



VOLUME 13 NO. 31

DX MONITOR

PUBLISHED BY
THE INTERNATIONAL RADIO CLUB OF AMERICA
WHOLE NO 414 MAY 22, 1976

CPC Results and FLASH TIPS..

On the behalf of the club, I would like to offer our condolences to Rob Keeney on the death of his father.

Anyone planning on going to the Convention should get their reservations in early, like next month. The Raphael is a very popular hotel, and fills up well in advance.

According to a local dealer, the next edition of the Jones Log should be out fairly soon.

Bill and Nancy Hardy have received Washington state personalized (vanity) license plate "DX ERS."

SCADS, Southern California Area DXers, will meet Saturday and Sunday, May 29 and 30, of the 3-day Memorial Day weekend from 10 AM Sat. through 6 PM Sunday. Registration is \$2 at the door, Room 42 (as always), Bel Air Motor Hotel, 140 W. 1st St., Tustin, CA 92680. Phone 714-544-5560. For a complete information flyer, questions, bus schedules, etc., write: Don Erickson, 6059 Essex St., Riverside, CA 92504. Phone 714-687-5910 days, early evenings, and weekends.

BROADCASTING

INFORMATION

(as compiled by Mike Worst)

Day	Nite			
new 1060	1000	Winters, TX	requests	KRWT
new 1130	1000	Newland, NC	"	WJTP
new 1140	500	Lake Isabella, CA	"	KVLI
WCUM 1230	1000	250 Cumberland, MD	granted	WCMD
WUOK 1270	5000	1000 "	"	WCBC
WCIS 1460	500	Moss Point, MS	"	WKKY
WPJD 1550	250	Soddy-Daisy, TN	to	lkw-D
KTUF 1580	50000	10kw-CH Tempe, AZ	granted	KNIX

From the May 3 and 10, 1976 issues of Broadcasting.

The Canadian Radio-Television Commission has granted a network license to Olympic Radio Network to provide broadcast coverage of the Olympic Games from July 5 to August 1, 1976, over the following stations:

560 CKNL Fort St. John, BC	1190 CHTN Charlottetown, PEI
GHTK Prince Rupert, BC	CFSL Weyburn, SK
590 CFNL Fort Nelson, BC	1220 CJOC Lethbridge, AB
CFTK Terrace, BC	CJSS Cornwall, ON
600 CJOR Vancouver, BC	CHSC St. Catharines, ON
CFCF Montreal, PQ	1230 CKQR Castlegar, BC
630 CKOV Kelowna, BC	CKTK Kitimat, BC
CKRC Winnipeg, MB	1250 CKOM Saskatoon, SK
CFCO Chatham, ON	1270 CHAT Medicine Hat, AB
680 CFTR Toronto, ON	1280 CHAM Hamilton, ON
900 CJVI Victoria, BC	CJSL Estevan, SK
CKDH Amherst, NS	1310 CKOY Ottawa, ON
CKBI Prince Albert, SK	1330 CKKR Rosetown, SK
960 CFAC Calgary, AB	1350 CKLB Oshawa, ON
1050 CJNB N. Battleford, SK	1440 CJOI Wetaskiwin, AB
1110 CKJD Sarnia, ON	1490 CJPR Blairmore, AB
1170 CKGY Red Deer, AB	

Thanks to Derek Ford, Vancouver, BC.

Geomagnetic Indices

Mar. 31-Apr. 6	6	79	15	27	25	20	24
Ap. 7-13	22	15	10	12	19	10	12
Ap. 14-20	13	4	4	6	2	4	1
Ap. 21-27	4	18	8	13	8	6	13

DX CALENDAR DX CALENDAR DX CALENDAR

	0300- 7	KLUC-1140 Las Vegas, NV	10kw
IRCA Mon. 5-31-76	0100-0130	WMGS- 730 Bowling Green, OH	1kw
IRCA Mon. 6- 7-76	0045	KDWN- 720 Las Vegas, NV	50kw
IRCA Wed. every			

KLUC-1140 (daytime only), no details available. Reports to Steve Herman, 1709 E. Kassaban, Las Vegas, NV 89104. Arranged by Steve Herman.

WMGS-730 (daytime only) will have various tones and voice IDs. Was not on for the TEST of 4-1 due to transmitter trouble. Reports to Jonathan Augustine, Radio WMGS, R.R.#1, Perrysburg, OH 43551. Arranged by James Hopkins.

*** NEW MEMBERS from Phil Bytheway

Chick Rogers, Rt. 6, Box 37, Bainbridge Island, WA 98110 (rejoin)
Iudo Arden Bertsch, 3905 Hillside, Regina, Sask., CANADA
SLS 3Y6
Jeffrey A. Sellers, 27 Victoria Parade, Manly, Sydney, New South
Wales, 2095 AUSTRALIA
Joseph J. McMiff, 28 Hovey St., Watertown, MA 02172
Bjarne Hansen, Box 118, N-9980 Berlevåg, NORWAY
Karl Ekonen, 17239 So. Carfax Ave., Bellflower, CA 90706

Address Changes:

Glenn Hauser, c/o WUOT, Univ. of TN, 232 C & E Bldg., Knoxville, TN 37916
Mark Connelly, 52 Amsden St., Arlington, MA 02174
David Oliphant, 11415 77th Ave., Edmonton, Alberta, CANADA
T6G 019
Carl Dabelstein, 8209 W. 78th, Overland Park, KS 66204
Arthur W. Peterson, 851 31st St., Richmond, CA 94804

Renewals:

Gregg Allinson, Robert A. Curtiss, Robert L. Neal, Jr., Erlend Carlson, Michael G. Worst, John C. Keleher, Robert Knitter, Gary Nuthals, Andrew Kwiatkowski, Andrew Mahoney.

Another DX season has come and gone. Cx this MM (5/17) were OK but nothing new was heard. It seems that there are a lot more AN stations now than ever. My vote of thanks goes out to the members of the IRCA CPC and the other club members that arranged DX tests this year. There are still a few trickling in. Thanks are in order to: James Hopkins, C.R. Weinstein, Scott Mentzer, Paul R. Mount, Karl Forth, Mike Sanburn, Jeff Brasier, and least we not forget the man in charge Rob Keeney. Anyone interested in becoming a member of this group contact Rob. Maybe you can get one of your most wanted stations to run a test!

New Member packets are still being revised, I hope that I'll have them in the mail by the end of the month. We're also revising our reprint list to include items in Volume 13. Send an SASE if you want one.

The Inside Story

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**eastern dx
roundup**

Editor: Mike Mitock,
Box 533
Lorain, OH 44052

DEADLINES: 6/1; 6/28; 7/25; 8/23; 9/6
All times are ELT.

- 540 CBK SK, REGINA 4/19 0155 jazz. Promo for Great Canadian Gold Rush (may have been name of show) ID as "CBK, Saskatchewan", CBC Nx, Sask wx and s/off w/GSQ, 0 Canada! Fair to good signal, a real surprise. Province #5. (AJ-NJ)
- 550 CFNB NB, FREDERICTON 4/19 0143 w/"Mack the Knife" and good ID. WGR nulled on TRF. (AJ-NJ)
- 570 WKBN OH, YOUNGSTOWN 4/24 0320 Musical ID thru WMCA, nulled w/TRF. New here. (AJ-NJ)
- 630 WPRO RI, PROVIDENCE 4/19 0213 peeked thru for first time w/"..if they do, you both win on WPRO.." Didn't listen anymore. (AJ-NJ)
- 640 KFI CA, LOS ANGELES 4/19 0217-0300, CMQ partially nulled w/TRF. Came here from 540 suspecting a western opening and finally got first WC-er. State #35. Religious programming. Sermon from Church of God to 0230, then good solid ID, then Music from Lutherans. Taped & reported. (AJ-NJ)
- 730 CHYR ON, LEAMINGTON 4/24 0336 ID as "The Leader, CHYR" thru slop & CKAC QRM. Seemed to strong for NRC log listed 250 w. and used daytime call. (AJ-NJ) ('76 BYB lists as 500W DA-2 and call at night as CHYR-7.....mrm)
- 790 WTAR VA, NORFOLK 4/2 2335 w/good ID, wx for Norfolk and mx. Pest WAEB nulled w/new TRF. First station other than WAEB here on 790. (AJ-NJ)
- 850 WRAP VA, NORFOLK 4/19 0117. ID as "Disco 85, WRAP" thru heavy FF CKVL QRM. (AJ-NJ)
- 1070 WNCT NC, GREENVILLE 4/2 0030 in well o/ WINA w/mx/wx and spot for Ritz house, a special on cheese omelets. New here. (AJ-NJ)
- 1270 WLBR PA, LEBANON 4/4 1210 nx, state theater spot, mx and talk. TRF selectivity enough to pull it through WBUD-1260 and WADO-1280 splatter. (AJ-NJ)
- 1340 WHAT PA, PHILADELPHIA 4/4 1235 good ID & Budco Movie spot through WMID and other GYers. Some splash from WHWH-1350. (AJ-NJ)
- 1400 WOND NJ, PLEASANTVILLE 4/4 1253 fair to good w/wx for Jersey shore and various station promos. TRF strikes again despite 4 or 5 other GYers coming in. I've wanted this for a long time. (AJ)
- 1410 WING OH, DAYTON ID surfaced u/KQV 4/11 0450. (AJ-NJ)
- 1440 WNPV PA, LANSDALE 4/4 1345 dominating freq here w/mx, good "1440-WNPV" musical ID. Never heard w/S-53A; like a local on TRF. (AJ-NJ)
- 1460 WBNS OH, COLUMBUS 4/26 0130 "Who, What and Where" w/Bill Edwards on Franklin County Children's Services and then s/off "for an indefinite period for technical corrections" w/no SSB. (AJ)
- 1470 WOHO OH, TOLEDO good IDs u/WSAN. (AJ-NJ)
- 1500 WDEE MI, DETROIT 4/24 0350 music and IDs thru lots of slop (KSTP?). Eter w/TTs came on at 0400. To tired to wait for an ID. (AJ-NJ)
- 1550 WIRV KY, IRVINE 4/3 0106-0125 ET w/TTs and IDs at 0115; 0123; and 0128. Some QRM. Even w/CBE till 0110 s/off, then over. (AJ-NJ)
- 1570 WKOL NY, AMSTERDAM 4/4 1648 mx, "We believe in America at WKOL"...may have been s/off. Strong for a few seconds, then gone u/WQXR splatter. (AJ-NJ)
- 1580 WKIG GA, GLENVILLE 4/19 0307 "...on the air for frequency test". (AJ-NJ)
- WCLS GA, COLUMBUS 4/19 0308-22 shouted WCLS IDs between records, also wx (570) (AJ-NJ)

1590 WGOE VA, RICHMOND 4/25 0101-0110 probable ET w/pop mx, wrong speed musical ID, pseudo-PSA for "Va Society for the Preservation of Sanity" and "More goeey mx on goeey radio". (AJ-NJ)
+ + + + +
THIS WEEKS CONTRIBUTOR:

AJ- Al Jones/ 45 Maplestream Rd., Hightstown NJ 08520/ Realistic TRF & S-53A.
+ + + + +
That's all in the box as of Noon today, 5/11.
Let's hope for more next time around! 73 to all.

