

# DX MONITOR

THE OFFICIAL  
PUBLICATION  
OF THE



INTERNATIONAL  
RADIO CLUB  
OF AMERICA

DEVOTED EXCLUSIVELY TO BROADCAST BAND DXING

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IRCA ADDRESS CHANGES, RENEWALS TO RALPH SANSEIRINO, 11300 MAGNOLIA #43 RIVERSIDE, CA 92505.

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IRCA ALMANAC 5 ORDERS & IRCA PUBLISHER: RALPH SANSEIRINO, 11300 MAGNOLIA #43, RIVERSIDE, CA 92505.

DX TESTS courtesy National Radio Club - Colorado CPC Machine - Thank You

MARCH 23rd, 1991 KTTG-1540, SPRING ARBOR COLLEGE, SPRING ARBOR, MI 49283 IIME 0430-0500 EST. Details later. Thanks Edmond R. Trombley CE.

CONVENTION: Anyone wishing to host the 1991 IRCA convention contact: Karl Zuk for a bid form at 154 Old Post Road North, Croton, NY 10520.

GET-TOGETHER: There will be a DX get-together at the home of Bruce and Evelyn Portzer on Saturday April 6th beginning at 2 PM. Address: 6546 19 Avenue N.E., Seattle, WA 98115. Phone 206-522-2521. DXers of all types are invited and welcome to bring tapes, veries, etc for show. At dinner time we will pass around the hat for pizza.

ANNIVERSARY ISSUE: March 16th. Check editor deadlines so you no miss-out.

FROM THE PUBLISHERS DESK: Nothing this time except buy a Almanac 5...73.

\*\*\* 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  
non-members: US - \$15.00 Canada - \$16.00 Overseas Sea Mail - \$16.00 Overseas Air-Mail - \$19.00

The IRCA AM-FM Almanac is available from: IRCA, 11300 Magnolia #43, Riverside, CA 92505.

# BROADCASTING INFORMATION

Editor: Geov Parrish, P.O. Box 15164, Seattle, WA 98115-0164

Deadlines: every Saturday \* compiled 2/17/91

## GOING OFF THE AIR

WHEB 750 1000/ ND-D NH PORTSMOUTH was rock // FM, now silent, station has no plans to return  
WCMG 910 500/ ND-D TN COLUMBIA was country, moving to Columbia from Lawrenceburg TN, now silent, will return next month with new black format  
WQPN 1370 5000/ ND-D WV MOUNDSVILLE was rock oldies, now silent  
WSFL 1380 5000/ ND-D NC NEW BERN was AC/oldies // FM, now both are silent, another victim of the war in NC  
WPRW 1460 5000/5000 DA-2 VA MANASSAS was country, now silent again  
WHRF 1520 250/ ND-D MD BEL AIR was rock oldies, now silent  
CKLM 1570 50000/50000 DA-1 PQ LAVAL was French AC, now silent, this should help a lot of peoples' DX!!

## GOING ON THE AIR

KSWV 810 5000/ ND-D NM SANTA FE was KMIK, silent, now Spanish  
KICN 1260 5000/ DA-D ID IDAHO FALLS was KTEE, silent, now all news // KECN-690 (see below)  
KHCB 1400 1000/1000 ND TX GALVESTON was silent, now religion // FM

## NEW STATIONS

WRNV 810 600/ DA-D VA DUBLIN wants CP to reinstate expired pmt.  
KSRT 830 2500/1000 DA-N CA ORANGE applies for changes in antenna sys.  
KRKL 840 2500/250 DA-D CA YOUNTVILLE requests extension of time  
KJRC 1090 5000/ ND-D CA SO. LAKE TAHOE wants CP to reinst. exp pmt

## CHANGES IN EXISTING FACILITIES

KLAY 1180 2400/1000 DA-N WA LAKEWOOD wants ext. of time (CP from 1480)

## CALL LETTER CHANGES

( \$ means change accompanies a station sale; \* check for format info)

KBLI 690 ID Blackfoot is now \* KECN KTEE 1260 ID Idaho Falls is \$\*KICN

## FORMAT CHANGES

WRMD 680 FL ST. PETERSBURG was WLFF, standards, now Spanish  
WCAW 680 WV CHARLESTON country, to go AC // WVAF-FM ("V-100") March 1  
KECN 690 ID BLACKFOOT was KBLI, adult standards, now all news  
WIRJ 740 TN HUMBOLDT was rock oldies, now all news  
KTAC 850 WA TACOMA was adult contemporary, now easy listening // FM  
KOGA 930 NE OGALLALA was adult contemporary, now satellite soft AC  
WASP 1130 PA BROWNSVILLE was country, now satellite talk  
WBRO 1310 GA WAYNESBORO was country, now black  
WDOD 1310 TN CHATTANOOGA was country // FM, talk, now sat. ad. standards  
KWWW 1340 WA WENATCHEE was business news, now satellite rock oldies  
KSWO 1380 OK LAWTON was country, now news, talk  
WTRR 1400 FL SANFORD was adult contemporary, now sat. adult standards  
KTOP 1490 KS TOPEKA was satellite rock oldies, now sat. adult standards  
WNST 1600 WV MILTON was business news, now AC // FM "Z-106"

## PROPOSED STATION SALES (\* means check the format listings for more info)

WJML-1110-MI, KIKC-1250-MT, WGHB-1250-NC, KFKA-1310-CO, KTZR-1450-AZ, KBLF-1490-CA, WBUX-1570-PA

Much of the station data for this column comes from weekly issues of The M Street Journal and assorted DX Monitor columns. Other contributors this issue: Phil Bytheway (Seattle WA); Tony Fitzherbert (Fairfield CT)



