Small but 1st Class!
The last issue of DX NEWS - dated February 8th - was mailed First Class to all domestic members; this is possible with all 16 pagers because the weight is just less than one ounce and so both First and Third Class rates are the same. It was mailed late February 7th and hopefully cleared the Boston area before Sunday's crippling snowstorm which halted all transportation here in the Northeast. As I write this the a.m. of the 12th much of this part of the country is still snowbound from the last storm and a second one is predicted for later today. If this present issue has arrived late it will have been due to unavoidable delays in production and/or delivery. Parts of Waltham where our printer is located have been without electrical power for more than a day now and this may interfere with production of this issue.

EMBARGO
For more than a month now the East Coast dock strike has resulted in a complete termination of all mail flow through those ports; First Class copies of DX NEWS bound for Europe and the Caribbean are being returned stamped "MAIL EMBARGO" Aircraft in not affected. If your overseas bulletin or publications are overdue this is the reason. According to the Times, no settlement is yet in sight.

LAST MINUTE SPECIAL...
KCKY-1560, 1 kw in Coolidge, Arizona will conduct a test for HB'A on Monday February 24th from 0000 to 0000 EST. Test arranged by Paul Lebed.

Do Something
The NRC continues to gain new members now at an unprecedented rate. If you know of someone who might be interested in receiving a free sample bulletin of DX NEWS along with information about the NRC, just drop a card to Roy Moore, address on mailing page. And if you've got a few hours of spare time that you'd like to devote to the NRC and the DX Hobby, join our flourishing CWP!
Our Thirty-Sixth Season!

FRANK WALTERS Jr. - 65 Lakeline Drive - Matamoras, New Jersey - 07817

DIX: 1/24 - I was surprised to find KMZ-950 in all @ 2:35,
no sign of Cuba or Nicaragua or any Spanish music.
They came in w/s good signal between fades, and were for my
best Om. GM-1 W-2900-1230 / 3 - TT heard 1:18 - 1:20 s off.
WRB & WIN were both off, as both were on 12/16. WIN seems
to have monthly or bi-monthly SP.
On 750 @ 1:50 I finally caught an ID from WQN stg/CO'TT.
Then @ 1:30, R. P.,"Ron" from WJD"41200-1230, said that he
had to go before finishing a cricket match; also an unid EM-2
coming at 10:45 s off the air.
On 1200 No school, so WQU-1230-1200 & 950-1230 plus
on top also w/Marti & Paul Harvey. At 1230 I was positively
I caught an ID from WMB-1500-1230 @ 1:22 s off for Giant
Maps, whatever they are. Their big maps, Frank. gl-BSC. I also
managed a half-decent report on KMZ-1300 for the first time
on 3100. They have been in since 4/22.
On 1230 V/7-8590 for Nov., WMB-1500 WMB-1500 & W?!-8590 plus v/1.
WMB-1500 plus 1230, from early Jan., HMB-1500 for States.
On 1230-1500, WES-1120 from Homer, NYS-1120, ENK-1120.
On 1230-1500, WMB-1500 plus, etc. from my local.
Overall listen, 79.4
11:30 1/20 11:00 22/11...

MUSINGS of the Members

FRANK WALTERS Jr. - 65 Lakeline Drive - Matamoras, New Jersey - 07817

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Overall listen, 79.4
11:30 1/20 11:00 22/11...
I haven't fooled v/s is enough yet. v/1, v/2 & OM c from Friendly W0MI-1050. On 2/1 I was ARRL V/0. I tried for W0MI-1050 but X1O strong & OM prevalent & V/0 testing. This between 315 & 330. 2/1 was 95% Q4. v/1, v/2 & OM c from Friendly v/s see Fig's column. 7/2 for now. Keep up the good work, Ernie! 72.

CLFPTN - 75 Parish Road - New Canaan, Connecticut - 06840

Hi! Again fine last report. 2/3 - HJ4-1000 KDMX-110 XSKX-770 VYU-560 QM/KO-110 XSKX-770. I already have these bugs but I wanted to add the ID's for my "Hope Tape Library" catalog. Also 1/28 ARRG for QSL, second semester, & in West Suburban Chicago. I'm finding it a bit more difficult to make the contacts. I'm not writing for verities. I do not stay up past 1:30 I play back tapes in the morning. As part of my job, I must travel new & then. Last trip was to Burlington, Mass. & I used v/s on the phone about an hour and a half to the NY. I got in the night of 1/30, a fired up my GM-71 first thing in the Howard Johnson Motel, & observed waves from W0MI that all was well & good. thanks for your wave. I hope to get the v/s. Time was so rainy & foggy the previous night I threw right by without seeing the towers. I hope the general membership of the NRC appreciates the efforts of the NRC, we have waves & GM-71's.