**central dx
roundup**

Richard C. Evans
P.O. Box 392
New Buffalo, Mich. 49117

PHONE: 616-469-4012 1430-2300+ ELT (work)
616-469-3866 after 2400 ELT (home)
DEADLINES: (Wednesday) 6/2 6/30 7/28

- 550 KSD MO St. Louis, 5/2 0254-57. Fair on a relogging w/wx & many "55-KSD" IDs, then into the Beatles' "Lady Madonna"; some fairly heavy QRM & slight unid QRM; a semi-regular around here, but never reported before now. (SAM) 4/26 2358-0018 good-fair KFVR QRM w/RR, NBC, Disney World family fun contest, Dave Hill DH. 1st time hrd, and reported. (HGC)
- 610 WDAF MO Kansas City, 4/27 0036-0038 w/RR, spot for John Wagner Sky Spot mornings. (HGC)
- 620 WETE TN Knoxville, 4/12 0534, fair-poor, w/Nx,Wx & ads, quick fade-out, thru CKCK. (JDF)
- 660 WNBC NY New York, 4/27 0055-0116, poor-fair, w/RR, NBC Nx, slop from CJOB, 1st time hrd, rptd. (HGC)
- 710 CJRN ONT Niagara Falls, 4/12 0511, fair, o/WOR & WGN slop, w/Pop, R&R Mx, Tc, Wx rpt & ID. (JDF)
- 740 ??? ? UNID, 3/22 0229-0235, who has a 4th MM f/c here? Sounded like KBAD-NM, "but I'm not sure. They had TT and 5m. IDs. (JDF)
- 850*WPTB*GA*Statesboro, THIS is the mystery stn as reported by Bill Nittler in 3/27 DXM as being WBUG-Cuthbert on 3/8 around 0400 w/C&W Mx on an ET, it was in well & all alone here. v/l, address is WPTB, Williams Rd, Rox 289, Statesboro, 30458. V/s Bernard Morris. (JDF)
- 860 KOAM KS Pittsburg, 5/2 0622-0637, fair, w/C&W, ID 0630 followed by "Sunday News", Summer Bowling League spot, 1st time hrd & rptd. (HGC)
- 910 WSBA PA York, w/ID, Wx and instr. Mx 0243 5/2. Not unusual here, but channel nearly clear w/no sign of KGLC/CKLY. (JCK)
- KALL UT Salt Lake City, 5/2 0643-0700, excellent, w/MOR, DJ said song names slow and clear, ID, 0649 spots for Rancho 42 bowling lanes 24 hrs, 1st time hrd and reported. (HGC)
- 960 KOVO UT Provo, 5/2 0703-0717, fair, w/MOR, slop from CFAM, Wx, 0703, ID 0707, Radio KOVO, 1st time hrd.(HGC)
- 1030*KCTA*TX*Corpus Christi, 4/27 0147-0211, Xlnt on what was probably a PoP w/EBS tone, very much OC, & promo-type IDs randomly thrown in just to break the silence, "Reaching into 26 states and parts of Mexico with the best in gospel programming, this is KCTA, 1030 kilocycles, in Corpus Christi, Texas"; some "Mexican Grizzly" & WBZ QRM easily nulled; never tried for during SSS. (SAM)
- 1140*KLUC*NV*Las Vegas, 4/19 0345, fair, o/CJTR on ET w/ET w/soul Mx & ID, mucho OC as well. States#44. (JDF)
- 1230 WKYG W Parkersburg, 0200 5/8, on top with w/ID, then Ai Nx. (JCK)
- 1240*WHUM*PA*Reading, 3/22, 0308-0325 t/out on DX w/code and voice IDs & TT, fair to poor, u/WEDC/WROV.v/l.(JDF)
- 1250*WTMA*SC*Charleston, 5/3 0158-, another ET consisting of ID-then-jingle, repeated over and over. At least, they ID, hi. (JCK)
- 1270 KBOM ND Mandan, 5/2 0724-0743, poor, w/RR, slop from CHSM, ID KBOM Bismarck-Mandan 0731, American Heart Assoc. fund raising psa, rotd. (HGC)
- 1290 KTRN TX Wichita Falls, 4/30 0228-30. Good to poor w/pop Mx & Wx capped by ID; some QRM from partially nulled WIRL & other unids; 1st time hrd. (SAM)
- 1300 WMAK TN Nashville, 4/16 0158 w/wx rpt & Bruce Clark DJ. (MH)
- 1320 KXYZ TX Houston, briefly on top 0120 5/3, ending ABC "Perspective", then KXYZ Nx/sports by gal. Never

ID'd before here; WKTQ usually too pesky. Gladly logged for stn #900 in just about 3 years. (JCK)

1340 ?OK? ?? UNID, 4/28 0116, w/a BB game and mention of Oklahoma City, thought it might be KOZY. (JCK)

1390*KSLM*OR*Salem, 4/19 0321, pleasant surprise on code ID on IRCA DX test. Very weak, but call to stn. confirmed it, u/WVON/WFBL. Quick v/q. (JDF)

1470 CHOW ONT Welland, 4/16 briefly surfacing in unusual conditions...does this stn only run 500 w. at night? It sounded like 10kw at the time, from the strength of the signal! Hrd at 0432. (MH)

1480*WTHI*IN*Terre Haute, 4/26 0117-0224. Semi-regular pest xInt on ET w/750 cycle tone & IDs accompanied by TC on the half-hour; strong signal w/no sign of WA BB, should have been hrd almost everywhere. (SAM)

1500 WDEB TN Jamestown, noted 2041 5/2 w/R&R, SSS pest. (JCK)

1520 KSIB IA Creston, s/off w/inv. to FM 2030 5/1, u/WKRW. (JCK)

1530 WTHM MI Lapeer, 4/12 0602, poor u/WCKY, w/hymn, s/on and ads. (JDF)

KNIE WY Cheyenne, noted 5/3 0143 w/"All Shook UP" oldie, and ID. Not new, but strange cx observed at this time; KSL inaudible at onset of aurora. (JCK)

1540 WSWG MS Greenwood, 5/6 2056 w/spot and Nx; s/off w/brief hymn 2101, on top. (JCK)

1550 WSAO MS Senatobia, 5/2 2059 s/off, no SSB, o/WOKJ. (JCK)

1570 WAPL WI Appleton, 5/1 2112, s/off w/inv. to FM, u/CHLO

1580 WBBA IL Pittsfield, w/EL Mx to detailed s/off 2115///(JCK) 5/2, inv. to FM 97.7, very good signal for power. (JCK)

KCHA IA Charles City, 5/2 2130, s/off w/inv. to FM 104.9, right after KTGR. Also hrd 2nd Sat. r/c 0145 5/8/ (JCK)

KTGR MO Columbia, w/EL Mx to s/off and inv. to FM, 2129 5/2. 15 minutes late per SR/SS map. (JCK)

WLIJ TN Shelbyville, s/off 2045 5/1 w/mention of 1 kw power. (JCK)

1590 WTVB MI Coldwater, 4/11 s/on 0600 w/ann. for FM station too. (MH)

*WVHH*NY*Elmira Heights, testing w/upbeat MoR 0150 5/1. Concluding annct explained calls, "serving Elmira Heights-Horseheads, NY." quick v/f. (JCK)

1600 WEUP AL Huntsville, s/off w/Lord's Prayer by chorus, 2042 5/1. (JCK)

*WCPK*VA*Chesapeake, 4/19 0254-0259 s/off, on ET/oldies Mx and many IDs, fair to good, o/WVRL. (JDF)

PER THE LIST

1st SAT: KSTW-1400 MO (SAM)
 2nd MON: WPRS-1440 IL (JDF)
 2nd SAT: KCHA-1580 IA (JCK)
 3rd MON: WORV-1580 MS (JDF) 45 min. early
 WKIG-1580 GA (JDF) 30 min. early
 4th MON: WCVS-1450 IL (SAM)
 KLEO-1480 KS (SAM)
 4th WED: WBFN-1500 MS (SAM)
 WLSM-1270 MS (SAM)

A TIP OF THE HAT THIS WEEK TO:

HGC - HAL CHRISTIANSON, 555 Community Row, Winnipeg, Manitoba R3R JH6
 JDF - JAY FLORIAN, 300 East Main Street, Round Lake, Illinois 60073
 MH - MIKE HOGAN, 4811 Euclid Avenue East Chicago, Indiana 46312
 JCK - CHARLEY KELEHER, 3924 Sleepy Hollow Lane, Fort Wayne, Indiana 46804
 SAM - SCOTT A. MENTZER, Route 3, Tylertown, Mississippi 39667

This is being typed at work again, as I'm back on what seems to be normal 13 hour days. I'm starting to look for another job, so hopefully I can be on a normal working schedule soon. Gotta run. 73.

Seattle Times, May 9, 1976
 via Bruce Portzer

CBs May Threaten AM Broadcasting

Is the citizens band a threat to the future of AM radio broadcasting? Gen. Mgr. Murray J. Green of Indianapolis radio stations WNDE-AM and WFBO-FM thinks so.

"The CB threat is far more serious than the tape deck a few years ago," he says. "The tape deck novelty required the continued buying of expensive tapes that became obsolete very quickly. CB radio provides new and different entertainment every minute."

Green called for broadcasters to fight the FCC's proposed channel expansion. If more people listen to CB, fewer people will listen to commercial radio, so broadcasters won't be able to charge as much for advertising, that's the crux.

NANCY HARDY, Editor

2301 PACIFIC AVE.

ABERDEEN, WA 98520

western dx roundup

ALL TIMES ARE EASTERN LOCAL

DEADLINES: June 3, July 3, July 31.

REPORTERS FOR THIS ISSUE:

(pb) Phil Bytheway-6635 57th NE-Seattle, WA 98111 HQ-150, "Wedge", SM-1
 (NHP) Nick Hall-Patch-3272 Alder St.-Victoria, BC National HRO, 4' box loop V8X LP2 *****

620 KIPA HI, Hilo KGW off 5/3 0440 but testing. This noted 0445 w/strings of rr songs w/fair signal but bubbly (due to KGW OC?). (NHP-BC)

810 WSJC MS, Magee apparent pwr & pattern change at 0559 5/2 w/C&W song, then WSJC ID. In CHQR null. Immediately sat on by KCMO pwr boost at 0600 so no report possible. (NHP-BC)

810 *KAFE* NM, Santa Fe ET w/C&W mx 5/9, ID at 0307 between albums, and then into Tennessee Ernie Ford album. (pb-WA)

That's it for this week. It appears DX is slowing down for the year. Please remember that the next WDXR deadline is a Thursday--June 3. Bill and I will be leaving late 6/4 for the East. 73

~~~~~ John Zondlo  
**eastern dx forum** 6617 Maryland  
 ~~~~~ Hammond, IN 46323

Michael Hogan-4811 Euclid Ave.-East Chicago, IN 46312

DX has come to a grinding halt at this shack. The 2 main reasons are: 1) starting to work 40 hours a week, which has forced me to DX only during SRS & SSS sessions, hopefully the sessions will be productive and 2) conditions have not been the best within the last three weeks. Charley Keleher's Eastern Spotlight on the state of Georgia looked very good and I found it very informative. Also welcome to all the recent new members, we're all happy to have you aboard. 73's and good DX'ing to all.

Scott Mentzer-Route 3-Tylertown, MS 39667
 Greetings from "SAM, the Test-Gambling Man". While the DX continues, things have slacked off quite a bit, and the pickin's have become mighty slim. Recent veries include WYVE, WVJS, WACD, WAKR, WDAX, and KIKS (the last one in six days); for recent catches, see CDKR. Received a nice surprise in the form of a phone call from Karl Forth several weeks ago. It seems that several Chicago-area DXers are in the process of setting up a "tag-call" system whereby tips regarding tests then in progress can be passed on to other members via "Ma Bell"; sounds like a great idea to me, extra glad they wished to include the "ol' Mississippi Test-Gambler" in their "network". Congratulations to Charley on his "Spotlight on Georgia" column; a real fine job, but how did you ever manage to miss my "sentimental favorite", WLOP, with their famous "growl-tone"? I missed the Kentucky deadline, but am working on my down-state Illinois listings now. Finally, in his v/1, the CE of WACD suggested that a ppc usually brings the quickest response from stations who do verie. I reckon that to send, or not to send, ppcs can produce debates far outlasting even IRCA/NRC merger, hi. While I guess it cuts down on the number of my veries, I personally don't like to mess with them. To me, half the fun of collecting veries is seeing "official shingles" hanging on my bedroom wall (running out of space though, hi), and since I preserve the essential fragments of all my catches on master tapes anyway, a ppc seems, at best, little more than "icing on the cake". Anyhow, till next time, 73s and good DX from "T-Town Downs, where the dogs race every summer", hi.

