 from new site. Same adcon format, not just oldies. They have G. Gordon Liddy 6-9pm. Also simulcast on KJJZ-FM 101.1. Both KVOK & KJJZ are all night relay of KENI-550 Anchorage from 9pm to 6am. (RJO-AK)
- 920 KCPL WA, Olympia-Lacey-Tumwater 8/16 2150 with ID "K-C-P-L, Olympia-Lacey-Tumwater" between segments of sportstalk show, with lots of commercials. Verie back in 2 days. Ex-KQEU. (pb-WA)
- 1050 KNOB CA, Frazier Park 8/19 per tip in DXM #992, turned on Superadio about 2000 or so & heard country. Waited until ID and found it indeed was KNOB. Weak but readable. Called info for that area and was given (805) 325-5805; called, but only an answering machine (no message) picked up. I left message why I called. Nice surprise here. (GL)
- 540 KOJY CA, Costa Mesa 8/11 ID at 0759½ "This is KJVI (?) San Fernando-Los Angeles, KOJY Costa Mesa, at 540 and 1260, you're listening to K-Joy." (Did KJQI-1260 change calls?) (LG-MT)
- 550 KFYR ND, Bismarck 8/5 0100 pop music, "Year of the Cat" by Al Stewart, ID into ABC news "K-F-Y-R Bismarck," o/u KOAC. (PM-OR)
- 560 KPQ WA, Wenatchee 8/10 0805 ID, then began NBC news. (LG-MT)
- 570 KISN UT, Salt Lake City 8/12 0800 ID'd simply, then had Popeye jingle. (LG-MT)
- 600 KHTE CA, Redding 8/11 0800 ID "This is Newsradio 600, CNR (?), KHTE-Redding." (LG-MT)
- 610 KFRC CA, San Francisco 8/12 2300 began simulcasting KFRC-FM at this time, dropping nostalgia format on AM. Station has new owners. (RW-CA)
- +Now old rock // with their FM, ex-big band/MOR. Heard 8/13 0100. Sounds a little like their old 1960's format, with some of their old "KFRC" jingles. Mostly 60's rock music. Thanks to RW-CA for the tip. (PM-OR)
- 620 KTAR AZ, Phoenix 7/31 0800 barely readable through the competition with definite ID. (LG-MT)

- 650 CISL BC, Richmond 7/31 0803 on top, man said "For good fun and great oldies there's only one radio station, 650 CISL, Vancouver." Then Oldies Coast to Coast program. (LG-MT)
- 690 CBU BC, Vancouver 8/13 interrupted AN program for GSQ at 0558, then announced "This is the CBC Radio Network. We now begin the daily program service for the C.B.C. from Vancouver, B.C....The station to which you are listening is CBU...or one of the low-powered relay transmitters located throughout B.C." QRM from KECN. (LG-MT)
- 790 \*KABC\* CA, Los Angeles 8/15 0621 apparently testing, KOQQ/KWIL audible underneath. (RW-CA)
- 830 KNCO CA, Grass Valley 8/15 relig. programming, ID "KNCO Grass Valley" at 1001. (GJ-CA)
- 890 WLS IL, Chicago 7/28 heard for the first time at 2305 with weather and ID "WLS Talkradio," ment. 94.7 FM. No sign of normally-dominant KDXU. (LG-MT)
- 910 KALL UT, Salt Lake City 8/4 2240 with quick ID ment. S.L.C., Ogden and Provo. (LG-MT)
- CKDQ AB, Drumheller 8/4 0803 with local news & ad for Riverside Drug in Drumheller. At 0805 nice ID "Nine great country songs with no commercials...southern Alberta's radio station, Q-91." (LG-MT)
- 930 KSEI ID, Pocatello on top local KLCY (whose towers are located 3 miles from my home!), thanks to new KIWA loop. Fine ID 8/15 0000 "...Idaho's news and information authority, AM 930, KSEI, Pocatello-Idaho Falls-Blackfoot," Then Mutual news. (LG-MT)
- 940 CJIB BC, Vernon 8/4 0800 singing ID "94 CJIB," then Standard Broadcast News began. (LG-MT)
- 950 KYGO CO, Denver 8/4 through the mess with ID "Classic...KYGO AM." (LG-MT)
- 960 ?KOVO? UT, Provo 8/16 0834 tent. with unID talk show, gave phone number 376-9600 which virtually matches Provo prefixes. Cross checked against other numbers, but couldn't find anything. Called number and got cellular phone! Was supposed to change calls, ex-KFMY. Good briefly in KABL null, but lost to KOOL-AZ. Will keep checking on this one. (RW-CA)
- 1000 KXRB SD, Sioux Falls 8/4 2252 with six call IDs within 33 seconds, with pest KOMO nulled. Slogan is "Country 1000, KXRB." (LG-MT)
- 1020 (KTNQ) CA, Los Angeles 8/16 approx. 0500 off air. Nothing else heard. (GL-CA)
- 1090 CRRX AB, Lethbridge 8/5 0135 o/u KING with "Southern Alberta's best rock," weather (low of 9 degrees, high of 27 degrees). Strong off eastern Beverage. Ex-CHEC. (PM-OR)
- 1230 KOZI WA, Chelan 8/5 2359:30 ID into net news (sounded like CBS), "K-O-Z-I Chelan." KVAS phased out. (PM-OR)
- 1270 KTFI ID, Twin Falls 7/29 2300 magically appeared atop CHAT with ID. (LG-MT)
- 1310 KIQQ CA, Hesperia 8/15 0906 ID as "KVVQ and KIQQ Hesperia," into weather. NRC Log lists them as Barstow. (GJ-CA)
- 1360 KRKK WY, Rock Springs on top 7/29 at 0746. Man said "Rock-n-roll all day and all night, the greatest hits of all time, KRKK AM 1360." (LG-MT)
- 1370 ?KTMG? CO, Deer Trail 8/9 0801-0804 poss. one with several CO news items with KXTL nulled out. Frequency like a GY. Faded quickly to oblivion. Hope to log this one before KEEN ever comes back on! (RW-CA)
- 1400 KUKI CA, Ukiah 8/1 0359-0401 caught me by surprise with contest promo, PSA (safety belts); soon faded. Format seemed to be country, but not sure. New, CA #242. (TRH-CA)
- 1430 KCLK WA, Asotin 8/12 2250 gave call ID, then ads for Lewiston and Clarkston businesses. (LG-MT)
- 1450 KNOT AZ, Prescott 8/7 0855 in briefly with ID, but lost in all the noise. (GJ-CA)
- KSGI UT, St. George 8/6 0700 ID. (GJ-CA)
- 1490 KWAC CA, Bakersfield 8/1 0915 English female announcer. NRC Log lists as Spanish, but using English at this time! (GJ-CA)
- KICO CA, Calexico 8/3 0630 in briefly with Spanish. (GJ-CA)

- KRKC CA, King City 8/1 0900 s/on giving address, call letters, then C&W music. Heard again 8/2 1400 strong with C&W. (GJ)  
 KOWL CA, S. Lake Tahoe 8/1 1000 strong with music. (GJ-CA)  
 KSYC CA, Yreka 8/1 0940 C&W music strong now! (GJ-CA)  
 1560 WPAD KY, Paducah 8/5 with "AM Only" format u/o jumble, WQEW, KNZR, etc, with "W-P-A-D" ID by man at 0045. (PM-OR)  
 1570 CFEZ AB, Taber 8/15 ID 0300, easy listening music. (GJ-CA)  
 1580 KBLA CA, Santa Monica 8/5 ended assumed Korean program 0800 with interval signal (3 pips, then higher-pitched tone), then ID in English "This is Radio Korea, AM 1580, 50,000 watts power, KBLA, Santa Monica, Korean broadcasting, Los Angeles." (LG-MT)  
 1590 KLIV CA, San Jose 8/8 1315 with traffic report. (GJ-CA)  
 KHIT NV, Reno 8/8 1740 in KLIV null, with country music. (GJ)  
 1600 KGST CA, Fresno 8/15 1155 in Yuba City null, strong in Spanish. (GJ-CA)  
 KUBA CA, Yuba City 8/15 1152 religious programming. (GJ-CA)  
 1610 TIS CA, Hornbrook Agriculture Inspection Station in strong 8/1 0830. Taped announcement on inspecting fruits & vegetables. (GJ-CA)  
 TIS CA, new TIS listing wind warnings for Bakersfield and area through passes. (GJ-CA)  
 1620 TIS WA, Bridgeport at Chief Joseph Dam strongest ever at 0753 8/12. (LG-MT)

## UNIDS

- 1450 8/1 0540 with ID "Memories 1450," nostalgia music, looped N-S thru KEST OC. (RW-CA) (Likely KKKO Eugene.--NH)  
 1490 1014-1100 unID in Spanish. Not able to ID. Only other one listed using Spanish is KICO Calexico. (GJ-CA) (Date?--NH)  
 1500 8/1 0544 unID TT poor-fair in KSJX null. KSTP? (RW-CA)  
 1560 8/8 1200 Spanish station in briefly in KCRV-1570 null. No ID. Nothing listed in NRC Log. (GJ-CA)

I hope a lot of you will enter the DX Partners Contest. In case you missed it, info is on page two of last issue! Speaking of last issue, the P.O. enjoyed reading WDXR so much that it took 13 days to reach Ralph! This issue, a report from Gary in Sacramento, had a Wenatchee, WA postmark on the back. Maybe they are training someone new somewhere between CA and WA, hi. Thanks to John C. Johnson for the new WDXR heading! You may have noticed the Prodigy logo at the beginning of the column. You are more than welcome to send WDXR tips via Prodigy. Each Monday evening (about 10pm Pacific) I'll check my Prodigy mailbox for any reports you may have sent. That way, if you hear a good catch on Monday morning it can be included in the column that goes to Ralph on Wednesday. Come to think of it, contest information can be sent to me via Prodigy, also. I know of one member who plans to enter the DX Partners contest via Prodigy. So, copy down the number and enter too!







# Central DX Roundup

John C. Johnson  
 979 Neptune Boulevard  
 Billings, Montana 59105-2129

**★**PRODIGY  
 MPNN49A

## FOR THE RECORD

REPORT ALL TIMES AS EASTERN.

DEADLINE: SATURDAYS.

### RIDING GAIN

- [SA-MB] **Shawn Axelrod**, 30 Becontree Bay, Winnipeg, Manitoba R2N 2X9  
 Icom IC-R70 with PLAM board and 4kHz filter, 4-foot box loop, 100' wire.  
 [SA-SR] **Shawn** on DX'pedition at Swan River, MB using a Sony 2010.  
 [JcJ-MT] Your editor using an Icom IC-R71A with a Radio West loop.

### SPECIAL INTEREST

- 980 **KRXK MN**, Richfield. **EX-KMZZ**. 7/14 good. 2305 with a Sioux Falls vs St. Paul baseball game. Several "KRXK 9-80" IDs. New call now in use. [SA-MB]

### DOWN THE DIAL

- 580 **WILL IL**, Urbana. 8/11 fair w/CKY. 0641 "WILL" ID and possible NPR program. New one for me. [SA-SR]  
 630 **KHOW CO**, Denver. 8/10 good. 0700 with oldies music, "KHOW" ID into local news. First time heard for me. [SA-SR]  
 680 **WOGO WI**, Hallie. 8/9 fair o/w/CJOB, KNBR. 0006 with news, "WOGO" ID by a woman into C&W music. New one for me. [SA-SR]  
 1090 **CKRX AB**, Lethbridge. **EX-CHEC**. 7/23 fair to good. 0650 with rock music by such groups as Black Crows, Pearl Jam, etc. IDing as "CKRX Southern Alberta's Best Rock." New for me. [SA-MB]  
 1290 **KOIL NE**, Omaha. TENTATIVE. 8/11 good. 0635 with C&W music. Mentions of Omaha and "Metro Area." "New K(T?) 103" ID. [SA-SR]  
**KOWB WY**, Laramie. 8/10 good o/CIFX. 0658 with instrumental SSB and sign on. New one for me! [SA-SR]  
 1480 **KMEM NE**, Lincoln. **EX-KFMQ**. 7/16 very good. 0648 with "KMEM The Memory Station" and "KMEM" IDs between NOS/Adult Standards music. EX-KFMQ and now back on the air. New for me. [SA-MB]  
 1610 ..... **MT**, Fort Peck. 8/1 good. 0534 TIS with information on the Fort Peck Dam Recreation Area. No calls given, only "The U.S. Army Corps of Engineers welcomes you to the Fort Peck Lake Area. This is visitor information radio station 16-10 AM. This is the same TIS first heard at the IRCA Convention in Billings earlier this year. Also heard 8/1 at 2344, 8/2 at 0600 and 2356, 8/3 at 0644 and 2251, and 8/4 at 0649. This TIS just won't go away! [SA-MB]

### LOCAL CHANGES

- 1240 **KMAY MT**, Billings. KMAY has added ESPN Radio Network to its programming. [JcJ-MT]  
 unIDs  
 1010 unID 8/9 poor. 2300 unID in SS talk with mentions of Utah. [SA-SR]  
 [Shawn, How about KTUR Tooele, UT? EX-KTLE. Runs 50kW. John.]

