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"Enclosed are my dues for another wonderful year in the NRC. Keep up the great work on that bulletin; it's very much appreciated." (Eric DiRicco, Pa.)

IN THIS ISSUE ...



The Loop-Sensor Cardioid Array - Ronald F. Schatz Pattern Controlled Loops for the Mediumwave DX'er - Gordon Nelson Domestic Supremacy Ratings - Bob Karchevski Verification Signers - Ernie Cooper

NEW NRC MEMBERS THIS WEEK ...

*Jim Hayes, 9 Henry St., Wilkes Barre, Pa. 18702 *Wm. Blazek, 2716 Bellbrook St., Hillcrest Heights, Md. 20031 *Stuart Kantor, 38 Lawrence Dr., N. White Plains, N.Y. 10603 *Sidney Scholes, PO Box 1494, Evanston, Ill. **60204** *Richard Lauhead, 591 W. Co. Rd. B, St. Paul, Minn. 55113 *Harry Simpson, 4520 State, Box 46, Kansas City, Ka. 66102 *Doug Brandon, Box 1265, Big Springs, Texas 79720



Welcome to the NRC, gentlemen, we hope to be reading of your DX activities often here in DX NEWS. Your New Member kits are being prepared and will be mailed at the earliest possible time. Why not write into Ernie and introduce yourself in a Musing?!

RENEWALS THIS ISSUE ...

DeLeurere... Greenhill... DiRicco... Wood... Grubbs... Russell...

INTERNATIONAL EDITOR IS OUTFOXED ...

Another brave spirit bites the dust! Word has it that IDXD Editor Bob "Foxy" Foxworth will be married on May 28th to a sweet young thing by the name of Kathy... This means Foxy'll be moving out of Manhattan and may even begin to DX again, who knows? We wish Foxy and his bride the best of luck!!! *GPN & BGK * members, worthy, but tending to procrastination and sloth WILL LOSE :

Below is reproduced the Table of Contents for the new NRC Latin American Log - 110 pages of unique Latin American station information, articles, maps. verification signers, etc. ! Updated to include LA changes as recent as April 1st, 1971, the NRC LA Log is now being mailed to those NRC members who have reserved copies and have sent payment to HQ. Can you get one? Well that depends... The pressrun was determined by the number of NRC members who wrote into HQ some months ago to reserve a copy; if every reserved copy is purchased this leaves 234 NRC members out in the cold ... The actual pressrun was considerably smaller than the NRC membership size but we do have a number of overrun copies for those who did not reserve a copy or who do not claim the copy they reserved. ON JUNE FIRST WE WILL MAKE AVAILABLE REMAINING COPIES ON A FIRST-COME-FIRST-SERVED basis. If you have reserved a copy but don't advance 2.50 to HQ by 6/1, you'll lose your reserved status and your copy will be mailed to the general membership on a f. c. f. s. basis... If you have not reserved a copy but wish to get in line, send \$2.50 to HQ and we'll put you on the standby list... The pressrun was 234 fewer than the present membership size so many will miss out... No second printing planned... Same size, format, and binding as the universally acclaimed NRC Domestic Log... He who hesitates loses...

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* "What significance hath 234?" A. Jordan

ON THE STATION'S STATIONERY

(reprinted in part) "Dear Mr. Cooper: W P J D - 1550 Daisy, Tennessee

"Thank you very much for your letter of April 19th regarding reception report for WPJD, Daisy, Tenn.

"I certainly an sorry that you have been caused concern by the announcement of one of our announcers regarding the non-verification of DX reports. "The reason for the announcement was that quite a number of reports have been coming in to WPJD. As you surmised we are understaffed and losing a considerable amount of money as we are nearly all non-advertising. Our engineer there is a fine Christian brother who drives 150 miles round trip to work every day. He puts in a full shift in on the board announcing and then does the engineering. Therefore he has no time to speak of to write letters of verification or to make up QSL cards. Presently we have none at WPJD. Frankly we never expected to have so many listeners reports from a little 250 watt station. Daisy, Tenn. by the way is a suburb of Chattanooga, Tennessee.

"No we did not receive any adverse letters nor falsified letters to we knowledge. However, we have received quite a number of falsified and copied reports from a number of foreign broadcasters for PJD2 but none that I can remember from U.S.A.

"We have discussed the matter and the engineer at WPJD says he will do the best he can to verify reports as soon as possible. It would help however if as you suggested DXers would fill out a card with all the data and put a stamp on it. All the engineer would have to do then is sign it. This would help us greatly. In fact one DXer did this the other day to help us out after hearing reports would not be confirmed. And this was appreciated, and was confirmed.

"We appreciate your concern and want you to realize that the announcement was not made because of any hard feelings toward broadcasters but because it was working a hardship on our engineer who is overworked.

"Please extend my personal best wishes to all of your readers and fellow DXers. We have had good relations in the past and certainly want you to know no one has any hard feelings toward DXers at WPJD.

"We would appreciate very much however the considerations mentioned above from DXers and we will be happy to confirm their reports."

-Sincerely in Christ, (signed) Robert A. Mayer, Managing Dir. P.S. We have just purchased a third station in Winston-Salem, N.C. (Ditor's note: They are affiliated with PJD-2-1295, in Sint Maarten.) FLASH- WWLE-1170, Cornwell,/

N.Y., MM 5/10, 1-1:30 PECIALS

 $\frac{1}{2} \frac{1}{2} \frac{1}$

- Biss Forunds on sir, / kc/s watts AM, E.D.T. Info: Monday May 17 K P I N 1260 Casa Grande, Arizona 1,000w. 3:01-4:15" I R C A This special TEST broadcast will feature middle-of-the-road music, and may station IDs. Send return postage with your reports, to Mr. "Bud" Thomas, KPIN, Casa Grande, Arizona, 85222. Arranged by Paul Lotsof.
- Thurs. May 27 K W Y S 920 West Yellowstone, Mont.1,000w. 2:30-2:45 r/c-TT
 This is their regular quarterly frequency check. Cycle tone and announcements are used on the air. Reports should be sent, with return postage, to Mr. John Stanturf, KWIS, Box 9, West Yellowstone, Montant, 59758. This is via Jim Adams of IRCA, and both these tips PHONED us by Don Erickson! ERC
 *This time, 3:01-4:15, COULD be E.S.T. or E.D.T. we're not sure. (D. Erickson)

"AN" Situation.

OFF: 950 W P E N (MMs omly) ON: W G S B ipc. MM - NSP? (RUSS EDMUNDS WAS IN AN AUTO ACCIDENT ON 4/17, HENCE NO DX-TEST on 4/19 from WWLE) The next issue is in THEE works. Deadline date in Brooklyn for Musings will be Thursday, May 19th. Be sure to Muse for that issue, and stick to 30 lines of DX MEMS print, and include your catches and tips by date, calls, frequency, and location. Make your report help someone else get some new loggings.

MUSINGS

of the Members



Alt Lost Dir Breaklyn, N.Y. 18294

TOM McCORMACK = 275 Littleton Street - West Lafayette, Indiana - 47906

I just got back from Jerry Starr's YAD DXOT and it was a blast to say the least. (The brew ran out!) Time for an intro: I'm 20 years old, single, and have been DKing BCB for a little over four years. I've logged and vertified all 50 states and eight provinces as well. I have heard between 2,000 a 2,100 stations and have 802 verifications. Recent veries here include: v/1= MCRL -780WDEB-1500 CF08-800 (34th Onterio verie) WICA-1050 WAUD-1230 ZEVI-760 WEEI-1500 WOER-1530 WEUE-1400-DX (34th Fla. verie here) WFIX-1450 WFFA-1400 (31st Als. verie) MAVZ-1300 (Fifth Conn. varie) WTRC-1330 WSHF-1480 MSEK-1340 MTRS-1480 (17 th srb.) WESA-GAO & WCMS-1270. v/r- WCVI-1520-TEST KELI-1430 (17th Ckls. verie) I have all Tulne's verified now. WINE-1240 (took six months) WINA-1150 HFDI-1070 (17th Eansas verie) & WSTP-1490-DX (34th M.C. verie). v/g- KUGM-770 X2WO-1030 (I size have 'en logged & verified by v/1 on old 1470 frequency on 1,000w) WMJ-620 (5th N.J. verie) KORL-650 (third Hawaiian verie here), WAIT-820 & WIR2-940. I just sold my H2-140-X met to Bill Lenek, so all DXing here will be done on the Highwave portable. I collect & swep CMs, SCs, and bumper stickers avidly. I do NOT count tape varies and never will, although I tape nearly all DX eatches. Hocent IX here includes: WACH-1340, WREA-1470, WISE-1310-DX (62nd M.C. logging) & WINE-940-THET (8th Conn. Logging), WCIT-940 (at noon u/WMIX/WJOR) WDAS-1480 (37th logging on 1480) & XRUS-1490. The entenna here is a 175' LM that is 60' high, & I've never used a loop. Up until recently I have been a DX fenatic listening excessivity on SRS, SSS & after midnight ofhen. Tapesponders are velocee here and visitors at all times. The WC Skip has been fantastic this past senson w/unns Hike HEX KORL CHU CKLG KFRE KABL KOMO KRLA KRAK heard most often on MMs. KRKO too. 73s from Hoosierland and 40 showed at YAD's DUJT! BCNU. (Welcome to the NRC, Ton, and we will welcome your regular contributions to Musings! -ERC)

BOB HUTT = 9242 Warwick Road = Indianapolis, Indiana = 46240

Well, it's about that time again to Muse. Since my last Musing quite a bit has been happening. Worcester Electronics Lab sent me their inf on their loop. So, when Lerry Black paid me a visit, I really not to work the loop well-I decided this is what I need, so I bought one, although it hasn't arrived yet. Meanwhile, while all of this was going on we added another 50' of wire to my 1W. which brings 3 meter readings up 5db. Anyway back to the DX. I finally received WAMES r/c several weeks ago and got a v/l for State #34 verified. On 3/25 WHAL-1090 was coming in strong o/IGAY, finally KSO in on 3/27 6 12:21am, a good catch egein from Mi. wes WFGC on STS 6 6:51em on 1580, a longed-for XEG-1050 w/talk. On 1550 e surprise, WAAY in on 4/4, KIWI in strong o/WKRC on 560 4/6, & WNIN in . well after local WERK s/off on 4/9, fairly regular WELD Miss. on 550 on 4/8, and good catch at ELOU-1580 12:25am on 4/9. Some other stations longed during the Spring break were WIMT Louisville, WXXI Casey, Ill., WITY Danviole, Ill., WIRT Chicago, WRTL Pantoul, Ill., WIPA Watseks, Ill., & finally WTHI semi-local in Terre H-ute. 538 on 4/11 brought WEGM Ga., WDKN Term., WERC Als. WRIN Ind. Now for the best catch of the Soring break was PJA5-900 in Aruba, NWI, running 10bes @ 7:47nm on SSS on 4/10. Well, that's about all I have to report for now, and don't forget the Summer CX will be setting in, so for all those who can take advantage of SSS & SRS, do it! Best wishes to all & 73s plus 15s.

MANCY GANTZER - 67 Liberty Street - Predonie, New York

Some DX: 4/1-7:25 s/off of WOTY-1000 Als. 4/4- KFDF-1580 Ars. s/off 7:45, WIFR-940 P.R. 7:15-7:35 w/Latin mx. 4/6- WADE-1210 N.C. s/off west 9 WC/U, WIFE-1190 N.C. o/WOWO 6:50-7pm, WBOM-710 Ga. s/off 7:15. 4/14- WCEW-1130 N C. s/off 6 7, WCH-1310 Vs. 8:50 w/rr & CFOM nulled. I was trying for WP/T-930 cm 4/5 around 8:30pm. I managed to noti WHEM well enough, so who did I get? H. APtilles in Monteerret. Quite disappointing. ERC, I'm vorking on a long-time pon-

Muser for you (I think you can use all the help you can get). (HELP! -ERC) For those of you who are listening for WHUZ-1570, it's 250w & not 1,000 as in MRC Log.

PAUL K. HAHT - 2105 Muse - Fort Worth, Texas - 76112

I spent April 4-7 in St. Charles, Ill. attending an NEC conference. DX CX seemed to be generally much better than when I lived there three years ago. All observations were on the Heath GR-2% in the motel room. I was able to spend only very short periods DXing. WSUN-620 noted in well @ 5:43am 4/5, 610 is still the same as here - chaos w/WDAF dominant. WOSB-1480 super-local advertising 24 hours, & noted on HM. It might be a good idea to check this to see if they are NSP, or what. At 10pm 4/5, XIOA was heard getting the worst of it from CHM-940. CBM not yet heard here in Taxas. At lips 4/6, KMX-1070 noted in weakly, & KRID-1080 in, readable but fady. All I can say is that the Chicago area, especially W of the city, is fine DX country. I miss the Canadians here in Texas, even some of them were pests up North. Their programming (with some obvious exceptions) is very tasteful. : CX here in TMxas have held up better this Spring than they ever have been since I moved here. Some of my more recent activity will illustrate the point (specifics to DDXD). WIRQ/WTOD-1560 s/ons 4/4, KXXX-1240 test 4/8, KELD-1400 on RS 4/9. KTMD/KLEK-1340 tests on 4/12. KRCB-1560 test on 4/12. CX on the sverage remain as good as they have ever been all year. Much of this stuff is very unspectacular, but a sprinkling of unusual stuff still is evident. This is what DX is all about. I hope it kneps up, totals are now 616 on tape. 73.

HICHARD M. BARPOS - 692 Moore Avenue - Campbell, Ohio - 44405

Greetings from the Steel City. Fear not NRCers for I am alive and well. Probably, before this gets printed it will be weeks after the YAD-LAND party. I must apologize for not being there because I just can't get anywhere w/ten pounds of plaster on my las. Yes, that's right folks - I broke it. But don't worry, it's only a compound fracture, hi. I have been paid up in bed for two weeks, but an up Saround now. Sorry for not being able to call Jerry Starr, but I don't have his phone number. Well, let's get down to DX, which has been pretty fair for me istely. Secent catches are: 3/18- KDAL-610 Minn. 3/29-WINE-940 Comm. on TEST, I believe there was some info about it in the 2/27 DX NEWS. 4/3- WESC-960 Ala, WIET-1240 N.C. 3/26- WEZN-1300 Pa. 4/6- WFEA-1370 N.H., MNUE-1390 III. 3/20- WRIG-1400 Wis. 3/22- WARM-1400 N.Y. after nulling out WRIG. 4/8 - WKCW-1420 Va. WPTR-1540 c/NCEL. 4/3- WNJH-1580 N.J.. I heard then testing nightly @ 12:12, probably a f/c w/very brief IDs. I have sent a report to all of those catches? It would be great if I would get a verie back from all, hi. Well, while I get back up on my crutches and breathe in some of this polluted Steel City air - cough-cough-cough, I say 73s and Peace.

DICK THUAX = 5101 Tamarock Drive - Charleston, West Virginia = 25312

EX since last Muse has indeed been sparce, with only four new loggings since April began, & it's now April 13? Such as it is: $4/2 \cdot MMSR-1320$ Tenn. s/off G 7:14pm. $4/3 \cdot MSR-1470$ Ky. s/off G 7:17pm. MM $4/5 \cdot MJEJ-1240$ Md. w/ID on ET G 1:21am, only other logging that more was MSTT-1170 Ia. G 1:28 v/SID & rr w/MWVA orf. MM $4/12 \cdot A$ total washout w/static & generally blab CX. Something that putles me: Where is WEED-1440 located? On two evenings this weak at SSS mear local-like IDs & c/w milled semi-local WHIS, but faded before location could be learned. HEEP? Locally, CP of WEES should be on testing before this is read, according to phone call, and also article in the local press. They plan to be on RS by 5/15, directional E & NW. With any lock at all, it should be heard in Midwest fairly easily. I am attempting to set up a DX Special in the near future. No sign of new CP-1310, White Sulphur Springs, W.Va. as of this date - I visit this area every week so I will keep my eyes and ears open. That's it for now; more in 14.