Ray Arruda-Scraggy Neck-Cataumet, MA 02534
Because of busy work sked on Cape Cod, I have not done much DXing in April. Only about 20 worth in the entire month. High point of the month has been that a number of good veries have reached my mailbox. DX Test veries have been received from WHUM-1240, WYVE-1280, WSYB-1380, and WKEX-1430. Still waiting on Tests from WEWO-1080, WJIC-1510, and WAYC-1600. Other veries: bright multi-color card from WIXY verifying taped report of 1/31. Also letters from CFGY-630, the new WPTB-850, WABI-910, WJBQ-1440, WVOX-1460, WANR-1520, and WSLT-1520 (after three tries in past two years). CE at WSLT said my report for a DX test back in 1974 was still at the station unanswered by the previous CE. If you need a verie from WSLT, the man to contact is CE Mike Ferriola. My most recent reception report was answered within two weeks. 73

Tom Butas-5612 Alta Dena Drive-Huntsville, AL 35802
Hi all, hope all of you had a real fine DX season this past winter. Now that you all have nothing else to do how about applying for an IRCA Achievement Award, since summer is the best time to complete those winter logs. I hope that many of you new members will write and see what these really look like. Thanks to all those who have applied recently. As for my summer activities, well I'm back at Montgomery Wards again through the summer. It was the only thing that I could find in this area. I'll also be changing schools this fall so watch for a new address about August 1. This is all for now. You all have a good summer. 73's.

**western
dx forum!**

EDITOR: RICK HEALD
840 WARFIELD AVE #6
OAKLAND, CA. 94610

NICK HALL-PATCH-3272 ALDER ST-VICTORIA, B.C. CANADA V8X 1P2

Somebody's postal system is screwed up all right. My Apr 10 DXM took 10 days as opposed to the usual 3. I almost called HQ to ask if they'd spent my membership renewal money on beer and decided not to send me any more DXMs. Apologies to bp for getting my DXMW dates confused in the Apr 24 issue--he's right--I got my DU stns in Apr not Jan. That's what I get for typing up my catches when I should be in bed, hi. Now if we can figure out who put CFGP on 1440 in the same issue's WDXR could it be CFCP??? Gremlins were everywhere that issue. EL, KIQI has been received here on SSS in March 74 w/CBR nulled and after KCHJ changed power. Probably possible most of the Winter too on SSS. Of course, they'll be fulltime next winter, but they'll still be easier on day power and pattern. (Nick, use to hear em daily on SRS up the coast a bit in Sitka, KSAY then, of course, might give that a shot too--RtH). Got myself a TRF to sub while I perform massive surgery on the old National HRO this Summer. Not quite as sensitive as the HRO, particularly on the low end of the band, but I used it to establish the // between 760 & 860 Zedders last MM, so it's not that bad w/a LW hooked up to it. It can get closer to the locals than the HRO, but that may be due to the HRO's need of alignment or possibly the two rather broad RF amps in the HRO. Hopefully, Summer surgery will correct some problems. 73 and hope you've had more time for DX than I have.

CHARLES A WOLFF-4911 PROCTOR ROAD-CASTRO VALLEY, CA. 94546

Greetings, Radio Freaks! In this issue of DX Monitor you should find the registration form and information about the 1976 IRCA Convention, which will take place August 13, 14, 15 in SAN FRANCISCO. For those of you who are planning to attend or are thinking about attending, there are a couple of things you can do to help us out. First, dig through your old DX stuff to find anything you could donate to the Auction. Proceeds from the Auction will go to IRCAs treasury, so we'd like to have plenty of stuff to sell - also, it's no fun if one person brings all the stuff. The infamous ECR may be our auctioneer. The auction has been a high point at many Conventions and DX Get-Togethers in the past, but there has to be plenty of stuff!! Bring things and be prepared to buy some things. The second thing you can do to help out is this: if you're an "expert" on some phase of the hobby, or if you have some interesting stories to tell, we're looking for people who will be at the Convention who will give short (15-20 min) talks on various subjects. We're especially looking for speakers on DXing in general (for beginners),

Old-Time Radio and DXing, and Technical stuff. But any and all topics will be welcome, and we'll fit you in somewhere. Write to RtH if you have something you want to talk about. 73 and all those other numbers.....

ROB KEENEY- 22-12 STOUFFER PLACE-LAWRENCE, KS. 66044

Since I couldn't remember the last time I'd sent anything to RtH, I figured it was time for another! End of the Season blains hit the last week on March and I'm still way behind w/reports, etc. The KC area has added another new member, Skip Labelstein! It's good to have such an active DXer within driving range. This should cut my phone bill in half! April netted me only 3 new stns, but I DXed only twice. My dad was in the hospital in Columbia, MO so I was busy running back & forth to see him. He died 4/15 and there has been lots of stuff to care of since then. DX on MM, 5/3 was pretty good. I had traces of N.Z. on 880 before KRVN and WRFD s/on and another solid log on IYA 760. Can anyone give me a tip on how to hear Chile? That was one of my goals this season, but so far no luck. (Love to Rob, but last time I hrd Chile was in '65, hi-RtH) When DX is slow, so are veries. Only v/l's from KOGA 930, WANR 1520 and KALN 1370 (Now KIKS) plus my R. Millon 625 from RFS have arrived this past month. I've got a bunch of f/ups to start on soon. Totals stand at 976/275 stns, 49/48 states (still waiting on WJIC-NJ); 7/7 prov and 45/25 countries. I hope to hit 1000/300 by the time next season rolls around. Next yr's CPC should be very active w/workers from coast to coast. A committee progress report is coming soon in these pages. Anybody who's interested in CPC work should contact me soon so they can get started on letters this Summer. RtH, I hope the A's all have color TVs so they can watch the Royals in the playoffs and Series!! (Come on Rob, you and I both know As and Royals will be watching the playoffs and series, hi-RtH) 73 and support your local CPC! (Sorry to hear of your father's passing, Rob-RtH)

MARK WEST-2350 BEACON AVENUE SOUTH, #9-SEATTLE, WA. 98144

I recently joined IRCA after several yrs absence so a re-intro is deffinitely in order. I'm 24, a graduate in History of the U of Washington, and I'm working as Equipment Co-ordinator at Foss Alaska Line. Around '63 or '64 I started DXing w/an old tube radio and worked my way thru an intercom radio w/a LW and a stereo rx w/a loop. Among my better catches, I count KSRM 920 Soldotna, AK, LYZ 860 NZ, and KRZY 1450 Albuquerque. Right now, I have nothing decent in the way of a rx, but I hope to remedy that soon. I'm undecided on what to buy--I've been considering everything from a TRF to a \$400 communications rx. Any recommendations or advice re a rx would be greatly appreciated. My other interests include rock music (Emerson, Lake & Palmer, Jethro Tull, Heart, & the Eagles), "things Japanese", and general craziness. 73 and good DX. (Mark, Hammurlund or Collins for serious DXing, TRF better in rural areas and not really for serious DXing, check ads in Ad-Visor and popular communications mags---and welcome back to IRCA, hope to hear from you regularly--RtH)

ALBERT S LOBEL-247 N 1st ST #27-EL CAJON, CA. 92021

SUBJ TO CHANGE ON 28 JUN 76--READ ON FOR DETAILS!!
As previously announced in my Ad-Visor column, I have bought a new house. It is deffinate that I will be moving effective 28 JUN 76. Effective that date, my address will be as follows: 10514 CAMINITO BAYWOOD, SAN DIEGO, CA. 92126; the phone number will change too. Watch the Ad-Visor for further details. Don't worry about your ads being forwarded, the PO will be informed of the new address. (I sure hope they don't foul you up like they did me, Albert-RtH) If in doubt as to when to send your ads to the Ad-Visor, wait until 28 JUN and then mail them. The deadline for #33 will be 2 Jul 76. Of course, I am always willing to accept Ad-Visor ads via "Phone-an-Ad Visor ad". My El Cajon phone # for those of you who seem to always insist on putting Ad-Visor on your envelopes despite my warning to the contrary, the new address is not an apartment, so you son't have to worry anymore. The POs reg. re mail delivery to apartments does not apply to private residences. Well, that's itso 73 and good DX to all during the hot Summer months!

GENE MARTIN-3303 E EVANS AVENUE-DENVER, CO. 80210

So far as I know, there are no CBS stns 660, but on two occasions I have heard an extremely weak station there on MMs which seems to broadcast the CBS on-the-hour news at 0500 ELT, May 3. I would suspect an image coming in from KOA, our new CBS affiliate in town, except that KOA is off the air at that hour MMs. The station is so weak in the period just before 0500 that it might be NZ. On 5/3, it was some kind of dramatic show, amle and female voices unreadable as to language, but w/an EE flavor. First noted this CBS theme @ 0500 a few weeks ago on another MM, but wasn't taping so I could not be sure my ears were not playing tricks on me. Cannot do an DF'ing on this one for I listen w/that pesti-

ferous YNAM het mulled. which aims the loop NE/SW, also looping out LA in one direction and AK in the other. Of course, that makes no difference because AK probably doesn't exist anyway. (??-RtH) And the morning of 5/3 was so auroral that I could not detect any trace of WNBC taking the air @ 0500, as it does on MMs. You could suspect WESC maybe, taking the air w/reduced power, but another Greenville stn is listed as the CBS affiliate. Think I've got a 1st class mystery here and would appreciate any ideas. My best guess is that I may have found a far-ranging "campus limited" University stn which may follow the practice of relaying the CBS news in the middle of the nite. Those fellos often follow irregular practices and 660 is possibly their favorite roosting spot in this part of the country anyway. (NZ does have drama prgms, but that would be 2100 NZ time. To best of my knowledge, CBS themes are on CBS affiliates only, Foxy pls correct me if I'm wrong-RtH)

BILL HARANG-811 NEVADA AVENUE-SAN JOSE, CA. 95125
Ph: (408) 292-8198

Jim Gabbert, during his 5/2 "Anything Goes" show o/KIOI FM 101.3, said, "If you ever get over to Hawaii now, you might listen to our sister station to be. We take over on May 18, a new radio station bought on the Islands over there; KIKI which is AM 83 if you happen to get over." Gregg Allinson told me, "I consider K-DaWN a fine station to listen to." When Eric Norberg was PD at KMBY, he had a long playlist of roughly 50 songs (since a considerable variety is important to attract and hold a large audience rating). The top 15 hits had a 2 $\frac{1}{2}$ -3 $\frac{1}{2}$ hour repetition pattern; the remaining playlist was cycled every 6-7 hrs. As a result, KMBY had a relatively low repetition of individual records for a Top 40 station. However, there was a high repetition of the familiar records to maintain the youth audience. There's been a study concerning differences in listening patterns of people w/listed phones, those w/unlisted phones, and those w/no phones. Pulse did it, and the upshot was that there were very considerable differences in the average listening patterns of each of the 3 groups. Top 40, C/W, R/B and ethnic stns did best in the unlisted and non-phone homes; the very types that do much worse in ARB than in Pulse. The study has been criticized on the basis that the company that stood to gain by the results it obtained had conducted it, but nobody has seriously criticized the way it was done, & significantly, no other rating service has undertaken to check the results by doing a similar survey themselves. Recent topics on DXer Report have covered MP stns, KLOK - 1170, R. Clarin, ANARC, and Jack London interviewing Steve Herman. On our 3/10 prgm, Jack said, "Tonight, I have a letter I received from Larry Flegle. Larry writes he's the editor of the Good Old Days of Radio column of DX Monitor. He says in his column, they explore the early days of radio ----the pioneers in electronics development as well as early broadcasters. Soon, they're hoping to have a crystal set DXing contest. The crystal sets were the first mass produced receivers as you know. Anyone interested in having comments on such a contest, please write to: Mr. Larry Flegle, that's 25 NE 185th Terrace, N. Miami Beach, FL. 33179." On our 3/7 prgm, Jack said, "We have a lot of listeners in San Jose, CA; one of which is Bill Harang. We appreciate all the cards and letters we have received from the San Jose people." Speaking about KLOK's sister station, KWIZ, Jack said, "They're at 1480 kHz. That's in Santa Ana, CA. In fact, a good friend of mine, John Novack is currently working the 7-midnight shift there. John and I worked together at KFOX."

