

DX MONITOR

THE OFFICIAL PUBLICATION OF THE  INTERNATIONAL RADIO CLUB OF AMERICA

DEVOTED EXCLUSIVELY TO BROADCAST BAND DXING

NOVEMBER 7, 1992 - Volume 30 - Number 8 - Edition 967 - ISSN 0899 - 9732

NEW MEMBERS: Christopher Yeats, Bill Swiger, Sherrell Warren, Marvyn Carlson. **RENEWALS:** F William Black, John Rieger, David Lanoue, Charley Kelleher, Guy Kudlemyer, Nigel Pimblett.....Thank you all very much..

IN THIS ISSUE: President's Report, DX Worldwide West, Western DX Roundup, Central DX Roundup, Eastern DX Roundup, Western DX Forum, Geomagnetic Indices, Eastern DX Forum, Technical Column, DX Techniques, In the center IRCA Special Ballot Measures with Ballot, also High Performance Loop Amp.

Editors/Positions within IRCA that are currently vacant include: "DX Monitor" Publisher/Editor-in-Chief, Achievement Awards Chairman, Graveyard/Heard/Verified DX Records Editors, New Member Packet Revision Committee and Publicity Chairman. Interested in filling any of these positions... contact Phil Bytheway for details.

IRCA DX TEST BULLETIN

MONDAY, NOVEMBER 9, 1992 - KMFI-1470, 2700 FRY BLVD., SUITE B-4, SIERRA VISTA, AZ 85635 WILL CONDUCT A DX TEST BETWEEN 2:00 & 5:00 AM EST. THE TEST WILL INCLUDE MORSE CODE AND TONES. RECEPTION REPORTS MAY BE SENT TO: MR. RICHARD MIZE - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, NOVEMBER 9, 1992 - KWCK-1300, BOX 1300, SEARCY, AR 72143, WILL CONDUCT A RESCHEDULED DX TEST FROM 4:00 - 4:30 AM EST. THE TEST WILL INCLUDE MORSE CODE AND MARCH MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. KEN SIMMONS - PROGRAM DIRECTOR. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, NOVEMBER 23, 1992 - KNAK-540, P.O. BOX 636, DELTA, UT 84624 WILL CONDUCT A DX TEST BETWEEN 2:00 & 2:30 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND VOICE ID'S. RECEPTION REPORTS MAY BE SENT TO: MR. DOUGLAS BARTON - OWNER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

WEDNESDAY, NOVEMBER 25, 1992 - WSMI-1540, P.O. BOX 10, LITCHFIELD, IL 62056 WILL CONDUCT A DX TEST BETWEEN 1:00 & 1:10 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND VOICE ID'S AND WILL BE PART OF THE STATION'S MONTHLY FREQUENCY CHECK. RECEPTION REPORTS MAY BE SENT TO: MR. BRIAN TALLEY (N9OWV) - CHIEF ENGINEER. MR. TALLEY REQUESTS AN SASE BE INCLUDED WITH ALL REPORTS. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

SATURDAY, NOVEMBER 28, 1992 - WIMA-1150, 667 WEST MARKET STREET, LIMA, OH 45801 WILL CONDUCT A DX TEST FROM 12:30 - 1:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, VOICE ID'S, AND MARCH MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. MARK GIERHART - DIRECTOR OF ENGINEERING. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, NOVEMBER 30, 1992 - KCNO-570, P.O. BOX 570, ALTURAS, CA 96101 WILL CONDUCT A DX TEST FROM 3:30 - 4:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, POLKAS, AND MARCH MUSIC. RECEPTION REPORTS MAY BE SENT TO: CAROL IRWIN - PROGRAM DIRECTOR. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 7, 1992 - WRIX-1020, WATSON VILLAGE, ANDERSON, SC 29624 WILL CONDUCT A DX TEST FROM 2:00 - 3:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, VOICE ID'S, AND AN UNSPECIFIED SELECTION OF MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. JOHN WOODSON - PROGRAM DIRECTOR. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 7, 1992 - KJR-950, 190 QUEEN ANNE AVENUE NORTH, SEATTLE, WA 98109 WILL CONDUCT A DX TEST FROM 4:00 - 4:30 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND VOICE ID'S. RECEPTION REPORTS MAY BE SENT TO: MR. KELLY D. ALFORD (KA7ZDW) - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 14, 1992 - WDEA-1370, P.O. BOX 1129, ELLSWORTH, ME 04605 WILL CONDUCT A DX TEST FROM 2:00 - 2:30 AM EST. THE TEST WILL INCLUDE MORSE CODE. POWER WILL BE 10.4 KW USING AN OMNIDIRECTIONAL ANTENNA PATTERN. RECEPTION REPORTS MAY BE SENT TO: TRACY TARR - NEWS DIRECTOR (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 14, 1992 - WABK-1280, P.O. BOX 1280, GARDINER, ME 04345 WILL CONDUCT A DX TEST FROM 2:30 - 3:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, VOICE ID'S, AND MARCH MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. BRANT CURTISS - PROGRAM DIRECTOR (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 14, 1992 - KNZZ-1100, P.O. BOX 969, GRAND JUNCTION, CO 81502 WILL CONDUCT A DX TEST FROM 4:00 - 6:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND VOICE ID'S. POWER WILL BE 10 KW. KNZZ WILL SWITCH BETWEEN A DIRECTIONAL AND OMNIDIRECTIONAL ANTENNA PATTERN DURING THE TEST. RECEPTION REPORTS MAY BE SENT TO: MR. DWIGHT C. MORGAN - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 28, 1992 - WKGf-1480, P.O. BOX 794, ARCADIA, FL 33821 WILL CONDUCT A DX TEST FROM 2:00 - 2:30 AM EST. THE TEST WILL INCLUDE MORSE CODE, VOICE ID'S, AND CONTEMPORARY CHRISTIAN MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. QUICK CODDINGTON (K8TRR) - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

IRCA PRESIDENT'S REPORT

-- Phil Bytheway, 9705 Mary NW, Seattle WA 98117

My humble apology for making this report so short (and late)... my workload has increased significantly in the last several months... everything is taking longer than anticipated.

The IRCA Board of Directors has voted upon the following proposals.

PROPOSALS	SA	MH	BH	RH	ASL	PM	RW
15.1.28 Confirm Leonard Hyde as EDXR editor	Y	Y	Y	-	Y	Y	Y
15.1.29 Confirm Nancy Hardy as Contest Chairman	Y	Y	A	-	N	Y	Y
15.1.30 Confirm Bill Nittler as club registered agent in CO	Y	Y	Y	-	Y	Y	Y
15.1.31 Authorize IRCA funds for 'M Street Journal' subscription for 'Broadcasting Information' editor	Y	Y	Y	-	Y	Y	A
15.1.32 Exact wording of 'run for more than one office' proposal	Y	Y	Y	-	Y	Y	Y
15.1.33 Change male to male/female in By-Laws	Y	A	Y	-	Y	Y	Y
15.1.34 ECC not to run for offices	Y	Y	Y	-	N	Y	Y
15.1.35 Campaign statements in alphabetical order	Y	Y	Y	-	N	Y	Y

Your IRCA Board: SA - Shawn Axelrod, MH - Mike Hardester, BH - Bill Hardy, RH - Ric Heald, ASL - Albert S Lobel, PM - Pat Martin and RW - Robert Wien. Y - yes N - no A - abstain. Ric Heald did not vote.

All proposals passed. 15.1.28 through 31 were proposed by Phil Bytheway. 15.1.28 and 15.1.29... there were no other volunteers. 15.1.32 and 33 were proposed by Albert S Lobel. 15.1.34 and 35 were proposed by Steve Mittman. Proposals 15.1.32 through 35 require IRCA By-Laws changes which must be voted on by the general membership in order to become valid (see ballot this issue). Once the vote has been taken, the modified By-Laws will be published in "DX MONITOR" (December/January). All passed proposals will be in effect for the next 1993 general election.

Your Board is currently reviewing a proposal by Paul Swearingen (NRC Publisher) for incorporation of "DX MONITOR" publication into "DX NEWS". This would eliminate "DX MONITOR" as a separate publication, but preserve the IRCA government as a separate entity. Any "DX MONITOR" column that has a "DX NEWS" equivalent will be absorbed into the "DX NEWS" column (like EDXR/CDXR/WDXR). Those "DX MONITOR" columns that do not have a "DX NEWS" equivalent will be added to "DX NEWS" (like DXF). It is obvious that many details will need to be worked out in various discussions. Several Board members have suggested that I open the discussion up to the general membership of IRCA, also that the entire IRCA membership should vote on the proposal once the details have been worked out... and I agree. Discussion in the 'DX Forum' seems appropriate at this time. Please keep your comments brief... longer comments should be sent directly to me for discussion among Board members. This is the only thing I have received in the form of a "DX MONITOR" publishing proposal since we announced that Ralph will be stepping down as Editor-in-Chief/Publisher next summer.

Only one bid has been received by deadline for the 1993 IRCA Convention, that being from John Johnson and Larry Godwin for Billings MT. The Board will be voting on that soon. Other items your Board is considering... reconfirm our bulletin swaps with other clubs/groups and expanding IRCA's band of interest in anticipation of AM band expansion.

Best of DX in the 1992-93 season.... pb *phil*

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

DX Worldwide - West

Time: UTC phone (503) 861-3185

DEALINE: MONDAYS

Another good turnout this week. Guy Atkins made another trip to the coast. The reports on the UNID SS on 1620 KHZ get more interesting!

