

September 3, 1994 - Volume 32 - Number 1 - Edition 1027-ISSN 0899-9732

NEW MEMBER: David Sullivan Jersey City NJ. **REJOIN:** Stephen Byan Littleton MA, Credo Bisquera Milliani HI, Roy Millar Marysville WA, Randy Tomer Eureka CA. **RENEWALS:** Randy Lott Plano TX, Joseph Esser Summit NJ, Herbert Newberry Jr Mansfield GA, James Herkimer Baldwinville NY, Matt Hew Shugart Carlsbad CA, Frank Merrill Macomb IL, Stephen Howe St Albans VT. Welcome new member David, welcome back Stephen, Credo, Roy and Randy. Glad to have all of you with us for the up coming DX season....

IN THIS ISSUE: DX Test..2, A Word From Your CPC..2, Broadcasting Information..3 (Robert was in such a big hurry to get to the convention & Reno he forgot to put the masthead on his column), DX Worldwide West..4, Western DX Roundup..6, Central DX Roundup..8, Western DX Forum..9, Eastern DX Forum..10, 93-94 DX Test Recap..11, HCJB QSL from Mark Connolly..15, Drake R8: Increased Dynamic Range, Mod 2..16(this is the last of this mod continued from Vol 31 number 33), IRCA Technical Column..19 Mini-DXpeditions..22, Los Angeles Radio Guide..26, Sony SRF-42..27, Some Thoughts On The Yaesu FRG-100..28, Geomagnetic Indices..30, Letter from Radio Kuwait with MW schedule..31, Back Page Addresses, Officers..

KIDS: KIDS Radio fades out of market; owner says station is for sale. Station owner Jeanne Kramer is pulling the plug on the format, taking the station off the air. It sounds like the station will go off the air at 6:30 PM Sept 2. Jeanne Kramer's family has been involved with the KIDS frequency 1340 since it went on the air in 1949 as KICK. This info from Randy Stewart from the 8/20/94 Springfield MO News-Leader.....

IRCA CONVENTION 1995: IRCA President Bill Hardy is taking bids for the 1995 IRCA Convention. Deadline for bids is October 15, 1994. So please hurry and send your bid to: Bill Hardy 2301 Pacific Ave Aberdeen WA 98520-4527. Lets see if we can get this out of the way early so we can make plans to attend the '95 convention.....

IRCA REPRINTS: A list of reprints from: Steve Ratzlaff 1885 East Bayshore Rd #90 East Palo Alto CA 94303. Lots of good stuff here.....

IRCA BOOKSTORE: IRCA Bookstore 9705 Mary NW Seattle WA 98117. Phil has lots of good things at this location. Send for the flyer.....

NEW MEXICAN LOG: The new Mexican Log is here and available from the IRCA Bookstore 9705 Mary NW Seattle WA 98117. Write Phil for prices....

VOLUME 32: Fellow members this is going to my last volume as publisher for the IRCA. At 68 years old it is time go on to something else. The publishing **JOB** has been informative. There is nothing hard about the position. The weeklies trap you in so you cannot do much else. I am not going to miss the job. Who ever takes over the publishing must be able to give up a lot of their time. I will be here to help the person or persons that take over the publishing. A lot of the work you must do yourself because there is not enough money to cover the cost to have a person do the stapling, folding, mailing, you got to do it all. Stepup.

DX TEST BULLETIN

• DX TESTS ARRANGED BY IRCA AND NRC •

MONDAY, OCTOBER 3, 1994 - KWEY-1590, P.O. BOX 587, WEATHERFORD, OK 73096 WILL CONDUCT A DX TEST BETWEEN 5:00 & 5:30 AM EDT. THE TEST WILL INCLUDE MORSE CODE, VOICE ID'S, AND AN UNSPECIFIED SELECTION OF MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. RAY BAGBY - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR THE IRCA CPC)

MONDAY, OCTOBER 10, 1994 - KA2XAU-1620, P.O. BOX 500, RICHLAND, PA 17087 WILL CONDUCT A DX TEST BETWEEN 2:00 & 2:30 AM EDT. THE TEST FROM THIS EXPERIMENTAL STATION WILL INCLUDE TONES AND MORSE CODE ID'S. RECEPTION REPORTS MAY BE SENT TO: MR. IRV FIDLER - ENGINEER. (ARRANGED BY J.D. STEPHENS FOR THE IRCA CPC)

MONDAY, OCTOBER 17, 1994 - WPMR-1-90, P.O. BOX 132, MOUNT POCONO, PA 18344-0132 WILL CONDUCT A DX TEST BETWEEN 12:30 & 1:00 AM EDT. THE TEST WILL INCLUDE MORSE CODE ID'S, TEST TONES, AND "VARIOUS AUDIO PROGRAMS". RECEPTION REPORTS MAY BE SENT TO: MR. JEFF WOEHRLE - CHIEF ENGINEER. (ARRANGED BY J.D. STEPHENS FOR THE IRCA CPC)

MONDAY, OCTOBER 24, 1994 - WNAM-1280, P.O. BOX 707, NEENAH, WI 54957-0707 WILL CONDUCT A DX TEST BETWEEN 3:00 & 3:30 AM EDT. THE TEST WILL INCLUDE MORSE CODE ID'S, TEST TONES, AND BIG BAND/SWING MUSIC. RECEPTION REPORTS MAY BE SENT TO: MR. DAVID J. MILLER - CHIEF OPERATOR. (ARRANGED BY J.D. STEPHENS FOR THE IRCA CPC)

A WORD FROM YOUR CPC

The '93-'94 DX season was the best yet for IRCA's CPC. This could not have been possible without the outstanding support by those individuals who were listed in a previous DXM. At this time, let's take a moment to thank them again. THANK YOU!!

Every year, it's traditional to prepare a report on the CPC activity for the past DX season, and this year is no exception. I'm sure many of you read the brief CPC writeup which appeared in a recent DXM concerning those who supported IRCA's CPC, as well as the final numbers for the year, so I won't rehash that here.

Perhaps you noticed a few non-IRCA names listed as those who supported IRCA's CPC with either check or postage donations. Each year has seen increased support of IRCA's CPC by non-IRCA members. Also, each year has seen a greater percentage of tests scheduled from the request letters which are sent out.

Hopefully, this season will be just as fruitful, and your continued support is solicited.

One problem that we encountered this past season was the rantings of one unsavory individual who seemed to have a vendetta against IRCA's CPC. Let me reassure you that so much of the information he has spread in the pages of DX bulletins about no-shows, not confirming tests with the stations, and other aspects of CPC operations has been so inaccurate, that it would be very difficult indeed to take *anything* this fellow says in the future seriously. I have addressed this in the recent CPC writeup in DXM, so I won't go into further detail here. I think the numbers speak for themselves.

Incidentally, the current members of IRCA's CPC are:

J.D. Stephens, Chairman (Request letters, station liaison)
Lynn Hollerman, BBS Rep. (Posting test info via E-Mail & various BBS's)
Jim Pogue, Technical Chairman (Code tapes & station liaison)

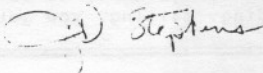
I want to thank Lynn and Jim for their outstanding work, and I want to encourage you to do the same.

By the way, anyone can arrange a DX test! If you have a station that is interested, you may contact any of the CPC members, or you can get everything arranged yourself, and contact us. When the notice graces the pages of DX Monitor, DX News, Monitoring Times & other sources, you'll receive credit for helping arrange the test! See your name in lights!

As always, donations in the form of checks (no cash, please) or postage stamps may be sent to: J.D. Stephens, IRCA CPC Chairman, P.O. Box 605, Huntsville, AL 35804-0605. At this point, we have a sufficient supply of envelopes for code tapes, Certificates of Appreciation, and other large items, so donations in this form are not needed at this time.

Here is a complete listing of every DX test arranged by IRCA's CPC during the '93-'94 DX season, as well as pertinent info on each and every test.

Thanks again for your support!



BROADCASTING INFORMATION



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

DEADLINES: 2nd & 4th Saturdays.

Compiled: 08/16/94

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

CONSTRUCTION PERMIT ACTIVITY:

CT. Ridgefield WREF-850 increases to 2500-D, ND
IN. Portland WPGW-1440 increases to 45-N
NJ. Trenton WFTM-920 increases to 1400-D, DA
WV. Point Pleasant WBGS-1030 on the air

FACILITY & PARAMETER APPLICATIONS:

IL. Rochelle WRHL-1060 20-N
NM. Clovis KICA-980 decrease to 110-N
TX. Midland KMND-1510 increase to 2400-D

FACILITY & PARAMETER GRANTS:

PA. Greensburg WHJB-620 decrease to 350-N

CALL LETTER CHANGES:

CA. Soquel KBOQ-1200 requests KOQI (CP)
KY. Russellville WRUS-610 becomes WBVR "Beaver"
Winchester WHRS-1380 becomes WLNT "Lexington's News-Talk"
NY. Endicott WMRV-1430 becomes WENE

FORMAT CHANGES:

AZ. Flagstaff KVNA-600 was talk, oldies, adds Michael Regan
South Tucson KMRR-1330 was EZL, now silent
Tempe KUKQ-1060 was rock//FM, now new rock
AR. Bentonville KJEM-1190 was religion, now SMN AS
Mountain Home KTLO-1240 was country, adds SMN country
Pine Bluff KCLA-1400 was urban, gospel, now WW1 stds, talk
CA. Bakersfield KERN-1410 was nx/talk, adds Michael Regan
Fresno KMJ-580 was nx/talk, adds Michael Regan
CO. Vail KSKE-610 was alternative//FM, now silent
CT. Southington WNTY-990 was AC, adds JSN AC
FL. Fort Pierce WTRA-1400 was stds., talk, adds Sports Byline
Immokalee WZOR-1490 was brokered, now silent
Okeechobee WOKC-1570 was SS, now country
Tampa WDAE-1250 was rptd AC//FM, remains country
ID. Nampa KF XD-580 was nx/talk, adds Michael Regan
IA. Sioux City KKSC-1470 was talk, sports, adds WW1 41 AC
KY. Florence WBND-1160 was AS, now country//WNKR
Winchester WLNT-1380 was WHRS, country, now nx, PRN talk
ME. Monticello WREM-710 was silent, now talk//WEGP
MA. Gardner WGAW-1340 was stds., talk, adds Sports Byline
Marlborough WSR0-1470 was stds., talk, adds Sports Byline
MI. Marine City WIFN-1590 was country, now talk & sports
MS. Jackson WSLI-930 was talk, sports, adds Sports Byline
Laurel WOIS-890 was urban, now EFN & PRN talk
MT. Great Falls KMSL-1450 was oldies, sports, now talk & sports

FORMAT CHANGES: (CONTINUED)

NE. Omaha	KFAB-1110 was nx-talk, adds Michael Regan
NH. Manchester	WKBR-1250 was silent, now EZL
NJ. Oakland	WVNJ-1160 was brokered, now WW1 oldies & talk
NM. Roswell	KBIM-910 was oldies, now WW1 CNN Headline nx
NY. Endicott	WENE-1430 was WMRV, hot AC//FM, now WW1 talk & sports (also uses Sports Byline, ESPN)
Huntington	WGSM-740 was soft AC, adds WW1 41 soft AC
New York City	WKDM-1380 was SS hits, now brokered variety
NC. Laurinburg	WEWO-1460 was talk, adds Sport Byline
OH. Bucyrus	WBCO-1540 was AC, now talk
Cleveland	WRDZ-1260 was religion, adds PRN talk
Hamilton	WMOH-1450 was nx, talk, adds Sports Byline
Lima	WIMA-1150 was nx/talk, adds Michael Regan
Wellston	WYPC-1330 was AS, now JSN EZL
OK. Pauls Valley	KVLH-1470 was country, adds EFM talk
OR. Brookings	KURY-910 was country, now PRN talk
Pendleton	KTIX-1240 was AC, talk, adds Sports Byline
Redmond	KPRB-1240 was country//KSJJ, now silent
PA. Latrobe	WQTV-1570 was AC//FM, now talk
Lock Haven	WBFPZ-1230 was oldies, adds JSN oldies
Mount Pocono	WPMR-960 was rock//FM, to be talk, AP nx
TX. Mineral Wells	KJSA-1140 was country//FM, adds PRN talk
San Antonio	KENS-1160 was nx, alternative, now AP nx
UT. Price	KRFX-1080 was silent, now oldies//KPRQ
WA. Spokane	KGA-1510 was nx/talk, adds Michael Regan
Yakima	KUTI-980 was country, now nx/talk
WI. Ashland	WATW-1400 was country, adds EFM & WW1 talk
New Richmond	WIXK-1590 was country//FM, adds SMN Real C&W//FM
Oshkosh	WXOL-690 was talk, now silent

Just 8 more days till I leave for convention, then off to Reno to pull the slots! 73's.

ANOTHER CALL LETTER CHANGE:

PR. MOCA WCXQ-1040 becomes WZNA



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

DX Worldwide - West

Time: UTC phone (503) 861-3185

DEADLINES: 9/5, 9/19

Some DU activity out there this time around and some LA material. Also a call from Chuck Boehnke-Keaau, HI announcing that KUAU-1570-Haiku, Hawaii has been testing with fairly good signals to the Big Island. Currently they are running 1 KW day and 500 W nights, Non Directional. Soon to be 1 KW full time and later hopefully 10KW, then up to 50 KW. Right now they are testing on and off. So far no sign of them here. We have reports from Nigel Pimblett and Larry Godwin this week.

PAN-AMERICAN DX ROUNDUP

820 Mexico, Guadalajara, Jal. XEBA momentarily atop KGNW with "La Consentida" ID at 1145 8/11. (LG-MT)

830 MEXICO, Culiacan, Sin. XEVQ on top with call ID at 1151 on 8/11, along with familiar western inst. theme mx. Believe this was s/on. (LG-MT)

4

1190 MEXICO, Mexicali, B.C.N.-XEMBC-fair o/KORG at times with SS talk and U.S. Old rr, many R. Variedades" IDs with commercials for businesses in Mexicali at 0345 on 8/17. KEX was off for about a half an hour. XEMBC is new for me. Report sent. (PM-OR)

TRANS-PACIFIC DX ROUNDUP

819 AUSTRALIA, Glen Innes-2GL presumed to be the one with fair signals of light inst. mx for about 10 minutes just after LSR. Also noted weak audio on 531 and 846 this A.M. on 7/23 at 1134. (NP-AB)

828 AUSTRALIA, Sale-3GI likely the one with fair reception of Aussie accented ancr talking about the Tommy Dorsey band, and then playing mx by them on 7/16 at 1113. The only DU audio noted that A.M., although several other decent hets were coming in. (NP-AB)

830 HAWAII, Honolulu-KHVH-"Coast to Coast AM" Talk Show, ID: "You're listening to the new 830, KHVH" on 7/21 at 1130 (NP-AB)

850 HAWAII, Hilo-KHLO-ID "Today's country music, KHLO" into Ricky Skaggs tune. My most regulat Hawaiian on 7/16 at 1138 UTC. (NP-AB) (KHLO is the strongest Hawaiian here, too. PM)

855 AUSTRALIA, Maryborough/Eidsvoid-4MB/4QO-UNID w/ABC NX at 1200 8/5. No pips on the hour. WRTH lists two possibilities, which are only a few miles apart. Evidently they share time. I sent a tentative to 4QB. (LG-MT) (The two stations are part of the ABC 3 Net and rin sychros. 4QB has more signal in this direction and 4QO has a null towards the East, protecting 4QB, per the Australian Pattern Book. 4QB is most likely, but you might have heard them both at the same time. PM)

1116 t AUSTRALIA, Brisbane-4BC-was I believe the accented EE station (EE) w/telephone talk progr 1150-1200 7/28. followed by 6 pips and nxcast which the ancr mentioned Brisbane twice. Reported. (LG-MT) (Good going, this one isn't hrd that often off the west coast. PM)

1206 UNID, with male vocal mod. strong looping DU at 1155 7/28. What's likely? (LG-MT) (Since you were hearing all Aussies, I would guess 2GF-Grafton. They have put in fantastic signals on the coast. PM)

1620 UNID, possibly Australian, man speaking 1208 7/28. (LG-MT) (IPPP is still here, logged here a couple weeks ago with weak to fair signals. runs 500 W. PM)

900 HAWAII, Kahului-KNUI EZL mx sung call sign jingle ID, then lost to CJVI. New for me. (NP-AB)

VERIFICATIONS

540 MEXICO, S.L.P.-XEWA small "Certificado de Sintonia" verification letter, stickers, and pennant from Ing. Miguel Angel Barrientos Valadez in 2 months for U.S.\$1 (NP-AB)

THANKS TO THESE REPORTERS

LG-MT LARRY GODWIN-2390 CLYDES DALE LANE-MISSOULA, MT 59801
Hammarlund HQ-150, Sanserino air-core box loop.