CLARK SMITH-2804 16th AV-PORT ALBERTI, BC, CANADA V9Y 3A2
Part II - Continued from last DX Monitor

Why all the snarling & yelling about superpower? The answer to the problem is simple, of course. Open up 1600-1700 for more AMs & 1700-1800 for 10 hi power stns located in various areas of N.A. Because of the splash from a hi power stn on 1700, 1670-1690 would be local channels. Maybe a 1710 SHP could be located in AK or someplace. (Clark, what do you propose to do w/existing XRs on those frequencies?-RtH) These SHPs would be branches of existing stns, eg. KGO which would keep its 810 channel for area bc on 50kw as well as having a SHP operation on, say 1750 w/ $\frac{1}{2}$ or 1 million watts. (They serve from Acapulco to Pt. Barrow now, their second harmonic gets out 50 mi-----RtH) One more thing, a few yrs ago, I'm sure I got KBOK 1310 Malvern, AR., but this is only lkw D only. Does anyone know if a year or 2 ago it was nights and was ever heard in the NW? (No-RtH) An annoying leftover from when I wasn't so serious a DXer and didn't bother to verify anything. A new magazine in Vancouver/Victoria is "Radio Guide", which lists all programming of Van/Vic AM/FM stns for a week. Unfortunately, it's not available in this hazy li'l hick town (NOTHING is) (well almost nothing) but I get one now and then when I get out of here. Cost is 30¢ per issue. For info, write Roger's Radio Guide, 115-525 Seymour St., Vancouver, BC. I really don't know if they'd

send a copy or what. My 76 yr old uncle from Vic was here today, he used to live in Wiinipchuck & was a bit of a DXer in the OLD days. Anyway, he said there was this "iron belt" starting in N. MN & running up the Can shield to the NWT. The iron in the ground there cut off all reception from the East-they could get anything S or W, but E no. Not even near-by Thunder Bay. I checked on a map & found (WCBS) New York is a straight line from here that would just miss the bottom of this belt. Maybe that's why no can get Toronto in this area, but yes in CA. Does anyone know anything about this? Does it still hamper reception or has the problem been overcome? (Hampers only in area of iron belt, if iron is still in the ground, then yes, it would hamper reception, but you are a long ways from there, couldn't possibly affect you-RtH)

ERLAND CARLSON-R.R. 1-CAMP RD-WINFIELD, BC, CANADA VOH 2C0

Hi again. A few things of note are happening in local radio since I last reported in Feb. The CRTC held hearings in Vancouver in early Mar & although I don't know all that happened I have heard about a few things. Firstly, the CBC applied for & today (4/28) the CRTC approved 5 FM relay stns carrying the CBC AM service from CBU Vancouver. The cities to get the FM relays are: Kelowna, Penticton, Vernon, Kamloops and Golden. This shoots down all talk last Summer of Kamloops & Kelowna getting the CBC AM service on regional AM frequencies. Why Golden is going to get the CBC on FM I don't know as they already have the same service on 1240 w/a mighty 20 watt relay. Other CRTC hearings news: CHNL 610 applied for 50kw daytime (now after they got 3 relays, they want more power to serve those areas better, hi) (50 kw on a Regional channel?? Ooops, guess there are a few in Canada-RtH) Application for a second AM stn in Penticton was also heard by the CRTC - no decision on that yet, but I think they'll get it. My guess is they'll revive the old 900 CP and get lkw D&N. There's been talk of Vernon getting a 2nd AM stn, but I never hrd if anybody applied. If I hear anything I'll let all you faithful WDXF readers know. A big tnx to Gary Parton for his call on 4/19. Gary is the first DXer I've talked to although I corresponded w/a few DXers in the past. I go to Calgary & Vancouver quite regularly (long weekends, etc) - any DXers living there would like me to look them up sometime, just drop me a line. Hrd/verie total now 599/196. Latest catch was KACE 1570 on 3/10 on a really freaky SSS evening w/S. CA from 1520-1600 coming in on top (KACY KPOL KPMC KACE-briefly & KDAY) and nothing coming in at all except locals from 540-1500. It was weird--never seen nuthin' like it in 4 yrs of DXing. Latest veries: v/q KSLM (for DX special) & KTFI. v/l KRKT KYME & KARI (+CM) v/f KACY & KUGN (+CM showing coverage areas if all 7 Eugene stns) Sed enuf for this time. 73 and gud DX.

MIKE SANBORN-15921 RYON-BELLFLOWER, CA. 90706

Hi all, from the land of sunshine and KFI, I bring you another fabulous Forum. In my last WDXF I said, "Hope this makes Volume 14." I really meant Issue 29, sri RtH. (That's OK, but don't let it happen again, hi-RtH) No veries to report, but just sent out big bunch of letters. At 13¢ per stamp, I MUST be crazy. (And to think when I started DXing, it was 4¢, and no, it wasn't the horse & buggy days either, hi-RtH). On certain Sun nites right after Bronk, I run into the shack, switch on 3 radios and hope to hear KAWT 1450, but no luck. Could time for f/c have been changed? (Sure nuf Mike, AZ is on MST, same as PDT, try 1 hr later at 0000 PDT/MST-RtH). I notice KDXU listing is 5 min late....Here's a message to all disturbed mail carriers who think the only way to fit large QSL cards like KVOO & KKAA in your box is to tear them up..... KNOCK IT OFF, those things are hard to come by! I've almost beat last yr's total and it's only May. I must be doing something right. Those 2 CA CPs sound easy to get. 10-1 they won't be on before Summer. FM stns seem to be snapping up all the good CLs like KVVJ etc (Including my initials, hi-RtH) For once, and AM stn gets lucky, KRXV. I feel obligated to listen to it every MM. I'm usually there w/KXEL anyhow. I think I hrd Micaragua 750 before WSB s/on w/SS announcements then song by Leon Russell. I'm going to go and see that new movie, "Bonzo buys K-101" (Sold by a real Bozo, hi-RtH). I've already read the novel, hi. A safety tip: when going up on roof to fix antenna, make sure termites haven't had your ladder for breakfast, ouch! Some mentioned K-145, that's definately KOB0. It's a secondary pest here. (Also, one of last 100 watters to increase power-RtH) I see I'm running out of space, so here's a closing note of optimism for local fellow DXers. Look on the bright side! When California falls in to the ocean, KIOE will be a cinch. (Especially when they return to the air, hi-RtH) 73 and good DX. Dodgers in '76.

RICK HEALD-840 WARFIELD AVENUE #6-OAKLAND, CA. 94610

Howdy! Again, tnx all for another good section. W/IRCA going to monthly editions, I hope all of you West of the Mississippi will want to contribute. Re IRCA Convention: Send, if you cannot physically bring your Auction items to the man in

charge: ERIC RITTENHOUSE-77 LINARIA WAY-MENLO PARK, CA 94025
 Eric is in charge of the Auction, and believe me, you have not lived until you've been to an auction w/ECR auctioneering, hi. I hope my comments were not too strong Clark, but I really believe there are no "white areas" in this country. Only people who don't know how to tune radios. This has been proved for the last 12 yrs on the Herb Jepko show. Back in '64 he was advertising a super Panasonic rx, for those who had trouble getting KSL on their \$9.95 transistor rx's not designed for long distance reception in the first place. Hey people, I lived in an area that would make the so called "white area" very active. Venetie, Alaska, 150 mi N of Fairbanks and 35 mi N of Arctic Circle. I listened literally around the world every 24 hours, I had no trouble hearing the Bay Area, EC, or closer, Fairbanks, AFRS Ft. Yukon, Anchorage, etc. Everybody in the village had LWs just so they could hear Fairbanks, but when they heard R. Luxembourg emanating from my rx, they learned they too could hear more than KPAR & KFRB, I think I may have converted a couple Natives to DXing. Face it, it's Big Business who wants it, and the average Joe is going to start hurting unless they stand up and fight it. Remember, I have said before the FCC is appointed, they have absolutely no knowledge of broadcasting (as we do), and look who appointed them, gang. Same is true in my business. If members of the CAB had to work in a travel agency for a year, aside from the ulcers they'd get, they wouldn't pull on us and the airlines what they currently are doing. And in that vein, went w/travel agents on long wknd to San Diego and Ensenada via TJ. Man, has the latter been cleaned up. Scratch 1230 and 1500 Ensenadans from your VJs, not on air. 1590 listed as CP for BCS, but they are BCN and on air, very muffled sound even w/tone turned full to high. Who belongs to tower right in downtown TJ? On road to Caliente Race Track. I thought it might be XEXX 1420. Also nearly dropped my rx as I went by the antenna farm at Rosarito. Had very hot \$200 Sony, tuned RF and PET and even hotter FM. From Ensenada, LA FM cooked!! That's 200 mi folks. San Diego not even there. Guess Mt. Wilson coupled w/high power helps. Noticed bus driver both directions (TJ-Ensenada-TJ) had bus rx tuned to XEPRS (Ranchera mx daytime). You guys in SoCal have lousy wx, hi. Fog the whole time. Then there's Oakland, and we checked in w/105 degrees May 12, hottest on record for date and hottest in state that day, a mere 96 in SF, same time, a cool 75 in LA and 70 in San Diego. Well, we've now had our two days of Summer, hi. See y'all next time. Remember 73's is goodbyes and 73, goodbye. And Hertz rents cars, cycles is what a kilo does. I refuse to change!! 73 de Rth..

ANARC ALMANAC-- Happenings in the Association of North American Radio Clubs

Executive Secretary: Dave Browne, 557 N. Madison Ave., Pasadena, CA 91101. IRCA Representatives: Rick Evans, John Zondo, Father Jack Pejza

The Longwave Club of America has received Associate Membership in ANARC. For information, write Ralph Sanserino, Membership Secretary, 8422 Crane Circle, Huntington Beach, CA 92646. At present, dues are 12 self-addressed #10 envelopes.

ANARC is currently soliciting nominations for its Man of the Year Award. Nominations will be made through the club representatives.

The Ontario DX Association has asked for membership in ANARC. Membership is restricted to residents of Ontario. Annual dues are \$7.00 per year for students and \$10 for non-students. The club publishes a monthly bulletin, "DX Ontario". Write to Ontario DX Association, 23 Lamont Ave., Weston, Ontario M9N 2J9 Canada.

Conventions and Summer Meetings:

July 23-25 ANARC, Los Angeles, CA. Write Registrar, 1976 ANARC Convention, P.O. Box E, Elsinore, CA 92530, and include a SASE.

