

DECEMBER 18, 1993 - VOLUME 31 - NUMBER 14 - EDITION 1006-ISSN 0899-9732

IN THIS ISSUE: DX TEST..2, BROADCASTING INFORMATION..3, DX WORLDWIDE WEST..4, WESTERN DX ROUNDUP..5, CENTRAL DX ROUNDUP..7, WESTERN DX FORUM..7 EASTERN DX FORUM..8, EASTERN DX ROUNDUP..9, HEARING IT THROUGH THE GRAPE VINE..12, NEWFOUNDLAND DXPELITION..16(this completes the DXpedition), A RECEIVER SHOWDOWN..19, MWT-3 TUNER/CONTROLLER..24(this completes the MWT -3 tuner/controller),4 SOFTWARE PIECES FOR THE MEDIUMWAVE BAND..32,.....

NEW MEMBERS: THE CAR CORNER, ALLISON SMITH. **REJOIN:** LESLIE GEIR. **RENEWALS:** KEITH SHORT, TONY FITZHERBERT, DAVID McCORD, JOHN CAIRNS. THANK YOU

CORRECTION: 4 SOFTWARE PIECES FOR THE MEDIUMWAVE BAND WILL APPEAR IN THE CENTER OF THIS DX MONITOR, NOT ON PAGE 32 AS STATED ABOVE.....

IRCA REPRINTS: THE IRCA MAINTAINS A VERY LARGE FILE OF ARTICLES WHICH HAVE APPEARED IN PAST ISSUES OF THE DX MONITOR. A LIST OF REPRINTS FOR \$1.00 FROM IRCA REPRINTS c/o STEVE RATZLAFF 1885 EAST BAYSHORE RD #90 EAST PALO ALTO CA 94303. SOME GOOD STUFF AVAILABLE CHECK IT OUT.....

FOR SALE: DX-440's I HAVE 3 FOR SALE. 2 HAVE PLUG-IN FERRITE BAR LOOPS THE OTHER IS UNMODIFIED. THE PRICE IS \$125.00 EACH PLUS \$5.00 FOR SHIPPING. ALL ARE IN EXCELLENT SHAPE, ONE IS BRAND NEW. CONTACT ME AT THE IRCA PO BOX 70223 RIVERSIDE CA 92513-0223 ASK FOR RALPH SANSENERINO....

IRCA BOOKSTORE: THE BOOKSTORE HAS A FLYER AVAILABLE FOR THE ASKING, GET IN TOUCH WITH THE IRCA BOOKSTORE AT 9705 MARY NW SEATTLE WA 98117....

THE IRCA ADDRESS LIST: WE ARE PUTTING THE FINISHING TOUCHES ON THE LIST AND IT WILL BE IN YOUR HANDS SOON AT NO COST TO YOU THAT HAVE ASK FOR IT

THE IRCA NEW NEW MEMBER PACKET: THIS IS BEING WORKED ON AND I HOPE TO SEND ALL MEMBERS A COPY IN JANUARY OR FEBRUARY. THESE THINGS TAKE TIME WHEN YOU DO NOT HAVE A LOT OF WORKERS. YOU CAN EASILY COUNT THE WORKERS ON ONE HAND, MAYBE A HALF OF HAND. IT WILL BE HERE SOON.....

KAMA

La Primera... !

DX TEST BULLETIN

• DX TESTS ARRANGED BY IRCA AND NRC •

MONDAY, DECEMBER 20, 1993 - WCGC-1270, P.O. BOX 888, BELMONT, NC 28012-0888 WILL CONDUCT A DX TEST BETWEEN 12:00 & 12:30 AM EST. THE TEST WILL INCLUDE MORSE CODE AND COUNTRY MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. BRUCE MUSSO - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 20, 1993 - WDAS-1480, BELMONT AVENUE & EDGELY DRIVE, PHILADELPHIA, PA 19131 WILL CONDUCT A DX TEST BETWEEN 1:00 & 2:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND BLACK GOSPEL MUSIC. FROM 1:00 TO 1:30 AM, POWER WILL BE 5 KW, THEN SWITCH TO A POWER OF 1 KW FROM 1:30 TO 2:00 AM. RECEPTION REPORTS MAY BE SENT TO: MR. WILLIAM R. SULLIVAN - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 20, 1993 - KWNC-1370, P.O. BOX 607, QUINCY, WA 98848-0607 WILL CONDUCT A DX TEST BETWEEN 3:00 & 3:30 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND "CLASSIC" MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. DONALD LOCKWOOD - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 27, 1993 - KVON-1440, 1124 FOSTER ROAD, NAPA, CA 94558 WILL REPEAT A DX TEST WHICH RAN IN OCTOBER BETWEEN 3:00 & 3:30 AM EST. THE TEST WILL INCLUDE MORSE CODE AND TONES. RECEPTION REPORTS MAY BE SENT TO: MR. MICHAEL MARTINDALE (KB6RQH) - DIRECTOR OF ENGINEERING. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, DECEMBER 27, 1993 - KQKE-700, 1514 MOFFETT STREET, SUITE I, SALINAS, CA 93905 WILL CONDUCT A DX TEST BETWEEN 3:30 & 4:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. DOUGLAS BROWN - PROGRAM MANAGER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

SUNDAY, JANUARY 9, 1994 - WSB-750, 1601 W. PEACHTREE STREET, NE, ATLANTA, GA 30309-2641 WILL CONDUCT A DX TEST BETWEEN 12:00 & 5:00 AM EST. THE TEST WILL INCLUDE 750 HZ TONES AND VOICE ID'S INSERTED IN THEIR REGULAR TALK FORMAT. POWER WILL BE 50 KW OMNIDIRECTIONAL. RECEPTION REPORTS MAY BE SENT TO: MR. RON WILSON (K4POZ) - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, JANUARY 10, 1994 - KURL-730, P.O. BOX 31038, BILLINGS, MT 59107 WILL CONDUCT A DX TEST BETWEEN 2:30 & 3:00 AM EST. THE TEST WILL INCLUDE VARIOUS TEST TONES AND MORSE CODE ID'S. DURING THE TEST, KURL WILL SWITCH SEVERAL TIMES BETWEEN POWERS OF 5 KW AND 235 WATTS. RECEPTION REPORTS MAY BE SENT TO: MR. KENT ABENDROTH (WA7DUC) - GROUP ENGINEER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

SUNDAY, JANUARY 16, 1994 - KWCO-1560, P.O. BOX 1268, CHICKASHA, OK 73023-1268 WILL CONDUCT A DX TEST BETWEEN 1:05 & 2:00 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, MARCH MUSIC, AND VOICE ID'S. DURING THE TEST, KWCO WILL SWITCH BETWEEN POWERS OF 1,000, 500, AND 250 WATTS. PHONE CALLS WILL BE TAKEN DURING THE TEST AT (406) 224-1560. NO COLLECT CALLS, PLEASE. RECEPTION REPORTS MAY BE SENT TO: MR. JOHN CARSON - NEWS DIRECTOR. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, JANUARY 17, 1994 - WJIB-740, P.O. BOX 848, NEEDHAM HEIGHTS BR., BOSTON, MA 02194 WILL CONDUCT A DX TEST BETWEEN 1:30 & 2:00 AM EST. THE TEST WILL INCLUDE MORSE CODE ID'S. THIS TEST WILL BE REPEATED ON JANUARY 24. RECEPTION REPORTS MAY BE SENT TO: MR. BOB BITTNER - MANAGER/OWNER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, JANUARY 17, 1994 - WOC-1420, 3535 EAST KIMBERLEY ROAD, DAVENPORT, IA 52807 WILL CONDUCT A DX TEST BETWEEN 1:30 & 2:30 AM EST. THE TEST WILL INCLUDE MORSE CODE, TONES, AND VOICE ID'S. RECEPTION REPORTS MAY BE SENT TO: MR. JON BOOK (KB0EDE) - DIRECTOR OF ENGINEERING. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

MONDAY, JANUARY 24, 1994 - WJIB-740, P.O. BOX 848, NEEDHAM HEIGHTS BR., BOSTON, MA 02194 WILL REPEAT THEIR JANUARY 17TH DX TEST BETWEEN 1:30 & 2:00 AM EST. THE TEST WILL INCLUDE MORSE CODE ID'S. RECEPTION REPORTS MAY BE SENT TO: MR. BOB BITTNER - MANAGER/OWNER. (ARRANGED BY J.D. STEPHENS FOR IRCA CPC)

WYNI-930 201 Office Park, Monroeville, AL 36460 will conduct a DX test on Tuesday morning, February 1, 1994 between 2:00 and 2:30am EST. The test will be at a power of 5000 watts and include marches and CIDs. Send reception reports to Mr. Harold Harris. Arranged by the National Radio Club CPC.

2

BROADCASTING INFORMATION



Editor:
Robert Wien
1309 Dentwood Drive
San Jose, CA 95118

DEADLINES: 2nd & 4th Saturdays.

Compiled: 12/08/93

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

FACILITY & PARAMETER APPLICATIONS:

AR. Crossett	KAGH-800	240-D
CT. Westport	WMM-1260	200-N
GA. Valdosta	WGOV-950	63-N
HI. Pearl City	KIFO-1380	6200/6200
NJ. Newark	WSKQ-620	4200-N

FACILITY & PARAMETER GRANTS:

PA. Philadelphia	WPGR-1540	500-N, DA-2
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CALL LETTER CHANGES:

AZ. Sierra Vista	KMFI-1470	becomes RNXX
CA. Concord	KWUN-1480	becomes KKIS
San Luis Obispo	KIXT-1400	becomes KIID "Kid"
CO. Denver	KDEN-1340	becomes KKYD "Kid"
NM. Albuquerque	KZRL-1580	becomes KRLL
NC. Rochester	WPXY-1280	becomes WHTR "Hot Talk"
NC. Black Mountain	WAVJ-1350	becomes WZQR
OH. Campbell	WZKC-1330	becomes WASN "All Sports"
PA. Philadelphia	WBEB-560	becomes WPHY
Reading	WAGO-1240	becomes WIOV
SC. Georgetown	WVEK-1470	requests WLNC
TN. Nashville	WVGM-1560	becomes WMRO
TX. Dallas	KAAM-1310	requests KTCK "The Ticket"
WI. Racine	WKKV-1460	becomes WBJX

FORMAT CHANGES:

CA. Carmel Valley	KIEZ-540	was AS, now SS (sim. KKLF-FM 50% of the time)
CO. Denver	KKYD-1340	was KDEN, silent, now CXN Children's net
GA. Alma	WULF-1400	was talk, now JSN oldies
Augusta	WCJ-1230	was silent, now urban/black gospel
Elberton	WWRK-1400	was country//FM, now JSN oldies
IL. Urbana	WBGP-1580	was urban AC, adds SMN Urban gold
IN. Humboldt	WHMT-1190	was AC, to be JSN oldies//FM (Jan.), never became SEN sports
ME. Portland	WZAN-970	was talk, adds Unis. Imus
MT. Newberry	WNBY-1450	was AS, now JSN oldies//FM
MO. Bolivar	KYOO-1200	was country, adds JSN country
NM. Tucumcari	KTNM-1400	was country, adds Unistar country
NC. Black Mountain	WZQR-1350	was WAVJ, religion, now country
OK. Holdenville	KRAF-1370	was country//FM, adds JSN C&W//FM
PA. Reading	WIOV-1240	was WAGO, oldies, adds SMN Kool oldies
SC. Florence	WJMX-970	was AC, adds JSN AC
TX. Austin	KVET-1300	was country, talk, adds sports tk 5-7PM
Denton	KDNT-1440	was nx, talk, now SS
Tulsa	KTUE-1260	was country, adds JSN country

KLAC-570 has definitely switched to their new "AM Only" format on 12/5, per several reporters to the column, including Steve Mittman and Pat Martin. Thank you each and every one.

Lynn Hollerman of Huntsville, AL, passes on the following tip:

AL. Huntsville WBHP-1230 now simulcasting country with WDRM-102 FM, with exception being "For Your Information", "Ask The Experts" (radio programs), and Auburn U. football and BKB (also carried on WHOS-AM Decatur).

Thanks, Lynn. DX has been a little slow of late, but hopefully it will pick up soon, just 17 more shopping days till gift day, buy me a nice big new shiny rx, hi. '73's.



DX Worldwide - West

PAT MARTIN PO BOX 843 SEASIDE, OR 97138
Time: UTC Phone (503) 861-3185

DEADLINE: MONDAYS

A nice new Masterhead. It looks great. Not alot of DX this week as CX continue to be on the slow side. A few more JJs were in on the AM of Dec 7th, but nothing too much. Hopefully CX will improve. So on with reports.

PAN AMERICAN DX ROUNDUP

- 540 MEXICO, Monterrey-XEWA-11/19 at 0344 Fair-easy copy with lively mx U/CBK (SA-MB)
- 640 UNIDS, several SS stations u/o KFI. The first one noted at 0530 on 12/2 with Hard US Rock and some SS Rock, soft low key ancr. Later a Tropical mx station(Cuba?), at both 0600 and 0800 stations with UNID NAs. The one at 0800 may have been a version of XE NA, by then the signal was way u/KFI. Anyone hear any hard rock on SS stations here? This was on the 1500' E Bev. (PM-OR)
- 730 MEXICO, Mexico City-XEX-11/19 0350-fair to poor, mx and SS talk, mixing w/CKDM. (SA-MB)
- 740 CUBA, Radio Progreso-11/22 0230-fair, man with talk on Cuba, then ID (SA-MB)
- 900 MEXICO, Mexico City-XEW-fair mixing with KNUI, etc. with "XEW" ID in SS at 0730 on 12/5 (PM-OR)
- 940 MEXICO, Mexico City-XEQ-11/19 0356-LA mx o/CJGX-Best signal in a longtime (SA-MB)
- 1500 MEXICO, Mexico City-XEAI-11/22 0312-fair, lively LA mx u/KSTP(SA-MB)

TRANS-PACIFIC DX ROUNDUP

- 531 JAPAN, Morioka-JOQG-man in JJ at 1610 12/7 (PM-OR)
- 540 JAPAN, synchros here in JJ //531 1612 12/7 (PM-OR)
- 558 SOUTH KOREA, KBS here with man in KK 1606 12/7 (PM-OR)
- 594 JAPAN, Tokyo-JOAK-good with man in JJ //531 1611 12/7 (PM-OR)
- 630 PHILIPPINES, Manila-DZMM-fair in jumble with man and woman ancrs at 1510 12/3 in Tagalog and English. (PM-OR)

THANKS TO THESE REPORTERS

- SA-MB SHAWN AXELROD-30 BECONTREE BAY-WINNIPEG MB R2N 2X9
ICOM R70 with Plam Board-4 foot Box Loop
- PM-OR YOUR EDITOR
Drake R8, Term. 200' SW LW, 2000' NNW Bev, Ground system.



WESTERN DX ROUNDUP

Nancy Hardy
2301 Pacific Avenue
Aberdeen, WA 98520-4527

★ PRODIGY
FMFT21B

DEADLINES FOR WDXR TIPS: EACH MONDAY. PLEASE USE EASTERN TIME.

