

DX MONITOR

THE OFFICIAL
PUBLICATION
OF THE



INTERNATIONAL
RADIO CLUB
OF AMERICA

DEVOTED EXCLUSIVELY TO BROADCAST BAND DXING

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RENEWALS & ADDRESS CHANGES TO: RALPH SANSENERINO 11300 MAGNOLIA #43
RIVERSIDE CA 92505.

REPRINTS: STEVE RATZLAFF 295 PETTIS AVENUE MOUNTAIN VIEW CA 94041.

BOOK STORE: PHIL BYTHEWAY 9705 MARY AVENUE SEATTLE WA 98117.

WESTERN DX FORUM: SEND ALL WESTERN DX FORUM REPORTS TO TEMPORARY EDITOR:
BILL HARDY 2301 PACIFIC AVENUE ABERDEEN WA 98520 TILL FURTHER NOTICE.

CONVENTION: DUE TO A CONFLICT WITH OUR ORIGINAL DATES WE HAD TO CHANGE
THE DATE OF THE CONVENTION IN MONTEREY TO **NOVEMBER 1ST, 2ND AND 3RD**. BUT,
HOPEFULLY THIS WILL GIVE PEOPLE EXTRA TIME TO MAKE PLANS TO ATTEND. THE
CONVENTION WILL BE HELD IN HISTORIC AND SCENIC MONTEREY AT THE **CASA
MUNRAS GARDEN HOTEL 700 MUNRAS AVENUE MONTEREY CALIFORNIA**. THE CASA
MUNRAS IS CENTRALLY LOCATED AND CLOSE TO THE CITY'S FAMED AQUARIUM,
CANNERY ROW, FISHERMAN'S WHARF, PRESIDIO AND HISTORIC ADOBES. OTHER AREAS
OF INTEREST SUCH AS CARMEL AND 17 MILE DRIVE IN PEBBLE BEACH ARE WITHIN
DRIVING DISTANCE. ALSO, SEVERAL RESTAURANTS, FROM FAMILY-STYLE COFFEE
SHOPS, TO FAST FOOD, TO GOURMET ARE WITHIN WALKINGDISTANCE. THE PRICES:

REGISTRATION FEE: \$16.00.....SATURDAY NIGHT BANQUET: \$15.95.....
THE ABOVE TWO ITEMS WILL BE MADE PAYABLE TO IRCA.

ROOM RATES: SINGLE-1 BED...\$59.00.....DOUBLE-1 BED...\$59.00.....
DOUBLE-2 BEDS...\$69.00.....TRIPLE-2 BEDS...\$81.00.....QUADRUPLE-2
BEDS...\$93.00....I BELIEVE CHILDREN UNDER 12 ARE FREE WITH THEIR PARENTS.

DEPOSIT REQUEST: FIRST NIGHT'S ROOM PLUS 10% CITY TAX OR CREDIT CARD
GUARANTEE. DEADLINE FOR GUARANTEED ROOM RATES IS OCTOBER 1ST, BUT WE MAY
BE ABLE TO GET THIS EXTENDED TO OCTOBER 15TH. WE HAVE A BLOCK OF ROOMS
SET ASIDE FOR US AT THE ABOVE RATES. WHEN YOU CALL TO RESERVE YOUR ROOM,
TELL THEM IT'S FOR THE IRCA CONVENTION. THE HOTEL'S PHONE NUMBER IS:
(800) 222-2446 WITHIN CALIFORNIA, AND (800) 222-2558 NATIONWIDE. THE
CONVENTION AGENDA IS BEING PLANNED, INCLUDING STATION TOURS AND GUEST
SPEAKERS. AS WE GET CLOSER TO THE CONVENTION, DETAILED DIRECTIONS ON HOW
TO GET TO THE HOTEL WILL BE INCLUDED IN THE BULLETIN. IF YOU HAVE ANY
FURTHER QUESTIONS, CALL JIM HILLIKER AT KOCN (408) 646-5105 TILL 1:00PM
EASTERN M-F OR AT KNRY (408) 373-1234 ON SATURDAY'S 10AM-3PM EASTERN.....

UPDATER 5.2 WILL BE OFF THE PRESS LATE THIS MONTH - 12 PAGES OF 1991
BASEBALL (MAJOR AND MINOR LEAGUE, VERY COMPLETE) AND 8 PAGES OF NETWORK
UPDATES. UPDATER 5.1 IS ALSO AVAILBLE WITH THE INDEX AND SLOGAN UPDATES.
EACH UPDATER IS \$2.00 FOR U.S. AND CANADA, \$3.00 ELSEWHERE, PAYABLE TO
IRCA IN U.S. DOLLARS. ORDER FROM BILL HARDY 2301 PACIFIC AVENUE
ABERDEEN WA 98520.

RADIOFEST: FROM WALT BREVILLE COMES INFO ON RADIOFEST 91. RADIOFEST HAS
ESTABLISHED ITSELF AS ONE OF THE PREMIER ANTIQUE RADIO MEETS IN THE USA.
LOCATION IS THE HOLIDAY INN 345 RIVER RD ELGIN IL 60123, (708)695-5000.
AUGUST 7TH THRU 10TH.

BROADCASTING INFORMATION

EDITOR: ROBERT WIEN 1309 DENTWOOD DR SAN JOSE CA 95118

DEADLINES: 2nd & 4th Saturdays

Compiled: 6/28/91

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

FORMAT CHANGES

AZ. Sierra Vista	KTAN-1420	was C&W, adds DCJ-country
CA. Red Bluff	KBLF-1490	was soft AC, adds DCJ-soft AC
CT. Hamden	WXCT-1220	was business nx, now Spanish
CO. Lakewood	KRXY-1600	was CHR // FM, now adult CHR // FM 107.5 'Mix'
FL. North Fort Myers	WRXK-770	was WVTI, travel info, now silent
KS. Concordia	KNCK-1390	was SMN-AC, now SMN-country
LA. Bastrop	KTRY-730	was urban, now SMN-urban AC
	KMYQ-1340	was AC, now southern gospel
	KMLB-1440	was country // FM, now nx/talk
MN. Park Rapids	KPRM-870	was C&W, now SMN-standards
MO. Aurora	KSWM-940	was C&W, silent pending sale
	KSFT-5550	was C&W, now SMN-standards
MT. Bozeman	KBMN-1230	was standards, silent pending sale
NM. Hobbs	KHOB-1390	was silent, now Spanish
NH. Claremont	WTSV-1230	was oldies, now Unisys-standards
NC. Fayetteville	WFLE-1490	was oldies, now southern gospel
	WELS-1010	was C&W, gospel // FM, no longer // FM, remains C&W/gospel
OH. Akron	WARR-1590	was AC, now nx'talk/oldies
OK. Ardmore	KKAJ-1240	was KVSO, religion, now C&W // FM
	KXOL-1320	was religion, now sports // WWLS-640
	KKRX-1050	was standards, now oldies, talk 6 AM-3 PM (Central time)
	KTOW-1340	was modern rock, to be rel. 8/1/91
TN. Memphis	WXSS-1030	was silent, now black gospel
	WPLX-1170	was C&W, now Unisys-standards
TX. Dallas	KLIP-570	was talk, adds Tom Snyder 9PM-midnight (Central time)
	KEBE-1400	was talk, now Unisys-country
	KRAN-1280	was country, now silent
	KCHL-1480	was urban, now black gospel
	KVWC-1490	was soft AC, now C&W/gospel
VA. Danville	WDVA-1250	was country, adds SMN-country
	WSVG-790	was oldies, now C&W // WSIG-FM
	WAMM-1230	was CHP, now C&W
WA. Tacoma	KKMO-3360	was standards, now AC 6AM-12 noon (Pacific time), then brokeu
WI. Neillsville	WCCN-1370	was C&W // FM, now SMN-standards
	WBZN-1460	was new AC // FM, now urban AC // FM 'B-100'
BC. Prince George	CJCI-620	was AC, now C&W

NEW STATION APPLICATIONS

NF. Nain 40/40 w. ND

NEW STATION GRANTS

HI. Haiku 1570 khz., 1000/1000 DA-2

CONSTRUCTION PERMIT ACTIVITY

MS. Richland WRBR-720 on the air
 NY. North Syracuse WYRA-1200 has moved ex-1200 khz.

FACILITY AND PARAMETER APPLICATIONS

FL. Palm Beach WPBR-1340 change city of license
 to Lantana
 IA. Decorah KDEC-1240 decrease to 580/580 w.
 MO. Camdenton (CP) KFYE-1520 increase to 10000-D,
 DA, 4006-CH

FACILITY AND PARAMETER GRANTS

CA. Lancaster KAVL-610 increase to 5000/4000
 IN. Newburgh WGAB-1180 decrease to 675-D
 KY. Florence WMLX-1180 move to 1160 khz.,
 5000/1000 DA-2
 SC. Manning WYMR-1410 move to 920 khz.,
 5000/1000
 ON. Bramton CIAO-790 move to 530 khz., 1000/
 250

Note: when CIAO moves, CFYZ-530 will be obligated to move to a new frequency.

Barrie CKBB-950 increase to 10000-N

CALL LETTER CHANGES

AL. Mobile was WMMI-1410, becomes WLTV (requested)
 CO. Estes Park was KNIC-1470, becomes KRKI
~~FL.~~ FL. North Fort Myers was WVTT-770, becomes WRXX
 St. Petersburg was WLFF-680, becomes WRMD
 IL. Aurora was WYSY-1280, becomes WBIG
 KS. Iola was KIKS-1370, becomes KALN
 KY. Eminence was WXLN-1600, becomes WKXP
 LA. Tioga was new CP, becomes KXIZ
 OK. Ardmore was KESD-1240, becomes KKAJ
 NC. Conway was WBIG-1330, becomes WPJS
 TN. Brownsville was WBHT-1520, becomes WNWS
 TX. Muleshoe was KMUL-1380, becomes KLZK
 VA. Roanoke was WBNI-910, becomes WWWR

CALL LETTER CHANGES THAT NEVER OCCURRED

NV. North Las Vegas remains KLUC-1140, will not become KZZP
 AB. Calgary remains CFAC-960, will not become CKKX

I would like to know your opinion about the new format for this column. Please write me with your comments/suggestions. Geov Parrish did a great job with this column, and I'd like to follow in his footsteps!

BROADCASTING INFORMATION

EDITOR: ROBERT WIEN 1309 DENTWOOD DR SAN JOSE CA 95118

Deadlines: 2nd & 4th Saturdays. Compiled: 7/14/91. Much of this information was compiled from M Street Journal, DXM, and various other sources.

FORMAT CHANGES

CA.	Barstow	KIQQ-1310	was silent, new AC, talk // KVVQ-910 Hesperia
	Santa Paula	KZTR-1400	was rock // FM, will be KKZZ, Unis. C&W (note: KCAQ/KTRO-1520 are currently leasing KZTR-AM/FM)
	Thousand Palms	KPSL-1010	was silent, new classical
CO.	Grand Junction	KSTR-620	was C&W, adds DCJ-C&W
CT.	Ansonia	WADS-690	was adult stand., new silent
FL.	Eatonville	WBZS-1270	was C&W, adds DCJ-C&W
	Pinellas Park	WMTX-1040	was WHBO, oldies, new AC // FM
	Saint Petersburg	WRMD-680	was WLEFF, stand., new SS
	Titusville	WAMT-1060	was SS, new silent
GA.	Augusta	WAKB-1480	was WRDW, silent, to be black gospel
	Dawson	WHIA-990	was C&W, adds IRN trucking show
	Thomasville	WSTT-730	was C&W // FM, new silent
KS.	Iola	KALN-1370	was KIKS, AC // FM, new C&W
KY.	Eminence	WKXF-1600	was WXLN, Christian, now C&W
	London	WBBE-980	was WMAK, silent, new SMN-Keel Oldies
	Middlesboro	WPHY-1490	was AC, adds DCJ-AC
	Louisville	WXLN-1080	was WJDX, CHR // FM, new contemporary Christian
ME.	Dever-Foxcroft	WDME-1340	was soft AC // FM, new silent
MS.	Columbus	WJWF-1400	was rel., now silent
	Starkville	WSSO-1230	was C&W, now AC oldies
	Winona	WONA-1570	was C&W // FM, adds DCJ-C&W // FM
MT.	East Helena	KVCM-680	was KHKR C&W // FM, now rel.
NV.	Reno	KXTO-1550	was silent, back on w/SS
NE.	Salem	WNNW-1110	was motiv., SS, now all SS
NJ.	Morristown	WMTR-1250	was busin. nx, now Unis. std.
NM.	Artesia	KSVP-990	was C&W, now nx/talk
	Bayard	KNFT-950	was Unis. AC, now Unis. C&W
NY.	Brewster	WPUT-1510	was C&W, adds Unis. C&W
PA.	Hughesville	WKHL-1190	was old. // FM, now Unis. adult rock // FM
	Willisport	WWPA-1340	was Unis. stand., now Unis. oldies
TN.	Nashville	WVGM-1560	was relig., new silent
TX.	Greenville	KGVL-1400	was C&W, adds talk
	Odessa	KNDA-1400	was SS, now silent
VA.	Lynchburg	WLVA-590	was nx/talk, now SMN ad. std.
	Norfolk	WTAR-790	was std/talk, now all nx
ON.	Orillia	CFOR-1570	was AC, now C&W

NEW STATION APPLICATIONS

(NONE)

NEW STATION GRANTS

(NONE)

CONSTRUCTION PERMIT ACTIVITY

CA.	Fewler	KRGO-1220	granted expired CP to move to 1210 khz. (CP reinstated) on the air
FL.	Gainseville	WWLO-1430	has moved ex-1220 khz., now 1 kw. DA-N
NY.	North Syracuse	WXRA-1200	

FACILITY AND PARAMETER APPLICATIONS

WA.	Tacama	KTAC-850	change studio location
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FACILITY AND PARAMETER GRANTS

MN.	Pipestone	KLOH-1050	incr. to 9 kw. days, 400 w. nights, change in ant. system
WV.	Green Valley	WANN-1040	incr. to 1430/250, change in antenna system, then granted move to 1050 khz., 1430/250

CALL LETTER CHANGES

CA.	Rancho Cordova	was KMCE-650, now KRDX
	Santa Paula	was KZTR-1400, now KKZZ (requested)
FL.	Pinellas Park	was WHBO-1040, now WMTX ("Mix")
GA.	Augusta	was WRDW-1480, now WABK, then appl. for WAKB
	Buford	was WLKQ-1460, now WXEM (requested)
HI.	Haiku	new, 1570 khz., now KUAU
KY.	Eminence	was WXLN-1600, now WKXP
	Louisville	was WDJX-1080, now WXLN
	London	was WMAK-980, now WBBE
MD.	La Plata	was WSMD-1560, now WMOM ('when MOM talks, people listen')
MA.	West Yarmouth	was WOGB-1240, now WUOK (requested)
MT.	East Helena	was KHKR-680, now KVCM