### 25 YEARS AGO

September 7, 1968 issue of IRCA's DX Monitor....There was discussion as to when KRVN would move from 1010 to 880....An article mentioned Don McNeill's "Breakfast Club" on ABC would go off the air after 35 years....Bill Nittler of Englewood, CO talked about his new VW camper-bus and a planned Labor Day

CDXR Continued....

weekend in the mountains....Also we were told that at the NRC convention there was a proposal to merge IRCA and NRC due to publishing problems at the Boston HQ of the NRC.

### OPEN MIKE

The right to do something does not mean that doing it is right. 25 years ago the NRC made a proposal to merge with IRCA because of their publishing problems. Very interesting. Thanks to Shawn we have a column this week! It's September, the new DX season is here! Turn on those receivers and be sure to send in your DX and tips so others can benefit. Weekly issues are very near, so report often. Deadlines here are Saturdays. 73, John-John.

## Geomagnetic Indices

+	high point	mas	major storm	SA	solar activity
-	low point	mif	minor flare	spe	satellite proton event
GEO	geomagnetic activity	mis	minor storm	ss	severe storm
maf	major flare	pca	polar cap absorption		

### Geomagnetic Summary July 15 1993 through August 11 1993

Date	FLUX	A	K	SA	GEO	OTHER
7/15	93	3	1	very low	quiet	-
16	97	1	0	very low	quiet	-
17	99	1	0	low	quiet	-
18	100	3	2	very low	quiet	-
19	101	2	1	low	quiet	-
20	102	12	3	very low	quiet-unsettled	-
21	105	13	3	very low	quiet-unsettled	-
22	108	11	2	very low	quiet-unsettled	-
23	110	5	1	low	quiet	-
24	106	2	2	very low	quiet	-
25	102	2	3	very low	quiet	-
26	104	4	0	very low	quiet	-
27	103	7	2	low	quiet-unsettled	-
28	102	5	1	very low	quiet	-
29	100	14	1	very low	quiet-active	-
30	98	5	2	very low	quiet	-
7/31	96	3	1	low	quiet	-
8/ 1	100	0	1	low	quiet	-
2	101	1	1	low	quiet	-
3	98	3	2	low	quiet	-
4	96	16	4	low	unsettled-active	-
5	94	17	4	low	quiet-active	-
6	94	18	3	very low	quiet-active	-
7	91	12	3	very low	quiet-active	-
8	91	10	3	very low	quiet-unsettled	-
9	96	11	1	very low	quiet-unsettled	-
10	102	6	2	low	quiet	-
8/11	108	3	0	moderate	quiet	-

**KTFI** *The*  
Memory Maker

1270 AM RADIO

**TERRY VEIS**

President & General Manager

Bus. (208) 733-3381  
Fax: (208) 733-4196  
Res. (208) 733-6090

P.O. Box 2820  
Twin Falls, ID 83301

**Kay Klug**

Sales Representative, CRMC  
(414) 223-5312

**WTMJ Radio 620.**

720 East Capitol Drive, P.O. Box 693, Milwaukee, WI 53201

**EASTERN  
DX  
ROUNDUP**

LEONARD HYDE  
1805 WHIPPLE DR. #27  
BLACKSBURG VA 24060-2436

DEADLINES: September 3, September 17, then weekly (every Friday)

**\* THE REPORTERS \***

(BC) Bruce Conti - Nashua NH - R70, DX-400, MWDX-5, 2 60' wires  
(LH) Lynn Hollerman - Huntsville AL - DX-440, MFJ-956, 70' longwire

**\* OF SPECIAL INTEREST \***

1510 WSSH MA, BOSTON 7/15 went silent, phone disconnected. 7/26 returned to the airwaves with usual "Radio Continental" SS, as if nothing happened. Called at new phone number (617) 935-9774; staff would only say there were "business problems." During subsequent listening, heard legal ID mention 'Metropolitan Communications Corp.' (used to be 'Int'l Communications Group Inc.') which indicates change of hands during silent period. (BC)

**\* THE REPORT \***

1500 W000 IN, Shelbyville 8/12 2151-2155 fair. "It Could've Been Me," ID. (LH)

**\* unIDs/HELP \***

730 unID 8/12 2135-2150 Braves baseball game, dead air/weak signal when stn was supposed to ID, according to Braves ancrs...very strong signal...who IS this? (LH)  
1390 unID 8/12 2205-2220 Pittsburgh vs. St. Louis baseball game. Fading signal. Who? (LH) (from your location, probably a Cardinal affiliate rather than a Pirate one, Lynn -ed)  
1420 unID 8/12 2221-2225 another stn in the "Braves Radio Network"...who? (LH)  
1430 WTKN 8/12 2157-2200 "This is as country as it gets" sign. C&W mx, good signal. ID as WTKN, not found on 1430 in the 1992 NRC Log. (LH) (1993 Log lists WTKN on 1560 in Daleville, AL. However, there is a "sounds like" with C&W on 1430: WCKN-IN, ex WIRE, ex WFXF, which is widely heard. That's probably the one. -ed)

**\* OTHER STUFF \***

From BRUCE CONTI: "Nothing else exciting happening here DX-wise. I've been trying for the new Turks & Caicos "Radio Christiana" - 530, but hearing only CIAO and the local TIS right now. Hopefully, the meteor showers thing month will result in some interesting DX."

From LYNN HOLLERMAN: "On the Fidonet SHORTWAVE echo, there was a mention of a WNV on 530 at night in SS. I heard that last night, as well, but I never caught an EE ID. I thought CIAO in Canada was on that frequency. I haven't seen it listed in DX Monitor over the summer, tho...any ideas as to what's going on?"

(I have been hearing the same station, Lynn, with preaching in SS. This is obviously the new Turks & Caicos station. It is quite strong here, though CIAO can still be heard underneath. As far as I know, no US stations have been licensed for 530. Apparently this is a relay of WWRV-1330-NY, Radio Vision Cristiana. It has been heard nationwide, and has already assumed "pest" status, in my humble opinion. -ed)

**\* EDITOR'S DESK \***

Thanks to Lynn and welcome Bruce!

Just a reminder: be sure to scan the 1610-1710 range every time you DX now. Who knows, you may be the first to hear a new station testing in the expanded band.

September means the beginning of high school football. Friday evening during h.s. football season is an excellent time to roam around the regional and GY channels. Most of the stations will carry a ballgame. An almost complete dearth of music on these channels at this time makes it much easier to hear stations that might normally be buried. (IDing a station with a local football game is quite another matter, hi.)

Next issue begins Volume 31, marking my first anniversary editing EDXR. It has been fun, but I couldn't do it without all you great DXers and reporters. You will all be credited in the next column. Let's go to work now to make Volume 31 an even bigger success. Thanks again and 73 de LLH. :-)

#### \* DX RECORDS \*

The first season was a smashing success. All told, 29 of you responded to the invitation to "qualify & quantify" your DXing career. A new, expanded report form is on it's way. Meanwhile, we will take a look at some of the highlights from the past year's reports.

I left the foreign "best catches" out: I am in no way qualified to judge their merits.

A number of the reporters left spaces blank, or put "have no records." Some put "do not verie" while others with high verie totals noted "do not keep "heard" records." That explains why some reporters who listed high totals of veries do not make the top 5 in heard stations, etc.

I used no totals marked "approx" or (?) Also, several reporters who would have ranked highly made no showing because they broke their totals down by location. I understand the reason for that, but this illustrates the need to compile cumulative totals as well as separate ones by location.

Lastly, it would be wonderful if someone would volunteer to revive the Graveyard Distance Records feature. I could do it, but I don't want to be a pig. Here's a chance for someone new to get involved. Contact the IRCA President if interested.

	HEARD	VERIFIED
TOTAL BCB:	2386 - Bruce Portzer 1874 - Phil Bytheway 1712 - Alan Merriman 1712 - Elliot Straus 1675 - Robert Wien	4421 - Ernest Cooper 3226 - Bill Nittler 2090 - Pat Martin 1588 - Alan Merriman 1190 - Ron Musco
US-CANADA:	1657 - Bruce Portzer 1420 - Alan Merriman 1396 - Shawn Axelrod 1383 - Elliot Straus 1319 - John C. Johnson	3921 - Ernest Cooper 3025 - Bill Nittler 1522 - Pat Martin 1357 - Alan Merriman 1151 - Ron Musco
FOREIGN:	729 - Bruce Portzer 588 - Phil Bytheway 329 - Elliot Straus 292 - Alan Merriman 159 - Shawn Axelrod	568 - Pat Martin 500 - Ernest Cooper 231 - Alan Merriman 201 - Bill Nittler 147 - Bruce Portzer
STATES:	50 - Pat Martin 49 - Alan Merriman Bill Nittler 48 - J.D. Stephens Charles Taylor	50 - Pat Martin 49 - Alan Merriman Bill Nittler 48 - Ernest Cooper 46 - J.D. Stephens, Charles Taylor
PROVINCES:	10 - Pat Martin Alan Merriman 9 - Shawn Axelrod Bill Nittler Elliot Straus Charles Taylor	10 - Pat Martin Alan Merriman 9 - Bill Nittler 8 - Elliot Straus 6 - Charles Taylor
COUNTRIES:	95 - Alan Merriman 74 - Pat Martin 72 - Elliot Straus 70 - Bruce Portzer	93 - Alan Merriman 84 - Ernest Cooper 72 - Pat Martin 46 - Bill Nittler

62 - Bill Nittler

41 - Bruce Portzer

**BEST CATCHES:** (alphabetized by reporter's surname)**DOMESTIC:**

HEARD: KOTZ-720 AK, Kotzebue - Shawn Axelrod - Winnepeg MB  
 WPGC-1580 MD, Morningside - Phil Bytheway, Seattle WA  
 WDEA-1370 ME, Ellsworth - John Johnson, Billings MT  
 WKBR-1250 NH, Manchester - Bruce Portzer, Seattle WA  
 KFQD-730 AK, Anchorage - Charles Taylor, Indianapolis IN

VERIFIED: KRKO-1400 WA, Everett - Ernest Cooper, Provincetown MA  
 KUAI-720 HI, Eleele - Lynn Hollerman, Huntsville AL  
 WNUE-1400 FL, Ft. Walton Beach - Pat Martin - Seaside OR  
 KUAI-720 HI, Eleele - J.D Stephens, Huntsville AL  
 KUUU-1590 WA, Seattle - Ron Musco, Poquonock NJ

**CANADIAN:**

HEARD: CJOR-600 BC, Vancouver - Lynn Hollerman, Huntsville AL  
 CBRB-860 AB, Banff - Gary Jackson, Sacramento CA  
 CJRW-1240 PE, Summerside - Ron Musco, Poquonock NJ  
 CJBC-860 ON, Toronto - Mike Sanburn, Bellflower CA

VERIFIED: CIOF-1040 BC, Vancouver - Tom Laskowski, S. Bend IN  
 CBY-990 NF, Corner Brook - Pat Martin, Seaside OR  
 CKOC-800 BC, Penticton - Alan Merriman, Annandale VA  
 CBG-1400 NF, Gander - J.D. Stephens, Huntsville AL  
 CBA-1070 NB, Moncton - Peter Taylor, San Francisco CA

**GRAVEYARD**

<b>HEARD:</b>	<b>VERIFIED:</b>
253 - Bruce Portzer	160 - Robert Wien
251 - Shawn Axelrod	122 - Ron Musco
233 - Phil Bytheway	109 - John Johnson
Robert Wien (tie)	87 - Bruce Portzer
159 - John Johnson	66 - Phil Bytheway
1230: 53 - Robert Wien	33 - Robert Wien
1240: 35 - Phil Bytheway	23 - Ron Musco
1340: 48 - Bruce Portzer	28 - Robert Wien
1400: 54 - Bruce Portzer	38 - Robert Wien
1450: 52 - Shawn Axelrod	24 - Robert Wien
1490: 40 - Shawn Axelrod	22 - Ron Musco

**IRCA DX TECHNIQUES**

LEONARD HYDE - 1805 WHIPPLE DR #27 - BLACKSBURG VA 24060-2436

**GETTING STARTED IN MW DXING**

By Leonard Hyde

**PART 3: HOW TO START DXING:**

You have your receiver and antenna. You have been playing around with them, but you seem to get the same stations all the time. Just what IS this thing called DXing, you wonder? How do I do it, and how do I recognize a DX station, if and when I hear it?