REPORTERS FOR THIS ISSUE:

- (pb) Phil Bytheway-9705 Mary NW-Seattle, WA 98117
ICOM R-70 and KIWA loop
- (LG) Larry Godwin-2390 Clydes Dale Lane-Missoula, MT 59801
Hammarlund HQ-150, Sanserino air-core box loop, KIWA loop
- (GJ) Gary Jackson-7735 Center Parkway-Sacramento, CA 95823
(GJ-CA1) DX'ing in Hanford, CA
- (PM) Patrick Martin-P.O. Box 843-Seaside, OR 97138
Drake R8, ground system, 2000' NNW term. Beverage
- (AWP) Art Peterson-851 31st St.-Richmond, CA 94804
- (MS) Mike Stonebridge-Box 511-Fox Creek, AB TOH 1P0
Drake R7, 70' wire
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118
GE Superadio, GE long-range portable, SM-2

OF SPECIAL INTEREST

- 930 (CJCA) AB, Edmonton ceased broadcasting 12/1 1800. They ID'd as "930 CJCA" at 1755, then on the hour they pulled the plug. No announcement. Evidently they had been losing money ever since changing to an all talk format several years ago. (MS)
- *****
- 530 CKHL AB, High Level 11/30 2025 fair on top of weak Astoria TIS. CKHL // CKYL-610 with oldies. Best in a while. (PM-OR)
- 570 ?CFWH? YT, Whitehorse 11/29 0115 presume the CBC station // 690 over/under KVI. No local ID's at this hour. Best ever heard this signal, wish I could ID it though. (PM-OR)
- 610 CKRW YT, Whitehorse 11/29 0116-0140 in the jumble with many Whitehorse & Yukon spots, pop music, Yukon Trappers PSA. New, report sent. (PM-OR)
- 670 *KBOI* ID, Boise 11/29 0300 with TT. (RW-CA)
- 760 CFLD BC, Burns Lake 11/30 oldies rock music, "LD" ID at 2057, "BV-LD" news at 2100. (PM-OR)
- 840 KWPN NE, West Point 11/26 1800 on top with ID, "KWPN AM and FM, West Point, Nebraska." News, then abruptly cut carrier. I phoned station which said this was s/off of AM outlet. Thanks to Stan W. for tip. (LG-MT)
- 890 KBBI AK, Homer 11/29 0105 fair on top with NPR programming, ID. (PM-OR)
- 960 KSRA ID, Salmon 11/29 0800 apparent s/on by very enthusiastic man. Concluded with "Good morning. Have a great day!" then ABC news. (LG-MT)
- KFLN MT, Baker 11/29 0900 on top with ID, "...Country for almost 30 years...960 KFLN, Baker." Then ABC news. (LG-MT)
- 970 KTRW WA, Spokane 11/25 1000 heard for first time. Man said "You're listening to Sportsradio 970, The Score, Spokane's own 24-hour all-sports radio station...Spokane Sports Central KTRW, Spokane." (LG-MT)
- 1020 KDKA PA, Pittsburgh 11/24 ended CNN news at 2305. Then talk show at 2327, and promo ending with "Radio 1020, KDKA" at 2245. KCKN weak for some reason, and easy to null. KWIQ & KYXE took turns dominating. New state! (LG-MT)
- 1070 KATQ MT, Plentywood 11/28 1104 ID "From Weyburn to Williston, it's

- radio for the USA and Canada, Radio International, KATQ AM & FM, Plentywood, Montana." First time heard. (LG-MT)
- 1220 KDFC CA, Palo Alto 11/30 1801 in CJOC null, ID for FM outlet in San Francisco and "your Concert Music Hall KDFC, Palo Alto." (LG-MT)
- KDDR ND, Oakes 11/28 2231 through CJOC, anncr. said "In Dakota Country, under partly cloudy skies it's 24 degrees." I phoned station to confirm. (LG-MT)
- CJRB MB, Boissevain 11/27 0909 in CJOC null, gave Provincial 4-A volleyball scores for Winnipeg-area schools. I phoned station to confirm. Reports should go to friendly CE Jack Hefner. (LG-MT)
- 1360 WMOB AL, Mobile 11/22 0600 apparent s/on mentioning Christian Program and call/freq. Into Dr J. Harold Smith and the Radio Bible Hour. Format checks against M Street book. It's been a while since I heard Alabama!!! (pb-WA)
- 1400 KUNA CA, Indio 11/29 0928 while looking for KIID-CA, this faded up, apparently not KBZT yet. "6:28 at AM 1400, KUNA," then gone in KBLX null. (RW-CA)
- 1490 KJOE UT, Ogden 11/29 0300-0315 fading o/u KOWL/KBAS et al, with Gene Scott, ID on hour. Did call station to confirm details. Call change, ex-KJQN. (RW-CA)
- 1500 (KSJX) CA, San Jose 11/29 0300-? totally off, 11/28 0615 with OC. (RW-CA)
- 1560 WQEW NY, New York 11/26 1830 weak but solid, and all alone on this loop bearing with ID "It's 6:30, 1560 WQEW in New York". (LG-MT)
- KZIZ WA, Sumner 11/26 1825 moderately strong on this loop bearing with ID as "KZIZ, the beacon" (not another beacon!). (LG-MT)
- 1600 KLGA IA, Algona a pleasant surprise 11/30. Two call ID's at 1830, then ad for Algona business at 1834. Heavy QRM from KWMX. (LG-MT)

LOCAL NEWS

- 630 CHED AB, Edmonton as of 12/1 became an all talk station. Now ID's as "630 Ched, Alberta's information superstation." With the change of format they hired on 5 ex-CJCA employees. (MS-AB)

HELP WITH UNID

- 960 Larry Godwin's unID in 12/4 WDXR surely must be KNDN Farmington, NM which carries Navajo programming. 0600 s/on would be logical and fits NRC Log s/on time. (AWP-CA)

UNIDS

- 1500 11/29 0316 unID Spanish good on occasion in KSTP null o/u CRAY. Suspect Mexico City, but may be a domestic. Heard partial ID as "ah-chay" (H?). (RW-CA)
- 1500 11/29 0700-0715 heard Morse code on this frequency. (GJ-CA)
- 1610 UnID TIS 11/29 0900-0915. Antenna pointed towards Gilroy and S. Cal, female announcer saying "for emergencies..." (part inaudible). Heard what sounded like Irvine or Irwin? Then in clear she stated "for fire, police, call 911!" "For traffic reports, emergencies, dial 1610 AM..." and faded before ID. Along coast or LA area? Gilroy or Irvine? Help out! (GJ-CA)

Congratulations Pat on hearing the Yukon! That was a great catch. Phil sent along a note that a friend in the UK heard a station on 1420 running Jim Bohannon and wondered who it might be. Bill called up the Larry King list in his database and that included WRCG-GA, WOC-IA, WVJS-KY and KPFL-LA. Does anyone know of any other 1420 outlets that now run Bohannon in that time slot? Keep up the good work, all.



Central DX Roundup

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

 **PRODIGY**
MPNN49A

FOR THE RECORD

REPORT ALL TIMES AS EASTERN. E-MAIL: JOHNJ53816@AOL.COM DEADLINE: SATURDAYS.

RIDING GAIN

- [TJR-IL] **Thomas J. Reiser**, 9506 South Winchester, Apt. 205, Chicago, IL 60643-1109
Sony ICF-2003 with built-in antenna.
- [JcJ-MT] Your editor using an Icom IC-R71A with a Radio West loop.

DOWN THE DIAL

- 640 KFI CA, Los Angeles. 11/27 poor. 2220 with talk program. Rare here. [TJR-IL]
- 1390 CJCJ AB, Medicine Hat. 11/29 good with fades. 0315 with rock. Spot cluster. "CJCJ" ID used. [JcJ-MT]
- 1470 KBCW MN, Brooklyn Park. 11/29 fair in CJVB null. 0245 with C&W format. Slogan "KCW AM 14-70." Not needed. [JcJ-MT]

DX TESTS

- 740 KBOE IA, Oskaloosa. 11/21 DX test poor. 0145 with code IDs. [TJR-IL]

25 YEARS AGO

December 21, 1968 issue of IRCA's "DX Monitor"...Thomas Jasinski aboard the USS Brumby mentioned he was 21 and didn't have much time for dial twisting while in the Navy....John Johnson in Rota, Spain mentioned this would be his last Christmas while in the Navy....Pat Martin of Seaside, OR talked about a recent ERBA gathering....Andy Lagomarsino of San Jose, CA mentioned logging WOKJ for state #33....Percy R. Kestevan of Edmonton, AB received a verie from HJDK-790 for country #9.

OPEN MIKE

Doing gets it done. Thanks to Thomas we have a column this week! Next weekend is Christmas. I hope you all receive lots of DX on Christmas Eve. 73, John-John.



Western DX Forum ★ ★ ★ ★ ★

Reid Wheeler 5910 Boulevard Loop SE Olympia, WA 98501

Deadline: Saturday 2 weeks before publication

Shawn Axelrod, 30 Becontree Bay, Winnipeg MB R2N 2X9

Well, another year is winding up. I hope everyone had as good a time as I did. I managed to survive a family vacation with three teenagers and DX at the same time. Good thing they sleep in and sunrise is something they don't want to experience. Wayne McRae and I did more work on our DX site at Valhalla Beach. Insulation to keep out those sub-Arctic nights should make DX'ing more comfortable this winter. Our last trip up the Valhalla we took along two visitors from the Minnesota DX Club. They had never been on a DX'pedition like ours and I can assure you they went home VERY happy with what was heard that night. The DX was the best we have had in a long time. Everything was alive. On longwave we managed to get two new ones: 153 Algeria and 198 England. The best was to come in the early morning when Tahiti, Australia and Hawaii made appearances. The Hawaiians were of unbelievable strength. We

heard stations on 760, 830, 850 and 1500, all of which were dominating the frequencies they were on. Up and to that day we had heard Hawaii once in the 7-8 years we've been DX'ing. This was like an FM E Skip opening. Everyone was pleased to say the least especially the boys from Minneapolis who got Hawaii on two of their locals!! I hope that all of you have a good DX season and that 1994 is filled with happiness and health. Remember to support the club in any way you can in '94 so we can all enjoy the hobby to its fullest. 73 Shawn

Gary Jackson, 7735 Center Parkway, Sacramento CA 95823

[12/1] Talked to head of CalTrans TIS here in Sacramento. CAI They are licensed now to use 1030 kHz here in California, but only in the Bay area. They have a TIS list; I asked for the address of the company. A TIS list for all of us is phone # 616-722-2300, Information Statistics' specialist, Bill Baker. It is published once a year at a cost of \$17.00 and covers all TIS stations in the US. Thought maybe other DX'ers might be interested in TIS list. DX poor here. 73's

EASTERN

DX

FORUM

DEADLINES: SATURDAYS

Richard C. Evans

P.O. Box 21883

Milwaukee, WI 53221-0883

Phone: 414-Atlantic 2-9035

Ernest Cooper, 5 Anthony Street, Provincetown, Massachusetts 02657

In my last Forum I suggested more of us contribute to this section - and what have I done? Right - I've let more than two months slip by without so doing! Sorry about that! My verie count is up to 4337 with the addition of these since last checking in: WBBB-1600 WV, WZAN-970 ME (ex-WYNZ), WZNZ-1460 FL their umpteenth set of call letters, WYFX-1040 FL, WXTC-1390 SC, WJIB-740 MA (out 16 months!) & WNNW-1110 NH. WZNZ and WYFX were caught during AU conditions 10/26 and 10/27, and another Floridian, WJNX-1330 was noted on top also but they're not needed here. A report to WDIS-1170 has been out a month, heard here easily after local WKPE's early (1600) s/ff, & before WWVA sets in. 11/1 found Bermuda's VSB2 o/WADO at 0100, also unneeded. While trying for Vermont's WKDE (ex-WDOT) on SM 10/31, with local WPLM exercising its regular Sunday silent period, I came up with, instead, WXTC-SC in/out with WMZQ-VA. Since then, I've found I can hear WDCW on 1390 in WPLM's null during the wee hours, and a report is off to them. Still no WKDR, maybe they're not on AN. Philadelphia's WBBB-560 is no more; they're now WPHY, and REL, AN. Their DA must be awry as they put in a fairly strong signal u/WGAN, whom they had been protecting. A report is out them, including a f/up for WBBB which never answered. WJDA-1300, a semi-local, is now AN with low power. On 11/25, Thanksgiving morn, somebody on 1480 0246-0306 & in w/talk on Christian and environmental bashing, unID in/out with WZEC, CHR D & WISL, who dis? Sun. 11/28 I had a station with bouncy polka music actually o/WOGL-1210 @ 1552-1603+. Other reports went to WAAV-980 NC on Talknet @ 0100 plus some local announcements, & to WMXH-750 PA at SSS and a goodie, WRAI-1520 San Juan also at sunset plus one hour recently on an AU evening. (I enjoyed their catchy music while on vacation at the King Frederik Hotel on St. Croix, USVI last May!) Also on 11/28 @ SSS. WWWW-1130 tearing up WBBB - does anyone have a verie from either one of these guys? I had a great time at Ray Arruda's annual GTG on 11/20. I'm hoping for an Eastern location for the 1994 IRCA Convention - we could have it here in Provincetown - IF - you would like to pay \$100 a day or more for lodging, hi! So, here's wishing you all a very Merry Christmas and a great new year, filled with good DX & verifications, and prosperity. Come on, Easterners, let's hear from you in this column! The more you contribute the better the DX Monitor! Forward - March!

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

Just a quick note to mention my first verie of the season, WOI-640 Iowa from their DX Test of 10/4/93. That gives me a 50% return for the season, hi. I was over in Kalamazoo, Mich. for the Thanksgiving weekend. No chance to listen to the radio, but did notice that WQSN-1470 now has its studios on the west side of town (on West Main Street) just a couple of miles from where I lived 40 years ago. I remember them being located on the east side of town. Have a Merry Christmas and a Happy New Year, and remember -- only 20 more DX Monitors until Labor Day! 73.