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

# DX Worldwide - West

Time: UTC phone (503) 861-3185

DEADLINE: TUESDAYS

## PAN-AMERICAN DX ROUNDUP

- 650 UNID, 2/2 2130 poor ranchera mx, man in SS, no ID hrd. (SA-MB)
- 660 MEXICO, Mexico City-XERIN2128 2/2 Good, Childrens prm. New (SA-MB)
- 730 MEXICO, Mexico City-XEX-2/2 2120 Good, man in SS o/uCKDM (SA-MB)
- 750 MEXICO, Loma Bonita-XEQF 2/2 2050 Poor, lively mx, man ancr. New (SA)
- 770 MEXICO, Monterrey XEATH-2/2 2101-Poor, R. Canon ID. New (SA-MB)
- 800 MEXICO, Cd. Juarez-XEROK-2/2 2112-Strong-Dominating freq. (SA-MB)
- 900 MEXICO, Mexico City-XEW-2106 2/2-excellent signal! (SA-MB)
- 940 MEXICO, Mexico City-XEQ-2/2 2114, Strong "La Super Q" (SA-MB)
- 970 MEXICO, Cd. Juarez-XEJ-, faded up w/R. Mexicana ID, 1/18 0745 (BP)
- 1180 CUBA, Radio Taino-1800 Good, Latin mx, YL ID 2/2. (SA-MB)
- 1610 - ANGUILLA, The Valley-Caribbean Beacon-1/16 0819 Gospel mx. (GK-CA)

## TRANS-PACIFIC DX ROUNDUP

- 738 TAHITI, Papeete-RFO weak in FF 1/31 0907. (GK-CA)
- 819 NEW ZEALAND, Rotorua-1YZ 2/12 1151, fair, het, inst mx. (GK-CA)
- 830 HAWAII, Honolulu-KIKI-1/31 0851 w/oldies. (GK-CA)
- 846 KIRIBATI, T3K1-1/31 0916 Island mx, weak, KOA splat. (GK-CA)
- 850 HAWAII, Hilo-KHLO-C&W mx u/KOA 1/31 0846. (GK-CA)
- 1431 UNID, Weak het 1505 2/13. (BP-WA)
- 1476 USSR/CHINA, one or both, w/bits of audio 1505 2/13. (BP-WA)
- 1512 UNID, weak het on KGA 1503 2/13. (BP-WA)
- 1521 UNID, good het on KFXX, no audio 1502 2/13. (BP-WA)
- 1566 SOUTH KOREA, Cheju-good carrier so-so audio 1501 2/13&14. (BP-WA)

## THANKS TO THESE REPORTERS

- SA-MB SHAWN AXELROD-30 Becontree Bay-Winnipeg, MB R2N 2X9 (CANADA)  
DXing at Lac Du Bonnet, MB R70 600' S/W wire
- GK-CA GLEN KIPPEL-612 West Avenue-Merced, CA 95340  
SP-600 JX17, 8 foot single turned nonresonant loops
- BP-WA BRUCE PORTZER-6546 19th Avenue, N.E.-Seattle, WA 98115  
FRG7, Radio West Loop

## Proceedings

1988

1989

1990

Fine Tuning is pleased to announce that a few volumes remain in stock of each of the first three years of *Proceedings*, the shortwave broadcast DXer's #1 book of features, technical articles, and reviews.

If your bookshelf is lacking any edition of *Proceedings*, you are encouraged to order now, as quantities are limited. Any future reprints of *Proceedings* are expected to result in prices of about \$25.00 each due to shorter print runs. Consider ordering now to save significant printing costs and an anticipated increase in postal costs!

The cost for any edition is \$19.50 each, plus \$2.00 postage (US funds, please). Outside of North America, postal costs are \$3.00 surface book rate (3-4 months typical delivery time for surface book rate) or \$15.00 airmail. Make checks or money orders payable to Fine Tuning Special Publications, and mail c/o John Bryant, Rt. 5, Box 14, Stillwater, OK 74074 USA.



WESTERN  
DX  
ROUNDUP

Nancy Hardy  
2301 Pacific Ave.  
Aberdeen, WA 98520

WDXR deadlines are Mondays. Please use Eastern time.

REPORTERS FOR THIS ISSUE:

- (pb) Phil Bytheway-9705 Mary NW-Seattle, WA 98117  
SPR-4, 3' Hagen amp. ferrite loop; ICF 7600D, Shotgun loop
- (BH) Bill Hardy-2301 Pacific Ave.-Aberdeen, WA 98520  
FRG-7, Radio West loop
- (NH) Nancy Hardy-2301 Pacific Ave.-Aberdeen, WA 98520  
FRG-7, Radio West loop
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ICF-6500W, SM-2
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Hammarlund SP-600-JX17, 2-8' single-turn nonresonant loops
- (PM) Patrick Martin-P.O. Box 843-Seaside, OR 97138  
SP-600-JX26; 1800' NNW, 1500' E. Beverages
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GE Superadio & 4' loop
- (bp) Bruce Portzer-6546 19th Ave. NE-Seattle, WA 98115  
1984 Ford car rx (SSS DX), FRG-7 (home), Sony Digital Walk-  
man (on trip)
- (RW) Robert Wien-1309 Dentwood Dr.-San Jose, CA 95118  
GE Superadio, GE long-range portable, SM-2

\*\*\*\*\*

- 570 KLAC CA, Los Angeles 2/5 0531 weak under KVI OC with ID, C&W  
music, talk by woman. (EH-WA)  
+2/5 news update at 0553 over KQNG for the moment. (PM-OR)
- KQNG HI, Lihue 2/5 topping freq. with oldies music, at 0535  
"KONG" ID. Some CLASS music QRM--CFWH? (PM-OR)
- \*KVI\* WA, Seattle 2/5 0527 noted ET'ing with TT, OC. (EH-WA)
- 7CFWH? YT, Whitehorse 2/5 0525 poss. the one // 690 with AN CLASS  
music. No ID poss., but extra strong on NNW wire, KVI test-  
ing on & off. Rock music prob. KISN! I'm bound to catch  
this in timel CBC ID at 0600, into news. (PM-OR)
- 650 WSM TN, Nashville 1/31 0423 with C&W music. Rarely heard  
nowadays. (GK-CA)
- 670 \*KBOI\* ID, Boise 2/4 0240 noted ET'ing with TT. (EH-WA)
- 690 KVNA AZ, Flagstaff 1/16 0344 with oldies "Pure Gold Radio"  
slogan. (GK-CA)
- 700 KGRV OR, Winston 2/7 2037 strong with local ads & IDs through  
mild KIRO-710 splat. (bp-WA)
- 720 WGN IL, Chicago 2/4 0754 with talk programming. (GK-CA)
- 740 KMEQ AZ, Phoenix 1/31 0403 with EZL music under KTRH. KCBS off.  
(GK-CA)
- CEX AB, Edmonton 1/31 0406 with "RSVP" classical music show.  
KCBS off, KTRH nulled. (GK-CA)
- 790 KFLI CA, Eureka 2/7 2042 all alone with ID & EZL music. (bp-WA)
- KGHL MT, Billings 2/15 1908 CBS "The World Tonight," call ID,  
local ad, 1910 "...Billings best country, the Mighty KGHL."  
Poor-fair with strong CFCW, and KGMI. (NH-WA)
- 800 CKOR BC, Penticton 2/15 1834 heard with "AM 800 Radio Auction,"  
followed by music and occasional bids that had been phoned  
in to 492-2848. 1900 ID "...CKOR AM 800" by man, then news  
read by woman. Fair with KPDQ nulled. (NH-WA)
- 830 KIKI HI, Honolulu 2/4 0254 good with "The Oldies Channel"  
slogan, TC into oldies songs. (EH-WA)
- 850 KTAC WA, Tacoma 2/13 2040 noted new format. Dropped AdCon, now  
relays their FM KBRD-103.7 with EZL music. No mention of  
the AM except for top of hour IDs, slogans include "FM 104"  
and "K-Bird." (bp-WA)