Radio **R-D 1110 AM**

DESDE

SANTIAGO DE CHILE



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

DX Worldwide - West

Time: UTC phone (503) 861-3185

DEADLINES: 8/5,9/2,9/16

PAN-AMERICAN DX ROUNDUP

- 540 MEXICO, Tijuana-XETIN S/off at 0600 throughout June, but now goes to OC around 0300. Keeps OC on AN now but why? They're 100% automated, might as well be running a tape if they're going to be using the power, hi. Signal not as huge as before. (TRH-CA)
- 740 MEXICO, Torreon XEQN 6/25 0442 Fair w/KCBS w/talk by man. OIR net. plugs, IDs. Rarely this good at home. (TRH-CA)
- 950 MEXICO, Tijuana-XEKAM 6/6 0754 Totally off, leaving XEPB. Spurs have most recently been on 940,960, and 1030! (TRH-CA)
- 970 MEXICO, Caborca-XEEZ 6/25 0510 HUGE signal with promos by woman, local ads. Slogan "La Super Zeta." (TRH-CA)
- 1030 MEXICO, UNID MM 7/1 0803. Noted XE anthem, probably the new s/off time for XEMPM. XEQR noted later. (TRH-CA)
- 1060 MEXICO, Mexico City-XEEP "Radio Educacion" 6/12 0955. Fair in QRM w/ semi-clas. mx //6185 SW (CB-HI)
- 1080 MEXICO, Cd. Morelos-XEDY 6/22 0801 Noted new s/off time for this station. Sounds like power increase too, Slogan Radio Gallo. (TRH-CA)

TRANS-PACIFIC DX ROUNDUP

- 630 COOK ISLANDS, ZK1ZC-6/12 0920 Good w/woman and pop mx //to SW 11760. (Good catch Chuck, this hasn't been reported in sometime. PM) (CB-HI)
- 710t TAIWAN (presumed) Hsinfeng-BEC72 6/25 1015, M&W jointly announcing program of EZ listening mx much Domestic QRM. (CB-HI)
- 738 TAHITI, Papeete-RFO 6/12 0930 Good signal FF Pops. Also hrd at same time on SW frequencies 6135, 11820, 15170, and 9750 (rare). (CB-HI)
- 810 FIJI, Lautoka-Radio 2-strong w/Hindi mx 6/25 1120 Faint QRM from KGO. (CB-HI)
- 963 NEW ZEALAND, Christchurch-3YA 6/27 1040, Political talks. (CB-HI)
- 1017 TONGA, A3Z 6/12 1010 fair w/woman talking, Island mx //5030. (CB-HI)
- 1035 SOLOMON ISLANDS, SIBS-Good w/local anmts, EE and Pidgin, Island mx and //5020 SW. (CB-HI)
- NEW ZEALAND, Wellington-2ZB 6/24 0850 good w/mx (CB-HI)
- 1470 TAIWAN (presumed) 6/25 1015 Strong o/Domestic QRM w/Pop CC mx, long talks by woman, No ID heard. (CB-HI)
- 1475 MALAYSIA, 6/21 1200-1215 and 6/28 1200-1230 w/female ancr, EE Pops (MR-CA)
- 1494 PNG, Wabag Radio Enga-Fair w/Faron Young Song and other C&W mx 6/22 at 0922 //SW 2410 (CB-HI)
- 1512 AUSTRALIA, Newcastle-2NA 6/24 0830 fair w/talks (CB-HI)
- 1566 REPUBLIC OF KOREA, poor signal splash from KNZR 1230 6/28 (MR-CA)
- 1593 PNG, Vanimo-Radio Sandaum or Radio West Sepik 6/12 1000. Awful Island rr mx // to SW 3205. (CB-HI)
- 1602 NEW ZEALAND, 2XA 6/12 0910 "Radio for Print Disabled" // SW 3995. (CB-HI)
- 1615 NEW ZEALAND, Omaru-OR cw beacon good here in Hawaii 1010 6/25 (CB-HI)

THANKS TO THESE REPORTERS

- CB-HI CHUCK BOEHNKE-POST OFFICE BOX 488-KEAAU, HAWAII 96749
Icom R-71A, FRT 7700 tuner, 175' LW
- TRH-CA TIM HALL-350 G STREET #F-1-CHULA VISTA, CA 91910-4559
ICF-2010, Radio West Loop
- MR-CA MIKE RIORDAN-POST OFFICE BOX 1195-GOLETA, CA 93116
DX-440, RF B300, Select-A-Tenna



WESTERN
DX
ROUNDUP

Nancy Hardy
2301 Pacific Ave.
Aberdeen, WA 98520

WDXR deadlines: Thursday July 25, Saturday Aug. 31, Monday Sept. 16.
Please use Eastern time.

REPORTERS FOR THIS ISSUE:

- (TRH) Tim Hall-350 G St. #F-1-Chula Vista, CA 91910
Sony ICF-2010, Radio West loop, Delco car radio
- (GL) Gary Larson-2806 Lincoln-Burbank, CA 91504
- (bp) Bruce Portzer-6546 19th Ave. NE-Seattle, WA 98115
(bp-CA) DX'ing at Marina del Rey, CA with Sony 7600D
- (MR) Mike Riordan-P.O.Box 1195-Goleta, CA 93116
Panasonic RF-2200
- (MS) Mike Sanburn-P.O. Box 1256-Bellflower, CA 90707
- (RT) Rich Toebe-2550 Hilborn Rd. #264-Fairfield, CA 94533
(RT-NV) & (RT-IBO) on road trip to Reno, NV - Delco car rx
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118
GE Superadio, GE long-range portable, SM-2

OF SPECIAL INTEREST:

- 680 KLDY WA, Lacey now back on air with relig. programs, first noted 6/24. Fair days, buried by KNBR on SSS. Apparent relay of KNTR-1550, as they run many Canadian oriented programs, mailing address is same as KNTR (P.O. Box 308, Ferndale, WA), and slogan "Help Ministry Radio" is used by KNTR. Call ID at top-of-hour is "KLDY Lacey-Olympia" so likely runs separate IDs similar to KTAC-850/KMTT-103.7. (bp-WA)
- 1060 KFNA TX, El Paso 6/24 0719 very good over KUKQ with CFCN nulled, ID "Kah-effe-enneh-ah, la super 1060," slowly fading to El Paso LSR. (RW-CA)
+6/25 0720 silent station back on the air with good signals, lots of IDs, "KFNA, La nueva 10-60" slogan noted. Thanks Neil Kazaross for tip. (TRH-CA)
- 1340 (KRCV) NV, Reno 6/13 noted silent. (RT-NV)

- 530 HAR NV, Reno 6/13 operated by Highway Dept., female gave information regarding road construction & closures on streets in Reno. No calls noted. (RT-NV)
- 540 ?XETIN? BCN, Tijuana 7/1 0806 tent. with Spanish under KPUP, faded out before ID. Looped N-S, a bad porch light QRM. (RW-CA)
- 550 KOY AZ, Phoenix 6/17 0528 not heard in a while, way over KCWR with ID "55, KOY, where our memories make a difference," nostalgia music. (RW-CA)
- 560 (KSFO) CA, San Francisco 6/17 0517 with open carrier, totally off later, frequency dead. (RW-CA)
- 590 KSUB UT, Cedar City 6/10 0447 good over KR50 with ID "Thanks for listening to KSUB..." (RW-CA)
- 660 CFFR AB, 6/24 0425 very good in KTNN null with "66 CFR" ID, rarely this strong. Strange that CFAC-960 was in weak! (RW-CA)
- 690 *XETRA* BCN, Tijuana 7/1 0404 with TT. (RW-CA)
- 710 (KFIA) CA, Carmichael now has weekly SM SP, hours unknown at moment. (RW-CA)
- 760 KFMB CA, San Diego MM 6/17 0313 off, leaving CMBD over KSJL. MM 7/1 0400 noted with OC. (TRH-CA)
+6/17 0435 totally off, CKQR dominant, KRZN/unID Spanish in null. 7/1 OC, totally off later, CKQR/KRZN mix. (RW-CA)
- 840 (KVEG) NV, North Las Vegas announced MM SP is 0400-0900. (RW-CA)
- 890 KVOZ TX, Laredo 6/17 0702 noted with soft instrumental music just before hour, ID on hour into CBS news. Wiped out at 0710 by KDXU s/on. Suspect this is my 890 unID from a few

- weeks back. (RW-CA)
- 950 (XEKAM) BCN, Tijuana 6/6 noted off all day, poss. due to putting new XMTR on air or other maint. Nite oldies program no longer on either. (GL-CA)
- 970 KBBT OR, Portland 6/26 0319 noted with new format and "9-70 the Beat" slogans. Channel usually dominated by XEJ/XEEZ/KAFY/KCLB. (TRH-CA)
- 1000 KCEO CA, Vista 6/10 0510, 0530 very weak and fadey, deep fades in KOMO null, but up both these times with ID "AM 1000, KCEO." Call change, ex-KVSD. (RW-CA)
- 1020 (KTNQ) CA, Los Angeles 6/26 0400 & 6/27 0308-0400+ completely off. (bp-CA)
- KCKN NM, Roswell 6/27 0308 good with weather for NM, "Interstate 10-20 KCKN" ID, woman DJ, C&W. KTNQ off. (bp-CA)
- 1050 ?KEYF? WA, Dishman 5/19 0630-0755 dominating frequency with nostalgia music (Sinatra, Glenn Miller, Andy Williams), frequent back announcement of song titles, and IDs "AM 1050 K-E-Y (?KEYF?)." Announcers name was Gary something. Later wiped out by KORE & XED s/on. (MS-CA) (Format fits, and we think they use a "Key" or K-E-Y slogan. We'll check when we pass through Spokane on vacation.--NH)
- 1060 *KPAY* CA, Chico 6/17 0427 with OC, splashing over to 1050 & 1070. (RW-CA)
- 1080 KRPX UT, Price 6/10 0747 good briefly in KWJJ null over XEDY with ID "More music, more memories, KRPX," Utah sports. Thought station was reported to be silent. (RW-CA)
- 1090 (XEPRS) BCN, Rosarito 7/1 0338 totally off on rare SP, KBOZ/KING mix. (RW-CA)
- 1120 *KPNW* OR, Eugene-Springfield 7/1 0418 off on very rare SP with OC, KMOX in alone. (RW-CA)
- 1140 KCMJ CA, Palm Springs 5/12 1135 in like a local in absence of KIIS-1150. C&W music by Waylon Jennings, IDs as Desert Country. CBS news on the hour. (MS-CA)
- (KRAK) CA, Sacramento 6/10 0507 & 6/14 0602 totally off again two times this week. (RW-CA)
- 1150 (KIIS) CA, Los Angeles 5/12 1130-1820 noted totally off most of the day. Came back on abruptly before SSS (it figures). KFVB-980 spur audible on 1150! (MS-CA)
- 1200 (WOAI) TX, San Antonio 6/23 0447 off, leaving CKDA with poor signals. (TRH-CA)
- 1240 (KSON) CA, San Diego MM 6/24 0310 off, leaving KLFE & others. Back at 0404. (TRH-CA)
- 1340 KIKO AZ, Miami 6/16 0300-0306 logged unexpectedly atop frequency. "K-Lite" ID, ABC-I news, PSA. S/off "This is radio station KIKO Miami Arizona, we now end our broadcast day," SSB. AZ #60 for me. (MS-CA)
- KVOY CA, Mojave re Mike Sanburn's logging in 5/18 DXM: I noted them on car rx near Castaic, CA in mid-May, using "The Eagle, KT-103 and 1340 slogan. Still C&W. Didn't check for top of hour ID. Don't confuse with KATY which could theoretically have similar slogan. (bp-CA)
- 1380 KHJJ CA, Lancaster 6/3 0500 good o/u KTOM with Talknet, ad for garden program on "KHJ," legal ID on hour, into NBC news. Not listed on Talknet network in new IRCA Almanac. What's night power? (RW-CA)
- 1400 KZTR CA, Santa Paula was AOR with FM 95.9, now Spanish with FM 95.9 as of 7/1/91. (MR-CA)
- 1410 KRML CA, Carmel 5/31 0053 very good signal tonight during s/off announcement. Over KERN. (MS-CA)
- 1440 KMED OR, Medford 6/27 0357 strong & alone with 50's pop music, "AM 14-40 KMED." (bp-CA)
- 1450 ?KVOV? WY, Riverton 6/10 0210-0220 heard TT here again. Possible frequency check. Too weak for ID. (MS-CA)
- 1550 KXTO NV, Reno 6/13 2000-2105 OK everyone, here's the definitive word on this station, hi. It's on (even listed in the Reno Gazette-Journal) with a weird Spanish format. The announcer speaks Spanish exclusively except for the hourly ID in English. Slogans are "15-50" (Quince cincuenta),

"Radio Exitos" & lots of "mas musica para usted," but the music was top-40 or R&B style sung in Mexican-accented English (lots of covers of older hits)! Unfortunately I was in Reno only during the day so don't know if they're on at night. (RT-NV)

- KZQQ UT, West Valley City 6/27 0322 o/u two Spanish stations (probably KXEX/XEBG) with oldies & many "WKRP" IDs. Finally pinned it down 0341 when they ran Salt Lake City, Ogden, Sandy ads. Tried for legal ID 0400 but by then all I could get was KKHI. Apparent switch to format & slogan of a few years ago after stints at Spanish, classical, heavy metal, rap, etc. (bp-CA)
- 1580 (KBLA) CA, Santa Monica 6/27 0314 OC popping on & off, off completely at 0350 recheck, leaving KCWW dominant over Spanish. (bp-CA)
- 1610 (WNPF405) CA, Balboa Park 6/6 0340 totally off, leaving KNEC996 (Tejon Pass, CA) and unIDs. (TRH-CA)
- WNUB568 CA, Chula Vista 6/17 1956 began RS today with very inane tape loop. Seemed on carrier current until about 6/28, now sounds like close to 10 watts. Bilingual messages started 7/1. XMTR somewhere near I-5 and L Street, just over 2 miles from my location. New NSP pest. (TRH-CA)
- TIS CA, Del Mar 6/30 2200 new station operating during the Del Mar (San Diego County) Fair with info on auxiliary parking lots. Poor-fair on car radio from Rancho Bernardo to Escondido, good signals at work (a few miles south of Del Mar). No callsign or slogan given. Seems to be operating only on weekends. New, CA #230. (TRH-CA)
- HAR CA, various locations on I-80 6/13 Caltrans erected an illuminated sign with flashing yellow lights in Gold Run (east of Auburn) announcing AM 1610, so I tuned in. Loop announcement by female, test transmissions being conducted on 1610 at 4 locations along I-80. These are: Gold Run, Blue Canyon, Cisco, and Truckee. Noted same announcements at all locations except Truckee, which was silent on both 1610 and 530. No calls were given. (RT-I80)
- KNEC996 CA, re TRH's recent log, this station is at Saugus, CA. Noted on car radio with road conditions for Tejon Pass while in northern L.A. County mid-May after seeing sign posted along I-5. (bp-CA)
- KOP20 NM, Sandia Peak 6/4 0308 poor-fair in Balboa Park TIS null with usual long tape loops. WNUB568 not on RS yet. QRM from WKK790 Phoenix later. (TRH-CA)