PAN-AMERICAN DX ROUNDUP

- 1620 MEXICO, UNID-station in SS at 0555, faded, couldn't catch jingle, faded up for XE NA at 0559 on 10/25. (PM-OR)
+A tip from Leonard Hyde-Virginia says he is getting the XE there too, same electronics effects and one clear ment. of "Mexico". In time someone will get an ID on this. Thx for the info on this, Leonard.

TRANS-PACIFIC DX ROUNDUP

- 531 AUSTRALIA, West Kempsey-2MC fair w/talk and mx 1203 10/18 (GA)
JAPAN, NHK sync. here with JJ talk 1445 10/24 (PM-OR)
- 540 JAPAN, NHK here with JJ talk 1447 10/24 (PM-OR)
WESTERN SAMOA, 2AP good here with Samoan talk 0715 10/23(PM-OR)
- 558 PHILIPPINES, unid Tagalog talk briefly surfacing at 1505 on 10/24 (PM-OR)
- 594 AUSTRALIA, Horsham-3WV Aussie accent and MOR mx fair 1209 10/18 (GA-WA)
JAPAN, Tokyo-JOAK 10/19 1407,xlnt signal w/big het on 590/600 w/nx in JJ,many ment. of Tokyo,varied in past,num. hets across the dial (RW-CA)
UNID, exotic, sub cont. vocals hrd briefly under JOAK-Tokyo at 1641. Wishful thinking says this was the 1000 KW Calcutta stn. 10/18 (GA-WA) (Who knows it may have been. PM)
- 612 AUSTRALIA, Brisbane-4QR most likely very strong at 1447 on 10/18 (GA-WA)
- 639 t PHILIPPINES, Tagalog talk in jumble at 1509 10/24 (PM-OR)
- 657 D.R. KOREA, good signal noted //3320 w/choral mx 1331 10/18(GA)
- 666 NEW CALEDONIA, Noumea-RFO presumed w/FF talk fair 1135 10/18(GA)
(Guy, I have hrd him after 1400 lately, so maybe it is 24 hrs as listed in the WRTH.PM)
- 675 UNID, chanting in background at 1447 10/21, Brunei? I can hope can't I? hi. With 200KW, it should be hrd. (PM-OR)
- 684 FIJI, poss. the one w/church choir at 1139 Fair 10/18 (GA-WA)
- 693 JAPAN, Tokyo-JOAB good level w/JJ talk 1255 10/18 (GA-WA)
- 720 HAWAII, Eleele-KUAI-sportscast of UorH "Rainbows" football at 0745 10/18 (GA-WA)
- 738 JAPAN, commercial stations here (two) mixing 1434 10/24 (PM-OR)
- 747 JAPAN, Sapporo-JOIB in JJ talk 1210 10/18 (PM-OR)
- 760 HAWAII, Honolulu-KGU w/UorH football. Fair-good 0525 10/18(GA)
- 765 AUSTRALIA, Port Lincoln-5CC -poor to fair with TC and spots, ments of South Australia, 5 Double C Id 10/20 1350 (PM-OR)
- 783 UNIDS, several weak stations mixing in hum, one Russian,poss. a JJ, and others 1515 10/24 (PM-OR)
- 792 AUSTRALIA, Brisbane-4RN w/good signal //9770 1450 10/18 (GA-WA)
- 801 UNID, sounded like a hymn at 1509 10/24 (PM-OR)
- 810 t JAPAN, Tokyo-PEN-poss. the one with U.S. ancr and rr mx way behind KGO on 1523 10/24 (PM-OR)
- 830 HAWAII, Honolulu-KIKI-w/good signal ID as "Stereo 83,KIKI" at 0405 10/18 (GA-WA)
- 846 KIRIBATI, End of BBC Nx or RA nx relay at 0625 in EE, Rel.music woman in Gilbertese. Best on 260 degree bev. Very good level when not in fade. NW Shortwave freq. of 17440 not hrd (reportedly sporadic sked per Fine Tuning newsletter #666)10/18(GA-WA)

- 850 HAWAII, Hilo-KHLO-very good signal ID "AM-850" with Hawaii's continuous country, 24 hours a day" 0410 10/18 (GA-WA)
- 864 t INDIA???, Shillong- 10/4 at 1350-1410, with Indian Pop mx Film mx, w/very weak female ancr, sub. cont. language. I didn't report this before now, as I have been checking out several sources. Per Chuck Boehnke-Hawaii, thinks it is probably India, also the same from Guy Atkins. Currently, sent a tape to John Bryant to play for an Indian student. Station surfaced around 1400 better than ever, but no ID across hour. As India is on GMT +5½ hrs, this would check, fading really different than other stations on freq.. The two Indo stations on the freq. are not in areas with Indian people, so that is unlikely. If I can get some identifiable info from the tape, I will send a tape to India. Station is 100 KW, and according to John Bryant, the SW // there on 90 Meters gets out very good. The station also is located way in the NE corner of India, not far from Burma. I am going to keep my fingers and toes crossed on this one.(PM)
- 891 FIJI, Radio Fiji One OM in lang. at 0647,Hindi mx 10/18 (GA-WA)
- 918 UNID, vy weak in splash strange Ort. lang. surfacing briefly muffled audio at 1519 10/24. Cambodia would be nice here.hi.(PM)
- 954 JAPAN, Tokyo-JOKR w/talk and mx in JJ fair 1255 10/18 (GA-WA)
- 981 PHILIPPINES, Tagalong talk in splash at 1505 10/24 (PM-OR)
- 1017 TONGA, A3Z fair presumed Tongan, island mx 0810 10/18 (GA-WA)
- 1026 AUSTRALIA, MacKay-4MK Loud dom. signal,rr mx, ads,local weather and ID. 1450 10/18 (GA-WA)
- 1053 KOREAS, Echo chamber audio here at 1432 10/24 (PM-OR)
- 1062 t SARAWAK, prob. the one with Malay type talk at 1443 10/23 (PM-OR)
- 1134 JAPAN, Tokyo-JOQR JJ mx and some EE lang. Poor-fair 1203 on 10/18 (GA-WA)
- 1147.5 PHILIPPINES, VOA listed in Cantonese language. Poor-fair, but becoming good by 1610 recheck 10/18 (GA-WA)
- 1188 REP. OF KOREA, Inchon-HLKK presumed w/good signal of listed Cantonese. Mixing w/JJ stn,likely JOKP-Kitami 1314 10/18 (GA-WA)
- 1242 JAPAN, Tokyo-JOLF-fair w/JJ talk at 0815 10/24 (PM-OR)
- 1566 REP. OF KOREA, Cheju-HLAZ-1617-1810,total fade out. FEBC station w/excellent near-local quality signal at 1617 in RR. Hymns and sermons. Still is w/good audio 3½ hrs past local SR. Toal loss of audio at 1800, 4 hours after local SR!!! 10/18 (GA-WA)
- 1575 THAILAND, VOA noted fair-good in Bangla lang. per WRTH. "VOA" ID and trumpet fanfare at 1631. Occ. long fades 10/18 (GA-WA)

VERIFICATIONS

- 765 AUSTRALIA, Bega-2EC-nice letter and QSL card, stickers, and tourist info in one months for taped report. -v/s Kirsty McFarlane. (PM-OR)

THANKS TO THESE REPORTERS

- GA-WA GUY ATKINS-5323 SOUTH ISLAND DRIVE-BONNEY LAKE,WA 98390-9624 DXing at Midway Beach,Wa w/Drake R8,950 ft. Bev. at 260 degrees and 1700' Bev. at 310 degrees. Both term.
- RW-CA ROBERT WIEN-1309 DENTWOOD DRIVE-SAN JOSE, CA 95118 GE Super radio
- PM-OR YOUR EDITOR Drake R8, Term. 200' SW/NE wire, Term. 1600'NNW Bev.,Ground sys.

IRCA Reprints

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

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WESTERN
DX
ROUNDUP

Nancy Hardy
2301 Pacific Ave.
Aberdeen, WA 98520

DEADLINE FOR WDXR TIPS IS MONDAY. PLEASE USE EASTERN TIME.

REPORTERS FOR THIS ISSUE:

- (NH) Nancy Hardy-2301 Pacific Ave.-Aberdeen, WA 98520
FRG-7, Radio West loop
- (LH) Leonard Hyde-1805 Whipple Dr. #26-Blacksburg, VA 24060-2436
(Help with unID's)
- (PM) Patrick Martin-P.O. Box 843-Seaside, OR 97138
Drake R8, term. 200' SW/NE wire, term. 1600' NNW Beverage,
ground system
- (BN) Bill Nittler-Box 824-Mancos, CO 81328
- (NP) Nigel Pimblett-1146 Queen Street-Medicine Hat, AB T1A 1B4
Kenwood R-5000, 1000' strand of barbed wire at 270 degrees
- (SR) Steve Ratzlaff-1885 E. Bayshore Road Sp.90-E. Palo Alto, CA 94303
(SR-OR) On vacation in Elgin, OR
IC-R70 receiver & broad band active whip, 600' NE/SW wire
and 300' NW/SE wire
- (PT) Pete Taylor-2614 Jackson Street-San Francisco, CA 94115
Sony ICF-2010
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118
GE Superadio, GE long-range portable, SM-2