NP-AB NIGEL T J PIMBLETT-1146 QUEEN STREET SE-MEDICINE HAT, AB

PM-OR YOUR EDITOR
Drake R8, Term. 200' SW/NW Antenna, Ground system.

A DXers TECHNICAL GUIDE

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

IRCA Stationery

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

WESTERN DX ROUNDUP



Nancy Hardy
2301 Pacific Avenue
Aberdeen, WA 98520-4527

★ PRODIGY
FMFT21B

Electronic Mail: 73201.2263@CompuServe.com, or Prodigy FMFT21B. E-Mail deadline:
6pm Mondays.

WQXR DEADLINES: Sat. Sept. 3, Mon. Sept. 19, Mon. Oct. 3, and each Monday
thereafter. Please use Eastern Time.

REPORTERS FOR THIS ISSUE:

- (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
FRG 9800, KIWA loop
- (GL) Gary Larson-2806-Lincoln-Burbank, CA 91504
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118
GE Superadio, GE long-range portable, SM-2

OF SPECIAL INTEREST

- 940 KXUX OR, Bend 9/15 0910-1010 ex-KGRL. Finally heard enough for
definite reception. Many songs, ID and SNN news on hour at 1000.
Good in varying KFRE null, finally faded out by about 1015, lost
to KNBR-680 spur on 940. (RW-CA)
- 1340 KTIK ID, Nampa-Boise 8/1 0404-0410 call change ex-KANR, with what
sounded like ESPN Sportsradio, many "KTIK" ID's, local break for
spot at 0410, back into sports talk. Good on top of KXEQ at
times, KVOY nulled. Calls mean "The Ticket," per M Street. (RW)
- 630 KSLR TX, San Antonio 8/1 0330-0400+ a complete shocker, thought I had
KCIS-WA. Frequency basically dead with KHOW/KIDO nulled (KRCV
apparently off MM's), KFI-640 off. Faded up for 1/2 hour with
show "Truths That Transform," ID caught on tape "Thank you for
listening to Satellite 63, KSLR, San Antonio," weather for San
Antonio, (predicted high of 95, current temp. 77), ID "3:00 at
KSLR, San Antonio," then tuned out. New! (RW-CA)
- 640 (KFI) CA, Los Angeles 8/1 0308-0430+ totally off, back on at 0800
recheck. Frequency with very weak unID to east, Cuban suddenly
boomed in strong at 0440, s/on or power change??? (RW-CA)
+8/1 0315 noted off, faint unID heard. (GL-CA)
-8/15 0330 totally off again 2nd MM out of last three, XEYQ
booming in this morning. (RW-CA)
- 830 KNCO CA, Grass Valley 8/8 0359 on air for emergency broadcast due to
fires in Grass Valley area. (RW-CA)
- KPLS CA, Orange 8/1 0800 with kids program, call ID and "Radio Aahs."
First time heard! (LG-MT)
- 940 ?KWBY? OR, Woodburn 8/2 0750-0801 probably the Spanish-speaker looping
E-W with phone interview on Haiti situation (no break on the
hour). Same program 8/10, with clear ID for XELT-920-Guadalajara
at 0758. I phoned station; woman said they carried satellite
feed from Mexico at that time. Station is AN; currently
broadcasts in Spanish 0300-0900 but will expand to full-time in
9/94. (LG-MT)
- 1050 KKG0 CA, Frazier Park 8/1 1517 heard in Burbank on mother's car radio,
faint but readable // KKG0-105.1 classical. (GL-CA)
- 1120 KPNW OR, Eugene 8/6 0145 knocked off air in middle of Eugene Emeralds
Baseball game for about 20 minutes, XEMX in strong. (RW-CA)
- 1220 KDFC) CA, Palo Alto 7/30 0804 totally off. (RW-CA)
- 1240 WASL NY, Newcastle 8/8 through the hash with legal ID at 2100. (LG-MT)
- 1530 WSAI OH, Cincinnati 7/29 2255 very strong with call ID amidst old
standards. (LG-MT)

- 1590 *KLIV* CA, San Jose 8/6 0608 with test tone. (RW-CA)
 1610 WNXK996 CA, ?? 8/8 0400 Caltrans Highway Advisory station giving traffic conditions. Believe location is near Bakersfield. (GJ)
 TIS CA, Hanford weak 8/7 with Midstate Fair Information Radio, with information on parking at CA Midstate Fair in Paso Robles. 8/8 0000 not sure of power, but good signal. (GJ-CA)
 1620 TIS CA, Sacramento 8/17 two watt Univ. of Sacramento signed on, testing with music. When school starts they will operate M-Th till 0145. (GJ-CA)
 1661.35 KAO992 7/19 0711 a driftnet buoy beacon (illegal under U.S. law, but still there!). No listing known. Thanks to Mike Hardester for ID. (GJ-CA)
 1666.6 "CC" CA, ??? 7/14 0700 ID as "CC" in Morse code, weak. Do not know who is operating it. Thaks to Mike again. (GJ-CA)
 1689.9 B235 CA, ??? another beacon logged 7/21 0650. Call in Morse code is "B235," operator unknown. Thanks to Mike Hardester! (GJ-CA)

UNIDS

- 640 8/1 0433 unID extremely weak just before Cuban signed on, over unID het. Sounded like C&W, never even came close to fading up strong enough to ID, very deep fades. Possibly CHOG-ON? Any other ideas? (RW-CA)
 1608 8/8 2053-2100 pirate carrying promo for housing development. During 1 min., 20 second tape loop woman mentioned "4 bedrooms...upper level, 2 bathrooms...lots of extras." Also noted weaker 8/9 at 0802. (LG-MT)

Mike Hardester sends along info that WNXY861 is the correct call for the 530 Altamont Pass TIS, operated by the American Wind Energy Assoc. Tehachapi Pass, CA TIS on 1610 is WNYD244, and is operated by the Kern Wind Energy Assoc. CALTRANS is not involved with either station. Both stations operate 24 hours a day, 365 days a year.

Is it possible, the weekly issues are just a few weeks away? Yes, WDXR weekly deadlines will return Monday Oct. 3rd!

WDXR REPORTERS FOR VOLUME 31

1. Larry Godwin	417/34	18. Harry Helms	14/5
2. Robert Wien	235/32	Curtis McMenamin	14/4
3. Patrick Martin	234/29	20. Mike Stonebridge	13/3
4. Gary Jackson	137/27	21. Gary Larson	14/8
5. Frank Aden	126/16	Steve Mittman	11/9
6. Nigel Pimblett	110/12	23. Rod O'Connor	8/6
7. Mike Sanburn	104/16	24. Bill Hardy	4/3
8. Bill Harms	58/2	Bill Nittler	4/1
9. Shawn Axelrod	57/2	26. Phil Bytheway	3/3
10. Bruce Portzer	45/7	Steven Jarvis	3/1
Pete Taylor	45/15	S.J. McDonald	3/3
12. Tim Hall	44/8	29. Nick Hall-Patch	2/1
13. Stan Weisbeck	43/3	Nancy Hardy	2/2
14. Thomas Reiser	24/2	Wayne Heinen	2/1
15. Art Peterson	23/7	Reid Wheeler	2/1
16. Dennis Gibson	20/2	33. Guy Kudlemyer	1/1
17. Ted Wendland	15/3	Dale Park	1/1
		Steve Schreiter	1/1

Thanks everyone for your support of WDXR this season!





Central DX Roundup

Editor: John C. Johnson

FOR THE RECORD

ADDRESS YOUR REPORTS TO:

E-MAIL: JOHNJ53816@AOL.COM

SNAIL-MAIL: 979 NEPTUNE BLVD., BILLINGS, MT 59105-2129

AMERICA ON LINE: JOHNJ53816

COMPU SERVE: 74444,3075

PRODIGY: MPNN49A

REPORT ALL TIMES AS EASTERN.

DEADLINE: SATURDAYS.

RIDING GAIN

- [JE-MN] Jon Ellis, Maple Grove, MN
GE SuperRadio III+, Select-A-Tenna.
- [JE-IA] Jon DXing on location in Storm Lake, IA using same equipment as above.

SPECIAL INTEREST

- 1470 KKSC IA, Sioux City. EX-KWSL. Station now using new calls. Drops AOR for Talk. Noted they are using AC music as a filler on the morning show until a morning host is found. Lots of mentions of "Siouxland." [JE-IA]

DOWN THE DIAL

- 530 CIAO ON, Brampton. 8/10 with local WPBX286. 0200 ID was a gong sound followed by "Ciao Radio 530" then back into SS program. [JE-MN]
- 930 KSEI ID, Pocatello. 8/14 with WKY and WTAD. 0658 out of TalkNet and into promo ending with "...AM 930 KSEI." ID#2! First ID station logged 3 years ago. [JE-MN]
- 1090 CKRX AB, Lethbridge. 8/12 o/u/KAAY. 0244 with call ID. Hard rock format. Slogan "1090 Rocks." Might be satellite fed music. [JE-MN]
- 1420 CJVR SK, Melfort. 8/12 good o/KTOE. 0200 with "AM Stereo CJVR" into SBN News. Country format. [JE-MN]

unID

- 1000 unID 8/14 w/WMVP. 0705 airing "Old Time Radio" featuring Dennis Day. Any ideas on who this could be? [JE-MN]

25 YEARS AGO

September 6, 1969 issue of IRCA's "DX Monitor"....New members included Glenn Hauser....President Larry Godwin detailed the annual business meeting. The subject of a merger with the NRC was again discussed. Larry thought a target date of September 1970 was reasonable....Mike Hardester of Modesto, CA commented 8/11 DX was almost winter-like....DXWW editor Father Jack Pejza mentioned he was 35 years old.

OPEN MIKE

Conversation enriches the understanding, but solitude is the soul of genius. Mike Hardester of Jacksonville, NC passes along information on a new TIS at Mesa Verde National Park in CO. KAF-727 on 1610 was to begin operation on Sept. 1st. Their new transmitter is located adjacent to the Park entrance and covers about a two mile radius. Thanks to Jon we have a column this week! I can only assume all other reporters attended the IRCA Convention last weekend? From what the Hardy's had told me, the convention was going to be one not to miss. I hope everyone had a great time at the convention in Aberdeen. Please note the deadlines, we're almost back to weekly issues! I hope everyone has a great DX season. Be sure to report all your DX and tips to the columns. 73, John-John.



Western DX Forum ★ ★ ★ ★ ★

Reid Wheeler 5910 Boulevard Loop SE Olympia, WA 98501

Deadline: Saturday 2 weeks before publication

Patrick Martin, PO Box 843, Seaside OR 97138

[7/19] Since DX has been rather poor this summer, I have been spending time improving the antenna and ground situation here. For the past several years I have been buying the 4-foot ground rods from Radio Shack, as they were inexpensive and easy to pound in the wet swampy ground here. Recently the price on the rods nearly doubled and being on the coast, the rods never lasted that long in the ground as they were only copper plated. I went over to the local hardware store and bought a 10-foot copper pipe and cut it in half, giving me 2-5' pieces. Then using stainless steel hose clamps to attach the wire to the pipe, it works very well and at about half the price of the Radio Shack rods. The pipe is a little soft, so I don't know how it would work pounding them in really hard soil. Here it works quite well. With raising my northern Beverage and the new ground system, skip signals are better this summer than in the past. One other thing is that the 5' of pipe isn't quite as easy to pound in the ground as the 4' Radio Shack rod was, but adding the extra foot and having solid copper is worth it. I won't have to replace the system every year or two. Living a mile from the ocean, a good ground system is really a big boost for signals. Good DX to all and 73s. Patrick.

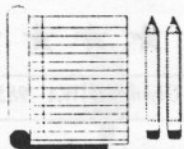
Gary Larson, 2806 Lincoln, Burbank CA 91504

818-558-1220, TH34219

[8/1] Hello. Not much going on here but did tune mother's car radio on AM today about noon and heard 1050 KKKO simulcasting 105.1 classical so 10 kw does get to my area but only heard on sensitive receivers. I did notice 640 KFI off this morning around 3:15 am. Two numbers here now, first one has ans. machine. Aberdeen '94! 73

Jim Hilliker, 1705 Withers Ave #14, Monterey CA 93940-1569

[8/13] After dropping out of the club for a year for personal reasons, I'm back and glad to get some news of what's happening in the hobby and AM radio! I still might not have much time to DX, but it's really tough to get past the various noises, TV interference, etc. where I live to hear anything decent, anyway. We have three AM stations in the market here still silent as I write this ... KMBY-1540 went off first ... their FM on 107.1, KMBY is back on with Spanish, run by the owners of KLOK-1170, I believe... no word when and if 1540 will come back on.. then KSUR-700 and their FM went dark in early summer. There was no work of this in the local papers. Their address had been at 8 Harris Court in Monterey but the new phone book lists them in Salinas near KCBA-channel 35. Tried calling them, but no answer. They're owned by same person that has 1260/540 in Los Angeles area and 1050 in Bakersfield area. Then, KIDD-630 went off, which simulcasted KXDC-FM. No word on them either, as to when it may go back on, but it will be under new ownership, after the sale is final. Several people are now trying to purchase the stations from the previous owners. It's nice to have 3 AM's off and hear other things for a change, but so far, nothing spectacular or unusual. There's word that the owner of the long-silent KOMY-1340 in Watsonville has reapplied for a new license, but he will not operate the station. Instead, it will be run from KSCO-1080 in Santa Cruz and duplex off one of their towers. The idea is to possibly have KOMY-1340 // to KKSJ-1370 in San Jose, and also have 1340 carry some sports, so as not to interfere with 1080's newstalk programming. There's been at least one test of 1340 from KSCO, but the licensing process won't be finished until at least the end of the year, so KOMY will be off a while longer. Have finally logged KVML-1450 in Sonora in KEST null and now hear it often, of course, hi. KNRY-1240 carries a lot of Tom Leykis' show M-F and a local UFO talk show Sunday nights from 2300-2400 along with a network UFO show from 2200-2300. Also, along with 49ers football this season, KNRY also will carry San Jose Sharks hockey and San Jose State football. Much of the rest of KNRY's sked is local brokered talk. David Brenner from Mutual and Jim Bohannon overnight. Sunday morning, there's a local 5-hour big band show and weekend afternoons and evenings are still ESPN Sportsradio.. much of the people's new has been scrapped from KNRY's sked. That's all for now. 73...Jim.