July 31-Aug. 1, Ontario DX Association, "All-Clubs DX Rally," Kingston, Ontario. Write Harold Sellers, 23 Lamont, Weston, Ont. M9N 2J9, Canada.

Aug. 7-9, Worldwide FM-TV DX Association, Chicago, IL. Write Maurice Goldman, 5815 North Christiana, Chicago, IL 60659.

Aug. 13-16, IRCA, San Francisco, CA. Write Rick Heald, 840 Warfield, Apt. 6, Oakland, CA 94610.

Sept. 3-6, NRC, Louisville, KY. Write Wayne Murphy, 1411 Phyllis Ave., Louisville, KY 40215.

Earlier Meetings:

May 26-30, European DX Council, 10th Annual Conference, Hilversum, Holland, hosted by Radio Nederland.

May 29, ASWLC meeting at 11 AM at 16182 Ballad Lane, Huntington Beach, CA 92649.

June 4-7, DX Parliament, 20th Anniversary Parliament at Halmstad, Sweden.

June 6, BAD Guys (Boston Area DXers), all day meeting. Contact Chris L-bdell, P.O. Box 146, Stoneham, MA 02180 617-438-5493.

July 3, ASWLC monthly meeting--same place as above.

July 16-18, American Radio Relay League, Denver, CO. Write to information, AARL Convention, 2450 S. Quitman St., Denver, CO 80219 for information.

This is World DX Year, 1976. Try to attend at least one DX meeting this summer. You'll really enjoy it; make contacts with other DXers, get helpful hints, compare equipment, and have a good time.

KANADIAN KORNER - News from the Frozen North - John Oldfield

- This time, we'll go in frequency order and see if it works any better. Comments are welcome.
- 550 ON CHNO Sudbury wants 570
 - 560 NF CP St. Anthony - another twin to be // CJCN et al.
 - 560 ON CFOS Owen Sound wants 2 $\frac{1}{2}$ kw-d & a twin on 1490
 - 570 BC CKWL Williams Lake is here ex-920
 - 570 ON CHYM Kitchener wants 5kw-d/10kw-n here ex-1490
 - 570 ON CHNO Sudbury wants 10kw-d/n here ex-550
 - 570 SK CKSW Swift Current moves here 10kw-d/n ex-1400
 - 620 ON Sudbury FFER denied a CP
 - 620 ON CFCL Timmins stays here - denied 850
 - 690 SK CFRG Gravelbourg - watch for this newie (ex-710d/1230n) CBC French & also // CFNS-860 (ex-1170) Saskatoon
 - 710 SK CFRG Gravelbourg moves to 690
 - 740 NF Nain, Labrador gets a big 40 watter // CFGB-1340
 - 790 AB CFCW Camrose is now NSP c&w music - due to CJCA-FM going c&w
 - 850 AB CKRD Red Deer is also NSP - due to competition
 - 850 BC CFVR Abbotsford tries again (now 1240) - 10kw - this spot also once denied for a CJVB-1470 twin
 - 850 ON CFCL Timmins denied a move to here - stays on 620
 - 860 SK CFNS Saskatoon CBC French // CFRG-690 - on soon - ex-1170
 - 880 SK CBHD Uranium City now // CBK-540 - an easy one
 - 920 BC CKCQ Quesnel here ex-570 - just a frequency switch
 - 920 PQ Lac Etchemin gets a twin here // CKRB-1460
 - 930 ON Espanola gets a 10kw-U2 (DA-N) EE newie, near Sudbury
 - 960 ON CFTJ Cambridge wants 1kw-d/n here ex-1320
 - 1010 ON CBLH Hornepayne LPRT is here ex-1090
 - 1110 ON Hawkesbury a day twin CP (ex-1060d) // CFML-1170 Cornwall
 - 1110 PQ CBSL Rimouski CBC supposed to be on by March 15
 - 1170 SK CFNS Saskatoon - try 860 - should be there by now
 - 1230 SK CFGR Gravelbourg dies when CFRG opens on 690
 - 1240 BC CFVR tries again for the 850 spot
 - 1310 AB CIOK St. Paul is still NOT // CFOK-1370 or CJOK-1230. Both still have yet to use calls - "We're OK. You're OK."
 - 1310 ON CFGM wants 1320 pending a CFTJ move to 960
 - 1310 PQ CHGB gets 10kw nights
 - 1320 ON CFGM Richmond Hill (Toronto) wants 50kw-d/n here ex-1310
 - 1370 AB CRDK Westlock - not a twin - see CIOK-1310
 - 1370 SK CJWW Saskatoon is on - 10kw protecting CFOK
 - 1400 SK CKSW Swift Current - log it here while you can - CP for 570 approved
 - 1450 BC CKSP Summerland (& the other twins) now have separate pre-timed cartridge IDs as well as the regular CKOK Penticton ID
 - 1450 NF CBG Gander gets 1kw-d/ $\frac{1}{2}$ kw-n, says the CBC
 - 1490 BC CHPG Prince George is on // CBU-690 and not // CKPG-550 (its owners)
 - 1490 ON CHYM Kitchener wants 570
 - 1490 ON Port Elgin will twin CFOS-560 Owen Sound
- BC: CJOR-600 Vancouver has formed an 8-10am PLT network for the popular Jack Webster open line show: CKIQ-1150/CHNL-610 (& its 3 twins)/GJCI-620 (& its many twins). The CBC said they intend to use FM vs. AM for expansion in BC next year in Victoria/Kelowna/Vernon/Kamloops/Prince George (although they'll likely buy CHPG first). They just bought CJAT-FM Trail releasing CJAT-610 from most CBC network. Lethbridge/Brandon will also get FM and not AM.

-John Oldfield, 325 E. 14th St., North Vancouver, BC, V7L 2N7



DX**Worldwide**BRUCE PORTZER,
EditorAll times GMT/UTC
Deadline Saturdays

7021 Sand Point Way NE, #215 - Seattle, WA 98115 - 206-522-2521

Greetings. DX continues to still be with us --- TP's and TA's are still coming in....

ATLANTIC DX ROUNDUP

- 164 FRANCE, Allouis at fair level o/QRN w/male FF vocal, then FF talk 0200 4/27. At good strength w/mushy inst of "I'm Beginning to see the light", then man in FF 0230 4/27. Good w/"Great Gatsby" theme song followed by FF teletalk 0342 4/28. (Connolly, MA)
- 180 WEST GERMANY, Saarlouis briefly at good level o/WGU20 slop w/man & woman in FF, then inst mx 0244 4/27.
- 185 EAST GERMANY, Oranienburg fair w/GG female vocal 0315 4/27. (Connolly, MA, last 2 items)
- 209 MOROCCO, Azilal fair w/AA mx, some QRN 0155 4/27. (Connolly, MA)
- 227 POLAND, Konstantinow likely the source of het on TAN beacon 0312 4/27. (Connolly, MA)
- 236 USSR, Synchronized outlets noted here w/man in RR well atop Luxembourg & MZW beacon 0303 4/27. (Connolly, MA)
- 251 ALGERIA, Tebessa noted at poor strength w/AA mx jammed by SKR beacon 0306 4/27. (Connolly, MA)
- 529 ALGERIA, Ain Beida fair w/man in AA, YCH CW beacon near zero beat, also QRM from MCW beacons NB & UUP 0102 4/27. (Connolly, MA)
- 584 SPAIN, Madrid fair w/soft mx, then man in SS 0059 4/27. (Connolly, MA)
- 638 SPAIN, La Coruña (et al) poor w/fragmentary audio 0508 4/27. (Connolly, MA)
- 665 t PORTUGAL/WEST GERMANY, OC w/1.7 Hz SAH, fair strength in WNBC splash 0056 4/27. (Connolly, MA)
- 719 PORTUGAL, Norte at good carrier level, audio hard to bring up, bits of PP talk extracted 0053 4/27. (Connolly)
- 737 SPAIN, Barcelona fair-good w/SS pop vocals, short anmts between records by woman in SS, fast paced show, 0050 4/27. (Connolly, MA)
- 764 SENEGAL, Dakar the only really strong TA during short skip dominated cx; banjo-like mx, then AA talk 2355 4/27. (Connolly, MA)
- 818 ANDORRA, Sud Radio atop Morocco w/potent signal, female vocal in FF, then Muzak inst; strongest TA at 0430 4/26. (Connolly, MA)
- 818 MOROCCO, Rabat good, best TA at 0345 4/20. At xInt level, totally dominant w/a-capella male AA chanting w/long pauses 0506 4/27. (Connolly, MA)
- 827 ? UNLD, Bulgaria or Libya possible, man & woman in FF at fair strength in & out of considerable HIJB slop 0433 4/28. (Connolly, MA)
- 854 SPAIN, Murcia, man in SS occasionally getting through horrendous WHDH splash 0436 4/28. (Connolly, MA)
- 1025 SPAIN, San Sebastian good w/female vocal, FF & SS talk by man & woman, then male FF vocal 0503 4/28. (Connolly, MA)
- 1034 PORTUGAL, Porto Alto, CSE2 at fair level in WBZ slop w/PP male vocal, then PP talk 0504 4/28. (Connolly, MA)
- 1187 INTERNATIONAL WATERS/GUATEMALA, Caroline & TGT hetting each other so fiercely that good audio could not be brought up on either station 0455 4/28. (Connolly, MA)
- 1375 ST. PIERRE & MIQUELON, R. France fair w/man in FF 0113 4/27. (Connolly, MA)
- 1376 FRANCE, Lille poor, bits of talk noted, mostly just a carrier wallowing in bad WFEA "Boogie Fever" slop 0448 4/28. (Connolly, MA)
- 1466 MONACO, Monte Carlo good, better than 1554/1586 w/IS, then talk 0445 4/28. (Connolly, MA)
- 1586 WEST GERMANY, Langenberg fair w/man in GG 0105 4/27. High-band cx can only be described as marginal for TAs w/very strong short skip from pests such as WKBW, WPTR, & CKLM being the order of the evening recently. (Connolly, MA)

PAN AMERICAN DX ROUNDUP

- 705 HONDURAS, "Voz de Olancho" ID in clearly during anmt 0320 4/28. Local WGBS mullied but splattered a lot. (Schatz, FL)
- 725 COSTA RICA, San José, TILX very strong w/slow SS male group vocal 0437 5/3. (Connolly, MA)
- 765 a EL SALVADOR, San Salvador, YSKL most likely the one here w/man in SS fair 0425 4/28. (Connolly, MA)
- 775 COSTA RICA, San José, TIW, R. Uno fair w/"Do It Again" soul song 0438 5/3. (Connolly, MA)