FLEASE GET IN THE SWIM THIS SUMMER - IF NOT IN THE LAKE, THEN HERE IN MUSINGS! LIST YOUR IN CATCHES BY DATE AND TIME AND PREQUENCY, SO THAT OTHER MEMBERS MAY TAKE ADVANTAGE OF YOUR LOGEINGS. JUST A LIST OF CATCHES IS OF NO USE TO ANYONE -GIVE THE DETAILS IN YOUR MUSINGS! FLEASE BE KIND ENOUGH TO DOUBLE SPACE! THANKS! BOB 1100N - 539 North Firestone Boulevard - Akron, Ohio - 44301

Hi gang! I haven't had a Musing in for several wonths now so I thought I'd at least say that I'm alive. First of all, I'd like to congratulate Jerry Starr and the mad YADs on a great get-together on 4/10. I really had a great time. DX: 4/4- WMIO-1540 Miles, O. I was shocked to hear this one. In fect, I had to be hauled to the hospital after listening to them, hi. WARD-plan Fm. C 5:01pm, WARJ-1490 Mich. on top w/local NX, WX, & good mt 6 5:20; W001-12an Columbus w/rr after tuning out WGAR's 250kw ERF slopover and sitting on the fraquency for 20 minutes till 6:32pm. 4/5- WSBR-1150 N.C. w/A1 NX & s/off @ 12:05. 1/6- WSAT-930 W.Ve. w/WEOL mulled @ 1:48pm, WCLW-1140 Manafield, C. finally culled out of the NCUL & WERY GHM & 2:10pm, WaHY-1470 W.Ca. w/promo for "Easter Bashet Full of Money" w/WOHO/WFAE GIM @ 5:15pm. CHIN-1540 Ont. w/spot for Toyota dealer & foreign language programs @ 5:51pm. WAHT-1510 Pa. w/WX & rr w/WLAC mulled @ 6:15pm. WJC0-1510 Mich. w/c/w @ 6:22, WCIN-1480 C. w/WHBC nulled @ 6:27 w/Soul mx, W/GL-1560 S.C. w/rr & beautiful signals w/WTOD nulled. WSHT-960 Ind, w/ID w/ WFIR mulled slightly & in deed mir @ 7:29cm, WWFE-1600 N.Y.C. w/best signals in 15 years since I moved from WAKR's slight Cleveland null and into their main lobe N through downtown Akron (50kw HP). Except for that and a couple of other items I haven't done much serious DX in three months. Veries: WIXY by v/f, WZAP by v/l. Does anyone have on AM XR (10w or under) for sale or trade? If so, please write. Also, 17 you want some WIXY WHLO or WINW SCs, seed an SASS. 535 heard, 73s.

ROMERT E. FISCHER - Box 94 - Newark, Delaware - 19711

of the world/in the Summertime with some of DuPont's finest paint factories within olfactory range. Who knows, Wilmington might even become the DX Capital with Dave coming back from YADland and with severf1 other area DXers activating. cent acquisitions include an SM-1 loop. It has a very good signal boost characteristics, just how much I don't know since my S-meter is not calibrated in the standard S units. It definitely extends the range of my Sony CRF-150 portable, which, by the way, will become the standby unit in another nonth. By the time you read this I'll have my order in for a spacking new HQ-1804C. I meed selectivity badly! No lack on TAs recently, mostly Lis. My SH-1 loop has somewaird characteristics. It sight be caused by interaction (maybe by mutual induction, perhaps") with the antenna built in to my portable, which cannot be disconnected. First of all I get "dead spots" (quadrants with nothing - not even background noise) when the antenna is pointed in certain directions when (a) it is too close to the RX, and (b) when the RX is tuned to low frequencies, like below about 650. Also I have difficulty mulling out locals and also some strong out-of-town 50kw stations at night, like WLW, etc. On some nights some stations null out better than others. Why? Maybe GPN can explain the dead spot phenemon. Also - when a strong antenna like the SM-1 is close to a weak one (like the one in my RX) can the signal be transferred through free space (air) from the strong antenna to a weak one making it impossible to null out stations because there is still signal in the weak antenna coming through? That's it for this time around. 73s. Summertime activites might include building the Altazimuth Loop.

JOHN TULL - 5539 Oak - Kansas City, Missouri - 64110

On the night of 4/21 CX must have really been great? I don't have my loop finished yet but my 100' longwire really came in great. Received were Nicaregue-550, Costs Rica-575, Colombis-660, Ecuador-725, El Salvador-765, and dme I could unierstand with our stepdaughter acting as interpreter, Belize-634, good solid S-8 signal from 9:W7 to 10:10ps. I could copy all the NBC MX word for words I guess I'd better get an LA Log fast. I also received Ecuador-905 and Colombia on 1055 & 1145. Have any of you ever made a multi-ferrite core antenna? I an starting on one now. It will have 13 7" cores on an 18" square frame. If anyone has tried this, how did it turn out? This is my first loop and I need all the help I can get. I had a visitor free Sockhurst College bring my verifications. They were wondering how I received them. I showed him their signal on my EX & gdt my verie. I joined the NBC the first of this year & now have 23 states & provinces veried. I just need a day job now so I can get in on NM Exing. 73. KEITH BIRLINGMAIR - Houte 3 - Noss Road - Beloit, Wisconsin - 63511 HI, everybody. I am writing this Sun. eve, so MM loggings will be added on the end. Attention: KTSA-550 tests every MM 4-4:30 for DNers. Now a few log changes, mostly small: WFEM-1260 MM SP is 1-jam. WRRR-B30 network is AL WKCT-930, sked 6:16an-lam. WOC-1420 Sked: 6-1:55am. I would like comments on the RCA AR-88, Knight R-195, Heath GR-54 & 64, Hallicrafters S-150A, & the Realistic DX-150A. They are possible choices for HXes. The MRC Report Forms are WOM-DERFUL! I just ordered my second batch as Ign down to four. Dking has been rather poor but this was masked by the absence of our TV. It's back now, though-One new province, two new states, and a new country in its absence. 4/15, Auroral. WSDR-1240 WXCL-1350 WLHK-1350 & WHHE-1110, all around 7 & all semi-locals. Later, MSPD-1370 6 11 w/talk about 50th birthday. 4/15- Just WOC-1420, w/Ward's ad @ 7:29, WIL-1430 @ 8:10 w/Sears ad & WWCO-1560 @ 9:24 w/mild rr & IDs. CHLO-1570 6 1:18 w/rr & very few ads but mucho IDs. 4/18 found KHO & KXEL on 6 2:35. Extra-weak WING-1600; too much Q FM.7 Unn WIEW-580 w/c/w 6 3:46. Then, the highlight of the might, KTAR-620 Ariz. # 3:29 w/HI, yech. Dollg Holiday has only one redeeming characteristic + her voice is easy to recognize! Poor log: only two IDs. At 5:30 WOHO-1470 w/rr. Earlier, HJAI-1040 R. Tropicsl taped again. Would someone w/access to a cassette player & who understands SS please write? I have 45 minutes of SS loggings & would like to have them translated. I support CPYE, the 73 Convention site. 73's (the year I graduate). LATER. Tis 4:30 4/19 & I just heard a bird. Nice rhyme. Terrible CX this AM. I got up @ 1:55 to the tune of good CX, but by 3 they had become awful. CXY-580 6 3:30 w/contest comcerning their announcers. MULF-790 on @ 3:33. WKEM-1520 a newie @ 4:05 w/MoR & ed or two. Lots of slop from - would you believe - KXEL? Where's the Friendly C ndy Company? Best log of the night was an unID on about 655 (I need a frequency meter) w/MoR EE U.S. songs, but talk & ID were in SS. They had a very complete ID 6 3 but since my SS is mediocre at best, I can't give a transcript, but it was definitely NOT caroussel or Jumentod. The us was been hice, & signal fairly strong, but fady - who? 73-

GANY ATRINS - 2200 West Barnett Avenue - Louisville, Kentucky - 40210

While on vacation in early March, I had a real nice visit w/Walter Breville in St. Louis and enjoyed hearing some of his taped IDs, especially WINN-1240. Also I had a long chat on the landline w/Jack Hathaway in Champeign, Ill. Since I visit both of these areas regularly, I'm sure we'll get together again. I recently pirchased a deluxe model Space Magnet but I haven't had too much of a chance to check it out yet. Now to new DX: 2/20- WGOK-900 Ala. s/off @ 6:47pm. 3/11- WKEA-1550 Va. s/off @ 6:33. 3/15- WAA0-1530 Ala.f/c @ 2:03am. 3/18- KLWL-1480 Tex. 6 1:20an v/PoP. 3/20- R. Barbados-900 @ 8pn. 3/22- MSYL-970 La. 1:15 an w/f/c: WPRC-1460 Ala. @ 1:27am; WLDT-1340 Mis. f/c @ 1:55am. 3/26- KCHA-1580 In. @ 1:55 w/f/c. 3/27- WAGG-950 Tenn. @ 7pm s/off. 3/28- WTPR-710 Tenn. @ 11an. WISE-1310 N.C. w/DX on 3/29 8 2:17. 4/9- WHES-1050 Ky. 8 6pm after WZIP's s/off; WIXC-1140 w/s/off @ 7:15, ID as "Wixie in Dixie" but I missed the location because of a telephone call. Is this one Fayetteville, Tenn. as per FCC info? I sure do wish I could have tried for the WINC TEST as N.H. is one of three states I have not heard. I did send both WHNC & WHN thank-you notes, though. 73s from the land of pretty horses and fast women.

Dr. RICHARD E. WOOD - Dep't of Foreign Languages - L.S.U. - Batom Houge, Le. 70803 A new receiving set-u2 is now in use: The Drake SPR-4 and the Worcester Space Magnet DeLuxe model. I have also installed quite an effective ground system; a metal rod driven into the Earth and a heavy2duty cable running up the wall, into the second-floor spartment, and to the chassis. It reduces not only static but especially man-made noise including fluorescent lights. CX as of this writing, 4/21, are rather Auroral; no Europeans moted in the last two weeks. Cemar Objio's U.S. loggings in DX NEWS 4/17 are quite remarkable. I will be writing an SM DX column for Fopular Electronics from the June issue op. I may not make it to NEC Convention this year, as senancer will have already started by Labor Day; IRCA date is more convenient. I will be in B.R. throughout Summer, teaching.

REMEMBER, ONLY ONE MUSING PER MEMBER PER ISSUE, AND A 30-LINE DX NEWS LIMIT!

J. RUSS MAPPIN - W-2924 Garland - Spokane, Washington - 99205

The 4/3/71 DX NEWS, page 10, had a Musing by Cesar Objio. He mentions the Heath IB-101 frequency counter. Let me make one thing clear. (Where have I heard that?) Cesar's remarks lead one to believe you can connect the IB-101 to your RX and read the frequency you are tuned to. Not so! I considered building one for just this purpose, but was told by a local ham the reasons it will not work. I was skeptical so I wrote Heath. Their Mr. V. W. Staub Tech. Consultant, enswered 'The IB-101 is not capable of being used to read the incoming frequency that the receiver is being tuned to. This type of application would require the circuitry described in the 10/70 QST. We have no recommendations for modifying this equipment to do the job you intended with the Hammarlund H2-160 receiver." It might be well to pass this info on to the members, as some might be considering this piece of equipment. The 10/70 QST can be checked out at your local library. Now I might introduce myself as this is my first to the NRC. I have been a member eight months. I am 71, have been dial twisting since 1928 - some times out during the war & when I was busy making a living. I am retired now and busy LIVING. Over the years I used 16 RXes. One of the later was a galaxy R-530, which turned out to be a lemon. Back for repairs three times. I traded it down to a Drake SPR-4, which is a much better RX. I am now using the SPR-4 and a 15 year old HQ-160, three antenna, a 50' wire, 30' vertical, & SWL-7 all patched through ENC connectors and 58U cable to any RX. A 4 copper rod ground, which is very important. I have an air loop, not too effective, also the AL-4 by Drake for the SPR-4. Real poor on nulling, not worth the \$20. I plan on an SM-1 soon. At another time I will list DX. 73s. (We look forward to that time, Russ, and WEICOME to the NRC! -ERC) (Suggest using a Signetics IC phase locked loop to provide signal for IB-101; prototype works well; details soon GPN RM3 DAVE DOSWELL - Naval Facility - Box 71 - F.P.O. - Seattle, Washington 9

ADAK, Alaska. Spring has yet to arrive as every few days there are snow flurries here but within the last few weeks CX have sure deteriorated. Even so. I was able to hear WBZ & KDKA one night ago. Adak's halfway between Seattle & Tokyo so a lot of DX is Japanese, etc. which I'll leave out of Musings. Two of us are DXing here & we're keeping what amounts to a joint log - so some of these I haven't heard myself. Times are EST. 4/5- KAHU-940 @ 4:08. KUAI-720 w/ Have ian-type mx @ 4:15. 4/6- VOA-1140 Philippines @ 3 w/VOA ID. In EE "DZCH, Bulacan, Philippines" ID on 1600 @ 5:30. 4/19- KACT #1-1520 @ 2. KNUI-1310 at 2:20 w/Hawaiian Islanders' BB. KHSL-1290 @ 2:45. CHQB-1280 @ 3 s/off w/GSQ. They announces s/on as 3, EST. KIT-1280 @ 3:45 w/rr, louder than CHQB. KREX-1100 @ 3:45. XEQR-1030 @ 3:50. KDKA-1020 @ 4. KIKI-830 @ 4:05 w/KIKI Hitbound" ID. KJR--950 @ 4:25. KHVH-1040 @ 4:45 w/CBS Information Central NX. XEG-1050 was I&C © 4:50. At 5 the announcer on 1030 was talking about Boston & gave the time in EST but no actual ID as WBZ. KMO-1360 @ 5:20 w/c/w. Best Eastern catch to date is one that Paul (my DXing buddy) heard, but not I. Rats! On 3/27 he caught a "Ses-Joe Ontario" ID on 1290 @ 4:03. CJOE, London, Ont. Maybe someone can clear up e question. Quite often on 790 are the letters "KB" over & over in Morse Code. Sometimes it's "KC" instead of KB & it's not KCAM Glenallen as they've both been heard at the same time. On 540 in CW are the Ltters "NUD." What and where are these? For now, 73.

GREG HARDISON - 17600 Orna Drive - Granada Hills, California

4/12. Well, CX here in Southern Cal. have been beautiful lately. MM 4/5 was a school holiday here, so I was up at no o'clock in the morning going over the dial several times. Actually I got up © 5:45 EXT to check KFI, which is supposed to be on SP 5-7am but I had to wait for them to turn off until 6, when they went off for five whole minutes. During that five minutes, CMQ was blasting in w/Calypso-type mx & SS announcements. KBIG testing © 6:10 w/MOR & fighting villently w/KCRS' OC. Also WPTF#680 © 5:51, WAPI-1070 © 6:18, & WDXR-1560 6:27. Was WAPI on their night power of 5kw at that time, or on full 50kw? Also, would wDXR be on night lkw, or day 10kw? Neither one has PSA on full power as far as I sam tell. I got my first TP (?) on 4/8 on 725k © 4:08 w/Oriental mx, staccato voice, etc. It turned out to be R. Pyongyang. It faded © 4:25 u/WON slop but not before I got 17 minutes of chants, etc. CMW-590 picked out of KFXM on 4/9 © 4reveilee-type bugle call, SS, etc. OC-880 looping E o/WCBS NX, KEVN test? 73. STEVE KAMP- 6149 Monteverde - San Jose, California - 95120

Veries: v/1- KDXU-1450. v/q- KCBQ-1170 WAGL-1560-TEST (thenks, Harry Helms) JOIB-750 CJCA-930 JOKD-700 WRVA-1140. v/f- KTOK-1000. v/r- KALE-960 KTHM-990 WDXR-1560 KCIR-1530. DX here since last Musing (details in DDXD): 4/4-KEOS-690 W/XETRA off in early eveing, PST. MM 4/5- KDXU-1450 found f/cing 15 minutes early @ 12:27-12:30am easily overriding local KEST. Other catches: CKOK-800 XELZ-1440 WRVA-1140 KLIR-990 KCAC-1010 KIXZ-940 JOUB-770 for tape report, KRMG-740 KRVN-1010 KCIR-1530 KUAD-1170 KRG0-1550 KJST-1420. 4/8- WAGL-1560 RS s/on @ 6:03am w/GSQ-like anthem - good signal & a good bet for those who missed TEST. SSS that day- KMYC-1410 KROW-1460 KKEY-1150. 4/11- KIZ-560. Now, I'd like to thank CAR & the rest of the BPC for publishing "LETTER FROM A PIRATE". It's about time someone spoke up for pirates is a DX bulletin and told a few truths about ham radio! In my opinion, has radio is a waste of time, as little is ever talked about by hams. Hams never talk about anything controversial, as politics, etc. is considered taboo - I find such an attitude disgusting. Ever hear a ham brag about how many countries he has worked? He rarely ever makes a long QSO w/a station in a rare spot - he just gives a signal report, asks for a v/q and gets out. Some hams in super-rare spots have been forced to leave the air because of these DX hounds. At present, the FCC is considering opening up a "license-free amateur band". Really, the FCC would do better to open up a band for free radio. rather than give bunch of middle-aged juveniles the chance to turn another slice of the radio spectrum into much of what CB is like now 73.