Eastern DX Forum

Richard C. Evans

P.O. Box 21883

Milwaukee, WI 53221-0883

Phone: 414-Atlantic 2-9035

DEADLINES: 9/3, 9/17, then every Saturday thru 3/11/95

R.C. Watts, 4109 Graf Drive, Louisville, Kentucky 40220-3016
Stoner Broadcasting has sold WDJX-99.7/1080 in Louisville to Regency Communications. The AM dropped FM simulcasting and alternative music for AP Network News. Calls itself The News Station, WDJX-AM. The LMA stations, 103.9 Cool WQLL (adult contemp, x-WHKW and 107.7 WHKW The Hawk (hot country) seem unchanged. The only other local left playing any alternative music is current rock WQMF too (WQNF-105.9), sister of WQMF-95.7. Arabic music and talk on 1030 about 1955 ET. Didn't hear the ID, if any, before it faded away after 2000. I drove up to Slade, KY the other day to see about the Natural Bridge-Powell County T.I.S. that was supposed to go on-the-air by end of June. Did not hear or see any activity and the caboose info center was closed since I got there late. A cousin has a friend working in the Lexington radio market. Sammy promoted a nice T-shirt, cap and gold/platinum mug from K-93 (WVLK-FM) and stickers from MIX 94.5 (WMLX). Hopefully, the contact will spring for more goodies in the future. I ordered Grove's SP200 speaker box the other day. It's backordered (must be popular) so it'll be awhile before I get my hands on it. Was looking for the noise reduction features combined with a better speaker. Like PM, I use Grove's TUN4 and find it a good unit. (second report) To M.H., re. addressed of obscure radio stations, I've had good luck with the Research Dept. of my Public Library. If no listing for the Airport, ask for the Regional Airport Authority. I get zips from the U.S.P.S. assistance operator. Bought a new Sony ICF-2010 and it seems to be somewhat better quality than my old one. I hope to get the old one cleaned up and re-aligned if I can find an outfit that can do it. Any suggestions? We drove over to Corydon, IN the other day. Col. DX visited WOCC-1550 while Col. A.J. hit the crafts and antique shops. Cheap camera broke halfway through a roll, so had to buy one of those single use jobs at a drug store. "Old Capitol Country" runs 250 watts of C&W and is automated in the afternoon. They set it up themselves. They do take CNN and simulcasts nx/wx from WLKY-TV32 in Louisville. They also do local nx and, during the school year, local sports. The single studio is upstairs, overlooking the old Capitol (1816-1825) and square. A neat, no frills station that's very community oriented. The Corydon tourist leaflet says, "For information about Historic Corydon, IN, tune to Corydon station Old Capitol Country AM, 1550 WOCC". 73 from me.

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

There was a get-together over in Madison, Wisc. on 8/20 that I was unable to get to because of prior commitments. Hope it went well for those who could make it. Like A.J., I've been spending time in the antique stores, and I've noticed a fair amount of old AM radios there at what appear to be reasonable prices. I'm not that familiar with old radios but some of them seem to date back to the middle 30's and 40's and I find myself wishing that some of the old-timers like Ralph and Ernie were along to reminisce about the radios. I've yet to see a 32 tube set like Ernie said he used at one time. Just about time for the weekly issues again, which means it's fall, thank goodness. I always figure that the Labor Day weekend is the start of the new season, but this year, I'll be spending the holiday over in Michigan with my cousin since we can't be there this year over Thanksgiving. 73 and make sure you report this season.

'93-'94 IRCA CPC DX TEST RECAP

MONDAY, OCTOBER 4, 1993 - WOI-640, AMES, IA. THE FIRST DX TEST OF THE SEASON FROM THIS HISTORIC 3 LETTER CALL STATION WAS HEARD COAST TO COAST. THE TEST INCLUDED MORSE CODE, TEST TONES, AND VOICE ID'S. CHIEF ENGINEER DAVE KNIPPEL VERIFIED REPORTS WITH A NICE QSL CARD.

MONDAY, OCTOBER 4, 1993 - KRZN-760, DENVER, CO. ANOTHER TEST THAT WAS HEARD COAST-TO-COAST. THIS 50 KW STATION EVEN RECEIVED ONE RECEPTION REPORT FROM NEW ZEALAND! USING FULL DAYTIME POWER AND ANTENNA PATTERN, MANY DXERS HAD NO PROBLEM HEARING THE MORSE CODE, NOSTALGIA MUSIC, AND NUMEROUS VOICE ID'S FROM KRZN. NOT LONG AFTER THE TEST, THIS STATION WAS SOLD AND CHANGED CALL LETTERS TO KTLK. FORTUNATELY, C.E. BILL HARRIS SAVED A STACK OF KRZN LETTERHEAD FOR ANSWERING RECEPTION REPORTS.

MONDAY, OCTOBER 11, 1993 - WELC-1150, WELCH, WV. THIS STATION TESTED WITH MORSE CODE, MANY VOICE ID'S AND BLUEGRASS MUSIC PERFORMED BY WEST VIRGINIA SENATOR ROBERT BYRD. HEARD WELL THROUGHOUT THE EASTERN U.S., THIS TEST EVEN MADE IT TO PARTS OF THE MIDWEST.

MONDAY, OCTOBER 11, 1993 - KVON-1440, NAPA, CA. THIS TEST CONSISTED OF MORSE CODE, TONES, AND VOICE ID'S, AND UTILIZED BOTH AN OMNIDIRECTIONAL AND DIRECTIONAL ANTENNA PATTERN, AS WELL AS POWERS OF 5 KW (DAY) & 1 KW (NIGHT) FOR DIFFERENT PARTS OF THE TEST. THIS TEST SEEMED TO HAVE BEEN HEARD ONLY IN THE WEST. UNFORTUNATELY, C.E. MIKE MARTINDALE ONLY RAN THE MORSE CODE DURING THE PERIOD WHEN HE WAS OPERATING ON NIGHT POWER AND PATTERN. A REPEAT OF THIS TEST WAS SCHEDULED FOR DECEMBER 27TH.

MONDAY, OCTOBER 11, 1993 - KSOK-1280, ARKANSAS CITY, KS. THIS TEST, WHICH INCLUDED MORSE CODE ID'S, WAS HEARD THROUGHOUT THE MIDWEST AND SOUTHEAST, BUT DUE TO LOW POWER AND A CROWDED FREQUENCY, WASN'T WELL HEARD IN OTHER PARTS OF THE COUNTRY.

SUNDAY, OCTOBER 17, 1993 - WTRP-620, LA GRANGE, GA. THIS STATION INSERTED MORSE CODE ID'S AT BREAKS DURING THEIR REGULAR PROGRAMMING. DESPITE BEING AT A LOW NIGHT POWER OF AROUND 100 WATTS OR SO, THIS TEST WAS SURPRISINGLY WELL-HEARD, EVEN AS FAR AWAY AS CANADAI NO-ONE HAS YET REPORTED VERIFICATIONS FROM THIS TEST - EVEN THOUGH G.M. MICHAEL THOMPSON SAYS THAT HE HAS ANSWERED ALL THE RECEPTION REPORTS. HE HASN'T ANSWERED THE REPORT OF YOUR CPC CHAIRMAN, DESPITE SEVERAL FOLLOWUP PHONE CALLS AND REPORTS.

MONDAY, OCTOBER 18, 1993 - WAGL-1560, LANCASTER, SC. THIS ONE REALLY GOT OUT! AT 50 KILOWATTS, THIS ONE WAS HEARD WAS FAR AWAY AS ALASKA, HAWAII, AND NEW ZEALAND! A VERY WELL-DONE TEST, IT INCLUDED MORSE CODE, AND LOTS OF FRIENDLY GREETINGS TO DXERS. CALLS FROM DXERS EVERYWHERE WERE PUT ON THE AIR (INCLUDING IRCA'S OWN PAT MARTIN).

MONDAY, OCTOBER 25, 1993 - WRCA-1330, CAMBRIDGE, MA. DESPITE USING FULL DAY POWER AND DAY PATTERN, THIS TEST WAS NOT WELL-HEARD OUTSIDE OF THE NORTHEASTERN U.S. QSLs HAVE BEEN VERY SPORADIC, WITH SOME DXERS RECEIVING THEIRS WITH NO PROBLEM, WHILE OTHERS GOT STIFFED.

MONDAY, OCTOBER 25, 1993 - KATL-770, MILES CITY, MT. ANOTHER ONE THAT REALLY GOT OUT WELL WAS THIS 10 KILOWATT STATION. IT'S MORSE CODE ID'S PUNCHED OUT COAST-TO-COAST, AND THE STATION RECEIVED ABOUT 40 RECEPTION REPORTS.

MONDAY, NOVEMBER 1, 1993 - WDJM-960, EAST MOLINE, IL. NOT WELL HEARD OUTSIDE THE EASTERN U.S., THIS STATION TESTED WITH MORSE CODE, TONES, VOICE ID'S, AND MARCH MUSIC. REPORTS WERE PROMPTLY ANSWERED WITH A QSL CARD.

MONDAY, NOVEMBER 1, 1993 - WSSH-1510, WOBURN, MA. THIS STATION, WHICH TESTED AT 50 KILOWATTS WITH DAY PATTERN, WAS SURPRISINGLY NOT WELL-HEARD OUTSIDE OF THE EXTREME EASTERN U.S. ANOTHER TEST ARRANGED BY MR. MICHAEL KLEIN OF DX ENTERPRISES (NOW G.M. OF WSSH), WHO HAS PROVIDED IRCA WITH MANY DX TESTS FROM AREA STATIONS IN YEARS PAST. LIKE PREVIOUS TESTS, EXPECT A LONG WAIT FOR A QSL CARD. THE LAST TIME HE TOOK OVER A YEAR!

SATURDAY, NOVEMBER 6, 1993 - KFJM-1370, GRAND FORKS, ND. THIS STATION WAS NOT WELL-HEARD, NO DOUBT DUE TO THE FACT THAT THE STATION WAS AT LOW POWER AT THE TIME. CHIEF ENGINEER JOHN AASEN PROMISES ANOTHER TEST IN THE FUTURE, BUT AT FULL POWER THIS TIME.

SATURDAY, NOVEMBER 6, 1993 - KREW-1210, SUNNYSIDE, WA. YET ANOTHER STATION THAT GOT OUT WELL. AT 10 KILOWATTS IT WAS HEARD ALL THE WAY TO THE EAST COAST (WEST VIRGINIA) AND THROUGHOUT THE REST OF THE EASTERN U.S., AND OF COURSE, THROUGHOUT THE WESTERN U.S. AS WELL.

TUESDAY, NOVEMBER 9, 1993 - WHSM-910, HAYWARD, WI. FROM NEAR THE CANADIAN BORDER, THIS STATION TESTED WITH MORSE CODE, TONES, AND VARIOUS FORMS OF MUSIC. IT MADE IT AS FAR SOUTH AS MISSISSIPPI AND ALABAMA, AND OTHER PARTS IN THE EASTERN U.S. MANY MAY REMEMBER THE ODD TIME FOR THE TEST, WHICH WAS BEFORE MIDNIGHT AT THE STATION (11:15-11:45 PM CST). THIS WAS SPECIFICALLY REQUESTED BY THE STATION, AS THEY WERE GOING TO BE DOING SOME MAINTENANCE AT THIS TIME.

MONDAY, NOVEMBER 15, 1993 - KDAL-610, DULUTH, MN. THIS STATION INSERTED MORSE CODE ID'S DURING BREAKS IN IT'S REGULAR PROGRAMMING, AND WAS WELL-HEARD IN MANY PARTS OF THE COUNTRY. AN AWKWARDLY-WORDED VERIE LETTER WAS SENT OUT.

MONDAY, NOVEMBER 15, 1993 - WXYT-1270, SOUTHFIELD, MI. DESPITE THE FACT THAT THIS STATION IS NSP, C.E. NEIL SCHWANITZ WAS HAPPY TO INSERT MORSE CODE ID'S DURING STATION BREAKS, AND EVEN KICKED THE POWER UP TO FULL DAYTIME POWER FOR THE DURATION OF THE TEST. MR. SCHWANITZ SENT OUT A VERY NICE QSL SHEET WHICH HE DESIGNED HIMSELF.

SATURDAY, NOVEMBER 20, 1993 - KWSU-1250, PULLMAN, WA. THIS STATION TESTED WITH MORSE CODE AND MARCH MUSIC, AND GOT OUT SURPRISINGLY WELL - EVEN AS FAR AS TENNESSEE AND ALABAMA. QSL CARDS WERE RECEIVED IN SHORT ORDER.

MONDAY, NOVEMBER 22, 1993 - WFIF-1500, MILFORD, CT. THIS STATION WAS A NO-SHOW. C.E. WILLIAM BARNETT CALLED ME ON FRIDAY THE 19TH TO TELL ME THAT HE WOULD NOT BE ABLE TO RUN THE TEST DUE TO A CHANGE IN HIS WORK SCHEDULE. MR. BARNETT FELT THAT SINCE HE HAD CALLED TO LET ME KNOW ABOUT THIS "FAR ENOUGH IN ADVANCE TO GET THE WORD OUT TO ALL THE CLUB MEMBERS" THAT IT "WOULDN'T BE A NO-SHOW". HE WAS UNWILLING TO TRY AND GET SOMEONE ELSE TO RUN THE TEST, OR TO GO AHEAD AND DO IT HIMSELF - EVEN AFTER I EXPLAINED TO HIM THAT I COULD NOT GET WORD OUT THAT IT WOULDN'T RUN AND THAT LOTS OF FOLKS WOULD BE UP IN THE WEE HOURS OF THE MORNING LISTENING IN VAIN. WHAT A DISAPPOINTMENT.

SUNDAY, DECEMBER 5, 1993 - KXXY-1340, OKLAHOMA CITY, OK. WHAT A SURPRISE THIS ONE WAS! WHO WOULD HAVE THOUGHT THAT A GRAVEYARDER COULD STILL BE WIDELY HEARD IN THESE DAYS OF CROWDED BAND CONDITIONS? THIS STATION WAS HEARD ON BOTH THE WEST AND EAST COASTS, AND RECEIVED MANY RECEPTION REPORTS. NOT ONLY WAS THE SIGNAL WIDELY RECEIVED, BUT MANY DXERS COMMENTED ON HOW LOUD AND CLEAR IT WAS COMING IN! WHO WOULD'A THINK IT?

SUNDAY, DECEMBER 5, 1993 - KSD-550, ST. LOUIS, MO. THIS STATION WITH A RECENTLY REASSIGNED 3 LETTER CALL CONDUCTED A VERY WELL DONE TEST, WITH MORSE CODE, MANY VOICE ID'S, NOVELTY MUSIC, AND GREETINGS TO DXERS. THE STATION CONDUCTED HALF OF THE TEST ON NON-DIRECTIONAL PATTERN & THE OTHER HALF ON DIRECTIONAL PATTERN (SPECIAL MORSE CODE MESSAGES INDICATED WHICH PATTERN WAS BEING USED AT THE TIME). SOON AFTER THE TEST, C.E. DAVE OBERGOENNER MOVED TO KZIM-960 IN CAPE GIRARDEAU, MO. HE HAS A PIECE OF KSD STATIONERY IN HAND TO MAKE UP SOME VERIE LETTERS, AND DXERS MAY WANT TO TRY FOLLOWUPS TO: DAVE OBERGOENNER - DIRECTOR OF ENGINEERING, KZIM-AM RADIO, P.O. BOX 1610, CAPE GIRARDEAU, MO 63702.

MONDAY, DECEMBER 6, 1993 - WAJR-1440, MORGANTOWN, WV. THIS STATION RAN IT'S DX TEST FOR 4 HOURS, AND OPERATED AT BOTH DAY AND NIGHT POWERS/PATTERNS AT VARIOUS POINTS DURING THE TEST. NOT WELL HEARD OUTSIDE THE EASTERN U.S.