- 800 NETH. ANPILLES, Bonaire, PJB extremely strong & totally dominant w/R. Bible Class in EE, talk by man & hymns 0440 5/3. (Connolly, MA)
- 805 ? UNLD CA, "Radio..." something, nothing similar listed in WRTH-76, tho suspect Honduras. PJB on figure 8 null causes no problems, but 805 is fairly weak. (Schatz)
- 850 MEXICO, Mexicali, XEZF 5/9 1245 w/ranchero mx & something about Calexico. Good ID as "X-E-Z-F" at 1259. Ancr was a deep voiced female. (Lobel, CA) (No comment.bp)
- 909 CUBA, Camaguey, C. Agramonte is the one hetting away here eves. Loud squeal here even at noon against WPLA-910. (Schatz, FL)
- 919 COLOMBIA, Cartagena, Emsis. Fuentes, another bit of ear torture here eves. Usually o/Popular-920. (Schatz, FL)
- 953 ? CUBA, R. Progreso likely CMHB-960 but not certain. Fair eves. Carrillon IS on 956 kHz. (Schatz, FL)
- 975 COSTA RICA, San José, "Radio Centroamericana", ex-"Atenea". (Schatz, FL)
- 1000 MEXICO, Cd. Juarez, XEFV, 5/3 1150 hrd just after logging KTOK & boy did XEFV almost ruin my logging of KTOK for the first time this one (both of them) were hrd. KOMO came on about 7 mins later and completely ruined the signal from XEFV. (Lobel, CA)
- 1010 MEXICO, Guadalupe, XEHL 5/9 1110 w/good ID "H-L Guadalupe" & ranchero mx. (Lobel, CA)
- 1180 CHIIE, Santiago, CB118, R. Portales hrd w/deep fades 1035-1105 5/10. Marginally intelligible except for "Portales" ID at 1059:50. Used to be friendly verifier --- now? Who knows. (Peterson, CA)
- 1180 t COLOMBIA, Bucaramanga, HJGK was possibly the one here w/non-stop RCN programming 0702 5/9. No IDs hrd but only RCN listed here in WRTH. (Bythway, WA)
- 1197 HONDURAS, San Pedro Sula, "Voz de Centroamericana" ID 0226 4/28, making this ex 1171 kHz. (Schatz, FL) (Apparently the unid rptd by Hauser/GMS a couple of issues back. bp)
- 1208 CUBA, Morón, "R. Morón" causing bad het here eves. strong w/o het days w/WCMQ-1220 mullied. (Schatz, FL)
- 1208.6 ? UNLD Sser badly junking WCAU w/raucous het 0116 4/27. (Connolly, MA) (The above? bp)
- 1210 h GUATEMALA, "R. Rumbos" noted on 2420 harmonic 0152 4/10, verifying existence of stn. (Schatz, FL)
- 1244 PANAMA, "Esta es --- Onda Tropical --- 1200 en su radio" IDed 0450 4/11. S/off w/NA 0455. City unkn. (Schatz, FL)
- 1285 ? NICARAGUA, "Radio ..." something, fair to weak. S/off w/NA 0302 4/28. Not R. Granada, the former occupant here. (Schatz, FL)
- 1295 NICARAGUA, Matagalpa, "R. Plata, la de éxitos", YNOO, 3 kw, nominal 1290 kHz, ex-"R. Plaza Reloj". All this derived after finally getting the location, Matagalpa, one eve & deducing from WRTH-76. (Schatz)
- 1312 ? CUBA, local pgmg, YL, s/off w/choral NA 0259 4/28. (Schatz, FL)
- 1520 COLOMBIA, Barranquilla, HJIQ R. Mimito good, atop WKBW w/ID mentioning Barranquilla, lively IA mx 0415 5/3. This must be more than 1 kw listed in WRTH-76. (Connolly, MA)
- 1525 COSTA RICA, Turrialba, TIEEAW in at good level w/"Columbia" ID, SS talk, rptd previously as unid, best reception ever of this one at 0428 5/3. (Connolly, MA)
- 1540 t BAHAMAS, Nassau, ZNSL, 5/h 0046-0051 w/apparent drama in accented EE, no WPTR, K-index 3. Killed 0051 by local QRN. Sending taped rpt for confirmation. (Ball)
- 1560 CUBA, Cardenas, CMGB, R. Reloj strongest signal ever from this one, o/u WQXR (!) w/Reloj ID, TC, 0422 5/3. (Connolly, MA)
- 1570 t MEXICO, Cd. Acuña, XERF likely here w/SS talk & ments of Mexico as it had been hrd a couple of hours earlier w/EE religion atop CKLM; SS talk was atop a 2nd IA w/woman in SS, low pitched het resulting, 0427 5/3. (Connolly, MA)
- 1575 ? UNLD SS male vocal, weak, 0423 5/3. (Connolly, MA)
- 1580 COLOMBIA, Barranquilla, HJQZ, R. Principe good w/SS ID 2nd IA under w/SS talk 0425 5/3. This opening had a marked resemblance in its high-end IA enhancement to the tremendous early morning opening 4/1, this apparently due to the approx one-month solar rotation cycle. (Connolly, MA)

PACIFIC DX ROUNDUP

- 620 HAWAII, Hilo, KIPA hrd w/fair sig 0445 5/3 after KGW s/off 5 mins earlier. Strings of rr songs w/little chat. Believe KGW OC was on, causing some mangling of the signal. (Hall-Patch, BC)
- 760 NEW ZEALAND, Auckland, iYA noted w/old jazz 0930 5/3, followed by comedy, NZ TC 0945, piano mx 0955, then pips on hour followed by NZ mx. //860 w/nil-good sig. Some QRM (KGU?) but often dominant. (Hall-Patch, BC)

- 850 JAPAN, Uwajima, JOZU, NHK1 hrd 1045-1100 4/19, usual pips on the hour. Had weird lang around 1045 which is why I stopped to listen. New here. (Peterson, CA)
- 860 NEW ZEALAND, Rotorua, 1YZ, See 760 above for pgm details. Poor-good sig w/no QRM, not even the usual LPRT hets. Both 760 & 860 also noted on TRF w/30' LW, though at reduced volume. (Hall-Patch, BC)
- 1040 CHINA, Shanghai, 5/9 1230 w/ammt in JJ. Fair S-5 sig u/QRN from neighbor's goldfish tank heater. (Lobel)

PRECISION FREQUENCY MEASUREMENT
IN THE MEDIUMWAVE AND THE
SHORTWAVE BROADCAST BANDS

PART
2

by Charles A. Taylor
(continued from page 281)

USES Other typical uses for the PFM monitor station follow.

INTERNATIONAL QSL ROUNDUP

- 625 COSTA RICA, San José, "R. Millón", rcvd handsome & ultra-definite "certificate" for 3/8 test in no time at all. V/s illegible. (Schatz, FL) (Haha, think you're funny doncha? bp)
- 640 AUSTRALIA, Crystal Brook, 5CK sent standard ABC card w/Full details on back for written rpt & 3 IRCs sent directly to the stn. Card gives location as Crystal Brook, contrary to info in WRTH. (Bytheway, WA)
- 1270 HAWAII, Honolulu, KNDI, usual card received from Alan Roycroft w/message on back saying that KNDI will be moving their tower prior to 7/1/76 due to land redevelopment. In answer to my question as to when or if KPUA-970 will move to 670 (per WRTH etc) Alan said, "KPUA changed hands recently & as their tower is short for 940 (sic) & 1500' above Hilo, they would be silly to move to 670." (Portzer, WA)

MISCELLANY

Word comes via other Seattle DXers that Australia has officially made "Waltzing Matilda" their NA.

Also, a price list from the Free Radio Campaign has worked its way into my hot little paw. FRC has available a big assortment of books, tapes, and records on European pirate stns such as Veronica, Caroline, etc. Anyone interested can write to FRC-Holland, P.O. Box 9460, The Hague, Holland. Their free price list is sent out twice a year.

CONTRIBUTORS

Thanks to the following people, DX Worldwide for 5/22/76 is what it is:

- David Ball, 62 Lexfield Ave., Downsview, ON M3M 1M5
DX-150A, SM-2
- Phil Bytheway, 6635 57th NE, Seattle, WA 98115
HQ-150, Wedge
- Mark Connelly, 52 Amsden St., Arlington, MA 02174
R-390A/URR, 1200' beverage
- Nick Hall-Patch, 3272 Alder St., Victoria, BC V8X 1P2
National HRO, TRF, 4' box loop
- Albert Lobel, 247 N. First St., #27, El Cajon, CA 92021
DX-150, Sanserino loop
- Art Peterson, 851 31st Street, Richmond, CA 94804
HQ-180, SM-1
- Bruce Portzer, ye ed, HQ-180A, SB-620, SM-2
- Ron Schatz, Box 592814, Miami, FL 33159
R-388/URR, LSCA-2

Vancouver Sun, April 1, 1976
via Derek Ford, Vancouver, B.C.

CRTC gets new name, more power

OTTAWA (CP) — The Canadian Radio-Television Commission took on a longer name, a bigger budget and more responsibility today in a government move to concentrate all regulatory control over telecommunications in a single agency.

Legislation passed a year ago to shift responsibility for telecommunications from the Canadian transport commission to the radio-television agency came into force today by

cabinet order, Communications Minister Jeanne Sauve said.

The change means the CRTC now is known as the Canadian Radio-Television and Telecommunications Commission, still going by the same abbreviation.

The expanded CRTC has regulatory powers over all forms of broadcasting and telecommunications, taking from the transport commission control over most telephone, telegraph, telex, broad-band and other telecommunications operations

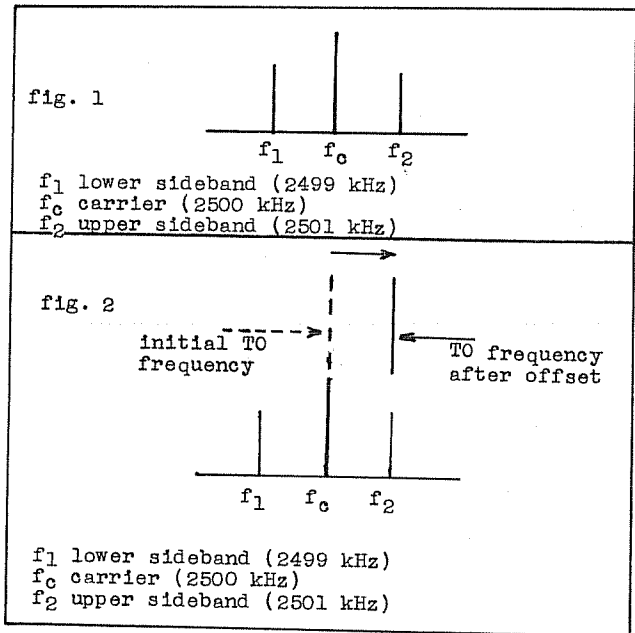
and rates.

The change will give the CRTC a \$2.6-million budget increase to \$12.4 million and an expanded board of nine permanent members instead of five. The number of part-time members remains unchanged at 10.

Mrs. Sauve said in a prepared statement that the transport commission will hear and issue decisions on two telecommunications applications which were still being considered at the time of the change.

TT frequency measurement It is simple to determine the unknown frequency of a test tone that is being transmitted by a broadcast station. This is accomplished by measuring first the station carrier frequency, recording that quantity, and then measuring the frequency of either sideband. The difference in frequency between either sideband and the carrier is equal to the frequency of the test tone.

To measure the frequency of either sideband, it is possible to take one of three approaches. The first is to zero-beat the TO with either sideband: After measuring the carrier frequency, and without altering the variable attenuator setting, carefully increase or decrease the TO frequency until it is found to cause an SAH with either sideband. This will occur when the TO frequency is offset from the carrier frequency by an amount equal to the test-tone frequency (typically 400, 500 or 1000 Hz). To illustrate, consider a typical case of a station operating on 2500 kHz, which is transmitting a test tone of 1000 Hz:



Two sidebands, 2499 kHz and 2501 kHz, are generated by the modulation process and transmitted along with the carrier, as illustrated in fig. 1. In fig. 2, the TO is brought to zero-beat with the station carrier, as shown. At this juncture, the counter should read out 2500.000 kHz. Then the TO frequency is varied upwards until it is approximately equal to the frequency of the upper sideband, at which time there would appear an SAH on the receiver carrier meter. The TO frequency vernier would be minutely adjusted to bring this SAH to zero, at which time the counter would read out 2501.000 kHz. To determine the test-tone frequency, subtract the carrier frequency from the upper sideband frequency, i.e. 2501.000 - 2500.000 = 1.000 kHz, or the test-tone frequency.