Eastern DX Roundup

Leonard Hyde
1805 Whipple Drive #27
Blacksburg, VA 24060-2436

* CHECKING IN THIS WEEK *

- (TB) Tom Bryant-849 Todd Preis Dr-Nashville TN 37221: Yamaha TX-930, Kiwa loop
(CS) Clifford Schnauffer-444-1B Edger Rd-Elizabeth NJ 07202
(1lh) the editor at home with R-392, 2' box loop, Autek QF-1

* HOT TIPZ *

990 WNRV VA, Narrows now ON at night, // FM. Noted poor to fair, phasing in w/WIVK sky wave. C&W mx. IDs as "Kool 100.7 - WBNK, Christiansburg: WNRV 990 AM - Narrows, Pearisburg, and the New River Valley." Just what I needed to further hamper my efforts to hear CBY!!! Per call to station owner: they are now on 24 hrs. Night power is 10.3 wts. Also talked about WFNR-710. Owner seemed favorable to the idea of doing a DX Test! He did say that the WFNR 10 kW xmtr is only putting out about 6 kW due to it's age and cx. (1lh-VA)

* AROUND THE DIAL *

- 1110 WMBI IL, Chicago Su 11/28 1715-1730 poor w/WBT phased. A REL radio play, complete w/soap opera type organ mx. Caught parts of s/off ancmt a/1730: "WMBI;" "studios in downtown Chicago;" "thanks for tuning in." New, much wanted, little hoped for. Had to rephase powerhouse WBT every 30 seconds or so. After s/off, unID left w/NFL football. Unable to gain a clue about that one! (1lh-VA)
1120 WUST DC, Washington Su 11/28 1650-1700 poor to nil w/KMOX phased. unID language, sounds like SS without the "o's". Occ. mx. Up to very good w/s/off ancmt in EE. Ment "New World Radio - WUST - Washington." SSB, and gone. Per call to station: unID language was "Amharic" (an Ethiopian tongue.) They were at 3000 wts CH power. See unID help below. (1lh-VA)
1250 WTAE PA, Pittsburgh Sa 11/20 0403 ID & wx - rare here. SRS cx beginning - zzzzzzz took over. (TB-TN)
1370 WCOA FL, Pensacola Fr 11/19 2209 unusually strong. ID during football game. (TB-TN)
1440 WBLA NC, Elizabethtown Fr 11/19 1959 ID only. New. (TB-TN)
1550 CBE ON, Windsor Th 11/18 0100 poor-fair w/ID & CBC nx intro. Faded into jumble during news. Not heard in about 10 years. (TB-TN)
1580 WKKD IL, Aurora Su 11/21 0235 ID, and oldies. "Pure Gold." (TB-TN)
1590 WCSL NC, Cherryville Fr 11/19 2138 ID in football game...40 wts? (TB-TN)

* DX SPECIALS *

HEARD:

740 KBOE IA, Oskaloosa Su 11/21 0100-0200 NRC DX TEST tuned in 5 min. late to hear KRMG s/off for maintenance. KBOE tone and code IDs u/CBL. CBL pulled the plug at 0112. That left KTRH, and in their null, got 'em GOOD. More code IDs from KBOE. No voice or mx heard. Only heard call, never QTH. New for #730. (TB-TN)

- 1170 WDFB KY, Danville Su 12/5 0030-0058 NRC DX TEST this test started late (according to the listing) and ran from 0030 - 0058. Fair to xint in WWVA null. Slow, somewhat unsteady Morse code, two different freq. tones. No voice IDs heard. QRM from KVOO, and occ. SS, assumed Colombian. Thanks to J.D. for the tip! I'd cut the rx off at 0028 and was drifting off to ?????! (11h-VA)
- 1340 KXXY OK, Oklahoma City Su 12/5 0100-0130 heard 4 distinct test tones right at TOH, and other occ. disjointed tones through test period. J.D. sez it was them. (11h-VA)

NOT HEARD:

- 1210 WILY IL, Centralia Su 11/21 0230-0300 NRC DX TEST needed, tried, not heard. Forgot about this one until 0245! Just WOGL like a local, & wk SS QRM, maybe a trace of KGYN. (TB-TN)
- 1250 KWSU WA, Pullman Sa 11/20 0300-0400 tried, not heard in blob of WTMA, WEMP, et al; & heavy splash from WIBV 1260. Sounded like someone WAS testing... long periods of 4-8 kHz tones, but no code IDs. (TB-TN)
- 1560 KLTI MO, Macon Sa 11/20 0000-0100 NRC DX TEST tried, not heard. Only monster WPAD & WQEW. (If WPAD is running legal nite power, I'm 19 with a 30" waist!) (TB-TN)
(I don't know, Tom...WPAD is a TOUGH log here. True, they are heard on the West Coast occ. -ed)

*** WHO DAT? ***

- 530 ???? (date? time?) tonight from 2200-2215 I heard a station on 530 - sounds like a piano, also woman talking like Chinese or Japanese. Help? (CS-NJ)
(almost certainly CIAO in Brampton, ON. -ed)
- 540 ???? (date? time?) woman talking to people about SEX for 1 hr, faded. (CS-NJ)
(I thought Dr. Ruth was gone from radio, hi! Talknet? -ed)

HELP:

- 1120 WUST DC, Washington possibly MB-ON's unID. Per call to station, they do broadcast in FF at times. (11h-VA)

*** OTHER STUFF ***

*** EDXR QUICK ALERT NET NEWS ***

The quick alert loop is a reality. 6 members are on board. To join, send a SASE to EDXR HQ. The only requirement: you must be willing to IMMEDIATELY pass on a tip when phoned to you. This is quick, easy and inexpensive, and can be very profitable. Yes, you CAN specify not to be called at 0300! You can also specify areas of interest (LW, SW, tropics, foreign DX, etc.)

The loop first swung into action on the evening of 11/10, when deep AU cx were in place, and ZNS-1, Bahamas, was heard at armchair volume in the East. It has been used several times since.

On Sunday 12/5, the loop proved invaluable to at least one member who had shut the rx off when the WDFB DX Test did not start as scheduled. Someone else had more faith, waited, and made a phone call when the test was heard.

Short updates will be provided here from time to time.

*** HEADLINES FROM HQ ***

Thanks to Tom & Clifford for supporting EDXR this week. Welcome Clifford...

A YEAR AGO IN DXM: (#14) Ralph put the Publisher problem to rest with his announcement that he would stay on as Publisher for another year...Pat Martin's India-864 verie was on the front cover...J.D. heard CBY-990 in NF...Karl Jeter heard the KCNO-CA DX Test in GA...Robert Wien set a MM record with 7 new stations and 3 CL changes logged...John Johnson mentioned that the FCC has processed 6,201 call changes since 1984.

Till next time, 73/gud DX de LLH. (28)

* DX RECORDS * One DXer's legacy...

REPORTER/DATE OF REPORT: **PATRICK MARTIN** - 11/21/93

LOCATIONS: Seaside OR; Alaska

STARTED DXing: 1962 YRS SERIOUSLY? 30

COUNT CALL CHANGES? Yes

SPECIAL: 10 QSLs from the Phillipines

VERIFIED: TOTAL BCB: 2151

US: 1345

OF STATES: 43 OR / 50 AK

MOST: CA-311, WA-227, OR-179

DC?: Yes (from AK)

CANADA: 227

OF PROVINCES: 8 OR / 10 AK

MEXICAN: 21

OF STATES: n/a

FOREIGN: 806

TOTAL # COUNTRIES: 72

BEST CATCHES:

DOMESTIC VERIFIED: WNVE-1400 FL, Ft. Walton Beach

CANADIAN VERIFIED: CBY-990 NF, Corner Brook

MEXICAN VERIFIED: XENZ-890 Cullacan

FOREIGN VERIFIED: AIR-864 INDIA, Shillong

TOTAL GY VERIFIED: 155

1230: 33

1240: 21

1340: 21

1400: 26

1450: 25

1490: 24

REPORTER/DATE OF REPORT: **G. Harley DeLeurere** - 11/24/93

LOCATIONS: Hendricks, WV; Hobart, IN

STARTED DXing: 1955 YRS SERIOUSLY? 37

COUNT CALL CHANGES? Yes

VERIFIED: TOTAL BCB: 3247

US: 2918

OF STATES: 48

MOST: PA-227

DC?: Yes (9 veried)

CANADA: 159

OF PROVINCES: 10

MEXICAN: 21

OF STATES: 7 (& D.F.)

FOREIGN: 149

TOTAL # COUNTRIES: 74

BEST CATCHES:

Mr. DeLeurere did not define his best catches, but mentioned in a letter that he has verified GY stations from Montana, Wyoming, Colorado, New Mexico and Canada. He also mentioned that it was great verifying YVKW-1070, La Guaira, Venezuela. In a humorous aside, he said that it was just as rewarding to hear and verify WCDE-640, Elkins, WV 25 miles away. If you lived in the Appalachians, you'd appreciate that! Groundwave signals just don't penetrate mountains!

TOTAL GY VERIFIED:

1230: 72

1240: 56

1340: 77

1400: 72

1450: 81

1490: 81

REPORTER/DATE OF REPORT: **Howard G. Kemp** - 11/22/93

LOCATIONS: Laconia, NH

STARTED DXing: 1932 YRS SERIOUSLY? all

COUNT CALL CHANGES? Yes

SPECIAL: Getting veries; NH's oldest active AM DXer

HEARD/VERIFIED: TOTAL BCB: 3237/2841

US: 2682/2841

OF STATES: 50/50

MOST: NY-214

DC?: Yes

CANADA: 249/228

OF PROVINCES: 10/10

MEXICAN: 68/39

FOREIGN: 555/416

TOTAL # COUNTRIES: 61/61

//

Hearing It Through The Grape Vine

SHAWN AXELROD, 30 Beconree Bay, Winnipeg, MB R2N 2X9 Canada (204) 253-8644 before 2300 E.L.T.

CONTRIBUTORS THIS TIME ARE

MIKE SANBURN PO BOX 1256 BELLFLOWER CA 90707-1256
 KARL ZUK 154 OLD POST ROAD NORTH CROTON ON HUDSON NY 10520
 PAUL A LAFRENIERE P O BOX 606 GRAND MARAIS MN 55604
 PATRICK MARTIN P O BOX 843 SEASIDE OR 97138-0843
 JOHN JOHNSON 979 NEPTUNE BLVD BILLINGS MT 59105
 JASON DOLAN 11753 LAKESIDE AVE SEATTLE WA 98125 ****WELCOME****
 YE OLDE EDITOR AS ABOVE

FREQUENCY OF THE MONTH 700 KHZ

MIKE SANBURN

WLW CINCINNATI OH	OCCASIONAL NITES	KFAM N SALT LAKE UT	DOMINANT NITES
KQKE SOLEDAD CA	IN KFAM NULL		

KARL ZUK

WLW CINCINNATI OH	DAY AND NIGHT	WCAT ORANGE ATHOL MA	SSS/SRS
CIMN CHAROLETTETOWN PE	RARELY HEARD		

JOHN JOHNSON

CKRD RED DEER AB	NITELY PEST	KFAM N SALT LAKE UT	GOOD SSS/SRS
KGRV WINSTON OR	RARE SSS/SRS	KMJY NEWPORT WA	RARE SSS/SRS
WLW CINCINNATI OH	OCC STRONG NITES		

PATRICK MARTIN

ZNR GRAFTON AUST.	OFTEN IN 60 & 70's	JOFD HIROSHIMA JAPAN	OFTEN IN 60-70's
JOKD KITAMI JAPAN	OFTEN IN 60-70's	---- P.R.CHINA	OCC IN 60's
TIHB SAN JOSE COSTA R.	OFTEN IN 60-70's	---- CUBA	OCC IN 60's
---- JAMAICA	OCC IN 60-70's	KBYR ANCHORAGE AK	OCCASIONALLY
KQKE SOLEDAD CA	REG AT NITE	WLW CINCINNATI OH	OCC AT NITE
KGRV WINSTON OR	REG DAY & NITE	KMJY NEWPORT WA	OCC AT SSS
CKRD RED DEER AB	SEMI REG DAY AND NITE		

PAUL LAFRENIERE

WLW CINCINNATI OH	ALWAYS!!
-------------------	----------

SHAWN AXELROD

WLW CINCINNATI OH	DOMINANT NITES	KFAM N SALT LAKE UT	VERY RARE SSS
CKRD RED DEER AB	MOST NITES	R. ONE MONTEGO BAY JAM.	VERY RARE NITES

STATE OF THE MONTH SOUTH DAKOTA

MIKE SANBURN

1560 KKA ABERDEEN	MM's 1976
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JOHN JOHNSON

570 WNAX YANKTON	COMMON HERE	690 KUSD VERMILLION	RARE
810 KBHB STUGIS	DAYTIME REG	920 KKLJ RAPID CITY	RARE
950 KWAT WATERTOWN	OCCASIONALLY	980 KDSJ DEADWOOD	SSS/SRS
1000 KXRB SIOUX FALLS	COMMON HERE	1060 KGFX PIERRE	COMMON HERE
1140 KSOO SIOUX FALLS	GOOD NITES	1150 KIMM RAPID CITY	OCCASIONALLY
1210 KOKK HURON	OCCASIONALLY	1260 KWYR WINNER	SSS COMMON
1270 KNWC SIOUX FALLS	COMMON AT SSS	1300 KOLY MOBRIDGE	COMMON AT SSS
1320 KELO SIOUX FALLS	MOST NITES	1340 KIJV HURON	RARE SSS
1340 KTOQ RAPID CITY	COMMON NITES	1380 KOTA RAPID CITY	PEST NITES
1400 KBJM LEMMON	RARE AT SSS	1420 KGIM ABERDEEN	RARE SSS
1450 KBFS BELLE FOURCHE	RARE SSS	1480 KSDR WATERTOWN	RARE HERE
1560 KKA ABERDEEN	PEST AT SRS/SSS		

YE OLDE EDITOR

TO SAVE SPACE MY LIST WILL NOT APPEAR AS IT IS VERY SIMILAR TO JOHN'S ABOVE OR PAUL'S ON THE NEXT PAGE.

PAUL LAFRENIERE					
570 WNAX YANKTON	DOMINANT PEST	690	KUSD	VERMILLION	PRIODICALLY
910 KJJQ VOLGA	PERIODICALLY	930	KSDN	ABERDEEN	OFTEN
950 KWAT WATERTOWN	PERIODICALLY	1000	KXRB	SIOUX FALLS	WINTER DAYS
1060 KGFX PIERRE	SRS/SSS	1140	K500	SIOUX FALLS	OFTEN
1240 KCCR PIERRE	PERIODICALLY	1260	KWYR	WINNER	SRS
1270 KNWC SIOUX FALLS	PERIODICALLY	1300	KOLY	MOBRIDGE	OFTEN SRS
1320 KELO SIOUX FALLS	TWICE WINTER	1380	KOTA	RAPID CITY	OFTEN
1420 KGM ABERDEEN	PERIODIC SRS	1450	KYNT	YANKTON	TWICE SRS
1480 KSDR WATERTOWN	OCC SRS	1490	KORN	MITCHELL	ONCE SRS
1510 KMSD MILBANK	OFTEN SRS	1560	KKAA	ABERDEEN	PEST

PATRICK MARTIN					
570 WYAX YANKTON	OCC IN 60's	1000	KXRB	SIOUX FALLS	DX TEST ONCE
1060 KGFX PIERRE	ONCE IN 60's	1140	K500	SIOUX FALLS	OCC IN 60's
1380 KOTA RAPID CITY	OCCASIONALLY	1380	KQKD	REDFIELD	ONCE IN 1993