OF SPECIAL INTEREST

- 1180 KYET AZ, Williams 10/12 2042-2100 s/off with soft oldies, gave
address as 138 W. Bill Williams. Ex-KDAN. (BN-CO)
- 1470 KUFA UT, Tremonton 10/16 0015 "Hawk 105 KGSC," C&W, "A good way
to spend your day in the country." EX-KZZK. (BN-CO)
- KWOG WY, Douglas 9/27 2015 "Word of God Radio" ID's with call
ID. Ex-KKTY. (BN-CO)
- *****
- 530 WNSA852 CA, Oakland 10/19 0315 fair o/u Astoria TIS with Oakland
Coliseum info, gave call & frequency, mentioned concerts.
Conditions to the south good, and TIS-Astoria weaker. (PM)
- WNYZ255 WA, Ritzville 10/16 fair to good reception all day long.
"You're listening to WNYZ255 owned by the city of
Ritzville on your 530 AM dial." Two minute tape extolling
the virtues of Ritzville, Washington, at intersection of
Hwy. 90 & 395. 35 second pause before tape repeats.
(SR-OR)
- 570 KLAC CA, Los Angeles 10/20 0215 good way over KVI with C&W music
and several KLAC ID's. (PM-OR)
- 630 ?KCIS? WA, Edmonds 10/19 0623 tent. on fade-up with KIDD off as
usual MM, in KOH null, looping N-S. Non-stop preacher. Is
this what they carry? (RW-CA)
- 720 KUAI HI, Eleele 10/13 1004 fair with flood warnings. Back on
now. (PM-OR)
- 840 (KSWB) OR, Seaside after being ordered off the air by the FCC,
owner now claims to be coming back on the air in "a few
days," per phone call 10/19. (PM-OR)
- CJXX AB, Grande Prairie 10/16 good with C&W music, top 40
contest, Standard Broadcast News at 0200. (PM-OR)
- 930 KTKN AK, Ketchikan 10/5 0947 good with "From AM 93, KTKN."
Haven't heard this in quite some time. (PM-OR)
- 1030 WBZ MA, Boston 10/5 0445 ad for program on WBZ-TV. KTW0 off
for MM SP. (NP-AB)
- 1070 WTSO WI, Madison 10/5 0615 ads, report on dairy farming. (NP)
- 1090 KAAAY AR, Little Rock 10/4 2225 religious programs, ad for
Arkansas State Parks. (NP-AB)

- 1100 WWWE OH, Cleveland 10/5 0600 promo for election campaign coverage, IDs as "three-W-E." (NP-AB)
- 1140 CFX AB, Calgary 10/13 with CBS baseball playoffs & ID 2329 "1140 CFX." (BN-CO)
- 1160 *WJJD* IL, Chicago 10/5 0547 ID "This is AM 1160, WJJD, Chicago. We are testing." (NP-AB)
- 1190 WOWO IN, Fort Wayne 10/5 0520 plug for "WOWO Great Getaway Giveaway." Finally I hear Indiana!! (NP-AB)
- 1210 WOGL PA, Philadelphia 10/5 0550 just caught ID through the mess. First time heard since call change. (NP-AB)
- 1230 KVOC WY, Casper 10/4 2325 plug for concert, ID as "1230 country, KVOC." (NP-AB)
- 1310 KFVR CA, Crescent City 10/13 1132 "Playing your favorites on KFVR AM 1310," MOR music. (PM-OR)
- 1340 KBOS CA, Fresno 10/19 0205 fair above jumble briefly with "Sierras to the Sea and beyond, 95 KBOS FM & AM, Tulare-Fresno." (PM-OR)
- 1430 ?KFIG? CA, Fresno 10/19 1026 very tent. call change, ex-KWDO, in tight KNTA null with "Let the Good Times Roll." Only ID heard was "Your oldies station." Faded to LSR. (RW-CA)
- 1460 KCKX OR, Stayton 10/25 0145 EST (2345 PDT) "Overnight Express" satellite country. I called station 10/26 and asked owner if they were running 15 watts instead of 1000. He had been out of town and didn't know, but he had been having problems with his power-switching relays, so chances are I heard them with 1000 watts. (PT-CA)
- 1480 KGCX MT, Sidney 0845 end of ad, MDT TC, weather forecast including call letters mentioned, into song "Proud Mary." Poor to fair, local KGHO-1490 had OC. Have heard this only once before, YEARS ago. (NH-WA)
- 1540 KXED CA, Los Angeles 10/19 0150 fair above jumble with "La Grand D" ID's. (PM-OR)
- 1610 TIS WA, Bridgeport Chief Joseph Dam visitor center TIS heard all day 10/17. No ID given during eventual 95% copy of the message, using NE wire. (SR-OR)
- TIS WA, Wenatchee Nat. Forest 10/17 1230 on NE wire heard "Welcome to Wenatchee National Forest...4500 foot elevation." Faded up once briefly. (SR-OR)
- 1620 WNZA95 CA, Pebble Beach 10/18 1015 good again with tape loop. (PM-OR)

LOCAL NEWS

- 1480 KWUN CA, Concord is NOT silent, as was reported in 10/19 NRC DXN. I never get them very well, but I called them 10/26 and they said they were on and hadn't been off. (PT-CA)

HELP WITH UNID

- 526 Bruce Portzer's unID beacon "RWE" in 10/17 WDXR is actually on 526 kHz rather than 527, and is located at Camp Roberts, CA. This per Longwave Club of America's bulletin "The Lowdown." (LH-VA)

UNID

- 620 10/19 0437 unID TT way under KTAR, looping east. (RW-CA)

Welcome to WDXR, Steve, hope to hear from you often! Thanks also to Leonard for his help with the unID. Looks like DX conditions are good. It has been some time since Wisconsin has been reported.



The NRC AM Radio Logbook, 13th Edition, is the most accurate AM radio listing of stations in the U. S. and Canada. Only \$16.95; Canada \$17.95 to U. S./Canadian NRC and IRCA Subscribers ONLY. \$19.95 to U. S., Non-NRC/IRCA Subscribers; \$20.95 Canadian Non-NRC/IRCA Subscribers. Others - please write.

Mail check or money order to: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents add sales tax).

Central DX Roundup



EDITOR : John C. Johnson

979 Neptune Boulevard Billings, Montana 59105-2129

FOR THE RECORD

REPORT ALL TIMES AS EASTERN.

DEADLINES: MAIL: SATURDAYS. PRODIGY: SUNDAYS.

FAX REPORTS ACCEPTED. CONTACT EDITOR FOR PHONE NUMBER AND TIME TO SEND.

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.
- [TMJ-IL] = Tom Jasinski, 419 North Raven, Shorewood, Illinois 60435-9640
FRG-7, 2½ foot loop.
- [WMc-MB] = Wayne McRae, 103 Donegal Bay, Winnipeg, Manitoba R2K 2B5
Icom IC-R70 with PLAM board and 4KHz filter, loop.
- [RS-MO] = Randy Stewart, 4225 West La Casa, Springfield, Missouri 65802-5615
Realistic TRF 12-656, 4' spiral loop.
- [JcJ-MT] = Your editor using an Icom IC-R71A, loop.

SPECIAL INTEREST ✓

- 1470 KWOG WY, Douglas. EX-KKTY. 10/19 with CJVB, KHND, others. 0905 with "Challenge For Today." 0910 ID "Holding Forth The Word Of God. KWOG Christian Radio 1470 AM and 99.3 FM in Douglas." Christian music. Needed for call change. [JcJ-MT]
- 1510 KDKO CO, Littleton. Recently reported as silent. Station is indeed on the air. 10/19 good in KGA null. 0810 with Dance/Rap music. "KDKO" IDs. [JcJ-MT]

DOWN THE DIAL

- 540 CJSB ON, Ottawa. 9/28 good. 0647 with "On AM 5-40, Cable 88.7. 54-Rock. Ottawa's best rock." Rock music format. [SA-MB]
- 610 CKTB ON, St. Catharines. 10/7 fair. 2130 with "CKTB" ID in EE into EZL music in SS and EE. [SA-MB]
- KOJM MT, Havre. 10/5 good. 2155 with "Northern Montana News Radio 6-10 KOJM" into local news. Listed as lite rock. [WMc-MB]
- KZSS NM, Albuquerque. 10/5 very good. 2300 with "94.1 FM and 6-10 AM KZRR and KZSS Albuquerque. 94 Rock, New Mexico's best rock." [WMc-MB]
- 790 WSGW MI, Saginaw. 9/28 fair u/KFGO. 0655 with "The Mighty 7-90" and local news and talk. New one for me. [SA-MB]
- 860 KPAN TX, Hereford. 10/3 good. 0735 with local garage sale announcements and for sale items. [SA-MB]
- 1130 CKWX BC, Vancouver. 10/6 good u/KFAN. 2240 with C&W music. "CKWX" ID and "Country 11-30" slogan. [SA-MB]
- 1340 KANR ID, Nampa. 10/24 briefly surfaced. 0359 with spot and ID "All News Radio 13-40 KANR Nampa, Boise." into CNN Headline News. Needed for call change. [JcJ-MT]
- 1350 CKOD ON, Oshawa. 10/8 good. EX-CKAR. 2000 with Blue Jays game. Lots of "CKOD" IDs. [WMc-MB]
- [NOTE: NRC Log lists this as being CKDO. John.]**
- 1380 KBOP TX, Pleasanton. 10/3 brief. 0750 with clear ID "KBOP" in SS. Not much more heard. [WMc-MB]
- KQKD SD, Redfield. 10/3 brief in mix of a number of stations. 0800 with clear "KQKD Redfield" ID. Note: Listed as silent in NRC log. [WMc-MB]

CDXR Continues....