CHRIS HAMBLY - 47 Chessell Street - Box Hill North - Victoria, Australia - 3129 Well, here I am again after a very long absence from these pages & I'd better give the membership a re-intro and a brick-bat to HQ for sending my last copy of DX NEWS by ship.* Would you remind HQ that my issues come via air mail? Getting back to the re-intro I've recently sild av EA+600 and purchased the Trio 9R59 DS & also have just got a Crystal Calibrator #10 which would be soon in operation once I get a power supply. The Trio is very good selectively in the 1440 range and does not have the harmful harmonics that the HA600 does. I hope to have the loop in operation soon after a year or so of waiting and then I shall be able to give you a report from Australia. I hope HQ would be interested in this. Also I would like to remind the membership I swap TV Guides & if anyone'd like one just write. I also can send a green section out of the Age newspaper (our local paper) which has the programmes of all our local radio & TV stations. radio 3AR &3LO, etc. I just recently got veries from IXI-1590 and Saigon-540. Also I am hearing numerous Chinese stations at the top end of the dial but I need the calibrator before I can give you any info on these. I must end now. 73s. * Oops, sorry-gpn

DAVE WHATMOUGH - 284 Main Street West - Hamilton 12, Ontario

Veries since last report include: v/l- KRGI WGGO WEBO. v/q-WSAU. v/f-WAJR. v/r-WEYY. They sure don't come in very fast any more. Only DX this month was MM 4/5- WAJR-1440 ETIng 2:02-2:23 L&C. 4/8-SSS brought WSFW-1110 u/CFTJ. SM 4/18- KCES-740 5:15-5:30 S-9 copy & no fading. First time I've heard WC stationd when daylight is streaming through the window. KCES gone by 5:45. Very strange morning all around. On 1340 WNCO Ashland, 0. all alone till 6:45 when WKSN arrived on the scene. Locals CKOX/WUSJ-1340 still not on @ 7:30. This is the first I've DXed SM for several years and I was amazed to see how many still signing on as late as 8am. Groundwave CX exceptional until about 8:30 from Eastern N.Y. & Pa. Things like WADR-1480, WTKO-1370, WEND-1580 WIXZ-1360 WEHH-1590 and othersm all 200 miles or more, solid copy 8-8:30 w/absolutely no fading. I enjoyed the get-together in Yojngstown. One of the biggest CM trades took place between Dan Myers & myself. Watch out Joe Kureth, we're catching up. Now that WELW has been logged, WEKC-1560 Chardon, 0. becomes my closest unheard, and with CFME Sincce s/off @ 6 every night maybe this one will be easy. 73s.

JOHN T. TWEEDIE - vacationing in - Potosi, Missouri - 63664

I am here for two weeks' vacation visiting my son & nis wife. Very nice around here & I can listen to KYRO which is the local station, also KFMO at Flat River. BEN DANGERFIELD 3rd - 202 Governor's Drive - Wallingford, Pennsylvania - 1956 I have been listening quite a bit but haven't reported in

for two months, so as usual I will just list some of the highlights. 2/24- Did anyone hear Jean Shepherd on WOR rambling on about how he had been picked up in Anterctica and Holland ? (For what? -ERC, hi) Back to my DX. I heard a Russien on 1525 @ 6:15pm - good signal. 3/4- CHRS atop 1090 most of the evening, and WJML atop 1110 @ SSS. 3/8- I discov red the Frazier-Clay fight on the RAI net in Italian, of course, and noted audio on 656 845 899 1331 1578. March generally was en excellent TA month. 3/12- CJRB quite alone on 900 @ 8:30pm, when looped that direction. 3/19- Arabic program on 1484 @ 11:18pm turned out to be another Libyan station, //-1124k. 3/21- BBC-1457 apparently at Crowborough, was like a locpl @ 7:30pm w/a church of England broadcast over the World Service. Skopje-809. Yugoslavia was clear @ 10:57pm. MM 3/19- Interesting morning. The SSes on 670 780 & 860 carrying ER were HRN, HRNQ & HRU, all heard between 3-4am. HRNQ, IDing as R. Morezen, dominated 780 though listed for 770. Same morning, PRB9-1000 wes very sttong @ 3:15, & LR3-950 was on top @ 3:40 w/WPEN off. Incidentally, WPEN has been off for several MMs. Noted on 4/1: WIIL-730 @ SSS. MM 4/5-A good one. KKHI-1550 nice @ 3:15 s/off. PRF4-940, Rio, completely dominated from 3-4am. Surprise, LRA-870 w/clear IDs was alone & good from 4-4:30. And LRA7-750 believed // to LRA. 4/9- R. Demerara had slipped to 761k from 8-9pm, & had a beautiful signal until their 9:15pm s/off. Mid-April has brought Auroral CX, and MM 4/19 there was no PRF4-on 94C. There was instrad, KIXZ @ 4. 4/21- Station heard throughout the evening on 1403 sounds like, and may be, Conakry, Guinea, so perhaps it is a sometimes AN station. Upper band TAs still good.* And, how, Ben;

DAVE SCHMIDT - 44 Green Lane - Green Ridge, Pennsylvania - 19014 see p. 24! gpn

Greetings from the land of stations who have all modulation and no carrier! It's been a few months since last report so I figured I'd drop in a few lines. The draft board is still hot on my trail but it seems like they don't know what to do since I started asking questions, hi! I just got the set and the loop hooked up again on 4/17 (in about five minutes, hi!). The loop still has a few bugs and will have to be rewired. It's nice to hear things like local WJWL-900 of WFIN, WAYE-860 o/WTEL, WMID-1340 w/no WHAT, WGH-1310 at a louder level than WCAM, WAEB-790 o/WTAR, etc. Speaking of WAEB, NRCer Joe Benson was recently employed by them and is doing the /N show. I told him to send in some info but I guess he won't - he don't know how to spell yet, hi! (Maybe he don't know his grammar good neither -ERC) Only DX is 4/19 w/WBAY-1360 @ 12:14am, w/c/w. In local tidbits: WEEZ is now c/w anymore. WFIL will be moving their studios shortly since the FM & TV were both sold seperately and will probably be off a few morns when it's taking place. WCAM is getting new owners (gang that owns KUDL-1380); WPEN-950 is under new management (again), their third new owners in the past six years! WAAT-1300 is due to change calls. (They already have, Dave, back to WINJ -ERC) Sorry that I didn't make the YAD thing; my time was spent elsewhere -hi! I need Ed Racis' address. And to all who are in the S.E. Pa. N.J. & Del. area, we will all have to get together and start reporting and give Youngstown a run of it. Who knows, by doing that we might even get a report from Joe Jones, hi! 73.

SAN F	RANCISCO	GIANTS' BA	SEBALL	NETWORK: OAKLAND	ATHLETICS '	BASEBAL	L NETWORK:
560	KSFO	570	KCNO	1090		1480	KWUN*
580	KMJ	1230	KDAC	1230			KBLF
	KWIN	1240	KPLY	1270	-	1510	KIRV*
600	KVCV	1290	KHSL	1340		-)10	KTTM*
620	KWSD	1380	KTOM		KAOR	1110	KPOP
630	KOH	1400	KUKI	1450		2110	14 01
760	KGU *	1450	KFIW	,,-			
970	FBEE	1490	KSYC	* - weekends	and holiday	s.	
980	KIINS	1530	KFBK	(These two submit			rchevski)

Several have sent the KEY stations only which was listed in the Sporting News of April 10. We want the NETWORKS carrying the games, as in most cases, the key station is a big, commonly-heard one. The list is printed for DX purposes, not for publicity for the baseball teams! CARTER SCHOLZ - 3 Somerset Road - Tenafly, New Jersey - 07670

Long time, no Muse. A recent camping trip to N.W. N.J. found me with a positively putrid transistor portable RX trying to DX off & on. Daytime found WABC & WNNJ-1360 to be the only listenable stations; at night the dial was filled, but dial calibration (At 1,000k per inch) made DX impossible. However one night (I believe it was 4/14) I think I had ZNS u/WPTR-1540, and later that night I saw a spectacular Auroral display. SSS 4/15- WASA-1330 Md. s/off clear from any WPOW N.Y. QRM! Very nice. Cesar Objio, your "WGFM New York" is probably WGSM-740, Huntington, L.I., N.Y. (WGFM is WGY's FM calls, Carter - and Cesar -ERC) Thanks to Jerry Starr for having the 1971 NRC "Convention" over Easter weekend, and regards to WHOT newsman Art Jordan who is undoubtedly scrutinizing this Musing with a microscope. If you put it under ultra-violet light, a dirty picture appears. (UV lamps are available for \$20 from Paul Parker, \$25 with a local/ distant switch). Jerry had a DOT pattern book: Did you know you're in WERA's major lobe, ERC? All correspondants, please write. 73s. (I can't be, Carter, for they protect WWRL's primary coverage area, and this is it! -ERC)

RONALD F. SCHATZ - 510 N.E. 138 Street - North Miami Beach, Florida - 33162

Greetings & solicitations from cardioid land! First, I wish to commend GPN on his extremely tactful though foggy article entitled "Pattern Controlled Loops." However, for a clearer & more comprehensive treatment of cardioid theory I recommend my upcoming "Loop-Sensor Cardioid Array - Part II" to appear in IRCA's bulletin & HOPEFULLY in here too, GPN permitting. Now, if I may clear up some misconceptions: 1) Cardioid arrays are nothing new. The FCC, etc. heve been using them for decades to solve the "1809ambiguity" problem inherent in the standard loop. In fact, I know of a marine RX equipped with such an array selling for about \$155 in certain marine electronics stores! 2) Technical literature on CA's is relatively rare, & 99% of it treats the subject only in terms of its capacity to eliminate the 1800 ambiguity. The CA designed as a nulling instrument, therefore, is very much a pioneer field on the practical side. 3) Over the past four months I have designed & built several ISCAs, all of which exhibited perfect-null cardioid reception patterns while the later models gave excellent & surprisingly easy pattern control. Richard Clark has been DXing with one of my designs for some time now, & several other DXers are building their own from plans which I supplied them. 4) The one big drawback of the ISCA, as compared to the standard loop, is that it's not a simple "tune & turn" operation. Finding the null is a matrer of shuffling at least three variable controls, & since the array is extremely sensitive to even the slightest electrostatic change in its vicinity constant retuning is mandatory. 5) As mentioned in my article "Loop-Sensor Cardioid Array - part I" (submitted to HQ some time ago for offsetting) the ISCA's greatest value is the tremendous width of its null area, a factor which makes all that delicate tuning worthwhile. 6) In the same article, please correct my formula for a cardioid pattern to read something like "K plus coseK, K - 1" - sorry 'bout that. Use of the sine function, however, is solely a matter of reference & is no great sin. Well, in less dramatic news: CMHQ-630 has been off the air for weeks now, w/CMHD-890 carrying "R. Liberacion" in its place. Why CMHQ is off makes interesting speculation. CMQ-640 has been much stronger lately, but off frequency HJBJ still causes a buzz all daylight long. Now that I've perfected the ISCA - excelsion! Onward to the narrow-beam array! See you all on top of Mt. Tamalpais in Sept. & in Miami/Fort Lauderdale the following year. Recuerden: La Florida y vos en '72! IXXXIII y el mejor DX.

TONY LAGATTUTA - Box 6291 - Portsmouth, Virginia - 23703

Just a few lines from Va. 4/25- Today Va. is on DST. Nice verie in from WIKR-1510 Norwalk, 0., 500w, heard 4/4 s/on 7:30, CM shows four sharp nulls to the W. 4/4- WJAX-930 atop channel @ 9:55pm. LAs were all over the dial but I don't speak SS, hi! WANV-970 clear @ 10:05pm. They also come in during daylight. 4/5- I copied WMCA-570 @ noontime, while looking for WLLE-570, which may have been in. 4/7- WYTI-1570 s/on @ Gam. WDTY-1420 (semi-local) s/on 6:01. 4/24- WARR-1520 atop @ 7am; later, WSIT. Is WARK the new 1,000w daytimer in Warrenton, N.C.? (I think so -ERC) Seems I need the NRC Log, hi! Best wishes. (And it seems I need to do the updating in mine! -ERC)

12 HANK HOLBROOK - 7211 Chestnut Street - Chevy Chase, Maryland - 20015

About time for my annual report to Musings. I'd better re-introduce myself. I have been DXing since 1946 & a member of NRC since '48. From the late 40s to early 60s I concentrated on BCB but in recent years I have become mainly a utility & FM DXer w/occasional tuning on BCB. Most listening below 3mc/s or above 30. I expect to do more BCBing next Winter as I swapped the HRO-500 (biggest mistake I ever made in a purchase) for an older model S_-600. Hammarlund makes a sharp RX. I'm still using a 20-year-plus HQ-129-X at the cottage. Recent DX includes WHIW-1170 N.J. 12/29; HIFA-1597 D.R. 1/16 @ 9:10pm. WYDE-850 Ala. 6pm. WREM-1000 Ky. 6:12pm 2/26. WEEP-1080 Pa. 2/27 @ 9:38am & 7DK-1100 An-tigue 3/8 @ 7:43pm on. Underlined have QSLed. Of above, most interesting verie wes two pager from WREM. CE says in part "Your hobby sound quite interesting -I've never heard of anyone logging BCB stations before." Come on fellows! You should hear them as their XR is on Pine Mountain some 3,000' above sea level. Some fine veries received in past couple of months from stations heafd in years prst. Oldest is from EAJ-29-953 for report of 11/64. No f/up sent since 1965! Inother surprise was Surinam-725 from 3/69 report. Best of all was from EFJ-57-894 Canary Is. for 12/69 reception. Never give up! All band veries total 7,029 of which 2,281 are BCB; 97 BCE countries QSLed. I have new hobby which is really competing with radio. I purchased a Schwinn ten speed bicycle last July and so far have pedaled some 350 hours for 4,830 miles. Anyone want to jiin me the Summer of '72 for a trip across Trans-Canada Highway? (I'll sit on the handlebars! -ERC) Only 4,725 miles from St. Johns Nfld. to Victoria, B.C. and just think of ell the LPRTs you could log if you weren't too tired, hi! Anyway my weight is down from 185 to 136 & the doc says this 42-year-old is in really GREAT SHAPE!

SCOTT BROCKWAY - 112 North Crescent Drive - Rome, New York - 13440

Ever get the feeling that someone up there doesn't like you? For one thing, very few verifications have been trickling in, and for mother, as I am typing this out, it's snowing (4/24) - hard! Yich! I'd like to know which direction the sessons are going in - backward or forward. Oh well, the few things that are in since last airing of the tonsils are: v/1- WTHM-1530 written on my report, XERB-1090 same (these are v/r!~ERC) WTOC-1290 w/s CM too. CKEY-590, WDEL-1150 w/CM, WEEP-1080 WEAN-790 w/program guide, & WXGI-950 for a report of a f/c. V/qs in ere WIIK-980 WCA0-600 R. Belize-834 w/a map design on an oversized card, WCHS-580 WAIT-820 WHLI-1100 & KOMA-1520 for state #36, f/up. I hope WNAX responds in a smmiler way to the f/up of a few days ago. For some reason, I haven't been DXing too much due to general apathy, I guess. Friday nights are spent socializing w/the weaker sex & other ones are generally devoted to taping mx off the RX. This is added to my ever-growing tape collection, and the cost of tape cassetts is driving me to the brink of bankruptcy along w/the \$\$ spent on other - ahem - necessities of life like the first reason for not DXing. But if you've got to go, what better way, hi? Till next accumulation of info, 73s.

ERNEST R. COOPER - 438 East 21 Street - Carrier Route 56 - Brooklyn, N.Y. 11226 Local newsettes: WJRZ-970 goes to WWDJ in May, & to rr format to catch the crumbs that fall off WABC's table. They will drop METS' BB next sea- ~ son, too. WAIK-1370, WRIV-1390 & WKIP-1450 have all dropped the METS for the YANKEES, as noted by hearing same lately. METS are on WJRZ-970 WGLI-1290, WNAB-1450 & WVIP-1310; maybe others even more remote, hi. WNYC-830 & the FM & TV outlets owned by N.Y.C. have dropped 55 employees & go to 11 hours on WNYC-830 starting 5/1 - the golden op_ortunity for NY/NJ men to log KBOA at their SSS! And, WQXR AM & FM have brought an offer of \$10,000,000 on the market! The N.Y.Times, owners, are mulling it over. There go all the locals I ever listen to - WJRZ for c/w, & WNYC & WQXR for classics! New York radio is as blah as anywhere in the country now - e big nothing. Just run-of-the-mill stuff - endless boring SIDS on so many stations (does tha Mafia control this, perchance? Why else'd a station bore its listeners with repeated jingles, over, over, & over?) It's like . listening to someone talk who keeps repeating the same cliche over & over, like "y'know" "y'know". Bostonians don't know how lucky they are, radio-wise, hi. Very little DX, nothing to write into DX NEWS about, so - C U N 15 fortnights.

PATTERN CONTROLLED LOOPS FOR THE MEDIUMWAVE DX'ER *Gordon P. Nelson

[Continued from the April 17th issue]

The previous table showed the effect on the basic cardioid pattern shape as the ratio of the vertical to loop signals was varied (R = E/B). If there is no vertical antenna at all, R = 0 and and we have a normal "figure eight" cosine loop pattern, with equal peaks and nulls separated by 180 degrees.

As the amount of vertical signal is increased (by using a taller vertical, for example), R in the equation increases and the nulls begin to pull together. If, for example, the pickup of the vertical is adjusted to one-half of the loop signal (R = 0.5), the nulls are 120° apart and the two peaks are definitely no longer equal in pickup: one is about 9.5 db (about 2 S Units) more sensitive than the other.