MONDAY, DECEMBER 6, 1993 - CKX-1150, 2940 VICTORIA AVENUE, BRANDON, MANITOBA. OUR THANKS GO TO TOM BRYANT, WHO HELPED TALK UP THE IDEA OF A DX TEST WITH HIS FRIEND RON THOMPSON, WHO IS A METEOROLOGIST FOR CKX'S SISTER TV STATION. DESPITE INFORMATION FROM THE STATION THAT A NON-DIRECTIONAL ANTENNA PATTERN WOULD BE USED, THIS WAS NOT THE CASE, AS IT WAS FOUND OUT LATER THAT CKX DOES NOT HAVE THIS CAPABILITY. HEARD WELL IN THE WEST, BUT NOT IN THE EAST. EVEN THOUGH RECEPTIONS IN MISSOURI AND KENTUCKY WERE REPORTED. A REPEAT OF THIS TEST WAS SCHEDULED FOR MARCH 7TH.

MONDAY, DECEMBER 13, 1993 - WNEZ-910, FARMINGTON, CT. THIS ONE WAS A NO-SHOW DUE TO AN UNEXPECTED DEATH IN THE FAMILY OF THE PERSON RESPONSIBLE FOR RUNNING THE TEST.

MONDAY, DECEMBER 20, 1993 - WCGC-1270, BELMONT, NC. THIS TEST WAS WELL-HEARD THROUGHOUT THE EASTERN PART OF THE COUNTRY. ACCORDING TO C.E. BRUCE MUSSO, HE RECEIVED "OVER 200" RECEPTION REPORTS FOR THE TEST. MR. MUSSO HAS ALSO BEEN SAYING SINCE FEBRUARY THAT HE HAD SEVERAL HUNDRED QSL CARDS PRINTED UP AND HAS THEM ON HAND TO SEND OUT TO THOSE WHO SENT IN REPORTS. WHY THEY HAVEN'T GONE OUT IS A MYSTERY, AND YOUR CPC CHAIRMAN IS STARTING TO SMELLS A PILE OF IT.

MONDAY, DECEMBER 20, 1993 - WDAS-1480, PHILADELPHIA, PA. THIS TEST WAS WELL-HEARD THROUGHOUT THE EASTERN PARTS OF THE U.S., AND USED BOTH HIGH AND LOW POWER FOR DIFFERENT PARTS OF THE TEST.

MONDAY, DECEMBER 20, 1993 - KWNC-1370, QUINCY, WA. WHAT A SURPRISE! EVEN WITH ONLY A MERE 1.000 WATTS, THIS ONE WAS HEARD AS FAR EAST AS ALABAMA AND TENNESSEE. C.E. & G.M. DONALD LOCKWOOD HAS YET TO VERIFY THE RECEPTION REPORTS, DESPITE NUMEROUS FRIENDLY REMINDER PHONE CALLS FROM YOUR CPC CHAIRMAN.

MONDAY, DECEMBER 27, 1993 - KVON-1440, NAPA, CA. THE SECOND TEST SCHEDULED FROM THIS STATION. C.E. MIKE MARTINDALE OPERATED PART OF THE TEST ON LOW POWER AND NIGHT PATTERN, JUST AS WAS DONE FOR THE FIRST TEST. THIS TIME, HOWEVER, HE AIRED MORSE CODE ID'S DURING BOTH SEGMENTS OF THE TEST, AND HE WAS REWARDED WITH RECEPTION REPORTS FROM AS FAR EAST AS MISSISSIPPI AND ALABAMA. A NICE QSL CARD WAS SENT OUT TO THOSE WHO REPORTED.

12

MONDAY, DECEMBER 27, 1993 - KQKE-700, SALINAS, CA. A REAL DISAPPOINTMENT HERE. I CALLED PROGRAM DIRECTOR DOUGLAS BROWN ON FRIDAY THE 24TH TO CONFIRM THE TEST, AND HE INFORMED ME THAT HE COULDN'T RUN IT BECAUSE THE STATION HAD CHANGED THEIR SCHEDULE AND NOW SIGNED OFF AT MIDNIGHT (THE TEST WAS ORIGINALLY SCHEDULED FOR 12:30 AM PST, WITH MORSE CODE ID'S INSERTED IN THEIR REGULAR PROGRAMMING). WHEN I EXPLAINED THE REASONS WHY THIS WAS EVEN BETTER FOR RUNNING A TEST, I COULDN'T CONVINCE HIM TO RUN IT ANYWAY (ESPECIALLY SINCE HE HAD GIVEN ME NO TIME TO GET THE WORD OUT THAT IT WOULD BE A NO-SHOW), NOR DID HE FEEL LIKE HE COULD GET SOMEONE ELSE TO RUN IT (HE COULDN'T EVEN VOLUNTEER TO CHECK). ABOUT THE ONLY THING I GOT OUT OF THIS ONE WAS MANY FEEBLE "I MEANT TO CALL YOU EARLIER" REMARKS, AND THE PERSISTENT THOUGHT OF "NO WONDER THE AM RADIO INDUSTRY IS IN THE SHAPE IT'S IN".

SUNDAY, JANUARY 9, 1994 - WSB-750, ATLANTA, GA. DESPITE REPORTS TO THE CONTRARY, THIS TEST DID INDEED RUN, WITH SPECIAL TONES AND VOICE ID'S INSERTED DURING BREAKS IN THEIR REGULAR PROGRAMMING. THERE WERE EVEN A FEW RECEPTION FROM THE WEST COAST REPORTED BY THE STATION.

MONDAY, JANUARY 10, 1994 - KURL-730, BILLINGS, MT. YET ANOTHER TEST FROM A TOUGH STATE FOR US FOLKS IN THE EAST. THIS TEST WAS RUN AT POWER LEVELS OF BOTH 5,000 & 235 WATTS, AND WAS WELL-HEARD THROUGHOUT THE WEST, AS WELL AS FAR EAST AS TENNESSEE, ALABAMA, AND GEORGIA.

MONDAY, JANUARY 10, 1994 - KXED-1540, LOS ANGELES, CA. THIS ONE MADE IT ALL THE WAY TO THE EAST COAST, NO DOUBT DUE TO THE FACT THAT THEY RAN AT 10 KILOWATTS NON-DIRECTIONAL. THE TEST INCLUDED MORSE CODE.

SUNDAY, JANUARY 16, 1994 - KWCO-1560, CHICKASHA, OK. THIS TEST, WHICH WAS A REPEAT OF SEVERAL YEARS AGO, WAS CONDUCTED BY AVID DXER JOHN CARSON. USING DIFFERENT POWER LEVELS OF 1,000, 500, & 250 WATTS, THIS TEST WAS HEARD WITH FAIR TO POOR SIGNALS IN MOST PARTS OF THE COUNTRY.

MONDAY, JANUARY 17, 1994 - WJIB-740, BOSTON, MA. NRC MEMBER BOB BITTNER AGREED TO RUN TWO TESTS FROM HIS STATION. THE FIRST WAS NOT WELL HEARD EXCEPT IN THE NORTHEAST.

MONDAY, JANUARY 17, 1994 - WOC-1420, DAVENPORT, IA. C.E. JON BOOK IS ALWAYS HAPPY TO RUN A DX TEST ON BEHALF OF THE IRCA, AND THIS ONE INCLUDE MORSE CODE, TEST TONES, AND VOICE ID'S. THEIR HAS BEEN INCORRECT INFORMATION PUBLISHED IN SOME DX BULLETINS THAT THIS TEST STARTED LATE AND WAS ON LOW NIGHT POWER AND DIRECTIONAL ANTENNA PATTERN. THIS WAS NOT THE CASE, AS JON INFORMS ME THAT HE USED DAY POWER, NON-DIRECTIONAL PATTERN, AND WAS ABLE TO START THE TEST ON TIME. DON'T BELIEVE ALL THE COMPLAINTS YOU READ, FOLKS.

MONDAY, JANUARY 24, 1994 - WJIB-740, BOSTON, MA. THE SECOND TEST FROM THIS STATION, LIKE THE FIRST, WAS NO WELL HEARD OUTSIDE THE NORTHEAST. A VERY NICE QSL CARD WAS SENT OUT FOR CORRECT REPORTS.

MONDAY, JANUARY 31, 1994 - WFRB-560, FROSTBURG, MD. THIS ONE REALLY PUT IN A POTENT SIGNAL, AND WAS HEARD WELL THROUGHOUT THE EAST AND MIDWEST. DESPITE BEING A RELIABLE VERIE SIGNER IN THE PAST, C.E. ROBERT MAY HAS YET TO ANSWER RECEPTION REPORTS, DESPITE FOLLOWUP REPORTS AND PHONE CALLS FROM YOUR CPC CHAIRMAN.

MONDAY, JANUARY 31, 1994 - KBLG-910, BILLINGS, MT. THIS ONE WAS A REAL SURPRISE! THE DX TEST FROM THIS STATION CONSISTED OF MORSE CODE ID'S INSERTED IN BREAKS IN THEIR TALK PROGRAMMING - AT WHICH TIME THEY WERE ONLY RUNNING ABOUT 68 WATTS OF POWER! WOULD YOU BELIEVE THAT CLEAR RECEPTION OF THE MORSE CODE WAS REPORTED BY DXERS AS FAR AWAY AS TENNESSEE AND ALABAMA? SIMILAR DISTANCES WEST WERE REACHED BY THIS STATION'S SIGNAL. ALSO. 68 WATTS - SIMPLY AMAZING.

MONDAY, JANUARY 31, 1994 - WFAW-940, FORT ATKINSON, WI. THIS STATION TESTED WITH MORSE CODE AND VOICE ID'S, AND WAS NOT WELL HEARD OUTSIDE THE CENTRAL U.S. C.E CLIFFORD GROTH VOLUNTEERED TO RUN DX TESTS ON MANY OTHER STATIONS FOR WHICH HE IS ENGINEER FOR.

THURSDAY, FEBRUARY 3, 1994 - WRDB-1400, REEDSBURG, WI. THE SECOND DX TEST ARRANGED COURTESY OF MR. CLIFFORD GROTH OF WFAW, THIS ONE WAS NOT WELL-HEARD, EITHER.

MONDAY, FEBRUARY 7, 1994 - WHVW-950, HYDE PARK, NY. PIRATE DXERS ARE FAMILIAR WITH THE MAN WHO RAN THIS DX TEST. WHVW'S G.M. ALAN WEINER WAS THE HEAD HONCHO BEHIND THE FAMOUS (OR INFAMOUS) RADIO NEW YORK INTERNATIONAL - THE PIRATE STATION THAT BROADCAST FROM A SHIP ANCHORED OFF THE ATLANTIC COAST DURING THE 80'S, AND WAS RAIDED AND SHUT DOWN BY THE COAST GUARD.

MONDAY, FEBRUARY 7, 1994 - WDMJ-1320, MARQUETTE, MI. YET ANOTHER DX TEST COURTESY OF CLIFFORD GROTH OF WFAW. AND, YET ANOTHER ONE NOT WELL HEARD.

MONDAY, FEBRUARY 7, 1994 - WIAN-1260, ISPEMING, MI. CLIFF GROTH AGAIN, AND NOT WELL HEARD AGAIN.

MONDAY, FEBRUARY 14, 1994 - WGTO-540, OCOEE, FL. THIS IS ANOTHER 50 KILOWATT STATION THAT WAS HEARD COAST TO COAST. SEVERAL DXERS IN CALIFORNIA REPORTED HEARING THEIR MORSE CODE ID'S, AND WERE REWARDED WITH VERIFICATION FROM WHAT FOR THEM IS A TOUGH STATE.

MONDAY, FEBRUARY 14, 1994 - KIEZ-540, SALINAS, CA. DESPITE RUNNING 50 KILOWATTS INTO A NON-DIRECTIONAL L ANTENNA PATTERN, THIS TEST, WHICH INCLUDED MORSE CODE AND TELEPHONE TONES, WAS NOT WELL HEARD EXCEPT IN THE WEST. NO DOUBT DUE TO THE POWERHOUSE MEXICAN, XEWA-540.

SUNDAY, FEBRUARY 20, 1994 - KLER-1300, OROFINO, ID. THIS ONE WAS A NO-SHOW, AND WAS RESCHEDULED FOR MARCH 20TH.

MONDAY, FEBRUARY 21, 1994 - WDLB-1450, MARSHFIELD, WI. CLIFF GROTH STRIKES AGAIN. NOT WELL HEARD OUTSIDE OF THE IMMEDIATE AREA.

MONDAY, FEBRUARY 28, 1994 - WHND-560, MONROE, MI. THIS ONE GOT OUT SURPRISINGLY WELL, DESPITE THE FACT THAT THE STATION DID NOT HAVE A NON-DIRECTIONAL ANTENNA PATTERN CAPABILITY. THE TEST CONSISTED OF MORSE CODE, TONES, AND OLDIES MUSIC. CORRECT REPORTS WERE VERIFIED WITH AN ATTRACTIVE QSL CARD.

MONDAY, FEBRUARY 28, 1994 - WIXN-1460, DIXON, IL. YET ANOTHER DX TEST COURTESY OF CLIFFORD GROTH OF WFAW, THIS ONE GOT OUT WELL WITH ITS MORSE CODE ID'S. DESPITE INFORMATION YOU MAY HAVE READ TO THE CONTRARY, THIS STATION ALWAYS INTENDED TO USE FULL POWER AND DAY PATTERN FOR ITS TEST (AS WAS ARRANGED FROM DAY ONE WITH YOUR CPC WHEN THE TEST WAS SCHEDULED). A NICE FOLDER QSL WAS SENT OUT TO CORRECT REPORTS.

MONDAY, FEBRUARY 28, 1994 - KOVO-960, PROVO, UT. THIS STATION GOT OUT WELL, BEING RECEIVED AS FAR EAST AS ALABAMA, AND AS FAR WEST AS NEW ZEALAND! PROGRAM DIRECTOR BENJAMIN REED, WHO CONDUCTED THE TEST, HAS SHOWN AN INTEREST IN JOINING IRCA.

MONDAY, MARCH 7, 1994 - WIWO-1580, SOUTH BEND, IN. CONFUSION RESULTED AFTER THIS TEST NOTICE SHOWED UP AS AN IRCA TEST AND AN NRC TEST. BACK IN THE SUMMER, IRCA CPC MEMBER LYNN HOLLERMAN BEGAN TALKING WITH OPERATIONS MANAGER MIKE SHANNON ABOUT RUNNING A DX TEST. HE EVENTUALLY AGREED AND A TEST WAS ARRANGED BY PHONE BY YOUR CPC CHAIRMAN IN EARLY DECEMBER. A COUPLE OF MONTHS AFTER, C.E. LARRY HUMPHREY AT WIWO RESPONDED TO AN NRC TEST REQUEST, THUS THE CONFUSION. OH WELL, AT LEAST THE TEST DID RUN, AND WAS WELL HEARD THROUGHOUT THE EASTERN U.S.

MONDAY, MARCH 7, 1994 - KBMR-1130, BISMARCK, ND. ANOTHER 50 KILOWATTER THAT WENT COAST TO COAST (AND BORDER TO BORDER) WITH ITS DX TEST. CE ANDY ANDERSON RAN MORSE CODE, TONES, AND COUNTRY MUSIC. CURIOUSLY, SOME FOLKS RECEIVED QSL LETTERS WHILE OTHERS RECEIVED QSL CARDS.

MONDAY, MARCH 7, 1994 - KVOW-1450, RIVERTON, WY. THIS WAS THE FIRST OF SEVERAL TESTS SCHEDULED FROM THIS STATION. AS PART OF IT'S NORMAL FREQUENCY CHECK, C.E. LONNY FAIRFIELD AGREED TO INCLUDE MORSE CODE AS PART OF THE MODULATION, AND EXTENDED THIS FIRST TEST BY 20 MINUTES FOR THE BENEFIT OF ALL DXERS. NOT WELL HEARD OUTSIDE THE WEST (IT DID MAKE IT TO CALIFORNIA). THIS TEST WAS REPEATED ON MARCH 14TH.