- 1380 **KRKO** WA, Everett. 10/3 very good. 0800 with "...a 70s weekend on the variety station KRKO. [WMC-MB]
- 1450 **KLBM** OR, La Grande. 10/21 weak to good mix w/KMSL. 0400 with ID "In the heart of Oregon Trail Country, KLBM La Grande, KBKR Baker. OK Gold." into ABC News. Rock oldies format. New for me, OR#40. [JcJ-MT]
- KMSL** MT, Great Falls. EX-KQDI. 10/21 weak to good mix w/KLBM. 0445 spot cluster included a promo for Great Falls sports commentary on KMSL. Rock oldies format. Finally enough for a report. Needed for call change. [JcJ-MT]
- 1500 **CKAY** BC, Duncan. 10/19 good in KSTP null. 0205 with weather, light rock. ID "Heart Of The Valley. 1500 CKAY." Not needed. [JcJ-MT]
- 1550 **KIWA** IA, Sheldon. 10/11 good. 0757 with "KIWA" ID into instrumental music. [SA-MB]
- 1590 **KZOK** WA, Seattle. 10/3 very good. 0845 with Z-Rock, ID, lots of talk about Seattle and spots. [WMC-MB]

DX TESTS

- 780(WCKB) NC, Dunn. 10/6 Test not heard here. Only WBBM. [SA-MB]
- 840 **WBHY** AL, Mobile. 10/12. 0300-0400 heard music, voice ID's and code during scheduled DX test. First heard as WWAX in 1983, but still need for a verie. [TMJ-IL]
+10/12 Test not heard here. Only WHAS. [SA-MB]
- 1320(KXOL) OK, Clinton. 10/12. 0300-0330 listened during scheduled DX Test time, but only heard WKAN, WJAS, WILS, and KXYZ. Was this a no-show or just too weak to make it here through the congestion? [TMJ-IL]

unIDs

- 1510 unID 10/19 fair looping N/S in WLAC null fighting it out with Latins. 0025 with CNN Headline News and spot for some retail business at 4516 Rogers Avenue in Colony Square. No city given. Does this ring a bell with anyone? Stayed with it all the way through 0100, but no local ID - stayed with CNN audio through top of hour. Might be KQHN? [RS-MO]
- 1620 unID 10/9. 2350-0002. Surfaced briefly with C&W. Male DJ at 2359 mentioned "You are listening to (??) KVGB (??) AM and FM (??) Great Bend. It's 11 o'clock and I'm outta here." 0000 there was ABC net news. 0002 signal faded. The call and city sounded phonetically similar to above. The city was a two word name. I have no idea who this was. At the same time there was also a weird sounding modulated carrier looping SE/NW. Loop on the unID above was generally E/W. Yes, I know KVGB Great Bend is on 1590 and occasionally heard here. [TMJ-IL]

Note [SA-MB] logged KVGB on 16197 awhile back. See 10/24 CDXR. John.

25 YEARS AGO

November 11, 1967 issue of DX Monitor....SN Thomas Jasinski aboard the USS Brumby stationed at Newport, RI reported hearing ZBM1-1235....George Tanner of Scottsdale, AZ received a verie from KOAM-860 for state #21 verified.... Larry Godwin of Littleton, CO commented TA's and TP's had both dropped out there....dan Sheedy of San Diego, CA reported DX conditions at State College were miserable.

OPEN MIKE

There are more ways into the woods than out. Wayne says 6 months went by between new loggings. But, he is ready for the new season with a new tape recorder, new head phones, new desk, new chair, and he has added a PLAM board to his R-70. Wayne comments all he needs now is new DX. 73, John.

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

EDXR

EASTERN DX ROUNDUP
Leonard Hyde
1805 Whipple Dr #26
Blacksburg VA
24060-2436

All times used in EDXR are Eastern Local Time. (ELT)

This week, more support for Guy Kudlemeyer's observations: with a low pressure system to the NW on 10/19, the editor noted greatly enhanced reception of low power stations in that direction.

* * * THE REPORTERS * * *

The editor at home with modified Philco-Ford car radio,
DX-440, 2' box loop, Autek QF-1

* OF SPECIAL INTEREST *

- 720 WGCR NC, Pisgah Forest 10/20 1859 fair signing off. Power announced as 10000 watts: NRC Log says 1000. Traditional SSB by orchestra.
- 1080 WEEP PA, Pittsburgh 10/20 1840 good w/spot for Red River BBQ; NASCAR racing this weekend on TNN; into old country music. "THANKS FOR LISTENING TO CLASSIC COUNTRY - AM 1080 - WEEP" Using new/old calls - ex WEEP, WDSY. Trying to project a small town station flavor, sounds like a Southerner.

As per a spot on WSET-TV 13, Lynchburg/Roanoke, VA, the following AM stations simulcast their 6 o'clock news: WRIS-1410 Roanoke; WBTM-1330 Danville; and WLVA-590 Lynchburg VA.

* * * THE REPORT * * *

- 560 WVOC SC, Columbia 10/18 1915-1950 poor w/postgame show on "the WSB Atlanta Falcons football network." At 1945 "WVOC Weather," then into Talknet, already in progress.
- 570 WTEM MD, Bethesda 10/20 1850 fair w/PSAs; sports call in show. First time logged here since call change. Ex WGMS. Despite being relatively close, this station not common here.
- 630 WBMQ GA, Savannah 10/23 0640-0700 good o/usual WMAL w/"Morning In America"; ad for "Select-A-Tenna" (for only \$59.95 you can end your AM reception problems FOREVER) (WE know better, right?)
- 710 ?WUFF? GA, Eastman 10/23 0615-0627 good w/modern country music. Birthday wishes for about a dozen people; bragging about Braves victory in Game 5 of Series. High today will be 80. (Only part of country today w/80s was Deep South.) ID as "97.5 FM." Lost to Cuban and WOR after 0630.
- 720 CHTN PEI, Charlottetown 10/23 0600-0615 good w/rock oldies: "What's Your Name" & "Pink Cadillac." Also, "weather for the Capital City." ID "720-CHTN." Lost to pests WGN and Jamaica after 0615.
- 1250 WGHB NC, Farmville 10/16 1930 fair w/"Coach's Corner" prior to Farmville Cougars football game.

More EDXR to come!!!

- 1280 WSAT NC, Salisbury 10/16 1950 fair w/Rowan Co. vs Concord high school football.
- 1400 WKEW NC, Greensboro 10/19 0125-0135 poor w/Best of King; at 0130 a short sports update, then back to King. "SPORTS TALK RADIO FOR GREENSBORO - WKEW 1400." Ex WGBC here.
- 1430 WCKN IN, Indianapolis 10/19 0245-0255 good w/country oldies. First time heard w/new calls. Ex WFXF, WIRE.
- 1550 ?KQWB? ND, West Fargo 10/19 0205 poor in background w/news ending. Heard through unID station's unattended beeping alarm (see last week's EDXR.) ID "1550 - K(QWB)." Then, Talknet theme on unID station began, covering channel. I am 90 per cent sure about the QWB, and 100 per cent that first letter of call was a "K". Since I heard no more, I will list this as tentative (grudgingly - I need ND!)
- 1590 WNTS IN, Beech Grove 10/19 0045-0100 fair w/preacher. S/off at 0059 w/mention that WNTS broadcasts on 1590 kiloCYCLES for 18 1/2 hours a day. Comments should be addressed to: Jim Wilson, GM - WNTS - 4800 E. Raymond Ave. - Indianapolis IN National anthem by acapella male gospel group. As carrier dropped, channel taken over by pest WAKR. New.
- 1600 WBBD WV, Wheeling 10/19 0020-0030 good w/strange mix of show tunes, nostalgia, and country music. "AM 1600 - WBBD." 33 watts as per NRC Log! Also new.
- 1620 WNSX VA, Virginia Beach 10/19 0235 very poor w/welcome to VA 589 Beach message. Audible only on DX-440 w/BFO on, and QF-1 audio processor "cranked up." Usually heard only at Beverage site.

* * * * * unID * * * * *

- 1616 unID 10/19 0210-0230 brief code-like tones, of short duration with no discernable pattern. Looped NE/SW.

* * * * * f/c * * * * *

- 1600 ?WINX? MD, Rockville 10/19 0015-0018 test tones noted, but no discernable ID. Strong.

The following FREQUENCY CHECKS are scheduled to run this week in EDXRland. Since the club's f/c list needs updating, be sure to listen for these tests, and report what you hear (or do not hear) to EDXR.

2ND SUNDAY (NOV 8)
 WSFC-1240 Somerset KY
 WLCK-1250 Scottsville KY
 WMOV-1360 Ravenswood WV

2ND MONDAY (NOV 9)
 WHHD-1320 Hornell NY
 WCDT-1340 Winchester TN
 WSVW-1570 Pennington Gap VA
 WSEZ-1560 Paoli IN

2ND TUESDAY (NOV 10)
 WSNJ-1240 Bridgeton NJ
 WRAR-1000 Tappahannock VA
 KSIB-1520 Creston IA
 WCLM-1450 Highland Springs VA

2ND FRIDAY (NOV 13)
 WHBG-1360 Bridgewater VA
 KCSJ-1360 Sioux City IA

2ND SATURDAY (NOV 14)
 WMIX-940 Mt. Vernon IL
 WPAD-1590 Paducah KY

EDXR will continue...

3RD SUNDAY (NOV 15)

No f/c's scheduled.

3RD MONDAY (NOV 16)

WCBG-1590 Chambersburg PA
WCON-1240 ?? GA (call change?)
WHHO-1320 Howell NY
WMBT-1530 Shenandoah PA
WCMS-1050 Norfolk VA
WOND-1400 Pleasantville NJ
WILK-980 Wilkes-Barre PA
WSWV-1570 Pennington Gap VA
WHOL-1600 Allentown PA

WINX-1600 Rockville MD
WCHE-1520 West Chester PA
WVFC-1530 McConnellsburg PA
WFTH-1590 Richmond VA
WFBG-1290 Altoona PA
WBCB-1490 Levittown PA
WJMA-1340 Orange VA
WNNT-690 Warsaw VA

For times consult the 1992 Frequency Check List in DXM #963.