By the time the relative amount of signal from the vertical antenna reaches 0.9 of that from the loop, the nulls are still 52° apart but the pickup of the smaller lobe is less than one-tenth of the larger.

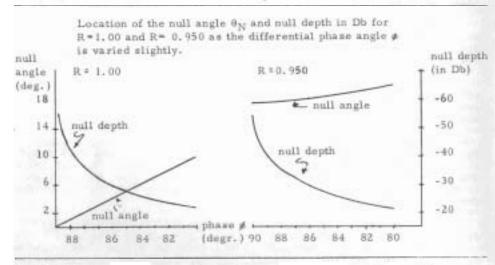
By the time we have increased the amount of vertical antenna pickup to within 1% of that from the loop (R = 0.99) the nulls are within 16 degrees of each other and the pickup from the small middle lobe is less than one-one hundredth of the main lobe.

When we adjust the signal from the vertical to a value exactly equal to that coming from the loop, the nulls merge together into a single null and we have the basic cardioid pattern. One of the characteristics of the basic cardioid pattern is that the pickup in the peak direction for a cardioid is twice (6 db) that of either the loop or vertical antenna alone.

What does this mean to the loop builder? It means that any attempt to construct a practical pattern controlled loop will require very careful adjustment of the relative signals contributed by the loop and vertical antennas. If our loop cum vertical array does in fact perform according to Equation 7 (see appendix) which is the classical textbook behavior, very slight variations in the electronic parameters will produce rather major alterations in the shape and properties of the resulting pattern. A one-percent shift in relative signal pickup, for example, will cause the single cardioid null to split into two nulls more than 16 degrees apart.

In order to thoroughly null out a powerful local station (say a 50 kw'er within a few miles) a null depth of at least 80 db is essential. Assuming a cardioid loop as described by equation 7 is adjusted to completely reduce the troublesome local station, observe that a variation in the relative pickup of only 0.1% will result in a new pattern with nulls split by about 5° and only 66 db of effective null in the original direction. Holding the relative signal contributions from the loop and vertical to within the tolerances necessary for really deep nulling will require extreme care in even the best of circumstances because of the sensitivity of the cardioid pattern to very small variations in relative pickup. THE PHASE PROBLEM. The previous discussion, you will recall, was based on the assumption that the relative phase shift between the two signals (as given by the quantity # in our equations) was adjusted exactly to 90°. But in actual practice it has been our experience that it is even more difficult to adjust and hold the relative phase than it is to control the relative pickup. What will be the effect of variations in the exact relative phase between the two signals?

Whereas variations in the relative pickup (as measured by R) have the effect of shifting the location of the nulls without affecting their depth, fluctuations in the phase adjustment will degrade the quality of the nulls as well as shifting their location. Suppose we have been able to adjust the relative pickup of the two antennas (R) to exactly 1.000; what happens if the phase differential changes by a small amount? The following graph shows the effect of varying the phase by a small amount from the correct setting necessary for the cardioid pattern.



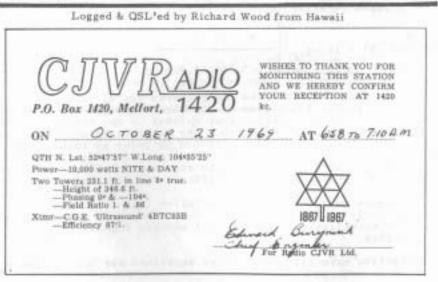
care weatio, R, ey ehat drees. Notethomenaticar, thedeected -e error inings th nthat theynlyaph hoslint vaonsse gln relativeupror hafrom a carewiep mllocron wwoder)tl8°. Stusicationdep-nullowe

SUMMARY OF THE BASIC PATTERN CONTROLLED ARRAY.

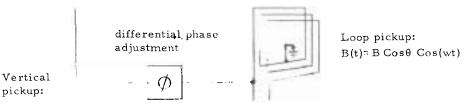
A pattern controlled loop designed around the basic equations given here and elsewhere will require very careful adjustment of the relative signal pickup ratio and phase differential. Very small deviations from the exact values given by the equations will have rather major effects on the shape of the resultant pattern. Slight variations in the pickup ratio of the loop and vertical antennas will produce significant variations in the locations of the nulls; minor fluctuations in the differential phase will seriously degrade the null depth, thus limiting the ability of the array to null strong stations. Taken together, slight fluctuations in both amplitude and phase (R and \$) tend to reenforce each other and readily produce significantly distorted patterns.

In the first part of this article we have attempted to describe the basic properties of the simple pattern controlled loop. In addition to our derivation of the basic cosine and cardioid patterns, we have given the equations for the patterns produced by arbitrary values of relative amplitude and phase. In particular we have provided the equations which predict the behavior of null location and depth as we introduce slight fluctuations in the array as are likely to occur in actual practice due to component drift, maladjustment, etc. To the best of our knowledge the equations for the general null location and depth for the arbitrary pattern have not been given before in the texts alt ough their derivation and evaluation are rather trivial.

Since we had performed this mathematical analysis prior to our first attemts to actually construct a pattern controlled loop array, we were spared a considerable amount of experimentation and head-scratching when we actually began to experience the problems produced by the slight fluctuations in amplitude and phase described above. Our first circuits (to be described next issue) provided us with patterns which while encouraging - especially for groundwave signals - still behaved somewhat unpredictably on skywave signals even with very tight control of R and ϕ . As we shall explain next issue, the basic cardioid pattern as described in standard textbooks and in this article breaks down in actual practice because of polarization ellipticity, wave tilt, and ground effects. In future issues we shall provide information not previously available about these complications and provide plans for what we've found to be the most effective circuitry for practical pattern controlled loops.



APPENDIX. Equations for Pattern Controlled Loop & Basic Cardioid.



E(t)= ESin(wt)

THE GENERAL PATTERN.

The signal pickup voltage in any azimuthal direction $\boldsymbol{\theta}$ is directly " proportional to:

$$V(\theta) = [\cos^2 \theta - 2R\cos\theta \sin \phi + R^2]^{1/2}$$
 where $R = E/B$

The pickup voltage in any direction relative to peak signal pickup, expressed in Db, is given by:

$$\frac{V(\theta)}{V_{max}}$$
 (Db) = 10 Log₁₀ $\left[\frac{\cos^2\theta - 2R\cos\theta \sin\phi + R^2}{1 + 2R\sin\phi + R^2}\right]$

Differentiation of the above expression shows that the nulls of any such pattern are located at the angles θ_N given by:

Substitution back into the pickup equation shows that the nulls have a depth relative to peak pattern pickup given by:

$$\frac{V_N}{V_{max}}$$
 (Db) = 10Log₁₀ $\left[\frac{R^2 \cos^2 \phi}{1 + 2R \sin \phi + R^2} \right]$

The above equations describe the patterns for all arrays produced by combining the signal from an omnidirectional vertical antenna with the output of a perfect loop antenna in any ratio and with any relative phase relationship. The generalized equations above predict the basic cosine and cardioid patterns as found in all standard textbooks (see below). These almost trivially simple equations do not however take into account the effects produced by the following physically significant complications:

- a. Polarization ellipticity and rotation (the above equations apply only to linearly polarized wavefronts in general); this is an unrealistic assumption for skywave signals in actual practice.
- b. Effective wave-tilt. The above equations not only assume a

linearly polarized wavefront, but also assume that the effective effective wavefront at the antenna is parallel to the ground. This is untrue in the case of all real signals: skywave signals because of skip geometry, and groundwave signals because of the effective wave-tilt produced by the interaction of the wavefront with the nonideal ground beneath the antennas.

c. Deviations from the simple ideal vertical antenna pattern assumed above. In actual practice the pattern of a real vertical antenna is rarely uniform in azimuth and the transmission line from the vertical antenna almost inevitably exhibits a finite pickup of its own.

All of the complications listed above must be taken into account if the behavior of a real pattern controlled loop to real signal wavefronts is to be uniquely described. We'll return to these problems later.

SPECIAL CASES OF THE BASIC EQUATIONS.

NO ELECTRIC OR VERTICAL PICKUP, R = 0.

In this case the general equation given above reduces to:

$$\frac{V(\theta)}{V_{max}}$$
 (Db) = 20 Log₁₀ Cos θ

which is the COSINE LOOP PATTERN with infinitely deep nulls at \pm 90°.

CASE OF R = 1 AND
$$\phi$$
 = 90°.

~

In this case the pickup equation reduces to:

$$\frac{V(\theta)}{V_{\text{max}}}$$
 (Db) = 20 Log₁₀ [1/2 (Cos θ - 1)]

which is the BASIC CARDIOID pattern with an infinitely deep null at $\theta_N = 0^{\circ}$. Note that if the inner term is replaced by (Cos θ + 1) the pattern is replaced by its mirror image with the null at 180° instead of 0°.

Part I

Ronald F. Schatz

<u>1)</u> Introduction. This first in at least a three-part article on the Loop-Sensor Cardioid Array will serve to familiarise the reader with the unit, determine the need for such an array by the DX community, and to compare an ideal LSCA with the ideal standard, figure-8 loop. Part II will cover the technical theory of operation, assuming a knowledge of reactance and resonance by the reader (who is advised to brush up on these subjects in preparation). Part III will deal with practical construction and operation, noting the experiences and difficulties encountered by the author.

2) What it is. The LSCA consists of two separate antennae: One is any standard figure-8 loop such as one you are likely using now. now; the other is, ideally, a vertical wire running the centre of the loop plane, but a horizontal long-wire will do fine in many cases. The signals from the two antennae are combined with the correct ratios of voltage and phase to form a K+sine differential pattern of reception known for its shape as a "cardioid".

3) <u>Directivity</u>. The primary characteristic of the LSCA is its unidirectional (one peak/one null) pattern of reception. The peak and null are separated by 180° in bearing, the peak having a gain 10 dB over that of the F8L uncombined with the vertical sensor.

.4) The 180° ambiguity, or the inability of the standard loop to distinguish supplementary bearings, does not exist for the LSCA. Hore important to the average DX'er than this DF characteristic, however, is the array's capacity to null out a strong station thereby unveiling weaker stations lying in the opposite direction, stations not heard previously because of necessarily peaked QRM or an undesired null.

5) The null. This fact was not appreciated by the author until after a night of DX'ing with the LSCA: The null of same is tremendous in size, capable of reducing not just a few degrees of bearing but, in the author's case e.g., all of the U.S.A. and Canada' Below is a table comparing relative null sizes of the LSCA and the F8L. Decibels down are referenced to each respective peak, assuming both peaks to be equal in gain (c.f. 3 above):

	-10dB	-20dB	-30dB	-40dB	- 50dB	-60dB	-70dB
SF8L:	60°	29 ⁰	14 ⁰	so	4 ⁰	2 ⁰	10
LSCA:	180 ⁰	120 ⁰	82 ⁰	57°	40 ⁰	29°	18 ⁰

Note that these are <u>ideal</u> antennae being compared. Any F8L capable of a -70dB null must be considered a precision instrument! Many DX'ers are quite satisfied with but -40dB of attenuation.

6) Proof of Performance. Using only a crude set-up with a longwire sensor the author has accomplished the following feats of DX: a) WINZ-940, a 50-kw Top-40 station only 4 miles from the author's location and beaming toward same with a cardioid of its own, was nulled beyond detection during evening hours, permitting clear reception of Radio Punto Fijo, lying in the opposite direction of WINZ. Interesting to note that WINZ's splas was still present on adjacent channels!

b) On a Monday morning 45 minutes were taped of AFCM-1340 Guantánamo Bay, with signal averaging 30dB over the background "noise". Audible traces of CMGU were present.

7) Advantages over the figure-8 loop. The cardioid reception pattern of the LSCA has several advantages over the FSL: a) The LSCA can differentiate between stations on colinear bearing:, determining exact direction of an unknown station and eliminating one colinear station while peaking the other. b) Experiments show that the LSCA has the capacity to peak 3, even 4, stations, one at a time, operating on the same channel (e.g., 3 stations on 1250 kHz, 120° apart - any one may be peaked 20dB over the remaining two). The F8L is limited to only two stations in practical application. c) The extremely broad null of the LSCA permits the attenuation of many stations in a broad region, whereas the F8L generally nulls only one station at a time. d) Properly constructed, the LSCA's null will eliminate any interfering station, regardless of polarisation errors (The null is tuned in with a pot, coil, and capacitor, so that any null that is not perfect is considered being "detuned").

8) ... and the disadvantages. a) The null is too broad for the LSCA to be of much use in high-precision direction finding. b) Two interfering stations on opposite bearings cannot be nulled. c) Using the LSCA, especially tuning the null, is a test of pati-ence.

9) In conclusion. The Loop-Sensor Cardioid Array far outshines the ordinary figure-8 loop in all respects except as a high-precision direction finder. Its addition to the DX den is highly recommended. The author considers its wide null to be its greatest asset, useful on crowded channels such as the graveyards. As construction details come to light and DX'ers contribute to its perfection the LSCA should prove to be the greatest advance in medium-wave DX antennae since the loop itself.

ADDENDA & Editor's comments:

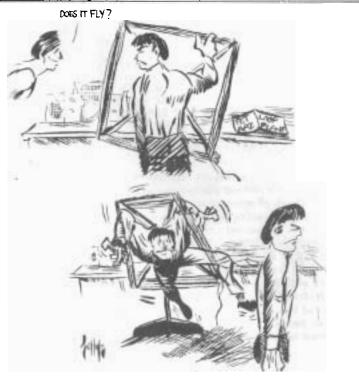
With regard to Mr. Schatz's comments elsewhere in this issue of DX NEWS, the reason that this article did not appear in the previous issue was because we had detected a number of serious technical errors in the original copy and, rather than publish a technically incorrect article here in DXN, we chose to advise the author of the suspected errors so that he might correct them before **the article appeared here in DXN.** Those who subscribe to the excellent ham magazine, HAM RADIO, were recently treated to the unfortunate spectacle of that magazine advising its readers to "please forget" a technically spurious article on antennas which unfortunately slipped by the editorial staff in a previous issue. Rather than repeat this unfortunate process, we chose to advise Mr. Schatz of the suspected errors in his article rather than run it immediately - thus the one issue delay in the appearance of this article. Mr. Schatz has submitted the following corrections to the above article in response

-30-

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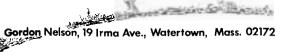
to our communication. (1) "In lieu of my 'K - sine differential', try 'K - $\cos \theta K$, (K=1)'; here K represents the loop-sensor voltage ratio rather than the usual 'constant value'." (2) "10 dB should be changed to 6 dB ".(3) "-10, 20, 30, 40, 50, 60, 70 dB should be changed to the values: -6, 12, 18, 24, 30, 36, 42 dB. The relative angles should still be correct. The numbers 70 and 40 at the bottom of this section should read '-42 dB' and '-24 dB' respectively."

We believe that there are a number of additional major technical errors in this article but, in keeping with the wishes of the author, will append our comments to the original article here in DX NEWS rather than further delay publication. RE: Paragraph 2- the general cardioid pattern can only be obtained by combining a cosine loop pattern with a vertical pattern which is invariant to θ . The equations relevant to this invariance will appear in the next issue of DX NEWS. RE: Paragraph 2, corrected by the author's comments above. Under no conditions can the "loop-sensor voltage ratio" K appear as a multiplicative constant in the argument of the cosine term in the pickup equation. This quantity is equal to the variable "R" given in our equations elsewhere in this issue. RE: Paragraph 7, section d: no linear combination of electric ("E") and magnetic ("B") antennas can be independent of variations in the effective polarization figure at the receiving site as affected by polarization ellipticity, polarization angle, the imaginary component of the complex dielectric component of the ground reflectivity under the antennas, and the wave angle of the effective vector resultant wavefront in the neighborhood of the antennas. We regret the necessity for such in situ corrections to an article here in DX NEWS but we bow to the wishes of the author for undelayed publication of the original manuscript. (GPN for BPC)





9



REPORTEDLY IN OPERATION ...