MONDAY, MARCH 7, 1994 - CKX-1150, 2940 BRANDON, MANITOBA. THE SECOND DX TEST FROM THIS STATION, IT INCLUDED COUNTRY MUSIC, TONES, AND MORSE CODE ID'S. DURING THE TEST, CKX SWITCHED BETWEEN IT'S DAY AND NIGHT ANTENNA PATTERNS.

MONDAY, MARCH 14, 1994 - WJIC-1510, SALEM, NJ. THIS ONE TESTED FOR THE NRC SEVERAL YEARS AGO, BUT THIS TIME RAN MORSE CODE AS PART OF IT'S TEST FOR THE IRCA. IT GOT OUT AMAZINGLY WELL THROUGHOUT THE EASTERN U.S. - EVEN WITH POWERHOUSE WLAC IN NASHVILLE GOING STRONG.

MONDAY, MARCH 14, 1994 - KCNN-1590, GRAND FORKS, ND. ANOTHER ONE THAT GOT OUT WELL THROUGHOUT THE EAST. THIS WAS ANOTHER TEST COURTESY OF C.E. JOHN AASEN (WHO DID THE KFJM TEST LISTED ABOVE). PART OF THE TEST WAS CONDUCTED ON NIGHT PATTERN, AND THE TEST INCLUDE MORSE CODE ID'S.

MONDAY, MARCH 14, 1994 - KVOW-1450, RIVERTON, WY. THE SECOND OF KVOW'S DX TESTS IN CONJUNCTION WITH THEIR FREQUENCY CHECK. IT INCLUDED MORSE CODE.

MONDAY, MARCH 14, 1994 - KTMJ-1370, DEER TRAIL, CO. WE HAVE SEEN NO REPORTS OF THIS ONE BEING LOGGED, SO IT WOULD SEEM THAT THIS WAS A NO-SHOW.

SUNDAY, MARCH 20, 1994 - KLER-1300, OROFINO, ID. DITTO HERE, NO REPORTS SEEN OF THIS TEST BEING HEARD. DID ANYONE HEAR IT? A NO-SHOW?

MONDAY, MARCH 21, 1994 - KPSO-1260, FALFURRIAS, TX. THIS TEST INCLUDED TEST TONES AND MARCH MUSIC AND WAS HEARD REASONABLY WELL THROUGHOUT MUCH OF THE EASTERN AND CENTRAL U.S.

MONDAY, MARCH 21, 1994 - WTIV-1230, TITUSVILLE, PA. THIS ONE INCLUDED TEST TONES & MORSE CODE ID'S AND WAS NOT HEARD WELL OUTSIDE ITS GENERAL AREA OF THE COUNTRY, ALTHOUGH ONE REPORT WAS RECEIVED FROM TENNESSEE.

SUNDAY, MARCH 27, 1994 - WCGC-1270, BELMONT, NC. THE SECOND TEST FROM THIS STATION, SIMILAR FORMAT AS THE FIRST. SIMILAR REPORTS OF LARGE NUMBERS OF RECEPTION REPORTS BY C.E. BRUCE MUSSO, AS WELL AS SIMILAR REPORTS OF LARGE QUANTITIES OF QSL CARDS ON HAND TO SEND TO DXERS.

MONDAY, MARCH 28, 1994 - KCVR-1570, STOCKTON, CA. THIS STATION TESTED WITH TONES & MORSE CODE, AND MADE IT TO THE CENTRAL PART OF THE U.S. IN SEVERAL LOCATIONS.

MONDAY, MARCH 28, 1994 - KOAC-550, CORVALLIS, OR. THIS ONE RAN CODE, TONES, AND MARCH MUSIC, AND WAS HEARD SIMILARLY AS WELL AS KCVR.

MONDAY, APRIL 4, 1994 - KCCR-1240, PIERRE, SD. THIS TEST CONSISTED OF MORSE CODE AND BIG BAND MUSIC, AND WAS HEARD SURPRISINGLY WELL THROUGHOUT MUCH OF THE CENTRAL AND MIDWESTERN U.S.

MONDAY, APRIL 4, 1994 - WWOL-780, FOREST CITY, NC. C.E. JULIUS BLANTON OVERSLEPT, SO THIS ONE WAS A NO-SHOW. HE HAS PROMISED A TEST DURING THE '94-'95 SEASON, AT WHICH POINT THEY WILL BE AUTHORIZED FOR A POWER OF 10,000 WATTS.

MONDAY, APRIL 11, 1994 - WQPM-1300, PRINCETON, MN. THIS ONE WAS HEARD WELL IN MANY PART OF THE EASTERN, WESTERN, AND CENTRAL U.S. USING MORSE CODE, TEST TONES AND SONGS ABOUT RADIO, THIS TEST WAS CONDUCTED USING LOW AND HIGH POWER AT DIFFERENT TIMES. A NICE QSL CARD WAS SENT OUT BY MR. CHRIS LONDON - WHO IS A HAM, AN AVID DXER, AND A MEMBER OF BBC'S MONITORING PANEL.

MONDAY, APRIL 11, 1994 - KVOW-1450, RIVERTON, WY. THE THIRD OF KVOW'S DX TEST IN CONJUNCTION WITH THEIR NORMAL FREQUENCY CHECK. THIS ONE INCLUDED MORSE CODE.

SATURDAY, MAY 7, 1994 - WEMR-1460, TUNKHANNOCK, PA. NORMALLY, NO TESTS ARE SCHEDULED AFTER MID-APRIL. HOWEVER, C.E. BOB GRAHAM RESPONDED SAYING THIS IS THE ONLY TIME HE COULD DO IT, BECAUSE IT'S WHEN HE HAS SCHEDULED MAINTENANCE TO DO. WE HAVE SEEN NO REPORTS OF ANYONE RECEIVING THIS TEST (WHICH WAS TO HAVE INCLUDED MORSE CODE AND TEST TONES). DID ANYONE RECEIVE THIS ONE? WAS THIS A NO-SHOW?



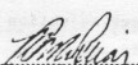
QSL
690 kHz

HCJB
Casilla 17-17-691
Quito, Ecuador

Dear Mark Connelly.....:

This confirms your reception of HCJB on May 27, 1994
at 0515-0519 UTC on 690 kHz mediumwave.
Transmitter power was 50 kw.

Congratulations and 73!


.....
DX Test Coordinator

Andean moonrise over Quito, Ecuador's capital city

HCJB's 690 kHz transmitter is located on the slopes of Pichincha Volcano on Quito's western border.

IRCA Reprints

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

IRCA Reprints, c/o Steve Ratzlaff, 1885 E Bayshore Rd Sp 90, E Palo Alto CA 94303.

Addendum 11 VI 94

The discussions above were written on 3 III 94 and revised on 8 III 94. At about the same time, the work described in the following addendums was begun. At first, the subjects of increasing R8 dynamic range and increasing R8 50 KHz IF image rejection seemed unrelated, and I hesitated to include the two topics together in a single article. But as you will understand by the end of this article, the two apparently different topics are related because the R8 50 KHz IF image rejection mod continued to evolve, and finally interfaced with the R8 increased dynamic range mod 2. I do not know whether a variation of the 50 KHz IF image rejection mod will work stand-alone, i.e., without modifying the 1st 45 MHz IF amp. The original R8 1st 45 MHz IF amp has a higher impedance load (the tuned LC circuit for the J-310 FET), and higher impedance circuits are more prone to RF leakage than lower impedance circuits. My best guess is that the 50 KHz IF image rejection mod would not be as effective if used with the original R8 1st 45 MHz IF amp.

Addendum, 13 III 94

After completing the mods described above, I turned my attention to one of the remaining R8 defects, inadequate image rejection. Several R8 reviewers have rated the typically 80 dB image rejection of the R8 (for the 50 KHz IF) as excellent, but that really is not the case at lower frequencies where there are exceptionally strong signals (in the MW band, and in some of the lower SW bands). A really outstanding receiver, like the R-390A or NRD-525, has 100 dB image rejection in the MW band, and the image rejection tends to fall off slowly as frequency increases. For example, the 455 KHz image rejection of my NRD-525 is about 100 dB for the 580 KHz image of 1490 KHz, about 90 dB for the 1090 KHz image of 2000 KHz, about 86 dB for the 9.090 MHz image of 10.000 MHz, and about 74 dB for the 19.090 MHz image of 20.000 MHz. For my R-390A, the 455 KHz image rejection is in excess of 100 dB at all frequencies, the variable 17.5 - 25 MHz IF image rejection is in excess of 100 dB at all frequencies for which it is used (0.5-8.0 MHz tuning range), and the 2-3 MHz variable IF image rejection varies from 90 dB at 10 MHz to 76 dB at 20 MHz.

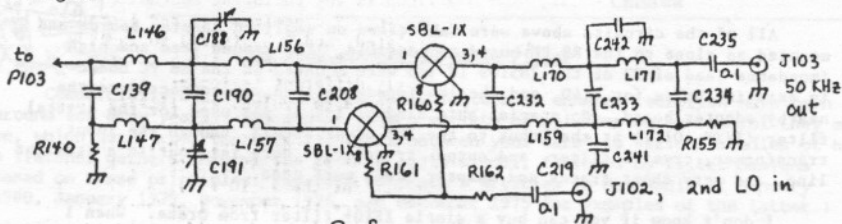
The obvious solution for the inadequate R8 image rejection is to add additional filtering in the 45 MHz 1st IF signal path. But I had tried that before, without success. Eventually it dawned on me to do what I have done before to test for signal leakage when implementing filter mods, break the signal path. And I got lucky and broke the signal path at C176 and C175 (by removing them); with the path broken at this point, the signal was down a mere 40 dB. The indication was that the input circuit of the image reject circuit was acting as an antenna. To test that hypothesis, I removed the input part of the image reject circuit R140, L146, C139, L147, C188, C190, C191, L156, L157, and C208; see the schematic below. With these parts removed, the signal was down in excess of 100 dB. My initial inclination was to rebuild the image reject input circuit in a small RF tight box and reinstall it. Before I started on that project, I decided to remove the remaining parts of the image reject circuit just to see how bad the bare-bones image rejection really was. So I took out R160, R161, R162, C232, L159, L170, C242, C233, C241, L171, L172, C234, and R155, and installed jumpers to enable one of the SBL-1X 2nd mixers.

You can imagine my surprise when the image rejection improved with the image reject circuit removed, to about 90 dB.

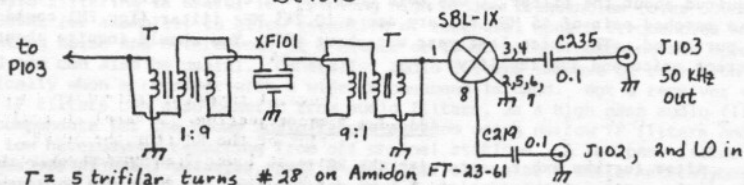
Next, I fabricated a small PC board adapter with two impedance matching transformers and one XF101 45 MHz crystal filter and installed the adapter in some convenient holes formerly occupied by the image reject input circuit. The image rejection went up to just a tad over 100 dB. The completed mod is shown below.

At first I mistakenly concluded that the image reject circuit of the R8 did not work. To test this hypothesis, I removed the image reject circuit from an otherwise unmodified R8 RF PC board which had 80 dB image rejection before removing the image reject circuit. After the circuit was removed, the image rejection dropped to 54 dB. My present hypothesis is that the changes

I made to the 1st mixer diplexer and 1st 45 MHz IF amplifier, as described above, are responsible for the improved 50 KHz image rejection. To test this hypothesis, I will need to implement those changes on this second RF PC board. Unfortunately, at present I am without some of the parts need to do those changes.



Before



After

Unintentionally, two crucial aspects of the image reject mod were omitted from the discussion. I had rewound L128 (the last 45 MHz IF transformer) with 9 3/4 turns #24 close spaced at the bottom (when mounted on the PC board) of the T-30-10(I think) toroid, and I had replaced C174 by a 6-60 pF ceramic trimmer (Mouser 24AA024, modified by trimming off parts of the mounting lugs and reworking the trimmed lugs with an India stone so that the lugs would fit properly in the PC board holes). I discovered these omissions while modifying the "new" PC board. The C174 change is probably not necessary, but the Mouser 24AA024 trimmers seem like higher quality trimmers than those used in the R8. When mounting the trimmer, be sure to mount the "ground" lug in the "ground" PC board hole. Drake production line workers did not seem to pay much attention to details like this; the original C174 was mounted incorrectly.

With the IF amp change, but L128 unchanged, image rejection was improved from about 54 dB to about 66 dB. After L128 was changed as described above, image rejection improved to 80 dB.

The "new" RF PC board I received from Drake was missing the small shield which covers the bottom of the crystal filter XF-101/XF-100. I don't know if this is a production change, or if I was shipped an incomplete RF board. In any case, omission of the shield degrades potential image rejection. I fabricated a similar shield out of copper plate and installed it under tension, without soldering it in place. The image rejection improved to 86 dB.

All of the above image rejection values are without the crystal filter installed at the input to the SBL-1X 2nd mixer. With the additional crystal filter, image rejection was about 100 dB, maybe a tad less.

It would appear that the primary cause of poor R8 image rejection is due to radiation from the high Q inductors of the 45 MHz IF transformers L140 and L128. My mod eliminated L140 altogether. Examination of the PC board in the vicinity of L128 suggests that extending the ground plane under the shield, and using a solid shield (no hole in the top) might improve image rejection further. Also, surrounding the input and output traces of the crystal filter XF-101/XF-100 with ground plane might improve image rejection further, and a more complete shield across the bottom of the filter might also help. This evening I have been eyeing L138, the inductor of the 2nd 45 MHz IF transformer and wondering if rewinding it might further increase image rejection.

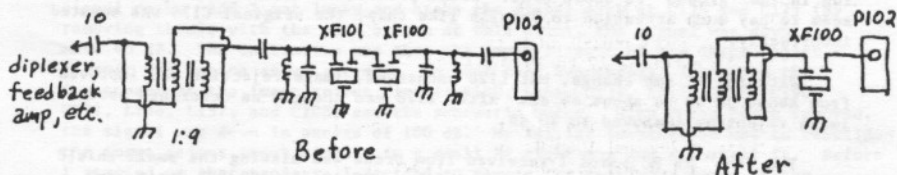
L128 does not actually have to be rewound because it comes with 11 3/4 turns #24, spaced evenly around the entire toroid. You merely remove two turns, adjust the spacing to close-spaced, trim and re-tin the winding ends, and reinstall it.

All of the circuits above were fabricated on small PC adapter boards and mounted as close to the R8 PC board as possible. The ground lead and high impedance lead of T2 of the 2N5109 IF amp were mounted on the R8 PC board in existing holes for L140, and the low impedance lead was connected to the nearby adapter board. No special shielding or layout was used for the crystal filter (T/XF-101/T) at the input to the 2nd mixer SBL-1X, though the input transformer, crystal filter, and output transformer were laid out in a straight line, and very short traces and adapter leads were used.

I don't know if you can buy a single XF101 filter from Drake. When I inquired about the filter, I was told only that a crystal filter set, consisting of a matched pair of 45 MHz filters and a 10.245 MHz filter (for FM) could be purchased. The price last year was about \$25. You should inquire about current price and availability.