KTAC +2/16 1357-1456½ EZL // KBRD-103.7, many KBRD IDs and K-Bird  
cont'd slogans. Finally heard legal ID 1456½ "This is KBRD-FM,  
KTAC-AM, Tacoma-Seattle-Everett." (NH-WA)

CFVR BC, Abbotsford 2/15 2235 ID after oldie. Very good with KOA  
nulled, no sign of KTAC. Last heard 5-10 years ago. (NH-WA)

860 KCNR UT, Salt Lake City 2/14 0200 good & atop with ID "The all-  
news station, KCNR, Salt Lake City-Ogden-Provo," into CNN  
news. Sounded much stronger than listed 196 watts. (bp-WA)

940 KWBY OR, Woodburn 2/7 0025 with Woodburn HS EKB good for a couple  
minutes with Walkman held next to airplane window. Listed  
as daytimer. (bp-WA)

950 KKIC ID, Meridan 2/11 2459 good with Spanish music, ID into  
s/off. (EH-WA) (0059?-NH)

KMTX MT, Helena 2/10 1910 excellent in KJR null with AP sports,  
ad for oldies dance in Helena then statement to disregard  
previous ad. I did, hi. (EH-WA)

(KJR) WA, Seattle 2/8 0437 noted totally off. (EH-WA)

1080 CKSA AB, Lloydminster 2/10 1944 fair to good in KWJJ null with  
some KING-1090 splat. DJ patter beginning and ending "10-80  
CKSA" between contemporary hit songs. (BH-WA)

1090 CHEC AB, Lethbridge 2/1 1850 good in KING null with oldies songs,  
"Check" slogan. (EH-WA)

1130 KRDU CA, Dinuba 2/13 1959½ ID excellent over CKWX, into AP news,  
2005 weather, then local news. (NH-WA)

KWKH LA, Shreveport 2/4 2040 fair above CKWX; weather, ments of  
"Radio Ranch." Haven't heard this in a while. (PM-OR)

1190 CFSL SK, Weyburn 2/10 1850 fair in CKDA-1200 splat with talk by  
man into C&W music. (EH-WA)

1200 CHMG AB, St. Albert 2/14 0350 good in CKDA null with oldies and  
"MG 1200" ID. (bp-WA)

1270 KBAM WA, Longview 2/7 0035 C&W music and "12-70 K-Bam" ID with  
radio held next to airplane window. Listed as daytimer.  
(bp-WA)

1280 ?KDOL? NV, Henderson 2/11 1001 tent. call change, ex-KREL, with  
Spanish coming in loud on freq. over KKAL-KJAX-KFRN, but  
faded out rapidly with no ID. (RW-CA)

1300 KROP CA, Brawley 2/10 0049 fair in KMPS null with C&W music, ID.  
(EH-WA)

CJME SK, Regina 2/10 1859 weak in KMPS null with ads, ID into  
oldies music. (EH-WA)

1330 KLBS CA, Los Banos 2/8 2053 good over KUPL with Portuguese talk  
(sports, I think) into Latin instrumental music, ID slightly  
garbled by KMPS-1300 audio spikes 2059. (bp-WA)

1360 KSCJ IA, Sioux City 2/11 0400 briefly over KUIK with ID, ment. of  
Sioux City. (EH-WA)

1380 KOTA SD, Rapid City 2/10 0243 good in KRKO null with ads,  
satellite oldies. (EH-WA)

\*KRKO\* WA, Everett 2/10 0322 noted with OC. (EH-WA)

1400 KSPT ID, Sandpoint 2/11 0144 excellent with ID, C&W songs. (EH)

1430 KYKN OR, Keiser 2/11 1020 strong with C&W music, "Kickin" ID,  
local ad, AAA road report. (bp-WA)

1460 KRRS CA, Santa Rosa 2/9 2105 briefly with loud whooshing sound,  
ID by Spanish-accented man. Covered the S9 signal of KARR!  
(EH-WA)

KCKX OR, Stayton 2/9 0416 good with C&W and ID in tight KARR  
null. (bp-WA)

1490 KMET CA, Banning 2/4 0659 with oldies, slogan "Kool Gold 1490" &  
into news. Local KYOS-1480 off 1st Monday 0300-0800 ELT.  
(GK-CA)

1610 KNEC996 CA, Ft. Tejon 1/29 0816 with tape loop announcing Tejon  
Pass open. Pass often has high winds, making travel  
hazardous for campers & trailers; also some snow in winter.  
(GK-CA)

DX TESTS

700 (KBYR) AK, Anchorage 2/4 0400-0430 tried but not heard. (pb-WA)


720 (KOTZ) AK, Kotzebue 2/11 0420-0435 tried but not heard, only WGN  
heard, KDWN off as usual on Monday morning. (BH-WA)

KOTZ +2/11 0431-0445 tried, not heard. Potent WGN on freq., weak  
 cont'd KUAI in their null. Conditions to north rather poor  
 tonight. (RW-CA)  
 780 (WABS) VA, Arlington 2/11 0000-0100 only heard the two 780 night-  
 time regulars KNOM and KROW. (RJO-AK)  
 1280 (KSOK) KS, Arkansas City 2/3 0500-0600 tried but not heard. (pb-WA)  
 1310 (KARY) WA, Prosser 2/18 0726-0730 tried for last minutes of test but  
 not heard, just KDIA & an UNID satellite country (KLIX?)  
 that was still there 0745. (BH-WA)

UNIDS

1260 2/13 0642 TT atop freq. in KKFY-1250 null. (bp-WA)  
 1400 2/9 0858 SSB on flute, harmonica or similar instrument weak-fair  
 in jumble. (bp-WA)

That's all for this week! ♡



## Central DX Roundup

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

FOR THE RECORD

Report in Eastern time. ➔ Deadline: Saturdays.