UNIDs

- 890 MM 6/17 0656 and many mornings since with BFL/instrumental music. Probably KVOZ; second station with long female vocal SSB at 0701 likely KBYE. Both needed for follow-up reports. Note KDXU s/on time varies, can be anywhere between 0655 and 0715. (TRH-CA)
- 1210 7/1 0419 unID TT weak under mess, looping SE in KEBR null. (RW)
- 1240 MM 6/24 0320 with local KSON off, noted a station with ID sounding like KBME; woman gave Kidd (?) Country weather. Nothing in road atlas fits. (TRH-CA)
- 1400 6/24 0830 unID fading up with ID "...the greatest hits of all time..." then mention of Reno, faded out, KHTZ back on the air? Called their phone number listed in M Street Radio Guide, got "Oldies 104" (KODS), she didn't know if they're on the air! Good briefly in KBLX null. (RW-CA)
- 1520 MM 6/3 0335j poor with man reading sports scores way under KOMA. Maybe needed KFXX? (TRH-CA)

This column was typed on our brand-new Smith Corona personal word processor. It is very quiet so I've even been able to type while Melanie was sleeping. Best of all, correcting a mistake is a breeze. Bill has spent A LOT of time using it in the two weeks we have had it, and I'm sure you will see his comments about it soon. We went camping June 30 with Bruce and Evelyn Portzer, and were able to take the word processor along as it is a portable lap-top. In case you missed it, my g

next deadline has been changed to Thursday July 25. Our vacation has been postponed for two weeks so we will leave on July 27 and return on August 12. Needless to say, we will not be here on the scheduled Aug. 5 deadline (we will be in Banff, AB). I'm listing the deadline as July 25, but if a brief report or two arrive on the 26th, they can probably be inserted into the column at the last minute before we leave. That's something I would never have been able to do with the old typewriter! August 31, a Saturday, will be the following deadline. It had been listed as Monday Sept. 2, but there will be no mail delivery that day because of the holiday. That's it for this time. Keep up the good work everyone!

Book Review:
Baseball America 1991 Radio TV Cable Directory
Reviewed by Bill Hardy

I became aware of the Baseball America Radio-TV-Cable Directory two years ago during the preparation of our club's IRCA AM-FM Almanac. Dale Park had obtained permission from Baseball America, a twice monthly fan publication, to use station listings from their directory in his Sportscentre column as well as our Almanac. I had not seen the actual publication until this year, when Mike Hardester sent me a copy for review.

I must say that I am quite impressed with the publication. Its low cost of \$4.95 makes it affordable to any DXer wishing to get complete radio information, as well as TV and cable, early in the season. The directory is normally available in May of each year, which gets it into your hands much quicker than DX bulletins such as IRCA and NRC traditionally have been able to do. And there is much information, such as sponsors, which may be of help to you.

The target audience for the directory is the baseball fan, who can locate broadcasts in his home area, and also find stations while travelling. The lists are arranged by team and then geographically, which is a handy format for use by travelling DXers as well. For instance, under Boston, the Red Sox list has stations in CT, FL, ME, MA, NH, RI, and VT, and alphabetically by city within the state. Calls and frequency are given, and the list seems quite accurate. Other information you can use includes the team's and flagship's address and phone, announcers, sponsors, and any Spanish or French broadcasts. And each team's minor-league affiliates, stations, number of games, and announcers are included, plus a listing of some independent minor-league teams. Look for similar information on TV and cable. And of special interest is the national listing, including the lineup for CBS Radio baseball, on which I learned that my 1450 local had signed up! There's also a summary of CBS-TV and ESPN cable coverage, and even team videos you can order.

The book is 64 pages, 4" wide and 9" tall and will fit into a large pocket, as well as a legal-size envelope. It's printed in black and white with excellent typestyles and a heavy-duty cover. Look for photos of Joe Garagiola, Jack Buck, Tim McCarver, Vin Scully, Harry Caray, and many other announcing greats, including legends Red Barber and Mel Allen, who are the topics of feature pages. And for most teams, their greatest broadcast moments are recalled in "How It Happened," ranging from 1940 to 1987, such as 1951's "The Giants win the pennant!!" or Hank Aaron's 715th home run or a World Series victory. All these items make interesting reading while you're perusing the 1400's looking for a Dodgers outlet.

I am planning to order the directory each spring. It is a good book in its own right, and will fill in the gaps before the Almanac updater compiles its baseball lists by frequency each summer. You may order by credit card at 1-800-845-2726 (9am-5pm Eastern), or send \$4.95 in U.S. funds to Baseball America, P.O. Box 2089, Durham, NC, 27702.

CENTRAL DX ROUNDUP

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

FOR THE RECORD

Report in Eastern time. Deadlines: 8/3, 8/31, 9/14.
CDXR accepts reports via computer through Prodigy, my address: MPNN49A.

RIDING GAIN

[MB-DX] = DX'pedition at Valahalla, Manitoba June 22-23.
Attending: Shawn Axelrod of Winnipeg, MB
Wayne McRae of Winnipeg, MB
Equipment: Icom IC-R70, beverage south and west.

[TML-IN] = Tom Laskowski, 1334 E. Miner St., South Bend, IN 46617

[JcJ-MT] = Your editor using an Icom IC-R71A with Radio West Loop.

DOWN THE DIAL

- 550 KUSA MO St. Louis, 6/23 good o/KFYR. 0420 with C&W music. "KUSA"
ID. [MB-DX]
- 620 WTMJ WI Milwaukee, 6/22 good u/CKCK. 2334 w/local spots, "WTMJ"
ID. [MB-DX]
- 640 CHOG ON Richmond Hill, 6/23 good in CKRC splatter. 0256 w/spots
for Toronto companies, R/R music. Only heard on our west
wire. [MB-DX]
- 910 WSUI IA Iowa City, 6/22 good. 2350 with Glen Hauser's "World Of
Radio" program. 0000 ID into ABC News. [MB-DX]
- 1010 KCHI MO Chillicothe, 6/23 good. 0005 w/"KCHI" ID, Joe Walsh oldie
"Life's Been Good To Me." Our first new station heard at
Valahalla...how fitting, yes, life is good to us. New!!
and at 30 watts yet! [MB-DX]
- 1190 KUII TX Dallas, 6/23 good. 0450 w/TalkNet, "KUII" ID at 0500. New
for us. [MB-DX]
- 1240 KBLL MT Helena, 6/17 good, KUUS off. 0250 w/Bruce Williams and
TalkNet, 0300 ID "KBLL Helena" into ABC News. [JcJ-MT]
- KTHE WY Thermopolis, 6/17 poor. 0245 w/rock, spot cluster. Not
needed, but fun having KUUS off at night! [JcJ-MT]
- KWIK ID Pocatello, 6/14 briefly good, KUUS off. 0355 with ID
"Idaho's Country Connection, Quick." C&W music. Not
enough for a report. [JcJ-MT]
- 1400 KDTA CO Delta, 7/5 on top w/KRLN, KXGF. 0659 w/sign on. IDing as
"K-Delta." Needed for f/up, last heard in 1963! [JcJ-MT]
- KRLN CO Canon City, 7/5 on top good. 0657 w/sign on. [JcJ-MT]
- 1440 WSSL SC Greenville, 6/5 heard during major geo. storm. 0525 with
spots for Greenwood and Laurens. ID by man as "wistle."
C&W music. [TML-IN]
- 1450 KEYY UT Provo, 6/14 briefly weak, ontop. 0655 w/USA Radio
Network News, 0700 promo & ID "KEYY Provo." Much
needed for follow up. [JcJ-MT]
- 1490 WDAN IL Danville, 6/3 poor. Local WNDU no longer NSP. 0206 with
ID "This is TalkNet on Danville's original radio station,
14-90 AM WDAN." New, much wanted. [TML-IN]
- WZOE IL Princeton, 6/10. 0259 fade up with "WZOE AM Princeton."
New here. [TML-IN]
- 1580 KBLA CA Santa Monica, 6/23 good. 0320 w/California business news.
New for us. [MB-DX]

LOCAL CHANGES

1240 KUUS MT Billings, Since early June no longer NSP. [JcJ-MT]

UNIDS

1190 unID 6/23 good. 0406 w/"It's time to return to TalkNet. All
night information and entertainment on K-(B?)-H-L Turbo(?).
Noises and time pios into TalkNet. Help? [MB-DX]

25 YEARS AGO

July 23, 1966 issue of DX Monitor...Rick Evans of Gary, IN said his
totals were now 114/4.....Dallas McKenzie of Wellington, New Zealand
submitted an article on what DX is like from New Zealand. Bill Nittler
of Englewood, CO said this was the last CO published issue.

OPEN MIKE

The impossible is often the untried. Shawn tells me he and Wayne
have purchased an old school bus, which they converted into a mobile
DX rig. Also, they have lined up a DX site on a farm. Watch this
column for some wild DX this fall!



Eastern DX Roundup

Ray Bauernhuber
141-12 243rd Street
Rosedale, NY 11422

- (RB-NY)** Ray Bauernhuber w/GE Superadio
(MB-ON) Mike Brooker 99 Wychorest Ave., Toronto, ON, Canada M6G 3X8; Panasonic RF-23200 & SONY ICF-7600D
- (MB-SYRACUSE)** - DX'ing in Syracuse
(MB-KRIPALU) - DX'ing in Lenox, MA at the Kripalu Center For Yoga and Health
- (MH-NC)** Mike Hardester P.O. Box 8159 Camp LeJeune, NC 28542-8159; ICOM R-70 + Radio West Ferrite Loop
(HH-MD) Hank Holbrook 407 Arundel Road, Fair Haven Cliffs, Maryland 20754; ; SP-600 w/Colegrove loop **(HH-1)**; SP-600 w/50' longwire **(HH-2)**; Realistic DX-400 w/30' basement antenna **(HH-3)**; Realistic EDX-400 with Colegrove loop **(HH-4)**; Toyota car radio w/whip antenna **(HH-Mobile)**.
- (JDS-AL)** J.D. Stephens 122 Brawley Drive, Owens Cross Roads, AL - 35763; Panasonic RF-2600; RF-B300; SONY ICF-2001 + several wires.
- (KZ-NY)** Karl Zuk 154 Old Post Road North, Croton-on-Hudson, NY 10520; Lafayette HQ-230 (9 tube wonder, newly acquired, reconditioned and modified) w/500' longwire ground system.

- 606 **WICC CT, BRIDGEPORT** 6/8 1755 GOOD w/nx, wx, hardware ad; promo for the "Italian House Party"; AC format. **(RB-NY)**
- 620 **WSKQ NJ, NEWARK** 2/23 0734-0811 surprisingly good signals way atop channel. Slight WHIB QRM and some splash at times of WMAL (630). All in Spanish w/pop mx and nx. Best ever heard. **(HH-2)**
- 640 **KFI CA, LOS ANGELES** 4/15 0430-0500 noted with 2 distinct IDs before and during WITZ DX Test, and believed the one w/"The Best of Larry King" program was at the above times. Only bits of programming noted during fade-in o/WITZ test. First CA loggea from NC. **(MH-NC)**
- 690 **WADS CT, ANSONIA** 6/15 1045 P-F with ethnic programming (Jewish); ad for the Lichenstein Company, makers of custom Jewish memorials followed by Jewish program of songs, talk and ID. **(RB-NY)**
- 740 **WGSM NY, HUNTINGTON** 6/17 1230 Good w/nx, sports w/Rachel Gonzalez, wx w/Joe Rao; "WGSM's Video Minute"; Subaru ad and ID as "The Station of the Stars, We're Long Island's 740 - WGSM" into MYL. **(RB)**
- 790 **WAEB PA, ALLENTOWN** 6/17 1240 Fair w/listener call-ins; ad for Walter's Pharmacy; nx at ToH and ID as "Fm Brian Downs at WAEB Newsradio"; AC format. **(RB-NY)**
- 840 **WKTR VA, EARLYSVILLE** 4/3 1844 not heard until WKDI, MD, signed off. Gospel, c/w mx and then into s/off announcement; fairly good. **(HH-1)**