* * * OTHER STUFF * * *

Mike Hardester's unID "TVX" beacon is Putnam Co Airport, Greencastle IN, at 10 watts on 521 kHz.

* * * EDITOR'S DESK * * *

I know everyone is busy, but EDXR needs reports. Nobody wants to read a column with reports only from the editor (myself included!) I'd much rather type yours, even if all you have is one! 'Nuff said.

By the way, thanks to Ing. Carl Huffaker of Mexico for his report on the WBHY-840 DX Test, which he sent along with some other useful info. Carl, as near as I can interpret IRCA Editorial Policy II-B-2, any reports from foreign members on domestic stations are to go to the DXWW sections. Therefore, I have forwarded your report to Jim Hall. I hope I interpreted the policy correctly. Thanks for the interesting info on Mexican calls, Carl: I will be sure to use it when possible. Incidentally, Carl, does the "Ing." you use before your name mean "Ingles", or is it something else? Perhaps you can reply in your next Forum. 73.

References used for EDXR are the 1992 NRC Log and DX Monitor. Deadline here is FRIDAY 2 weeks before the DXM publication date. 73 de LLH. (typed October 23)

1 AM ★ 1600
KWRD

C O T T O N W O O D



Western DX Forum

★ ★ ★ ★

REID WHEELER 5910 BOULEVARD LOOP SE OLYMPIA WA 98501

Deadline - Saturday 2 weeks before publication

Your Editor

For whatever reason, contributions to this column have been quite sparse this fall. Please remember that the success of both IRCA and the DXM is directly related to the active participation of the members. Personally I don't have the time to do all the DXing I would like and sending in lots of reports to WDXR, but I do contribute by doing the best job I can as your WDXF editor. Occasionally I will add my own ramblings if the material is a little short but I'm certain you don't need or want any more than is appropriate so please take a little time and keep me well supplied with Forum materials. Most of the time the "regular" column contributors generate enough stuff, however, we all would like to hear from some of you other members who may not be so well known. Forums from new members are particularly solicited (and the rest of you, don't wait for the Anniversary Issue to speak a few words). 73 ... Reid.

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 September 22 1992 through October 18 1992

Date	FLUX	A	K	SA	GEO	ETC
9/22	112	11	3	very low	quiet-active	-
23	112	11	0	very low	quiet-unsettled	-
24	112	2	1	very low	quiet	-
25	116	7	2	low	quiet-unsettled	-
26	117	6	1	low	quiet-unsettled	-
27	121	3	2	low	quiet	-
28	116	9	4	very low	quiet-unsettled	-
29	117	54	5	low	unsettled-ss	mas 0300
9/30	116	27	4	low	unsettled-mis	-
10/ 1	118	21	4	low	quiet-active	-
2	119	11	1	moderate	quiet-unsettled	-
3	120	5	3	low	quiet	-
4	126	6	1	moderate	quiet-unsettled	-
5	130	3	3	moderate	quiet-unsettled	-
6	137	7	3	low	quiet-unsettled	-
7	136	10	2	moderate	quiet-unsettled	-
8	126	7	3	low	quiet-unsettled	-
9	121	17	0	low	quiet-active	-
10	113	9	3	moderate	quiet-unsettled	-
11	111	14	2	low	unsettled	-
12	107	32	2	low	unsettled-mas	mis 0740
13	109	15	2	low	quiet-active	-
14	106	16	4	low	quiet-active	-
15	98	26	5	very low	mis-unsettled	-
16	101	22	2	low	mis-quiet	mis end 0900
17	107	12	2	low	quiet-unsettled	-
10/18	100	10	3	low	quiet-unsettled	-

12

EASTERN

DX

FORUM

Richard C. Evans
P.O. Box 21883
Milwaukee, WI 53221-0883

Deadlines: Saturdays Phone: 414-Atlantic 2-9035

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

Had a real nice visit 10/21 with Frank Merrill who was in town. One of the fun parts was demonstrating the computer for him, and letting him spot the WSKW-1160 ME listing for himself. Also got a bundle of newspapers (well over 100 new ones) from him for my newspaper collection. I sat down Saturday afternoon and went thru my Milwaukee log marking off those stations I had verified at one or more of my four other listening locations. I was amazed at the number of stations I marked off, and at which ones they were. More surprising, however, were some of the stations I had never bothered to verify before, such as WWWE-1100 in Cleveland, WISN-1010 in NYC and CBE-1550 in Windsor, Ont. The last one, of course, is a CBC station, which no longer verifies, hi. This will give me a easy way to knowing the better stations to write to, as I would prefer not to write to stations I already have from other locations. Overall, from five different locations, I have verified just over 775 different stations. The heard total from the five places is about 1600. See you in seven days. Hope there are more reports on hand then. 73.



the irca technical column

Editor: Nick Hall-Patch
1538 Amphion St.
Victoria, B.C. V8R 4Z6
Canada

The ICOM IC-R72

by Don Moman

The R72 was released several years ago but, due to some legal entanglements, has only become available in North America in late 1991. It doesn't replace the popular R71, but it does offer several additional features and an improved operating system. Unfortunately, some of the features that made the R71 popular among DXers are missing - notably passband tuning, notch filter and dual VFOs. No AGC OFF position is available, and no RF GAIN control either. On the plus side, the amber LCD display is very viewable and displays the frequency to 10 hertz resolution. In addition, changing sidebands is accomplished without having to retune - a very welcome change from the R71.

The R72 tunes 100 khz (30 khz with reduced specs) to 30 Mhz in AM, SSB and CW. FM is optional. Sensitivity is enhanced above 1.6 Mhz where the switchable pre-amplifier is available. At 14 Mhz, a signal of .15 uv was detectable but severely bothered by an internally generated heterodyne. Whether this is a function of this particular radio or a fault of the new DDS* PLL system, I don't know. In actual listening use, this wasn't detected. Below 1.6 Mhz sensitivity dropped by about 10 db. The switchable preamp is controlled below 1.6 Mhz by Q15, but with surface mount technology making everything so tiny, it's not a simple matter physically to allow the amp to function below 1.6 Mhz.

The front end appears respectable, at least compared to my Kenwood TS 850. At the new QTH (approx 55 km from the nearest MW 50 kw'er) using a 1000 foot beverage pointed right back at the transmitter site (many 50 kw'ers in this same general area) the '850 needs (usually) both the 6 and 12 db attenuators activated to reduce IMD products to a similar level of the stock R-72. At this point both have approximately the same degree of (in?)sensitivity. On other beverages pointing away from the city, the extra sensitivity of the '850 can be used.

The MW band seemed quite free from internally generated garbage and even the longwave spectrum wasn't too badly overloaded (again, it acted much like the TS-850).

AM selectivity is either too wide or too narrow. The AM wide filter is: 6 khz / 20 khz at -6/-50 db and is a 4 pole discrete crystal affair, much like that of the Kenwood R-5000. Too broad and too sloppy but gives good sound when conditions allow. No optional filter is available from ICOM, but it appears that the much better FL-33 6 khz AM filter (originally used in the IC-751 transceiver) or the aftermarket 4 khz ESKAB filter could be shoehorned into the set for better AM. The 9 Mhz crystal SSB filter is rated as 2.3 khz / 4 khz at the usual -6/-60 db steps. It's used in AM narrow and in CW as well. Pretty muddy sound in AM but adequate when used in the SSB mode. An optional CW narrow filter is available. Another feature is a center tuning LED indicator. Not really too useful but interesting anyway....

Operating controls are sparse with only 3 knobs to turn; none of them are even dual function! The keypad buttons are small and rubbery feeling, I much prefer the solid feel of the R71 keypad. Trailing zeroes or the decimal point must also be keyed in unless you are only entering a 1 or 2 digit Mhz selection. Also available are 99 memory channels which store frequency and mode. Another two channels store the upper and lower scan limits. Multiple scan modes including programmed scan, selected memory scan, memory scan and auto memory write are available. A major annoyance is the lack of dual VFOs, very handy for many DX situations or for comparing two signals without having to store them in a memory channel.

For unattended recording, the R72 has a built in clock and timer function, plus relay outputs on the rear for controlling a recorder through its remote input. A high level (AUX input on most recorders) fixed audio output is available on the rear panel.

The operators manual mentions the "R72 Battery type" model which has a sealed lead-acid gel cell battery backup installed internally, that provides about 1 hour of listening time. Certainly not enough for a weekend listening expedition, but at least an accessory 12 VDC socket is provided. This uses a commonly available coaxial style DC power connector. Current draw is about 1 amp. Mine was not the "Battery Type" version and I have not seen any mention of this variation of the R72 in their ads.

Audio from the built in speaker is rather decent, in my opinion, especially considering the tiny speaker. As usual, an external speaker would be even better.

Passport to World Band Radio 1992 summed up the R72 as "nice but nothing special". I'd agree with that. I'd also agree with most of their comments but note that not all units come with the 1 hour battery pack feature and that the R72 does not replace the R71; both are still available at the moment. Comparing the R72 to other models in the same price range such as the Yaesu FRG-8800 and Kenwood R-2000, I'd certainly pick it as the clear winner. But considering the field, that's not saying a lot.