RIDING GAIN

[SA-MB] = Shawn Axelrod, 30 Becontree Bay, Winnipeg, MB R2N 2X9  
 Icom IC-R70, 3' box loop, 100' longwire, Mini TUN-3.  
 [JcJ-MT] = Your editor using an Icom IC-R71A with Radio West Loop.

SPECIAL INTEREST

1450 KNSI MN St. Cloud, EX-KCLD. 2/4 poor. 0424 w/spot for National  
 Car Rental. "KNSI" ID. New for me, MN#104. [SA-MB]

DOWN THE DIAL

780 KROW NV Reno, 2/9 good u/WBBM. 0745 w/C&W music, local spots, ID  
 as "KROW." [SA-MB]  
 1240 WIBU WI Paynette, 2/10 fair. 0655 w/Polka music, 0701 "WIBU" ID  
 into local news. [SA-MB]  
 1300 KLER ID Orofino, 2/17 brief periods of good w/CJME and KPTL. 0930  
 with "Country Today" program. Local spots. Last heard in  
 1986, needed for follow-up. [JcJ-MT]  
 1400 KVPD IA Ft. Dodge, 2/10 good. 0712 w/"KVPD" ID. "Favorites of  
 yesterday and today." Oldies format. They either have a  
 new sign on time or now NSP. [SA-MB]  
 1440 WPRS IL Paris, 2/9 poor. 1844 w/ABC News, weather. "AM Stereo  
 14-40 WPRS" ID into oldies. New, IL#56. [SA-MB]  
 1470 KCBW MN Brooklyn Park, 2/9 fair. 1824 w/local spots, "14-70 KBCW"  
 ID. New for me, MN#105. [SA-MB]


IDING THE UNIDS

Tim Hall of Chula Vista, CA offers some help for [Wmc-MB].  
 1400 unID in 2/2 CDXR with "Wax Works" program. Tim says both KBRB and  
 KVOE carry "Wax Works." Thanks Tim!

25 YEARS AGO

March 5, 1966 issue of DX Monitor...The article on "Tips Towards  
 Better Beginning DX" said to first get a set of headphones, which  
 would cost about \$2.50 per pair...second, a receiver. Any radio  
 is better than none at all....The Milwaukee convention committee  
 had set up a tour of the Miller Brewing Company.

OPEN MIKE

 The world stands aside to let anyone pass who knows  
 where he is going. 73, John.



\*\*\* A DXers TECHNICAL GUIDE \*\*\*

Now in its 2nd edition, this 120 page book answers questions on how receivers work, how to make them  
 work better, what audio filters and loop antennas will do for you, how to build a beverage and phasing unit,  
 and much more. Only \$5.50 for IRCA members, \$6.50 for non-members (add \$2.50 for overseas airmail).  
 Write: Phil Bytheway, 9705 Mary N.W., Seattle, WA 98117.



# Western DX Forum

★ ★ ★ ★

Editor: Ric Heald • 8539 Bellamy Way • Sacramento, CA 95828 USA • (916) 396-8677

Temporary Editor: Bill Hardy • 2301 Pacific Ave. • Aberdeen, WA 98520  
Deadline: Saturdays • Anniversary Issue deadline: March 2

**BILL HARDY, 2301 PACIFIC AVE., ABERDEEN, WA 98520**

This is strange. Between Monday, 4 February when I last typed forums, and Saturday, 16 February (the 18th being a postal holiday), no forums have shown up in the mail! So we'd miss a column two weeks in a row if I didn't bore you with my own ramblings - yawn, hi. Nancy has done what seemed quite unlikely in 1973 when she moved here from western New York. She has now logged more stations than I have. Consider that I began DX'ing in Aberdeen in 1960, I had logged about 450 stations when Nancy moved here, and of course many are "extinct" now because of call or frequency changes. Others are very rare. Some, such as KDB 1490 Santa Barbara, were "exclusives" of mine from the 1960's and early 1970's and then became "extinct" by changing calls. But I work five days a week, and Nancy has spent the last couple of DX seasons doing extensive sunset skip DX. As a result, she caught up with me on 6 February and went ahead of me on 8 February. So there is currently more than one "air war" on this planet, hi. Tacoma's once mighty KTAC 850, which was a top 40 rocker in the 1970's and dropped back to satellite adcon four years ago, is now a simulcast of its sister FM KBRD 103.7. "K-Bird" is an easy listening station used as the background to the local weather channel on our cable TV. Wednesday night 13 February, we suddenly noticed "KBRD-FM, KTAC-AM, Tacoma-Seattle-Everett" ID's, which in the trend of today's FM's are given about 3-4 minutes before the hour. Nancy confirmed their simulcast on AM a few days later, as KTAC's night signal here is erratic under KOA and sometimes the Canadians. In fact, that night there was what sounded like Seattle or Tacoma sports (soccer or hockey) so I suspect KTAC may remain separate for its sports commitments. But if you see a call change to KBRD-AM, you'll understand. Speaking of which, KMJK 1550 Vancouver, Washington appears to have kept the KMJK calls even though it partly simulcasts KMXI-FM, formerly KMJK-FM. The AM appears to still program somewhat to Vancouver and Clark County, adcon, while the new FM is one of those "Mix FM" formats. I'm hoping for forums from you in the next few weeks, so please get to thinking. A big turnout for Anniversary Issue (deadline will be past by the time most of you read this) would be great! 73 and good DX.