Books have been written on the subject, and you are strongly encouraged to read some of them. However, here are a few guidelines.

To define DX: the old definition was "distant." On today's crowded band, that must be modified. Distance is relative. Hearing WBAP on 820, no matter how far it is from you, is probably not true DX: nearly everyone in the continental US can hear it. However, on 1240 kHz, a crowded 'graveyard' channel filled with 1000 watt locals, a station 100 miles away is distant.

Perhaps a better definition is "hard to hear." Now, a station 150 miles away is a DX station, if you rarely hear it. Tennessee is a neighboring state for me, but it's full of low power radio stations I have yet to hear. When I hear one, it's DX for me. When I hear it for the tenth time, it's no longer

The first thing to be considered is **band conditions**. When they are bad, you are not going to hear any DX. Many scenarios comprise 'bad cx,' as DXers say. Some nights are noisy, with lots of hiss and static crashes. Bad cx.

At other times, the ether seems milky or murky. Stations are subdued in strength, and fady. Bad cx again.

The best nights to DX? When the powerful clears fade to reveal a station underneath, that's good cx. You will often be able to null the clear, and pull out the subdominant station for a good catch. When I can null WBT-1110-NC to hear CKTY-ON, I know it's a good night, and I'll do a lot of DXing.

A powerful tool for the DXer are the hourly WWV propagation forecasts, at 18 minutes past each hour. There are two specific forecasts that signal good cx for the MW DXer:

1) High solar flux, low A, low K. Geomagnetic field quiet. This doesn't happen very often, since the high solar activity usually triggers adverse geomagnetic conditions. When it does happen, it signals excellent cx. The high solar activity will cause changes in the ionosphere. Signals will drop in and out. These are the nights when the powerful clears may fade momentarily, and allow you to hear something underneath. On such nights, the regionals and graves will support momentary reception of individual signals, as the patches of ionosphere that reflect each one "switch" in and out. These channels will provide excellent chances for DX reception.

If the solar activity goes extremely high, there may be an aurora. This is a much anticipated event. An aurora wipes out signals from the northerly latitudes. A listener in mid America will find the channels usually dominated by clears now populated by Spanish stations from Central and South America. This is an excellent opportunity to DX crowded channels, as many of the usual competing signals may be subdued or wiped out altogether.

2) Low solar flux, low A, low K. Geomagnetic field quiet. Here is the steady, rock solid band cx that will allow extremely long distance reception on MW. The atmosphere will be quiet. The powerful clears will be strong, but nulling may allow you to hear some good DX. This is the night to use all your system's gain to advantage.

Primetime for DX is not always at night. Sunrise and sunset are times when the ionosphere is changing, and cx may change from minute to minute. Also, stations are signing off and on now: this makes for an intriguing situation. The general concept that sunset is for Easterners and sunrise is for Westerners is not entirely true. I have lived on both sides, and used both periods to advantage in either place.

"Radio" sunset is marked by the beginning of skip. When skip begins depends on the season. In summer, skip may not begin until virtual sunset is imminent. During the winter, skip is often present by mid afternoon.

Skip begins at short distances. To illustrate this, I'll describe a typical mid winter afternoon here in SW Virginia.

Mid afternoon: short skip begins, marked by a distinct increase in strength of hard to hear regional stations. For example, WH00-1370 in Martinsville VA is a tough log here at mid day. When skip begins, it comes up to readable levels.

At the same time, WRVA-1140 in Richmond comes up over the station in St. Paul VA.

As afternoon progresses, I begin to hear stations to the north and south at greater distances. Now, WNC5-540 in Canonsburg PA can be heard with WRIC-VA nulled. Soon, I will be hearing SC and FL, as well as NY, PA, and some Canadians.

As the sun nears the horizon, the skip zone shifts west, bringing GA, TN, KY and OH in.

Around local sunset I get an opening to AL, MS and LA. This lasts for 15-25 minutes. This is an especially productive period. Daytime stations in the Eastern time zone sign off, while others reduce their power, leaving the channels open for Central Time Zone stations.

As dark falls, the big clear channel stations to my north and west begin to take over. Sunset is over, and night cx are in place.

Sunrise is a different story. It is not just a reversal of sunset. For one thing, stations sign on every 15 minutes through the period. These sign ons are often easily heard. Many stations must operate with reduced power during these 'critical hours,' and the possibility exists for some good DX.

Different stations are heard during sunrise. WWJZ-640-NJ is NEVER heard here at sunset, but is a regular visitor every morning. (This was written

before it became silent, hi.) I hear more regional stations from VA, KY and TN at sunrise.

Powerful stations from the west may ride in a good while after local sunrise, after they have increased power and changed to their day pattern. KFAB-1110-NE is an example. It often rolls in here after sunrise, putting WBT down in the 'muck' until true daytime cx take over.

When I was out West, sunset was a good time to catch stations to the north and south. Living in N. CA, this was prime time for WA, OR, and S. CA stations on the regional channels.

Of course, sunrise in the west is the time to hear the Eastern stations after they have changed power and pattern.

To DX effectively, one must have a plan of attack. This is called 'targeting' and has been described in a prior article. (Note 3.) Simply tuning around the band to see what you can hear works at first, but soon gives out as the new DXer exhausts most of the possibilities using this method. (To Be Continued.)

(Note 3: See "DXing With A Winning Gameplan" by the author. Printed in installments in "DX Monitor" during Volume 30. Soon to be available from the IRCA Reprint Service.)

NOTE: The last DX Techniques column got the bottom line cut off. (Sorry.) The sentence at the bottom of the page should have read:

What is a phasing system? Simply, signals from two dissimilar antennas are combined. The amplitude of the signal to be phased out is carefully adjusted so that it is at the same level from both antennas.



# Western DX Forum ★ ★ ★ ★ ★

Reid Wheeler 5910 Boulevard Loop SE Olympia, WA 98501

Deadline: Saturday 2 weeks before publication

**John C. Johnson, 979 Neptune Blvd, Billings, MT 59105-2129**  
406-259-9210

[8/13] DX has been nil here this past month. No new veries in quite a while. Hopefully with the new season and new contests starting I will add to my totals. Frank Aden: thanks for the TV Guides! A TV Guide collector can always use more copies. An article in the 8/11 issue of Radio World tells of the problems KEED-1600 Eugene, OR is having getting back on the air after an arsonist's fire last June 13th. The entire transmitter building burned. Originally the site was a landfill, but now is a pristine park. The city won't let them rebuild or even set up a temporary trailer to house a transmitter. Additionally, because of PCB capacitors, the cleanup cost about \$10K. It could be awhile before KEED is back on the air. 73, John-John.

**Larry Godwin, 2390 Clydes Dale Ln, Missoula, MT 59801**  
406-721-5131

[8/16] Greetings! Last month neighbor DXer Stan Weisbeck from Spokane stopped by and we had a good visit. And I spoke with former member Don Kaskey while I was in San Francisco; he's doing well and may take up the hobby again and rejoin IRCA. I've added two pieces of DXing equipment with which I am very pleased. I bought a Kiwa loop which is great for nulling locals, although it's not as sensitive for the long haul as my Sanserino box loop. Also I bought a CTR-69 portable cassette recorder from Radio Shack (stock #14-1154) for \$69.95 that is well suited to my needs. It has a sturdy pause button, large counter, good-quality speaker, and useful record volume indicator. I've modified my "stations heard" database so that it prints each frequency only on the first occurrence, and the report looks sharp. I use an inexpensive shareware program called File Express, which I recommend. Also got a Gateway 486-DX2-66 computer that executes the database program like lightning. Just heard my 301st station from Missoula, and am in no hurry to get to 1,000. I enjoy the probability of hearing something new each time I turn on the Hammarlund. Reception conditions have been generally poor the past three weeks, but fall is coming! 73.

15

EASTERN

Richard C. Evans

DX

P.O. Box 21883

FORUM

Milwaukee, WI 53221-0883

DEADLINES: 9/4 9/18 9/27 10/4 Phone: 414-Atlantic 2-9035

Gary Siegel, 2955 - 115th Street, Toledo, Ohio 43611

I certainly hope everyone's summer is going well. I hope no IRCAN's have been affected by the terrible flood in the Mississippi River Valley basin. Well, another siege of FM success has caused the demise of a good radio AM in the Toledo market. This time long time excellent radio station WTOD-1560 has been sacrificed to the 'simulcast' god. The stations' operators have tossed in their traditional C&W format and the separate WTOD programming in favor of airing their 99.9 FM WKKO over the 1560 AM frequency. Their LMA agreement which featured WTOD being aired on the 95.7 (WRED) Gibsonburg channel has been replaced by the 'hotter' 'young country' format that has sprung up like weeds in so many locales these days. They refer to that station as Y-95.7. Ah consultant radio--don't you just love it! I'm wondering if this latest surge in the 'new' country which sounds more like metal rock will be the equivalent of what the urban country did to the country field in the early '80's (hot for a while followed by a quick fade that took C&W music years to recover from). Anyway while the deed is done I still phoned my complaints to key WTOD/WKKO & Booth Broadcasting Co. personnel over the loss of the separately programmed WTOD which by the way had decent market ratings for a daytime AM station (2-5 share). I also fired off a letter of protest which I sought to have placed in their FCC file for listener ascertainment purposes. We don't have to idly sit by and watch good radio die. I'm hoping that WTOD will be brought back as a separately programmed entity. In other recent developments, I've noticed a new religious broadcaster operating at 530 kHz. What I've heard so far is primarily Spanish speaking with an ID I believe to be Radio Buenos Christiana International and would seem to be operating somewhere in the Caribbean or off the Atlantic coast as the direction of reception is SSE. Can anyone shed any light on this one? They seem to be strongest after 0000 ELT, also mentions of P.O.Box in NJ have been aired. (Is this the same one that Pat Martin mentioned in WDXF 8/14?--rce) Back in late June I heard a Mexican (Ranchero) sounding station on 1010 kHz which briefly topped CFRB just after 0600 ELT. By 0610 ELT it was gone. Can anyone offer ideas or possibilities on this one? Had the likes of Texas City's 920 and Monterrey's 1050 in solidly at the same time. Not heard since. Wish I could have made the Billings confab--sounds like it was a fun and successful gathering. More later. 73s

Rick Evans, 4841 South 26th Street, Milwaukee, Wisconsin 53221-2937

Small turnout this time. Good to see all the positive comments about the convention in Billings back in June. Sure wished I could have been there but it wasn't possible. It's also good to see the start of a good DX Test season coming up over Labor Day Weekend. At least two and perhaps all five will be possible here. Conditions seem to be on the upswing now in the middle of August. For several weeks, I wasn't able to listen to the Tiger games on WJR-760 after sunset while I'm at work, but now I can again. The band had been absolutely dead except for some locals. I've been listening to WKSH-1370 until they switch patterns at 2000 CLT; now WSPD and KDTH are mixing with it after 1900 CLT--with KDTH I believe the one with the ball games. We're back to bi-weekly bulletins until the middle of Sept., then it's weekly until March. It seems good to me but I'm just an editor, what do I know?, hi. Congratulations to John Johnson on being elected Chairman of the Board, and thanks to all of those who voted for me to be on the BoD. See you in two weeks. 73.



# SPORT CHANNELS IRCA

One mo' time...After a month (or was it two? Al, my mind's been swisscheesed again), I'm back with a new column, albeit the info is getting somewhat old. Though I could not attend the entire IRCA Convention, I'd like to thank everybody that I met for making my first experience memorable. I wish I had more time to travel, DX, and use a Kinko's, hi. Now, it's football time already and I would appreciate receiving network lists for football teams, pro and college, and hockey too! So let's ice this, to coin a phrase...