- 850 **WREF CT, RIDGEFIELD CENTER** 6/17 1315 P-F AC format, SID as "WREF"; ads. (RB-NY)
- 910 **WGB1 PA, SCRANTON** 6/19 0000 big signal w/rock 'n' roll and CBS nx on the hour. New...500 watter. (KZ-NY)
- 910 **WRKL NY, NEW CITY** 6/17 1335 Good w/IDs, AC songs, wx, PSA for library. (RB-NY)
- 950 **WPEN PA, PHILADELPHIA** 6/17 1500 w/ad for Pop Pepper's Windows, MYL songs and ID as "It's 3:11 on WPEN, 950 on the dial." (RB-NY)
- 950 **WPEN PA, PHILADELPHIA** 4/30 0533 Fair w/local nx, anct "WPEN Newstime is 5:33", Weight Watchers ad. (MB-KRIPALU)
- 960 **WEL1 CT, NEW HAVEN** 6/15 1935 Fair w/AC mx and IDs as "960-WEL1" (RB-NY)
- 990 **WALE RI, PROVIDENCE** 4/30 0530 F-G w/ad for Miller & Soto Law Offices, ID anct as "Covering all of southern New England... WALE Providence, all talk all the time" into nx. Never heard in Toronto despite 50 kw power. (MB-Kripalu)
- 1030 **WBZ MA, BOSTON** 6/15 1945 Poor w/listener call-in's, ID as "WBZ-Boston", nx, traffic, lottery #'s and Sears Roebuck ad. (RB-NY)
- 1070 **WKMB NJ, STIRLING** 6/17 1520 Good w/ad for the Elizabeth Cohen Law Firm, c/w and ID as "WKMB Stirling Country - 1070," (RB-NY)
- 1110 **WHIM RI, PROVIDENCE** 4/30 0548 F-G w/promo for CNN nx, "Stereo Country WHIM" ID...into c/w; either local WHIN (Pittsfield, MA only a few miles from Lenox) hadn't signed on or was running PSA power. (MB-Kripalu)
- 1120 **WADN MA, CONCORD** 4/28 2200* Poor in KMOX null w/long s/off anct read by f/ann, mentioned programming provided by CBC, BBC and other international sources; no SSB. Not needed - heard in 1990 on CPC test. (MB-Syracuse)
- 1170 **WJCC MA, NORFOLK** 3/2 0631-0640 topping the channel for awhile before fading u/WVVA; also some QRM from unID stations. Popular mx and solid ad for a restaurant in Foxboro, MA. Good report; now 5 stations added on 1170 w/WBRW off the air. (HF-2)
- 1230 **WFAS NY, WHITE PLAINS** 6/17 1600 Poor w/nx at ToH and ID as "Newstalk 1230 - WFAS." (RB-NY)
- 1250 **WMTR NJ, MORRISTOWN** 6/17 1610 P-F w/ID as "This is Business Radio - 1250 - WMTR" followed by a Stock Market Report. (RB-NY)
- 1300 **WAVZ CT, NEW HAVEN** 6/17 1615 P-F w/MYL and BBD mx; ID as "1300 - WAVZ." (RB-NY)
- 1310 **WJLK NJ, ASBURY PARK** 6/17 1620 P-F w/ID as "1310 AM - WJLK"; oldies and ad for Air and Space Magazine. (RB-NY)
- 1320 **WKAF PA, ALLENTOWN** 6/17 1625 P-F w/ID as "1320 - WKAF"; oldies w/a DJ that seems to be ringing a cow bell. (RB-NY)
- 1340 **WMID NJ, ATLANTIC CITY** 6/8 1812 Good w/MYL format (Barry Manilow song), ID. (RB-NY)
- 1350 **WHWH NJ, PRINCETON** 6/17 1630 Poor w/ID as "1350 Radio - WHWH"; AC format; nx, wx, Wall Street update, Shadow Traffic Report; ad for a Mercury dealer. (RB-NY)
- 1400 **WSTC CT, STAMFORD** 6/17 1635 F-G w/NY Mets Report (interviewed Dave Magadan); oldies; promo to win a GEO and ID as "Newsradio 1400 - WSTC." (RB-NY)

- 1430 **WNJR NJ, NEWARK** 5/2 0537 Fair w/ad for Denny's restaurant, into call-in show called "Great Awakening" with a number of quasi-ID's (i.e. ancr said "Hello, you're on WNJR). (MB-Kripalu)
- 1440 **WNYG NY, BABYLON** 6/8 1829 Good w/oldies, ID and CNN nx @ 1830. (RB-NY)
- 1460 **WVOX NY, OLD BETHPAGE** 6/9 1030 Very Good w/"Bill Chibilski's Polka Party"; dedications, ID as "WVOX-Old Bethpage" and lotsa polkas! (RB-NY)
- 1510 **WNLC CT, NEW LONDON** 5/1 0544 F-P w/local wx, ad for "We the People" cassette to improve reading skills [by the same folks who offer "Hooked on Phonics"]. (MB-Kripalu)
- 1510 **WNLC CT, NEW LONDON** 3/18 0401-0428 noted w/plenty of QRM from WSSH/CJRS & WLAC. Copied some CW IDs and tone; voice not deciphered. NBC DX PROGRAM. (HH-1)
- 1570 **WBUX PA, DOYLESTOWN** 5/1 0546 Fair w/local wx, many mentions of Bucks County, farm report. (MB-Kripalu)
- 1580 **WLIM NY, PATCHOGUE** 5/1 *0531 Very Good w/sign-on ancr preceded by SS.B; this station is a #\$\$* & @ pest just about anywhere I DX!! (MB-Kripalu)
- 1600 **WJQ1 VA, CHESAPEAKE** 4/8 1854-1922 Good atop channel much of the time. Some WAYC QRM and unIDs; love songs on "JOY-95", commercial and weather. (HH-3)

DX TESTS, FREQUENCY CHECKS, TIS

- 500 **TIS VA, PRINCE WILLIAM FOREST PARK** (Triangle, VA) 3/4 1150 Good w/park information. Noted during return trip from basketball tournament. (HH-3)
- 530 **WNHQ VA, PRINCE WILLIAM COUNTY** 3/4 1150-1212
TIS first noted w/weak signal near Exit 47 (Stafford, VA) & peaked near Quantico, VA. Previously QSL'd; power listed at 10 watts. (HH-Mobile)
- 530 **TIS VA, RICHMOND** 3/4 1045-1110 station was testing; good signals leaving the Richmond Marriot...then North on I-95 and signal weak by the time we reached Exit 40 (King's Dominion Park). (HH-Mobile)
- 530 **TIS VA, ALEXANDRIA WASHINGTON NATIONAL AIRPORT** 3/4 1220 this station has a good range; usea to hear it when I lived in Chevy Chase, MD; QSL'd (HH-Mobile)
- 530 **TIS MD, COLLEGE PARK** 3/4 1240 Weak-Fair signal w/highway traffic info. No QRM noted from KNJX - 865 (Annapolis) as they are off (probably only operate summer season with beach traffic); 10 watts. (HH-Mobile)
- 640 **WJT2 TN, BLOUNTVILLE** 4/15 0430-0500 w/scheduled DX TEST. CW IDs, voice IDs, and "rock" (?) music. Fair level at best w/KFI (?) and "Best of Larry King", Radio Progresso, and WGST w/talk - all QRM, though the Cuban was the pest. First DX Test this season! (MH-NC)
- 640 **WJT2 TN, BLOUNTVILLE** 4/15 0330-0400 Strong w/frequent code IDs and test announcements. A few tones also. (JDS-AL)
- 640 **WJT2 TN, BLOUNTVILLE** 4/15 0426-0502 fairly good w/tone, CW ID's and voice on test for NRC. (HH-4)
- 1160 **WYRO NC, RED SPRINGS** 4/22 NOT heard scheduled test date. Listened from 0535-0600 but no test noted...only WOBM noted. (MH-NC)

- 1610 TIS VA, PRINCE WILLIAM FOREST PARK 3/4 1150-1212 about the same signal characteristics as Prince William County on 530 kHz...a stronger signal. (HH-Mobile)
- 1610 TIS VA, RICHMOND 3/4 1045-1110 Testing; good signals leaving Richmond Marriot...then North on I 95 and weak at Exit 40 (Kings Dominion). (HH-Mobile)
- 1610 TIS NC, BERN NC Department of Transportation (Division of Ferries) noted 4/20 at 1518 w/male announcer and 2 minute 10 second tape on ferry service available at various parts in NC (7 announced). Transmitter noted along I-70 East on-ramp (at I-17 Interchange). Also, sign advising to tune to 1610 noted on approach to New Bern (on I-17). Reported, and will pass along info on ops when received. (MH-NC)
- 1610 WNSX 589 VA, VIRGINIA BEACH now a regular with their big 10 watt signal 8 miles from the beach on Route 44. Owned and operated by the City of Virginia Beach; call (804) 428-8000 and ask for Courtney Dyer. Range is only supposed to be 2 1/2 miles! (KZ-NY)

TENTATIVES & unID's

- 836 WGCF SC, SAN SOUCI 6/18 0000 end of religious program then elaborate sign off. Big signal but, of course, faded when ID was read. Has this station gone on the air? Mentions of Greenville, etc. (KZ-NY)
- 104G CHRS PQ, MONTREAL 6/19 2200 someone is in there with a second harmonic of 1040. Lots of pop mx in FF... possibly an FM simulcast. Very few announcements. WEAK with a different propagation on each frequency. (KZ-NY)
- 1060 unID 3/24 2122 Fair w/"Power Hits 1060 Weather"; slogan = "The All New Power Hits 1060 - where we play your kind of rhythm." UC format. Any ideas" (JDS-AL)

QUIPS & QUOTES

- FROM MIKE HARDESTER: regarding the WVOF - 1580 logging in the April 13th MONITOR: how can a radio station have a "city of license" which is a U.S. Military Reservation? All of their IDs announce "Camp Lejeune/Jacksonville," as do announcements at s/on and s/off. Comments anyone? A possible address for this station is WVOF, c/o Ward of Faith, 1309 Lejeune Blvd., Jacksonville NC 28540-6335 (this is the street address listed in the local phone directory).
- FROM KARL ZUK: WSNX 589 1620 kilocycles is operating on 10 watts with a 35 foot monopole whip antenna on Route 44, 8 miles from the ocean. Range is estimated at 2 1/2 miles with a height of 9 feet above average terrain.

COMMENTS

Well, we're into the Spring/Summer doldrums again and everyone, including this editor, is thinking of things other than DX. The next issue of the MONITOR and EDXR is scheduled for August 24th, which is the last issue for Volume #28. I hope to get some loggings in on the patio, as the barbecue is cooking...hope others do also. Thanks to Mike Hardester, J.D. Stephens, Mike Brooker, and 1st time EDXR reporter Hank Holbrook for their reports in this issue. Can anyone help me with the WVOX location? The NRC log has it located in Rochester, NY but I clearly heard them say Ola Bethpage, which is right here on Long Island. Did they move the station? Last but by no means least, congratulations to all recent winners in the IRCA Elections! Till next time, **CONTINUED**

GOOD DX MY FRIENDS, and 73 de Mr. B

EASTERN DX FORUM

RICHARD C. EVANS
PO BOX 21883
MILWAUKEE WI 53221

Reports from members living east of the Mississippi River
Deadlines: 8/10, ?

Gerry Thomas, 3635 Chastian Way, Pensacola, Florida 32504

Wow! The weather around here this spring sure has been weird. Almost 50" of rain so far this year when the normal amount is near 20". Of course, the rain has been accompanied by lightning and thunder so radio pursuits have been minimal. I did experience an interesting phenomenon in March, however. I was driving along the coast in a moderate sea fog when I looked up at the sun and thought I saw a dark spot on it. I put on my sunglasses and looked again and was astonished to see the largest sunspot I had ever seen with the unaided eye; it seemed to cover a full third of the upper left quadrant! Two nights later the aurora borealis was again visible from Pensacola. This was the third week of March, the same time last year when the aurora made its first appearance this far south. And, of course, radio conditions to the north were just atrocious with even WSB-750 Atlanta and WSM-650 Nashville completely gone. Strange goings-on going on. Summer's here which means you can't DX when you feel like it; you have to DX when Mother Nature says it's okay. Down here the regional weather has to be dominated by a high pressure system to make the BC band listenable, which generally occurs about 3 or 4 days a month during the summer. These days, however, are worth seeking out because some unusual South American DX has been had in years past. This past DX season was pretty much of a bust. The Desert Shield/Storm/Sabre events had us DoD scientists putting in 70-hour work weeks and most spare time hours were spent glued to CNN. I'm looking forward to a peaceful, productive DX season this fall, hi. On other matters, the new Drake R-8 looks too good to be true; finally, the opportunity to buy an American product from an American company with an excellent engineering and service-after-the-sale reputation. Right now, the only thing standing between me and the R-8 is this thing called a "wife", hi. I've enjoyed the recent articles by Dallas and Mark on antennas. Keep 'em coming (maybe I'll even get the 3 I've written polished up and sent in pretty soon). That's about it from here. 73's...GT.

R.C. Watts, 4109 Graf Drive, Louisville, Kentucky 40220-3016

I really enjoyed EDXC-91 at Sitges (Barcelona), Spain. The local station is Radio Maricel, Emissora Municipal de Sitges on 107.7 MHz. Somehow my mini recorder did not work properly, so I don't have it (operator malfunction!). Atlantic 252 was pretty well blocked by Algeria, which has a very good early evening international program. Radio Monte Carlo very big on 216 kHz with local French program about UTC 2100. Radio Luxembourg still the same on 1440 kHz as it was over 30 years ago while I was living it up prior to getting married. My all time favorite station. Got 60 minutes of Lux on tape. Got a good 60 minutes of Radio Titano, 97.3 MHz, while in San Marino. Toured AFN Munich, 1107 kHz and got tape of that, plus VOA Europe, 1197 kHz, Europe 1, 183 kHz and Antene Bayera, 107.7 MHz. Saw the RFE/RL transmitter site, 720 kHz plus SW, from outside the fence at Holzkirchen. The Sony ICF-SW7600 worked nicely, but I should have planned my monitoring better over three weeks instead of two. I thought there would be some monitoring time during EDXC-91, but those guys mostly came to party. Late afternoons and evenings were filled with tours, sight seeing and banquets. All in all the trip was worth it! "Found" my old sheet of SCDX Reporter stickers. These helped with QSLs at one time as there was some distinction attached.

Tom Laskowski, 1334 East Miner Street, South Bend, Indiana 46617

I just returned from a very enjoyable (and much needed!) vacation to the southwest where I visited Texas, New Mexico and Arizona. The main purpose of my trip was to attend the 1991 Texas Star Party at the Prude Ranch in Fort Davis, Texas, but I did manage to do a little bit of DXing and listening to some of the locals and western clear-channels. The only daytime local heard from the ranch was KVLP in Alpine, playing EZL/NOS music. Other than that the band was completely dead since we were really out in the middle of nowhere. At night the dial was filled with Mexicans. Unfortunately, I did not have a good radio with me so I didn't take any logs for reporting to DX Monitor. The strongest signals at night were from KOMA, WBAP, and KCWW. Surprisingly I was unable to hear anything from east of the Mississippi. One more change to pass along concerning South Bend radio. It seems that my closest local (at one mile) WNDU-1490 has decided to drop NSP. They used to be AN6, signing off on Monday mornings. Then they went NSP about a year ago. Now they're signing off at 0100 local time every night. Finally a change I can live with. Congrats to all the election winners. I know you'll do a good job for IRCA. Hope to see Broadcasting Information return soon. It's the most important column in my opinion. 73.