BANDSCAN MANIA

THE FOLLOWING BANDSCANS ARE FROM JASON DOLAN USING A KENWOOD ICRC630 CAR STEREO.
DXING FROM LOS BANOS, CA 7/26/93

540 KIEZ CARMEL VALLEY	550 KCWR BAKERSFIELD
560 KSFO SAN FRANCISCO	580 KMJ FRESNO
600 KKLQ SAN DIEGO	610 KFRC SAN FRANCISCO
620 KIGS HANFORD	630 KIDD MONTEREY
640 KFI LOS ANGELES	650 KSTE RANCHO CORDOVA
680 KNBR SAN FRANCISCO	690 XTRA TIJUANA
700 KSUR SOLEDAD	710 KFIA CARMICHAEL
740 KCBS SAN FRANCISCO	770 KPLA RIVERBANK
790 KOQO CLOVIS	800 KHIS BAKERSFIELD
810 KGO SAN FRANCISCO	830 KNCO GRASS VALLEY
830 KPLS ORANGE	860 KTRB MODESTO
880 KKMC GONZALES	900 KBIF FRESNO
910 KNEW OAKLAND	920 KLOC CERES
940 KFRE FRESNO	960 KABL OAKLAND
970 KOOK MODESTO	980 KEYQ FRESNO
990 KKIS PITTSBURG	1010 KIQI SAN FRANCISCO
1020 KTNQ LOS ANGELES	1030 KKSAT Lodi
1050 KOFY SAN MATEO	1060 KPAY CHICO
1070 KNX LOS ANGELES	1080 KSCO SANTA CRUZ
1090 KTN S OAKHURST	1090 XPRS TIJUANA
1100 KFAK SAN FRANCISCO	1110 KRXC ROSEVILLE
1130 KRDU DINUBA	1140 KRAK SACRAMENTO
1150 KIIS LOS ANGELES	1170 KLOK SAN JOSE
1180 KERI WASCO	1190 KORG ANAHEIM
1190 KNBA VALLEJO	1220 KRGO FOWLER
1220 KDFC PALO ALTO	1230 KWG STOCKTON
1240 KSAC SACRAMENTO	1250 KHOT MADERA
1260 KOIT SAN FRANCISCO	1270 KJUG TULARE
1280 KJAX STOCKTON	1290 KAZA GILROY
1300 KYNO FRESNO	1330 KLBS LOS BANOS
1360 KFIV MODESTO	1370 KGEN TULARE
1380 KSMJ SACRAMENTO	1390 KMIX TURLOCK
1400 KEYX VISALIA	1410 KERN BAKERSFIELD
1420 KSTN STOCKTON	1430 KWDO FRESNO
1440 KVON NAPA	1440 KUHJ SANTA MARIA
1450 KTIP PORTERVILLE	1450 KVML SONORA
1480 KYOS MERCED	1500 KSJX SAN JOSE
1510 KIRV FRESNO	1520 KMPG HOLLISTER
1530 KFBK SACRAMENTO	1540 KLAU CAPITOLA
1550 KXEX FRESNO	1560 KNZR BAKERSFIELD
1570 KCVR LODI	1580 KLOQ MERCED
1600 KGST FRESNO	

DXING FROM PULLMAN, WA 9/25/93

550 UNID		560 KPQ	WENATCHEE
570 KVI	SEATTLE	580 KFXD	NAMPA
590 KAQQ	SPOKANE	610 KONA	KENNEWICK
630 KHDL	OPPORTUNITY	640 UNID	
660 KAPS	MT.VERNON	670 KBOI	BOISE
680 KOMW	OMAK	690 CBU	VANCOUVER
700 KMJY	NEWPORT	710 KIRO	SEATTLE
730 KULE	EPHRATA	750 KERR	POLSON
760 UNID		770 KULL	SEATTLE
790 KJRB	SPOKANE	810 KTBI	EPHRATA
850 KMTT	TACOMA	870 KORD	PASCO
880 KIXI	SEATTLE	900 KKRT	WENATCHEE
920 KXLY	SPOKANE	930 KZTA	YAKIMA
950 KOZE	LEWISTON	970 KTRW	SPOKANE
980 KUTI	YAKIMA	1000 KOMO	SEATTLE
1020 KYXE	SELAH	1020 KWIQ	MOSES LAKE
1050 KEYF	DISHMAN	1080 KVNI	COEUR D'ALENE
1090 KING	SEATTLE	1150 KQQQ	PULLMAN
1180 KOFI	KALISPELL	1210 KREW	SUNNYSIDE
1230 KSBN	SPOKANE	1250 KWSU	PULLMAN
1280 KUDY	SPOKANE	1290 KUMA	PENDLETON
1300 KLER	OROFINO	1310 KARY	PROSSER
1320 KSMX	WALLA WALLA	1330 KMBI	SPOKANE
1350 KRLC	LEWISTON	1370 KWNC	QUINCY
1400 KRPL	MOSCOW	1420 KUJ	WALLA WALLA
1430 KCLK	CLARKSTON	1450 KCLX	COLFAX
1470 KBSN	MOSES LAKE	1490 KENE	TOPPENISH
1490 KTEL	WALLA WALLA	1510 KGA	SPOKANE
1550 KSVY	SPOKANE		

DXING FROM BAKERSFIELD, CA 7/26/93

550 KCWR	BAKERSFIELD	570 KLAC	LOS ANGELES
580 KMJ	FRESNO	600 KKLQ	SAN DIEGO
610 KAVL	LANCASTER	620 KIGS	HANFORD
640 KFI	LOS ANGELES	660 KGDP	ORCUTT
670 KWNK	SIMI VALLEY	680 KNBR	SAN FRANCISCO
690 XTRA	TIJUANA	700 KSUR	SOLEDAD
710 KMPC	LOS ANGELES	740 KCBS	SAN FRANCISCO
740 KBRT	AVALON	770 KPLA	RIVERBANK
800 KHIS	BAKERSFIELD	830 KPLS	ORANGE
860 KTRB	MODESTO	870 KIEV	GLENDALE
900 KGRB	WEST COVINA	930 KKJH	LOS ANGELES
940 KFRE	FRESNO	970 KAFY	BAKERSFIELD
1010 KCHJ	DELANO	1020 KTNQ	LOS ANGELES
1070 KNX	LOS ANGELES	1090 XPRS	TIJUANA
1110 KRLA	LOS ANGELES	1110 KRCX	ROSEVILLE
1130 KRDU	DINUBA	1140 KVLJ	LK.ISABELLA
1150 KIIS	LOS ANGELES	1180 KERI	WASCO
1230 KGEO	BAKERSFIELD	1260 KGIL	SAN GABRIEL
1270 KJUG	TULARE	1300 KYNO	FRESNO
1310 KMYX	TAFT	1350 KBID	BAKERSFIELD
1370 KGEN	TULARE	1380 KHJJ	LANCASTER
1390 KMIK	TURLOCK	1400 KEYX	VISALIA
1410 KERN	BAKERSFIELD	1430 KALI	SAN GABRIEL
1440 KUHL	SANTA MARIA	1450 KTIP	PORTERVILLE
1460 KTYM	INGLEWOOD	1470 KUTY	PALMDALE
1470 KKFO	COALINGA	1490 KWAC	BAKERSFIELD
1560 KNZR	BAKERSFIELD	1590 KXEM	MC FARLAND

DXING FROM FRESNO.CA 7/26/93

550 KCWR	BAKERSFIELD	560 KSFO	SAN FRANCISCO
580 KMJ	FRESNO	610 KFRC	SAN FRANCISCO
610 KAVL	LANCASTER	620 KIGS	HANFORD
640 KFI	LOS ANGELES	650 KSTE	RANCHO CORDOVA
660 KGDP	ORCUTT	680 KNBR	SAN FRANCISCO
690 XTRA	TIJUANA	700 KSUR	SOLEDAD
710 KFIA	CARMICHAEL	740 KCBS	SAN FRANCISCO
770 KPLA	RIVERBANK	790 KOGO	CLOVIS
800 KHIS	BAKERSFIELD	810 KGO	SAN FRANCISCO
860 KTRB	MODESTO	880 KKMC	GONZALES
900 KBIF	FRESNO	920 KLOC	CERES
940 KFRE	FRESNO	980 KEYQ	FRESNO
1010 KIQI	SAN FRANCISCO	1080 KSCO	SANTA CRUZ
1130 KRDU	DINUBA	1140 KRAK	SACRAMENTO
1170 KLOK	SAN JOSE	1180 KERI	WASCO
1220 KRGO	FOWLER	1240 KJOP	LEEMORE
1250 KHOT	MADERA	1270 KJUG	TULARE
1300 KYNO	FRESNO	1330 KLBS	LOS BANOS
1340 KBOS	FRESNO	1360 KFIV	MODESTO
1370 KGEN	TULARE	1380 KSMJ	SACRAMENTO
1390 KMIX	TURLOCK	1400 KEYX	VISALIA
1420 KSTN	STOCKTON	1430 KWDO	FRESNO
1450 KTIP	PORTERVILLE	1470 KKFO	COALINGA
1480 KYOS	MERCED	1510 KIRV	FRESNO
1530 KFBK	SACRAMENTO	1550 KXEX	FRESNO
1580 KLOQ	MERCED	1600 KGST	FRESNO

DXING FROM BURLEY.ID 9/24/93

540 KNAK	DELTA	570 KISN	SALT LAKE
580 KF XD	NAMPA	590 KID	IDAHO FALLS
610 KVNU	LOGAN	630 KTKK	SANDY
630 KIDO	BOISE	650 KMTI	MANTI
670 KBOI	BOISE	690 KECN	BLACKFOOT
700 KFAM	NORTH SALT LAKE	730 KSVN	OGDEN
790 KBRV	SODA SPRINGS	800 KSOS	BRIGHAM CITY
860 KLZX	SALT LAKE	910 KALL	SALT LAKE
930 KSEI	POCATELLO	950 KMER	KEMMERER
970 KBBK	RUPERT	1010 KTUR	TOOELE
1060 KKDS	SALT LAKE	1060 KBGN	CALDWELL
1120 KANN	ROY	1140 KGEM	BOISE
1160 KSL	SALT LAKE	1210 KRSV	AFTON
1230 KBAR	BURLEY	1260 KICN	IDAHO FALLS
1280 KDYL	SALT LAKE	1290 KZBQ	POCATELLO
1310 KLIX	TWIN FALLS	1320 KCNR	SALT LAKE
1340 KSKI	HAILEY	1370 KSOP	SOUTH SALT LAKE
1400 KART	JEROME	1430 KLO	OGDEN
1480 KRXR	GOODING	1490 KGOE	OGDEN
1490 KRCD	CHUBBUCK	1510 KLLB	WEST JORDAN
1550 KRGQ	WEST VALLEY	1600 KCPX	CENTERVILLE

MORE TO COME NEXT TIME FROM JASON!!!

NEXT TIME
FREQUENCY
STATES

940 KHZ
HAWAII & ALASKA

Best of DX to all in '94 Shawn

15

*** COUNTRIES LOGGED ON THE 1993 NEWFOUNDLAND EXPEDITION ***

1	Albania	1089 1395
2	Algeria	549 891 1422
3	Angola	1088 1115 1313 1367 1502
4	Anguilla	690 1505 1610
5	Antigua & Barbuda	1100
6	Argentina	670 870 1030
7	Austria	1026 1476
8	Azores	693 828 909 1259 1503 1566
9	Belarus	1566
10	Belgium	540 927 1512
11	Benin	1475
12	Bermuda	1160 1230
13	Brazil	600 610 740 750 840 860 900 940 980 1030 1040 1100 1120 1130 1150 1200 1220 1240 1260 1280 1300 1360 1550 1571.7 1580
14	Bulgaria	576 828 864 1161 1224 1296
15	Canada	many (locals 590 640 740 800 930 1210)
16	Canary Islands	621 837 882 1008 1098 1179
17	Channel Islands	1116
18	Colombia	770 810 840 870 1170 1230 1450 1550
19	Croatia	1125 1134
20	Cuba	640 760 940 950 1180
21	Denmark	1062
22	Dominica	595
23	Dominican Republic	1570
24	Ecuador	640
25	Egypt	819 864 1107 1593
26	England	693 756 882 909 945 1053 1089 1116 1152 1197 1242 1260 1296 1332 1431 1458 1476 1485 1503 1521 1530 1548 1557 1584
27	Faroe Islands	531
28	Finland	963
29	France	675 945 1071 1161 1206 1242 1350 1377 1404 1467 1557
30	French Guiana	1070
31	Germany	666 756 873 936 972 1044 1107 1269 1323 1422 1539 1593
32	Greece	792 981(t) 1179(t)
33	Grenada	535
34	Guadeloupe	640
35	Guyana	560 760
36	Hungary	540 873 1188 1251 1341
37	India	1566
38	Iran	1404 1449 1566
39	Ireland	567 612 729 1278
40	Isle of Man	1368
41	Italy	846 900 1116 1332 1449 1575
42	Jamaica	560
43	Jordan	801 1494
44	Latvia	1350
45	Lesotho	1197
46	Libya	711 1251
47	Lithuania	1557
48	Luxembourg	1440
49	Madeira Islands	531
50	Malta	1557
51	Mauritania	1349
52	Mexico	730
53	Moldova	1449 1467
54	Montserrat	885
55	Morocco	594 819 1044 1053 1080 1188 1233 1325
56	Neth. Antilles	800
57	Netherlands	675 747 1618.2 1638
58	Northern Ireland	1026 1341
59	Norway	1314
60	Oman	1242 1413
61	Poland	819 1206 1368

4

SOFTWARE PIECES • for the • MEDIUMWAVE BAND

© 1993 Guy Kudlemyer

Much has been written and even more has been said about the advantages of computer-aided DXing (CADx). Unfortunately, a disproportionately large number of those words has been advanced in support of DOS and Windows-based computers. There are however, a few of us Medium Wave DX'ers who utilize Macintosh computers in pursuit of DX. This article is intended to review and compare three different pieces of Macintosh Propagation Software: Mac Shortwave 1.0, Mac Mini MUF (no version number available) and DX Helper 1.4. All of these Applications were written for, and are aimed directly at Shortwave Listeners and/or Ham Radio operators. However, each one possesses at least a few qualities that likely will make them of some use to MWDX'ers. In addition, the benefits of utilizing MAP are detailed in the final section.



Mac Shortwave

Mac Shortwave: An 84K Application. For MW DXers, this software is probably of the least use of the three. Still, it can be valuable when used with the understanding that it is intended for SWLs. Upon opening the Application, today's date is already displayed on screen, dependent upon the user having properly set the Mac's Alarm Clock. (See Fig. 1)

Mac ShortWave

SELECT ANY TWO LOCATIONS:

<input type="checkbox"/> Baker, HI	<input type="checkbox"/> Madras, OR	<input type="checkbox"/> Fairbanks, AK	<input type="checkbox"/> Omaha, NE
<input type="checkbox"/> Bellingham, WA	<input type="checkbox"/> Miami, FL	<input type="checkbox"/> Las Vegas, NV	<input type="checkbox"/> Los Angeles, CA
<input type="checkbox"/> Cape Cod, MA	<input type="checkbox"/> Madison, WI	<input type="checkbox"/> San Diego, CA	<input type="checkbox"/> Albuquerque, NM
<input type="checkbox"/> Colorado, CO	<input type="checkbox"/> Tucson, AZ	<input type="checkbox"/> Denver, CO	<input type="checkbox"/> Yonkers, NY
<input type="checkbox"/> Dawson Cr., BC	<input type="checkbox"/> Billerica, MA	<input type="checkbox"/> Honolulu, HI	<input type="checkbox"/> Sacramento, CA
<input type="checkbox"/> Edmonton, AB	<input type="checkbox"/> Sacramento, CA	<input type="checkbox"/> Boise, ID	<input type="checkbox"/> Madison, WI
<input type="checkbox"/> Helsinki, FI	<input type="checkbox"/> Birmingham, AL	<input type="checkbox"/> Tampa, FL	<input type="checkbox"/> Salt Lake City, UT
<input type="checkbox"/> Jakarta, ID	<input type="checkbox"/> Williams, AZ	<input type="checkbox"/> Winnipeg, MB	<input type="checkbox"/> Seattle, WA
<input type="checkbox"/> John Day, OR	<input type="checkbox"/> Springfield, MA	<input type="checkbox"/> Billings, MT	<input type="checkbox"/> Cheyenne, WY
<input type="checkbox"/> Ketchikan, AK	<input type="checkbox"/> Anchorage, AK	<input type="checkbox"/> Haver, MA	<input type="checkbox"/> Houston, TX

FROM Baker, HI TO Honolulu, HI

Set: Month 3 Set: Day Set: Seconds

Fig. 1 Mac Shortwave opening screen

Forty-nine buttons also appear on screen. These buttons can be pushed by pointing and clicking the mouse. Forty of these buttons are "locations" that can be individually programmed by the user. These can be "target cities" (stations), or simply "indicator" cities located in general areas from where DX is desired. One button is reserved for the receiving location, and the other 39 are individually programmed via a simple procedure: Pushing the "Change Buttons" button executes a straightforward dialog box into which requested info can be keyed. Six additional buttons can then be pushed to set Month, Date and Solar Flux. (As with all Propagation Software, obtaining Solar Flux Values from WWV prior to utilizing this software is a must!) Pushing the "Display Chart" button executes a chart of projected Maximum and Minimum Useable Frequencies between transmitting and reception sites for a 24 hour period beginning at midnight, of any local time the

user chooses. Also displayed is distance (mileage) between transmitting and receiving sites, and bearing heading in degrees. (See Fig. 2) Pushing "Previous Chart" allows for overlay of up to 20 previously-generated charts (within the same session) for comparison.