PLAYERS OF THE WEEK: Bill Hardy, Dave Whatmough at Billings, KKUL/KBSR Radio, Baseball America's 1993 Directory, DX Monitor, various newspapers.

UNIVERSAL SYMBOLS: (=) AM-FM simulcast. (+) Relays another AM. (\*) Daytimer. (o) Under 100 watts at night. (p) Partial schedule; dates unknown. (w) Weekend games (Sats./Suns.) only. (z) Off air at press time. Others are explained for each team or league.

## NATIONAL LEAGUE

### Atlanta BRAVES

Skip Caray, Don Sutton, Pete van Wieren, Joe Simpson

540	*WDXN-TN	940	WAZN-GA	1280	WPID-AL	1380	*WGYV-AL	'	'	WVLD-GA
550	WDUN-GA	950	*WGTA-GA	'	WSAT-NC	'	WTOB-NC	'	'	WWLG-GA
580	WGAC-GA	970	*WVOP-GA	1290	WCHY-GA	'	*WLRV-VA	'	'	WBHF-GA
'	WMGA-GA	'	*WWIT-NC	'	WCHK-GA	1390	WXTC-SC	'	'	WGPC-GA
590	*WCAB-NC	980	*WPGA-GA	'	WATO-TN	1400	WTXQ-AL	'	'	WGNC-NC
610	*WCEH-GA	'	*WBZK-SC	1300	*WMTN-TN	'	WJHO-AL	'	'	WHSC-SC
'	WAQS-NC	990	*WEIS-AL	1310	*WHEP-AL	'	WAVD-AL	'	'	WGNS-TN
630	*WAVU-AL	1050	WWIC-AL	'	WAUC-FL	'	WNUE-FL	1460	'	WBCU-SC
640	WGST-GA	1130	WACQ-AL	'	WTIK-NC	'	WCOH-GA	1470	'	*WCLA=GA
690	WJOX-AL	1150	WGOW-TN	'	WGH-VA	'	WWRK-GA	'	'	WRGA=GA
710	WKRG-AL	1160	WAMB-TN	1320	WGLD-NC	'	WCOS-SC	1480	'	*WAJA-NC
'	*WFNR-VA	1170	*WHNE-GA	1330	WMLT-GA	1410	*WEGO-NC	1490	'	WRLD-AL
730	WOHS-NC	1230	WBHP-AL	'	WFBC-SC	1420	WACT-AL	'	'	WHBB-AL
'	WLIL-TN	'	WGGG-FL	1340	WFEB-AL	'	*WPEH-GA	'	'	WFSB-GA
740	*WBAW-SC	'	WBLJ-GA	'	WGAU-GA	'	WRCG-GA	'	'	WSNT-GA
790	*WQSV-TN	'	WAYX-GA	'	WGAA-GA	'	*WMYN-NC	'	'	WCHM-GA
800	WJAT-GA	'	WSKY-NC	'	WTFI-GA	'	WKSJ-TN	'	'	WSVM-NC
830	WMO-NC	'	WFAT-NC	'	WBGJ-KY	1430	WLTG-FL	'	'	WGCD-SC
860	WDMG-GA	1240	WBGC-FL	'	WKRJ-TN	'	*WQFS-GA	1520	'	*WKVQ-GA
900	WJTH-GA	'	WLAG-GA	'	WBAC-TN	1440	WHHY-AL	'	'	WNWS-TN
910	WORD-SC	'	WPAX-GA	'	WHAP-VA	'	*WVMG-GA	1560	'	*WCCP=SC
'	WJCW-TN	'	WVNS-GA	1350	WGAD-AL	'	WLXN-NC	1570	'	*WCLR-AL
'	*WEPG-TN	'	WBHB-GA	1360	*WMFC-AL	1450	WDNG-AL	1590	'	WVNA-AL
'	WRNL-VA	'	WAVN-MS	'	*WZPQ-AL	'	WDLK-AL	'	'	*WTGA-GA
930	WLSL-MS	'	WDXY-SC	'	WCHL-NC	'	WTAL-FL	'	'	*WCSL-NC
'	WLLL-VA	1270	WLIK-TN	1370	WCOA-FL	'	WKEU-GA	1600	'	*WFIS-SC
							*WLOP-AL			

### -FM-

92.1	WKUL-AL	94.5	WIST-TN	'	WVMG-GA	100.7	WBNK-VA	103.9	WQLS-AL
'	WPEH=GA	94.9	WPCH=GA	97.7	WKLD-AL	100.9	WIFM-NC	'	WDDK-GA
'	WWRK=GA	'	WMKO-GA	97.9	WDMT-AL	101.9	WHHY=AL	104.5	WGPC-GA
'	WBTR-GA	95.3	WYSC-GA	98.3	WTKT-SC	'	WSSG-GA	104.9	WCCP=SC
92.5	WOKF-GA	'	WTGA-GA	'	WINJ-TN	102.3	WQTU-GA	105.5	WIFO-GA
92.7	WLIQ-TN	95.9	WKXN-AL	98.7	WISK-GA	102.9	WMJE-GA	106.3	WKNU-AL
92.9	WZLA-SC	'	WDXE-TN	99.1	WBAW=AL	103.1	WRIX-SC	'	WGMK-GA
93.5	WLIL-TN	96.7	WMKJ-GA	99.3	WMFC-AL	103.5	WMTY-SC	106.7	WAMB-TN
94.3	WPUB-SC			99.9	WACQ-AL			107.1	WCLA=GA

### Chicago CUBS

Harry Caray, Thom Brennaman, Ron Santo

570	WNAX-SD	1050	WDZ-IL	1350	KRNT-IA	'	zWLYV-IN	'	'	*KIWA=IA
720	WGN-IL	'	WTCA-IN	1370	KDTH-IA	1460	WKAM-IN	'	'	*KAPE-MO
740	*WLWI-AL	1060	*WRHL=IL	1380	KCIM-IA	'	KENO-NV	1570	'	WFRL=IL
880	WINU-IL	1150	KCKY-AZ	1400	WDWS=IL	1470	*WHUT-IN	1580	'	WIFF-IN
910	*WAKO-IL	1250	KCFI-IL	'	WBAT-IN	'	WQSN-MI	1590	'	*WPCO-IN
920	WMOK-IL	1290	WIRL-IL	'	KADR-IA	1480	WRSW-IN	'	'	WKBG-IA
930	WHON-IN	1310	KOKX-IA	1410	*WGRD-MI	1490	WDAN-IL	1600	'	KCRG-IA
960	WSBT-IN	'	WGH-VA	1440	WGEM-IL	1500	*WGEN=IL	'	'	*WCWC-WI
1020	*WCIL-IL	1320	*WNGO-KY	1450	WFMB-IL	1540	WBNL-IN			(continued)
		1330	*WRAM=IL			1550	*WJIL-IL			

## -FM-

94.3	WJNZ-IN	97.5	WDWS-IL	98.5	WXQX-IL	103.1	WAKO-IL	105.5	KIWA-IA
95.9	WKUZ-IN	97.7	WMOI-IL	102.3	WRHL-IL	104.9	WGEN-IL	107.1	WOML-IN
96.9	WLBH-IL	'	WFRX-IL			'	WAXI-IN	107.3	WRNW-IN

## Cincinnati REDS

560	WJLS-WV	970	WATH-OH
580	WCHS-WV	990	*WJEH-OH
610	WTVN-OH	1050	WGAT-VA
620	WDNC-NC	1150	WIMA-OH
680	WCJT-KY	1230	WIRO-OH
700	WLW-OH	1240	WFTM-KY
740	*WLWI-AL	'	WSFC-KY
'	*WRNR-WV	'	WHIZ-OH
920	*WTCW-KY	1250	*WOFR-OH
930	WTKZ-WV	1260	WNDE-IN

## Marty Brennaman, Joe Nuxhall

1290	WHIO-OH	1390	*WBLL-OH	'	WFKY-KY
'	WVOW-WV	1400	WPAT-OH	'	WOMI-KY
1300	WLXG-KY	'	WBTH-WV	'	WBEX-OH
1320	*WLOH-OH	'	WVRC-WV	'	WJOC-TN
1330	*WTRE-OH	1440	*WPGW-IN	1520	WOOD-IN
'	*WYPC-OH	'	*WMDJ-KY	1550	*WNDD-IN
1340	WLBC-IN	'	WRRO-OH	'	*WCVL-IN
1370	*WGOH-KY	1450	WXVW-IN	1570	WSWV-VA
1380	*WHRS-KY	1490	WKBV-IN	1590	*WSRW-OH
		'	WSIP-KY	1600	*WBLY-OH

## -FM-

92.1	WMPO-OH	95.9	WFTM-KY	101.5	WMGG-OH	'	WXKQ-KY	105.5	WSWV-VA
92.7	WCMI-KY	96.7	WBVI-OH	101.7	WMCQ-KY	104.1	WLBC-IN	105.9	WHAY-KY
'	WPMW-WV	'	WKOV-OH	101.9	WVOW-WV	'	WPAY-OH	106.1	WRZZ-WV
94.1	WAXS-WV	99.5	WBKW-WV	102.3	WFPC-IN	104.9	WWDY-IN	106.7	WSRW-OH
94.3	WRCR-IN	100.1	WMDJ-KY	'	WUGO-KY	'	WKYW-KY	107.3	WCJT-KY
'	WKKI-OH	100.9	WPGW-IN	103.9	WRBI-IN	'	WKWC-OH	107.5	WZLK-KY
95.3	WNDI-IN			'	WIMC-IN	105.1	WRNZ-KY		

## Colorado ROCKIES

580	*KZMX-SD	920	KLMR-CO
610	KSKE-CO	930	*KRKY-CO
'	*KCSR-NE	'	*KROE-WY
'	KVNU-UT	940	KGRL-OR
690	*KOAQ-NE	950	*KMER-WY
730	*KLOE-KS	1030	KBUF-KS
740	tKRTC-CO	'	KTWO-WY
or	iKVFC-CO	1080	*KRPX-UT
790	*KUTA-UT	1110t	*KYKK-NM
850	KOA-CO	1150	KCKY-AZ

## Wayne Hagin, Jeff Kingery

1230	KBCR-CO	1310	iKFKA-CO	'	iKVCS-MT
'	iyKKUL-MT	1330z	*KFCA-AR	'	iKVOW-WY
'	KYVA-NM	1340	iKWOR-WY	'	KBFS-SD
1240	xKMAY-MT	1350	KGHF-CO	'	iKBBS-WY
'	KFCB-WY	1400	KTUC-AZ	1470	*KUFA-UT
'	KEVA-WY	'	KPAG-CO	1490	iKDBM-MT
'	iKTHE-WY	'	iKDRG-MT	'	iyKBSR-MT
1250i	*KIKC-MT	'	KCOW-NE	'	iKRTN-NM
1290	KOWB-WY	1410	KCOL-CO	'	KUGR-WY

## -FM-

92.7	iKVCK=MT	97.3	iKKJQ=KS	101.3	KIQX-CO	106.5	KQOL-UT	'	KFXX-KS
94.3	iKRTN-NM	97.7	iKSPN-CO	102.3	KSPK-CO	106.7	KBOM-NM	107.9	KBKL-CO

(i) Per Bill Hardy but not team. (t) Per team as of 3/18. (x) Per personal observation at IRCA Convention. (y) Per stations' owner, dropped coverage when KMAJ was granted rights as well.