75 Parish Road - New Canaan, Connecticut - 06840

4. You are not the only one who has sacrificed so much for all of this to continue. The Johnson Motel, 75 Parish Road - New Canaan, Connecticut - 06840.

I do not have any new news. People will be better for verities. I don't know where to go from here. I have noticed on MF that is all. I hope as planned, I'll be going to New York this summer. I want the Sept. 65 issue is ready for my "Summer Portal." 72, 72, 72. Never the end.

HARC DESTROYED - 39 Bylend Road - Amherst, Massachusetts - 01002

Verdict: v/s are a necessity. I have been using v/s this summer. The fine is not bad as planned, I'll be going to New York this summer. I hope the Sept. 65 issue is ready for my "Summer Portal." 72, 72, 72. Never the end.
February 15, 1969

LEW KHUSE
1675 Glen Oak Street - Dubuque, Iowa - 52001

The new DX MAGS is just wonderful! Congratulations to Admiral Nelson & his staff in preparing such a fine job in making this 'magazine' such a success. A DXer's standpoint.

And a big THANK YOU to Farnoy Cooper in continuing to do such a fine job with 'Musings of the Members.'

I'm real glad Jerry Starr is getting the "WAVE" program organized, & under his leadership, I feel we can expect some fine DX Specials. Speaking of DXers, I enjoyed the two hour TEST from KDIR-1520 Lincoln on 1/30 in which my good friend Dave Fischer did the frequency. It was a real treat. I would think to add this one to my DX Log since it's World-Record. I'm also glad to see the "WAVE" use the loop Antenna. The latest additions to my DX Log included: KARE-810 Santa Fe; KBL-1110 Alameda Heights, Indiana; KMC-1520 Crestwoodville, Indiana; KSA-1202 Davis, NC; KUS-1100 Denver; KWO-1000 Huntsville, Ala. The most recent additions added to my collection included these: WKPZ-2015 S. Wey, VA; KAI-1100 Miami, FL; KWO-1200 Atlanta, GA. I also heard the wild stack of announcements I've ever heard. WKBW-1120 very weak at 17:50. WKBW-1200 in 17:50. Confining situation on 2/1: Apparently two bears at 12:30, 200 in the air. I thought for a moment that there, WKBW w/an apparent RSP. MM/6 a bust - no sign of WAXO DX. Just WRK/WRUH.


KEN XYN
5155 South Hewes Street - Atlanta, New York - 14001

No luck on the CWV, only ONM. 17-3: WKBW-1200 @ 15:10-20 r/c-570, WKBW-1400 2:30-3:13pm on, WKBW very strong. At first I thought it was WKBW. KXBI-810 2:50-4:30 on, WKBW-1400 3:34-3:54 on, WKBW-1400 3:42-3:57 on, a very strong signal from 17:50-18:30. At 17:50 was a very clear signal. WKBW-1400 4:34-4:36 on, r/c=570. KXBI-810 r/c=570. KXFI-810 w/on list. KXBI-810 not very good here. CU later.

STAN NOYES - Route 3 - Bradford, Massachusetts - 01300

1/20- R/c - Capitalist, about 15:00. Costa Rica using pop tunes.

1/20- WKBW-1315 St. George in poor signal to 1610 s/off for a report on one longsample. WKBW-1315/1410: 15:10-15:15 on, WKBW-1315 @ 15:20 r/c=570, a very strong signal from 15:10-15:15. WKBW-1400 15:10-15:15 on, WKBW-1400 15:20 r/c=570, a very clear signal, MM/6 completely different, MM/6 from 15:10-15:15. WKBW-1400 15:10-15:15 on, WKBW-1400 15:20 r/c=570, a very clear signal.