## THAT'S WHY By Joel Achenbach

**W**HY WAS AM RADIO MORE POPULAR than FM for so many years even though FM sounds better?

**T**HAT'S A SORDID TALE FM HAS LONG HAD many advantages over AM. For technical reasons, a frequency-modulated broadcast has less static and noise than one that is amplitude-modulated. Moreover, FM could easily be converted to stereo when stereo was first developed around 1958. Only recently has the technology become available for stereo AM broadcasts, and it hasn't become widespread: Most AM stations have given up on music broadcasts and don't need fancy sound for traffic reports and call-in shows.

Edwin Howard Armstrong, a former World War I major, patented frequency-modulated (FM) radio in 1933, but the radio industry, including the Radio Corporation of America (RCA), harassed him with endless lawsuits. There were many reasons for RCA's concerns, but one was that they had invested a lot of money in AM. The Federal Communications Commission also didn't help Armstrong, initially limiting FM to a narrow range of wavelengths and also restricting the wattage of FM stations. And Detroit continued to make cars with only AM radios. Armstrong never lived to see FM take over the radio market: In 1954, he jumped from the window of his Park Avenue apartment.

Courtesy San Jose Mercury  
from Robert Wien



## KANADIAN KORNER

*Knews from the Frozen Knorth*

JOHN OLDFIELD

7135 129A Street

Surrey, BC V3W 6T4

### TWINS

BC CKNL-560 gets an FM repeater at Hudson's Hope  
BC CFFA(ex CFNI-1) Port Alice is call for CFCP-1440 twin.  
BC CKKC-2(ex CICF-3) Kaslo & CKKC-3(ex CICF-2) New Denver now twin  
CKKC-1390 Nelson(which mostly twins its owner, CJAT-610 Trail).  
AB CILW-830 CP Wainwright & all Nornet Stns. now owned by "Marco".  
PQ CJAN-1340 Asbestos new owners may no longer twin CKLD-1330.  
PQ CKFL-1400 Lac-Mégantic new owners may no longer twin CKLD.  
NB CJCJ- 920 Woodstock -1-1140 Perth-Andover/-2-990 Plaster Rock.  
These are old CBC lprts apparently taken over by CJCJ...40 watters.  
PQ CJVL-1360 Sté.-Marie now twinning owner CFLS-920 Lévis(Quebec City)  
from 6pm-6am 7 days.

### FM Repeaters of AM

PQ CJMC-1490 Sté.-Anne-des-Monts/-1 Marsoui/-2 Mont-Louis/-3 Murdochville  
-4 Grandé-Vallée  
NS CKBW-1000 Bridgewater/-1 Liverpool 94.5 3kw./-2 Shelburne 93.1 3kw.  
NS CJLS-1340 Yarmouth/-1 Barrington 96.3 5kw./-2 New Tusket 93.5 3kw.  
AB CKUA- 580 Edmonton...add CKUA-14-FM Banff.  
PQ CFVD-1370 Dégelis/-1 Cabano/-2Pohénégamook/-3 Squatec

### Ownership

Nornet is now "Marco": CKNL/CFNL/CKVH/CKBA/CKWA/CJOI/CFOK/CHLW/CILW/  
Moffat(CFOX/CKLG/CHAB/CISS/CKY etc.) teams 50% with Maclean Hunter  
to own CHED-630/CKNG-FM "king" Edmonton.  
Télémedia buys CHRC-800 Quebec City. I still show them owning KCKV-  
1280/CITF-FM in the same city. Legal dual station in same city seems  
to becoming a reality. CHUM still owns both CFUN-1410 & CHQM-1320 BC.  
WIC was denied the sale so Western World wants to buy CJCA-930/CIRK-FM  
Edmonton. I show WW still owning CHMG-1200 Edmonton(St. Albert).  
WIC becomes the 4th largest private TV guy in Canada buying CITV/CKRD-TV.  
WIC(CKNW/CFMI/CHQR/CJOB/CKIS/CHML/CKDS) will move to new studios for  
their CHOG/CILQ Toronto.

### Satellites

Someone called "Goldstar Comms. Inc." Edmonton got CRTC OK to Aug.'95  
to carry "Hitline USA". New is TSN Sports Radio. TSN is Canada's  
satellite version of ESPN-Sports Network. SRN("The Oldies Network" &  
"Coast To Coast Country") now has "Reunion"(ex on WIN) with Red Robin-  
son on Sat...so far heard on CJVI-900/CFVR-850/CHWK-1270. Noted that  
CFVR/CHWK carried Reunion rather than WIN's NHL Canucks Hockey. Also  
CHUB/CHPQ carried Nanaimo Clippers Hockey instead of NHL. Larry King  
Live & Jim B. plus some Mutual News now on CKXY-1040 "Vancouver's Hot  
Music Mix". Rawlco(CFFR-660) gets Calgary Flames NHL to 1995.  
Radio Mutuelle Inc. gets NHL Quebec Nordiques network to 1995.  
Their AMers are CJRC/CJMS/CJRP/CJTR.

And...cleared by Iraq censors...CBQB-1160 NWT ex 1200...CKNR & CJVI  
no longer have to carry any CBC to keep their licenses.



This article presents a flexible solution to coupling Beverage and random-length longwire and vertical antennae to 50-ohm coaxial feedline suitable to transport a low-noise signal from a remote location to the receiving position. Several issues are involved: these must be discussed at the outset.

1. Inability to keep correct antenna orientation if the antenna is extended to reach the receiving "shack"

A Beverage or other wire antenna laid out for a particular directional characteristic may only be feasible at a site not immediately adjacent to the receiving position. It is necessary to "capture" signals as if the receiver was "out in the field" at the end of the properly-aimed antenna.

2. Excessive manmade RF noise in the immediate vicinity of the receiving position.

Noise from TV's, machines, fluorescent lights, computers, power lines, etc. obliterate serious DX signals in the area near the receiver. A remote antenna at a quieter nearby site is mandated. Active remote antennae may be overloaded by strong local stations, so a passive fix is required. Again, a means of delivering a true noise-free replica of the signal "in the field" at the base of the antenna to the operating position is needed. It goes without saying that signal attenuation due to cable loss should be minimized. Luckily, even 100' (30 m.) of RG-58 type coax. has relatively little loss below 5 MHz. Cable shielding must be effective and ground loops are to be avoided if noise is to be held at bay and if RF "leakage" (that could compromise directivity) is to be "plugged".

3. Wire antennae seldom provide a proper 50 ohm match: simply connecting a run of coax. to a remote wire antenna is a recipe for failure.