## Houston ASTROS

## Milo Hamilton, Larry Dierker, Vince Cotroneo, Bill Brown

560	KLVI-TX	950	KPRC-TX	'	*KWHI-TX	1350	*KTXJ-TX	1460	WACO-TX
580	KALB-LA	1080	*WFIV-FL	1300	*KFLO-LA	1390	KULP-TX	'	KRME-TX
710	KURV-TX	1150	WTAW-TX	'	WIBR-LA	1400	KEBE-TX	1470	KLCL-LA
790	KKYR-AR	1230	KSIX-TX	'	KVET-TX	'	KYLR-TX	'	KUOL-TX
860	KSFA-TX	'	KERV-TX	1330z	*KFCA-AR	'	KTEM-TX	1490	KIBL-TX
910	KNAF-TX	1250	KZEP-TX	'	KDOK-TX	1440	KMLB-LA	'	KVLL-TX
930	*KDET-TX	1260	KXQZ-TX	1340	KAMG-TX	'	KPUR-TX	1520	*KRJH-TX
		1280	WQUE-LA	'	KRBA-TX	1450	KCTI-TX		

## -FM-

92.7	KTOD=AR	'	KIVY-TX	98.3	KULM-TX	102.3	KDET-TX	106.3	KPJJN-TX
		94.7	KVLL-TX	98.5	KRXT-TX	105.3	KHOX-AR		

(en espanol:)

1320 KXYZ-TX

## Ernesto Ruiz, Manny López

1530 KGBT-TX

## Los Angeles DODGERS

## Vin Scully, Ross Porter, Rick Monday#

610	KAVL-CA	920	KVEC-CA	'	pKYVA-CA	1310	KIQQ-CA	1440	KUHL-CA
720	KDWN-NV	950	KNFT-NM	1240	KJAA-AZ	1320	KKSJ-CA	1450	KVEN-CA
760	fKGY-HI	990	KTKT-AZ	'	KLOA-CA	1340	WSTA-VI	'	pKMSL-MT
790	KABC-CA	1140	KCMJ-CA	1250	KTMS-CA	1370	WAXE-FL	1560	KNZR-CA
910	KVVQ-CA	1230	KBOV-CA	1300	KROP-CA	1400	KEYX-CA	1570w	*KUAU-HI
						92.7	KAKT-CA		

## -FM-

(H) Replaces the late Don Drysdale. (f) Friday games from June to September only. (+) Relays 910 KVVQ.

18

[en español:]

910 KOXR-CA 1010 KCHJ-CA 1280 \*KDOL-NV 1330 KWKW-CA 1490 KICO-CA

NOTE: Listings for Mandarin Chinese and Korean are unavailable.

Jaime Jarrin, Rene Cardenas

## New York METS

660 WFAN-NY 930 \*WIZR-NY 1340 WALL-NY 1520 WKKB-NY 1570 WFLR-NY  
870 WHCU-NY 950 WIBX-NY 1450 WKIP-NY 1540 WPTR-NY 1590 \*WPSL-FL

Gary Cohen, Bob Murphy

FM: 101.7 WRCZ-MA ' WBAZ-NY

## Philadelphia PHILLIES

590 WARM-PA 1150 WDEL-DE 1240 WYGL-PA 1390 WKLP-WV 1440 WREY-NJ  
790 WAEB-PA 1210 WQGL-PA 1270 WLBR-PA 1390 WRSC-PA 1490 WAZL-PA  
850 WEEU-PA 1230 WCMC-NJ 1320 WGET-PA 1400 WOND-NJ ' WNB-T-PA  
960 WPMR-PA ' WBPZ-PA 1350 WJRV-PA ' WRAP-PA ' WLPA-PA  
' WKBO-PA 1360 WPPA-PA 1420 WCOJ-PA

FM: 105.5 WCHX-PA

## Pittsburgh PIRATES

590 WMSB-PA 1150 \*WHUN-PA ' WCVI-PA ' WEIR-WV 1490 WOHI-OH  
600 \*WFRM-PA 1160 WCCS-PA ' WHAR-WV 1440 WAJR-WV ' WESB-PA  
940 \*WESA-PA 1270 WCBC-MD 1390 WHOT-OH 1450 WFRA-PA ' WNTJ-PA  
990 WTIG-OH 1280 WKST-PA 1400 WKBI-PA ' WJPA-PA ' WMGW-PA  
' WVSC-PA 1310 \*WNAE-PA ' WJRV-PA ' WMAJ-PA ' WTCS-WV  
1000 \*WIOO-PA 1330 WEYZ-PA ' WKWK-WV 1460 WMBA-PA 1540 \*WECZ-PA  
1020 KDKA-PA ' \*WETZ-WV 1420 WBRD-FL 1470 \*WZGO-PA 1580 \*WANB-PA  
1050 WMSG-MD 1340 WTRN-PA 1430 WVAM-PA 1480 WCNS-PA 1590 WCBG-PA  
' WADC-WV 1600 \*WPDC-PA

-FM-

92.1 WXIE-MD 94.7 WELK-WV 100.9 WRAX-PA 103.1 WANB-PA 105.5 WPXZ-PA  
93.5 WBNV-OH 102.1 WOWQ-PA 107.1 WEXC-PA

## St. Louis CARDINALS

560 WHBQ-TN 1120 KMOX-MO ' WTAX-IL 1390 KCRC-OK 1460 WROY-IL  
690 \*KEWI-AR 1130 WSJP-KY ' KFMO-MO ' WTJS-TN ' WIXN-IL  
740 \*WVLN-IL 1220 WLPO-IL ' KWOS-MO 1400 WDWB-IL 1470 WMBD-IL  
800 \*KAGH-AR ' KJAN-IA ' WWZQ-MS ' WGIL-IL ' WNAU-MS  
' \*KVOM-AR 1230 KCON-AR ' WENK-TN ' KFRU-MO 1480 WTHI-IN  
860 \*KOSE-AR ' KFPW-AR 1250 WRAY-IN 1410 WTIM-IL 1490 KDRS-AR  
' WSON-KY ' KBTM-AR 1270 WEIC-IL ' KGRN-IA 1500 WGEN=IL  
900 \*KHOZ-AR ' WJBC-IL 1310 KOKX-IA 1420 KXOW-AR 1520 WLUV=IL  
' KFAL-MO ' WHCO-IL 1330 WTRO-TN ' WINI-IL ' KMPL-MO  
910 KAMD-AR ' WLLR-IL 1340 KBTA-AR 1430 WYMC-KY 1550 WMSK=KY  
940 WMIX-IL ' WHOP-KY ' WSOY-IL ' KQLL-OK ' KSFT-MO  
960 KZIM-MO ' KVAS-MO ' WJPF-IL 1440 WRAJ=IL 1570 WTAY=IL  
980 WITY-IL ' KLWT-MO ' WBIW-IN 1450 WKEI-IL ' WTRB-TN  
1050 KSIS-MO ' WBBB-OK ' KXEO-MO ' WDXR-KY 1580 WBBA=IL  
1070 KHMO-MO 1240 KTLO=AR ' KSMO-MO ' KIRX-MO ' KCHA=IA  
1090 WCRA=IL ' KBIZ-IA 1360 KFFA-AR ' KWPM-MO 1590 KDEX=MO

-FM-

92.7 WRAJ-IL 95.3 KOKX=IA 97.5 WBBA=IL 101.7 WTAY=IL ' KRES-MO  
' KCZY-IA ' KMAQ-IA ' KOEA-MO 102.1 KJFM-MO 104.9 KAGH=AR  
' KLOZ-MO ' WMSK=KY 98.1 WRAY-IN 102.3 WRFJ-IL ' WGEN=IL  
92.9 WSEI=IL 95.7 WCRC-IL 98.3 KTLO=AR ' WEBQ-IL ' KPWB-MO  
93.5 WKBL-TN 95.9 KSAR-AR ' WBYS-IL ' KCZQ-IA 105.1 WGEM-IL  
93.7 WTKB-TN ' KCHA-IA 99.3 WZLT-TN ' WCBL-KY 105.3 WZQZ-MS  
94.3 WDXR=IL ' KKBZ-MO 100.1 KYFM-OK ' KDEX-MO 105.5 KTEL-AR  
' KQMX-MO 96.3 KHLA-AR 100.3 KGAR-MO ' KJPW-MO ' KILQ-IA  
94.5 KCLR-MO 96.7 WLUV=IL 100.7 KOKR-AR 103.1 KLOW-MO 106.3 KMSI-MO  
95.1 KCZE-IA ' WKXQ-IL 100.9 KTUI-MO 103.9 KPOC-AR 107.1 WEAL-IL  
' KLGS-MO ' WFML-IN 101.3 KTXR-MO ' WXIS-TN 107.9 WAMW-IN  
' KMEM-TN 104.7 WLMD-IL

SYNDICATOR: Anheuser-Busch Sports Productions.

## San Diego PADRES

660 KTNN-AZ 1230 KAAA-AZ ' KXO--CA 1280 KKAL-CA 1450 KSGI-TV  
760 KFMB-CA ' KINO-AZ 1360 KNNS-AZ 1460 KENO-NV

Jerry Coleman, Bob Chandler, Ted Leitner

**San Francisco GIANTS**

600	KHTE-CA	580	KNBR-CA	'	KAGO-OR	'	KPLY-NV	1380	KSMJ-CA
620	*KWSO-CA	730	*KBOY-OR	1240	KSUE-CA	1300	*KYNO-CA	1540	KLAU-CA
670	xKPUA-HI	990	yKXVH=HI	1270	KJUG-CA	1340	KATA-CA	1560	*KIQS-CA
		1150	KBAI-CA			1360	KFIV-CA		

**Hank Greenwald, Ted Robinson, Barry Tompkins**

FM: 92.7 KMFB-CA 98.5yKHHH-CA

(x) Weekend games until mid-July, when station switched to daily coverage. (y) Weekend plus select weekday games only.

**AMERICAN LEAGUE****New York YANKEES**

770	WABC-NY	1160	*WPIE-NY	1340	WBRK-NY	1390	WEOK-NY	1450	WPAM-PA
840	*WVPO-PA	1240	WWCO-CT	'	WENT-NY	1400	WICK-PA	1490	WKNY-NY
850	*WREF-CT	1300	WQBK-NY	'	WYCK+PA	1420	WACK-NY	1520	WWKB-NY

**John Sterling, Michael Kay**

FM: 93.9 WDNV-NY

**AA MINOR LEAGUE BASEBALL****EASTERN LEAGUE**

590	WROW-NY	Albany-Colonie	YANKEES [Yanks-a]						John Thomas
1430	WMRV-NY	Binghamton (NY)	METS [Mets]						Rob Evans
1010	*WERQ-MD	Bowie (MD)	BAYSOX [Balt-b]						UNAVAILABLE
990	WFIG-OH	Canton-Akron	INDIANS [Clev-c]						Sam Bourquin
	UNAVAILABLE	Harrisburg (PA)	SENATORS [Pitt]						Mark Mattern
94.7	CHRW-ON#	London (ON)	TIGERS [Detr]						Doc Palmer
1120	WBIS-CT	New Britain (CT)	RED SOX [Bos]						Don Wardlow, Jim Lucas, Gizmo The Radio Dog
	UNAVAILABLE	New Haven (CT)	RAVENS [Colo-d]						
	UNAVAILABLE	Portland (ME)	SEA DOGS [Fla-d]						
1340	WRTA-PA	Reading (PA)	PHILLIES [Phi]						Steve Degler

(#) 20 games only (this is a college station). (a) Plays in Albany. (b) Based in Laurel but plays in Baltimore. (c) Plays in Canton. (d) Expansion teams for 1994.

**CANADIAN FOOTBALL LEAGUE**

British Columbia	LIONS	980	CKNW-BC	Sacramento	GOLD MINERS	1530	KFBK-CA
Calgary	STAMPEDEERS	770	aCHQR-AB	Saskatchewan	ROUGHRIDERS	980	CKRM-SK
Edmonton	ESKIMOS	930	CJCA-AB	Toronto	ARGONAUTS	1010	bCFRB-ON
Hamilton	TIGER-CATS	900	CHML-ON	Winnipeg	BLUE BOMBERS	680	cCJOB-MB
Ottawa	ROUGH RIDERS	580	CFRA-ON				

(a) Announcers: Don Siler, Kevin Gallant. (b) Relayed on 6070 CFRX (SW). (c) Relayed on 96.1 CHGG, 99.1 CHGW.

**ARENA FOOTBALL LEAGUE**

Albany (NY)	FIREBIRDS	1540	WPTR-NY	Dallas	TEXANS		
Arizona	RATTLERS	620	KTAR-AZ	Detroit	DRIVE		
Charlotte				Miami	HOOTERS'	940	WINZ-FL
Cincinnati	ROCKERS			Orlando	PREDATORS		
Cleveland	THUNDERBIRDS	1300	WERE-OH	Tampa Bay	STORM	970	WFLA-FL

More extensive and updated information in the latest IRCA ALMANAC Updater. Don't know when this will be printed, but by then I will have returned from South Korea, where I visited Expo '93 (weak promotion machine—nary a travel page mention, and running only three months) and kowtowed to numerous relatives who don't speak English, but it's better than my pidgin Korean, hi. Maybe I had a squid hotdog at a pro baseball game? Tune in to find out. Til then, I'M VAN DALE Park, IRCA SPORTSSS!!!