The second approach is to measure the carrier frequency as in the first approach, and then, while listening to the frequency of the heterodyne that is introduced by detuning the TO from zero-beat with the station carrier, adjust the TO frequency until the heterodyne formed by the TO and the carrier is heard to be equal in frequency (or pitch) to that of the test tone. At this instant, an SAH will be produced which can be brought to zero-beat by minutely adjusting the TO frequency vernier. The TO frequency thereby becomes equal to whichever sideband is zero-beat.

The third approach requires a highly selective receiver for accomplishment. Invoking the receiver's maximum selectivity, return the receiver to either sideband at which time the test tone will become inaudible and the sideband selected alone will be apparent. The sideband may then be measured in frequency in the normal manner. Then tune the receiver to the carrier and measure its frequency. As before, the test-tone frequency is equal to the difference in frequency between either sideband and the carrier.

All three approaches require recognition that sideband frequencies that are generated in the A-M modulation process are discrete r-f energies that are transmitted simultaneously with the carrier, and that each sideband is individually measureable in frequency.

Frequency Check measurements With a carefully calibrated PFM station, the experienced MW monitor can accurately measure the frequency of a MW station, as can a frequency-monitoring service. Frequently, when faced with with severe cochannel interference, a frequency monitoring service will measure the frequencies of both sidebands of a broadcasting station which is modulating with test tone, and average the two to determine the carrier frequency. Such an option is available to the MW monitor. Correct measurement of test-tone modulation frequency and of the carrier frequency of a broadcast station which is conducting a frequency-check transmission, may be sufficient evidence for a cooperative chief engineer to issue a verification.

A similar opportunity may be available to both the MW and the SW monitor in recording the frequency error of a particular transmitter over a period of time (e. g. several days), for submission as evidence of reception for correlation with the records available to a chief engineer; for the issuance of a verification. The author recently received an unsolicited (but very much welcomed) verification for submission of a record of several days' measurements.

Heterodyne frequency measurement Measurement of the frequency of a heterodyne is identical to measurement of a test-tone frequency, save that a heterodyne is created by the beating of two radio frequencies while test-tone modulation produces three frequencies (two sidebands and a carrier). If the monitor's receiver lacks sufficient selectivity to determine whether a particular tone on a broadcast channel is the result of modulation by some station or of an audible frequency difference between two station carriers, it can be determined by measuring frequencies that exists in the immediate vicinity of the channel. A test-tone broadcast would yield three related frequencies while a heterodyne would yield only two frequencies.

Receiver frequency spotting The PFM equipment can be used as a most useful adjunct to a receiver with mediocre dial frequency calibration. In this application, the TO is set at a frequency which the monitor wishes to tune; and the receiver is tuned until the TO output is audible, thus tuning the receiver to the desired frequency exactly.

While using the PFM equipment in this function. it is necessary for the monitor to become acquainted somewhat with overload characteristics of the receiver and the degrees of output produced by the TO at various settings of the TO variable attenuator. This is necessary because in setting the TO variable attenuator for an excessively high output, spurious responses may be generated in the receiver which could be mistaken for the TO output frequency; likewise, an insufficiently low setting of the TO variable attenuator may render the TO output obscure or inaudible. Experience is of value in determining the optimum TO variable attenuator setting for frequency-spotting applications.

Some TOs have facilities for amplitude-modulating the TO output with a test tone of some frequency, typically 400 Hz or 1000 Hz. So modulated, a TO output frequency will become more conspicuous for frequency-spotting purposes.

When modulating a TO for frequency spotting, increase the percentage of modulation of the TO incrementally to maximum while observing the counter readout; at some high degree of modulation, it will probably be found that the counter readout will become erratic and unstable. Note or record this degree of modulation

and avoid advancing the modulation control to this setting. Avoid using the modulation function of the TO while making frequency measurements.

ERRORS INHERENT IN PFM There are certain sources of error inherent in the PFM process. If the sources of these errors are recognized and understood, they can be minimized.

Time-Base Error Reviewing the brief description of a digital frequency counter presented in the beginning of this article, it will be remembered that the time base determines the period of time that the electronic gate is open. In a hypothetical case, the electronic gate is opened for a precise period of one second. If an input of exactly one megahertz (one megacycle per second) were applied to the input of the counter, then exactly one million cycles would transit the gate, to be counted by the electronic counting devices, and displayed on the counter readout as a count of 1,000,000 Hz (or 1,000.000 kHz, depending on the placement of the decimal point). If the gate period is changed to precisely 10 seconds, then exactly ten million cycles would transit the gate to be counted and displayed as 10,000,000. Depending on the placement of the decimal point, this would be read as 1,000,000.0 Hz, or as 1,000.0000 kHz, with the least significant digit (the digit to the extreme right, abbreviated LSD) representing tenths of a Hertz (the LSD represents one-Hertz units in the case of a one-second gate period).

If the gate period were not exactly one second in duration, the number of cycles passed to the counting devices would not be exactly one million. Since the gate period is controlled by the time base, an error in the time-base frequency will cause an error in the number of cycles counted. The error in the count (as averaged over a number of counts) will be proportional to the error in the time-base frequency. Obviously then, the time-base frequency must be a very closely controlled quantity. Generally it is, but beware of the counter whose time base is controlled by the 60-Hz, power-mains frequency; the short-term stability of which is much too poor for our purposes. Counters to be reviewed later in this article will not possess this class of time base.

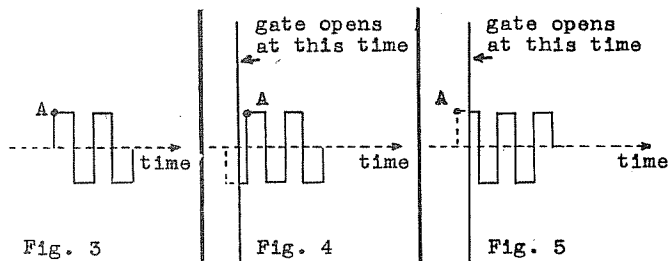
In order to be able to perform PFM's of an accuracy approaching 1 Hertz in the mediumwave band, and 5 Hertz in the shortwave bands; the stability of the time base must be about twice to ten times the desired readout accuracy. Since an average of 1 Hz at 1 MHz in the mediumwave band is the goal (stated as one part per million, or 1 p.p.m. as abbreviated), then a time-base stability of 0.1 p.p.m. (or restated as one part in ten million) is indicated. Fortunately, such a stability is achieved by the time bases of even some of the simplest counters. In order to achieve approximately 1-Hz accuracy in the 11-meter shortwave band, a time-base stability of one part in 300 million (or 0.003 p.p.m.) is indicated. Unfortunately, a counter whose time base can achieve this stability would be expensive; the monitor would have to be contented with impaired accuracy at those frequencies. An accuracy of 50 Hertz in the 11 m.b. might be considered a worst-case figure. Experience indicates that an accuracy of about 10 Hertz is feasible in that region.

Time-base error is minimized by careful calibration of the time base and by a counter warm-up period of at least one-half hour before use. Since most counters either have a time base whose frequency is 1 MHz, or have a calibration output of 1 MHz; calibration is facilitated by observing the beat frequency between the harmonic of the time base and one of the frequencies transmitted by WWV, WWVH, JYJ, et al. In using a time and frequency standard station for calibration, select the highest standard station frequency that is audible consistently in your area (usually 10 MHz during the winter and 15 or 20 MHz during the summer) and adjust the time base of the counter for slowest SAH against the standard station (when calibrating a counter time base, a warmup period of at least one hour prior to calibration is necessary).

Digitalization Error Beside an error in time-base frequency which over several counts will cause a proportional error in the counter readout, another source of error inherent to digital counters is digitalization error. Digital counters are on/off devices which only respond to a specific point on an input waveform. Since the counter gate may open at a random time in

relationship to the frequency that is to pass through it (remember that the gate is only required to remain open for a specific period of time), there is an uncertainty as to which portion of the waveform of the incoming frequency will first appear when the gate is first opened; and so whether or not the specific portion of the waveform that triggers the counting devices will have already passed.

To illustrate, assume that the counting devices only respond to that portion of the incoming waveform (the square waveform is the appearance that the TO waveform will have after passing through the counter input preconditioning circuitry) that is marked "A" in the following figures 3 through 5:

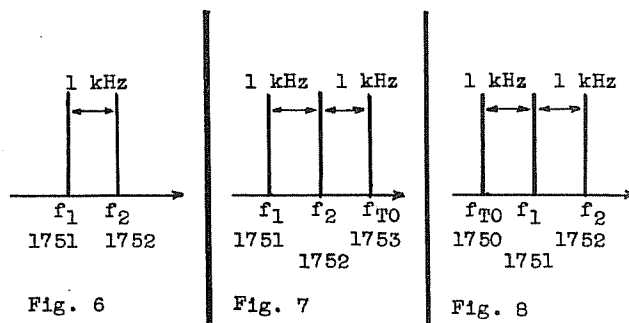


If, as in figure 4, point "A" of the first cycle of the incoming waveform just passed by the gate, has yet to arrive, the counting devices will be able to count it as it passes. If, as in figure 5, point "A" has already passed when the gate opens, the counting devices will be unable to count it. The result is that, to take the example of a 1-MHz input frequency, the counting devices may count 999,999 Hertz; 1,000,000 Hertz; or 1,000,001 Hz. This uncertainty in the LSD (the digit to the extreme right) is a manifestation of the digitalization error. There will always be this ± 1 -count uncertainty inherent in any counter that lacks a synchronized gate (the case with most of the counters that the DXer is likely to acquire). Since plus-or-minus one count out of a frequency of 100,000 Hz is a greater percentage of that frequency (0.001%) than it is of 1,000,000 Hz (0.0001%), or of 10,000,000 Hz (0.00001%); this error is of greater consequence at a lower frequency than it is at a higher frequency. In this respect, a counter's accuracy increases with frequency (disregarding time-base error and assuming that we do not exceed the counter's cut-off frequency, i.e. that frequency above which the counter ceases to count). In order to reduce the percentage of the digitalization error at lower frequencies, we can increase the gate period (for example, from one second to ten seconds, or even to one hundred seconds) and so minimize the digitalization error as a percentage of the total number of cycles counted. Likewise, we can make a series of independent measurements and rely on statistical probability to average out the error. For mediumwave PFMs, unless a counter with a ten-second gate (and a TO of correspondingly greater stability) is available, we must rely on making several measurements and averaging the individual results. For shortwave PFMs, the digitalization error is about proportional to the frequency to be measured; at 10 MHz, it becomes nearly negligible.

Synchronization Error Also termable zero-beat error, this error is caused by the lack of a perfect zero-beat between the TO frequency and the signal of unknown frequency. While a perfect zero-beat, i.e. a perfect synchronization in frequency between the TO and the unknown frequency, is a practical impossibility; an error of 0.1 to 0.25 Hz is an easily attained minimum at mediumwave frequencies. The error at shortwave frequencies is apt to be greater, perhaps 0.5-1.0 Hz without especial care. This is true because the relatively rapid fade characteristics of SW signals, especially those that have been propagated via a polar or near-polar path, tend to obscure the zero-beat.

Lacking an oscilloscope with long-term luminescent phosphor or a strip recorder for use as an indicating device (block 5 of the basic heterodyne frequency measurement system), one must depend on experience and multiple measurements to reduce synchronization error to a reasonable minimum (about 0.25 Hz, mediumwave; 0.75 Hz, shortwave).