Mark Connelly, 30 William Road, Billerica, Massachusetts 01821-6079

WVNE-760 (Leicester, MA) is on with a religious format. It seems to be on daytime only: if operating at night, it must be low power, as only the usual WJR/Columbia/Venezuela/Cuba mix shows here after dark. WVNE's day strength is consistent with 5 kw: WTAG-580, in the same metro-Worcester area, runs a comparable signal. Recent daytime drives along the coastline north of Boston (e.g., Cape Ann) revealed CFDR-780 (Dartmouth, Nova Scotia) to me. Its groundwave is at fair to good strength near the water, poor to nil a few miles inland. (It's just a BFO-detectable carrier at the Billerica home QTH.) CFDR gets covered by ZBVI, WBEM, Venezuela, and others at night. It runs a CHR/Top 40 with some '80s-era hits mixed in. Like CHTN-720, CFDR is a good daytime "antenna testing" station for determining the TA DX viability of a given loop, longwire, Beverage, etc. from QTH's in eastern MA, RI, and probably coastal ME, NH, CT, NY, NJ and DE. Wasn't Yarmouth, NS (CJLS-1340) supposed to go to 780? I don't think that they could "co-channel co-exist" with CFDR. If CFDR makes it to MA, it certainly must get to Yarmouth, NS. By the way, the addition of the Portsmouth, NH area religious station to the stew on 1340 makes an already rough channel an even more insufferable mess. I used to enjoy listening to CJLS's groundwave when in Gloucester/Rockport, MA. Getting behind the "right rock" usually killed competing WNBH. Now the channel's a big jumble throughout the area. Frequency stability of AM's seems to be getting sloppier: one of the local 1450 guys (WNBP-MA or WKXL-NH) is somewhat off channel (causing a growl); similar situations exist on the groundwaves of 1340 (WNBH-MA, WNNH-NH, CJLS-NS or WGAW-MA) could be the culprit) and of 900 (with WCLZ-ME/CKDH-NS/WSSR-DE). I would think that, with "within-a-Hertz" counters being accessible at hobbyist prices (under \$500), off-frequency problems would be a thing of the past. Stability of US stations (I think) was actually better 30 years ago: "growls" then meant a Latin American. Another local note: Travellers' Information stations at the Tyngsborough, MA/Nashua, NH border have been noted on 530 and 1610 kHz. Range of these on a car radio is a couple of miles at best, but a serious DX receiver/antenna combo can haul them if for at least 30 miles with no problem. Skip (CJFT-530 and Atnigua-1610) bury these TIS stations at night here approximately 20 miles southeast of them. 530 could conceivably make it to the outer Cape (e.g., Provincetown) if good DX equipment is used. Oh year -- What's up with PJB-800 and R. Paradise-825? I haven't heard these lately. They used to be "pests". Are we dealing with power changes, antenna changes, frequency changes, increased QRM, or just rotten propagation?? I'd like to know. Cesar Objio, Gerry Thomas, or other DXers "closer to the action" should be able to solve this. I hope all have a great summer. Report that vacation trip DX! 73.

Ernest Cooper, 5 Anthony Street, Provincetown, Massachusetts 02657

We've recently enjoyed a vacation in St. Croix, at the King Frederik Hotel in Frederickstad, a "hotel for special people", they advertise. The island has recovered greatly after Hurrigan Hugo back in 1989, but there are still many evidences of its damage. I found out that my GE Superadio is smarter than I am. I take it to the islands, and immediately it speaks Spanish - how come I can't do likewise? The Virgin Islands are English-speaking, but they have a very distinct Caribbean accent which is sometimes hard to understand. I visited local WRRR-1290 Frederikstad, and met with their GM who told me they were the only V.I. station not to lose its antenna to Hugo. They were without power for two days, and off for two more because the roads to the station were inaccessible due to rubble and fallen trees. Contrary to the NRC Log, they are 1000 watts unlimited, and operates from 0600 to 2400 AST, which is the same as EDT. He said WRRR has never been heard in the U.S. proper, so there's a challenge for you, Mark Connelly, when the next Aurora blooms! Arriving home, I found a large packet of things on which to vote (after the fact) so the IRCA operated for a whole season in effect, without a Board of Directors. Also, I found the battery in my SM-2 antenna was dead, and I had no replacement. I went to the local hardware store to find the cheapest such battery they had cost \$3.58 plus tax, so I waited until I was next in Orleans, and I got a Radio Shack battery for 59¢ and became a member of their Battery-of-the-Month club. I have found that the Energizer and the Duracell batteries overload the antenna and make tuning very difficult for the first couple of months, or until they wear down a bit. The hard-to-find red Eveready batteries were always ideal for this purpose, but are they still on the market? (Ernie, if you're referring to the "classic" label battery, yes they are--rce) The Radio Shack ones will not last too long, I reckon, but at least they're great while they do work. They have a "deluxe" model for 99¢ I didn't get that one, for fear it too might overload. There's supposed to be a gigantic Aurora these days (6/10-15) but no sign of such here on either AM or FM. Seems every time they publicize one of these in advance nothing happens, but when they are caught unawares, that's when the fun begins! Local WOCB & WOCB-FM 1240 & 94.9 are now signing off at midnight & have been sold for something like only \$875,000 to a Norwood automobile dealer, pending FCC approval. The previous owner paid \$4 million three years ago! Times is tough.

Mike Harvester, P. O. Box 8159, Camp Lejeune, North Carolina 28542

GREETINGS! To begin with, to all who voted for me in the recent election, THANK YOU! I'll do the best possible for you and the club, so feel free to write me with suggestions, comments, inquiries, whatever. I may not have an immediate answer to all questions, but I'll find someone who does. Remember: it's OUR club and YOUR input is needed to continue the growth of the IRCA! June has been a busy month here, and July looks to be qually as busy. In the weeks ahead, my family and I are scheduled to close on a new house (utilities underground!); I'll be transferred to another unit in this area; and knee surgery will become (FINALLY!) a reality on 12 July. So, while it's going to be busy, don't hesitate to write. The new house is NE of Camp Lejeune (about 10 miles), and the ONLY potential source of QRM I can see is a mercury vapor lamp -- does anyone know their potential for causing QRM? What good is summer with all the static? Well, a couple of things come to mind: checking outside antennas, and sending out follow up reports...a bunch will be going out in the mail, along with this FORUM. Also, for those traveling this summer, don't forget to check for new TIS operations - they'll appear where you least expect them! ENJOY! Very 73 and Best of DX! (Mike, thanks for the newspaper--rce)

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

Congrats to all those who won in the club elections this spring. It's interesting to note that while we had the same 7 BoD members from 1987 to 1991, only two will be carried over to the 1991-93 BoD. It looks like things could be interesting for the next two years. I wish the nine of you guys the best of luck and wisdom. 73.

Verification Signers



Editor: TIM HALL, 350 G St. #F-1, Chula Vista, CA 91910-4559
 Deadline: Last Friday of the month

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 MS - MIKE SANBURN, P.O. Box 1256, Bellflower, CA 90707
 JDS - J.D. STEPHENS, 122 Brawley Dr., Owens Cross Roads, AL 35763

FREQ	CALL	SIGNER'S NAME / TITLE	ADDRESS	WHAT	WHEN	WHO
530	CKHL	Mary E. Cambridge	High Level, AB			DXC
550	CHLN	Denis Gaudreault [VE2EMD]	Trois-Rivieres, QC			DXC
	KLLV	B. Jansen, OP MGR.	14780 Highway 140 Breen, CO 81326-9775 P.O. Box I-850	L	35	TRH
560	CHVO	Tom Ormsby, PD	Carbonear, NF AOA 1T0			ARC
570	CKSW	Ken L.A. Burgess	Swift Current, SK			ARC/DXC
580	CKY	Kim Topham, EXEC SEC'Y	Winnipeg, MB			ARC/DXC
590	CKEY	[CKYC] K. Dent, CE	1 Yonge St. 25th Floor Toronto, ON M5E 1G1			ARC
	VOCM	John Murphy, STN MGR.	St. John's, NF			DXC
600	CFCP	Andre Chevalier, PD	Montreal, QC			DXC
	CFCH	Wayne Russell, ENG.	743 Main St. East			ARC
		Todd Pulsifer	North Bay, ON P1B 1C2			
	CFQC	[ILLEGIBLE]	216 First Ave. North Saskatoon, SK S7K 3W3			ARC
610	CHNC	Mario Loubier, DIR.	New Carlisle, QC			DXC
	CKYL	Mary E. Cambridge, P/GM	Peace River, AB			ARC
620	CKCK	Art Williams, CE	Regina, SK			ARC
630	CHED	Tom Davies, CE	5204 84th St. Edmonton, AB T6E 5N8			ARC
640	CHOG	Lija Edgington, EXEC ASST.	Richmond Hill, ON			ARC
	WJTZ	Mitch Sandidge, CE	640 Radio Way #286-B Blountville, TN 37617	LM	13	JDS
650	CKOM	[ILLEGIBLE]	3333 Eighth St. East/Box 65000 Saskatoon, SK S7H 0W3			ARC
	KYAK	Wayne Meloney, NX DIR.	2800 E. Dowling Rd.			ARC
		Wayne Maloney, NX DIR.	Anchorage, AK 99507			DXC
670	KBOI	Willis Frahm, CE	Boise, ID			DXC
680	WRKO	Karry Bruce, CE	Boston, MA			DXC
690	CBF	Denis Doucet, GM	Montreal, QC			ARC
700	CKRD	Marv Casey, PD	2840 Bremner Ave. / Bag 5700	L		ARC
		M. Gunderson, PD	Red Deer, AB T4N 6V5			ARC
	KBYR	A.G. Hiebert, CHAIRMAN	P.O. Box 102200 Anchorage, AK 99510			ARC
710	CKVO	John Murphy, VOCM STN MGR.	Clareville, NF			DXC
720	WGN	James J. Carollo, CE	435 N. Michigan Ave. Chicago, IL 60611	Q		MS
730	CKDM	Linus Westberg, GM	P.O. Box 2000, Dauphin, MB R7N 2V5			ARC
740	CBX	Jack Tyler, MGR TECH SVC.	Edmonton, AB			ARC
	KCBS	[UNSIGNED]	One Embarcadero Center San Francisco, CA 94111	Q+	7f	JDS
750	CJWW	Dawson Elliott, CE	Saskatoon, SK			ARC
	KPQD	Roy Robinson, GM	9200 Lake Otis Parkway Anchorage, AK 99507			ARC

FREQ	CALL	SIGNER'S NAME / TITLE	ADDRESS	WHAT	WHEN	WHO
760	KGU	Alan Zee, PD	2153 N. King St. #376 Honolulu, HI 96819	LB		MS
770	CHQR	Mel Hoyme, VP ENG.	1900 125 Ninth Ave. SE Calgary, AB T2G 0P6			ARC
800	CHAB	Mike Soar, TECH DIR.	116 Main St. North Moose Jaw, SK S6H 3J7			ARC
	CKLW	Wally Dowhan, CE	1640 Ouellette Ave./Box 480 Windsor, ON N9A 6M6			DXC ARC
830	KIKI	Jerry Varojean, CE	345 Queen St. #601 Honolulu, HI 96813			ARC
840	KVEG	Cameron A. Archbold, OP MGR	Las Vegas, NV	L		OA
	WHAS	Charles R. Strickland, CE	Louisville, KY			DXC
850	KOA	Jan Chadwell, CE	Denver, CO			DXC
860	CBKF2	[ILLEGIBLE]	Saskatoon, SK			ARC
	CHAK	David H. Tait, PROG OFCR.	Inuvik, NT			ARC/DXC
870	CFSX	James O'Rourke, GM [CFCB]	Stephenville, NF			DXC
	WLAM	Armand Girard, CE	Gorham, ME			DXC
880	CHQT	Bob Hunter, CE	2200-10130 103 St. Edmonton, AB T5J 3N9			ARC
890	CJDC	Mike Michaud, GM	Dawson Creek, BC			ARC
900	CHML	Danny Kingsbury, PD	Hamilton, ON			DXC
910	CKDQ	Kirk Layton	Drumheller, AB			ARC
	KIYU	Rebecca Derendoff, OFC MGR	P.O. Box 165, Galena, AK 99741	L		ARC
	KPOF	Robert B. Dallenbach, GM	Denver, CO			DXC
	WJWC	Al Lefevre, CE	P.O. BOX "W", CRS Johnson City, TN 37601	L	11f	JDS
	WSUI	Dennis Reese, PD	Iowa City, IA			DXC
920	CFLS	Louis Mercier, DIR PROD.	Levis, QC			DXC
	CKCQ	Brian Miles, OP MGR.	Quesnel, BC			DXC
	CKCY	Mike Thurnell, OP MGR. [DXer]	642 Great Northern Rd. Sault Ste. Marie, ON P6B 4Z9	LB	15fff	JDS
930	WRXJ	Van Page, PD	8386 Baymeadows Rd. #107 Jacksonville, FL 32256	LB	9ff	JDS
940	CBM	Monique Dubois	Montreal, QC			DXC
	CJGX	[ILLEGIBLE]	Broadcast Pl./120 Smith St. E. Yorkton, SK S3N 3V3			ARC
950	CFAM	Myron Dyck, ENG.	Altona, MB			ARC
	KMTX	Ron Remington, CE	Helena, MT			DXC
960	CPFX	Lee Sterry, VP PROG.	Kingston, ON			DXC
970	CBZ	Rose Arsenaault, COMM OFCR.	Fredericton, NB			DXC
	WEBR	Al Wallack, OP MGR.	Buffalo, NY			DXC
980	CKRM	Jorj Hyde, CE	Regina, SK			DXC
1010	CFRB	Ron Hopkins	Toronto, ON			DXC
	WONE	Richard Walsh, CE [WDSMSJ]	Dayton, OH			DXC
1050	CFGP	Lorrie Dalglish, PROMO COORDINATOR	200 Windsor Ct, 9835 101 Ave. Grande Prairie, AB T8V 0X6	L		ARC
	WEVD	George B. Levites, CE	New York, NY			DXC
1070	CHOK	Paul Mc Kee, PROMO DIR.	148 N. Front St. / Box 1070 Sarnia, ON N7T 7K5			ARC
1080	CKSA	Erynn Fischer, PROMO DIR.	5026 50th St. Lloydminster, AB T9V 1P3			ARC
1090	CHEC	Cliff Stoakley, PROMO DIR.	Lethbridge, AB			ARC
	CKKW	Lynda Gyvaert, ENG SUPVSR.	864 King St. West Kitchener, ON N2G 4E9			ARC
1130	WISN	Robert Johnson, CE	Milwaukee, WI			ARC
	WNEW	Alan D. Kirschner [WA2UCV]	New York, NY			DXC
1140	CISS	Jerry Pendree, TECH DIR.	804 16th Ave. S.W. Calgary, AB T2R 0S9			ARC
1150	CKX	[ADDRESS UPDATE:]	P.O. Box 1150, Brandon, MB			ARC
	KSEN	Anne James	Shelby, MT			DXC
	WCRK	Grace Waldo	204 Brown Ave. / P.O. Box 220 Morristown, TN 37815-0220	LMB	6ff	JDS
	WYNE	Greg Scheider [W9IEI], ENG DEPT.	P.O. Box 1035 Neenah, WI 54957	L		ARC