D. CUSHMAN
4001 Jefferson Avenue East - Detroit, Michigan - 31302

February 15, 1969

D. Cushman - On bed till school resumed. Then from two weeks later, the last of which was March 1 (no break). Now my DX Log is 12/23:

- WKBW-1100 Roanoke, VA
- WCW-1370 Penobasco, WA
- WOZ-1150 Wilmington, DE
- WKBW & WOR has been received earlier but not logged. These stations bring my total to 20. I've made a point of monitoring them and made a bunch of a dozen or so stations in between that came in off KXBI.

I also have my DX Log from 12/23:

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I have to thing else to.

Michael

FROM - 1004 Kings Park Drive - Liverpool, New York - 13080

CBX went from excellent to poor between 1/2 & 2/4, as normal

January totals were 84½, i.e.,

February 15, 1969

RARE Morse, W200-1350 is a V. Must have been a possible 5/6.

Rudy, must have been a possible 5/6.

February 15, 1969

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February 15, 1969

CHUS IRCAS - 9Y Point Hill Road - Fairfield, Connecticut - 06824

February 15, 1569

AN

They are a rare breed...and an entire breed even with W5PQF off. MN (3) - I got my driver's license at 16 - Aug. 31, 1956. On W5PQF, 1740. First time here, W5PQF was on 1940 - W5PQF apparently still off. (RPG)

Reporting on W5PQF (490) 9:00 p.m., better than usual then last November. Report on W5PQF as Aurora came in. W5PQF had W5Q as aux. for Golf at 11:10. BSS, W5PQF was at 0:04 p.m. W5QF was at 0:04 p.m. W5QF promised...n. W5QF was still all over the dial that I didn't bother logging up. For a report on W5PQF until 6:45 p.m., then left W5QF strongly when he should have been picking up W5PQF but, apparently didn't...W5QF?/W5PQF has the only DX field I've ever seen, written by Carroll Witter. Anyone know how? Thanks to those who (F11)
February 15, 1969

We welcome the following new members to N.R.C.:

N. RALSTON
Philadelphia, Penna.

G. CARRELL
Kirkville, Mo.

J. CONDON
Cape Hill, N. C.

A. COOPER Jr.
U. S. Virgin Islands (Rejoining)

R. FULMER
New York, N. Y.

R. GALLANT
Montreal, Quebec

E. GOLDSMITH
Indianapolis, Miss.

R. KINCAID
Minneapolis, Minn.

R. SCHREINER
Waterford, Wis.

* Chief Editor, Popular Electronics

CLASSIFIED STATION DATA, continued

<table>
<thead>
<tr>
<th>Station</th>
<th>City/State</th>
<th>Frequency</th>
<th>Power</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>WAKO</td>
<td>Sunbury, Pa.</td>
<td>500W</td>
<td>100,000 U-1</td>
</tr>
<tr>
<td>1400</td>
<td>CXX</td>
<td>Calgary, Alta.</td>
<td>50,000/10,000 U-4</td>
<td>- delete this power; station will remain 10,000 U-4</td>
</tr>
<tr>
<td>1200</td>
<td>WAKO</td>
<td>Sunbury, Pa.</td>
<td>500W</td>
<td>100,000 U-1</td>
</tr>
<tr>
<td>1200</td>
<td>WRO</td>
<td>Rochester, N. Y.</td>
<td>5000 U-2</td>
<td>Minor changes in night pattern</td>
</tr>
<tr>
<td>1200</td>
<td>WSN</td>
<td>Newport News, Va.</td>
<td>5000 U-2</td>
<td>Move nighttime transmitter site WW. (station has two transmitter sites</td>
</tr>
<tr>
<td>1200</td>
<td>CFEA</td>
<td>Anson, N. C.</td>
<td>1000 U-1, from 250 U-1.</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>WBR</td>
<td>Memphis, Tenn.</td>
<td>1000 U-1</td>
<td>Move XE N.E.</td>
</tr>
<tr>
<td>1200</td>
<td>WDS</td>
<td>Graysby, N. C.</td>
<td>1000/500 U-4</td>
<td>from 1000/150 to 1500 U-4.</td>
</tr>
<tr>
<td>1500</td>
<td>WCTW</td>
<td>New Castle, Ind.</td>
<td>250 U-4</td>
<td>Minor changes in nighttime pattern.</td>
</tr>
</tbody>
</table>