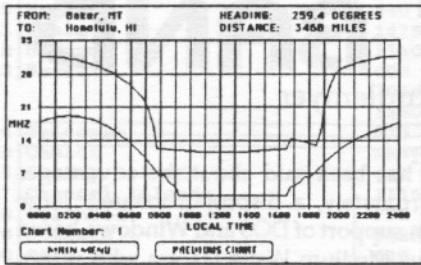


Fig. 2 Mac Shortwave chart screen

MacShortwave does have a few drawbacks, thus making it of "least use" of the three Applications to the MW DX'er. Most notable is its propensity for "flattening" the bottom end of the Max. and Min. UF curves at about 3 or 4 Mhz., even when the Max. and Min. fall below that. For MW DX'ers, this can be a bit frustrating considering that all frequencies DX'ed are considerably below that lower limit. Both Mac Mini MUF and DX Helper (reviewed below) bring the bottom of the curve to a much lower point.

Another of Mac Shortwave's drawbacks is its questionable accuracy. Going head-to-head-to-head with Mac Mini MUF and DX Helper, there can at times be huge discrepancies between Mac Shortwave's projection of MUF's when compared to the projections of the other two. Ninety-nine percent of the time, Mac Mini MUF and DX Helper agree to within a couple Khz. in their propagation projections. At least 50% of the time, Mac Shortwave's projections vary widely. In practice, I never allow Mac Shortwave to stand as the final authority on any particular day's propagation projection.

If for no other reason, Mac Shortwave can still be valuable to the MW DX'er in that it accurately displays bearing headings in degrees (for pointing loop antenna nulls) and accurately calculates mileages. In addition, a rough idea of Maximum and Minimum Useable Frequencies and times of occurrence can be obtained by using Mac Shortwave. This can at least supply the MW DX'er with a general idea of when and by how much the propagation conditions will be or have been changing, allowing for possible exploitation of an anticipated opening.

Mac Shortwave 1.0 is © 1989 and is priced in the under \$10.00 range as part of a package of Shareware that includes Mac Mini MUF. Contact Kinetic Designs, P.O. Box 1646, Orange Park, FL 32067-1646. It can also be obtained for a \$12.00 Shareware fee from its producer: BXA Research, 2704 Nighthawk Dr., Plano, TX 75025-2126. A newer version may well be available, but even after sending in my Shareware fee more than a year ago, no news on its availability has been forthcoming.



MacMini MUF

Mac Mini MUF: A 53K Application. This Application is useful to the MW DX'er if for no other reason than because it accurately displays a propagation curve on its chart that goes down to as low as 2 Mhz., instead of simply flattening-off the bottom of the curve at some randomly-predetermined 3 or 4 Mhz. limit. In addition, a 24 hour, hour-by-hour digital readout accompanies the curve, for greater accuracy when trying to pinpoint a lower or upper limit. When the bottom of the curve falls into the below-5 Mhz. area, it is possible that propagation in at least the upper-end of the Broadcast Band may begin to be affected; It is

reassuring to the user that the digital readout resolves frequencies to a tenth of a Mhz.

There are no pre-set buttons to be programmed on Mac Mini MUF. The date is already displayed on screen upon the opening of the application, dependent upon the user having properly set the Mac's Alarm Clock. (See Fig. 3)

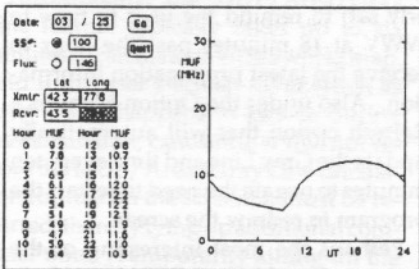


Fig. 3 Mac Mini MUF chart screen

Mac Mini MUF will accept either the standard-issue WWV Solar Flux Value, or its "Sunspot Number" equivalent. Upon opening the Application, the transmitting and receiving latitudes and longitudes automatically default to 42.3 lat., 77.8 long.; and 43.5 lat., 72.8 long., respectively (somewhere near Rochester, NY and Rutland, VT), and the Solar Flux Value automatically defaults to 146. All settings can be changed simply by double-clicking on the box and keying in the proper info. After having completed that operation, simply press the "GO" button and Mac Mini MUF displays an MUF chart.

Unfortunately, Mac Mini MUF is sort of a bare-bones propagation Application, and as such, displays no calculated mileages or bearing headings, as does Mac Shortwave. However, it appears to be quite accurate, at least when compared with DX Helper and against Mac Shortwave. When two Applications agree on propagation calculations and one is in disagreement by several Mhz., its easy to question the one renegade.

Mac Mini MUF is © 1987 and was created by J. Scott Weaver KA2OVS, 5 Sayles St., Alfred, NY 14802. There is no

Shareware fee listed on my copy, but it is priced in the under \$10.00 range when purchased as part of a package of Shareware that includes Mac Shortwave. Contact Kinetic Designs, P.O. Box 1646, Orange Park, FL 32067-1646.



DX Helper 1.4

DX Helper 1.4: A 191K Application. By far, the most complete, and therefore, the most useful of these three Applications. Upon opening the DX Helper, three boxes appear: Key in the receiving location's latitude, longitude and the current Solar Flux Value. Click OK. When the Application opens, the user sees a screen that features a Rectangular World Map, a scrolling list of Amateur Radio country prefixes, and five buttons: "Az/Eq Map", "Rect. Map", "Oblasts", "DXCC" and "Int'l". Of these five buttons, "Rect. Map" and "DXCC" are the defaults and thus, their accompanying graphics are displayed. (See Fig. 4)

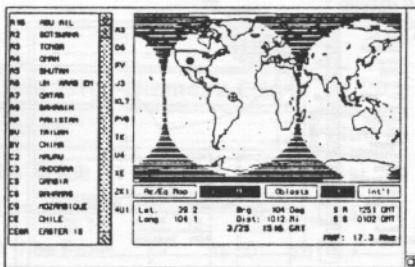


Fig. 4 DX Helper Rectangular Map screen

Pressing the "Az/Eq Map" button will execute a North Pole-projected Great Circle Map of the world centered on the receiving site's location. (See Fig. 5) Pushing "Oblasts" will bring up a list of Russian Oblast prefixes and corresponding Ham Radio-related info. Pushing "Int'l" will execute a list of international Ham prefixes. Selecting one of the prefixes will result in a box that details the name of the host country.

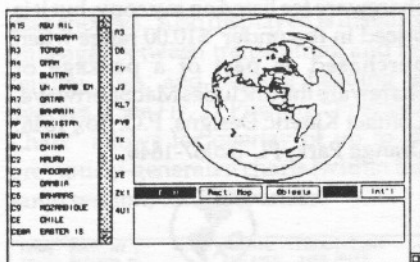


Fig. 5 DX Helper Az/Eq Map screen

Most of the info displayed when in the "Oblasts", "DXCC" and "Int'l" modes is of little use to the MWDX'er, and thus will not be detailed here. Of major interest is the "Rect. Map": Choosing any spot on the globe and clicking the mouse will execute an info box with the following MWDX-pertinent information for the selected site: Latitude; Longitude; Time Zone; Bearing degrees; Distance (mileage); current date and time in GMT; Sunrise and Sunset (at the selected site); and MUF. Double clicking on the selected site will yield this same info box, along with a 24 hour propagation chart that also delineates the current time. (See Fig. 6)

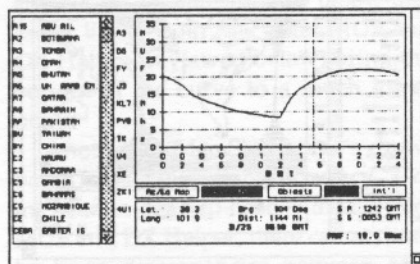


Fig. 6 DX Helper MUF chart screen

The Sunrise and Sunset listing feature is of particular interest to MWDXers interested in those particular modes of propagation.

In addition, DX Helper features the following: A display point (circle with a cross in the middle) on the Rect. Map that represents current noon, wherever in the world it happens to be; an option that allows for CW code practice; and an option that allows for the display of

current Gray Line. Also available is an option that allows for a Distance and/or Bearing List for major countries (based on the receiving site) to be printed to an ImageWriter printer. Under the Option Menu, an alarm can be selected which, when turned on, will automatically sound-off at 17 minutes past each hour (provided the Mac's Alarm Clock is properly set) to remind the user to tune to WWV at 18 minutes past the hour to receive the latest propagation information. Also under the Option Menu is a Refresh option that will automatically update the Gray Line and time every ten minutes to negate the need to restart the program to redraw the screen.

Perhaps the most interesting of the options offered is the MUF/Area/Gray Line Display. This allows the user to input an upper, mid, and lower frequency limit. The Mac will then display on the Rectangular Map the areas of the world where the MUF falls above and below the mid-point. (See Fig. 7)

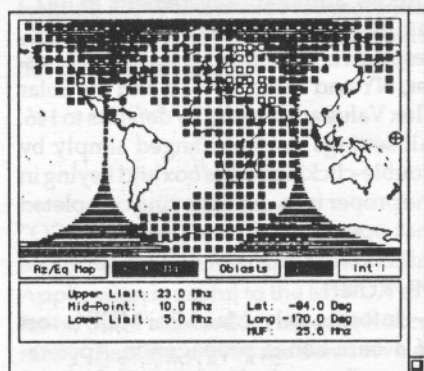


Fig. 7 DX Helper MUF/Area/Gray Line screen

In most instances this will be of limited use to the MWDX'er as the lower limit rarely falls into Broadcast Band frequencies, but during periods of abnormal propagation conditions, may prove to be quite useful.

DX Helper is not without its shortcomings. Most annoying is that it has no internal translator for converting the Mac's Alarm Clock to GMT. Thus, the

Alarm Clock must always be set to GMT (thereby displaying erroneous date and time for the user's local time zone when called up), or the user must always remember to re-set the Alarm Clock to GMT before using DX Helper, then set it back again to local time when shutting down.

Additionally, the MUF/Area/Gray Line feature typically takes up to six minutes to calculate an entire world map. And if the user's screen saver (such as After Dark) happens to kick-in during the calculation, cancelling it will not restore the MUF/Area/Gray Line calculation routine on the screen; it must be re-started, thereby tying up additional computer time. (Temporarily killing-off the screen saver is the most effective remedy for this malady.)

Another annoyance is that the Distance and Bearing Lists will print only to an ImageWriter; those of us with Bubble Jet or Laser printers must do without hardcopy (and the lists will not display on screen...!)

DX Helper 1.4 is © 1989 and was offered for approximately \$40.00 at release. To my knowledge, there has not been an updated version yet made available. It can be ordered from Mac Trak Software, P.O. Box 1590, Port Orchard, WA 98366.

Although each of the above Applications was written in the late 1980's, all are compatible with System 7. (Oddly, Mac Mini MUF will only run under System 7 with Virtual Memory "on" and set to 5 Megs.) Each will run under System 6.0x. If desired, all three can be run simultaneously on earlier Systems (a pseudo-simulation of one of System 7's tricks) if the user utilizes System 3.02 and Application Switcher 1.5 (contact me personally for more info on this; Application Switcher may no longer be marketed or available through software outlets.)



DX Locator

MAP: A 38K Application. Often it is beneficial to the MWDX-chaser to have an at-hand reference of major ("target") cities and their concomitant latitudes/longitudes. Goode's World Atlas is a favorite at this shack for pin-pointing the center of selected cities. However, beginning with System 6.0x or so, Apple has offered a Control Panel utility labeled "MAP". MAP displays a scrolling world map with the user's current location highlighted, and comes from the factory with most of the major world cities' latitudes and longitudes pre-programmed. Additional cities can be keyed-in by the user. (See Fig. 8)

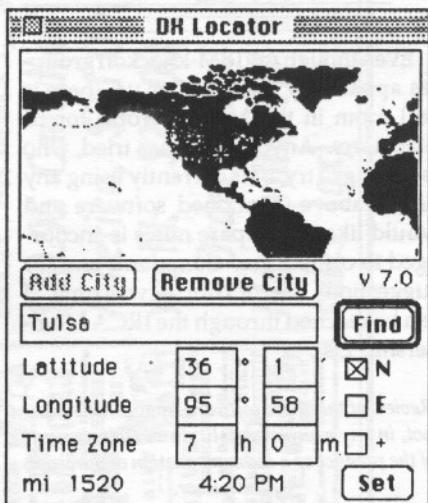


Fig. 8 MAP/DX Locator screen

In addition, MAP will display the Time Zone of selected city, current time in GMT (dependent upon the user having correctly the Mac's Alarm Clock), and mileage between receiving site and selected city (particularly useful when double-checking Mac Shortwave or DX Helper!)

The wise MWDX'er learns that MAP can be a useful supplementary tool

when utilizing any of the reviewed Propagation Software; no longer must the user dig through hardcopy references to locate coordinates for the target of choice; quickly referencing MAP will supply the necessary data (provided it was properly keyed-in by the user!) I have re-named my copy of MAP "DX Locator" (for alphabetical purposes) and placed it under the Apple Menu to allow for quick reference. Because I reside on the west coast, my "DX Locator" is chock-full of California, Hawaii, Arizona, Washington, Oregon, Idaho, Montana, Nevada, British Columbia, Alberta and Utah cities. Custom-tailoring of MAP will allow each individual user to best suit his/her own needs. MAP is © 1987-1991 and is available (if nowhere else) from Apple dealers (as part of their "free" System upgrades.)

Even though the IBM-knockoff groupies apparently out-number us, there is still room in the MWDX world for us Mac users. Anyone who has tried, who is willing to try, or is currently using any of the above-mentioned software and would like to compare notes is encouraged to contact me. Comments and/or suggestions are, of course, welcome. I can be reached through the IRCA Membership List.

Review of the above software Applications does not, in any manner, constitute an endorsement of the product or a recommendation of purchase by the author.

This article was written and compiled on a Macintosh LCII/80, utilizing MicroSoft Word 4.0, PageMaker 4.2 and TypeStyler 2.0. Graphics are "snapshots" of actual on-screen displays.