**IRCA Stationery**

Black on white masthead with the IRCA logo and name. Great for using when writing for verifications. 100 sheets, \$5.00. Order yours today from: IRCA Bookstore, 9705 Mary Ave NW, Seattle WA 98117

20

## USING THE STEREOPHONIC DECODER IN YOUR BRAIN

By Cary Simpson

Here's something I'd like you to try, to see whether you can make it work. I believe that it works for me.

First, each person with normal hearing hears stereophonically, receiving sounds in each ear, and at a different time, perhaps thousandths of a second apart. But, the fact that there are two separate ears receiving the sounds enables the human mind to "tune out" unwanted sounds, and focus sharply on the one we want to hear.

When someone loses the hearing in one ear, this ability to focus is lost. Try it for yourself. Plug one ear with your finger and note that all of the background noises in the room suddenly become noticeable, and annoying.

Now, think of the typical graveyard channel on the AM Band, or one of the regionals with lots of post-sunset signals. When you listen to it on a radio speaker, or headphones, it all comes at you together, and it's impossible for your brain to "tune out" unwanted parts of what you hear, since you are receiving the sound monaurally.

But, what if you were to listen with two pairs of headphones, from separate radios? Could this "difference" be significant enough that your mind might be able to "tune out" or exclude unwanted sounds?

To test this, I used two separate "Walkman" type receivers, of different makes, and put a headphone from each set on each ear. Then I tuned to a noisy frequency, making sure that I had the same one on both radios. Then, taking one in each hand, I turned one of the radios, so the loop inside brought up a tiny amount of audio from a station that was not audible on the other radio, since it wasn't pointed in the same way.

I found that I could then "tune out" in my mind much of the sound of all of the other stations. If I could hear the station on both radios, it wasn't as clear in my mind, unless it became dominant on the frequency.

But, the experiment was not limited to Graveyard Channels. Especially interesting was the frequency, 1410 KHz, where I was able to pull a Black Gospel station from Mobile, Alabama, out of the mud and listen for some time, in spite of the fact that WING, Dayton, Ohio, was dominant on the frequency. I could not null it out by moving the two Walkmans, but, by turning one of them so Mobile could be heard, while it was not audible on the other one, my mind could exclude or ignore WING's CNN News, and I could concentrate on the preaching from Mobile.

One of the things that stereophonic hearing gives us is the ability to determine the direction from which a sound comes, by the slight delay in the sound getting to the second ear. Sounds from directly overhead can't be located, since the sounds reach both ears simultaneously. But, with two Walkmans, there is not any real time delay in getting to the second ear. So, there is no sensation of hearing sounds from one ear or the other. Even when "tuning out" unwanted sounds and focussing on one, it does not seem to come out of one of the headphones.

I would appreciate it if other DXers would try this experiment and see if it helps you to focus in on "wanted" stations and pull them out of the mud. If so, it could make an interesting additional way, beyond nulling with a loop antenna or pair of antennas, and doing the "nulling" in your brain.

## A DXers TECHNICAL GUIDE

Now in its 2nd edition, this 120 page book answers questions on receiver and antenna theory, how to make them work better, what audio filters and loop antennas will do for you (and hints on their construction), how to build a beverage and phasing unit, and much more. Only \$5.50 for IRCA members, \$6.50 for non-members (overseas airmail add \$2.50). Order your copy today from: IRCA Bookstore, 9705 Mary Ave NW, Seattle WA 98117

## Drake R8: Encoder Shaft "Static" Elimination

Dallas Lankford, 8 V 93

In his RDI white paper, Edition 2.0, review of the R8, Magne referred obliquely to the R8 encoder shaft static problem as follows. "If it wasn't grounded, the receiver might emit static sounds when the tuning knob was adjusted to a certain position -- hardly what you'd hope for in a fidelity-oriented receiver. However, most units manufactured in 1991, and all units manufactured since early January, 1992, have been upgraded to eliminate the need for grounding."

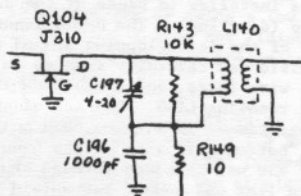
My R8 was purchased in July 1992, so presumably it was manufactured after January 1992. Yet my R8 had the static problem. Grounding my R8 reduced the intensity of the static, but did not eliminate the static. Assuming that somehow my R8 was not correctly manufactured, I returned it to Drake in September 1992 to have them fix the static problem and to do some other warranty work. I got my R8 back in exactly the same condition regarding the static with the following notations on the warranty work sheet. "Unit has new type encoder. No noises noted."

They were helpful enough to provide me with a clue as to the cause of the static, namely the encoder. So I removed the main tuning knob from the encoder shaft and fiddled with the shaft. Sure enough, by wiggling and rotating the shaft I could generate the "static" to my heart's content. Here perhaps I should add that the static is not observed without an antenna connected and the R8 tuned to a relatively weak signal with little background noise. Anyway, while I was fiddling with the encoder shaft I was reminded of a similar problem I had with my 2 foot air core amplified loop. About a year after I built my loop it started emitting static as the tuning knob was rotated. The cause of my loop static problem was traced to the two speed shaft of my Jackson Brother's planetary drive: it was not grounded properly. The JB shaft is heavily lubricated, and thus partially isolated from ground, depending on whether the shaft and/or bearings make good contact with the case. Since the shaft was attached to the main tuning capacitor (which was floated from ground because the loop is balanced) through a flexible insulated coupler, the JB shaft did not have a good ground. The solution there was to ground the JB shaft through a tension loaded ground contact (a thin automotive feeler gauge bolted to ground). I quickly verified that a similar solution worked for the R8. The R8 encoder shaft was not properly grounded!

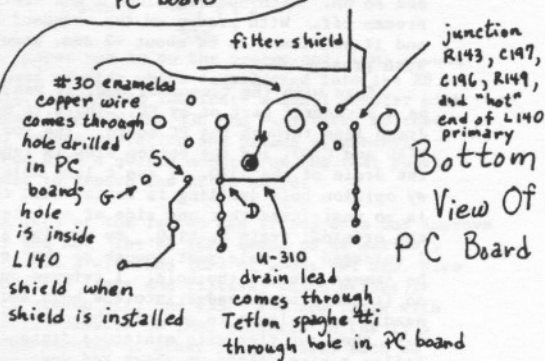
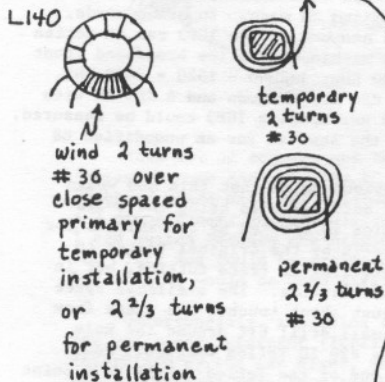
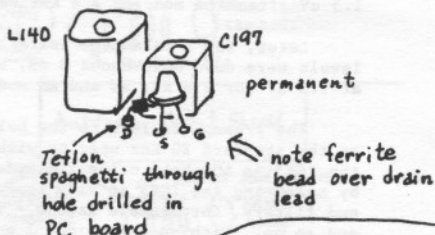
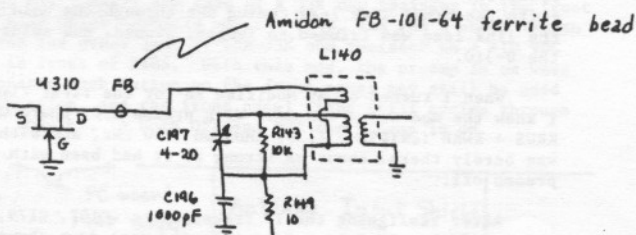
Unfortunately, there is not enough space between the main tuning knob and encoder shaft bushing to install an automotive feeler gauge ground like I did for my loop. Then I was reminded of the 51J-4 KCS shaft tension washer assembly (clearly Collins didn't permit their PTO shaft to emit static). After considerable digging through my junk boxes I found two thin flat washers with 1/4 inch inside diameters, and an extremely thin bronze spacer (apparently from an R-390A RF deck gear shaft) which could be easily bent into a tension washer shape (convex). The 51J-4 tension washers have way too much tension and give the R8 tuning a definitely sluggish feel. You want to use a tension washer with as little tension as possible while maintaining a good electrical ground. With the tension washer sandwiched between the two thin flat washers, and the main tuning knob installed carefully to minimize tension, the encoder "static" was completely eliminated and the R8 tuning "feel" remained original.

22

Before :



After :



As R8 owners know, just about every night you can get lots of 3rd order intermodulation distortion products (IMD3) in the 1.8-2.0 MHz range with the preamp on using rather modest antennas. And it is not uncommon to get IMD3 during the daytime in that frequency range with the preamp off. And at night in the 15.6-15.8 MHz range it is not uncommon to get 2nd order intermodulation distortion products (IMD2) from 6 and 9 MHz SW broadcaster with the preamp off or on. In a previous review of the R8 I had speculated that the cause

of the IMD was the first mixer, although I did not completely rule out the 1st IF amp as a possibility. Denzil Wraight had discussed the problem with me, and he was more inclined to suspect the 1st IF amp. Because of that, and because the 1st IF amp is easier to modify than replacing the 1st mixer, I modified the 1st IF amp before trying anything else.

The basic idea was to present the J310 with a lower load impedance, which would in theory increase the 3rd order intercept (ICP3) of the J310 amp. To avoid drilling holes in the PC board, my first mod was temporary. The J310 was removed and a U-310 was installed in place of the J310 with the drain lead of the U-310 curved up (dangling). The U-310 leads are stiff enough so that there is no danger of the lead flopping around and shorting the +10 volt DC line. The L140 shield was carefully removed so as not to break the flimsy #30 enameled copper wire leads, and a two turn link was threaded around the bottom of L140 without removing L140. One end of the short length of #30 enameled copper wire was tinned in advance, and solder was removed from the PC board hole for the "bottom hot" side of the L140 primary. The tinned end of the short length of #30 was threaded through that PC board hole and soldered. The the two turn link was wound, the shield can was reinstalled (with the other link lead coming out through the hole in the top of the shield), the link lead was trimmed to length, tinned, and soldered to the drain of the U-310.

When I turned on my modified R8 for the first time last Saturday afternoon, I knew the mod was a winner. With preamp off, there was no sign of my usual KRUS + KWKH (2x1490 - 1130) IMD3 on 1850 KHz, and with the preamp on the IMD3 was barely there, about as strong as it had been with the unmodified R8 and preamp off.

After realigning the IF transformers (C197, C179, C174) I began making tests and observations. Signal levels were down about 12 dB, but surprisingly the sensitivity of the R8 was hardly changed, from about 1.1 uV before to 1.5 uV after the mod for a 6 KHz BW and AM mode with preamp off.

Later, for a permanent installation I used a 2 2/3 turn link, and signal levels were down only about 8 dB, but with sensitivity still down slightly at 1.5 uV for a 6 KHz BW and AM mode with preamp off.

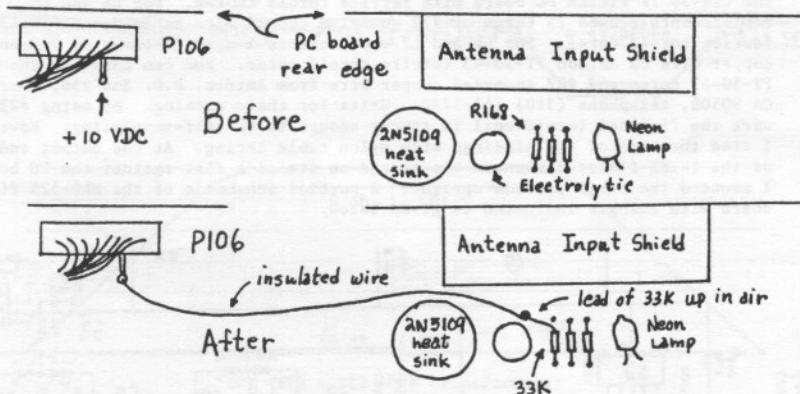
The preamp off ICP3 is now below the local oscillator (LO) phase noise at the standard 20 KHz spacing with 6 KHz BW and AM mode. In other words, the ICP3 is LO phase noise limited. A good measure of the ICP3 can be gotten by measuring the ICP3 at wide tone spacings within one of the broadband front end filters, for example 2x1000 - 520 = 1480 KHz, 2x2000 - 1520 = 2480 KHz, and so on. With such spacings I got +16.5 dBm for AM mode and 6 KHz BW with preamp off. With preamp on the standard 20 KHz spacing ICP3 could be measured, and it was found to be about +2 dBm, about the same as for an unmodified R8 with preamp off.