HEARD STATIONS LAST ISSUE

500 | KRAI | Nov. 5,000/500 U-2 | 1030 | WAKO | Lenior, North Carolina |

1070 | CXXK | Now 10,000 U-4 | 1600 | WAKO | Knox, Maine |

1200 | CKSA | Nov. 25,000 U-1 | 1810 | WAKO | Knox, Maine |

OFF-SIGHT SITUATION

330-920 KANK

ERNEST N. COOPER - 438 East 21 Street, Brooklyn, New York - 11206

Two more or less unexpected v/1 cases in this week's Radio News from the Venezuelan 1200/1400 broadcasts, and from the Von de Mellein-950, an AM, logged back on FM 11/4 during afternoon DX. DX Down the Week: 2:45-3:00 A.M. a day off to go to a Wed. Broadway matinee on a little DX on an Aurora-rich AM: Still unverified 1200-1210 heard 1210 to 1215, 1200 to 1205, in & out w/some 55 & 600-W. WYX-650, R. Girardino, noted still on WYX 12:50-30, giving AUTH. now in BS. Umu WBU-750 heard on f/c 1475-1485 with /off - I thought he said "WUBA" at first & my heart really jumped! WM 2/10 - be wary up to our "you-know-whatevers" in snow here, & DX was only fair. Frequent NW testing WUBA-1600 was as it was at 12/34 & on, WUBA-W & WUL, etc. During. WBU-1150, Hambly, Ohio, was on 97/36/400, WUBA-1200. They were quite strong here. NW-1150 WUBA-1600 was off at this AM, but testing off & on, & brand new WBU-1600 logged on its new late show to /off at 12:34-40. There was another testing there tonight BAUW- an ID at 1:09 sounded like "WANG". Spotswood, N.J. I noted WUBA-W and WBU-1560, both Hartford, on for snowstorm news, as was WUBA-W, but this was raising Holy Toledo with them. (Oh, Ernest!) At about 1:15 a.m. I noted WM-1-1255 running TM WUBA-1150, whose target date was 2/18 & is still not on NS. You all know that slogan of the Post Office - no mail before the snow, etc. shall stay these carriers from the swift completion of their appointed rounds? Haywood. Here was NO mail delivery here at all today, with 18" of snow on the ground. Then it was rough going, but why have such a slogan if it's not applied? The Weather Dept? Yep, I'm still blushing - BARN UNIV.
As of today, we have enlisted 22 volunteers for the NRC's Courtesy Program Committee. That's a good start, but we still need your support. If you can give a few hours a week for your NRC, please write for complete CPC details.

We now have a full supply of CPC stationary. If you are now to CPC or if your supply is small, write and I'll get some more letterhead in the mail right away. Of course, it's free to all CPC members.

A reminder to all CPCers: When you arrange a Test, don't forget to notify IRCA too. We have a very friendly working arrangement with IRCA so both Club's test schedules can be published in both DX NEWS and DX MONITOR. Send all info to DON ERICKSON G059 ESSEX STREET RIVERSIDE, CALIFORNIA (92504). This way, you can be certain your Test information will reach the maximum number of DXers. Thanks.

In future issues, DX NEWS will publish a list of stations already contacted for Tests. This is for reference, so other CPCers won't waste time contacting a station already contacted. These stations will appear only once, so be certain you keep these lists handy. To date, I have been informed the following stations have been contacted: WETC, WHLY, WIBD, WAVH, WDRK, WLSD, WSFW, WBBE, MIKE, WJAY, KD7Y, WFLR, WSGAT, WSGP, WSNC, WLYC, WTIL. Don't forget to keep me posted on which stations you have contacted for future listings.

HOW ARE WE DOING? Here is the CPC BOXSCORE:

<table>
<thead>
<tr>
<th>NRC</th>
<th>IRCA</th>
<th>NNRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>1/3</td>
<td>1/8</td>
</tr>
</tbody>
</table>

Tests arranged for more than one Club have been credited to both in the above count. Not counted are Tests which did not show. Since this BOXSCORE changes constantly, this count may differ from the count by the time this reaches you. CPC BOXSCORE will appear in all CPC REPORTS as a barometer of our success.

That's it for this time. A big WELL DONE to all CPCers for the Tests so far. Let's have many more. Remember, if you don't belong to CPC now, do something about it. JOIN TODAY.