*DDS--direct digital synthesis. One chip looks after frequency synthesis right through to sine wave output. Supposed to lock up more quickly and be quieter than older methods of frequency synthesis, though Don still feels that the R72 signal handling is limited by synthesizer noise.

(the above review first appeared in CIDX Messenger; Don has added further MW notes for its IRCA printing)

--errata: in the tech column of Sept.19/92, the matching transformer is shown with the coax center conductor shorted to the shield. Nope, they should have been separate....slip of the pen I guess.

DX TECHNIQUES

Leonard Hyde
1805 Whipple Dr #26
Blacksburg VA
24060-2436

PHONETICS CAUSE PROBLEMS WHEN IDING XE CALLS - by Ing. Carl Huffaker
Domicilio Conocido - Huasca de Ocampo, Hildalgo - MEXICO C.P. 43500

It's just over 50 years since I sat in class and practiced the phonetic script that every student in anthropology class had to learn, back in those days before tape recorders. That script - which I don't remember at all - is beyond the capability of this typewriter, so I'll use appropriate English sounds, and underline them when they're used as a phonetic symbol.

Although "The Hour of Mexico" has been on the air for half a century there have been few network broadcasts in Mexico. This, along with the characteristic Latin-American suspicion by the country people of those in the Capitol, has prevented development of a standardized language such as the "Radio English" of the States. Each local Mexican station tries to establish a unique identity in program, personality, & language. The characteristic Latin mixture of high formality & extreme individuality results in a wide variety of ID formats, sometimes confusing to those new to DXing XEs. Here are some generalizations based on the IDs I've copied and taped the past year.

Mexico does not use the Spanish letters "Ch", "Ll", and Ñ in it's call letter assignments. They never appear on formal ID tapes, but occasionally an ad lib announcer will ID XECH as XE-"che" or XELL as XE-"elya." When Y (the Spanish conjunction) stands alone, it's pronounced somewhat like "yes." In radio, the initial sound is exaggerated, and it becomes "Yee" in most IDs. In a word, the Spanish Y is exactly like I, and to differentiate it, the Mexicans invariably refer to the letter as "ee-griga" (Greek I). I have heard this form in IDs only twice during the past year.

Occasionally, a station will pronounce repetitive letters in it's call. XE-R-R-R and XE-B-B are examples, but forms like XE-doble-L and XE-triple-A are far more common. W is pronounced both as "dobloo" and "doble-U," sometimes both in the same ID.

Pronouncing the call as a single word is a custom from the States. It was slow to arrive, as there are no three or four letter words that start with XE, and perhaps because X stands for a half dozen Indian phonemes that didn't exist in Spanish. However with the advent of prefix plus three letter calls, the custom of pronouncing the last three letters took hold; now, IDs like X-E-TOL (XETOL), and X-E-PHEU (XEPUE) are common.

The old stations, those with the prefix-plus-one-letter calls, consider it a mark of prestige to omit the prefix (X, Q, W, etc.) in all but very formal IDs. Some prefix-plus-two-letter stations omit all but the last letter, as in "La Zeta Zacateca" (XEXZ), and "La Y Grande" (XEY)

Radio propagation is not kind to Mexican IDs. In English, we've become accustomed to one syllable names for our letters (with the exception of "W".) In Spanish, there's a dozen letters with two syllable names, and when a crash of static pulls the AGC to cut one syllable, what's left sounds like another letter, no matter how many times you play the tape.

Perhaps it is a bit more difficult to ID the XEs, especially when you're unfamiliar with the language; but isn't that what DXing is all about?

(Carl, while reading this, I was struck by the difference in attitude between the XEs and American stations. High formality? extreme individuality? unique identity? pride in having a 3 letter call? Maybe we need look only south of the border for a clue to the problems facing American AM stations. -ed.)

THE INTERNATIONAL RADIO CLUB OF AMERICA (IRCA)

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.

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IRCA SPECIAL BALLOT MEASURES

Below are four IRCA By-Law changes IRCA members are being asked to vote on. These By-Law changes were recently voted on by the IRCA Board of Directors to be submitted to the membership for vote.

PROPOSAL 1. (Albert S Lobel)

Allow any IRCA member in good standing to run for more than one office.

[TEXT]

Change ARTICLE III, SECTION 5, PART 4 to:

"The ECC shall notify all eligible candidates concerning their nomination by February 1. Each letter of nomination shall contain the names of all eligible members who have been nominated for the particular office in question. Such letters must stress that the nominee must reply in writing if he accepts the nomination, and each such letter must request from each nominee a campaign statement, not to exceed 20 bulletin lines, to appear in a March issue of "DX Monitor". However, a nominee is not required to submit a campaign statement provided he has duly notified by the ECC of his intention to run for office. Campaign statements may be submitted for each office the candidate intends to run for, but it is not mandatory that the candidate submit campaign statements for each office. An IRCA member may be nominated for more than one office, but must decide for which office(s) he prefers to run and so notify the ECC of all such office(s) he will run for. A nominee who has indicated his intention to run for particular office(s) may not be considered for another office in the same election."

Change ARTICLE III, SECTION 8 to:

"The seven eligible members who receive the most votes cast shall be deemed winners during a regular election of the Board of Directors. In all other elections, whether regular or special, the eligible member who receives the most votes cast shall be declared the winner. If an eligible member is elected to more than one office, only the highest office shall be valid. The person must relinquish the lower office and the eligible runner up in the lower office election shall be declared the winner."

PROPOSAL 2. (Albert S Lobel)

By-Laws be amended to change all gender references to male/female where appropriate.

PROPOSAL 3. (Steve Mittman)

The Election Committee Chairperson (ECC) shall be exempt from being permitted to campaign, or run for an elected office, during the period in which he or she is the Election Committee Chairperson.

[TEXT]

Change the first part of ARTICLE III, SECTION 3 to:

"Any member in good standing, except the Election Committee Chairman (ECC), regardless of where he lives, shall be eligible for regular election to any office... (etc.)"

Change ARTICLE III, SECTION 4 to:

"The Election Committee Chairman (ECC), appointed by the President and confirmed by the Board, shall handle all aspects of all elections of officers, whether regular or special, with complete authority. The ECC should essentially be unbiased, and therefore, may not campaign for a person, policy, or matter to be voted upon, or run for any elected office, during the period in which he is the ECC. If at the time a member becomes the ECC he holds an elected office, the office must be resigned."

PROPOSAL 4. (Steve Mittman)

Campaign statements submitted in a timely fashion to the ECC for inclusion in the "DX Monitor" be printed in alphabetical order by last name. All candidates running for office (except write-ins) be listed on the ballot categorically by office, and in alphabetical order by last name.

[TEXT]

Change the first part of ARTICLE III, SECTION 5, PART 5 to:

"All letters of acceptance of the nomination, and all campaign statements, must reach the ECC by February 20. The ECC shall prepare the campaign statements in alphabetical order by candidates' last name, and the ballot categorically by office and in alphabetical order by candidates' last name, and submit them to the Publisher... (etc.)"

IRCA SPECIAL BALLOT MEASURES

PLEASE BE SURE TO SEND YOUR COMPLETED BALLOTS TO:

ALBERT S. LOBEL
POST OFFICE BOX 26762
SAN DIEGO CALIFORNIA 92196-0000

DEADLINE FOR RECEIPT IS: DECEMBER 15, 1992. ALL BALLOTS MUST BE RECEIVED BY THAT DATE OR THEY WILL NOT BE COUNTED! NO EXCEPTIONS!

1. SHOULD AN IRCA MEMBER BE ALLOWED TO RUN FOR MORE THAN ONE OFFICE AT THE SAME TIME?

YES []; NO []

2. SHOULD ALL REFERENCES SUCH AS TO GENDER, I.E., HE, HIS, CHAIRMAN, ETC. BE CHANGED TO REFLECT BOTH MALE AND FEMALE BY USING TERMS SUCH AS HE/SHE, HIS/HER, CHAIRPERSON, ETC.?

YES []; NO []

3. SHOULD THE ELECTION COMMITTEE CHAIRPERSON BE PERMITTED TO ALSO CAMPAIGN OR RUN FOR AN ELECTED OFFICE IN IRCA, DURING THE PERIOD IN WHICH HE/SHE IS THE ELECTION COMMITTEE CHAIRPERSON?

YES []; NO []

4. SHOULD ALL CAMPAIGN STATEMENTS BE PRINTED IN ALPHABETICAL ORDER BY LAST NAME AND THE BALLOT LIST THE CANDIDATES CATEGORICALLY BY OFFICE, AND IN ALPHABETICAL ORDER BY LAST NAME?

YES []; NO []

CERTIFICATION OF IRCA MEMBERSHIP

NAME OF IRCA MEMBER (VOTER): _____ <PLEASE PRINT>

SIGNATURE OF IRCA MEMBER (VOTER): _____

Received by ECC on: _____.

Counted by ECC on: _____.

Signature of ECC: _____.

High Performance General Purpose Loop Amp

Dallas Lankford, March 6, 1992

This amp is a further improved variant of the Kolb-Sanserino amp which has been widely used for many years, such as in Radio West's loops, in the RTL-1 remotely tuned loop and other circuits developed by Mark Connelly, and, I have been told, in Palomar Engineers' loops. In my article "What's wrong with present-day loop antennas" in *DX News* 58, 23 (April 1, 1991) I described some minor improvements to the Kolb-Sanserino amp. However, it took almost another year of development and testing to obtain the major improvements described here.