A Beverage characteristically has an impedance of 500 to 900 ohms over a fairly wide bandwidth. DXers such as Nick Hall-Patch have constructed toroidal-transformer assemblies that take advantage of this fact by using a fixed ratio of transformation (e. g. 12:1) and ground isolation to get substantially better RF energy transfer to the 50-ohm feedline. Separating transformer primary ground from transformer secondary ground reduces noise as long as a decent earth ground can be provided at the field site at which the antenna-to-cable interface box is located. Tests by Pat Martin indicate that the matching / isolation transformer idea works quite well. The subject has also been covered by the 1988 & 1989 Fine Tuning "Proceedings". It can be seen from the foregoing discussions that the problem of efficiently transferring, by passive means, the output of a remotely-sited wire antenna to a receiving position has been attacked and partially overcome. I say "partially" because of the Beverage-specific nature of the best-known current solution. Palomar Engineers had at one time advertised a passive remote whip that was efficiently broadband-coupled to a coaxial feedline by means of a matching-transformer scheme. It is doubtful that such an antenna could deliver much output on medium-wave and longwave, but shortwave performance on "big signal" bands like 49 meters was probably adequate. I've set about to assemble a unit that can match a wide variety of remote wire antennae to 50-ohm line without the need of active devices (that can overload) and tank circuits (that are narrowband and must be "tweaked"). Nick

Hall-Patch's transformer box served as the starting point: I tossed one together and found that it even helped with wires of shorter-than-Beverage length, in some cases. Not being a big fan of homebrew transformers or inductors (at work we never use them), I did subsequent tests with some commercially-available matching transformers of differing impedance-transformation ratios. These models are made by Mini-Circuits (Brooklyn, NY). Experimenting with 16:1, 9:1, 4:1 and 1:1 ratio units, I found out that different wire antennae coupled most efficiently to my 50-ohm receiver input differently, in terms of the transformation ratio best suited to the job. This is to be expected. Therefore, a broadband matching box offering several ratios would seem to be a worthwhile DX tool - able to interface with a greater variety of wires than the single-transformer unit. Such a matching unit has potential to be a remote-site coupler and also an in-shack optimizer for wires coming right in the window.

Some time back, I experimented with a "combiner" box, a sort of poor man's (or - more accurately - lazy man's) phasing unit. The concept of the combiner was to take two wires, or two ends of the same longwire looped horizontally or vertically, and connect them to the receiver and ground in six different configurations meant to establish different directivities. Table 1 illustrates these configurations:

Table 1: Two Wire Connection Combinations

<u>Set-up #</u>	<u>Antenna 1 to:</u>	<u>Antenna 2 to:</u>
1	receiver	no connection
2	no connection	receiver
3	receiver	ground
4	ground	receiver
5	receiver	receiver
6	balun primary-A balun primary-B [balun primary centertap to ground; secondary to receiver and receiver ground]	

Results both at home and at DXpedition sites were encouraging. Nulls of pests (allowing choice foreign DX to slide through) sometimes occurred, even with two ends of the same wire looped around the yard. Of course, phasing provides nulls more often and more controllably, but "combining" has operating simplicity as an advantage: less time tweaking, more time DXing. Time, especially on DXpeditions, is a valuable commodity.

A decision was made to put the combiner and the switchable-impedance-transformers into a single unit, dubbed the Bevmatcher. This allows added flexibility in either in-shack or field-remote-coupler applications. Impedance transformations of 16:1 (800 ohms antenna to 50 ohms receiver), 4:1 (200 ohms to 50), and 1:1 are selectable; in addition, by reversing the transformers, 1:4 (12.5 ohms to 50), and 1:16 (3.1 ohms to 50) ratios may be obtained. These low-ohms ratios may be useful in coupling short untuned loops to a 50 ohm system. Use of the balun in the combiner section allows use of balanced antenna systems such as V-beams and rhombics (as well as large wire loops).

In addition to the combiner and impedance-transformation sections, a third section was added to the Bevmatcher box: a resistive matching pad that can be switched in or out. The purpose of the pad is to improve the VSWR (voltage standing wave ratio) on the coaxial transmission line. Reducing VSWR equates to improving the impedance match: the result is an improvement in the shielding ability of the coax. cable. If shielding is good, near-field noise and directivity-spoiling leakage of broadcast signals into the feedline center conductor will be minimized. The resistance values chosen cause a 4.2 dB

reduction in signal levels if the pad is switched in. In low-signal areas (the "boondocks"), it is generally wise to leave the pad switched out: every microvolt of signal counts, especially if the receiver is insensitive and a high-gain preamplifier (MWT-1, MWT-2, or similar) is not available to place ahead of the receiver input. In reasonable-signal-level conditions (characteristic of night-time), using the -4.2 dB pad may help retain directivity and noise-immunity: the penalty to system gain may be a lesser evil than a noise or interference increase. The pad assures that the maximum VSWR will be 2.2:1 (even if the antenna represents a virtual open or short). Such pads are often used in VHF, UHF, and microwave applications where keeping mismatches "localized" is of considerable benefit in preserving the shielded nature of coaxial cables.

#### Bevmatcher Assembly & Technical Data

The construction-related documentation is as follows:

- Figures 1 & 2: schematic
- Figure 3: TA1 transformer card assembly
- Figure 4: TA2 transformer card assembly
- Table 2: hole-drilling list
- Tables 3-6: parts lists

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#### Brief Synopsis of Control Usage

S1: If a good low-resistance earth ground (separate from receiver ground) is available at the location of the Bevmatcher box, noise may be reduced by setting S1 to Float. This separates the grounds. If such a ground is unavailable, set S1 to Common.

S2: The setting of this switch depends on whether a single wire is being input to the unit, or two wires. With two wires, this switch is set for optimized reception of DX targets. This optimized reception is based upon the ability to reject noise and interfering stations (more than merely presenting the highest S-meter reading on desired stations). Refer to the schematic (Figure 1) and Table 1 for additional information.

S3: This switch selects the impedance transformation ratio. Beverages and longwires generally transfer maximum signal when the 16:1 or 4:1 ratio is chosen. Some wires may work best with the 1:1 ratio. Closed loops (one end to J1; other end to J2), especially if shorter than a quarter-wavelength, may perform better with one of the "step up" ratios (1:4 or 1:16) than with 16:1, 4:1, or 1:1.