3's and Good DX.

---

**INTERNATIONAL DX Digest**

**Propagation & Features**

Gordon Nelson, 19 Irma Ave. Watertown, Mass. 02172

**DX Conditions**

DX conditions here in the Northeast have been highly auroral during the past week; many have generally been very weak or totally absent. February 2nd exhibited the most auroral conditions noted here since the major magnetic storm 10/29/68. On the 3rd, an aura only TA present at our regular 1830 check was Agadir-215, and that was only a weak carrier. Later, in the evening, most U.S. stations to the North, East, and West were very weak; reception to the Caribbean region and Northern South America was extremely good. In Pennsylvania, Ben Dangerfield reports, "Reception has been very spotty here. Near-auroral DX noted almost every other night, including 2/7. The evening of 1/25 was terrible, but on the early AM of 2/26, there was a TA opening on the top of the band. One interesting observation. Your chart indicated 'good high latitude in or on 1/13'. On that evening around 2130, I had a weak signal on 1295 kc. I was looking for Kabul; PBJD had signed off at 2100, MAMJ [Nov, 73], the combination of prolonged auroral quiet prior to the 12th and the lateness of sunrise on that date makes it a possible reception. Recent reports out of Europe indicate that Kabul is now back on 1280 but it's not clear when they switched back... 2/5 John Rosehead in Michigan reports, "2/5 and 1/25 were really weird nights... 2/5 was all over the dial, 1/25 had results more toward Nicaragua and El Salvador; 2/5 more towards Cuba and Bahamas."
FBIS LOG OUT

The DI’s yearly listing of Broadcasting Stations of the World should now be available from the Government Printing Office in Washington. While it’s even later than usual this year because of a new computerized production system, this necessarily means a prompter reduction of the final product, Part II, listing by frequency, and Part I, listing by country, are now both available for only $1.75 from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402. Used in conjunction with the Latest World Radio TV Handbook and IDX, this latest FBIS station list supplies the international DI’er with just about all of the information there is!

SIMULTANEOUS LISTENING CONTEST

Comments on the last SLC: “I’ve suggestions for improving future contests but my wife’s reaction to the 0130-0135 AM (105) blocks is something else. And I’ve gotta try the 0250-0251 PM (465) of Friutwurst (depth) on 1200 yielded no signal whatsoever. Likewise 550 in block 7 and 540 in block 15, that is a waste of time... actually WAGL a good catch for me as XKO 50 kw was operating on 710 but I was able to pick it up anyway. FM(1) Miller “More hit blocks; I think most participants KH most if’e anyway – and they’re far more productive. Consider shortening the blocks to 3/4 hour. The contest was fun anyway and the blocks were better than last year.” (Gih). “Don’t make stations start at 1200 but later than usual this year because the latest FDIS station list supplies the international stations of the world, are now both available.” (Sullivan) “It was a lot, but then all signal was something else. And the contest was most enjoyable and I am all for running another spring.” (Dangerfield)

We’ll try to get in another North American SLC this season; have received letters from both Arctic and EU Circle (Ontand) expressing interest in a Europe-NA SLC this year and hope we can also arrange a UA-UC affair also.

SOUTH AMERICA LISTENING REPORTS

** TO THE SUBSCRIBERS OF THE NORTH AMERICAN FBIS LOG OUT USE THE CONTEST LISTING FOR YOUR CONTEST RULES _NOT OUR OWN_ AS A GUIDE AND FOLLOW OUR HOST'S RULES

TOTAL COUNTS: ALL THIS

<table>
<thead>
<tr>
<th>Country</th>
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<tr>
<td>Argentina</td>
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<td>RJ Sao Paulo</td>
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<td>XBD Bogota</td>
<td>500</td>
<td>200</td>
<td>Spanish</td>
<td></td>
</tr>
</tbody>
</table>

Report by Ray Moore.
CURT VINCENT, Probably the loudest of the cricketers network except for RKO-770; logged here 0300 2/29 and was the first time this AM. "2004, cut-out heard, thanks to WOR site. Only ID seemed to be "EA0" (Engberg, Mass.).
A happy set of circumstances found this one on with crackles and all too WON-720 off for new log and new country, 2/27. I believe it is one of the British stations in the YVIIY area on 3200 PM. (Cooper, N.J.) (Well, forewarned is for, er..."