FREQ	CALL	SIGNER'S NAME / TITLE	ADDRESS	WHAT	WHEN	WHO
1160	WKCM	Jeff Morgan, PD	P.O. Box 335 Hawesville, KY 42348	LMB	4fff	JDS
1170	CKGY	Ritch Nickell, MX DIR.	Red Deer, AB			ARC
1180	WHAM	Jeff Howlett, STN MGR.	P.O. Box 40400 Rochester, NY 14604-0900	Q		ARC
1190	CPSL	Jim Hutchings, CE [VE5HM]	305 Souris Ave. / Box 340 Weyburn, SK S4H 2K2			ARC
	WBMJ	Chuck Newby, PD	San Juan, PR			DXC
	WOWO	Eric Culp, ENG MGR.	Fort Wayne, IN			DXC
1200	CHMG	Susan O'Connor	22 Sir Winston Churchill Ave. #602 St. Albert, AB T8N 1B4			ARC
1220	CJOC	Paul M. Crawford, TECH.	Lethbridge, AB			ARC
	CJRB	Ed Siemens, ENG.	P.O. Box 950, Altona MB ROG OBO			ARC
	CKCW	Robert Oke, CE	1000 St. George Blvd. Moncton, NB E1E 2E1			ARC
1230	CFPB	Curt Petrovich, ANNCR/OP.	Iqaluit, NT			ARC
	KAMJ	James Bojorquez, ASST ENG.	4745 N. Seventh St. #135 Phoenix, AZ 85014	LB		MS
1240	KFLY	Bob Holt, GM	Corvallis, OR			DXC
	KFOR	Jerry Basham, CE	Lincoln, NE			DXC
	KNSS	Mary Beal, STN MGR.	Wichita, KS			DXC
	KODY	John Kelley, PD	308 W. Fourth St. North Platte, NE 69101			ARC
	WMMB	Larry Brewer, PD	2221 Front St. Melbourne, FL 32901			ARC
	WOCB	Keith G. Corey, VP	278 South Sea Ave. West Yarmouth, MA 02673			ARC
	WSDR	[ADDRESS UPDATE:]	3101 Freeport Rd. / Box 658 Sterling, IL 61081			ARC
1250	CHWO	Peter Dyck, CE	Oakville, ON			DXC
1260	CFRN	Bruce Hogle, MGR COMM REL.	Edmonton, AB			ARC/DXC
	WEZE	Dick Jolls, CE	Boston, MA			DXC
1270	CHWK	A. Schmidt, CE	P.O. Box 386 Chilliwack, BC V2P 6J7			ARC
	KIML	David King, STN MGR/NX DIR	Gillette, WY			DXC
1280	CJSL	Jim Hutchings, CE	P.O. Box 1280, Estevan, SK S4A 2H8			ARC
1290	CIFX	[ILLEGIBLE]	1445 Pembina Ave. Winnipeg, MB R3T 5C2			ARC
	CJBK	Jeff Guy, VP ENG.	743 Wellington Rd. South London, ON N6A 5A2			ARC
	WIRL	Mark Hill, CE	Peoria, IL			DXC
1300	KGLO	Sue Reilly, CE	Mason City, IA			DXC
1310	CHLW	Gary Tougas, PD	St. Paul, AB			ARC
	CIWW	Stan Harrison, CE	Ottawa, ON			DXC
	WNAE	[ADDRESS UPDATE:]	310 Second Ave. Warren, PA 16365			PB
1320	CHQM	D. Di Palma, CE	1134 Burrard St. Vancouver, BC V6Z 1Y8			ARC
	KUTR	Ritchie Bauer, CE	434 Bearcat Dr. Salt Lake City, UT 84115			ARC
	WJAS	Ted Lewczyk, ASST ENG.	Pittsburgh, PA			DXC
	WQIK	Les Samuels, VP/GM	5555 Radio Lane Jacksonville, FL 32205	LMB+	14ff	JDS
1330	WEYZ	[ADDRESS UPDATE:]	1946 W. 26th St, Erie, PA 16508			PB
1340	CFYK	[ILLEGIBLE]	Box 160, Yellowknife NT X1A 2N2			ARC
	WSOY	Orv Graham, GM	Decatur, IL			DXC
1350	CKAR	Dave Lyman, VP/GM	360 King St. West Oshawa, ON L1J 2K2	L		ARC
	WSLR	D. Krieger, CE	Fairway Ctr, 1867 W Market St. Akron, OH 44313	QB	8ff	JDS
	WXCL	Steven J Bednarski-Cook, PD	Peoria, IL			DXC
1360	CKBC	Kevin Chamberlain, ENG.	Bathurst, NB			DXC
	WGEE	Stephen Konopka, CE [N9FOY]	115 S. Jefferson St./POB 1991 Green Bay, WI 54305			ARC
1370	CFOK	Ian Glen	P.O. Box 1800, Westlock, AB TOG 2L0			ARC

FREQ	CALL	SIGNER'S NAME / TITLE	ADDRESS	WHAT	WHEN	WHO
	KDTH	Ellen Neese, BUS MGR.	Dubuque, IA			DXC
	KGNO	Jerry Miller, CE	P.O. Box 1398, Dodge City, KS 67801			ARC
	KSUM	Carla Nagel	Fairmont, MN			DXC
	WDEA	Tracey A. Tarr, NX DIR.	68 State St. / P.O. Box 1129	L		ARC
			Ellsworth, ME 04605			DXC
	WXXI	Adam A. Wilcox, PROG ASST.	Rochester, NY			DXC
1380	CKLC	Albert Aufleger	Kingston, ON			DXC
	KRKO	Mike Purdy, DIR OPS.	Everett, WA			DXC
	WAOK	Richard Mack, Jr., VP/GM	120 Ralph McGill Blvd. #1000	L	8fff	JDS
			Atlanta, GA 30365			
	WPHM	Eric Hanson, CE	Port Huron, MI			DXC
1390	CHOO	Grant Hoepfner, ENG.	339 Westney Rd. South #201			ARC
			Ajax, ON L1S 7J6			
	CJCY	R. Finlay, CE	457 Third St. SE, 2nd Floor			ARC
			Medicine Hat, AB T1A 0G8			
	WISA	Edwin Nieves Montano, PD	Isabella, PR			DXC
	WLAN	Frank Altdoerffer II, CE	Lancaster, PA			DXC
1400	CBG	R. Young	Gander, NF			DXC
	CKSQ	Warren Todd, PD	4703 58th St.	L		ARC
			Stettler, AB T0C 2L0			
	KBLX	Jenna Roman, SALES ASST.	Berkeley, CA			DXC
	KDRG	Dave & Edith Fransen, O.	Deer Lodge, MT			DXC
	KITZ	Jeff French, GM	Silverdale, WA			DXC
	WCCY	Justin "Mac" Marzke, GM	313 E. Montezuma Ave.	L		ARC
			Houghton, MI 49931			
	WKBI	[ADDRESS UPDATE:]	10 Railroad St.			PB
			St. Mary's, PA 15857			
1410	CFUN	David Youell, CE	1900 W. Fourth Ave.			ARC
			Vancouver, BC V6J 1M6			
1420	KITI	Harvey Brooks, CE	1133 Kresky	L		OA
			Centralia, WA 98531			
	WOC	Jon Book, CE	3535 E. Kimberly Rd.			ARC
			Davenport, IA 52807			
1430	KLO	Arlene Goodrich	385 24th St. #727			ARC
			Ogden, UT 84401			
1440	WRRO	[ALTERNATE ADDRESS:]	124 N. Park Ave, Warren OH 44482			PB
1450	KONP	Kris Grier, CE	313 W. First St. / Box 1450	L		ARC
			Port Angeles, WA 98362			
	WFRA	[ADDRESS UPDATE:]	1411 Liberty St.			PB
			Franklin, PA 16323			
	WMAJ	[ADDRESS UPDATE:]	P.O. Box 888			PB
			State College, PA 16805			
1470	CHOW	G.W. Burnett, MGR.	Welland, ON			DXC
	CJVB	[ILLEGIBLE]	814 Richards St.			ARC
			Vancouver, BC V6B 3A7			
	KBSN	Al Stewart, NX DIR.	Moses Lake, WA			DXC
1480	CKER	Ashebir Alemu, ENG TECH.	6005 103rd St. #200			ARC
			Edmonton, AB T6H 2H3			
	WHBC	Bill Glasser, CE	Canton, OH			DXC
	WTDY	Tim Morrissey, STN MGR.	Syene Rd. / P.O. Box 2058			ARC
			Madison, WI 53701			
1490	WOSH	Joe Roskos, CHIEF OP.	2333 Bowen St. / P.O. Box 1490	L		ARC
			Oshkosh, WI 54903-2846			
1510	WSSH	Daniel L. Steves, CE	500 W. Cummings Park, #2500			ARC
			Woburn, MA 01801			
1520	KFXX	Larry M. Holtz, CE	Oregon City, OR			DXC
	WWKB	Wende C. Westphal, ASST PD	Buffalo, NY			DXC
	WVOI	Bob Gross, CE [WB8D9K]	P.O. Box 5408, Toledo OH 43613	LM	8fff	JDS
		[REPLY MAILED FROM:]	6695 Jackman Rd.			
			Temperance, MI 48182			
1530	WCKY	Bruce L. Still, OP MGR.	Cincinnati, OH			DXC
	WTTI	Lee Spencer	P.O. Box 216	L	33fff	JDS
			Dalton, GA 30722-0216			
1540	WPTR	Steven J. Simons, CE	Albany, NY			DXC

FREQ	CALL	SIGNER'S NAME / TITLE	ADDRESS	WHAT	WHEN	WHO
1550	KITH	John A. McAulay, GM	13470 Manhasset Rd. #1 Apple Valley, CA 92308	L	5	MS
	KNTR	Ronald Cowell, CE	P.O. Box 308, Ferndale WA 98248			ARC/DXC
	KVKI	John Brewer, PROD DIR.	P.O. Box 78277 Shreveport, LA 71137	LM+	9f	JDS
1560	KNZR	Randy Warwick, GM	Bakersfield, CA			DXC
	KPWS	Barry Thompson, Sr., GM	P.O. Box 1469 Crowley, LA 70527	L	37f	JDS
1570	CFOR	Jack Latimer, PD	Orillia, ON			DXC
	CKMW	Myron Dyck, ENG.	P.O. Box 1570 Winkler, MB R6W 4B5			ARC DXC
	KPRO	Pastor Bill Kolb, STN MGR.	7351 Lincoln Ave. Riverside, CA 92504	L		MS
1590	KCIN	[ILLEGIBLE], PRES.	P.O. Box 1428 Victorville, CA 92393			MS
	WONX	Ken Novas	Evanston, IL			DXC

WHAT was received: Q=QSL card; L=Letter; B=Bumpersticker/other sticker; P=PFC.
 WHEN the reply came: Number of days elapsed; f=Follow-up (report/phone call/visit).

Congratulations to OLLE ALM on obtaining a verie from KVEG-NV. And thanks to all
 the Scandinavian DXers whose tips Olle forwarded to us! 73, TRH

The VERIFICATION SIGNERS ANNUAL is now available through the IRCA Reprint Service. This publication lists verification signers for approximately 800 different stations, as submitted to this column over the past year. Column numbers and masthead dates are listed so you can look up the addresses in DXM. Typefont is the same one used here, but will appear LARGER because we didn't have to reduce it so much for printing purposes (same as the Mexican list updater). Prices are \$2.00 to U.S. addresses, \$2.25 U.S. to Canadian addresses, and \$2.75 U.S. to foreign addresses. Send your orders to:

IRCA Reprint Service, Steve Ratzlaff, 295 Pettis Ave., Mountain View, CA 94041.

SPECIAL OFFER TO IRCA MEMBERS: Most of you probably have heard of Father Jack and read in DXMonitor edition #: 924 that he will be appearing on Jeopardy on July 8, 1991. I can and will make two video tape copies of the show. One copy will be in the VHS format and the other copy will be in the BETA format; I do have machines capable of recording either format. Any IRCA Member who would like a copy of the show can have one simply by sending me a blank VHS or blank BETA tape and return postage for the tape. I will duplicate my copy on to the tape you provide and return it to you. This is not a money making offer and I do not want any compensation for this service. To make any money on it would be in violation of Federal Copyright Laws and I will not accept any form of payment except for actual costs of return postage. Remember, there is a special recording tape rate that will save you money. Check your local post office for the exact rate. Canadian Members: you can send me Canadian Stamps for the same face value and I'll substitute U.S. Stamps, don't worry about the exact exchange rate between the U.S. and Canadian Dollar; I don't know if the special recording tape rate applies to Canada or not. Check your local post office to see if there is a special rate from the U.S. to Canada for recording tapes. **SEND YOUR TAPES TO: Albert S. Lobel, Post Office Box 26762, San Diego CA USA 92196.** And please be patient. If I get a lot of requests you may have to wait. I will be doing this as time permits on a first tape in first tape out basis. So it may be a while until you get your tape back.

Option 5 / MWT-2:
A Controller for Remotely - Tuned Antennae
Mark Connelly - WA1ION - 05 JUN 1991

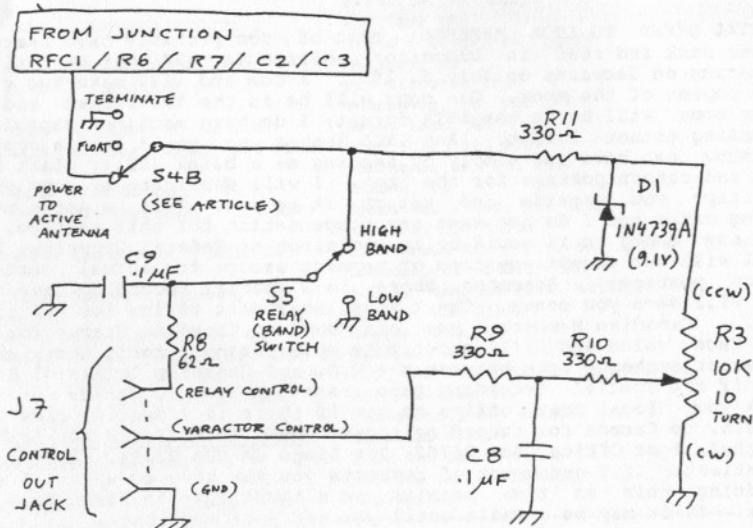
This article presents an option to the MWT-2 Regenerative Tuner which will allow it to control varactor-tuned antenna systems located at remote sites. Option 5 creates an MWT-2 which is compatible with the RTU-1 Remote Tuning Unit. The RTU-1 has been used with a great deal of success on active whips such as MFJ's 1024. Refer to my previous articles on MWT-2 (10 DEC 1990) and RTU-1 (14 MAY 1991) for further background information. The MFJ 1024 / RTU-1 / Option 5 MWT-2 system provides good sensitivity from a travel-ready antenna set-up well suited to use with popular DXpedition portables such as the Sony ICF-2010 and the Radio Shack DX-440. As noted in the RTU-1 article, the tunable active whip offers some operational advantages over typical small loops such as the Palomar Loop and the Radio West "Great Little Loop". Operation from difficult environments such as vehicles and hotel rooms is better suited to the active whip. Of course, a serious DX-minded traveller should pack a compact loop in the suitcase as well. A future project here will combine a remote loop and whip into a single box. This unit will be compatible with the Option 5 equipped MWT-2.