One of the main differences between my amp below and all previous variants of the Kolb-Sanserino amp is that the output of my amp is completely balanced. Balancing the output reduced amp noise (a minor but annoying problem with previous versions), and improved 2nd order IMD performance. It was also found that 2nd order performance was further improved by using FET's for Q3 and Q4 instead of BJT's (which were used in previous versions). My output transformer is homemade, 11 trifilar turns of #26 enameled copped wire on an Amidon FT-50-43 ferrite toroid core. Mark Connelly has reported equivalent performance with a T4-6T-X65 transformer (Mini-Circuits, P.O. Box 350166, Brooklyn, NY 11235-0003).

C - 660 pF; see text

L - see text

Q1, Q2 - MPF102 matched pair

Q3, Q4 - MPF102 matched pair

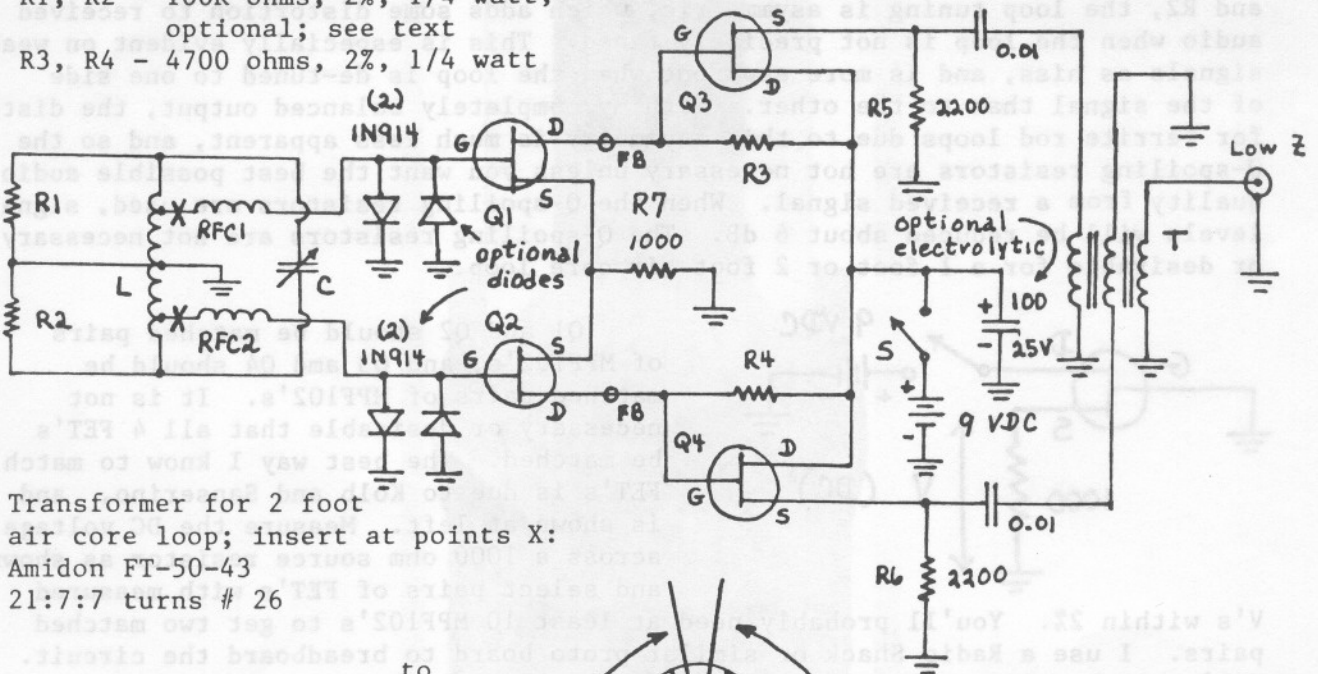
R1, R2 - 100K ohms, 2%, 1/4 watt,
optional; see text

R3, R4 - 4700 ohms, 2%, 1/4 watt

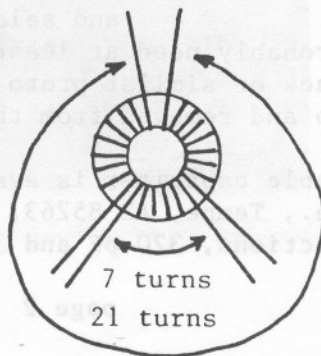
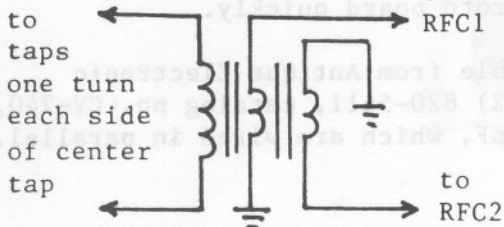
R5, R6 - 2200 ohms, 2%, 1/4 watt

T - 11 trifilar turns #26 enameled copper
wire on Amidon FT-50-43

FB - Amidon FB-101-64 ferrite bead



Transformer for 2 foot
air core loop; insert at points X:
Amidon FT-50-43
21:7:7 turns # 26



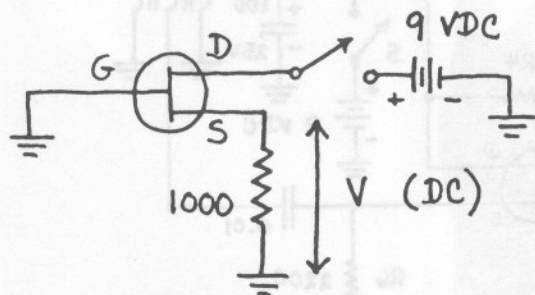
RFC1, RFC2 - 100 μ H;
39 turns #26 enameled
copper wire on Amidon
FT-50-61; omit these
chokes when the amp
is used with a ferrite
rod loop

Another major difference between my amp and all previous variants of the Kolb-Sanserino amp are the 100 micro-Henry chokes RFC1 and RFC2. The chokes are not necessary or desirable when the amp is used with a ferrite rod loop; they should be omitted in that case. The chokes are necessary to eliminate 2nd order IMD products due to SW signals when the amp is used with 1 foot or 2 foot air core loops as described below.

The pair of back-to-back diode pairs (4 1N914 diodes) are static protection. I added these to my design recently when Ralph Sanserino told me he occasionally "kills" FET's, especially during dry periods when the Santa Ana winds blow dry desert air across Southern California. Mark Connelly expressed concern that these diodes might cause spurious mixing products, and he has a good point. However, signal levels at the gates of Q1 and Q2 should not be high enough to cause spurious mixing products provided the amp is used correctly. I have observed no spurious mixing products due to the diodes during extensive testing. If any spurious mixing products are observed, you may remove the diodes and replace FET's when you "kill" them.

Amp gain is determined by the 4700 ohm load resistors R3 and R4. For lower gain you may reduce the values of R3 and R4. However, I have found (not surprisingly) that for best strong signal handling performance the amp should be operated at or near maximum gain, and signal levels should be reduced (if necessary) to an appropriate level before the gates of Q1 and Q2.

Resistors R1 and R2 are Q-spoiling resistors for the loop coil. The original Kolb-Sanserino schematic (IRCA reprint A8) included these resistors as optional, but did not discuss their function, or the pros and cons for using them. In my experience, these Q-spoiling resistors are only necessary for previous variants of the Kolb-Sanserino amp which do not have a balanced output, and then only when the amp is used with a ferrite rod loop coil. In that case, without R1 and R2, the loop tuning is asymmetric, which adds some distortion to received audio when the loop is not precisely tuned. This is especially evident on weaker signals as hiss, and is more apparent when the loop is de-tuned to one side of the signal than to the other. With my completely balanced output, the distortion for ferrite rod loops due to this asymmetry is much less apparent, and so the Q-spoiling resistors are not necessary unless you want the best possible audio quality from a received signal. When the Q-spoiling resistors are used, signal levels will be reduced about 6 dB. The Q-spoiling resistors are not necessary or desirable for a 1 foot or 2 foot air core loop.



Q1 and Q2 should be matched pairs of MPF102's, and Q3 and Q4 should be matched pairs of MPF102's. It is not necessary or desirable that all 4 FET's be matched. The best way I know to match FET's is due to Kolb and Sanserino, and is shown at left. Measure the DC voltage across a 1000 ohm source resistor as shown, and select pairs of FET's with measured

V's within 2%. You'll probably need at least 10 MPF102's to get two matched pairs. I use a Radio Shack or similar proto board to breadboard the circuit. FET's can be plugged into and removed from the proto board quickly.

The 660 pF air variable capacitor is available from Antique Electronic Supply, 6221 S. Maple Ave., Tempe, AZ 85263, (602) 820-5411, catalog no. CV-240, \$4.65 each. It is two sections, 320 pF and 345 pF, which are wired in parallel.

As I pointed out previously, you will have to degrease and regrease the bearings because the original grease has dried out, causing stiff bumpy rotation of the shaft.

The main reason this amp was developed was for use with a 1 foot air core MW loop. My 1 foot square loop coil is 22 turns of #18 bare stranded (7x22) copper wire, center tapped, about 1/4 inch spacing between turns, 2 inch spacing between 11 turn halves, with taps 1 turn each side of center tap. The tuning range is about 485 KHz to 2150 KHz. Ralph told me he has constructed a similar 15 inch square air core MW loop with the amp connected across the entire loop coil, but I have recommended that he not do that because the resulting signal levels will be higher than needed and the strong signal handling performance will be degraded.

This amp can be used with many ferrite rod loops, especially those built by Ralph Sanserino and sold by Radio West. For most ferrite rod loops the amp is connected across the entire loop coil, and, as I said above, RFC1 and RFC2 are omitted. For ferrite rod loops, R1 and R2 are optional; see my previous remarks. I have used a homemade version of Ralph's ferrite rod loop which consists of 4 rods, bundled and overlapped, 3/8 inch diameter by 8 inches long rods, initial permeability 125, 26 turns of #22 enameled copper wire, center tapped. It is an excellent amplified MW loop.