WILL: 22 here with SS pop and deep-voiced sale announcer heard at 0705 - 0205 off with plane "MM", 2/27. Believe RFYV; is this a new extended mode? (Gooding, Ont., C.)

JANET: WON Kingston logged with crackle 1/27 thanks to WOR-710 and the Cuban 720 being silent. Over/under the AM (Cooper, NY) did not check here at all 1/27 but had crackle that same event; and logged atop the tree at 2005. (Engberg, Mass.)

Aired: Radio Trindade, Port-A-Prince heard only one the one here at 2050 2/26 with AST TOE1, EE center and BIG. Well atop the channel and natural ex; cat carrier 2035 leaving weak OKE. (Waldron, M.J.)

5665: Radio Nicaragua, Mexican Radio T-PQX, 2005 with news and into "Inspirational" at 0700. (Kilroy, D.C.)

Radio Nicaragua, WON noted sign 1800 2/20 with No Sign of a set from the new QTH. (0530 over on 720.)

JANET: Crackpot station here also, 1/27. (Engberg, Hayway, Mass.) Crackpot, closest of any station so 0500, 1/27, (station.

8729: WMH Virginia is stopped at 0500 2/20 and found a very high signal from what I assumed to be Barbados. Was all set to tune away when I heard a dedication for the town of East and St. John. From 0500 to 0530 an extremely powerful signal, all along on this channel from in, Redstone, Fort; B.V.I. with gospel ex and dedications. 1000 at 0530: "You are listening to Red B.V.I. - your voice of the Virgin Islands." Then, continued with gospel ex. Where was Barbados at this hour? Unfortunately 2802 is a new new and had been before, but probably not now. The 1000 WJ signal that Pete Dymszow show at the NAB show. (Nelson, Mass.)

9090: Barbados. Only crackpot noted on this freq 0200 and again at 2300.

1640: XEPW Tempico had win 0600 and prome 2140-2200 12/26/68.
1740: Found over columbia (Van Horn, Texas)
1818: XAIU-101 Radio Naranjo was ex 2105 2/29, alone. (Saxman, M.J.)
2300: Crackpot station first noted strong here about 0140 2/27 and probably was the new log it caused to the other outlets with 6 new stations in the next hour. (Beckham, N.C.)

Radio Cuba - "Cuba". 0640-0645 (Van Horn)

15 Feb 1969

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Radio Cuba - "Cuba". 0640-0645 (Van Horn)
**Domestic DX Digest**

**domestic contest standings**

Don Harrison, Hotel 1/N Rancho, PO Box 235, W Sacramento, Cal 95631

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1. Stewart Drake, Pa 597 21 Richard Eddie, MD 216
2. Bob Shaw, Ohio 606 22 Wayne Heiden, NY 224
3. Frank Waldron, NY 617 23 John Gifford, Ill 229
4. Bill Nilson, Colo 627 24 Gene Delozen, Mass 234
5. John Javetzky, NY 634 25 Jerry Conrad, Fla 246
6. Dave Fletcher, WI 642 26 Chuck Hosten, Ga 204
8. Joe Fala, NY 661 28 Walter LaRoche, Pa 171
9. Dave Carlson, Ind 671 29 Dan Erikson, Cal 169
10. Steve Allaway, Mass 680 30 Steve Carlson, Cal 169
11. Marc Delozen, Mass 690 31 Fr. Jack Pajak, Fla 132
12. Clarence Freeman, Ind 697 32 Bob Pleisch, Fla 127
13. Dan Menefee, Ne 707 33 Demetrius, NY 114
14. George Sherman, Minn 710 34 Larry Van Horn, Tex 116
15. Dave Kulka, Cal 715 35 Paul Kilroy, DC 106
16. Ken Lyon, Ind 725 36 Fred Norquist, Cal 90
17. Glenn Bauer, Colo 730 37 Bill Ochoa, Colo 80
18. Mike Nordman, Ore 732 38 Bill Bolduc, Ore 90
19. Frank Wheeler, Pa 740 39 Lynn Brooks, Ohio 20
20. Gene Mattacks, Cal 750 40 Bob Jacoby, Cal 0

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**FRIZZ**

1st place $12.50 2nd place $6.25 3rd place $3.25 4th place $2.50 5th place $1.00

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**after hours: midnight to sunrise**