Audio Imaging A possible source of error, especially for the inexperienced monitor, is audio imaging. Audio images are most likely to occur when attempting to PFM the frequencies of two stations which are heterodyning one another with a resultant carrier beat in the audio-frequency range. This is best explained through the aid of illustrations:



In figure 6, two stations, one on 1751 kHz, and the other on 1752 kHz, are heterodyning one another. Since they are on frequencies 1 kHz separated, the heterodyne is 1 kHz. In figure 7, the TO frequency (1753 kHz) has been brought into the vicinity of the pair. Since the frequency of the TO (f_{TO}) has been brought to 1 kHz of 1752 kHz (f_2), there will also be set up a heterodyne of 1 kHz between f_{TO} and f_2 . In addition, an audible beatnote will be generated by the difference in frequency between the first 1-kHz heterodyne (between f_1 and f_2) and the second 1-kHz heterodyne (between f_2 and f_{TO}). In figure 8, the same situation exists, the only difference is that the additional 1-kHz heterodyne is generated by f_{TO} (on 1750 kHz) and f_1 (on 1751 kHz). Here again, the two 1-kHz heterodynes will interact to generate a second beat. In either case, the audible beat between heterodynes can be brought to zero; however, in both cases, the TO frequency will be offset from either station frequency by an amount equal to the difference in frequency between the two initial, heterodyning signals.

In this condition, the TO frequency forms a mirror image of the alternate frequency (with respect to the middle frequency, i.e. the frequency between the mirror-image frequencies). In figure 7, f_{TO} is the image frequency of f_1 ; in figure 8, f_{TO} is the image frequency of f_2 .

See those paragraphs entitled "TT frequency measurements" and "heterodyne frequency measurement" for advice on avoiding errors due to audio imaging. Also refer to the following paragraph for further advice on avoidance of errors. An additional aid in this circumstance is to observe the indicating device (block 5). It will be found that the indicating device will register an SAH when the TO is brought within about 10 Hz of either 1751 kHz or 1752, but an SAH will be relatively weak or lacking entirely when an audio image occurs.

SAH Obscuration An additional problem in PFM is that of SAH obscuration. In this situation, an SAH or SAHs already exist on a channel as the result of interaction between carriers. Attempting to zero-beat the TO frequency with any of the interfering carriers will be impeded by the pre-existing SAH(s).

At mediumwave frequencies, it is possible to separate SAHing signals on a frequency by use of a directional antenna, usually a loop antenna. Another approach is to quickly PFM one of the frequencies as the other fades, and vice-versa. This approach is more feasible at mediumwave frequencies where the fading period is longer and the relatively lengthy fadeout of one of the carriers facilitates PFMing the other.

(To be continued in next available space)

San Diego Tribune
10 MAY '76, P. B4

DJ CLAIMS NEW MARK IN BROADCAST

ELMIRE, N.Y. (AP) — Disc jockey Robb Capp of radio station WELM claimed a world record for continuous broadcasting

over the weekend, after ending 112 hours of playing records and chatter on the air.


Capp, 26, began his stint at 6 a.m. last Monday and signed off at 10 p.m. Friday. The Guinness Book of World Records listed a 111-hour, 21-minute record by Chris St. John of a radio station in Maine.

Capp kept going by rubbing himself with ice and dousing himself with water. He took no stimulants, he said.

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BROADCAST PARK

KVON-KVYN-FM

Hotel Raphael · San Francisco · August 13-15, 1976

Depart Sunday morning, August 15 to Fisherman's Warf, board the boat to Alcatraz Island, 3 mi from San Francisco. Guided tour of Alcatraz Island. See Al Capone's cell, The Birdman's cage, and the cells of the famous outlaws of the past, sent to the toughest prison in the land, the prison that was thought to be unescapable. See the cells where Rth would like to put a few local CEs and station owners.

Tour last approximately two (2) hours and cost a mere \$2.00 per person. There is much more to see on Alcatraz than the cells, and cruising the bay in the morning air will get you going from the all night DX session the night before. Roundtrip transfers from hotel to Fisherman's Warf via Cable Car, 25¢ ea way (providing MUNI doesn't strike again). Please reserve early, space is limited.



OUR 1976 CONVENTION

COME TO THE 1976 ANNUAL CONVENTION OF THE INTERNATIONAL RADIO CLUB OF AMERICA! IRCA '76 WILL TAKE PLACE AT THE HOTEL RAPHAEL IN DOWNTOWN SAN FRANCISCO, ON AUGUST 13-14-15, 1976. PLANS INCLUDE SPEAKERS ON DX'ING IN GENERAL, OLD TIME RADIO, AND TECHNICAL TIPS; QUIZZES, A SOFTBALL GAME, A TOUR OF ALCATRAZ ISLAND, A BANQUET WITH A SPECIAL GUEST SPEAKER, THE IRCA BUSINESS MEETING, AN AUCTION, AND LOTS MORE!

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RETURN REGISTRATION FORM TO: RICK HEALD, 840 WARFIELD #6, OAKLAND, CA 94610

THE PLACE: THE RAPHAEL, 386 GEARY STREET, DOWNTOWN SAN FRANCISCO. THE TIME: FRIDAY, AUGUST 13, STARTING AT 6:00 pm AND GOING UNTIL 6:00 pm, SUNDAY, AUGUST 15. SINCE IT'S THE IRCA CONVENTION, THIS WILL BE AN ALL-MEDIUM WAVE BCB DX'ERS' MEETING. DIG THROUGH YOUR DX SHACK FOR SOME OLD STUFF TO BE AUCTIONED OFF - ALL PROCEEDS FROM THE AUCTION WILL GO DIRECTLY TO IRCA. BRING RECEIVERS, ANTENNAS, QSL CARDS, VERIFICATIONS, DISPLAYS, TAPES, BOOKS, CLUB BULLETINS, MONEY, HEADPHONES, LOGBOOK, AND YOURSELF! SEE YOU IN SAN FRANCISCO!!!!

AUGUST 13-14-15



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 EL CAJON, CA USA 92021
 PHONE: (714) 440-2544; HRS.
 EDITOR: ALBERT S. LOBEL 1800 - 2115 PLT **ONLY!**
 DEADLINES: FRIDAY 1800 PLT. **SASE EXPECTED FOR A REPLY!**

AND FINALLY HERE IT IS

EFFECTIVE 28 JUN 76 YE EDITOR WILL HAVE A NEW ADDRESS.
 THE ADDRESS AFTER THAT DATE WILL BE AS FOLLOWS:

→ 10514 CAMINITO BAYWOOD
 SAN DIEGO, CA 92126

THERE WILL BE ONE MORE ISSUE OF THE AD-VISOR TO BE PUBLISHED
 FROM THE OLD ADDRESS. DEADLINE FOR THAT ISSUE IS: 4 JUN 76.

Now, before I go on to typing this weeks ads, let me say
 that this weeks column is being typed on Thursday Night instead
 of the usual Friday Night. Reason: have noticed the late
 arriving columns! Although, the Ad-visor is not one of those
 late arriving column, I have decided to give this one a little
 more time. May switch deadline to Thursday or Wednesday after
 my move to my new house.

AND NOW ON TO THE ADS.....

SWAP

Will record my local AM & FM stations on cassette or reel to
 reel in exchange for your locals, or for recordings from the
 Dr. Demento Show, which is unavailable in my locality.
 SHAUL CEDER, 1481 EGHONT PLACE, FAR ROCKAWAY NY 11691.

ARRL - radio amateur's license manual, new edi. Original cost:
 \$1, yours for 50¢ postpaid. + GDE - code practice set. Orig-
 cost over \$5 yours for \$1.50 postpaid. + 1972 WRTH 26th Edi.
 exc. cond. Yours \$2.50 postpaid. + Lafayette Dyna-Com 3b
 Walkie-talkie, 3 watt, 3 channel, crystals for 10, 13, 14, 19,
 w/ ext. battery pack, leather case, DG auto cable (2), antenna
 lead, batteries (20). Original cost over \$110, sell for \$85
 postpaid and insured.
 TOM BUTAS, 5612 ALTA DENA DRIVE, HUNTSVILLE AL 35802.

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THE INTERNATIONAL RADIO CLUB OF AMERICA, INC.

A non-profit club devoted to listening to distant radio
 stations on the broadcast band (510 to 1630 khz). IRCA
 is a member of ANARC, the Association of North American
 Radio Clubs.

OFFICERS: President - Richard C. Evans, Box 392, New
 Buffalo, MI 49117 (616-469-3866). Secretary-Treasurer -
 H. John Clements. Board of Directors - Robert L. Foxworth,
 Nancy Hardy, Grant Manning, Father Jack Pejza, Bruce
 Portzer, Ronald F. Schatz, and John Zondlo.

DX MONITOR: The official bulletin of IRCA, published 34
 times a year; weekly from November to March, 3 times in
 October, 2 times in April, May, and September, and monthly
 in June, July, and August.

MEMBERSHIP DUES: \$12.00 First Class to Canada and the
 U.S.A., Air Mail to Mexico. \$13.50 Air Mail to the rest
 of the world via Canada. Air Mail direct from Seattle:
 \$25.00 to Central America, Caribbean, Colombia and
 Venezuela; \$30.00 to the rest of the world. Sample copies,
 50¢ or 3 International Reply Coupons. Make all checks and
 money orders payable to "I.R.C.A." Members outside the
 U.S.A., please use money orders payable in U.S. funds.

PUBLISHING STAFF: Editor-in-Chief - Michael G. Worst
 (206-776-8249), Publisher - Phil Bytheway (206-525-8736);
 Derek Ford, Gary Kayser, Tim and Sue O'Hare, Jon Orren,
 Bruce and Evelyn Portzer.

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 butors and do not necessarily reflect those of IRCA, the
 publishing staff, or the DX FORUM editors.

DX MONITOR is printed by Save-On Printing, Seattle, Wash.

Zenith Trans-Oceanic portable BCB + SW receiver. Clean and
 mechanically excellent, but needs alignment. \$75 plus shipping.
 TIM O'HARE, 910 NE 114th STREET, SEATTLE WA 98125.

IRCA FOREIGN LOGS:
 Vol. 3 (1973-74 season): \$3.50 (\$3.75 to non-members)
 Vol. 4 (1974-75 season): \$4.00 (\$4.25 to non-members)
 Vol's. 3 and 4 \$6.50 (\$7.00 to non-members)

IRCA Rubber Stamps with the IRCA Emblem are available for
 \$3.00, postpaid.

Red and Black IRCA Stationery is available for \$3.00 per
 100 sheets, postpaid.

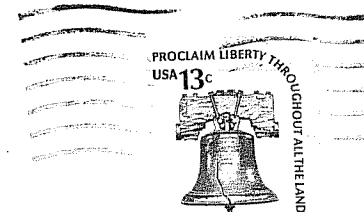
I.R.C.A., P.O. Box 21462, Seattle, WA 98111



PORTLAND AREA RADIO FREAKS;
 GREETINGS:
 YOU ARE HEREBY REQUESTED TO REPORT AT 133 SOUTHEAST 31st,
 PORTLAND, OREGON, ON THE TWENTY-SIXTH DAY OF JUNE, NINE-
 TEEN HUNDRED AND SEVENTY-SIX, FROM NOON ON, FOR AN ALL
 BAND DX GET-TOGETHER. COORS BEER AND POP FURNISHED!!
 FOR FURTHER DIRECTIONS AND INFORMATION WRITE TO BILL
 BLOCK, 133 S.E. 31st, PORTLAND, OR 97214, OR PHONE HIM
 AT 503-234-1809, FROM 6-9 P.M., OR CALL PATRICK MARTIN
 AT 503-224-0614.



IRCA
P.O. BOX 21462
SEATTLE, WA 98111
U.S.A.



First Class

Dave Williams 2
 Box 615, Hwy. 101
 Astoria, OR 97103