The four previous options for the MWT-2 tuner provided: (1) increased tuning range (added bands), (2) improved ease of regeneration adjustment, (3) increased gain, and (4) an added broadband amplification function.

Option 5, for remote tuner control, provides a variable DC output (0 volts to +9 volts) for varactor control and a switched 0 volt / +12 volt DC output for remote (bandswitching) relay control. These voltages, plus an auxiliary ground, are routed to a stereo headphone jack added to the MWT-2.

FIGURE 1 : OPTION 5 COMPONENTS TO
BE ADDED TO THE STANDARD MWT - 2

→ [SEE FIGURE 1A OF MWT-2 ARTICLE FOR
REMAINING CIRCUITRY]



addition, because the stock MWT-2 provides transfer of DC power (typically +12V) along the coaxial signal cable, the DC/RF coupler box normally supplied with the MFJ 1024 and similar whips does not have to be used. The MWT-2 replaces it and, in the process, adds the possibilities of regenerative tuning, varactor control, and relay control to the customary power-coupling and attenuation capabilities of the commercially-supplied base-unit box.

Figure 1 illustrates the components added to the original MWT-2 baseline schematic.

Note that the original SPDT toggle switch used for S4 has been replaced by a DPDT type. S4 Section B is the new section (see Figure 1); S4A is equivalent to the original wiring of S4 in the baseline MWT-2.

Table 1: Option 5 parts list

Vendor codes:

RS = Radio Shack / Many locations worldwide

MOU = Mouser Electronics / 11433 Woodside Ave.
/ Santee, CA 92071
/ Tel. 1-800-346-6873

Item	Designator	Description/Value	Vendor	Vendor Stock #	QTY
1	C8,C9	capacitor, 0.1 uF	RS	272-109	2
2	D1	zener diode 1N4739A	MOU	333-1N4739A	1
3	J7	stereo headphone jack	RS	274-312	1
4	R3	pot., 10K 10-turn	MOU	594-53411103	1
5	R8	resistor, 62 ohm	MOU	29SJ500-62	1
6	R9,R10,R11	resistor, 330 ohm	RS	271-1315	3
7	S4	switch, DPDT, on-off-on	RS	275-664	1
8	S5	switch, SPDT, on-on	RS	275-326	1

Table 2: Holes added for Option 5 implementation

X = Horizontal distance, in inches, from the vertical centerline (VCL) on the side observed. Negative values of X are left of VCL, positive values of X are right of VCL.

Y = Vertical distance, in inches, from the bottom horizontal edge of the side observed.

D = Hole diameter in inches.

+++++

LEFT SIDE

Hole #	Comp. Desig.	Description	X	Y	D
7	S5	Relay switch - shaft	-1.5	0.75	0.25
8	S5	Relay switch - tab	-1.5	0.5	0.144

+++++

TOP SIDE

Hole #	Comp. Desig.	Description	X	Y	D
18	J7	Control Cable Out-stereo jack	0.125	3.25	0.375
19	R3	Varactor Control Pot - shaft	1.5	0.625	0.375

+++++

Compatibility of Option 5 with previous MWT-2 options

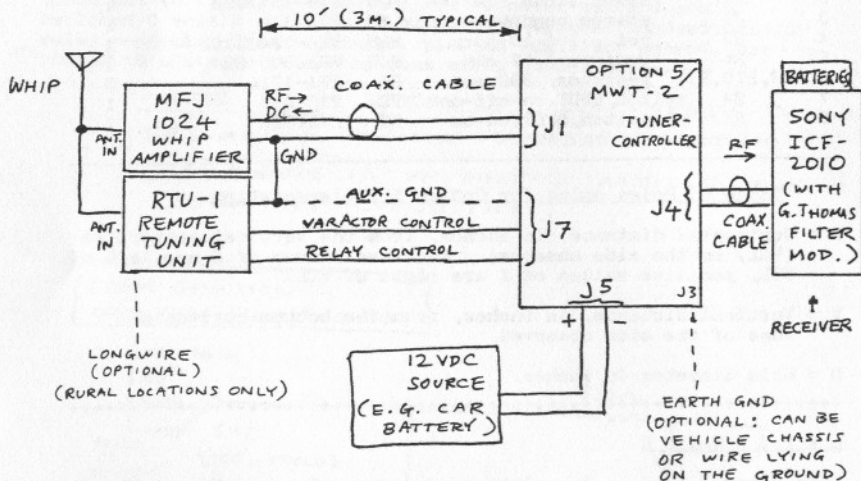
Option 5 is not meant to be installed with Options 2 through 4. Option 1 can be co-implemented if J7 (external coil) of Option 1 is deleted: it is physically replaced by J7 of Option 5 (which does a different job). S1 position 12 would be outfitted with a twelfth pair of inductors - e. g. 1 uH and 0.22 uH - in lieu of the external coil jack.

Operating conclusions

Option 5 / MWT-2, as noted earlier, provides a very DX-worthy portable antenna system when used in conjunction with the RTU-1 equipped MFJ 1024 active whip. The ability of the MWT-2 to provide regenerative selectivity-sharpening (in effect, a passband filter with variable center frequency and bandwidth) augments the capabilities of IF filters in receivers such as the Sony ICF-2010. Selectivity-improvement has made the difference between a loud het and clearly-discernable audio on numerous Trans-Atlantic MW DX "splits" logged on afternoon beach DXpeditions.

APPENDIX

FIGURE 2 : BLOCK DIAGRAM OF DXING SYSTEM FOR MOBILE DXPEDITIONS



*** IRCA AM-FM ALMANAC, 5th Edition 1991 ***

The fifth edition of the IRCA AM-FM Almanac is now available! 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, Volume V 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).

The IRCA AM-FM Almanac is available in large comb bound or loose leaf (please state preference when ordering). Post-publication prices are:

IRCA member: US - \$13.00 Canada - \$14.00 Overseas Sea Mail - \$14.00 Overseas Air-Mail - \$17.00
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26 The IRCA AM-FM Almanac is available from: Phil Bytheway, 9705 Mary NW, Seattle, WA 98117.

The Drake R8: Initial Impressions

Richard Eckman, 9 Still Harbor Ct., Hampton, VA 23669

Introduction

I finally did it: I called up Drake on July 1 and ordered the R8. Despite being told that it would likely take 10 days to ship (they're apparently getting a lot of orders as a result of recent ads in QST and other magazines), it was shipped on the July 2 and received on July 5.

This highly non-technical review is a slightly edited version of one that I posted to the world-wide USENET computer network bulletin board "rec.radio.shortwave."

First Impressions

I immediately connected the R-8 to about a 10-foot length of wire strung in the shack (admittedly not a terrific antenna arrangement) and sat it next to my JRC NRD-525. It appears to be reasonably easy to operate and the manual is okay, if a bit too brief at times. It doesn't compare with the outstanding manuals produced for the Hammarlund HQ-180A or R-390A.

The first thing that became apparent is that it is not possible to display the frequency to finer than 100 Hz when in AM mode. This is utterly unacceptable. The fact is that you're tuning in 10 Hz increments and when you switch to USB or LSB (where the full frequency is displayed) you can be well off where you thought you were tuned. Also, every time that you change mode (from, for example, AM to USB or whatever) the AGC, bandwidth, and tuning step are reset to Drake's 'default' settings, regardless of what you had previously entered. You may then reset them to what you really wanted, but this is a major pain.

I found both of these problems extremely annoying. It's clear that they could be solved with a couple of easy software fixes if Drake were so inclined.

Synchronous Detection

When it's locked, it's easily as good as a Sony ICF-2010, though I didn't have an opportunity to compare it side-by-side with my friend's 2010. The real problem is that it can take a very long time for the internal carrier to lock with the received one. You can hear the whistle 'homing in'. I found that this can be hastened by depressing the sync button several times - not exactly stellar engineering! Whether this is unique to my set remains to be seen. Also, when using passband tuning (PBT) while in sync mode, the sync is lost when you turn the knob quickly and, again, it takes a few seconds to re-sync on the received signal.

Once, the sync is locked, it does indeed work very well. The difference on weak/fade signals is very noticeable.

Sensitivity

I have no lab instruments, so all I could do was tune in some very weak stations on both the Drake and the NRD-525 and see what the difference was. With the preamp on, the Drake did do somewhat better than the NRD on very weak signals (like a few out-of-band Chinese domestic stations this morning). So, the edge goes to Drake.

Selectivity/PBT

Drake's published specs on their filters are not that exceptional. Shape factors appear to be about 1:2 (6 and 60 db down) which isn't that good. However, in a comparison with the NRD (with stock 6 and 2 kHz filters and a Collins 3.8 kHz mechanical filter), the edge goes to Drake under tough signal conditions. Combined with a dramatically better PBT than the NRD, the Drake did a significantly better job on a signal on 15171 kHz this morning (presumably Tahiti in French?) which had a tough heterodyne and lots of 15170/15175 QRM.

Audio

No comparison! The Drake is far better than the very poor, hissy audio produced by the NRD-525. The internal speaker is quite good. A Minimus-7 connected externally sounds a bit better. The tone control is reasonably effective.

Keypad/Ergonomics

The buttons look nicer than those on the NRD, but it's difficult to get good contact on them. The logic of entering a frequency is far inferior than that of the NRD. There's also no 'clear' key - a major drawback.

The menu operation is definitely an acquired taste. The tuning knob is not as nice as the NRD's and it's too small and close to other buttons. Also, it's too easy to hit the knob and deactivate the sync mode unintentionally.

The tuning steps are not as flexible as the NRD and the display has got some real problems (as described above) with regard to frequency resolution in AM mode.

Frequency Accuracy

Zero beating to WWV on 15 MHz showed that the display was about 30 Hz off of nominal 15.0000 MHz. This is not nearly as good as the rock solid accuracy on the NRD.

MW Performance

This is the first solid state unit that I can connect my two-foot amplified Sanserino loop antenna to without serious overload problems. This perhaps means that the dynamic range is better than that of the NRD. The published specs, at least, seem to confirm this. Conditions last night on MW were terrible - typical summer thunderstorm static and little in the way of high-latitude paths open. However, I was able to get a carrier on 684 kHz, likely from Sevilla at around 0400 UT. It's going to take a lot more time (and better conditions) to see how well this unit works on MW. The preamp cannot be enabled below 1.8 MHz (revised from the original 5 MHz published figure).

S-meter

Again, no comparison. Drake's analog S-meter really works, unlike the totally unusable digital meter on the NRD.

Other comments

There seem to be rogue whistles that appear randomly on received stations which manifest themselves as increasing or decreasing in tone. Kind of like the sync locking slowly, but this is with the sync OFF. This is most evident on strong signals (in AM mode), but also shows up when tuning around in USB/LSB modes with no signal present. Apparently, this is some internally-generated carrier sweeping across the HF region. This isn't particularly the mark of a \$1000 receiver. This apparently is unique to my sample (see below).

The instruction manual contained a complete description of the RS-232 interface and commands. It should be trivial for anyone with a PC to write some programs to control this radio. I understand from another DXer's comments on the bulletin board that Drake has not quite finished implementing all of the logic for the RS-232 interface. An updated ROM will supposedly be available in August.

Summary

After just a few hours of tests, this unit has a lot of plusses, and unfortunately, a number of annoying minuses. It will be interesting to see some real lab measurements of this unit from Larry Magne's RDI.

I spoke with Drake customer service on July 8. The person whom I spoke with basically agreed that he thought that the frequency display problem was unfortunate and *he* had made that opinion known to engineering in the past. He did give me the name of a contact in the Drake engineering department to write to (Steve Koogler). He did say that this was a software issue and, presumably, it could be corrected easily if Drake decided to do so. The same goes for the unfortunate return to Drake-defined defaults when changing mode. I was told that the 'rogue' whistle problem is definitely not normal. The customer service person recommended that I return it for repair.

I decided, however, to return the receiver for a refund under Drake's 15-day money back guarantee. This was a difficult decision to make, but I felt that there were simply too many little problems that caused the receiver to operate far less effectively than its potential. I wrote a detailed letter to the head of Drake engineering asking for his reply to my concerns. I do hope that Drake decides to correct some of them. If they do, I would seriously consider revising my opinions on what could have been a truly excellent receiver.

Escuche usted:

SOLO DEPORTES EN LA LIGUILLA

19:30 hrs.

Con Antonio
Moreno

Martes 4 de Junio desde la concentración de T. de G.-AMERICA
Miércoles 5 de Junio desde la concentración de PUEBLA-MONTERREY
Jueves 6 de Junio desde la concentración de GUADAJARA-CRUZ AZUL
Viernes 7 de Junio desde la concentración de MORELIA-UNAM

ABC
RADIO
760A

LA ESTACION
DE LA PALABRA

Del 11 al 14 de Junio
con los Semifinalistas.
Miércoles 19 y Viernes 21
con los Finalistas.



Viva la emoción de las finales del Fútbol Mexicano
Siga a su favorito y gane boletos, playeras, maletas y balones

Interference-reducing antennas for the BCB

Denzil Wraight, Burgwaldstr. 3, W-3553 Schoenstadt, Germany.

There is probably little of value which has not already been researched or patented as a way of improving reception on the BCB: the main problem is finding it! Over the last two years I have been looking at the early radio literature in my attempt to understand the problems better. One of the most useful findings were references to 'anti-interference' antennas in literature of the 1930s. Since I have seen few post-war references to such arrangements, it seems well worth repeating this experience, especially because the reception improvements can be quite startling.

The aim of most radio reception can be simply stated: to hear the desired station-and nothing else! Discrimination against unwanted stations or distant noise sources is often achieved with directional reception, either with loops alone, or with phased and combined loop and omnidirectional antennas. The vertical whip or inverted L antennas often used in phasing combinations are more susceptible to the interference from household appliances, than screened or balanced loop antennas. Thus, the directional omni + loop array is often 'contaminated' by interference received by the omnidirectional antenna and ways must be found of reducing this interference if the effective system noise floor is not to be determined by nearby interference.