- **560 WHNO-Mass Northern VT, Boston, good strength both here and on 1120 240-0131, nice 13 X of one better than 100 mw each, but radiates considerable noise, nonup pal good reception, very poor stations in Mass, Tenn.+ (Tenn.+ on all with 3 Ls)**

- **WWJ-Pa. Noted off MM 2/3. (Frank Harrill, Minn, Minn)**

- **570 WMAM-Wis Newsgcast in progress at 0101 after WHNO and WWJ. (0101-0130 is for recent newscast.) Longest X of 100 better, 10 Hz in each, two X on waves heard. (Harrill)**

- **690 KHHT-Tex Heard 0107 0300-0124 W/P. (Ken Lyon, Abq, NM)**

- **710 WHB-MA X2 0200-0230 MM 12/21, WHB off. (Bart Chadwick, NY)**

- **790 KSBW-Idaho 2/5 WMRO was not on. (Mike Nordman, Bennington, Vt)**

- **990 KOIP-Idaho Brief MM/X2 0200-0210 GL 0700-0800. (Ken Lyon, Abq, NM)**

- **900 KFMB-Tex Received QRM +9 QRM +39 QRM +19 QRM. (Bill Ochoa, Colo)**

- **920 KFRC-Tex Received QRM +9 QRM +39 QRM +19 QRM. (Kerp)**

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**900 XTCN-Ariz Very good at times MM 3/2 W/O glint. (Bart Chadwick, NY)**
990 KLJH-So 11:45-12:30 Miss. 2/3 w/250w Hr., s/off 0139. (Kaskey, Cal)
1050 WWHO-NK 12/1 2/3 not hrd, nor CPM, only XNR 0331-0339, may due to
tsaurml ex. (Norcent, Org)

1170 KWVO-Tex 12/21 MM 2/3, but male amor- npt HK. Per- haps need m1, ID (IDC)? Maybe
IDC here 0131 1/27. this one assumed.

1210 M1 12/1 2/3 w/10 no sign of MM TRA-DX, much H Moff, possi- bly due
to M1 aff. WCAU. (rk, checked with G Fox)
1st time hrd 0107? 2/10 w/ww, school closed w/ww, may
perhaps MM M1 for storm emergency, (randy)

1230 WZAS-6X 12/30 0107-0113 WZAS & ANP. DP E/W but no IDs. (DKK)
RT FM-NT 0153-0200 2/3, no IDs hrd, (m1)

1240 WQOR-Ey 12/30 0107-0113 OCP ID here 0131 2/7, this one assumed. (Merril, Mich)
1270 WRKO-FM 12/30 0135-0210 on 1/30. (Starr, Ohio)
1300 WQOC-CT 12/30 0135-0210 MM 2/3, MM runs 0213. (Starr, Ohio)

4 WZAS-6X

3.30 WPM-NY 12/30 0135-0210 in MM 2/3, MM 0210-0213 2/3, not IDed; after 0210

1340 WZUS-Fla 12/30 0305-0315 MM 2/3, MM of KRKO/MI
1440 WZUS-Fla 12/30 0305-0315 WZUS AM was MM 1/2, possibly NSP now. (Waldron, NJ)

1360 WZAS-Wa 12/30 0305-0315 ending 0200 E/W N at 0310 w/r. (Lyon, NY)
1400 KXIV-Ari 12/30 0305-0315 MM 2/3, MM 0313 2/3, WPOW

40 WZAS-Wa

1410 WZUS-Wa 12/30 0305-0315 on 0200 E/W at 0310 w/r. (Lyon, NY)
1450 WZUS-Wa 12/30 0305-0315 WZUS AM was MM 1/2, possibly NSP now. (Waldron, NJ)

1520 WINZ-Fla 12/30 0515-0530 MM 2/3, MM 0529-0532 2/1

WOW-FM 12/30 0515-0530

1540 WINZ-Fla 12/30 0515-0530 MM 2/3, MM 0531 2/3, MM 0532 2/3, MM 0534 2/3

1550 WZUS-Wa 12/30 0515-0530 ending 0900 E/W N at 0531 w/r. (Lyon, NY)

sunset and daytime

730 KPGC/KDRA- Tex Grand Prairie at off 1/25, unable to catch 240. (Merril, Mich)
740 WWHO-NK 12/30 0200-0225 2/3, surprising signal for only 250w. (Jerry Starr, Youngstown, Ohio)