Even with the temporary mod, it was obvious to me that this mod would be a permanent part of my R8. There is not much space to bring the U-310 drain lead through the PC board. The top side is blocked by the shields for L140 and C197, and the bottom side is fenced-in by the original traces to the drain of the J310. I don't like hole drilling or trace cutting, but in my opinion hole drilling is better than trace cutting. The available space is so restricted that one side of my hole just about touched the trace from the original drain to L140. By working a small drill bit around the hole I enlarged the hole just enough so that some #20 ID Teflon spaghetti could be jammed through the hole. I trimmed one end of the Teflon tubing to a point so it could be threaded into the hole and forced through, and then used miniature needle nose pliers to pull it through further. The ends of the Teflon tubing were then cut flat with miniature diagonal cutters. About 1/8 inch of the Teflon tubing sticks up above and down below the PC board surfaces. With the L140 shield removed, a small hole was drilled through the PC board to pass through one end of the #30 link. The hole is very near one inside corner of the shield with the shield installed. When winding the 2 2/3 turn link you should be careful not to move L140 too much because #30 wire is easy to break. At some future date I'll probably rewind L140 because I moved mine around a lot while working out the mod. I may use #26 for the link because that would give a sturdier and more reliable installation.



Further testing with with several other IF amps and further alignments of the 45 MHz tuned circuits and image reject circuit at the 2nd mixer revealed that there can be considerable variation in ICP3 depending mainly, it seems, on the alignment trimmer settings and image reject trimmer settings. For best 45 MHz crystal filter shape and maximum 100 KHz image rejection, the preamp off ICP3 tends to be in the +10 - +12 dBm range, and the preamp on ICP3 tends to be in the -1 - +3 dBm range. At present I am using a pair of U-310's mounted on a small adapter PC board instead of the single U-310 mod described at the beginning of this article. It may be possible to raise the preamp off/on ICP3 to +17/+5 dBm by using a low pass filter between the diplexer and the 1st 45 MHz IF amp, but I have not finished these tests. The point is that this mod should be regarded as preliminary, and further significant improvements may be possible.

With the higher dynamic range there is no longer any reason (if there ever was one) to disable the preamp below 1.8 MHz. For the last week or two I have been running my R8 with the preamp turned on for all bands, and I have found no significant IMD3 products. The simplest way to turn the preamp on is to remove R168 (10 K), install one lead of a 33K ohm resistor in the front panel side PC board hole which formerly mounted R168, and run a short length of insulated wire from the other lead of the 33K ohm resistor to a +10 VDC plated through hole in front of P106. With this mod, the preamp is on when the R8 is on. The preamp push button on the front panel may still be used to obtain 10 dB attenuation, and the front panel light still cycles through OFF, ATTN, and PRE. However, in both OFF and PRE the preamp is on.



This is, of course, not the proper way to do the preamp mod. One should fabricate some kind of tiny PC board adapter which is soldered into the R8 PC board where R168 was originally. I plan to fabricate a small adapter with a 3 prong header and movable jumper (and 10K and 33K ohm resistors) so that I can switch between the original preamp operation and preamp permanently on. This mod could be accomplished with a switch mounted on the rear panel, but then it would be more difficult to remove the RF PC board.

Unfortunately, improving the ICP3 of the 1st 45 MHz IF amp does not improve the 2nd order intercept (ICP2) of the R8. The R8 ICP2 seems to be entirely determined by the 1st mixer, which has a wideband ICP2 of about +41 dBm, plus some additional help from the broadband front end filters, which brings it up to the +45 - +50 dBm range with preamp off, and +35 - +40 dBm range with preamp on. This means you will still observe SW IMD2 products in the 15.6 - 15.8 MHz range many evenings, and perhaps at other frequencies, such as 500, 510, and 520 KHz and 3000 - 3200 KHz for MW IMD2. The only way to substantially improve the R8 2nd order performance is to replace the 1st mixer. And there is really only one MiniCircuits mixer which would, in principle, substantially improve the ICP2, namely the TUF-3H with a broadband ICP3 of about +29 dBm and broadband ICP2 of about +68 dBm. However, the TUF-3H requires +17 dBm LO drive, so additional amplification of the LO would be required. In addition, the R8 preamp would probably have to be replaced with a balanced amp to achieve a +68 dBm ICP2. Nevertheless, the advantages of such improvement may be worth pursuing.

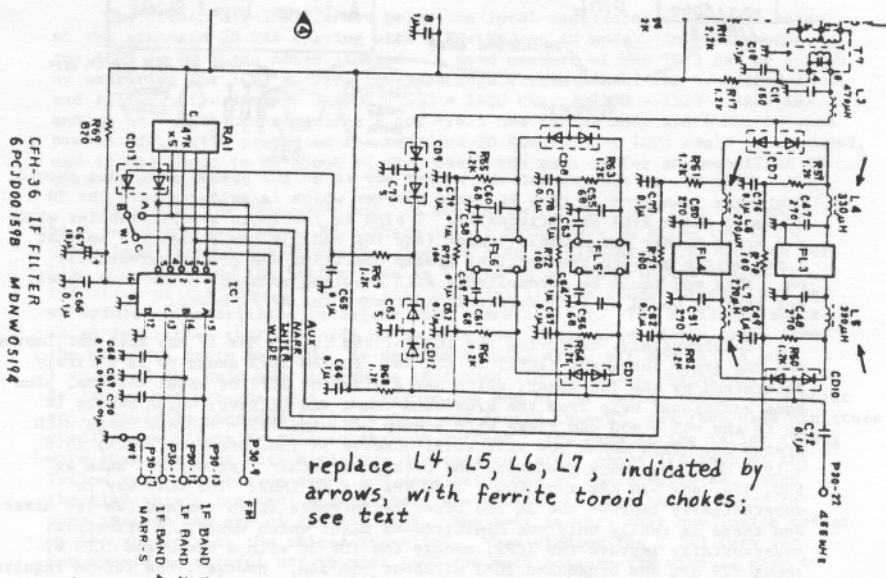
## NRD-525: Filter Leakage

Dallas Lankford

April 15, 1993

In my recent article, "NRD-525: A Technical Review," I said that no filter leakage was present in the NRD-525s I tested. I was wrong. The method of measurement I used was not accurate below about 65 dB down on the filter skirts, and the "leakage" began about 70 dB down on one skirt of the INTER filter, and about 75 dB down on the other skirt of the INTER filter. The "leakage" is not observed for the WIDE filter when the test signal is injected at the antenna input terminal, as I did, because of the bandwidths of the cascaded filters ahead of the WIDE filter.

Before discussing the technical details of the "leakage" problem, let me describe a cure for the "leakage" problem. Replace L4, L5, L6, and L7 on the CFH-36 IF FILTER PC board with ferrite toroid chokes. For L4 and L5 replacements I used 25 turns of #22 enameled copper wire on Amidon FT-50-43 ferrite toroid cores. For L6 and L7 replacements I used 20 turns of #22 enameled copper wire on Amidon FT-50-43 ferrite toroid cores. You can purchase the FT-50-43 cores and #22 enameled copper wire from Amidon, P.O. Box 956, Torrance, CA 90508, telephone (310) 763-5770. Write for their catalog. By using #22 wire the finished toroid coil is sturdy enough to be self-supporting. However, I tied the ends of the windings with nylon cable lacing. At the output end of the INTER filter I mounted the toroid on its side flat against the PC board. I mounted the other toroids upright. A partial schematic of the NRD-525 filter board with changes indicated is given below.



Magne's RDI white paper review of the NRD-525 (Edition 2.0: 11 June 1987) stated that 525 filter leakage was "due to cross coupling in the matching networks of the IF stage," and that it "can, under extreme conditions, allow for penetration of adjacent interference." Magne's review also stated that "Sherwood has drawn up a tentative solution -- a variant of that used earlier on the '515 -- to improve the ultimate rejection on the '525 to -80 dB or greater." Sherwood's catalog (undated, about 1991) stated "improvement of existing AM and SSB filters can be realized with circuit changes to the i-f filter board. A 20 dB improvement in existing ultimate rejection is typical. Circuit modifications: \$39.00."

To understand the 525 filter leakage problem, you must consider all of the filters in the receiver. A block diagram of the 525 and some typical filter parameters are given below in Figure 1.

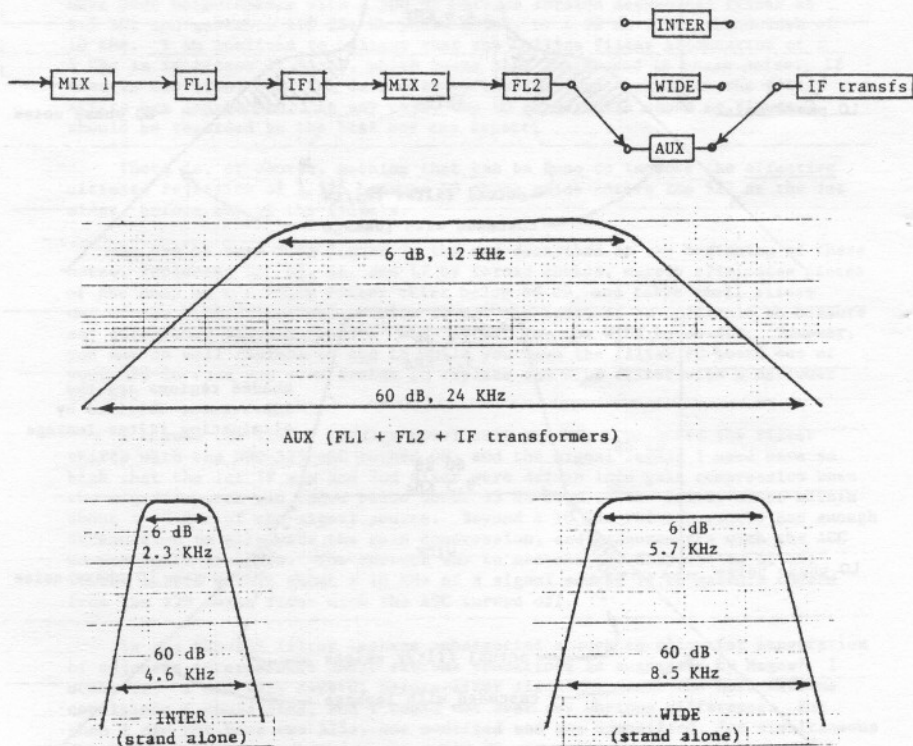


Figure 1

Let us suppose that the ultimate rejection of the WIDE and INTER filters is limited to 65 dB. When either the WIDE or INTER filter is selected, the filter is cascaded with all the other filters in the 525. Attenuation is additive, so the cascaded filter response when measured by injecting a signal at the antenna input and measuring the signal at the audio output should resemble the solid lines in Figure 2 below.