S4: This selects Matching Pad In or Out. Using this -4.2 dB pad, as mentioned previously, reduces VSWR (possibly improving integrity of cable shielding and, thereby, noise-rejection and directivity quality). Switching out the pad gives greater signal throughput. In many cases, directivity and noise-rejection are not influenced by the pad; therefore, delivering maximum signal is the preferable situation.

\*\*\*\*\*

#### Conclusion

The Bevmatcher is a useful accessory for the DXer inclined toward antenna experimentation. In some cases, it may result in stations being heard that would otherwise be missed (though a loop or phasing unit will generally do more). For a fairly low-tech, low-cost, easy-to-use accessory, Bevmatcher has its merit.

Table 2: Bevmatcher hole-drilling list

Box = Mouser 537-TF-779 (5" x 4" x 3")

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.

Hole loci are first marked on the box with a scribe and are then drilled with a .125" bit. Subsequently, as required, the holes are enlarged to the proper size by using progressively larger bits up to that corresponding to the final desired diameter.

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LEFT SIDE

Hole #	Comp. Desig.	Description	X	Y	D
1	J1	Ant. #1 In-red banana jack	-0.75	0.5	0.3125
2	G1	GND H/W - internal lug	0.0	2.0	0.125
3	J3	GND In - black banana jack	0.0	0.5	0.3125
4	J2	Ant. #2 In-red banana jack	0.75	0.5	0.3125

+++++

TOP SIDE

Hole #	Comp. Desig.	Description	X	Y	D
1	S1	Ground mode switch - tab	-1.875	3.0	0.144
2	S1	Ground mode switch - shaft	-1.875	2.75	0.25
3	TA1	Balun card - H/W 2	-1.25	1.5	0.125
4	TA1	Balun card - H/W 1	-1.25	0.7	0.125
5	S2	Input combiner switch -shaft	-0.875	2.75	0.375
6	S2	Input combiner switch - tab	-0.375	2.75	0.144
7	S3	Impedance switch - tab	0.375	2.75	0.144
8	S3	Impedance switch - shaft	0.875	2.75	0.375
9	TA2	Imped. transformer card H/W4	0.5	1.5	0.125
10	TA2	Imped. transformer card H/W3	0.5	0.7	0.125
11	TA2	Imped. transformer card H/W2	1.7	1.5	0.125
12	TA2	Imped. transformer card H/W1	1.7	0.7	0.125
13	S4	Matching pad switch - tab	1.875	3.0	0.144
14	S4	Matching pad switch - shaft	1.875	2.75	0.25

+++++

RIGHT SIDE

Hole #	Comp. Desig.	Description	X	Y	D
1	G2	GND H/W - internal lug	0.0	1.25	0.125
2	J4	RF out - BNC jack	0.0	0.5	0.375

+++++

Table 3: "upper level" parts list

Vendor codes:



RS = Radio Shack / Many locations worldwide  
 MOU = Mouser Electronics / 11433 Woodside Ave.  
           / Santee, CA 92071  
 MCL = Mini-Circuits / P. O. Box 350166  
           / Brooklyn, NY 11235-0003

Item	Designator	Description/Value	Vendor	Vendor Stock #	QTY
1	-	chassis box	MOU	537-TF-779	1
2	TA1	balun card ass'y		(see Table 4)	1
3	TA2	impedance transformer card ass'y		(see Table 5)	1
4	(for S2, S3)	knob	RS	274-416	2
5	J1,J2	red banana jack	RS	274-662	2
6	J3	black banana jack	RS	274-662	1
7	J4	BNC jack	RS	278-105	1
8	R1,R3	resistor, 12 ohm	MOU	29SJ250-12	2
9	R2	resistor, 100 ohm	RS	271-1311	1
10	S1	switch, SPST	RS	275-612	1
11	S2,S3	switch/4pole/6pos. rotary	MOU	10WR046	2
12	S4	switch, DPDT on-on	RS	275-614	1

Table 4: Balun card parts list

See Table 3 for vendor codes.

Item	Designator	Description/Value	Vendor	Vendor Stock #	QTY
1	BD	perfboard(1.2"X0.8")	RS	276-1396 (cut)	1
2	H1,H2	screw, 4-40 X .25"	MOU	572-01880	2
3	H1,H2	spacer, 4-40 X .5"	MOU	534-1450C	2
4	H1,H2	split lockwasher, #4	MOU	572-00649	2
5	P1-P5	flea-clip for .042 hole	MOU	574-T42-1/100	5
6	T1	balun transformer	MCL	T2-1T-X65	1
7	W	buss wire	RS	278-1341 approx.1'	1

Table 5: Impedance Transformers card parts list

See Table 3 for vendor codes.

Item	Designator	Description/Value	Vendor	Vendor Stock #	QTY
1	BD	perfboard(1.2"X1.8")	RS	276-1396 (cut)	1
2	H1,H2,H3,H4	screw, 4-40 X .25"	MOU	572-01880	4
3	H1,H2,H3,H4	spacer, 4-40 X .5"	MOU	534-1450C	4
4	H1,H2,H3,H4	split lockwasher, #4	MOU	572-00649	4
5	P1-P12	flea-clip for .042 hole	MOU	574-T42-1/100	12
6	T1	RF transformer 16:1	MCL	T16-6T-X65	1
7	T2	RF transformer 4:1	MCL	T4-6T-X65	1
8	T3	RF transformer 1:1	MCL	T1-6T-X65	1
9	W	buss wire	RS	278-1341 approx.1'	1

Table 6: small hardware parts list

See Table 3 for vendor codes.

Note: Mounting hardware is supplied with the following components: J1, J2, J3, J4, S1, S2, S3, S4.