CYPRUS. The brand new Cyprus relay transmitter for Radio Monte Carlo began testing on 1232 kHz on April 3rd with programming in French and Arabic; announcements were given as "This is Radio Monte Carlo, the first experimental Arabic transmission of Radio Monte Carlo at reduced power on medium wave 243 meters, 1232 kHz." (Editor)

LIBYA. Confirming the suspicions of many stateside DX'ers, Beida on 1124 is using a two-tower directional antenna array for their 1,000 kw transmitter. Benghazi on 674 also has a two-tower array. (MWN)

EGYPT. Cairo reportedly has been heard with a new station on 809 kHz in Arabic; with Abu Dhabi also on the channel be wary of presumptive ID's! (Ed)

BRAZIL. ZYK36, R. Capibaribe, noted in Sweden on 1237 kHz. (ARC)

SINGAPORE. A new 150 kw transmitter is reportedly now operating on 680 kHz. (MWN)

GAMBIA. Radio Syd, formerly based on the pirate ship Cheeta II, began operating from a land-based station on 5/9/70 and supposedly employs a staff of 20. The last information we had on this was that they were using 10 kw on 908 kHz. A good target for this summer and fall! (DXCLUSIVE)

CYPRUS. The BBC East Mediterranean Relay station is now on 1457 kHz and was noted signing off 2315 after World Service news; announced only 1421 and 719 channels however. Much disturbed by another testing transmitter noted often with nonstop classical music until about 2320. This second station may well be the powerful BBC transmitter, believed to be the 1295 kHz rig, which is heard testing nights around 0000 with World Service relays. A rather confused situation at the present time! (Bengt Ericson, Sweden)

URUGUAY. CX12, Radio Oriental, Montevideo is reportedly using "one of the most powerful transmitters in America" on 770 kHz according to a QSL recently received by a European DX'er. Correct address in NRC LA Log to: R. Orientaldd Oriental, Juan A. Rodriguex 1405, Montevideo. (SDXK)

PORTUGAL. San Gabriel's 971 kHz operation is 100 kw and may be the transmitter formerly operating on 1412 kHz. (ARC)

INDONESIA. A DX'er in New Zealand reports hearing a Radio Republik Indonesia station on 1334 kHz; location given as Djakarta. This is the first RRI station reportedly operating on the MW band; the stations reported by Lars Ryden some months ago were private operations. (NZDXRA; Editor)

SPAIN. La Voz de Guipuzcoa now broadcasts in French every Sunday 0900-1100

22 and identifies as "Radio Ocean" for two hours on Sundays; according to info from the station, this one is owned by Mr. Trimoulent, a majority stockholder in Radio Andorra, and expects to increase the amount of French language programming in the future. This one, which operates on 1097 kHz, has been logged in North America with RS Spanish programming. (ARC)

PLANS, RUMORS, AND PROMISES...

JAPAN. The Japanese Minister of Posts and Telegraphs has announced that a major change in the Japanese broadcasting scene will take place soon as the result of excessive QRM from Chinese and North Korean stations. The plans call for an expansion of medium wave broadcasting in Japan, both an increase in the number and power, and for switching some Prefectures to FM at the same time. The new plans are scheduled to be implemented in September but still must be formally approved by the Government's radio wave control council. (Official Japanese sources, via Editor) Hopefully this will put some high power stations on channels more favorable for ECNA reception... Ed.

COMORO ISLANDS. According to La Monde, ORTF will set up a high power station sometime this year to counteract propaganda from Tanzania; this is expected to be a 200 kw medium wave station also to be used for beaming to Tanzania itself. These islands are located North of Madagascar. (ARC)

GABON. On April 16th President Bongo signed an agreement with a representative of the European Development Fund for 247,000,000 CFA francs for the construction of the Franceville radio center which will include a 20 kw medium wave transmitter. (Editor)

IRAN. Radio Ahwaz on 1390 plans 400 kw; Radio Mashad on 725 plans 400 kw; Radio Shiraz on 1050 is using 125 kw. (BDXC)

FRANCE. ORTF plans the following changes: Nancy-1241 to 100 kw; Nice-1241 to 100 kw (and the frequency changed); Strassbourg-1277 to 300 kw. Limoges-791 has already increased power from 100 kw to 150/250 kw. (ARC)

AUSTRALIA. The University of Adelaide has been granted a license tooperate operate a 300 watt station on 1630 kHz; no music allowed. (NZDXRL)

ANTIGUA. ZDK on 1100 kHz plans to increase power to 50 kw. (SXDK)

DENMARK. Radio Denmark will replace the 22 year old 50 kw Copenhagen transmitter with two 500 kw ones in Jylland. (CDXN via SCDX)

GILBERT & ELLICE IS. The new 10 kw transmitter on 844 will be moved to Naribai and it is hoped to provide a directional antenna for better coverage in the Line Islands. (NZDXRL) GET THEM WHILE THEY LAST!!!!!

IRELAND. The Irish Press says there will be new MW stations in the Gaeltacht area, Donegal, Connemara, and Kerry (or at least one new station to cover these areas); Athlone on 566 kHz is to up power to 400 kw. (MWN/ARC/Ed.)

SWAZILAND. Transworld Radio has received permission to build a missionary station near Mbabane; transmitter on MW to be as much as 100 kw. (SCDX)

CHEJU ISLAND. This island South of Korea has been mentioned as the site of the replacement for the VOA Okinawa station in the event the latter is forced out of Okinawa (see elsewhere for further information on the VOA affair). Far East Broadcasting is also takling about setting up a 250 kw transmitter on the same island for beams to China. (Lars Ryden, Japan)

PAPUA AND NEW GUINEA. The ABC is planning the following relay stations which will carry the Port Moresby program (no local studios):

Location	Callsign	Frequency	Power (kw)	Possible opening date
Madang	9MD	860	2	March 1971
Lao	9LA	670	2	June 1971
Goroka	9GR	900	2	June 1971
Wewak	9WK	1520	2	Not determined (ARC)

INDONESIA. The RRI stations in Djakarta, Jogjakarta, Surabaya, Surakarta, Malang, Den Pasar (Bali), and Medan have been visited by Japanese radio experts to investigate the possibility of installing medium wave stations. (ARC)

FIJI ISLANDS. Heard an interview over 4VEF with someone from FEBC who mentioned a new station several times and seemed to say it would be in Fiji; not certain, though, audio was not the best. (Sullivan, Mass.) More info?

CLANDESTINES, BOOTLEGS, AND PIRATES...

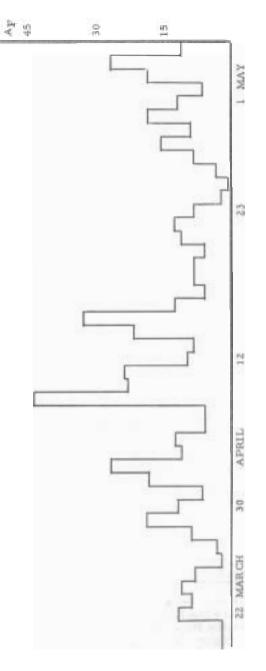
NETHERLANDS. Radio Nordsee International is currently anchored near Radio Veronica's ship. RNI is still operating on 1367 with 100 kw. (ARC)

ENGLAND. Capital Radio will resume transmissions soon. (ARC) Britain is currently caught in the grip of the radio equivalent of Prohibition, with bootleg land-based operations all over the band. Most are low-powered but some, such as Radio Caroline (only a namesake to the former marine pirate)' on 1332V kHz are powerful enough to reach Sweden and Finland. The following stations belong to the Independent Radio Association, 91 Park St., Horsham, Sussex: Radio London on 1125 KHz and FM; Britain Radio on 1180 and 1385; Radio Malvern on 1000; Galazy Radio on 1136; Radio Horsham on 1115; plus Radio Ajax and Radio Reigate, channels unknown. In addition, Radio England operates on 1299 kHz with 300 watts; address is 50 Hempstead Road, Watford, Herfordshire. The most powerful station is Radio 240 on 1250; reportedly using 5 kw. 240 operates with Radio Jackie on 1325, and Radio Free Caroline on 1430; address is Jackie Porey, 62 Kenilworth Ave., Wimbledon Park, London SW 19. (ARC) Come next fall, if they're not all in London Tower, one of these bootleg stations might make it to North America?!

THE NAME GAME...

CEYLON is now officially The Socialist Republic of Sri Lanka. CAMBODIA is now the Khmer Republic. MUSCAT is now the official name of Muscat and Oman.







ROBERT L. FOXWORTH GPO BOX 2111 NEW YORK, NY 10001

Deceptions: (All times are GMT)

- 529 Algeria. Chanting on at 0603, 3/9: not nearly as good as last year.
- 548 Algeria. Oran fair with chanting thru loud het 2352-0000 s/off 4/7 and weaker at 0000 s/off 4/8. (DeLorenzo, Mass)

Morocco. Oujda was in with clear signal and Arabic music around 0200 on 3/10 so must be going most of the night. (Dangerfield, Penna.)

- Alaska. KYAK Anchorage was all alone on the channel at 1200 3/24; has been seldom heard this season. (Millar, Everett, Wa.)
- Italy. RAI carried the Clay (Ali)-Frazier fight eve of 3/8 here, so was AN then, with a readable signal, assuming one knew Italian, I don't really. The fight was also on other RAI stns, of which 845 was by far the strongest. (Dangerfield, Pa.)

Haiti. This is Radio Lumière drifting from 660. (Objio) (This is likely Gene Martin's unID, can someone tell him? ed)

- 665 unID LA. WNBC too strong to ID, hrd 0430 4/3. Unable to DF. (Edmunds, NJ)
- Honduras. HRN Tegucigalpa hrd MM 3/29 before and after 0800 with ER. They were topped by the Cuban. Was // to other freqs in Hond. (Dangerfeild)
- unID. Who has The World Tomorrow at 0510 on MM's? Noted under WLW 3/22 and 3/29 looping South. Seems awfully late for Jamaica. (DeLorenzo, Ma)
- Venezuela. Radio Capital, YVKY, Caracas; a new name for La Voz de la Patria. Re item in 3/20 IDXD. (Objfo)

Argentina. I think I had LRA-7, Cordoba, at 0925 on 4/5 with what sounded like the same pgm definitely logged on 870; see item there. (Dangerf'd)

- Guyana. Radio Demerara was the one causing the severe het here the evening of 4/9 here (0100-0245 s/off 4/10 GMT). Was a very strong and clear sig with WJR and the Cuban no problem. They kept the carrier on long after the 0245 s/off, apparently to correct the problem. (Dangerfield)
- Honduras. Another one with returns from the recent Honduran election, all alone with a good signal. None listed here, but I believe the ID was Radio Morazan, which would be HRNQ. Hrd MM 3/29 0800-0900. (Dangerf'd)
- Honduras. None listed here in WRTHM, but Radio Norte heard. This slogan appears as HRBT-960, San Pedro Sula, so maybe a move, or a relay. Noted MM 3/22 1048 with Honduran ad, ranchera mx: 1055 ad for a "Refresca Tropical", more ads, 1059 ID as Radio Norte. WBEM Carrier intermittent after 1102 but ID again after 1103 as "Radio Norte, la emisora con programacion para seis mil watts." (Watts and not watios? ed). ID later as "Radio Norte, la emisora de todos los hondureños", an obey-the-law PSA. Was very strong at times, and seemed on the high side of 780 hets. This may be IMA's unID in the 12/12 DXWW. (Hauser, Texas)

Likely this one the one reported: stn hrd IDing as "Emisoras Unidas" with ER on 3/29 at 0505. Consejo Nacional de Elecciones through "Emisoras Unidas" a network comprising all stns in the country, directly from the central office. Other // stns were hrd also. (Objio, D.Rep.)(Bartels, New Zealand. 4YA with what sounded like a play or discussion 0913 3/15.

The Puerto Rico. AFRTS Ramey AFB with rock pgm 0856 3/22 "Down in the Boondocks" to 0920. Fairly weak but no real intf. exc weak 4YA which had to be looped out, hi. (Bartels, Wisc.)

(Bartels, Wisc.)

- 26
- THO Br. Virgin Is. ZBVI is on until midnight their local time on Sat. nights, per anmts heard last week. Otherwise; they s/off in the early evenings. (Dangerfield)
 - Yugoslavia. Skopje must have been the very strong signal hrd before and after 0400 on 3/22 in a Slavic lang. At first I thought it might have been the BBC European Service, but I don't think BBCES is on the air at such an hour. (Dangerfield, Pa)
 - 818 Andorma. Sud Radio 3/20 2305 to 2340. Sig s-5 but good audio, all in French, girl ancr with guitar and pop singing; man with news at 2331, also on 3/21. (Kocsan, NJ)
 - an unID. Chanting 0835 3/22. (Bartels) (Must be Apintie, Surinam. ed)
 - St. Lucia. Castries believed to be the stn with an English religious pgm 3/15 between 0951 and 0958 when WHAS signed on. Also had the same pgm on 3/1, at that time WHAS went off the air and I hrd French, between 1016 and 1028. (Bartels, Wisc)
 - 851 Spain. Murcia assumed the one here 3/21 at 2342 with an s-7 signal and fair audio, very relaxed male speech with brief piano interlude at 2345, sideband splash QRM. (Kocsan)
 - By Puerto Rico. WHOA at 0054 4/1 with WWL looped, good with singing in Eng and anmts, and "Sing the Nickle Song" (Kocsan)
 - Argentina. Assumed the one here 3/29 at 0900 "the hard way" under the Cuban and WWL OC; WWL mostly looped (70°); their s/on coincided with the Cuban bells ID and IS; hrd a series of "pips" which sounded like trumpet tones, voice followed but only "onda corta" and "radio nacional" were understood. News for 10 minutes; at 0913 a folksy male ancr with accordion mx and 2 singers. 0916 had 2 singers on a jingle in a long drawn-out commercial. 2 girl singers at 0922 and signal gradually dropped under the Cuban. Logged again MM 4/12 at 0859 under the Cuban. In the clear at 0913 with man in Spanish, "L R A Radio Nacional, Buenos Aires" folo by a man singing with guitar. (Kocsan, NJ)
 - IRA was strong and inthe clear on 4/5 from 0905 to 0930. Was easy, and gave a nice, clear ID as ellay-erray-ah, Radio Nacional de Argentina. Tried again 4/12 but Cuban was dominant. (Dangerfield) (What happened to you on 4/5, ESK? hi-ed)
 - BBO unID SS. Hrd MM 3/22 0705-0800, a varying signal with a bad het, LA mx with several male voices in anmts and cmcls. IS of 2 short and 1 long on a police whistle or a horn during station ID which is difficult to follow but includes mention of "Radio Union" and seemingly, "Buenos Aires". I assume this is Lima, Peru but it lacks the sharp pgmg and IDing associated with OBZ4N. (Kocsan, NJ)
 - BEO Peru. Radio Mil (?-ed) MM 3/22 0831 EST TC, ID, andean-influenced music, a later TC as "las tres de la mañana y 38 minutos en todo el Perú", indicating daylight time is over. (Hauser, San Antonio Tx)
 - Lima very clear with Radio Union ID by YL and man 0800 3/29, hrd 0640-0800 with shrill police whistle repeated twice, usually after every alternate song. (DeLorenzo, Ma)
 - Radio Union hrd 0630-0830 3/22 with MoR mx, many IDs. There was a het from BBC-881 until almost 0700 then generally was on the clear except for an occasional low freq het but no other audio. Cty#39. (Sullivan,Ma)
 - Wales. BBC4 hrd 0608 to 0657 f/out 3/22, news to 0610 then talk. QRM from WCBS testing and het from Lima. Logged Wales as #38. (Sullivan)
 - Montserrat. Good signal 3/18 with BBC World Svce at 0200. (Bartels)
 - By Australia. 5AN Adelaide believed to be the stn with Opera on 3/8 at 1014 with WIS silent. (Bartels)
 - Morocco. Agadir clear with chanting 2330 4/8. (DeLorenzo)
 - Brazil. PRF-4, Rio in with a fairly good signal atop the freq on MM 3/29 at 0845. Was all alone and quite dominant on 4/5 from 0830-0900. This was a good morning for lower So America. (Dangerfield, Pa)
 - 950 Argentina. LR3, Radio Belgrano was on top of several domestics at 0840 on 3/29 with local, WPEN silent. (Dangerfield)

960 Colombia. Radio Sutatenza exclnt at 0858 MM 3/22 at s/on giving outlets; for a few minutes there was a distorted spur on appx 955 but was soon clered up. Then into a pgm, network linked by FM, lasted 90 mins.Outlets listed conflict with WRTVH, including this freq:

HJCY	250 kw	810	Bogotá (WRTVH says 300 kw)
HJOP	10 kw	1010	Barranquilla (WRTVH says HJHN)
HJCX	120 kw	700	Cali (WRTVH says HJGU)
HJHN	120 kw	960	Magangué (WRTVH says Barranquilla)
HJCR	10 kw	590	Medellin (WRTVH in agreement)
	f other	outlets.	shown in WRITH were not mentioned