This amp can also be used with a 2 foot air core MW loop. In that case a matching transformer should be inserted at the points marked X as shown on the schematic above. For details of the 2 foot air core loop coil you should consult my previous article, "High dynamic range balun loops," which appeared in DX News 58, 23 (April 1, 1991). The IMD performance of this amp and matching transformer seems to be about as good as the high dynamic range balun loop amp which was originally used with my 2 foot air core MW loop. Unlike the balun loop amp, the gain of this amp does not depend on the load it sees. Thus it would appear to be an improvement over the balun loop amp.

As I have said many times before, the most frequent defect of many previous amplified loop antennas is excessively high signal levels. When excessively high signal levels are applied to the input of an amp, spurious responses are often generated in the amp. And when excessively high signal levels are output from an amplified loop, the receiver dynamic range is degraded. In both cases the weak DX you want to hear may be covered up by spurious responses. Yet many DXers continue to degrade the performance of their receiving systems with amplified loop antennas which have excessive signal levels.

Tapping down on the 1 foot loop coil, as described above, illustrates the preferred solution to the excessive signal level problem for amplified loops with high input impedance amps. The signal levels input to the amp are reduced before the signals arrive at the amp. Sometimes a loop coil does not have enough turns to permit the signal levels to be reduced to a suitably low level. For example, a balanced 2 foot air core loop for the MW band typically has 14 turns, center tapped. Thus the minimum signal levels which can be obtained directly from a 2 foot air core MW loop are obtained by taps one turn each side of center tap. However, if my amp is connected directly to those two taps, signal levels are about 10 dB higher than needed. (In the past, high gain, high input impedance amps were connected across the entire loop coil, which resulted in signal levels 20 dB or more higher than needed!) This problem could be solved by reducing

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amp gain by 10 dB. However, signal levels at the input to the amp would still be 10 dB higher than needed. For best strong signal handling performance I have found that many of these kinds of amps should be operated at or near maximum gain, and the input signal levels to the amp should be reduced by an appropriate amount, in this case 10 dB. The matching transformer for the 2 foot air core MW loop reduces the output voltage from the coil by a factor of 3, which is equivalent to a 10 dB reduction in signal levels input to the amp. In theory this improves the effective 2nd order intercept of the system by 10 dB, and improves the effective 3rd order intercept of the system by 20 dB.

Spurious responses observed from an amplified, balanced, air core, MW loop antenna are seldom the result of inadequate 3rd order IMD performance. As a matter of fact, I have never observed any 3rd order IMD products from an amplified MW loop during on-the-air use. Of course, 3rd order products can be generated and observed using signal generators in a laboratory setting. The same cannot be said for 2nd order IMD products. If you observe any IMD products from an amplified MW loop during on-the-air use, you can be virtually certain they are 2nd order products. Moreover, the 2nd order products you hear, if your amplified loop has any, are usually due to a frequency difference $f_1 - f_2$ of two SW signals of frequencies f_1 and f_2 . For example, if you connect my amp directly to a 2 foot air core MW loop² (without the 3:1 turns ratio matching transformer), and do not use the 100 micro-Henry chokes RFC1 and RFC2, or if you use any similar high gain, high input impedance amp, then almost every evening for the first several hours after local sunset you may observe some (and occasionally numerous) SW 2nd order IMD products as you tune your receiver between 1.6 and 2.0 MHz, especially with the receiver BFO turned on, and with the loop detuned (say, to around 500 KHz). Even with the loop tuned to the received frequency (in the 1.6 to 2.0 MHz range) you may still observe SW 2nd order IMD products near the ambient noise floor on a quiet night.

Balanced, amplified, MW air core loops are susceptible to SW 2nd order IMD products because they are actually quite good antennas for the SW frequencies above about 5 MHz. If you have a 2 foot or larger balanced, amplified, MW air core loop, turn the amp on and tune your receiver between 6 and 16 MHz during the early evening hours. Unless your amp is my balun amp, or my amp above with chokes RFC1 and RFC2, you will find that signal levels above about 9 MHz are almost as high as with a full size outdoor LW antenna. In effect, your loop is a broadband SW antenna, and your amp is a broadband amp for SW signals above about 5 MHz. Even the best amplifiers do not have high enough 2nd order intercepts to prevent 2nd order IMD products from being observed at medium frequencies (on quiet afternoons and evenings) when the amp is used with a balanced, air core MW loop. Fortunately, I discovered a simple solution for this problem some time ago when I developed the balun amp. A 100 micro-Henry choke added at the appropriate point in the balun amp, or a pair of 100 micro-Henry chokes added at the appropriate points in my variant of the Kolb-Sanserino amp pass MW signals without loss, but reduce SW signal levels, especially those above 9 MHz, up to 20 dB or more. Thus SW 2nd order IMD products are reduced up to 20 dB or more, and well below the threshold of detectability.

Perhaps I should add that if you live in an urban area with high levels of ambient man-made noise, then you may seldom hear the SW 2nd order IMD products discussed above. For example, in Riverside, CA Ralph Sanserino normally has about 20 dB of ambient man-made noise when using one of the loops described above with an R-390A, while I normally have 0 dB or less ambient man-made noise. With previous versions of the Kolb-Sanserino amp (sans chokes, and not tapped down on the loop coil), SW 2nd order IMD products are seldom as strong as 10 dB

and so Ralph has never observed them. Similarly, many DXers in noisy urban areas may never hear these SW 2nd order IMD products. However, it appears that the problem of SW 2nd order IMD products is not entirely unheard of. In a recent issue of DX News the IDXD editor discussed several SW "images" which had been reported to IDXD and another SW "image" which he had observed recently. It appears they observed SW 2nd order IMD products which originated in their amplified MW loop antennas.

Some variation in components for my amp is permissible. For example, Mark Connelly suggested using a Mini-Circuits T4-6T-X65 transformer instead of my homemade transformer T. While I was typing this article I received one of these MC transformers from Mark. I checked it out and found no differences in signal levels or IMD performance. So the MC transformer would appear to be a winner because it saves time making a transformer. The chokes RFC1 and RFC2 were homemade because the chokes I had been using ("high reliability" Mouser 43HH104) proved unreliable. Ordinary handling can cause them to develop an internal open circuit. Perhaps some other commercial choke (maybe Mouser 434-1120-101L) would be satisfactory. In a similar amp, Alan Merriman reported that a Radio Shack 100 micro-Henry choke caused bad spurious responses. Using different FET's is not a good idea unless you are willing and able to do extensive testing, and you have extremely low levels of ambient man-made noise. For example, I tried U310's in place of the MPF102's after someone suggested them. The U310's gave greater gain, as I was told, but they also generated considerably more amp noise. The additional amp noise was about equal to the additional gain. When the load resistors were adjusted to equalize amp noise, there was no difference in amp gain. So there is no advantage to using U310's in place of MPF102's. These experiences illustrate the importance of testing if you make any component changes.

I would like to express my appreciation to Mark Connelly and Ralph Sanserino for comments and suggestions relating to this article and the amp design. For example, Ralph recently asked me to clarify how ambient man-made noise could give a carrier meter reading of less than 0 dB on an R-390A. Of course, Ralph is right. The R-390A carrier meter (when properly adjusted) does not read below 0 dB. What I meant was that because an R-390A has delayed AGC, there is 20 dB or more "headroom" above the R-390A noise floor and below the point at which the carrier meter begins to move. On extremely quiet days at my location the ambient man-made noise floor in the MW band is (I estimate) about 5 to 10 dB below 0 dB on the R-390A meter using any of my standardized antennas. That is what I meant when I said I have less than 0 dB of man-made noise on some occasions. Although I can't find the letter or article where Mark mentioned it, I recall Mark writing that he has experienced SW second order intermodulation distortion when using this amp with a ferrite rod loop. So my suggestion above to omit the 100 microHenry chokes when using the amp with a ferrite rod loop should be ignored, and you should use the 100 microHenry chokes with all MW loops. It never occurred to me that DXers closer to Europe, like Mark, would experience SW second order intermodulation products with loops which would be free of spurious responses at my location where SW signal levels are lower. But apparently that is indeed the case.

Finally, a few words are in order regarding which kind of loop you should build or buy - ferrite rod(s) or air core. Recently while testing the AGC mod I performed on Russell Scotka's NRD-525, I discovered, much to my surprise, that my two foot air core loop was much less susceptible to the NRD-525 display noise than my ferrite rod loop. I do not know whether this is also true for a one foot air core loop because I did not have one prototyped at the time. I have no explanation for this strange discovery, but it should be studied further.

For an NRD-525, display noise was reduced below ambient man-made noise at my location (which is considerably lower than ambient man-made noise in typical urban locations) when the two foot air core loop was moved three feet or more away from the NRD-525. With the two foot air core loop three or four feet away from the NRD-525 it was not awkward or difficult to operate the loop and receiver simultaneously. In fact, it would be inconvenient to have the loop much closer to the receiver. If a one foot air core loop is equally less susceptible to NRD-525 display noise than a ferrite rod loop, and if air core loops are equally less susceptible to display noise of other solid state receivers than a ferrite rod loop, then air core loops would clearly be the MW band loops of choice. Increased prices of ferrite rods, and inherently limited sensitivity of ferrite rod loops are other reasons which make air core loops more attractive than ferrite rod loops.

KMCM and KMTA Coverage Areas