Addendum 2 VI 94

After further experiments with the R8 image rejection, and further thought about the nature of the problem, I have decided that the best way to proceed is to remove the undocumented surface mount components associated with the two-filter 45 MHz crystal filter, remove one of the filters, and use the removed filter at the input to the 2nd mixer (after removing the image reject circuit as described above). With this approach, the image rejection is about 100 dB, which is about as good as can be achieved with any of the approaches I tried. This approach obviates buying another 45 MHz filter from Drake. The original two-filter 45 MHz crystal filter circuit in an unmodified R8 simply seems like a bad idea to me because the amount of image rejection from that circuit depends on the geometry of the PC board layout and the geometry of the IF transformer windings, which in turn determines the amount of phase cancellation, and thus the amount of image rejection. If my analysis of the situation is correct, it is a very unsatisfactory situation, and there is no need for two filters where they were used. My present modification to the original 45 MHz crystal filter is shown below.



A DXers TECHNICAL GUIDE

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

IRCA Stationery

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

IRCA Reprints

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

IRCA Reprints, c/o Steve Ratzlaff, 1885 E Bayshore Rd Sp 90, E Palo Alto CA 94303.

18



The Timewave DSP-59 Audio Filter

Commercially available outboard audio filters to enhance reception have been around for many years. There have been a variety of opinions on how useful they may be, which vary from "the best filter is between your ears" to serious studies of how a listener gathers information from an audio signal, followed by filter designs based on these principles. (See Jim Hildreth's articles in Ham Radio of January 1980, January 1979, November 1976, and November 1975 for examples of the latter.)

Audio filtering is useful for removing high or low frequencies (over 3000Hz and under 300Hz for example), to allow retention of essential speech frequencies while eliminating noise and heterodynes of a higher or lower pitch; notching out specific heterodynes can also be useful. Generally, audio filters improve DX reception most dramatically when a receiver with a wide IF passband is used. But a receiver with narrow IF filters can also benefit from audio filters, as a high pass audio filter helps compensate for the boomy audio resulting from using narrow IF filters and reduce low heterodynes resulting from off channel stations. A low pass filter takes the edges off sideband splatter, static or electrical noise. While heterodynes are not normally a problem with selective receivers, it has been noted that notching out a broad range of frequencies around 1 kHz can improve readability of a rough signal; Jim Hildreth's article looks at this phenomenon in more detail. (IRCA reprint T51 includes a good introduction to audio filtering as well as some reviews; it is excerpted from A DXer's Technical Guide).

Presently I am using a homebrew continuously variable frequency (250-1000 Hz) two pole high pass filter in series with an Autek QF-2 which features switchable low pass, notch and peak facilities with continuously variable frequency (250 to 2500 Hz) and selectivity (from flat to 50 Hz). They are used between the receiver detector and its audio output amplifier and are a good example of op-amp based analog technology which was first available to the consumer 20 years ago.

More recently, digital filtering techniques have become available to the radio amateur and SWL/DXer in such units as the Watkins-Johnson HF-1000 (anybody got one yet? A review would be appreciated), and in the Timewave Technology DSP-59 Audio Noise Reduction Filter. Like many other commercial audio filters, it is meant to be used between the speaker output of a receiver or transceiver and the speaker itself, and is powered by external 12 to 16 volts at 1 ampere.

Like earlier filters, the DSP-59 has high and low pass filters, but these are not continuously tuneable. The high pass filter has eight selectable cutoff frequencies between 200 and 1500 Hz, while the low pass filter has eight cutoff frequencies between 1.8 and 4.2 kHz. Two rotary switches control the selection of cutoff frequencies. In addition, there is a bandpass function which provides 8 center frequencies between 400 and 2210 Hz with 8 selectable passbands between 50 and 600 Hz, primarily intended for CW and RTTY reception. All of these filters have a very sharp roll-off outside their passbands: 60 dB attenuation within 180 Hz of any of the low pass filter cutoff frequencies, somewhat less attenuation with high pass filters, while the bandpass filters have somewhat better out of band attenuation than the low pass filters.

In digital filters, an incoming analog signal is sampled and converted to its digital equivalent at fixed and frequent time intervals. The filters described above are "finite impulse response" (FIR) filters which are essentially computer programs that process the most recent digital information along with other digital information from previous analog to digital conversions. The modified digital signal is then converted back to an analog signal which makes sense to our ears. A primary advantage of this sort of filtering is that extremely sharp roll-offs past the cutoff frequency are possible without the "ringing" sound associated with sharp analog filters.

The DSP-59 has two functions called "Random Noise Reduction" and "Tone Noise Reduction". These are quite different from anything found in analog filtering. In the manual, they are explained in the following terms:

"The noise reduction functions of the DSP-59 operate by examining a characteristic of signals and noise called correlation, and dynamically filtering out the undesired signals and noise. The degree of correlation is relative. Random noise such as white noise or static is uncorrelated. Speech is moderately correlated. Repetitive noise such as a heterodyne is highly correlated. The DSP-59 measures correlation and filters out signals and noise that are outside its correlation thresholds. There is little degradation of the desired speech signal. The amount of noise reduction varies according to the correlation characteristics of the noise. Typical noise reduction ranges for 5 DB to 20 dB for random noise and up to 50 dB for heterodynes."

Although the manual doesn't go into great detail, it seems that in the Random Noise setting, samples of digital data which have no similarity (correlation) to previous samples are eliminated, while in the Tone Noise Reduction setting, digital samples which are identical to previous samples are eliminated. In both random noise and tone noise settings, "aggressiveness" of the noise filter is controlled in eight steps; in the more aggressive setting, it seems that more signal is thrown away in trying to eliminate the interference. These settings also include a variable low pass and a fixed high-pass of 200 or 300 Hz.

The first noise reduction setting "C/LP NRT" allows control of the "aggressiveness" of the tone elimination circuitry but includes a fixed "aggressiveness" of random noise reduction as well as variable low pass filter. The second setting "C/LP NRT" has fixed tone reduction "aggressiveness" and variable random noise reduction "aggressiveness". The third noise reduction setting allows for variable high pass/low pass filtering with a fixed "aggressiveness" random noise reduction filter.

So, how does it sound? I compared this unit with my filter set-up described above, and fed each filter with signals from my SONY ICF-2010 and from my homebrew receiver (described in IRCA reprint M39).

Heterodyne reduction:

I created a het on a signal on 1490 kHz by tuning a portable radio to around (1490 - 455 kHz) 1055 kHz and moving it towards my loop antenna until the het on my homebrew receiver started to distort audio recovery of the desired signal. With both a 500 Hz and a 2000 Hz heterodyne generated using this method, the DSP-59 gave a marginally better sounding signal with no sign of a heterodyne and minimal apparent distortion of the desired signal. This was using the C/LP NRT setting with a correlation setting of 2 ("more aggressive"). The QF-2 gave a somewhat more "woolly" sounding desired signal, but the hets could also be reduced to inaudibility. The best method of heterodyne elimination was detuning the receiver so that the het was outside the IF filter passband, or by using exalted carrier techniques to demodulate the sideband unaffected by the heterodyne.

The low pass filter without noise filtering also worked very well (i.e. very sharp, with minimal ringing) at removing high frequency heterodynes (over 1.8 kHz), but this was only observed using the 2010 in its wide AM position. The IF filters in the homebrew receiver mean that heterodynes much above 2.2 kHz are not a problem, so the low pass filter is not really needed for heterodyne reduction.

The high pass filter is specified as not being as sharp as the low-pass, and without the noise reduction in place, it was necessary to place this filter in its 500 Hz position to eliminate a 200 Hz het. It still did a better job of eliminating the het than my homebrew highpass filter did.

Noise reduction:

I wanted to try this filter on electrical noise, sideband splatter and on static crashes. Using the QF-2 in its low-pass mode along with my high pass filter is my usual method of dealing with these irritations, but the filters just make my listening less fatiguing; they don't make the desired signal more readable. Listening to a splatter or noise plagued signal using the DSP-59 in its HP/LP NR

(with the fixed random noise filter) and its C/LP NRtr (with the adjustable random noise filter) settings gave similar results to my present setup. For some reason, the straight low-pass/high pass filter was quite harsh sounding, as if the 1.8 kHz low-pass was not low enough (yet I know it was accurate due to my earlier heterodyne testing); the same harsh sound was noted on the C/LP NRtr setting. These settings were not as pleasant to listen to as my own filters were.

On some types of buzzy electrical noise, the DSP-59 made the signal more readable when the HP/LP NRr or C/LP NRT settings were used, as the noise was virtually eliminated from the audio output. However, the C/LP NRtr setting was better for reducing the intensity of static crashes on MW and on the 75 meter amateur phone band.

Other features:

I found the bandpass filter very useful in receiving multiple CW signals, especially when using the ICF-2010 with its relatively broad (for CW reception) narrow IF filter. Signals could be picked out by setting the DSP-59 to a 400 Hz center frequency with a 200 Hz passband (or less), setting the 2010 to LSB/CW and slowly tuning it. The signals just popped out, then disappeared with the next tuning step. The bandpass filter can also be used in this way to DX longwave beacons. By slowly tuning the receiver (with its BFO on) and using a fixed setting of the DSP-59's bandpass filter, one can hear the beacon's sideband (which contains its ID) pop up then disappear.

Such techniques are not as straightforward on the QF-2/high-pass combo, and the QF-2 is prone to much more ringing than the DSP-59 when its selectivity is tight.

Further comments and conclusions:

The DSP-59 has a red LED indicator on the front to tell you if its audio input is overloading the unit. One should keep an eye on this as it is necessary to limit the input amplitude to allow the unit to work properly. Actually, this is also true of analog filters, but they don't often have the warning indicator.

The bypass setting of this unit does not appear to be a true bypass. Instead, it appears to perform an analog to digital conversion on the signal, and then convert it back to analog without any further processing. Although I didn't find the audio output too much different from the input when using the bypass setting, it may be a cause for concern. If filtering isn't needed, it's probably best to process any signal as little as possible to retain readability.

I found that the DSP-59 made DXing rather more comfortable for me than my present audio filter does, especially when the signal was bothered by certain kinds of electrical noise and splatter. However, it did not dig out any identifications from anything previously unreadable. I'm not sure that any audio filter would do that when one is already using a receiver with reasonable IF selectivity and demodulation options.

The DSP-59 (which was priced in the US\$200 range) has recently been superseded by the DSP-59+, but may be still available at some dealers, and will likely appear on the second hand market. The DSP-59+ costs more than the DSP-59 did and uses a new algorithm for het removal, and has many more bandwidths available as well as sharper CW bandwidths. Further information can be obtained about this and the US\$99 upgrade of the DSP-59 to the 59+ from Timewave Technology Inc., 2401 Pilot Knob Road, St. Paul, MN 55120 (phone 612 452 5939). Distributors include Ham Radio Outlet, Amateur Equipment Supply and Texas Towers.

(Thanks to George Chase, W7DCH, for the use of his Timewave DSP-59)

IRCA Stationery

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

21

Mini-DXpeditions

Mark Connelly - W110N
19 JUL 1994

Much has been written about large-scale DXpeditions involving several DXers, miles of wire, numerous receivers, and around-the-clock activities running for a weekend or longer. These are the grand efforts of which DX legend is made. Over the years, I've been involved in some big DXpeditions with guys like Neil Kazaross, Jean Burnell, and Bruce Conti. Valuable guidance for the serious DXpeditioner is given by Shawn Axelrod's fine discussion in the NRC DXpedition Handbook and by Nick Hall-Patch's compendium in Proceedings 1990.

Mini-DXpeditions, as the name implies, are smaller scale efforts not usually requiring an overnight stay or more than two operators. These shorter efforts can still be quite rewarding. Some of us have discovered worthwhile DXing locations not far from our homes or workplaces. Just getting a bit farther from pesty local stations or noisy power lines can help DXing considerably. Signal strengths are greater in locations having a view of the horizon not blocked by buildings, mountains, and other obstructions. Seaside locations are the best at medium and low frequencies because of both the high ground conductivity and a clear horizon. Mountaintop sites are good, especially on HF, VHF, and above. Flat, open farmland and lakeshores also have merit.

For medium-wave DXing, the simplest DXpedition can be taking some loggings on the car radio for an hour or so while parked at an advantageous site. Certain DXers' drivetime loggings (e.g. Marc DeLorenzo in the Hyundai) have become a regular feature in the DX magazines because some cannot DX effectively from RF-noise-riddled urban apartments having no space for outdoor antennas.

Besides the car radio (with an accurate clock), the only other equipment you might need on the simplest mini-DXpeditions is a logbook, reference materials, a pen, and a flashlight. Car radios are usually quite sensitive. Newer models are synthesizer tuned. This is an advantage because accurate frequency readout is provided, but channelized radios make tuning in foreign split stations more difficult. Some car radios are harder to tune onto weak-station frequencies because of the way the scanning functions work. Still, for many domestic DXers, the car radio will be the receiver of choice.

Unlike a full-blown DXpedition often requiring a substantial expenditure and time away from work and home duties, a mini-DXpedition can be "squeezed in" between leaving work and having dinner, or between dinner and bedtime. Sometimes these outings can be very impromptu, based upon hearing something unusual during a homeward commute. More than once, when I worked in downtown Boston, the sound of loud African heterodynes on the car radio around 5 PM EST (2200 UTC) in winter made me detour to the waterfront for an hour or so of listening before heading home.

Beyond the Car Radio ...

The next step up from car radios on mini-DXpeditions is the portable receiver. Inside of a parked vehicle (the customary mini-DXpedition operating position), a portable receiver will only get powerhouse locals. The vehicle's metal surrounding the receiver eliminates everything else.

Few portable radios are sensitive enough on their built-in antennas even when operated outdoors, let alone inside a car. An external antenna, therefore, is necessary. The whip antenna that connects to the car radio is a high-impedance source that will not operate properly into the low-impedance external antenna inputs of portable receivers. If the car whip is to be used, it must be fed to a high-gain, high-Q tunable amplifier with an input impedance similar to the high impedance (LC tank / FET gate) of the car radio; such an amplifier would have a low-impedance (50 to 75 ohm typical) output. The "MWT" and "APT" regenerative tuners described in various NRC / IRCA reprints can provide this function.

A broadband active whip such as the MFJ 1024, powerable from the car's 12 VDC supply or from a battery pack, could be used for fast and easy scanning in areas not having strong local stations. The whip should be roof-mounted for best results.

22

A tunable antenna is always preferable, in terms of signal-to-noise and overload immunity, to a broadband active antenna. The MFJ 1024 can be modified for varactor-tuned operation: see the NRC / IRCA reprint about "RTU-1". You'll need to tune your active whip to prevent spurious responses at urban and suburban sites.

Most medium-wave DXers use loops and prefer them to any other compact antenna. Obviously, the ability to null and peak different stations and the overload immunity afforded by a high-Q tuned source make loop use desirable. A large air-core loop is probably too cumbersome for most mini-DXpeditions. Small ferrite loops like the Quantum, the SM-2, and the Radio West Loop are recommended. You've got to be able to tune the loop - located (usually) on the car's roof - while you tune the receiver inside the car. This can be done if you reach out the car window to adjust a loop positioned on the roof immediately adjacent to the window. A remotely-tuned loop (e.g. RTL-2) is better than a conventional loop because the only need to reach outside the car is to turn the loophead occasionally.

It is advisable to find a way to mount the loop base securely to the edge of the roof. More than once, a ferrite loop has been dislodged from a car roof by a gust of wind at a beach DXpedition site. This can be hazardous to your loop's health and to your sanity! Take a plastic bag to cover loops and active whips during rain; a rigid plastic radome-like cover might even be better.

Beyond the figure-of-eight pattern possible with loop usage, cardioid (single-null) patterns can be generated by phasing a remotely-tuned loop versus a remotely-tuned whip of comparable gain. Or, two remotely-tuned loops at a right angle can be phased. My RTL-2 and DCP-1 articles cover this in detail.