- A couple of other outlets shown in WRTVH were not mentioned.(Hauser)
- 970 Hawaii. KFUA was copied weakly from 0800 to 0810 3/22. I hrd a newscast beginning at 0800 and the call KGMB was mentioned twice. At 0805, tide conditions were given for Hilo, and a time check at 0805 for "10:05". Copy was very weak under KAKC QRM but am absolutely certain. Although I did not catch the KPUA call at anytime, I am counting as Hawaii # 2. Replay of tape leaves no doubt. Was hard to believe; phonetics of KCHV are so similar, and KGMB not on this freq itself. (Paul Hart, Ft Worth, Tx) (I recall hearing that this station does re-broadcast KGMB news in order to serve Hilo; I too feel it is certainly KPUA -ed)
- 975 Ecuador. Ondas del Pacifico, Guayaquil. Hrd 2355 3/18 with a better signal than 995 and 100% readable. At 0000 they carried paid messages for the people in rural areas without phone or telegraph service. This is a characteristic of many Ecuadorian stations. (Gleason, Puerto Rico)
- 985 Peru. Lima logged 2335 3/18 with ID as "Radio Programas del Perú, nua sola voz para todo el país". Signal was 30% readable. This time is barely sunset in Lima this time of year. The same ID was hrd several times clearly, in a pgm of English and Spanish rock, plus spots. They were gone by 2350. By 0100 the carrier could not even be detected with BFOing. This appears to be a change of name. (Gleason, P.R.)
- 989 Spain. RNE-Peninsular was clearly hrd in spite of local WIBG at 0015 3/22. I had bandwidth at .5 kc and slot tuning at +2 on the 180.(Dgfld)
- 995 Ecuador. Radio Suceso, Guayaquil came in just as the 985 signal faded out with an excellent signal. Far better than ever noted on late night reception. 3/18 at 2350. (Gleason, P.R.)
- 1000 Brazil. PRB-9, São Paulo was very strong at 0811 on 3/19. They were the best Brazilian signal in many a moon. (Dangerfield)
- 1017 unID SS. 0300-0345 3/24, looped slightly north of YSC-1015 taking a null reading. Doubt if it was CMAC-1019 as strong het against KDKA disappears with null toward Cuba. Music with anmts were hrd around 0330, but the low modulation was impossible to read. YSC and CMAC (?) were distinctly separate. This one peaked at a good level at times. (Sundstrom, N.J.)
- 1020 Tonga. ZCO was quite good at closedown at 1000 3/17 and all pgmg was in Eng on this occasion. (Millar, Wash.)
- 1030 Argentina. LS-10, Buenos Aires was hrd below XEQR around 0800 on 3/29 with ant pointing SE; not good enough to report. (Dangerfield)
- 1043 E. Germany. Good signal on 3/12 from 0130-0200 with rock mx and again at 0345 on 3/24. Still seems to be weaker than in previous Years but then, all the low and middle band Germans have been that way for awhile.(Dgfld)
- 1046¹ Cuba. Item in 3/20 IDXD here is Radio Caribe, CMBN. (Objio)
- 10552 Colombia.3/20 IDXD itemis HJBB, Radio Valledupar. (Objio)
- 1061 Italy. Cagliari + hrd 0445 3/22 with good signals; man in Italian(RjE)
- 1120 Colombia. HJJC Cartago, R. Cartago s/off at 0530 to s/on at 1000 3/21. Anned freq as 1130. (Objio, D.R.)
- ** 1121 Dom. Rep. Radio Antillas, HICN Santo Domingo hrd here on 4/2. (Objio)
 - 1137 Colombia, Rio-Mar hrd here 0405-0418 3/17; a good signal. (Bartels, Wisc)
 - @ Unusually strong, on 1138, 0450 4/3. (Edmunds, NJ)

- 28
- 1165 umID. Weak signal, TA. (If so, would be a split -ed). Faded often, lang seemed to be accented English. Pgm was old rock, hrd "Light my Fire" by the Doors. Hrd 0634 to 0659 f/out 3/1. (Bartels)
- 1170 Venezuela. YVQV, Radio Acarigua probably the Venezuelan topping WWVA on 4/16 at 0005, an auroral night. (Dangerfield, Pa)
- 1180 Venezuela? SS in AST, TC, mx at 1035 MM 3/22 assumed to be the YV listed active, YVNU, R. Petrolera, Ci. Ojeda; upon reflection however, it could have bean Chile. (Hauser, Tex)
- 1180 Brazil. PRE3, Rio de Janeiro s/on at 0800 3/14; only the 4th Brazil logging in better than 30 years of DXing, and my first Rio station. (Roy Millar, Wash state) (Nice, Roy. ed)
- ** 1203 unID. Am hearing a Latin American stn on this freq anneg as "el Mundo" and hrd "Guatemala" but can't get anything else as my Spanish is poor. I have 2 fine logs on him, a 45 minute one on 3/18 and 72 minutes on 3/29. Find nothing in any up-to-date reference. (Wilkinson, Hlywd, Cal)
- ** 1210 Dom. Rep. Radio Merengue, HICJ San Francisco de Macorís is back here ex-1190. (Objío)
 - 1235 Bermuda. ZEM-1 hrd with news on 3/21, ID at 0610 and s/off with GSQ.
 - 12372 Colombia. HJIL LV de las Américas the one here 3/20 IDXD. (Objío)
 - 1245 Ecuador. Radio Metropolitana, Quito hrd with dozens of definite IDs 3/19 0100 with a basketball match. Plenty of ads, local references. Rptd this one. Not a bad signal for this station, which uses about 500 watts operating into a poorly tuned tower. This station fades out about 10 miles out of Quito, on groundwave. (Gleason, Hato Rey, P.R.)
 - 1255 Colombia. (see also next item-ed). This is "La Voz del Cesar", Valledupar, (the name and the city are not the same, but both sound the same at the end.) reported in the 3/20 IDXD. (Objio, D.R.)
 - 1255 Colombia. Definitely IDed as La Voz de Corozal in Corozal, with exclut signals most evenings. (Gleason) (obviously further research is in order on this freq -ed) (1259 item de Dangerfld_
 - 1259 Poland. Wroclaw etc. holding forth at 0345 on 4/9 prior to the recent auroral storm. That day was a nice opening to parts of Central Europe.
- ** 1267¹ Haiti. Gleason's unID is quite likely the new Radio Metropole drifting from 1280 kc.-re 3/20 IDD. (Objfo)
 - 1290 Cuba. Radio Guantánamo, CMKS, Guantánamo hrd with pop mx on 3/29 at s/off with NA at 550. He has been selected and the Spanish. (Objio)
 - 1295 Sint Maarten. PJD2 hrd at 2355 3/23 to 0045 3/24 with non-stop religion, IDing as, "this is PJD2, Sint Maarten, Neth. Antilles" (Sullivan)
- ** 1310 Dom. Rep. Radio Boyá, HIHZ, Address: Calle 21 esq. 9, Sabana Grande de Boyá. Power is 500 watts, operates 1000-0300. Owner is Juan Aquiles González. This is the former Radio Difusora Popular, San Cristobal, which operated on 4980 kHz. (Objio)
 - 1345 Ecuador. Radio Paz y Bien, Ambato. Hrd 3/19 0005 with a mass or rosary. Station is owned by a religious order. Later on, noted a pgm of typical Ecuadorian mx with ads. Was about 50% readable. This one uses a 3 kw rig on MW which is identical to the widely hrd 3 kw unit of Radio Quito on 4923 kHz SW. (Gleason, P.R.)
 - 1353 Colombia. Stn in 3/20 IDXD is Écos del Río, Puerto Boyacá, HJHW. (Objío)
 - 1358 East Germany. Stn hrd with fair signal on 4/9 at 0355 with unID signal behind. (Dangerfield, Pa)
 - 1367 Int. Waters. Radio Nordsee in at 2355 on 3/21. (Dangerfield)
 @ Radio Noordzee finally hrd here, best TA on band 3/23 0535 with downbeat rock and what sounded like German deejay (Dutch? ed) (Edmunds, NJ)
 - 1385 unID. Spanish 3/22 at 0018, faded at wrong times. Good with guitar mx a and rock group at 0022, girl singing typically Latin song at 0028, news at 0101. Signals on practically every TA channel were hrd this Sunday evening. (Kocsan, Morris Plains NJ)

- 1410 Dominican Rep. Re item in 3/20 IDXD for HIAE Radio Tricolor. Your pgm hrd on 2/21 is not live sports, as you say, but old baseball games being broadcast again as if it were a new one; not even a recording.
- ** 1420 Dom. Rep. Radio Unica, HIRD Castillo has moved here (Objio) ex-600 kHz. (Objio)
- ** 1423 Mexico. XEF nominally 1420 has varied to here with a slightly distorted signal; is in Ci. Juarez. At 0428 3/17 with 2 minute fast TCs and ID, "Siga escuchando lo mejor de la música de Mexico, en X E F, 14-20 en su radio, Mexicorama!" (Hauser, Texas)
 - 1457 Gr. Britain. Hrd 0459 3/22 with good audio in European svce with a German spkr; carrier cut 1459:30 after "auf wiedersehen". (Kocsan)
 (e) Noted frequently evenings 1 thru 5 and 8 thru 13 in March with 6 pips, short part of an anthem, then Eng news but no real ID 0200-0215, off, then back with same 0300-0315, then in Eng to 0330, then German to 0400, then a Slavic tongue to an abrupt carrier cut at 0500. Then, back with s/on and regional pgms, 0630 with others, as usual. Hrd more recently with BEC World Svce IDs, etc. 3/22, 23, 25 at 0400.(Edm.)
 - 1484 Libya. A fine signal from what must be Benghazi 3/20 0418-0432 atop the channel and // to 1124 kHz. (Dangerfield)
 - 1506 Anguilla. Very weak with mx 0130 to 0204 s/off 4/4 but quite loud during brief Aurora with religious pgm 0000-0100 4/5; into pgm on various musical instruments 0100, has chimes and ID every half hour. Country # 61 hrd. (DeLorenzo, Mass)
- ** 1525 China Comnst. (NOTE: Recent reports from Europe indicate this has MOVED to 1529 kHz. -ed) Pretty sure this was Sinkiang with wailing female "vocal", flut, talk folo by anthem 2340-2355 3/27; also apparently a jammer here. Hrd what might have been an IS on a stringed instrument, seemingly 4 notes: A-G-A-G. Was hrd again on 3/28 but was almost totally covered by WKEW splash. (Edmunds, NJ) *
 - 1527 unID. Hrd 0015-0019 4/5; carrier faded in, very weak, thought I hrd some audio. Varied and wavered in level before fading out. (Kocsan,NJ) (This may be the above. Russ says that they seemed slightly off freq, assuming that 1525 was "the" freq. Evidently they - if it was China, and if they were on at that time, were moving up the dial. ed)
 - 1537 Colombia. Stn here, 3/20 IDXD, is HJHD, L.V. de Petroleo. (Objio)
 - 1538 W. Germany. D.L.F., Mainflingen a very good signal with girl spkg German at 0433 on 4/4, then lively mx. (Objio, D..R.)
 - 1550 Mexico. XEBG Tijuana hrd well under CBE and after s/off AM 3/29. Also under CBE 0045 4/3. (Edmunds, NJ)
 - 1550 Australia. 4QD was in with a weak signal, first time hrd on 3/1 with music off and on 0838, then mostly talking after 0853 in English, faded and talking again 0909 with pgm, "England Today". Has not been hrd since then. (Bartels, Wisc.)
 - 1597 Dom. Rep. HIFA appears here nightly very strong to C500 taps, anthem and s/off. I think this has to be more like 10 kw as it is consistently hrd here regardless of cx. (Edmunds, N.J.) * * * * * * * * * * * * *

* The latest EBU listing, dated April 15th, shows the Chinese transmitter to be on 1524.994 kHz; we hope for more information next issue. We have an NRC member on his way to Novosibirsk as part of a tour of the USSR; hopefully he'll bring us some word about this one... (GPN)

- remember IDXD is on GMT -----

- 725 Surinam. SRS sent folder-type v/q after 14 months; apparently are clearing out backlog again. No f/up but had sent another report in the interim. Veri statement is specific and complete; I was under impression that previous QSL's were not. Gives call letters as PZX-26. V/s is unreadable but is the Director, S.R.S. (Mohr, N.Y.)
- 780 Br. Virgin Is. Verie in from ZBVI, logged 3/1 and veri rcvd 3/15. This is country #62 on BCB; v/s Leopold N. Mills, Mgr. (Wilkinson, Cal.)
- 870 Hawaii. KAIM veried 2/15 report. Loren F. Bridges, G.Mgr. is signer. Back in about 10 days. (Bartels, Wisc.)
- 880 New Zealand. For 2/15 report; signer Arch Crabb says pgmg 0600 to 1100 is of classical and operatic mx. Auckland P.O. Box 2209. If you want to call them, telephone 78-850. (Bartels, Wisc.)
- 890 Colombia. Verie in from La Voz de Bogotá, no call letters on the letter or pennant. V/s: Emiro Enjardo Ramos, Director, Address; Apto Aéreo 13018. Member of the Todelar network. HJ Number 29 verified. (Wilkinson)
- 1075 Costa Rica. Faro del Caribe sent specific v/q in 1 month for TIFC, San José and signed by both Asst. Gerencia and Gerente, both unreadable, but letterhead on enclosed info sheet lists Don Federico Picado O. as the Gerente. Addr. is Apt. 2710, San José. (Mohr, N.Y.)
- 1100 Antigua. ZDK, St. John's sent nice, large yellow v/q in 1 month with a "thank you for your reception report of ..." statement. Last name of signer looks like Matthews but wouldn't hazard a guess on the first name. Address is Grenville Radio Ltd., P.O. Box 1100, St. John's. They are also on 99.0 mHz FM. (Mohr, NY)
 - Verie for report of 1/25. Signer Mickey Mathews. Owned by Greenville @ Radio Ltd. (is it Greenville or Grenville?-ed) Power 10 kw. (Alster, NJ)
 - @ Verie for 1/25 and 2/1 reports. Addr as above. (Bartels who spells it Grenville)
- 1210 Colombia. Verie in from La Voz Amiga, Pereira for rpt of 3/19 and was in the mail 3/20. Verie rcvd 3/29. Itr states stn is on air 24h daily and gives call letters as HJFF, 1210 kc and 10 kw. V/s is Daniel Alfonso Benitez R., Director, Calle 10 Nº 10-19. HJ#30. (Wilkinson)
- 1505 Anguilla. Nice letter by Roy Dunlop, Director for 1/22 rpt.(Bartels,Wi) — changes —
- 700 Alaska. Existing AM stations, final action. Broadcast Bureau grtd CP for KBYR. Anchorage to change from 1270 to 700 kHz and decrease night power to 500 watts; conditions (BP-18918); action 3/5. (de Brdcstg)
- 1370 Puerto Rico. Broadcast Bureau grtd change of license covering change in corporate name to the Calvary Evangelistic Mission Inc. for WIVV, Viegues. Action 3/10. (Broadcasting)3/22 back of the file

Realize your concern is MW only (a misconception, we welcome LW info-ed) but must tell you that after the local light dimmer QRN dies down after 0600. I can read the following on my Grundig TR-6001, using only built-in antenna: 164 France. In French with varied pgms, including deejay with some good

- jam session discs. Good signal.
- 180 W. Germany. Europa One, also in French, much speech, only fair. (LW info from Ed Kocsan, NJ)

For the past 2 years I have sent all my reports to Spanish-speaking stations in the Spanish language, by registered air mail, return signature card and enclose sufficient uncancelled stamps for that particular country. Stamps are purchased from DX Stamp Service. (NRC ran the price list for this a few months ago in DX News-ed). This has resulted in only one failure to reply, and that was from a station in Peru! --Henry (Hank) Wilkinson Jr, Hywd, Cal.

* * * * * * * * * * * * * *

3/11 was an interesting evening here in P.R. Almost no N-S reception. YV and W stns were either weak or totally dead. Cubans, usually infrequently hrd, and HI's were all over the dial. A number of Africans were hrd well. Tripoli on (cont'd)

Tripoli on 1250 was doing a good job with chanting. The best TA this evening was 1457. Northern Europe was not hrd. Even Monte Carlo was in weaker than normal and Luxembourg-1439 was hardly readable. Middle Europe, though, was excellent and 1502 had beautiful signals. Receptions in this issue of IDXD represent conditions that I have never seen in Quito, or in San Juan, for that matter. It appears that there exists a type of long-distance sunset skip here. I will certainly continue to check on it, and report findings. Apparently, the signals will stay in for no more than 1 hour or 90 minutes. with good signals, after local sunset, and then start to fade. -Dave Gleason.

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"I definitely think it would be good to conduct another poll (regarding whether EST or GMT would be used in the IDXD section), this time without the heavy bias that was in the last one. If you will recall, the announcement that contained the ballot for the poll included a big plug for GMT and not one word in opposition, and by the time the issue reached the members, there was no time for anyone to write an opposition view and have it appear before the results were announced (let alone with the ballot as it should have been in the interest of fairness.) Now that GMT has been in use for almost a year, perhaps you should run another poll, this time with both the pro's and con's stated along with the ballot. The main thing the results of the last poll showed is that the majority didn't express any opinion - either because they didn't realize how it would work on GMT, whether there would be confusion or not, or because, reading the ballot and the announcement that came with it. they got the distinct impression that the decision to switch had already been made and that it wasn't worth the bother to express an opinion. In short, I don't know whether the majority WANTS GMT or whether they are merely going along with it because they think everyone else wants it. I doubt if anyone wants the present situation where in the summer we have Musings on EST, DDXD on EDT and IDXD on GMT. " - That was a letter we received a few weeks ago

ago from an IDXD contributor. I believe it has raised some valid points. and of course if there should in fact exist a sentiment in favor of returning to use of EST in the IDXD section of DX News, I want to be so appraised. Unfortunately, polls have a habit of being relatively minute samplings of sentiment. The respondents to last year's time switch poll were just a handful out of a membership of something near 500, and I don't think that is very good sampling. Now, with the summer coming on, and DX cx becoming worse, this would be a good way to fill up space in DX News, if you will cooperate. I am soliciting statements, to run here in this section, on a pro and con basis, for the retention of GMT (acceptance of EST). Let's hear from you. your IDXD Monitor Reports Editor.