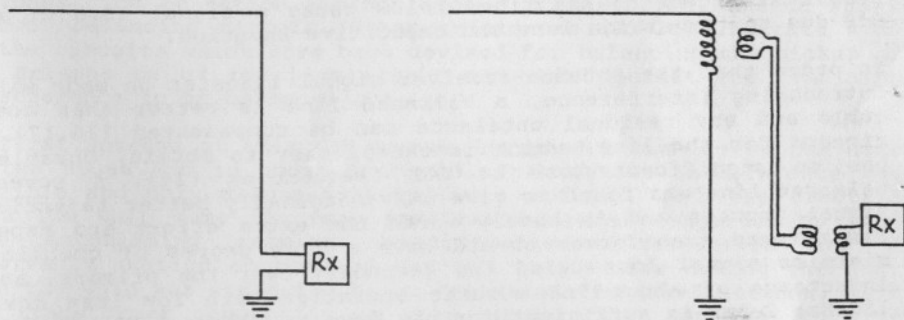
A possible confusion must be avoided at the outset: "anti-interference" or "anti-static" antennas are sometimes referred to as "noise-reducing" antennas, which could be misleading. The background "noise" on the BCB is produced by distant thunderstorms or man-made electrical interference and will not be reduced by an "anti-interference" antenna; it only deals with interference in the vicinity of the antenna (up to about 90m on the BCB), since the principle strategy is that of reducing electrostatically-induced interference.

The interference to be combated is mostly generated by household appliances, fluorescent lighting, and TVs, but the presence of interference may not be audibly obvious unless one happens to hear the moment when an appliance is switched off and the received "noise" drops suddenly: other interference has a distinct signature. Local interference on the BCB is mostly vertically polarized and generated with respect to ground, thus, any antenna which is balanced with respect to ground should be able to reject some of this interference. Screened, or balanced loops do not respond to the electrostatic wave and have a well-known reputation for being relatively insensitive to nearby interference, compared with vertical (capacitive) antennas which respond mostly to the electrostatic component. At a distance from the interference source where the electrostatic and magnetic components are of equal strength (a distance of about 30m and 90m at the high and low ends of the BCB respectively), the advantage of the screened or balanced loop over vertical or inverted L antennas will not be great. If, in the presence of nearby interference, a vertical antenna sounds about as "noisy" as a screened or balanced loop, then "anti-

interference" techniques can be probably judged successful, or unnecessary.

Interference-reducing antennas can be roughly divided into two categories: those which depend for their effect upon being placed away from the interference, and those which attempt to balance it out, regardless of their position.

The best introduction is to be found in Terman (1) and a number of articles (2-9) show the interference-reducing antennas known in the 1930s, a time when, before the enforced suppression of appliances, interference was a considerable problem for BCB reception. Although any improvement of the antenna/receiver grounding in fig. 1 will increase interference rejection, further improvement is possible when the antenna or its feeder is near a source of interference. Strafford (2), who patented several details of anti-interference antennas for his company, Belling Lee (UK), which marketed the antennas, gives an arrangement as shown below.



1. Normal antenna

2. 'anti-interference'

The difference between the two types is in the use of a balanced line feeder and the point where the line is connected to the antenna. The fig. 1 antenna picks up interference, and the download may contribute substantially. Although different explanations of the 'anti-interference' mechanism were offered in the 1930s, practical experience showed that a substantial reduction of the pickup of nearby interference resulted when connection 2 is used. The balanced feeder is practically unaffected, since interference voltages cancel out in the receiver transformer. Furthermore, it permits the antenna to be placed away from the interference field of the house. In fig. 2 an element of balance may also be involved in the antenna's rejection of interference.

It is no exaggeration to expect reduction of nearby, electrostatically-induced interference of the order of 30dB-40dB, as compared with an indoor antenna or badly constructed outside antenna. The reduction in comparison with a reasonably-sited

outside antenna will not be so large, but even 10-15dB can make the difference between receiving weak signals and only interference.

It is also possible to connect a vertical whip as fig. 2 and I have my 10m whip with the transformer 6m from the ground. Contrary to expectation, there was no measurable loss of signal voltage (i.e. + 3dB) on groundwave stations, as compared with the transformer at ground level. If a vertical whip is mounted on the house structure, the upper part of the antenna should be above roof level, where the interference will be weaker. An existing CB-band whip could form the upper part of such an "anti-interference" antenna.

Thus, there are three cardinal rules for antenna placement:

1. Put it as far away from any house and mains wiring as possible.
2. Make it as high as is feasible.
3. Use a balanced feeder. This may even require that the downlead from an inverted L be at the end furthest from the house. Even if one is using a battery-powered radio, there will still be electrostatic coupling of the antenna and antenna feeder to the mains wiring, and one can expect local interference to be re-radiated by your own house-mains wiring. It is important to recognise that a good signal-to-interference ratio is more important than the highest possible signal input, since the feeder arrangements described below cause a signal loss of about 6dB due to transition loss and capacitive shunting.

In order that the antenna-receiver signal transfer be made without introducing interference, a balanced line is better than coaxial cable and any residual unbalance can be compensated (16,17). Use zipcord for the line, which is cheap, easy to obtain, durable and has no significant loss at BCB frequencies (14). A screened, balanced line was found to give only marginally better rejection of signal ingress and is hardly worth the extra effort and expense. The antenna transformer should have a high degree of coupling to minimise signal loss (wind the secondary over the primary) and an inductance of about 5mH ensures operation with low loss down to 150kHz; 2-3mH is sufficient for use down to 500kHz (10). My antenna transformer was wound on a Siemens B64290-K618X830 25mm ferrite toroid with 37:7 turns, which ratio was determined empirically (11). A toroid gives good coupling, but is not obligatory, and ferrite rod can be used. Reference 3 stresses the importance of low capacitive coupling across the electrostatic screen, for which reason the windings are separated by 1.6mm (on a cylindrical iron dust core). It also advises that an electrostatic screen at the antenna transformer (connected to antenna ground) may do more harm than good. Antenna transformer ratios in the range from 1:4 to 1:7 will be roughly correct, but optimum voltage transfer will depend on your antenna/feeder, and can be adjusted when receiving steady, daytime groundwave signals. The step-down ratio is necessary in order to reduce the capacitive shunting by the line of the antenna voltage. Both windings of the balanced-to-unbalanced transformer (on the same Siemens toroid type) at the receiver have 8 turns, for use down to 150kHz. The inductive reactance of this transformer in a 50 Ohm circuit should be roughly 200 Ohms at the lowest frequency of interest. Other toroids or ferrite rods can be used. Although a 1:1 balun could be used at the receiver I have used a conventional transformer, which permits the use of an electrostatic screen (use copper, aluminium foil, or p.c.b.) should this give an advantage,

but centre-tapping the balanced side of the transformer and grounding it to receiver ground will cause current to flow, probably inducing some noise and is not recommended. The best possible, independent ground connections for the antenna and the receiver should still be used. At least a single ground stake should be used, as deep as is practicable and the connection to the antenna/receiver should be of low inductance. The mains ground is NOT suitable and even house water pipes may be unsatisfactory.

These arrangements will cover the BCB and longwave and also give usable signals on SW. There may be several dB loss on SW and those interested in making an all-bands antenna should consult reference 8. Lankford has reported satisfactory SW reception with an "anti-interference" inverted L antenna (20), but results must be tested experimentally at each location

While the connection of fig. 2 will reduce interference, there may still be a large residual level if the whole antenna is near a strong noise field. A balancing arrangement (7) is of interest where the antenna cannot be placed away from interference and provides a useful source of ideas for those restricted to indoor antennas. The operation depends upon a counterpoise antenna and a bridge, balancing circuit. Other references (15-18) indicate some of the circuits which have been devised for balancing the pickup of the antenna or of the line itself and which permit the remaining interference to be balanced out.

My first antenna at this QTH was an inverted L running up the side of the house and in under the roof. The daytime interference was terrible and only strong stations were audible. With the erection of a 10m whip some 15m away from the house as suggested by (13) came astonishing results: virtually no interference and a receivable station on most of the BCB frequencies during the day. When the whip was connected as an "anti-interference" antenna, with the transformer connection 6m from ground, it appeared to give extra protection from fluorescent lights, but this is difficult to test, unless one uses a standard interfering signal as described in (3) or (7). In cardioid mode, intelligible, atmospheric-noise-limited signals of less than -109dBm ($1.6\mu\text{V}$ across 50 Ohms) can be routinely heard at midday in summer on 1215kHz from BBC Radio 3 (650km distant) even though 15 40W fluorescent lights are in operation only 16m away: fluorescent light interference is inaudible.

The bottom line: even with this 'anti-interference' antenna you will still be able to hear TV horizontal output and other RF nasties in your neighbourhood, which even special directional nulling techniques may not eliminate (12), but these will probably be at a level where they no longer prevent intelligible reception of even the weakest signals. Some experimentation will probably be required for optimum results.

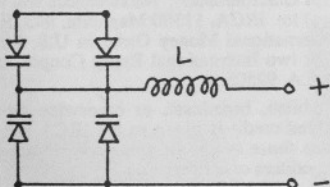
My warm thanks go to Graham Maynard and Dallas Lankford, whose sharing of ideas and experience have helped develop my antenna system, and for reading a draft of this article

- (1) F.E.Terman, Radio Engineers' Handbook, 1943. The essential reference book for every BCB DXer.
- (2) F.R.W. Strafford, "Screened Aerials", Wireless World 1937 pp 516-518, and "Vertical or inverted L aerials", Wireless World 1939, pp 575-577. The arrangement shown was patented by E.M.Lee, F.R.W.Strafford and H.G.Stedman, UK Patent No. 505838, described in Wireless World, Aug. 1939, p 226.
- (3) W.L.Carlson and V.D.Landon, "A new antenna kit design", RCA Review vol. 2, 1937 pp 60-68. Contains much practical information. This reference was kindly obtained for me by Dallas Lankford.
- (4) J. van Slooten, "Ontvangantennes", Philips Technische Tijdschrift vol. 4, 1939, pp 333-337. Also in English and German editions.
- (5) G.H.Browning, "Reducing man-made static", Electronics vol.5, 1932, pp 366-368. Mostly on the theory of matching the antenna to the line.
- (6) K.R.Sturley, Radio Receiver Design, London 1949, pp 109-115. One of the standard works on radio design.
- (7) V.D.Landon and J.D.Reid, "A new antenna system for noise reduction", Proc. Institute of Radio Engineers (Proc.IRE) vol. 27, 1939, pp 188-191. A synthesis of several patents including De Monge. Essential reading.
- (8) H.A.Wheeler and V.E.Whitman, "The design of doublet antenna systems", Proc.IRE vol.24, 1936, pp 1257-1275. Discusses all-wave antennas and matching transformers.
- (9) A.J.Cawthorne, "Curing TVI to MF/HF reception", Practical Wireless (London, UK) vol.80, Jan. 1984, pp 60-62. Advises placing antenna away from house; details on suppressing fluorescent lights.
- (9) A.J.Gill and S.Whitehead, "Electrical interference with radio reception", Journal of the Institution of Electrical Engineers (London) vol. 83, 1937, pp 345-394. A substantial general survey of all types of interference and brief details of antennas.
- (10) See E.E.Zepler, The Technique of Radio Design, London 1943, pp 41-44 for design equations and a discussion of problems. A very practical book.
- (11) Dallas Lankford reports equivalent performance with 40:9 turns on an Amidon FT-87A-F for the antenna transformer and FT-114-75 43 turns trifilar as a transmission line 1:1 balance-to-unbalance transformer (see (20)).
- (12) J.K.Webb, "Electronic steering of antenna nulls for interference reduction", Institution of Electrical Engineers Proceedings (London) vol. 130, 1983, pp 417-422. A more detailed version of the QST Oct. 1982 article by the same author.
- (13) G.Maynard, 'Medium Wave, a practical approach', originally Medium Wave Circle, GB, also NRC reprint A60, IRCA reprint T63. The isolating amplifiers contributed more noise than the atmospheric background with my antenna and their use has been discontinued. There are also problems in obtaining low IMD from source or emitter followers on broadband use.
- (14) The ARRL Antenna Book, 14th edition, Newington C.T., 1984 p13.10.
- (15) UK Patent No. 506063, R.I.Kinross, reported in Wireless World, Sept. 1939, p306. Additional antenna with RC amplitude/phase balancing.
- (16) UK Patent No. 504752, V.D.Landon, reported in Wireless World. Aug. 1939, p 114. Interference on transmission line is cancelled with phasing.
- (17) E.M.D., "The prevention of interference between 'wired-wireless' circuits and wireless stations", Experimental Wireless and the Wireless Engineer, July 1924, 563-570. Similar arrangements to ref. 16.
- (18) R.I.Kinross, "Reducing Interference", Wireless World, Nov. 1940, p 469-470. Experience with the De Monge balancing patent and variations.
- (19) P. Hawker, Amateur Radio Techniques, 7th ed. 1980, p273. "Jones noise-balancing circuit" using additional "noise" antenna (RSGB publication).
- (20) Private communication, July, 1991.

Remote Tuning and amplified antenna signals

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If one intends to implement remote antenna tuning, as recently described by Mark Connelly, the best engineering practice is to use varicaps back to back, and then add a second pair in order to achieve the capacitance of a single unit. When the signal voltage is more than about 1/10 of the tuning voltage, IMD may become noticeable. IMD is said to be lower when the tuning voltage is fed from a high reactance (large inductor) rather than a high value resistor (1). The out-of-band input power per diode should not exceed 25mW, but low-capacitance varicaps could be paralleled as a way of dividing the RF voltage between devices and lowering IMD.



X_L approx. 100K Ohms
(e.g. 33mH for BCB)

When one is already committed to the use of an antenna amp with inadequate dynamic range, bandwidth limiting is the only way of reducing IMD without sacrificing signal level. Rohde & Schwarz make an active HF antenna (AK001) which switches (under microprocessor control) appropriate values of L and C in order to improve rejection at the antenna of very strong unwanted frequencies (of the order of V/m) and avoid the use of non-linear varicaps. This approach is feasible for a hand-switched design.

I believe the point has not been sufficiently appreciated in BCB listening circles (and some equipment manufacturers), that where active devices are used broadband in front of the receiver, these should be configured in a balanced mode in order to cancel 2nd order IMD by 20-35dB. I have had success feeding a 10m whip and 40 m² loop into balanced JFET grounded gate amps on the BCB in order to achieve adequate daytime sensitivity. Development of this approach is not completed, but ICP3 is about +30dBm and ICP2 about +60dBm which ensures inaudible daytime IMD products at this QTH. Furthermore, high-current, JFET source follower designs I air-tested for broadband use were only satisfactory when used in balanced mode.

(1) W.E.Sabin and E.O.Schoenike (eds.) Single Sideband Systems and Circuits, McGraw-Hill 1987, pp 301-302.

(2) A.Burwasser, "How to design broadband JFET amplifiers", Ham Radio, Nov.1979, pp 12-19. (This article was kindly obtained for me by Dallas Lankford)

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