Up to now, I've been talking about antennas which can be mounted on the vehicle. Sometimes, longwires can be put up at a mini-DXpedition site. These can be phased for more directivity and run through tunable preamplifiers for higher gain and sharper tuning. Installation of such wires can produce different - sometimes better - DX than can be heard using car-mounted loops and active whips. One drawback is that wires must be rolled up at the end of the DXing session. Another disadvantage to wires is that if your site has substantial pedestrian, bicycle, or vehicular traffic, your wires may be pulled up by someone (accidentally or on purpose). Wires can attract the attention of police and can be a safety hazard. Antennas mounted on a vehicle do not slow you down when some circumstance - bad weather, police, bears, gangs of hooligans, or whatever - demands that you get away from the site quickly. Think about it before stringing out Beverages at a site whose potential dangers are not fully known. Here in the urbanized Northeast, few mini-DXpedition sites have enough room for big antennas anyway. You'll run into buildings, water, fences, other cars, powerlines, roads, or something else within a relatively short distance of most of the desirable shore sites.

I find that two insulated stranded wires of about 40 m / 130 ft. each, run at a right angle to each other and fed through an amplified phasing unit, give good results and can be rolled in quickly when it's time to leave. Still, if you're in the busy parking lot of a beach or seaside restaurant, forget the wires.

On the subject of receivers, there are many portables which will perform very well when operated with a good loop or tuned active whip. I have used the Sony ICF-2010 (2001D), the Realistic DX-440 (Sangean ATS-803A), and the Realistic DX-392 (Sangean ATS-818CS) with good results. The Sony has the edge in selectivity over the others because it was modified by Gerry Thomas for narrower filters. A regenerative loop (Kiwa or Martens) or a regenerative preselector such as MWT-3 can improve selectivity of portables to the point of being comparable to that of moderately-priced tabletop communications receivers.

The Realistic / Sangean models, while fairly insensitive on their built-in antennas, work like champs when hooked to a Quantum loop or to a regenerative wire / whip preselector. The DX-392 (ATS-818CS) has the advantage of a built-in cassette deck. You'll want to tape the excellent DX coming in at a good DXpedition site, especially during a wild aurora or other unusual conditions. Taping the jumping between a difficult medium-wave catch such as Lesotho - 1197 and an easy shortwave parallel like 5975 can make for interesting "show and tell" at the next DX get-together. Dealing with a separate cassette deck, patchcords, etc. can get a bit clumsy in the limited space / limited light environment of a car at a DX site. (Vans and campers give more operating room, but at a stiff price compared to compact cars.)

23

Portables often have "wimpy" external antenna jacks that are prone to wearing out much sooner than the rugged BNC and UHF (SO-239) connectors typically found on "serious" receivers. Think about modifying your portable's external antenna input connector for longer life.

When you want to "do it right", use a "real" communications receiver that is powerable from 12 VDC. I'm talking about the Drake, JRC, Icom, Yaesu, Lowe, and Kenwood radios customarily used for serious DXing. Obviously you will do much better on weak stations and foreign splits by using such a receiver instead of a compromise portable. The drawbacks are increased power consumption and the added room such a receiver takes up. The new battery-operable Drake SW8 promises to bridge the performance gap between portables such as the Sony ICF-2010 and tabletop receivers such as the R8 and NRD-535.

Other hints

Start the car up about every 30 to 60 minutes if you're running receivers, preamplifiers, etc. from its battery. Run the engine for 5 or more minutes each time. In winter, you'll want to do this to get some heat as well as to recharge the battery. Use a separate flashlight or lantern rather than a light drawing power from the car battery. I learned this the hard way a few years ago when I "croaked" the car battery during a cold winter outing to Swampscott, MA. It took more than an hour to find someone for a jump-start. You don't want this to happen!

Do dry runs of mini-DXpeditioning from the driveway at your home location to figure out optimal placements of receivers, tapedecks, books, lanterns, antenna tuners, patchcables / antenna lead-ins, etc. Determine the most efficient, most comfortable set-up. Also, at home, if you decide you need another book, tool, adapter, or patchcable, it's right there inside your house or apartment. If you left a necessary item at home and you're parked out on a pier more than an hour's drive away, it's "tough luck Charlie".

Take back-up batteries and a small back-up receiver (e. g. Realistic DX-380) to prevent dead batteries or a receiver malfunction from wrecking the whole effort. If your travel time to the site from your normal home (or work) location is over an hour, this is especially important.

Mark's Mini-DXpedition Items: A Check-List

NOTES: This list is written with single- or dual-operator car-based medium-wave mini-DXpeditions in the US and Canada in mind. It can be adapted for operation on other bands, other locales, etc. One to five hours of actual DXing time is typical. Items - such as tools, cables, and books - that are not sensitive to heat and cold can be stored in the car on a permanent basis.

*** BARE ESSENTIALS ***

- * portable receiver (e. g. Sony ICF-2010) with batteries and / or car cigarette lighter adapter
- * ferrite loop (RTL-2 base with Quantum head, or equivalent)
- * whip with BNC plug (for use of RTL-2 as active whip)
- * regenerative preselector / remote loop controller (MWT-3)
- * cables to connect RTL-2 to MWT-3, MWT-3 to receiver
- * kit of between-series coaxial adapters (BNC, UHF, RCA, N, SMA, F, stereo & mono phone & mini-phone)
- * 12 VDC power cord for loop / preselector, etc.
- * logbook, hit lists
- * World Radio-TV Handbook
- * NRC Domestic Log
- * flashlight or lantern
- * pens, pencils
- * rolls of wire (two about 40 m / 130 ft.; one or more over 250 m / 820 ft.)
- * toolbox with common tools (screwdrivers, socket set, knives, cutters, pliers, wrenches, 12 V soldering pencil, solder, electrical tape, hammer, etc.)
- * clock or watch set to UTC (GMT)
- * single lighter plug to 2 (or more) jack car power adapter
- * extra batteries as deemed necessary
- * clip leads (alligator, 'Easy Hooks', etc.)
- * rugged storage case(s) for the above items

*** ADDITIONAL ITEMS WELL WORTH HAVING ***

- * small portable cassette recorder, blank cassettes
- * amplified two-wire phasing unit (e. g. MWDX-5)
- * second RTL-2 loop and a DCP-1 controller for loop-vs.-loop, loop-vs.-whip cardioid pattern generation
- * small back-up receiver (e. g. Realistic DX-380) (should also have digital readout)
- * 2-meter ham transmitter, CB, or cellular phone for emergency communication
- * pocket digital multimeter
- * batteries, interconnecting cables (power/AF/RF) as required for the above

- * headphones
- * recent copies of DX Monitor and other hobby bulletins
- * supplemental station lists (EBU List, Newfoundland DXpedition Logs, LF Beacon Guide, etc.)
- * VRC directional pattern book
- * compass
- * sunrise / sunset maps or tables
- * great-circle map or bearing / distance tables that are fairly accurate for the DXpedition QTH
- * US / Canada road atlas
- * world atlas
- * topographical map of local area, aeronautical charts showing tower sites and beacon freq's
- * Spanish / English and other language dictionaries as needed
- * lunchbox with sandwiches, snacks, soda / fruit juice; thermos with coffee or tea
- * bow & arrows, fishing line, thin & thick nylon rope for launching antennas into trees
- * insect repellent for summer DXpeditions
- * matching / noise-reducing transformers for wire antennas

*** WHEN YOU REALLY WANT TO GO NUTS ***

- * separate deep-cycle (marine-type) battery
- * communications receiver (e. g. Drake R8)
- * spare fuses for communications receiver
- * VCR for up to 6 hours of taping DX audio or for experiments with direct taping of RF
- * 12 VDC to 115 VAC converter if needed; AC extension cords / power strips / adapters
- * laptop computer for checking previous logs and geographical data, and for taking notes
- * ground rods, termination resistors for Beverages
- * special protective clothing, boots, gloves as required for wet / rough terrain, harsh weather
- * folding tables, chairs for outdoor set-ups

Business / Vacation Trip Mini-DXpeditions

When you have to travel by air to get to your destination, instead of driving your own car, you must be more selective in terms of items taken. This is especially so if DXing is to be a spare-time pursuit rather than the focus of the trip. The check-list can be customized accordingly. A radio, a small loop, the logbook, and the WRTH might be all you can pack ... Better than nothing at all.

For foreign travel, power adapters may be required. Having receipts proving where equipment was bought is advisable. Bring magazine or newspaper articles explaining the hobby. This can help to prove that you aren't a spy or smuggler. Think about customs restrictions at both ends of your trip. Talk to those who have visited a given area. Find out what DX is like there and if there any DXers living nearby. Learn about local laws, possibly-useful sites, and any special problems (weather, insect pests, high crime, etc.).

Conclusions

Really interesting DX can often be heard in a few hours at a choice location within a reasonable drive of home. On DXpeditions to Granite Pier in Rockport, MA and other coastal sites in New England and eastern Canada, upwards of 30 countries have been logged on medium-wave in a 2 or 3 hour stretch starting at sunset. Similar results have been obtained by DXers in Florida during short sessions. Brief pre-dawn operations from the Pacific Northwest have resulted in rapid-fire logs of stations from Australia, New Zealand, Japan, and many other countries.

One thing mini-DXpeditions prove is that it doesn't take a huge investment of time or money to "spice up" your DX life.

25

LOS ANGELES RADIO GUIDE

- Steve Mittman

A new magazine has just popped up in the Los Angeles area which focuses on the market's radio happenings. Entitled "Los Angeles Radio Guide," the bi-monthly magazine is sort of a "TV Guide" for radio: It has a slick color cover photo; is packed filled with great articles, interviews, and photos; and provides a detailed hour-by-hour, station-by-station, log of local radio programming. [Some of you might recall that a similar magazine appeared in Los Angeles a few years back. That venture went belly-up after only 3 or 4 issues.]

The premiere issue, Volume 1, Number 1, dated June/July 1994, features as its cover story the new Tom Leykis national Westwood One radio show, which originates from the studios of the new 710 Talk (KMPC) in Los Angeles. The cover photo shows Leykis standing at his mike and console; and the accompanying article is entitled, "Leykis on a Mission: Brazen KMPC Superstar Aims to Wipe Out KFI's John and Ken." The article details Leykis' radio career, beginning in 1970 at the age of 14 at a Long Island radio station, how he worked his way to Phoenix, where he brought KFYZ from 31st to 9th in two years, and then to his finally arriving at KFI in Los Angeles when the station went all-talk on July 10, 1988. In 1992, Leykis was suddenly fired, and replaced by the John and Ken team. And now, Leykis is back, getting his revenge on (as Leykis says) "KKK-FI," by not only directly competing with John and Ken, but by now being heard coast to coast. Incidentally, the article was written by Richard Wagoner, a name DXM readers might recognize. Wagoner writes a weekly radio column which appears in many Los Angeles area newspapers, and from time to time some of them have been reprinted in the DXM.

Other articles featured in the premiere issue include: "KMPC Armed for Talk Wars," which details its recent purchase by KABC-790, and its plans to tackle KFI; "KFI Not to be Underestimated," which mentions that KFI is #1 in both Orange Co. and the Riverside/San Bernardino area, and even does better in San Diego than many San Diego stations!; "Sports Shorts," which takes a look at XTRA Sports 690; "AM Band to Expand," which examines the FCC's recently scaled-back plan to allow radio stations to broadcast in the 1605 to 1705 kHz. spectrum; "The Return of Radio's Golden Age," which takes a look at old time radio shows, and which are heard nightly on KJOI-540/1260 and KNX-1070; "KFI's Dr. Laura Schlessinger," a psychologist whose program has just gone national; "Karl Haas Spins Tales of Music," a classical music program host on KUSC-91.5; "710 Talk Hopefuls Test Their Skills," a photo-article about KMPC's over-the-air auditions for talk show hosts its first week on the air; "Dead-icated: Two Stations Cater to Grateful Dead Fans," about two nationally syndicated Grateful Dead programs heard locally on two FM stations; "Brian's Birthday Bash," a photo-article featuring KLOS-95.5's Mark and Brian, a morning team carried nationally; and "Interplay of Radio and Listeners in Quake," which examines the roles played by KFI, KFNB, and KABC during the January 17, 1994 earthquake.

Also included in the magazine is a listing of sports on the air; a readers' survey; an Arbitron Ratings listing; local telephone numbers; a complete format listing of all area stations; classified ads; and radio station ads.

But now here's the clincher...! As per a recent Tom Leykis show, you can obtain a FREE sample issue by calling: 1 (800) 681-7637! Leave your name and address. (The second issue is due out in August, but I recommend asking for their first issue if any are still left.) And while you're at it, tell them you heard about them through the IRCA!

26

SONY SRF-42 AM STEREO WALKMAN

FRANK ADEN, JR., N7SOK, 4096 MARCIA PLACE, BOISE ID 83704
208-377-5346

The Sony SRF 42 is a recently issued (December 93) AM Stereo radio that I believe is the only AM stereo (C-QUAM) currently available to the public.

When I first heard that such a radio was on the market I called over 20 different Sony offices in North America before I was able to confirm the radio did exist and where I could obtain one. I suspect this radio is going to be a marketing failure if Sony does not make it easier to find. It seems they are limiting the number of locations where it can be bought which I feel is a major mistake. Sony does have a new magazine (around \$5.00, found in most larger book stores) which is just a glorified catalog and it does list this radio.

I found it available at the NW SONY ONLY STORE in Portland OR. Address: 1610 NW Glisan, Portland OR 97209, Phone #: 503-224-9400. They will take credit card orders via the phone. They quoted me a price of only \$29.00 (but charged me only \$28.00), list price is 34.95.

The radio is small, a little larger than the Sony SRF-39, about 4.5" by 2.75" and about .5" wide. Band coverage is 530-1710 khz plus 87.6-108 Mhz FM. The SRF-42 uses a small ferrite loopstick AM antenna, typical of most walkman type radios. Selectivity and sensitivity is about average for a walkman radio. With careful tuning I can pick out many of the AM Stereo stations heard in this area. Sound quality is quite good, listening to KBOI 670 with their 40% stereo separation sounds almost as good as listening to FM. When tuned to distant AM stereo stations the usual "platforming" distortion can be noticed especially when moving the antenna (radio) around.

The only complaint I have with this radio is when the volume control is set at minimum it still puts out a moderate level.

The SRF-42 runs off 2 AA batteries. It has no external port jack. Battery life is listed as 48 hours for FM and 40 hours for AM. I have already exceeded that with my first set of batteries so it does not appear to be a problem compared to that of the Sony AM stereo radio which was available several years ago.

Hooking up an outboard loop antenna (via headphone jack) makes the radio fun to tune around with, looking for AM Stereo signals. Also hooking the SRF-42 up to a stereo system can also be a pleasant surprise if a strong AM stereo signal is available.

For its price the SONY SRF-42 is a bargain if you want an AM Stereo radio. As expected this is not a "DX" machine but it can provide for some interesting AM Stereo DXing.



27

SOME THOUGHTS ON THE YAESU FRG-100
BY RANDY STEWART

First, a disclaimer: I am not particularly "technically" inclined; I have no test equipment; therefore, I am not in a position to give you a comprehensive breakdown on the FRG-100's circuit features and specs. Also, space precludes going into a long, detailed description of the rig's operating procedures. For that, I recommend reading the various published reviews mentioned below. I just wanted to pass along some impressions of this radio gained after several months of nearly daily use on both MW and SW, with some limited LW listening (limited by my local noise problems, and the fact that my Sanserino loop only tunes down to about 480 kHz).

"TOO GOOD TO BE TRUE!!" I'm sure we've all uttered (and muttered) that many times in response to advance publicity for the "next great communications receiver" to hit the market. The Yaesu FRG-100 is no exception in inspiring a healthy skepticism. Here, for around \$600 (latest list price \$668) is a high-performance "entry level" communications rx offering AM/CW SSB and (optional) N3FM, with 50 kHz-30 MHz coverage; three IF bandwidths (nominally 6, 4 and 2.4 kHz), noise blanker, adjustable (but *non-defeatable*) AGC, two attenuators (but *no RF gain* control); two clocks; timers and other full programming functions; 50 tunable memories; frequency display down to 10 Hz in sideband mode, etc. And all this in a compact 9.5 x 11 x 4.25" box. "They've gotta be kidding!"