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29, 1871

March 3

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U.S. RADIO AT ISSUE | IN OKINAWA PACT

Japanese Reluctant to Let 'Voice' Transmitter Stay

By TAKASHI OKA

Epseud to The Xive Yort Times TOKYO, April 3—A Voice of America radio transmitter near a lonely beach in northern lands, including Okinawa and its huge American base complex, from American to Japanese rule.

Negotiating teams from the two countries are in the final stages of drafting a formal treaty giving effect to President Nixon's 1969 agreement with Premier Eisaku Sato to return the Ryukyus in 1972. The treaty must be passed upon by the United States Senate and the Japanese Dict, or parliament, and both sides want adequate time for deliberation before the date set for the transfer, which is expected to be in the first half of the year.

The two Governments thus are hoping to sign the treaty by early next month and to submit it to their respective legislatures as soon as possible afterward.

Essentially what the two sides are talking about now are the specific arrangements for the transfer-the status of the American bases in the islands, how much Japan should pay for the United States's civil assets that will be handed over-and what should be considered civil assets-how to protect the rights of American residents, including businessmen, lawyers and doctors, how, in short, to work out the myriad details involved in shifting administrative authority over approximately a million people from one country to another. Legislative Scrutiny Due None of these items, taken

separately, constitutes an insuperable obstacle to reaching an acceptable agreement. But both sides-the Japanese under Foreign Minister Kiichi Aichi, the Americans under Ambassador Armin H. Meyer-are acutely aware that the finished agreement will be scrutinized with meticulous care by legislators in both countries. The scrutiny will take place in an atmosphere of accumulating irritations and frictions over matters unrelated to Okinawa, particularly the textile issue.

The Americans do not expect Southern Senators, angry over Japan's refusal to restrict textile exports as rigidly as they desired, to defeat the Okinawa treaty. But when irritations over other issues are added up, the agreement could face rough sledding on the Senate floor this summer.

transmitter in Okinawa, a relay station beamed toward the Chinese mainland. It occupies 134 acres at Okuma, 50 miles north of Naha, the Okinowan capital, and has a strength of 1,000 kilowatts medium wave, plus four short-wave transmitters.

The station is one of a network operated by the United Information Service States around the world, situated in countries such as Britain, Morocco, Greece, the Philippines and even in left-leaning Ceylon. Moving the station out of Okinawa would be expensive-\$15- to \$20-million-and the State Department sees no reason to do so since it says there is nothing cloak-and-dagger or subversive about the broadcasts.

Revision Of Law Needed

The Japanese, however, have a law denying foreign governments the right to broadcast or rebroadcast from Japanese territory. This law will have to be amenied if the Voice of America station is to stay. The Ministry of Communications, which controls broadcasting in Japan, has announced its firm opposition to such a change.

The major Japanese principle in conducting the Okinawa negotiations is to keep departures from the norm to a minimum. Premier Sato has promised the Okinawans that when they come under Japanese rule their status will be exactly the same as that of Japanese in the home islands that they will not be discriminated against or made to feel different in any way.

This is important because the Okinawans resent not only a quarter-century of alien mililary rule, but the half-century of semicolonial rule that the Japanese imposed on them before World War II. Any exceptions made in favor of the United States or Americans represents, in the Japanese mind, a departure from the Premier's pledge.

On the American side, a number of key Senators still seem to feel that Japan has taken a "free ride" on defense matters at American expense: that is, that she has prospered economically without having to underwrite heavy military costs, because she shelters behind the American nuclear and naval defense shield. A Japanese refusal to allow a purely civilian broadcasting operation to continue on Okinawa, which would compel the Administration to ask Congress for relocation funds, would not sit well with the Senate, Washington feels.

B, FOXWORTH

XQ-1



Greetings, folk -

Please pardon the above substitute mastheads, and the subsequent substitute Please pardon the above substitute mastheads, and the subsequent substitute section subheaders, but an unfortunate auto accident 4/17 has resulted in a badly injured car, and a rather painful neck and back for me. (The other guy was at fault, tho', hi). Likewise, this is done on a totally alien typewriter, a newly-acquired war-surplus Remington electric, circa 1958-60, so we can't expect too much, although if I leave my current job (from which I'm on a two-week doctor/lawyer-enforced "vacation"), this may become the official DDXD typer, after a bit more cleaning.... One thing's for sure, it's got the best ribbon transfer ever seen in DDXD... Due to previous mixups here re publication dates, this issue will be a bit monsterous, hay even humongous as it contains some 3-4 weeks of materials. Only good thing to come out of the accident is that the pain frequently keeps me awake, and thus, if cx are good, it means lotse DX. Now on to business ----

changes

r/C'S

- + 910 KPOF-CO SCH: 0800-0200 as of 4/1 (Blake Lawrence, Canon City, CO)
- + 1410 WOTT-NY CP: 5000/1000 U3
- + 1490 KCUZ-AZ CP: 1000/250 U1
 - unID Strong low-freq. het (50-100 Hz) here day and nite for past several months, hrd thruout NE Ohio & W. Pa. Suspect either WOHI or WMGW is off freq. Also noted in Pgh., so it gets out. Anyone else hear it? (Jerry Starr, YADland, Ohio) ** not noted here, but why not get somebody to check it, or contact the stns.... -RJE
 - ***Thassit for changes, as the 4/19 issue of <u>Broadcasting</u> never arrived, so I've had to order a replacement -RjE

		10	207.	
NEW CHECKS:		0130-45 *1 0045-0100 0230 0245	KHUB-1340-Nb T WWML-1470-Pa WNSL-1260-AL	(NRC) T (FT) D (NNRC)
	3494:	0215-0230 0245-0300 0045-0100	WLIQ-1360-MS WBLO-1470-AL	D (NNRC) D (NNRC) T (RjE per stn) ((400Hs TT)) MT (NRC)
(change) " Lag DELETE;	4MM: t MM:	0040-0050 021 4 -0230 0130-0145 0115-0130 0230-0245	*WTON-1240-VA KPOS-1370-TX WYNS-1150-PA KRNY-1460-Nb	T (RjE) T is Quarterly 3,6,9,12 (Hart) T is Quarterly 3,6,9,12 (RjE) T (Starr) (Hart, per stn.)

Checks Hrd:

1MM: WEVA-860; KNOX-1310; WGHN-1370; WRMG-1430 (0100); KGHL-790; 2MM: WGMF-1500; WATS-960; WELI-960; WCAZ-990; WAGN-1340; KKGF-1310; KXRA-1490; 2TH: WIDG-940; 2FM: WNJH-1580; WHBG-1360; WWBZ-1360; 2SA: WCCR-1580; 3MM: WAA0-1530; WORV-1580; KWLA-1530; WTHB-1550; WBTS-1480; WKSK-1600; WBBQ-1340; WDXY-1240; WTON-1240; KWKY-1150; WDIC_1430; WJFF-1340;

3FM: WFOY-1240; WVOS-1240; lst SU: KCII-1380; WDAN-1490; WMAY-970; 4MM: WCBG-1590; WTOP-1500; WDXY-1240; WTON-1240; KSYL-970; WBCB-1490; WGOE-1590; WFEC-1400 (,Make change for WHSC to this date 4/17 DXN a tentative...)

- SUNSET & evening
- MEDS-AZ Weak w/rr w/IETRA off 2355-2359, u/IETRA when back 2359 on 690 4/4 (Steve Kamp, San Jose, Cal)
- WEWE-FL W/SID 1802 3/24 (Jerry Starr, Youngstown, Ohio) 900
- 950 WRIT-MA S/off w/ instr. SSB 1744 3/24 (Starr)
- 1000 WEDE-VA W/ ceas 1810-25+ 3/24 (Starr)
- 1150 LIET-OR Good w/rr 2150 to 2200 s/off 4/8 (Kamp)
- 1170 WELM-MJ "Followed" signal back up from shore, though I'd lost it abt. 20 mi. out, but popped back in for ID at 1810 4/13 just down the street. (RjE)
- 1250 WFEL-PA Hrd w/ relig. then s/off 1844 4/9 (RjE)
- 1370 WPAZ-PA One of my closest unbeards bites the dust u/WFEA,WSAY, etc. w/ID 1840 4/15 (RfE)
 - unID Hrd at 1845 s/off 4/14 w/ calls for AM & FM ops. same, looping W or SW, call taped as WAUM or possibly W - F,N,orM, -UM. Call change? Help? PT hrd tape, gets same thing ... (RjE)
- 1410 KMTC-CA Good 4/8 w/ mx 2127 (Kamp)
- 1460 KROW-OR Good 4/8 w/ 20-20 nx 2139 into rr after (Kamp)
- 1470 WHEN-CT Hrd wk w/ ad for Meriden & temp. then later ID 1820 &1826 4/9 (R<u>1</u>E)
- 1540 WPTS-PA Hrd wk. w/ID u/CHIN/WRCP mess 4/7 1831, another closest unheard gone. (RjE)
 - midnight to sunrisc
- 540 WDAK-GA Fair u/slop from KOY/KSD w/rr 0220 3/28 (Lawrence)
- 550 KTSA-TX Alone 0020-45 4/14, no sign of usual WKRC-WGR-KFYR, etc. (Wes Boyd, YADland, Ohio)
- 560 KLZ -CO Strong w/rr 4/11 0526-35 w/ ID 0535; KSFO off (Kamp)
- 600 WSOM-OH ET-TT & OC 4/21 0205-0220+ (Boyd)

610 KDAL-MM Good 3/18 0105 w/rr (Rich Bartos, Campbell, Ohio) ** ie. suburban YAD-land, hi - welcome to DDXD, Rich - RjE

- 620 WVNJ-NJ On late to 0100 w/ relig. mx for holidays 4/12, and thus sched. r/c didn't go, (RjE) 680 CHFI-ON Well atop freq. w/ ad 0050 4/19 (Dave Schmidt, Chester, Fa)
- WOR -NY Off MM 4/19, noted 0047 (DS) ** This appears to be a regular ** 710 3rd MM SP, as have been off then in Feb, Mar also -RjE
 - 730 CHIR-ON Has to be the one w/HI vy poor but readable u/CKLG 0246 3/28 (BL)
 - 740 KRMG-OK Good w/MoR 4/5 0703-10 when KCBS OC on (Kamp) Tx) KBIG-CA ET-mx vy strong thru hvy QRN 0500 4/19 (Paul Hart, Ft. Worth KCMC-TX S/on of FM outlet(KTAL) and SSB 0600 4/19, NSP status holds. though (Hart)
 - 800 CKOK-BC Fair w/ a/off 4/5 0305 for CKOK, CKOO & CKGF (Kamp)
 - 900 WLMD-MD Noted using time-second tone system MM 4/19 w/ bad signal 0025, tone cut 0032, couldn't get ID. (Schmidt) ** Quite frequently, they don't ID, Dave, but format is them - RjE
 - WINE-CT Weak on TEST 0200 3/29 (Bartos) W/good sigs., atop freq., 940 noted 0245 3/29, ended 0304 (Starr) ** See, Rich, if you'd only held out to 0245, it wouldn't's been weak ... hi-RjE WILD-LA Caught w/last part of ID on ET 3/29 0332 (BL)
 - KIXZ-TX Good 4/5 w/c&w 0546-53(Kamp)
- 950 WFEN-PA Noted off 0200+ on 4/12. First time noted off in abt. 5yrs. 960 WELI-CT Had ET/TT 0020-30+ 4/9 (RJE)
- WBRC-AL Fair w/rr & nx 0255 4/3 (Bartos) WFLA-FL On AN 4/4. Now NSP?? or MM SP??, didn't note them MM 3/22 .. ** 970
- (Paul K. Hart, Ft. Worth, Tx)
- 990 KLIR-CO Good on ET w/MoR 4/5 0549 (Kamp)
- 1010 KCAC=AZ Good on ET 4/5 0555 w/ID (Kamp) Good on ET w/rr 0433 4/5, This one ET's often per DIM (BL)

- 1010 KAWA-TX ET-mx & wise-cracking DJ's noted from 0200 4/12, clobbering all else (Hart)
- 1060 KYW -PA Was on @0310 4/12 w/nx, also copied 0220 2/1. If testing, sure sounds like RS (Hart) ** Paul, I'lltry to remember to check them a few MM's -RjE
- ++ 1070 KNX -CA Did s/off 0400 4/5 w/ annet of 0700 s/on. Must be 1st MM SP (Hart)Off again 4/5, 4th straight 1st MM, but did ET 10 kw. AXR that AM (BL)
 - Who s/ons 0500 MM w/ orchestral SSB AFTER s/on annot., (or unID else no annet. at all) hrd second time 4/5... (BL)
- WDIA-TN S/on ard. 0500 4/5, anybody know if regulard SP or if NSP still holds (Hart) ** BL, maybe this check w/PKH on format **
- Noted off MM 4/19 0005 (DS) ** Is now regularly off((-RjE ++ 1110 WBT -NC 1st MM's -RjE
 - 1140 KS00-SD ET w/ c&w mx noted 0230-40 3/29, strong (Starr) WRVA-VA Good w/CKXL nulled 4/5 0512 w/ relig. to 0530, then ID, nx. (Kamp)
 - KUAD-CO Good 04/5 0745-0755 w/ c&w; KLOK OC on 0755 (Kamp) 1170
- KLIF-TX Off MM's 3/29 & 4/5, TT much of time leaving KRDS & unID(BL) * 1190
 - 1230 KVOC-WY Fair u/KDZA w/ID on ET-TT 0237 3/27 (BL)
 - 1240 WIST-NC Hrd w/loc 1 nx & wx 4/3 0300 (Bartos)
 - KWAK-AR Hrd w/ Cards BB 0125-52 4/14 (Boyd) KXOX-TX Sounded like PoP from b4 0230 to ard 0430, TT's, mx, potent, but few ID's. (Hart)
 - KAKE-KS ID noted in ET 0230 4/12, vy nice signal. This one gets out, and they test a lot. (Hart)
 - 1250 WTAE-Pa ET from 0300 4/4/ to ard 0330 (Hart) WTMA-SC Copied nice ID @ 0600 4/4 pattern/power change.
 - WIXY-OH Almost never hrd here, but popped in w/SID 0207 4/12 w/ no 1260 eign of usual WNDR-pest. (RjE)
 - Hrd 4/14 w/Braves BB all o/WKST & WADO 2250-2300 (BOYD) *** WANS-SC 1280 By my own mistake, I'm running a bunch of 2200-0000 stuff of Wes's in here this time ... -RjE
 - 1290 WTOC-GA AM/FM simulcast ID up & over unid TT 0130 4/12 (RjE) CJOE-ON Finally hrd thru the mess 0105 4/19 (RjE)
 - 1300 WBRC-MS All o/WERE-WOOD 2300-10 4/14. (Boyd) ** Who notes that the sun freaked out about 2200 4/14... -RjE WHZN-PA Three ID's hrd 0330 3/26 (Bartos)
 - WISE-NC DX in well w/ unID TT'er 0200-0220+ 3/29 (Starr) ** My verie 1310 indicates that several reports indicate WKNR's regular MM happening was the TT -RjE
 - WRR -TX Carrying HI now from 0100 nightly, ugh (Hart) ** Now maybe I can log this one, hi -RjE
 - CKOX-ON W/clr ID 0046 3/19, calls itself "Countryside Radio", is 1340 this extended sked?? (Starr)
 - KRMD-LA ID noted 0259 4/12 in ET, TT bettling next one (Hart)
 - KLBK-TX 0330 s/off of ET w/ continuous TT after s/on ID for 2 hrs only s/off ID hrd, but didn't monitor constantly (Hart)
 - WKSN-NY Hrd ID behind 2 TT's 4/12 0114 (RjE)
 - WHAP-VA Atop channel 0105 4/19, seemed scared to use call, as only type of ID hrd in 2 hr was "... in Hopewell, Va." after each TC or temp check or wx. (RjE)
 - WGAD-AL Smashing insipid Ohio c&w w/ underground hour 0025-45 4/13. 1350 and again almost alone 2215-35 4/14 (Boyd)
 - 1360 WBAY-WI Rptd. MM 4/19 0014 w/ c&w (DS) WIXZ=PA ET-TT-OC w/ ID noted 0242 4/12 (RjE)
 - WFEA-NH Fair o/WSPD 0040 4/6 (Bartos) 1370