WTKG 1080
RADIO

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22



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Concordia Theological Seminary of the Lutheran Church

(Missouri Synod)

SAINT LOUIS, MISSOURI

REV. HERMAN H. HOHENSTEIN, Director

PROF. JOHN H. C. FRITZ

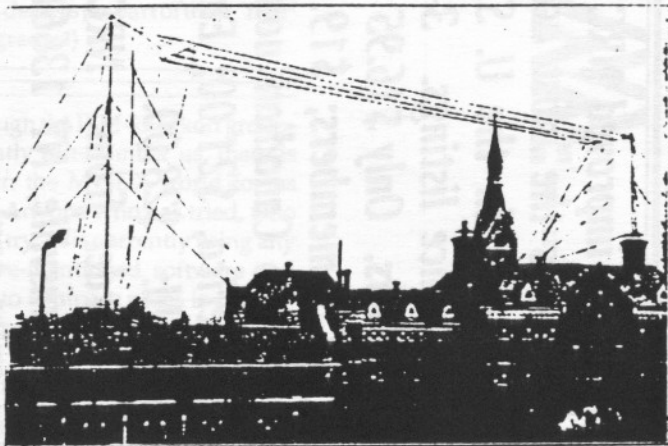
PROF. WALTER A. MAIER

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Wave Length: 545.1 Meters

Power: 500 Watts

Range: Throughout the United States, in Canada, in the West Indies,
and far out on the ocean



=====

THE SEASON'S GREETINGS.

¶ May the peace proclaimed on that first Christmas Eve abide in your hearts and make them temples in which the Holy Spirit dwells!

¶ May the close of the old year find your sins canceled by faith in the redeeming blood of Bethlehem's holy Child, who came into the world to seek that which was lost!

¶ May you at the dawn of the New Year find the Sun of Righteousness, Jesus Christ, arising in your hearts with healing in His wings, to make and keep you a beloved child of the heavenly Father and to cheer and comfort you on life's rugged road.

=====

62	Portugal	567 666 720 783 891 963 981 1035 1170
		1251 1377
63	Puerto Rico	1330 1350 1480 1520
64	Romania	756 855 1053 1152 1179
65	Russia, European	810 1089 1116 1494
66	Russia / Kaliningrad	1143 1386
67	Saint Kitts & Nevis	555 895
68	Saint Lucia	660
69	Saint Pierre et Miquelon	1375
70	Sao Tome & Principe	1530
71	Saudi Arabia	900 1440 1512 1521
72	Scotland	810 1035 1152 1449
73	Senegal	765
74	Slovak Republic	702 1098 1287
75	Slovenia	918
76	Spain	531 558 567 576 585 603 639 648 657 666
		684 702 729 738 756 774 792 801 810 837
		855 864 873 954 972 990 999 1008 1026
		1044 1053 1080 1098 1116 1125 1134 1143
		1152 1179 1215 1224 1296 1305 1314 1341
		1359 1413 1485 1521 1575 1584 1602
77	Sudan	1296
78	Sweden	1179
79	Switzerland	765
80	Syria	783 918
81	Trinidad & Tobago	730
82	Tunisia	1566 585(t)
83	Turkey	1017
84	Turks & Caicos Islands	535 1020
85	Ukraine	972 1242 1377 1404 1431
86	United Arab Emirates	1476
87	USA	many - most northern / eastern clears good
88	Uruguay	850
89	Vatican	1530
90	Venezuela	600 640 670 700 720 740 750 760 820 880
		890 900 950 960 1110 1230 1290 1420 1450
		1470 1500
91	Wales	1125
92	Yugoslavia (Serbia)	684 1413

*** TENTATIVES ***

Costa Rica	1024.5
Czech Republic	954 1287
Iraq	1530 (clandestine; QTH probable)
Macedonia	810
Qatar	954
Saharan Arab Republic	1544 (clandestine; QTH probable)
Sri Lanka	1548

|unID's | 630, 1100.3, 1240, 1492.7, 1493

*** Heard in NOV 1991, but not in OCT 1993 (some may now be inactive) ***

Ascension Island	1485 1602
Balearic Islands	909
Barbados	900
Burkina Faso	747
Cameroon	1152 1286
Central African Republic	1440
Gabon	1554
Gambia	909.8
Guinea	1386 1404
Ivory Coast	1493a(t?)
Melilla	1359 - now on 972
Mozambique	872
Niger	1125
Nigeria	909 918 1170 1395
Saint Vincent	705

Spanish Morocco	990 1355 [see also Saharan Arab Rep. above]
Togo	1394
Zambia	818

*** Others heard at various NF & MA sites / mostly 1991-1993 ***
(some may now be inactive)

Bahamas	810 1540
Belize	830 1530
Bolivia	1550
British Virgin Islands	780
Cayman Islands	1205 1555 (currently inactive)
Cyprus	1323
El Salvador	655
Estonia	1215
Gibraltar	1458.2
Greenland	700 720
Haiti	1080 1170
Honduras	650
Mayotte	1458
Panama	860
Paraguay	920
Saint Helena	1548
Sierra Leone	1206
Suriname	600
Virgin Islands (US)	970 1000

Besides this report being the record of a specific DXpedition, it may be used as a comprehensive international DX guide for those in eastern Canada and the northeastern United States. Target stations and frequencies with best reception times are given for many countries. Medium wave and shortwave parallel frequency information is often provided; sometimes sign-on and sign-off times are listed. This article should assist DXers in focussing their efforts during the Winter '93 - '94 season and likely during DX seasons to follow.

Abbreviations commonly used:

AA = Arabic	m = male, man
CC = Chinese	MoR = middle-of-the-road music
DD = Dutch	mx = music
EE = English	o/ = over, atop
FF = French	o/u = over / under (alternating)
GG = German	PSA = public service announcement
II = Italian	QRM = interference
NN = Norwegian	R. = radio
PP = Portuguese	s/off= sign-off
RR = Russian	s/on = sign-on
SS = Spanish	SIO = strength/interference/overall merit
// = parallel frequency	(t) = tentative reception claim
BBD = big-band (jazz) music	TA = Trans-Atlantic
C&W = country-western music	TC = time check
CW = continuous-wave (code)	TOH = top of the hour (e. g. 0500)
DJ = disk jockey	u/ = under
dom.= dominant	unID = unidentified
EZL = easy-listening music	V. = Voice (of)
f = female, woman	w/ = with
het = heterodyne, beat note	wx = weather
ID = station identification	xlnt = excellent
IS = interval signal	YV = Venezuelan station
LA = Latin-American	ZY = Brazilian station

RECEIVER SHOWDOWN

A Comparison of Five Top RXs from a MW DXer's Perspective

Gerry Thomas

You know, most jobs have their high points and their low points. Doing tests like this one is definitely one of the high points of my job, hi.

As a research scientist for the Navy I'm responsible for, among other things, improving communications, especially radiocommunications, among Naval aviators and other personnel in the aviation environment. In support of this effort, I maintain in my office/laboratory a monitoring post composed of various rxs capable of receiving all types of signals across a very wide frequency range. Because many of the rxs I had been using were well past their typical life span and because I had some money left over from one of my projects, I decided that this was the time to upgrade the monitoring post. Rather than spend \$15K-\$20K on a single mil-spec rx that was designed for heavy use in hostile environments, I decided to save the government some money and order several commercial grade rxs instead. All of the HF rxs also covered the broadcast band so I spent a few weeks of lunch hours and also stayed late at work several nights to conduct the tests in this report.

I hope that the findings reported here will answer some questions you might have and, perhaps, save you some money and/or disappointment if you are about to plunk down some hard earned cash for a major rx.

THE RECEIVERS

The five receivers tested included the ICOM R-9000, the ICOM R-71A, the Japan Radio Corporation NRD-535D, the R.L. Drake R-8, and the old R-390A. I won't bother re-hashing the manufacturers' specs for each of these rxs; those data are readily available from a number of sources. Rather, I'll just say a few words about each rig and describe how each rx was equipped...

ICOM R-9000 -- This was by far the most expensive rig in the group--about \$5,000. As you already know, this rig has a built-in spectrum analyzer for visually displaying the received and surrounding frequencies and covers a frequency range from 100 kHz to 1999 MHz! It was in its stock condition when tested and was equipped with the excellent SP-20 external speaker.

ICOM R-71A -- This rx was purchased several years ago from the Electronic Equipment Bank and was their "upgraded" model with the FL44A 9MHz IF filter and supposedly had their enhanced dynamic range modification, preselector mod, etc. Two of these were purchased at the time; one went down shortly before these tests began so the other "brand new" one was broken out of its box for testing. This model did have the PBT feature and was evaluated using ICOM's SP-3 external speaker.

JRC NRD-535D -- The 535D was the second most expensive rx, available for about \$1700 from several sources. Ours had the upgraded 4 kHz "wide" filter rather than the earlier 6 kHz'er and had the ECSS board and the variable bandwidth feature typical of this "D" model. It was tested using the JRC NVA-319 external speaker.

Drake R-8 -- The R-8, at current prices, was the least expensive "new" rx tested -- under \$1000. It was tested in its "straight from the manufacturer" condition and was paired with Drake's MS-8 external speaker.

R-390A -- As a point of comparison, I decided to throw this venerable old standby into the fray. As everyone knows, this is an old tube type, designed by Collins and manufactured by several companies (the one I used was made by Amelco). I had aligned and re-tubed this guy about 18 months before this test so it may not have been in absolutely perfect shape but I feel that it was pretty close. I ended up using a pair of communications headphones to monitor the audio on the R-390A.

Before the testing began and before I had even received some of the rxs, I had some questions in mind about the rxs...

1. Yeah, the R-9000 had a lot of bells and whistles and a wide frequency coverage but would the "jack

of all trades" nature of this rx result in performance compromises on the tough MW band? Secondly, I wondered if I would be able to "see" carriers on split frequencies even if they weren't producing readable audio?

2. The NRD-535D advertised a variable tuned front-end, sort of an automatic preselector. Was the Q of this feature high enough to place the 535D head and shoulders above the rest when a broadband antenna was used?
3. How would the R-71A perform in this group? My personal, modified R-70 beats the pants off both of the R-71As I have at the lab; I've never known whether my R-70 is super good or whether the R-71A design incorporated some performance compromises to gain operating conveniences (e.g., keypad frequency entry, remote control, etc.).
4. I was really interested in the relative performance of the old R-390A. It didn't have any of the latest features such as synchronous AM detection and IF Shift/PBT and it wasn't designed to be a super sensitive receiver. I didn't know how it would come out.

FIRST (NON-PERFORMANCE) IMPRESSIONS

R-9000 -- My first impression of the R-9000 came when I started wrestling this guy out of its shipping box -- it weighs about 44 lbs., far more than the other rigs but far less than the old R-390A. Visually, there is a bewildering array of buttons and knobs (which is to be expected in a rx with the flexibility of the R-9000) and the overall "appearance" of quality is high.

R-71A -- The R-71A has been around long enough that first impressions have faded from memory. Its appearance and "feel" are, however, professional.

NRD-535D -- The 535D is a handsome rig with a solid feel and a professional demeanor.

R-8 -- Being the least expensive new rx tested, the R-8 lacks some of the pizzazz of the other rigs. The rx sheet metal is a little flimsy, the plastic tuning knob practically shouts "Cheap!" and the rubber-feel buttons may be "the latest thing" but seem better suited to a \$100 portable. I also would have preferred a different color of display lighting -- greenish yellow falls just below lavender in my personal ranking of "most disliked display colors."

R-390A -- Everyone knows the R-390A -- heavy, serious, government gray.

The preceding are my own personal, totally subjective impressions of the aesthetics and arm's length judgments of the quality of the rigs. As a general rule, these concerns are way down on my list of considerations in buying a radio. If the rig performs superbly, it can look like a PeeWee Herman kitchen appliance and I'll still buy it.

THE TEST SET-UP

The site of the tests was the Naval Aerospace Medical Research Laboratory located at NAS Pensacola. The building is on a promitory and about a block from the Gulf of Mexico (which can be clearly seen from the roof). Because the monitoring station is located in the basement of this three-story, ferro-concrete building, any desktop antenna (e.g., loop) is out of the question. I didn't really want a tuned antenna anyway; I wanted to test the front ends of the radios without the help of a tuning circuit. I have several antennas on the roof for monitoring HF and higher utility frequencies but didn't have anything specifically for MW so I ended up installing an Alpha/Delta sloper (Model DX-SWL; the one with the MW leg) for these tests (incidentally, this antenna performs quite well on MW).

The antenna was routed through a shielded conduit to the monitoring station and was connected to a six-way antenna switching box. This allowed me to quickly switch among the rigs for A/B (or, I guess, A/B/C/D/E) comparisons.

In comparing the radios, I spent as much time as necessary adjusting knobs and altering settings to get the best possible signal from each rig. This was sometimes a tedious process because the strengths of both the desired and interfering signals would tend to vary. Once I was convinced that no further improvement was possible, I would switch through the rigs and make subjective evaluations. What I'll report here are the comparisons that were most confidently and reliably made.

SENSITIVITY COMPARISONS

Comparing sensitivities using on-the-air stations is a lot trickier than using a signal generator -- signals fade, interference can be present, etc. However, using on-the-air stations can provide more meaningful info than "microvolts for a given S/N ratio" in that the whole system (e.g., quality of the detector, passband of the audio stage, etc.) comes into play. I've seen radios that seem to reveal a greater presence of a carrier, yet produce no audio, or poorer audio than a radio that seems to present a less potent carrier. In other words, for these tests, I've adopted a definition of sensitivity that relates to "the

radio's ability to produce readable audio from a very weak station not being QRM'd by a nearby station."

At my location here in northwest Florida, perhaps the best ever station for determining sensitivity as I've defined it appeared this summer. The new Turks & Caicos station on 535 kHz has been audible throughout most days this fall and winter. There is no significant interference from the couple of weak stations on 540 kHz (WGTO and KNOE) and, most importantly, the prevailing signal level of R. Vision Christiana is such that it discriminates nicely among the radios being tested.

Results...

1. NRD-535D -- At high noon, the 535D provided audible, but barely readable SS. The signal was generally too weak for the an ECSS lock and did show some fades. The 535D was always first to fade in and the last to fade out.
2. Drake R-8 -- The R-8 was usually less than 2 secs behind the 535D in fade ins and ahead of the 535D by the same amount on fade outs. If the R-8's preamp had been operative below 1.8 MHz (it's automatically disabled below this frequency), it would have been the most sensitive. Even though the R-8 was a little behind the 535D in producing audio, its audio was crisper and more easily readable than the slightly "woolly" sounding 535D audio.
3. R-390A -- Was last to fade in with readable audio and the first to leave. There were times when the signal level never did manage to cross the R-390A's threshold. When audio was readable, it was very close to the R-8 in clarity.
4. R-71A -- Carrier was almost always detectable but it never did produce readable audio (although some audio would occasionally appear). Switching on the preamp helped little.
5. R-9000 -- Carrier always detectable (not visible on spectrum display) and never produced audio, readable or not, regardless of what I did.

As noted, although the signal would appear first on the 535D, the R-8 was always close behind and always produced more easily readable audio. The R-8 with the MS-8 speaker sounds as though it has a peak audio response between 2 kHz and 4 kHz which makes the information carrying speech consonants stand out. The R-8 was always best at digging out intelligible speech from weak, poorly modulated signals.