They weren't kidding. Now, *no* receiver is "perfect," and the FRG-100 is no exception; it has engendered a certain amount of controversy in the hobby press. The initial published review that I saw, in the 1993 World Radio-TV Handbook, was full of praise but also suggested the bandwidths out-of-the-box were rather wider than the nominal figures. Larry Magne, in Monitoring Times May 1993, didn't just *suggest* as much; he *pounced*, complaining bitterly about the "dreadful" bandwidths... the 6 kHz filter actually measured 7.6; worse, the 4-kHz "AM Narrow" filter was more like 6.9! The SSB filter was fine, but of course muffled the audio in AM mode. Magne expanded on his criticisms in a long review published in the 1994 Passport to World Band Radio (though he eventually gave the rig 3 1/2 stars out of five!). He noted that several distributors were offering aftermarket IF-filter mods, but seemed dubious that Yaesu itself would ever do anything about the problem.

Enter the ARRL's resident SWL Dave Newkirk, whose review in the January 1994 QSI is highly recommended reading for anyone interested in this radio. Newkirk's response to Larry Magne was "Eh? Can we be talking about the same radio?" Newkirk noted that Yaesu *had* indeed improved the 4-kHz filter in later production runs... Magne eventually reported the same in February 1994 Monitoring Times, even offering a "tip of the hat" to Yaesu for "cleaning up the problem." Now, this all came to light *after* my wife had ordered *my* FRG-100 for Christmas last December, and I had her get me EEB's "High-Performance Mod" package consisting of a Collins 6-kHz mechanical filter and a heavy-duty 15-pole 4 kHz ceramic. For \$699 (including full bench test and "burn-in") it still seemed like a really good deal. Of course, this means I *cannot* comment on the "stock" 6 & 4 kc filters. But at any rate, Yaesu did listen to the initial complaints and respond.

I was attracted to this radio precisely because of its mouthwatering combination of reasonable price and multitude of features. Yes, I would've liked a Drake R-8, but I (and my wife, hi!) couldn't justify the additional \$270 cost for the Drake features lacking on the little Yaesu: synchronous detection, a keypad, notch filter, etc.

So... I've kept you waiting long enough. *Do I like the FRG-100?* Yes, very much. Is it a worthy performer on medium wave? Yes... but you do need a good loop or other high-performance antenna. Here are some general observations. It's a fairly complex rig, and the small size is no doubt responsible for the front-panel pushbuttons all performing multiple functions (many of which are "Power-Up", i.e. you hold down a certain key while pressing the "Cn" button). Luckily, the manual is extremely well-written, and there's even a plastic command-function card for quick n'easy reference--it slips into a holder on the rig's bottom cover. Learning all the important functions is pretty easy, but you can always refer to the manual or the card if you forget. There's no keypad, but I don't miss it (never had a radio with one, anyway!); the 50 memory positions can serve as a sort of quick "band-switching" system by programming band ends/key frequencies etc., so you can move around the MW and SW bands very quickly for checking parallels etc. The memories are tunable, so you can dial up a frequency from memory and start tuning from there. There are numerous scanning features (memory, band, priority and channel-group), but I personally have no use for them. The nominal IF bandwidths for each mode are changeable--you can use the SSB filter in AM mode or the wider AM filters in sideband. The VFO is rock-solid stable. Image rejection seems very good. Headphone output is nominally 8 ohms, but it drives my higher-impedance Sennheiser stereophones moderately well. The built-in top-panel speaker is pretty wimpy, as is usually the case these days; I use an old Radio Shack Minimus 0.5 outdoor speaker. There's also a tape output jack on the back, along with both spring-clip and coax antenna connections. One strange thing in the microprocessor: the display shows "2.7" rather than "2.4" when you switch in the SSB IF filter. The manual even mentions it--but doesn't explain *why*. No matter, since the filter actually does measure closer to 2.7 kHz anyway!

The 10-Hz tuning step in sideband mode isn't always quite tight enough to allow one to listen to AM signals in "ECSS" mode (or whatever you wish to call it--"non-synchronous heterodyne detection"?) using the 4 or 6-kc filters--not without at least a couple of "zero-beat" pulses per second. As I said, there's no synchronous detection. However, it's smotheringly effective using the 2.4 (.7?) kHz bw. But then, even in AM wide mode this radio *ain't* "hi-fi." Yaesu has *ruthlessly* rolled off the audio highs--I'd estimate 4 to 5 kHz is the *absolute* top end.

MINOR ANNOYANCES: No RF gain control, though the two attenuators (-6 and -12 db) can be used singly or in tandem to give you three levels of attenuation (the third one being -18, of course). You can't switch off the AGC--there's "SLOW" or "FAST", but you can't defeat it. The AGC-attack response times seem pretty good, though. I really do miss having a notch filter... selectable-sideband *won't* always get you away from hets in really crowded situations on SW (i.e. where there are several stations less than 4 or 5 kc apart).

For the most part, selectable-sideband is great for DXing. For instance, on MW I can cleanly separate the Colombian on 1100.3 from 1100 domestics in USB (it's audible virtually every night). And when the Saudi on 1521 was booming in here earlier this year, it was nothing but a loud i-kc het obliterating 1520 in AM mode; in USB I got clean, readable (if slightly muddy) audio most of the time. There's no built-in preamp in the FRG-100, but sensitivity is really hot on SW and *almost* as good on MW--certainly hotter than my Realistic TRF. I live in an electrically noisy area so I can't make *extremely* fine distinctions in weak-signal reception, at least on SW with a random-length wire. But my amplified Sanserino box loop provides all the gain I'll probably ever need on MW (and, needless to say, does wonders for the local electrical QRM!). The loop and the FRG-100 make a pretty potent combination on MW. The receiver does well with splits, even really close ones--at least, if the domestic and the "split" are fairly close in signal strength.

The one *moderate to major gripe* I have is the FRG-100's mediocre **DYNAMIC RANGE**. Newkirk's **QST** review mentioned this, too: weak signals closely adjacent to very strong ones are very often obliterated... not so much by sideband splatter as by a sort of superimposed *hiss* on the weaker signal (due, according to Newkirk, to frequency-synthesizer phase noise). Then again, Newkirk felt this was to be expected "in this price class". Frankly, it may somewhat limit the FRG-100's usefulness in chasing foreign splits on the BCB for some DXers... but this is a pretty iffy proposition for those of us in the interior of North America anyway (just ask John Bryant or Shawn Axelrod!)... TAs & TPs need to be pretty bloody strong to be readable at all this far inland--i.e. anything more than just a BFO-detectable carrier--and it doesn't happen very often! And anyway, this is less of a problem when trying to log domestic DX next to locals... you need to be able to get at least a shallow *null* on the local, but DX is well readable adjacent to megablaster locals; selectable-sideband is a must. (Before getting the FRG-100, it had been years since I'd been able to log KJIS-1050 Sedalia MO due to local KLSM-1060. It's easily readable in USB on the FRG-100.) And with the nominal 5-kc separation of SW stations, coupled with their (usually) less than local-like signals, it's not a big problem on shortwave.

One other rather strange thing I've noticed since getting the Sanserino loop: if I switch in the FRG-100's attenuators, I get all kinds of spurious/intermod signals and hand-capacitance problems with the loop... but *not* if the receiver's attenuators are off. So I have to take my chances with front-end overload on super-strong MW signals; luckily, it doesn't seem to be a big problem. Ralph (or other technically-minded folks)--can you think of any reason for this happening?

BOTTOM LINE: I'm extremely pleased with the FRG-100's performance for the price. Okay, it may not perform like an R-390, HQ-180... or an R-8. But vacuum-tube boat anchors are often highly maintenance-intensive beasts... and the R-8 was simply out of my price range. Yaesu has come up with a very worthy successor to their affordable "workhorse" rig of years ago, the FRG-7...and with a tremendous amount of advanced "modern" conveniences, and excellent-to-superb performance in many categories. In fact, the 100 significantly outdistances the FRG-8800--and for less money.



Geomagnetic Indices

Geomagnetic Summary July 1 1994 through July 28 1994

GEO - Geomagnetic activity pca - polar cap absorption
 maf - major flare SA - Solar Activity
 mas - major storm spe - satellite proton event
 mis - minor storm ss - severe storm

Date	FLUX	A	K	SA	GEO	OTHER
7/ 1	87	21	3	very low	quiet-mis	-
2	83	27	3	very low	quiet-mis	-
3	86	15	2	low	quiet-active	-
4	85	6	1	very low	quiet	-
5	83	5	2	very low	quiet	-
6	84	12	3	very low	quiet-active	-
7	88	13	2	moderate	quiet-active	-
8	86	4	1	very low	quiet	-
9	86	3	0	very low	quiet	-
10	86	1	2	very low	quiet	-
11	86	4	1	very low	quiet	-
12	83	1	0	low	quiet	-
13	81	2	2	very low	quiet	-
14	82	19	3	low	quiet-active	-
15	83	14	4	low	quiet-mis	-
16	82	26	4	low	unsettled-mis	-
17	80	14	3	very low	quiet-active	-
18	80	10	3	low	quiet-unsettled	-
19	78	13	1	very low	quiet-active	-
20	77	6	1	very low	quiet-unsettled	-
21	77	10	3	very low	quiet-unsettled	-
22	76	5	1	very low	quiet-unsettled	-
23	78	4	3	very low	quiet-unsettled	-
24	75	5	2	very low	quiet-unsettled	-
25	75	13	2	very low	quiet-active	-
26	74	5	4	very low	quiet-active	-
27	74	9	3	very low	quiet-active	-
7/28	75	17	3	very low	quiet-active	-

IRCA BOOKSTORE

International Radio Club of America publishes several items which are available from the IRCA Bookstore.

IRCA AM-FM ALMANAC, 5th Edition 1991 - (Reprint)

This 240 page book is a must have cross reference for the serious AM DXer. Within it you will find the current frequency check list, affiliates for news and talk show networks, syndicated music and religious programs, AM-FM simulcasts, station slogans, broadcasting in Canada, AM stereo, sports networks, utility stations and many articles on AM broadcasting. In addition, the fifth edition contains a section focusing on AM band foreign DXing (including a compressed IRCA Foreign DX Reference). Each list is in frequency order and many include the FM frequencies as well as the AM (great for FM DXers).

IRCA AM-FM Almanac is available loose leaf or comb bound (please specify). Prices are:

IRCA/NRC member: US - \$13.00 Canada - \$14.00 Overseas Sea Mail - \$14.00 Overseas Air-Mail - \$17.00
 non-members: US - \$15.00 Canada - \$16.00 Overseas Sea Mail - \$16.00 Overseas Air-Mail - \$19.00

IRCA AM-FM Almanac, 5th Edition 1991 Updaters are also available from the IRCA Bookstore!

Updater 5.1 - Almanac index, AM slogans. Updater 5.2 - Satellite Music Network, Unistar/Transtar, talk updates, BRN, 1991 Baseball. Updater 5.3 - updated NFL and college football, NHL Hockey, 530/1610 TIS/Highway Radio update, Rush Limbaugh. Updater 5.4 - updated NBA and college basketball, ABC-AP-UPI-USA network lists, ESPN-SEN sports talk lists, Canadian Music networks and more. Updater 5.5 - 1992 baseball, Spanish networks, Interstate Radio Network and AM Slogan list updates.

Each IRCA AM-FM Almanac, 5th Edition 1991 Updater is 20 pages. Price \$2.00 US and Canada, \$3.00 elsewhere.

[NOTE: IRCA Almanac (third and fourth editions) are still available for \$5.00 (overseas airmail add \$2.50)]

A DXers TECHNICAL GUIDE

Now in its 2nd edition, this 120 page book answers questions on receiver and antenna theory (how to improve their performance), how audio filters and loop antennas can improve DX (and hints on their construction), how to build a beverage and phasing unit, and much more. Only \$5.50 for IRCA/NRC members, \$6.50 for non-members (overseas airmail add \$2.50).

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



Cable: ALIRSHAD
Telex: (496) MI 40285 KT
Fax: (965) 2456680

Tel.: (965) 2423774
Address: P.O. Box 193 Safat
13002 Safat, KUWAIT

MINISTRY OF INFORMATION
STATE OF KUWAIT

Ref. _____

Date 30 July 1994

INTL. RADIO CLUB OF AMERICA
USA

Dear Sirs:

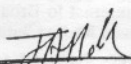
We are pleased to send you our Frequency Schedule for the period J-1994 for your perusal.

We invite all the members of your club to send their reception reports to us which will be confirmed by our QSLs.

We convey our best wishes to all the members of your club.

With regards.

Yours truly,


Jawad A. Al-Mazeedi
Asst. Under Secretary
Engineering Affairs

RADIO KUWAIT MEDIUM WAVE SCHEDULE

540 kHz and 1134 kHz 24 hours a day in Arabic
963 kHz 0200 to 2100 UTC in Holy Quran and Arabic
1269 kHz 24 hours a day in Arabic music
1341 kHz 0200 to 1800 UTC in Arabic, 1800 to 2100 UTC in English
11990 kHz shortwave is // with 1341 at 1800 to 2100 UTC
Radio ID at 1759 UTC with chimes and national anthem at 1800 UTC

31



FIRST CLASS MAIL

LEE FRESHWATER
414 SE 3RD ST
OCALA FL 34471

THE INTERNATIONAL RADIO CLUB OF AMERICA (IRCA)
PO Box 1831 Perris CA 92572-1831

The IRCA is a non-profit organization devoted to the hobby of hearing distant stations on the AM Broadcast Band (510 - 1720 khz). **DX Monitor**, the official publication of the IRCA, is published 34 times a year, weekly from October to March, twice in September and April, and monthly from May to August. **DX Monitor** contains members' loggings, articles on radio stations, receiver reviews, technical articles, DX tips, and other material of interest to Broadcast Band DX hobbyists. IRCA is a member of ANARC, the Association of North American Radio Clubs.

CLUB ADDRESSES AND OFFICERS

President: Bill Hardy, 2301 Pacific Ave, Aberdeen WA 98520 (206) 532-6827 (proposals)
Secretary-Treasurer: Ralph Sanserino, PO Box 1831, Perris, CA 92572-1831 (dues/address changes)
Board of Directors: Shawn M Axelrod, Richard Evans, Larry Godwin, Michael S Hardester, John C Johnson (chairman), Patrick Martin and Robert Wien
Editor-in-Chief/Publisher: Ralph Sanserino, PO Box 1831, Perris, CA 92572-1831
Publishing Coordinator: Phil Bytheway, 9705 Mary NW, Seattle, WA 98117

MEMBERSHIP DUES

U.S. - \$25.00 per year. Canada - \$27.00. Overseas Surface - \$28.50. Overseas Airmail - \$35.00 (Central America, Caribbean, Colombia and Venezuela), \$38.00 (Europe, North Africa, Middle East), \$41.00 (rest of the world). One time charge for New Member Packet - \$2.00 (first year only). Trial Membership - \$9.50 (10 issues of **DX Monitor** and a New Member Packet, U.S. / Canada / Mexico only). Installment rate: two payments of 1/2 dues plus \$1.00 (\$13.50/payment for U.S. members). Make checks and money orders payable to IRCA and send all dues (and address changes) to: IRCA, PO Box 1831, Perris, CA 92572-1831. Persons living outside the U.S., please use International Money Order in U.S. funds. Sample copies of **DX Monitor** are 29¢ (40¢ to Canada) or two International Reply Coupons each and are available from: IRCA, PO Box 1831, Perris, CA 92572-1831.

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