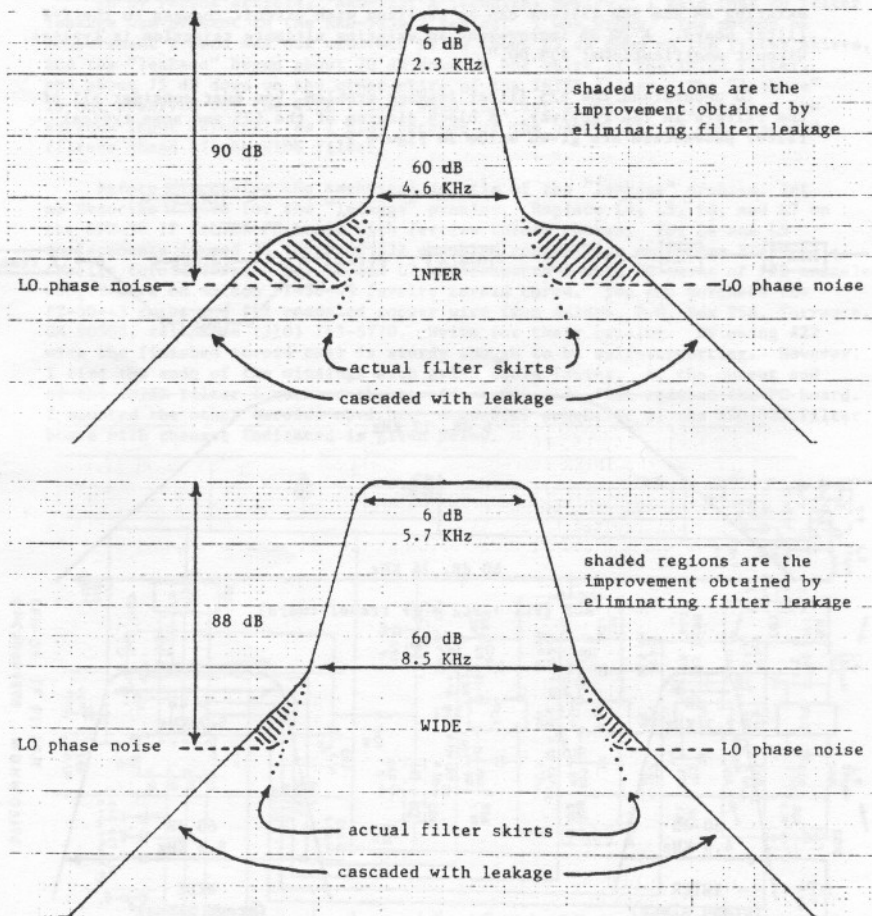


Figure 2

28

When cascading is included, the ultimate rejection of the WIDE or INTER filter is clearly well in excess of 100 dB. However, the effective ultimate rejection of an NRD-525 within about 50 KHz of a strong signal is determined not by the cascaded filters, but by local oscillator (LO) phase noise for the standard AUX, WIDE, and INTER filters, and for any added filter. In other words, the ultimate rejection of a 525 is LO phase noise limited. For example, at  $\pm 10$  KHz from the LO, phase noise is typically 124 dBc/Hz. This means that at  $\pm 10$  KHz from a signal injected at the antenna input, noise due to the LO will be about 90 dB down when using the INTER filter, and about 88 dB down when using the WIDE filter. Thus, if you measure the filter shapes by injecting a signal at the antenna input, the ultimate rejection of the WIDE and INTER filters would appear to be 88 and 90 dB respectively at  $\pm 10$  KHz. LO phase noise is represented by the dashed lines in Figure 2. LO phase noise begins to fall off slowly beyond  $\pm 10$  KHz and may be somewhat higher than shown in Figure 2 at frequencies closer than  $\pm 10$  KHz. For example, I have made measurements with a 500 Hz Collins torsion mechanical filter at  $\pm 5$  KHz and gotten - 118 dBc/Hz phase noise, or a 92 dB filter bandwidth of 10 KHz. I am inclined to believe that the Collins filter attenuation at  $\pm 5$  KHz is in excess of 92 dB, which means that I measured LO phase noise. If that is the case, then the dashed lines should slope upwards as the filter skirts are approached. In any case, the LO phase noise shown in Figure 2 should be regarded as the best one can expect.

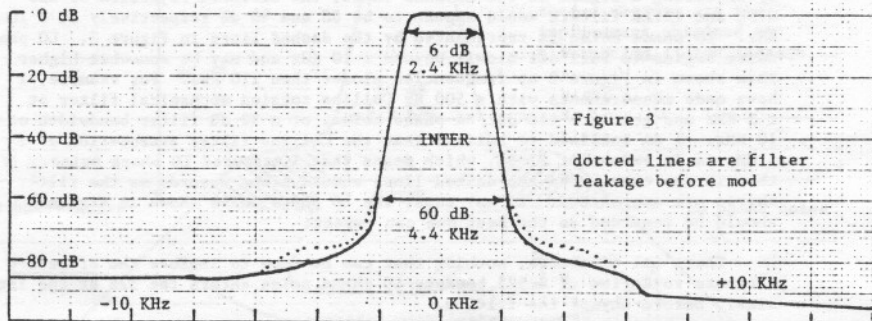
There is, of course, nothing that can be done to improve the effective ultimate rejection of a 525 because LO phase noise enters the 525 at the 1st mixer, before any of the filters.

As can be seen from Figure 2, the mod described at the beginning of these notes, replacing L4, L5, L6, and L7 by toroid chokes, merely eliminates pieces of the hump on the INTER filter skirt below 60 dB, and takes small slices out of the WIDE filter skirt below 60 dB. In fact, it is difficult to measure any difference between "before" and "after" for the WIDE bandwidth. However, you may as well replace L4 and L5 while you have the filter PC board out of your 525 in case you ever decide to replace the WIDE filter with a narrower filter.

I missed the filter leakage previously because I measured the filter skirts with the NRD-525 AGC turned ON, and the signal levels I used were so high that the 1st IF amp and 2nd mixer were driven into gain compression when the signal source was tuned below about 65 dB down on the filter skirt within about  $\pm 10$  KHz of the signal source. Beyond  $\pm 10$  KHz FL1 apparently has enough attenuation to eliminate the gain compression, and measurements with the AGC on are again accurate. The correct way to measure the deep (below 65 dB) filter skirts within about  $\pm 10$  KHz of a signal source is to measure upward from the 525 noise floor with the AGC turned off.

Is the NRD-525 filter leakage substantial enough to allow for penetration of adjacent interference under extreme conditions as suggested by Magne? I doubt it. I did very careful before-after listening under the most extreme conditions I could find, and I could not hear any obvious difference. But then I did not have two 525s, one modified and one unmodified, for simultaneous comparison. So perhaps there are a few DX situations per month where the mod provides slight improvement.

Figure 3 below shows the before-after shape of the INTER filter in my NRD-525. As can be seen, the results are not as dramatic as suggested by Figure 2. The main reason for this difference is that the INTER filter in my 525 did not have as much leakage as suggested by Sherwood. The in-circuit ultimate rejection of my INTER filter was about 75 dB, compared to 65 dB reported by Sherwood. Apparently there may be considerable variation in the amount of leakage from one 525 to another. You can also see that the LO phase noise is not as flat as indicated by Figure 2, and that the LO phase noise for my 525 is not symmetric. The measurements for Figure 3 were made centered at 1880 KHz. I have noticed that at other frequencies the upper and lower LO phase noise sidebands are more symmetric.



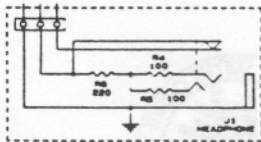
One thing is clear as a result of these measurements and observations. Filter cascading by installing add-on filter boards to improve the ultimate rejection of the original 525 filters is unnecessary because the ultimate rejection of the existing 525 filters exceeds LO phase noise when filter leakage is eliminated. Since the amount of phase noise passed by a filter decreases as bandwidth decreases, it is worthwhile to eliminate filter leakage for narrower filters. For example, with a 500 Hz bandwidth Collins CW torsion mechanical filter, the measured noise was 92 dB down at  $\pm 5$  KHz. As I said before, it is impossible to determine whether this noise is LO phase noise, ultimate filter attenuation, or signal leakage past the diode switching circuit. But it does establish some upper bounds for each: my 525 LO phase noise at  $\pm 5$  KHz is less than -118 dBc/Hz, my CW filter has at least 92 dB ultimate rejection, and the diode switching circuit in my 525 has no more than -92 dB leakage. Some writers have suggested that the 525 diode switching circuit is not capable of such high isolation, but clearly it is.

I would like to express my appreciation to Craig Siegenthaler and Denzil Wright for pointing out that my previous AGC ON method of measurement was not correct in some cases, and to Denzil Wright for many long discussions about LO phase noise and filter leakage.

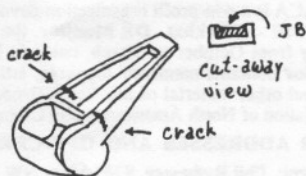
## Drake R8: Low Headphone Volume And Broken Feet

Dallas Lankford, 7 V 93

I doubt I am the first R8 owner to be annoyed by the low headphone volume. I use Radio Shack lightweight mono headphones, #20-210A, rewired to a standard stereo plug. The mono headphones are rated 16 ohms, and, presumably, rewired in series each earphone is 32 ohms. So 8 ohm headphone users must get even lower headphone volume than I got. I removed the R8 front panel (1.5 mm and 2 mm Allen metric hex wrenches required), removed the nut which secures the R8 headphone jack and small attached PC board, unplugged the small PC board, and "Chinese puzzled" it out of the R8. Then I desoldered and removed R4, R5, and R6. Use ChemWick Lite 0.100 desoldering braid, the only desoldering braid which works. I replaced R6 with 47 ohms and R4 and R5 with 10 ohm, 1/4 watt resistors (Radio Shack). Depending on the type of headphones you use, some other resistor values may be optimal for you.



And I doubt I am the first R8 owner to have the tilt feet crack or break. Mine cracked as shown below. Getting a new pair of feet did not seem like a practical solution because they would probably crack too after a few months of use. So I tried filling the hollow space in the long "neck" with J B Weld, which is available at many discount stores. I mixed about 1/3 of each of the two 1 ounce tubes ("STEEL" and "HARDENER") to have plenty of excess, and filled up the hollow spaces in the "necks" of the feet using a toothpick to dab in the thick mixture. If you put the mixture in the feet as soon as you mix it, the mixture will "flow" a little and will mostly level out, except at the edges where surface tension draws it up. I did not fill the spaces completely, maybe within about 1/32 inch of full. Any excess I got on the sides of the feet was easy to remove with toothpicks. When dry, the J B Weld shrunk a little, which is good, because the back sides of the "necks" must clear the mounting screws. I let the J B Weld harden for about 2 days before reinstalling the feet. So far, so good. Whether this is a long term fix remains to be seen.



FIRST CLASS  
U.S. POSTAGE  
PAID  
RIVERSIDE, CA  
PERMIT NO. 5214



**FIRST CLASS MAIL**

32-09  
J D STEPHENS  
3715 CONGER RD SW  
HUNTSVILLE AL 35805-5725  
USA

**THE INTERNATIONAL RADIO CLUB OF AMERICA (IRCA)  
PO Box 70223 Riverside CA 92513-0223**

The IRCA is a non-profit organization devoted to the hobby of hearing distant stations on the AM Broadcast Band (510 - 1630 khz). **DX Monitor**, the official publication of the IRCA, is published 34 times a year, weekly from October to March, twice in September and April, and monthly from May to August. **DX Monitor** contains members' loggings, articles on radio stations, receiver reviews, technical articles, DX tips, and other material of interest to Broadcast Band DX hobbyists. IRCA is a member of ANARC, the Association of North American Radio Clubs.

**CLUB ADDRESSES AND OFFICERS**

President: Phil Bytheway, 9705 Mary NW, Seattle, WA 98117 (206) 356-3927 (proposals)  
Secretary-Treasurer: Ralph Sanserino, PO Box 70223, Riverside, CA 92513-0223 (dues/address changes)  
Board of Directors: Shawn M Axelrod, Michael S Hardester, Bill Hardy (chairman), Albert S Lobel, Patrick Martin and Robert Wien  
Editor-in-Chief/Publisher: Ralph Sanserino, PO Box 70223, Riverside, CA 92513-0223  
Publishing Coordinator: Phil Bytheway, 9705 Mary NW, Seattle, WA 98117

**MEMBERSHIP DUES**

U.S. - \$25.00 per year. Canada - \$27.00. Overseas Surface - \$28.50. Overseas Airmail - \$35.00 (Central America, Caribbean, Colombia and Venezuela), \$38.00 (Europe, North Africa, Middle East), \$41.00 (rest of the world). One time charge for New Member Packet - \$2.00 (first year only). Trial Membership - \$9.50 (10 issues of **DX Monitor** and a New Member Packet, U.S. / Canada / Mexico only). Installment rate: two payments of 1/2 dues plus \$1.00 (\$13.50/payment for U.S. members). Make checks and money orders payable to IRCA and send all dues (and address changes) to: IRCA, PO Box 70223, Riverside, CA 92513-0223. Persons living outside the U.S., please use International Money Order in U.S. funds. Sample copies of **DX Monitor** are \$1.00 (U.S. or Canadian) or two International Reply Coupons each and are available from: IRCA, PO Box 70223, Riverside, CA 92513-0223.

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



92513 0223