SELECTIVITY COMPARISON

One of my standard tests for selectivity on the low end of the band involves tuning in WVOG-60C (1 kW) in New Orleans next to WVTJ-610, a local slopper. WVTJ-610 averaged 25 dB over S-9 on the rigs under test with severe overmodulation during the test session.

Results...

1. Drake R-8 -- Produced a fairly clean signal with the R-8 in the 4 kHz IF position and the PBT adjusted. Activating the synchro (i.e., ECSS) really cleaned up the remaining slop and significantly improved the audio.
2. NRD-535D -- Judicious setting of the PBT and the variable bandwidth feature (i.e., bandwidth control (BWC)) produced clean audio in the INTER(mediate) IF position. After activating the ECSS (LSB) and with the PBT readjusted, the quality further improved but was still not quite as good as the best R-8 reception.
3. R-390A -- In the 4 kHz position and with the rig tuned between about 598 kHz and 599 kHz (the R-390A doesn't have a PBT feature), reception quality was in the same class as the R-8 and 535D, maybe just a little more splash.
4. R-9000 -- In the middle IF selectivity position and with the IF Shift adjusted, the signal was barely audible and intermittent due to the AGC being activated by 610 slop and releasing too slowly--just as the AGC was decaying, it would be reactivated by the rhythms on 610 and the signal would be killed. Reception was best in the "narrow" IF position and with the AGC off but the audio was very muddy.
5. R-71A -- Not audible due to heavy slop and suboptimal AGC timing constants. Neither the wide nor narrow IF filters or any setting of the PBT produced audible audio. I fiddled with the controls for quite some time and was only able to catch a bit of signal (I think) with the AGC off and the IF in the narrow position. Switching back to the R-8, 535D or R-390A was an eye opening contrast to the two ICOMs!

These results were typical of several other tests of selectivity conducted throughout the band -- the R-8 and 535D alternating in first place with the R390A sometimes the equal but always at least very close behind. The two ICOMs always did worse than the top three. The R-71A would sometimes manage to come close if the slop wasn't too bad and the AGC was disabled. The R-9000 almost always did the poorest on the selectivity measure.

Another selectivity test was conducted to determine how useful the 535D's tuned front end was in reducing adjacent channel splash. WRNE-980 is a 10 kW, overmodulated slopper that serves up a steady menu of heavy R&B and rap and pegs S-meters at 50+ dB over S-9. WRNE lies on a direct line to the test's target station, WFLA-970 (5 kW), across the Gulf in Tampa. When particularly heavy splash was occurring, no radio was able to produce audio from WFLA no matter what tricks I tried. In the presence of moderate splash the R-8 and 535D were able to produce intelligible audio; no other rx's could. Between songs on WRNE the R-8, 535D, and R-390A allowed very readable audio to punch through; the R71A produced audible but only intermittently intelligible audio; the R-9000 always remained blocked. So, it appears that the Q of the tuned front end of the 535D is too low to provide help with very heavy adjacent channel slop on the BCB; maybe it helps on further removed slop, I didn't check.

DYNAMIC RANGE

No formal laboratory tests were conducted on this measure, only "ear tests." In brief, on channels with one very strong station and a second, much weaker station under, the 535D, R-8, and R390A were essentially equal. That is, the weaker station was clean and easily readable under the stronger station on these rigs. On the two ICOMs, the weaker station, when it was audible, tended to be muddled and largely unreadable. And, as noted earlier, the ICOMs tended to block up, or desensitize, a target channel when it was located next to a super strong slopper; the other rigs had far less of a tendency to do this.

Besides the performance tests, several other attributes of the radios under test were noted...

ERGONOMICS

The clear winner here was the 535D; no other rx was even close. Everything on the 535D was intuitive and fell nicely under hand. An economy of key presses to get from point A to point B was the rule instead of the exception. The next easiest to operate, in my opinion, was the R-390A, the biggest pain in the neck being the required occasional recalibration of the mechanical digital read-out drum. Next in line was the R-71A where the frequency entry sequence on the keypad kept it from ranking any higher. Last place would have been a tie between the R-8 and the R-9000 had not the R-9000 had a stepped gear dial that, even with this detent feature disabled, produced significant backlash. Chasing a blip on the spectrum display screen (which lagged behind knob turn anyway) was a maddening experience with the knob backlash. This backlash could be reduced by pulling out on the knob while turning it but this was a pain. The R-8 had so many shift/function key combinations and "key press step throughs" to get from one point to another that several weeks of practice would have been required before the process became second nature...give me the array of knobs on the old R7A any day (but frequency hopping was no picnic on the R7A either, come to think of it).

AUDIO QUALITY

With its wide filters and simply superb external speaker, the R-9000 was a joy to listen to, especially for extended periods. The audio was silky smooth (the word "delicious" comes to mind) and was very reminiscent of the quality of sound the old Altec-Lansing stereo speakers produced. Next best was the R-390A, but I was using headphones throughout the testing. For general listening, the 535D and R-71A were about equal using their respective factory external speakers; nothing exceptional, just okay. Using the external MS-8 speaker, I found the audio of the R-8 to be a little fatiguing for extended listening periods. This effect was only noticeable after about an hour of continuous listening when the audio seemed to take on a slightly strident, ringing quality. Maybe it's just my ears but if I were to buy an R-8, I'd search for an external speaker capable of smoothing out this perceived stridency. This is a double edged sword, however, in that the R-8 also produced the most readable signal in tough DX situations...the higher frequency peaking tended to put voice signals atop the masking noise floor.

ECSS

All five of the radios were capable of exalted carrier selectable sideband reception but only two (the 535D and the R-8) did it automatically and tracked the phase of the target signal. The R-9000, R-71A and R-390A all were sufficiently stable to produce good ECSS results but required periodic knob

tweaking to track the phase of a varying target signal. The 535D and the R-8 use slightly different approaches to ECSS listening. The 535D allows/requires the listener to select either the USB or LSB for ECSS operation and states in the manual that the PBT and notch should be "off." In reality, you can fiddle with the PBT a little to further improve the signal and, at times, this tweaking can significantly improve a tough signal's readability. Trying to use the variable bandwidth feature to any useful degree, however, sometimes locked up the ECSS system which then had to be turned off, then reactivated. The R-8, on the other hand, encourages such fiddling (although the manual suggests optimizing before activating the synchronous detector). A "synchro" button selects this AM detector and the operator can then turn the PBT (slowly or a beat tone will occur while the system tries to lock on the carrier) for best reception. I found that this system often resulted in a dramatically improved signal and was responsible in many cases for the R-8 nudging out the 535D in tough signal situations. With this system, in fact, I was able to get easily readable signals even when using the very narrow 1.8 kHz IF filter! For me, the Drake approach to synchronous AM detection was the better one even though both were effective.

I could go on for many more pages describing the relative merits of these five receivers but I'd better wrap it up...

CONCLUDING REMARKS

I'd like to start by answering some of the questions posed at the beginning of this review.

Yes, it does appear that some compromises were made with the R-9000. The R-9000 has a lot of advantages and would probably be my first choice for DXing utilities (you could visually monitor a band of frequencies for signs of the intermittent signals typical of this kind of monitoring). But in terms of MW DXing or even serious SWLing using the AM mode, the R-9000 falls short. Its best IF filter is the narrow SSB filter; the other filters are shared by the other modes (AM, FM-wide, etc.) and are muRata CFW series ceramics. These are the same little black cubes found in portable radios and cost only a few bucks a piece. For \$5000 I expect a little more. The same is true of the R-71A; a very good filter is used for SSB and an inexpensive CFW ceramic in the AM section. It's the age-old story of the wide filter being too wide and the narrow filter too narrow for AM listening. It seems as though ICOM's primary concern is the radio amateur and not the SWL or other AM-oriented listener. Also, regarding the usefulness of the spectrum display -- for HF utility or VHF/UHF scanning, it's fantastic; for MW DXing, it's not very useful. It turned out that, in general, if a signal didn't make the S-meter move, it wouldn't clearly appear on the display. Finally, ICOM needs to re-think their AGC constants.

The tuned front end of the 535D didn't appear to help much when DXing the BCB; its Q was apparently too low. But it was apparent that the 535D was designed by a team intimately familiar with the needs of DXers. It is truly a superb radio.

The Drake R-8 has to be the "buy of the decade" so far. It went head-to-head with the much more expensive 535D and came out on top as often as not. If you can live with its tedious ergonomics, ringing audio, and yellowish display you'll be capable of hearing a lot of DX.

The R-71A continued to disappoint and its shortcomings were glaringly obvious next to the 535D and R-8. The R-71A is super for receiving SSB signals and not-so-tough AM targets but is definitely lacking if you intend to try to dig out the tough stuff. I just hope that the two samples of the R-71A that I've tested are representative of the breed; they were purchased from the same outlet.

Finally, the R-390A held up very well against the R-8 and 535D often equalling these two in tough signal situations. Because the R-390A is available on the surplus market in the \$300 range, it has to rank as a top buy for the serious DXer, especially if the DXer feels comfortable maintaining this legendary rx.

In conclusion, I'd estimate that 98%-99% of the signals that were present on the MW band at a given location, at any given time, could be heard by any of the five radios being tested (or by virtually any moderately serious radio, for that matter). It's that remaining 1%-2% that tells the tale (but that's what we call DX, I guess). In the case of these tough signals, being able to run A/B comparisons using identical signal sources is very revealing. After all, if a DXer had access to only one radio, and it was one of the lesser radios, he'd have no idea that he was missing any DX; he'd assume there was no DX to be had. That's kind of an unsettling thought to me, hi.

I hope that the preceding comparisons have been of some value to club members. It's the most fun I've had at work in some time, hi. 73's ...GT

Table 9 (continued)

-	C11 side 2	S3 "Normal"	D
-	C10 side 2	S3 arm	D
-	C12 side 2	S3 "Short"	D
-	C10 side 1	C11 side 1	D
-	C11 side 1	C12 side 1	D
23	S3 arm	S2B 'AT'	3.5" I
24	S2B 'AT'	S2B 'PT'	1" I
-	RFC1 side 1	S4A 'PAA'	D
-	R11 side 1	RFC1 side 1	D
-	C2 side 2	GB (see Note 5)	D
-	C2 side 1	RFC1 side 2	D
-	RFC1 side 2	R11 side 2	D
25	RFC1 side 2	S2A 'BB'	2" I
26	S2A 'BB'	S2A 'AT'	0.5" B
-	R12 side 2	J5	D
-	C3 " + "	R12 side 1	D
-	C3 " - "	GND lug on J5	D
27	S2A 'AT'	R12 side 1	4" I
28	S2A 'BP'	GB (see Note 5)	2" I
29	S2A 'BP'	S2A 'PT'	0.5" B
30	S4B 'PAA'	RFC1 side 2	1" I
-	R10 side 1	S4A 'TERM.'	D
-	R10 side 2	GB (see Note 5)	D
31	S2E 'PT'	S1 Common (see Note 3)	3" I
32	S1A arm	S2C 'AT'	2.5" I
33	S1B arm	G3	1.5" B
34	R4 CCW	S2D 'AT'	2.5" I
-	C13 side 2	J4	D
35	C13 side 1	S2E arm	4" I
36a	S2E 'BB'	A2-P5	5" TP
36b	GB (See Note 5)	A2-P7	5" TP
37	S2E 'BB'	S2E 'AT'	0.5" B
38	S2E 'BP'	S2B arm	2" I
39a	A1-P5	A2-P1	5" TP
39b	A1-P6	A2-P2	5" TP
40	A1-P3	A2-P3	3.5" I
41	A1-P3	S2A arm	3" I
42	A1-P1	S2C arm	3" I
43	A1-P7	S2D arm	3" I
44	S2D 'BB'	S2D 'BP'	1.5" I
45	S2D 'BP'	S2D 'PT'	0.5" B
46	S2D 'PT'	S2C 'PT'	1" B
47	S2C 'PT'	S2C 'BP'	0.5" B
48	S2C 'PT'	TAl GND lug	2" I
-	R13 side 2	TAl-in (= T1 pin 1)	D
49	S2B 'BB'	R13 side 1	2" I
-	R14 side 1	TAl-out (= T1 pin 6)	D
50	S2C 'BB'	R14 side 2	2.5" I

OUTSIDE BOX

wire #	From	To	Description
51	J6 + terminal pin	P1 plug - center pin	2" I
52	J6 - terminal pin	P1 plug - shield pin	2" I

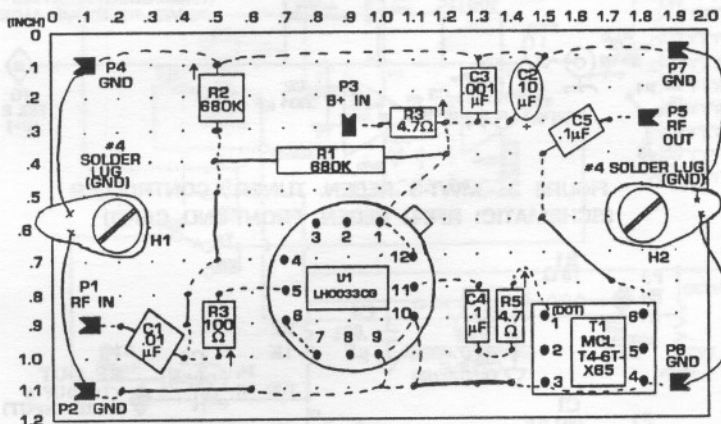
[P1 connects to J5 for battery operation]

Table 10: control orientation conventions

Ensure that components are mounted and wired in accordance with this table; align knob pointers to clock positions indicated. Orientations are as viewed from outside the chassis box assembly.

Side	Control	Orientation Conventions
top	C1	CCW = minimum C = 9:00; CW = maximum C = 3:00
top	R1	CCW = maximum level (no attenuation) = 7:00 CW = minimum level (maximum attenuation) = 5:00
top	R2	CCW = maximum regeneration = 7:00 CW = minimum regeneration = 5:00
top	R3	CCW = maximum varactor voltage = max. remote freq. CW = minimum varactor voltage = min. remote freq.
top	R4	CCW = maximum regeneration (vernier) = 7:00 CW = minimum regeneration (vernier) = 5:00
top	S1	[see Table 2]
top	S2	"Passive Tune" = 10:30; "Bypass" = 11:30; "Active Tune" = 12:30; "Broadband Amp." = 1:30
top	S3	"Normal" = up; "Long" = center; "Short" = down
top	S4	"Terminated" = left; "Float" = center; "Power to Active Antenna" = right
top	S5	"Band 2" = up; "Band 1" = down
top	S6	"Spare Antenna" = left; "Main Antenna" = right

FIGURE 6: MWT-3 REGEN. TUNER / CONTROLLER
(ASSEMBLY: BUF-A BUFFER AMPLIFIER CARD)



Notes

For schematic, see Figure 5.

For parts list, see Table 8.