+#

- KREL-CA Good o/WSPD w/rr, up-tempo MoR on TEST; ID 0308 3/29. (BL)
- WNUS-IL Hrd 0255 o/WFBL w/ local WFMJ off 4/6 (Bartos) 1390

36

- 1400 WRIG-WI Hrd faint w/ local nx 0350 3/20 (Bartos)
 - WABY-NY w/rr & wx 0355 3/20 (Bartos)
 - WDUZ-WI Good w/wr. SID, rr 0418 3/29, o/u KFRU (BL)
 - WWW-PA Only one wk ID hrd in one hr TEST, Starr and others hrd even less (BOYD) - 4/12 0000-0100 ((TEST arranged at YAD-land get-together)) Hrd 0005-0015 w/ march mx, ID's, CW ID's (afterny call) wk o/u the mess, gone after 0015 4/12 (RjE)
 - WJBO-AL ID copied 0302 in RS 4/12, atop all nite (Hart)
 - EADE-LA Copied 0600 s/on 4/12 for 1st time (Hart)
 - IND-ME Fulled ID out of mess 0430 4/9, w/ HI-sounding show, but local origin. entitled "Music While Others Sleep". Anner. sounds like Dolly ... (Hart)
- 1420 MAR-TI Audio proof from ard 0230-0300+ 4/12 (Hart) LIET-CA S/on SSB 4/5 0815 (Kamp)
 - WECH-VA Hrd w/ okw 4/8 0330 (Bartos) *ET. I presume ... -RjE
- 1240 WORK-IL E/off noted 0030 4/12 w/ SSB. New time or only MM ? (Boyd) WAJE-WV ET-ex noted 0215 4/5 (Starr)
- WEHH-OE Was CC 0020-35+ 4/20 AM (Boyd) (Boyd)
- II 1350 EMMT-IA W/ WX, g/off SSB o/ semi-local insipid Ohio cew 4/12 0105 14.50 WQSM-30 Hrd w/c&w RS 0155 4/19 o/u WHSC r/c (RjE)
- IVEL-AN ID noted in ET 4/12 0230, vy nice sig. (Hart)
- . WPAR-WV What sounded like RS 0320-35 w/ Top 40, AN?? (Boyd)
- WHEF-MC So strong, splashing o/WHHH 2350-58 s/off 4/14 (Boyd) WHER-JL Well atop free here 4/19 0010 w/rr. New aked? Shades of 1966
- 1460 AN ?? (DS)
- 1470 WHEN-CT DELETE my listed log here last issue. While GM said on phone it was them. CE's card later said no. (RjE)
 - WHIG-MC Has not been noted HI for several wks; (Boyd) WHED-IL W/ Cards BB all o/WFAR 2240-50 4/14 (Boyd)
 - 1480 CHED-QU The FF rr here all nite, hrd 4/19 0040. (DS) ** Dave listed
 - as unID, but this is the PESTIII-RiE 1490 KIEN-TI ET-TT, think PoP ard 0200 4/16 (Hart)
 - ECTI-AR Fair w/ 20-20 nx 0142 3/27 (BL)
 - WILL-W Whilest tuning by, noted stn. atop freq., & caught SID 0104 L/8 (RJE)
 - WARJ-MI Popped in w/ID 0147 4/12 u/2 TT's, then back again atop (RjE) all w/ Big Band mx 0200 (RjE)
 - WHAY-MA Hrd w/ anned. f/c (dunno if reg.) 0024 4/19 o/u the mess
- WHET-HA Hrd on ET's MM's 3/29 & 4/5 ard 0400, then on RS (5kw) also 1510 both AM's after 0500. (BL)
- 1530 KCLR-TI Good w/ c&w (uggh SK) 4/5 0722-32 (Kamp)
- 1540 WPTR-MI Hrd w/rr 0400 o/KIEL 4/9 (Bartos)
- Vy good 4/5 0802-10 w/ nx, wx, Fish & Game rpt. (Kamp) 1550 KRGO-UT S/on SSB 4/5 0830, right into c&w, quickly faded to Mexican, unID maybe KGAR?? (Kamp)
- S/on SSB 0600 into what was seemingly mr, ID not copied (Kamp) 1560 unID Wall-B Booming s/on 0603 on RS 4/5 w/ GSQ-like anthem, easy shot for SC for those WC'ers who missed TEST (Kamp) (Hart)
- 10 KPMC-CA S/off 0505 must be weekdays, as no sign of them 0315 4/12. KRCB-IA ID @ s/off of ET-OC ard 0415 4/12. Believe only ID (Hart) WTRQ-NC Copied s/on in clr 0600 4/3, new stn, should be good bet for WC'ers, fine sigs, (Hart)
 - WTOD-OH Copied s/on 0615 4/3 in the bedlam (Hart)
- 1580 WCLS-GM Good on clear channel w/ jr. rr 0315 3/29 (BL)

Well, that does it for this time, however, several notes on several topics follow on next page.

1600 WWRL-NY Had ET-OC-TT 4/19 0130-0200+ (RjE) - fergot this one, hi.

WITH the next issue, we go to the semi-cnnual EST-DST confusion. For that issue only, we'll denote items hrd b4 4/26 w/ an "S" and those after w/ a "D" following the time listed. And don't forget that Michigan doesn't recognize daylight time, so all stns. there will be on EST, which is equivalent to MDT. Thus, too, all r/c's from Michigan will be on an hour later than listed per ELT (EDT).

DEADLINES for DDXD will be as follows: 5/12; 6/2; 6/30; 7/28; 8/25.

On the WDLC-1490 test listed in the 4/17 issue, the name listed for the CE is wrong. I don't happen to have the correct one handy, but this should reach most of you b4 you write reports. (test 5/10).

ADD one more r/c to the fold: 4th THU: 0000-0015, WIKI-1430-VA w/TT, hrd March.

WHO will be Domestic DX'er of the YEAR??? Well, the inside story is that it's so tight between the top two people that we may have to declare a tie, and give away two awards!!! Be at the Convention to find out!!

With no more information to impart, we'll close this now, so until next time, 73, RjE

UPDATER NEXT ISSUE!

Pop pirates plague the Kremlin **By Gabriel Ronay**

A VIGOROUS official crack-down on Russia's youthful radio pirates. who put out programmes of Western beat music, "politically inspired gossip and decadent tittle-tattle" on their unlicensed transmitters, has met with a surprising amount of open opposition from many people who are usually silent.

"Radio Hooliganism," the official description of the pirate radio stations, began in the mid-1960s when an educational hand-book on do-it-yourself radio building introduced youngsters with too much free time on their hands to a new hobby. One-man pirate radio stations began springing up all over the country, even invading Moscow's sacrosanct airwave length with politically sick jokes and beat music.

In one industrial area 115 illegal broadcasts were recorded within a five-hour listening period. For some time the Soviet Press and State-controlled radio have been condemning the radio pirates. In the Volga region, it has been asserted by the Baku Party newspaper, Bakhchinsky Rabochy, the pirate broadcasts

have interfered with shipping, railway and air communications systems. Another allegation was that illegal transmissions had interfered with a doctor who was giving emergency instructions to a first aid crew on an oil derrick in the Caspian Sea. Other reports complained of pirate stations preventing the talking down of crippled aircraft through the blocking of control tower wave-

From the

London Times

lengths. Another paper, Volshskaya Kommuna, which has published scores of readers' letters criticising the pirates, declared: "The wanton sons of the ether are stifling the State's radio communication lines." But despite the periodical clamp-down on illegal transmitters the radio piracy

It now appears, moreover, that dissenting values have been chal-longing the Party line of condemnation of the radia pirates levestia, which recently publishes an article on "Dirt on the sic" condemning the pirates, has ad milted more in sorrow that share its own editorial views.

The political content of some of the broadcasts is worrying the authorities. For instance Radio Camomile run by a young girl to cater for more sophisticated and politically conscious listeners, peddled "full-blooded reactionary rumours and base tittle-tattle " to the people of Kuibishey. Three radio stations in the Moscow area were called "Radio Natasha's Dream," "Radio Romantic" and 'Radio Robinson "; their transmissions used to drown Moscow's Maysk (Light) programme in their districts.

You asked for it.

	DOMESTIC DX SUPREM	ACY R	ATIN	IGS	FOR 10	APR	IL	1971 (#5)	
YR	NAME AND	HEARD			TAPE			VERIE	S	
STD	GENERAL AREA	TDH	SH	PH	TDT	ST	PΤ	TDV	sv	ΡV
68	HART, DALLAS/FT. WORTH	586	40	6	584	40	6	8	4	0
67	NEAL, NORTHERN CALIF.	481	41	5	264	34	4	92	38	5
63	SHANNON, NEAR PITTSBURGH	1141	49	8	240	43	5	180	42	4
64	DUNNING, NYC	957	40	8	204	30	4	579	44	8
68	PIMPER, SALT LAKE CITY	1162	44	7	198	26	5	382	43	t
62	EDMUNDS, NYC	799	40	7	179	32	5	201	37	6
59	OLDFIELD, EDMONTON, ALTA.	958	47	11	161	34	8	541	42	10
69	KARCHEVSKI, SAN FRANCISCO	204	33	з	160	30	3	158	30	3
69	BENNETT, WEST OF NYC	279	32	4	157	24	4	114	24	4
63	JUNKER, NEAR CINCINNATI	539	37	4	145	30	3	11	10	1-
?	STARR, NEAR PITTSBURGH	1407	50	10	85	33	7	954	50	10
21	HANSCH, SOUTHERN WISC.	1009	50	10	60	50	10	-	-	-
69	BUCKLEY, WASHINGTON, DC	237	34	6	55	55	5	161	32	5
68	BROCKWAY, MID-N.Y. STATE	344	39	9	46	29	6	244	35	8
40	MORSS, NEAR BOSTON	3377	50	10	18	14	0	3377	50	10
70	FEINSTEIN, BOSTON	112	28	5	5	2	2	72	26	5
3	PHILLIPS, LOUISVILLE, KY.	1461	48	4	4	4	0	557	44	3
30	WHEELER, ERIE, PENNA.	2528	50	9	-	-	-	1553	50	9
59	DRAKE, PHILADELPHIA, PA.	2149	50	10	-	-	-	2086	50	10
60	RUGG, MONTREAL, QUEBEC	1238	47	10	-	-	-	1212	47	10
61	ERICKSON, LOS ANGELES	900	42	6	-	-	-	442	38	0
64	BREVILLE, ST. LOUIS, MO.	870	43	7	-	-	-	267	40	6
.70	EGGERT, CHICAGO	606	43	5	-	-	-	34	38	2
64	SORENSEN, CENTRAL ONT.	575	41	9	-	-	-	384	39	8
?	ROGERS, NEAR BOSTON	524	45	10	-	-	-	151	31	6
68	FR. PEJZA, SAN DIEGO, CAL	• 418	37	6	-	-	-	184	33	5
65	WHATMOUGH, NEAR TORONTO	1525	49	10	0	0	0	793	49	10
68	HOOGERHEIDE, UPPER MICH.	1317	50	8	0	0	0	0	0	0
58	MERRIMAN, WASHINGTON, DC	1113	49	10	0	0	0	1113	49	10
66	EVANS, E. CHICAGO, IND.	1056	48	8	0	0	0	610	46	5
62	ATKINS, LOUISVILLE, KY.	1033	47	7	0	0	0	222	40	3
62	DELORENZO, NEAR BOSTON	917	45	9	0	0	0	227	32	5
68	LOMBARDO, NYC	50 5	37	9	0	0	0	170	36	-
?	RICHMAN, NYC	503	37	8	0	0	0	406	36	8
62	KERFOOT, TORONTO, ONT.	523	41	-	-	0	0	228	40	-
69	DIRICCO, PITTSBURGH	418	42	-		0	-		32	
?	HARDESTER, CENTRAL CAL.	275	36			0	-		36	
69	CRONIN, SEATTLE, WASH.	234	28	4	0	0	0	0	0	0

THIS COLUMN IS FILLING A FULL PAGE NOW, LET'S TRY FOR TWO. NEXT LIST WILL BE COMPUTED ON 5 JUNE. MY APOLIGIES TO STAN MORSS WHO DID-NOT BELONG AT THE BOTTOM OF THE LIST LAST TIME (AS WAS PROPERLY POINTED OUT TO ME).

THIS TIME WE ARE LISTING BY TOTAL STATIONS TAPED. THOSE WHO ARE STILL COUNTING THEIR TAPES (-) ARE LISTED ABOVE THOSE WHO HAVE NO TAPES (0). FOR THOSE STILL COUNTING TAPES, HAVE YOU TRIED TAKING OFF YOUR SHOES, HI? WHEN HAVE THEM COUNTED, SEND YOUR TOTALS TO:

N-R-C. DOMESTIC DX SUPREMACY RATINGS - C/O BOB KARCHEVSKI PO BOX 3151, DALY CITY, CALIFORNIA 94015



N.E.R.I.E. S.I.C.N.E.R.S.

■ - E C - T D - F E - A	. Kemp . Bennett . Kerfoot . Edminds . Merrime . Boyd	I - IRCA J - C. Debelstein n K - K. Birlingmair L E. Cooper	`.	1090 1100 1110 1130 1140	K AqA Y WqK YmC W H Y T W EhE O W A W K K RqA K W K P A	Н. Н. Ј. Я.	Mcdonald, CE Spiller, CE Kelly, DoE M. Hartzler Riddle, CE E. St.Jan, CE Monahan, CE	DEHLF
540	W DqA K W GqT O C BunK	u/u, CE D. R. Schick, CE	A B K	1,170 1,190	WWLE WVLC KHAD	т. G.	Schober, CE D. Benoit, CE	C H D
550	K SqD K FqY R	E. Fergus	к К	1220	K ZrE E W S O K	c.	Shane, NxD Singer, SM Kinsey, CE	J P
580 590	CKPR KGqMB	G. Bustow, DoE A. Roycroft	F A	1240 1250	W IfN N W TfA E	M. I.	C. Scarsdale, CE Greenwood, CE	J K
600 610	K HqQ K CmI S W IqO D	M. Shepherd, CE	A A B	1260	W EqZ E K W Y R WrU OmK	в.	Lyon, CE Viedt, PD King, PD	H F E
620 660 680	W SqU N W NgB C W DcB C	J. Hughes, StE	H K H	1290	K FqJ Z	(G. J.	Kirtley, MxD R. Green, E Kline, CE	Б Н Н
690 710	W CqT T K GfG F W HqB	C. Sulfridge	H A	1300 1310	K OqI L W RqB C C FcG M	J. W.	Weist, CE Fulgan, CE Carnegie, CE	К Н Н
720 730	W GqN K SmV N	W. R. Crane, CE Thornbush Ripple	B A	1320 1340	K CqP X W E P M	W. L.	Wright, Redio M Golliday, O, GM	J E
740 770	W AqC E KVFC W AqBC	Dorothy Weyt, AM W. Loyd, CE	B J K	1360 1370	W JqM A W KqM I W G H N	u/1	Harrison, CE u Kleis, CE	C Fr Fr
790	K Ufl F K BmR V KrJ RmB	J. Hulse, SM	K A A	1380	K U D L W TqO B W FqM J	R.	Keeney, IRCA Beaver A. Dieringer, CE	I. F J
810		T. Ptsk, CE	A E	1410	W L A Q K R I G	Ρ.	Baker, CE F. Bagwell, DJ	3.
830 850	K C M O J OqB B K TmA C	(SW v/q, u/u)	A A A	1430 1460	C K F H W HfI L K SqO	к.	A. Wilson, CE Atkins, CE Myers, ESu	D E H
860	r K Oq/ K SmH J	u/u	A A A	1480 1490	W YrD K KfL MsS	J. u/u	Smith. CE	A
(August)	W DhO R	A. Roucroft	A C	1500 1510	KFO WuL KTXO KCAW	J.	Bartoli, CE Sharp, PD Love, PD	M J J
920	K A M D W R N L K AqR K	S. Straus, CE	J F J	1520 1530	K OsM A K WeL A	с. т.	Mamn, DJ, E Wayne, PD	A H
930 940	W C N R W F N C	R. Fulton, CE	F D	1540	K FqBK WAAO W PqME	D.	Bennett, CE Ingram, E J. Drummond, CE	H L F
950	W E S A K AmT N	S. Garofalo, E	F A	1560	W AcG L W D X R	Hai	rry Helms, NRC/IRCA Bartlett, CE	M K
960	K IqM N W BcR C C F A C	J. Walton, CE	H H D	1580 1590	W CqOY W KcUN K U D U	D. D.	E. Shal, CE Morris, GM Taber, DJ	H H M
970 1000	C KqW S K RqE M W R A R	L. Todds	B A	We have them of	e some m	ore They	on hand and please t appear at irregular	(eep
1020 1060	W P E O K YqW		J B	our "s	ls, we adm system".	mit, Ple	and please don't mi ase weed out those f	ind that
1050 1080	W D Z W K L O K WqJ J	v ,	H H A	our at	breviation	ons,	and also, please do and also, please do and name on the paper	use puble