Hardware is required by the following component designators: G1, G2, TA1, and TA2. All required hardware is listed below:

Used on	Description/Value	Vendor	Vendor Stock #	QTY
G1-G2(2), TA1(2),TA2(4)	screw, 4-40 X .25"	MOU	572-01880	8
TA1(2),TA2(4)	split lockwasher, #4	MOU	572-00649	6
G1-G2(2)	solder lug, #4	MOU	534-7311	2
G1-G2(2)	hex nut, 4-40	MOU	572-00486	2

FIGURE 1: BEVMATCHER INPUT (COMBINER) SECTION SCHEMATIC

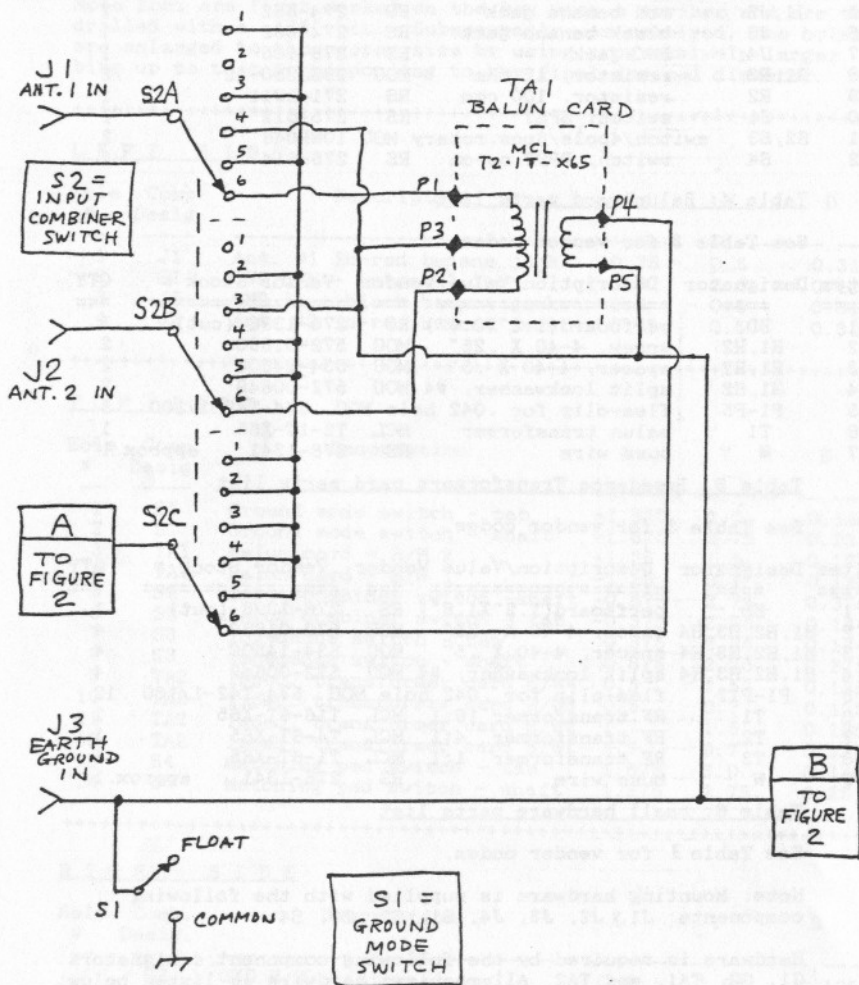
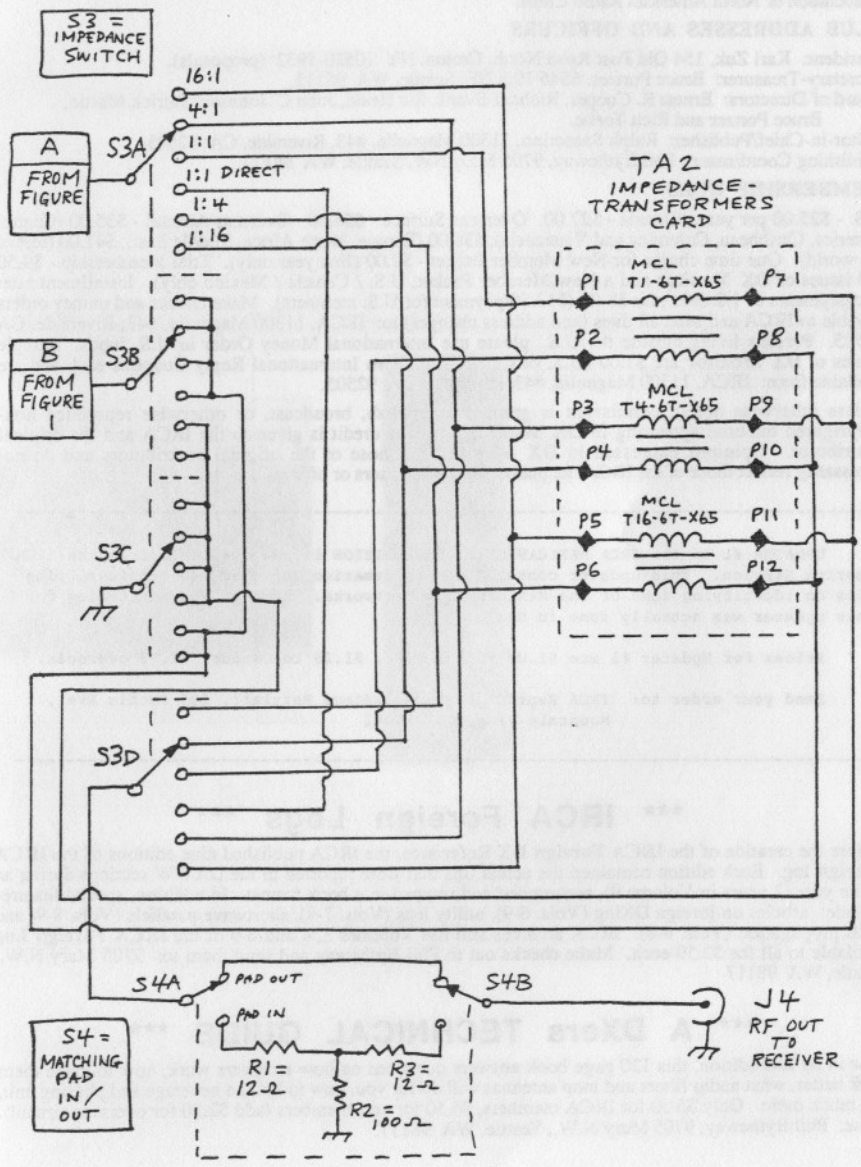


FIGURE 2 : BEVMATCHER OUTPUT (Z-MATCH) SECTION SCHEMATIC



continued next issue

## THE INTERNATIONAL RADIO CLUB OF AMERICA (IRCA)

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

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