↑ = Long lead side of vertically-mounted component

--- = Buss wire on solder side of board

— = Buss wire on component side of board

☐ = "Flea clip" terminal pin
OPEN SIDE

FIGURE 1: MWT-3 REGEN. TUNER / CONTROLLER
(CONTROL / INPUT SECTION)

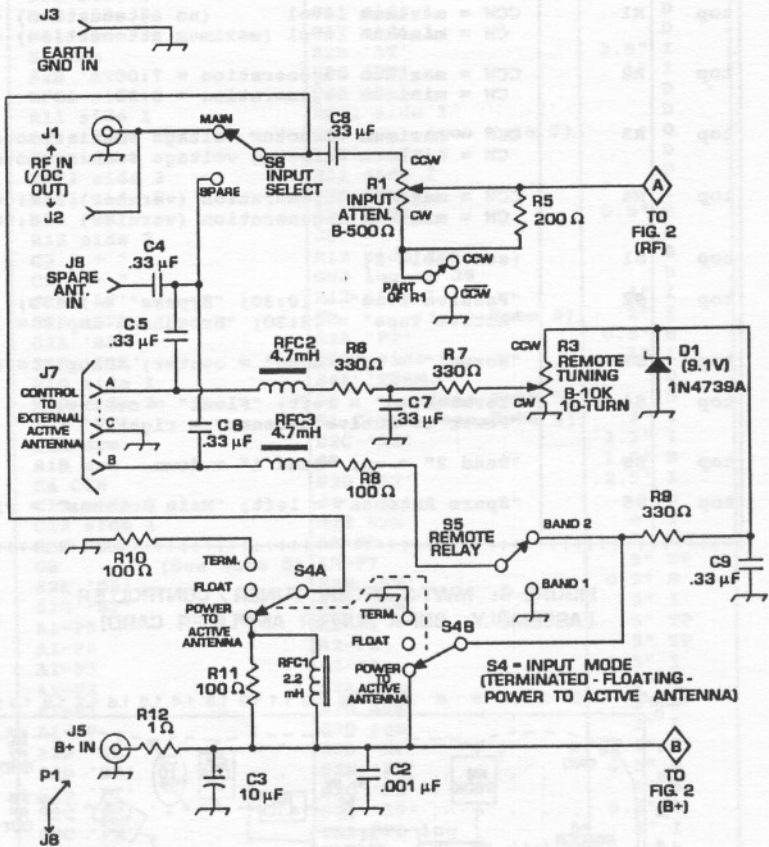


FIGURE 3: MWT-3 REGEN. TUNER / CONTROLLER
(SCHEMATIC: RFE-D REGEN. FRONT-END CARD)

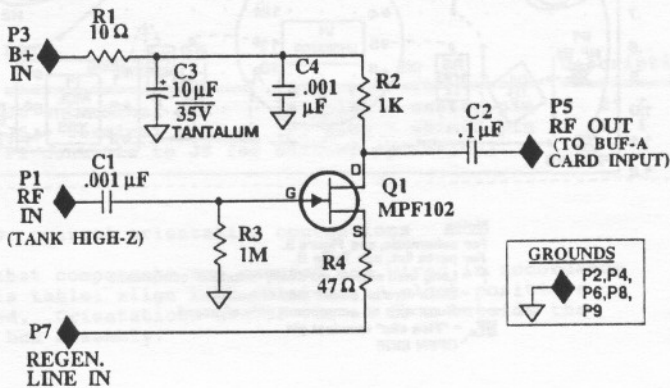


FIGURE 2: MWT-3 REGEN. TUNER / CONTROLLER
(TUNER / AMPLIFIER / OUTPUT SECTION)

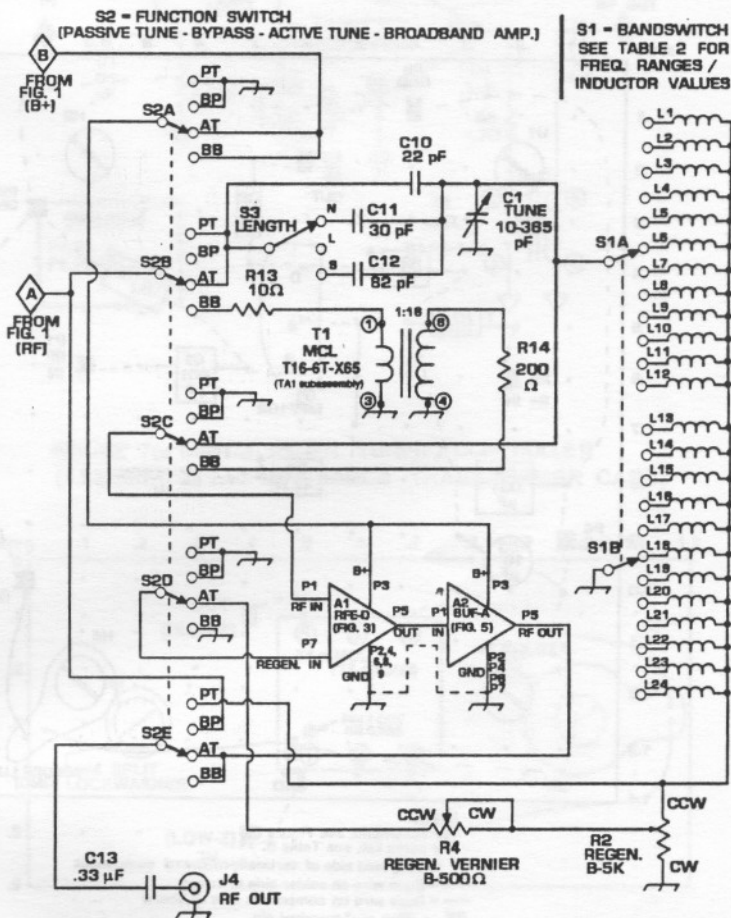
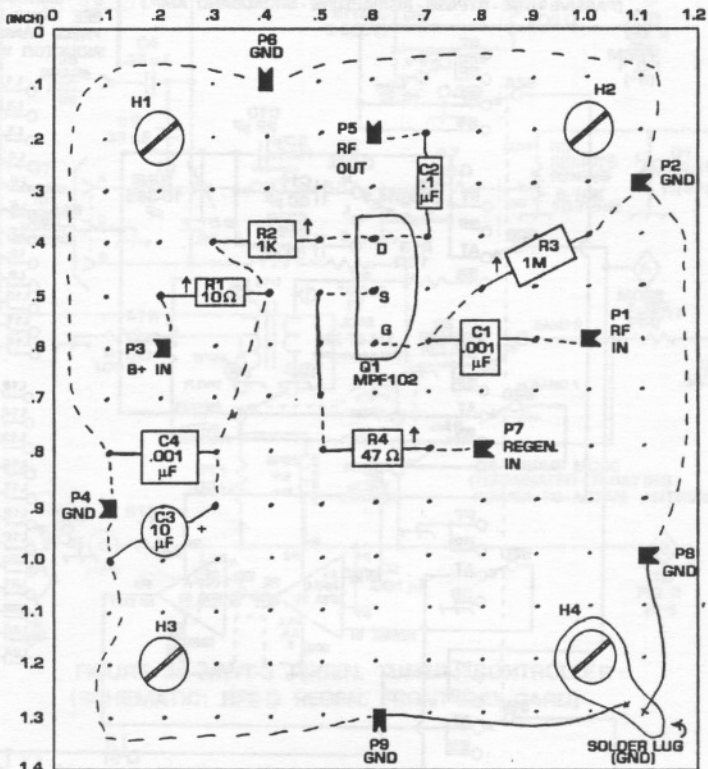


FIGURE 3: MWT-3 REGEN. TUNER / CONTROLLER
(CONTROL / INPUT SECTION)

FIGURE 4: MWT-3 REGEN. TUNER / CONTROLLER
(ASSEMBLY: RFE-D REGEN. FRONT-END CARD)



Notes

For schematic, see Figure 3.
For parts list, see Table 5.

- ↑ = Long lead side of vertically-mounted component
- - - = Bus wires on solder side of board
- = Bus wires on component side of board
- ◀ = "Flea clip" terminal pin
- OPEN SIDE

36

FIGURE 5: MWT-3 REGEN. TUNER / CONTROLLER
(SCHEMATIC: BUF-A BUFFER AMPLIFIER CARD)

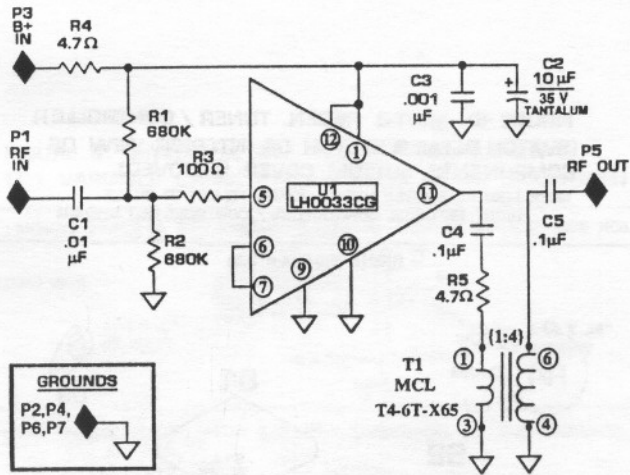
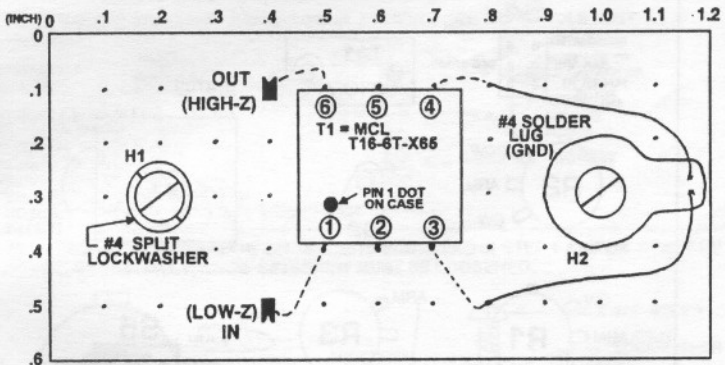


FIGURE 7: MWT-3 REGEN. TUNER / CONTROLLER
(ASSEMBLY: TA1 IMPEDANCE TRANSFORMER CARD)



Notes

For connections, see Figure 2.
For parts list, see Table 7.

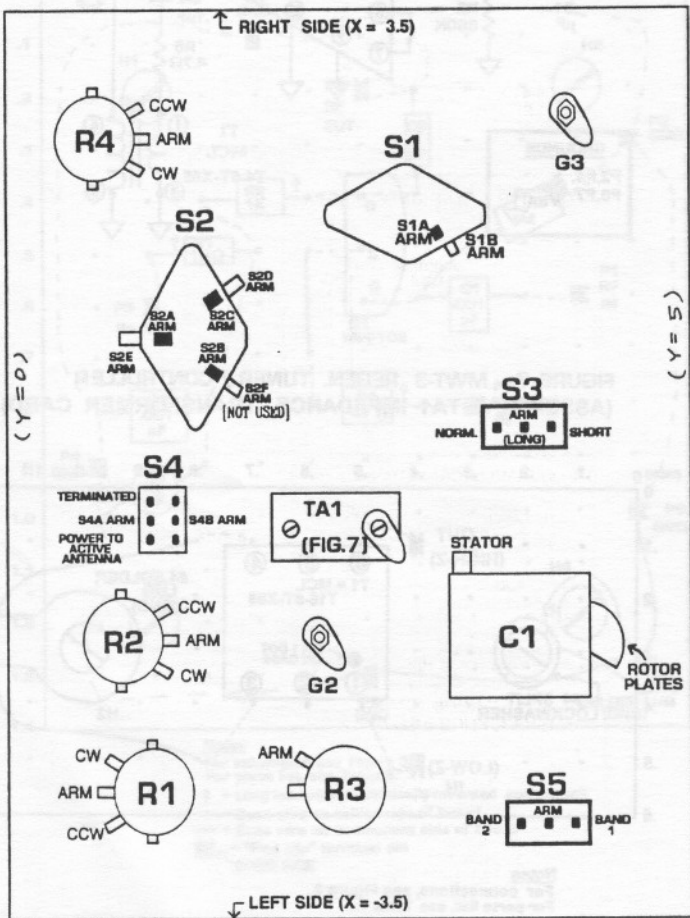
Each screw mates to a 4-40 X 0.5" spacer on reverse of board.

- - - Bus wire on solder side of board
- Bus wire on component side of board
- ◀ "Flea clip" terminal pin
- OPEN SIDE

MCL T36-1-X65 or TT25-1-X65 may be substituted for T1.

FIGURE 8: MWT-3 REGEN. TUNER / CONTROLLER
(SWITCH DETAILS: SKETCH OF INTERIOR VIEW OF
COMPONENTS, BOTTOM COVER REMOVED)

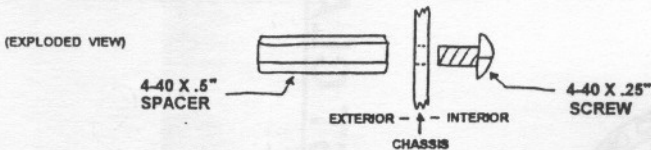
NOTE: POSITIONS, SIZES ARE APPROXIMATE; NOT TO SCALE
 RIGHT, LEFT SIDE CONNECTORS / CONTROLS NOT SHOWN



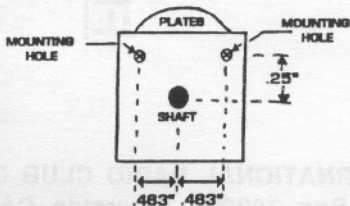
38

**FIGURE 9: MWT-3 REGEN. TUNER / CONTROLLER
 (C1 VARIABLE CAPACITOR / VERNIER KNOB MOUNTING)**

STEP 1: MOUNT SPACERS FOR VERNIER KNOB TO CHASSIS AT TOP SIDE HOLES 7, 11.



STEP 2: TAP MOUNTING HOLES ON VARIABLE CAPACITOR TO 6-32 THREADS

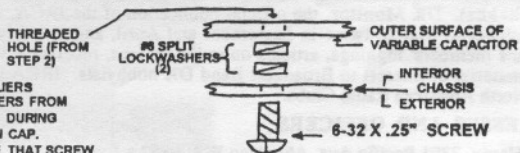


STEP 3: MOUNT VARIABLE CAPACITOR IN ACCORDANCE WITH HOLE LIST

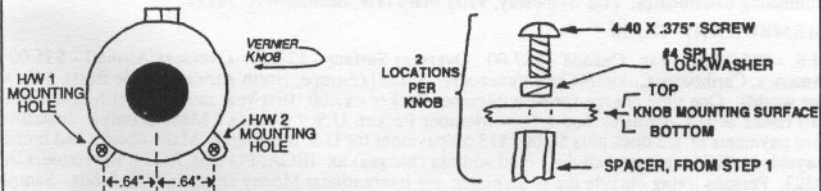
(EXPLODED VIEW)

(2 LOCATIONS:
HOLES 8, 10)

USE NEEDLE-NOSE PLIERS
 TO KEEP LOCKWASHERS FROM
 FALLING OFF SCREW DURING
 MATING TO HOLES ON CAP.
 WHEN DONE, ENSURE THAT SCREW
 END IS FLUSH WITH INNER SURFACE OF
 CAP. : SCREW END SHOULD NOT TOUCH MOVING PLATES (ROTOR)



STEP 4: MOUNT VERNIER KNOB ON SPACERS INSTALLED IN STEP 1 AND ON SHAFT OF TUNING CAP. - INITIALLY, KNOB SETSCREW MUST BE LOOSENED.



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**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.

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