-- WWHO-NK

1405 WWHO-NK 0200-0225 2/3 On until 0225 2/3. (Starr, Ohio)

1570 WSSA-Fla 12/30 0200-0225 2/3 surprising signal for only 250w. (Jerry Starr, Youngstown, Ohio)

sunset and daytime

1560 KXIV-Ari 12/30 0200-0225 2/3, surprising signal for only 250w. (Jerry Starr, Youngstown, Ohio)

1570 WSSA-Fla 12/30 0200-0225 2/3 surprising signal for only 250w. (Jerry Starr, Youngstown, Ohio)

sunset and daytime

-- KSAT-Tex

730 KSAT-Tex 12/30 0200-0225 2/3 good signal. (Sky Radio, (MAJ)
740 WWHO-NK 12/30 0200-0225 2/3 On until 0225 2/3. (Starr, Ohio)

1405 WWHO-NK 0200-0225 2/3 On until 0225 2/3. (Starr, Ohio)

1570 WSSA-Fla 12/30 0200-0225 2/3 surprising signal for only 250w. (Jerry Starr, Youngstown, Ohio)

sunset and daytime

1600 KZQZ-Fla 12/30 0200-0225 2/3 On until 0225 2/3. (Starr, Ohio)

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schedules and other info

Is Victoria, PO Box is correct:
(Father Jack)
(Edmunds, lnm
I
Some of the most widely heard parasitic
There is considerable confusion about some of these spurious
Farasitic
II.,.,,

There is a considerable confusion about some of these spurious

Para...
A long piece of wire or of piping with a defective connection can produce 'spurious signals' at sum and difference frequencies. The sum frequency, 1620 kHz (950 + 670), falls outside of the band by accident in this case; likewise so does the difference frequency, 60 kHz (1300 - 1240). But nonlinear junctions of this sort can indeed radiate considerable energy on combinations of the difference frequency and the original channel, in this case 970 (520 - 820) and 1110 kHz (520 + 590). On both of these frequencies, 970 and 1110 kHz, are points of a real signal that can be heard, and since the sum and difference products are present at the nonlinear junction, a real signal is transmitted. If the junction is corroded or behaves somewhat differently for other reasons, such as the presence of nearby metallic objects, this signal will be heard and may be difficult to suppress.

The nonlinear mixing effect can be used to advantage in some applications. For example, it can be used to mix two signals together to produce a new signal at a frequency that is a combination of the two original frequencies. This can be useful in situations where it is necessary to combine two signals with different frequencies. The nonlinear mixing effect can also be used to generate signals that are not present in the original signals. For example, a signal at a frequency that is a combination of two other frequencies can be generated by mixing the two original signals. This can be useful in situations where it is necessary to generate a new signal with a specific frequency.

The nonlinear mixing effect can also be used to detect defects in antennas or other components. A defective connection in a long piece of wire can produce a signal that is a combination of the two original frequencies, and this signal can be detected by the receiver. The nonlinear mixing effect can also be used to detect defects in transistors or other electronic components. A defective transistor can produce a signal that is a combination of the two original frequencies, and this signal can be detected by the receiver.
If instead In this list only /I, Next, 1030 Now h For the sake of Illustration we'll only consider 4 of Ani.ntll~n N.W. Weak tubes 11, 1. Check the tubes in the 6. Replace mixer, the spur will be peaked up all the way when the antenna trimmer is set at the null position to null a (true) signal on 280. If instead the spur is the result of internal mixing in the receiver caused by overload, the 280 spur would not peak at the position for 280 but would peak at the positions for 290 and 1030. Both of these tests make use of the fact that an external mixing spur behaves in all ways like a signal from a real transmitter originating from the location of the mixing junction.

d. Images are a special kind of spurious response which results from a basic flaw in the design of most superheterodyne receivers (see 438 Handbook, etc., for details). Only those spurious responses which appear on channels separated by twice the receiver's intermediate frequency (usually 2 x 455 = 910 kHz away) are images! Note that most of the top quality communications receivers used on the BCB (such as the HQ-180) while advertised as "double" tuned, etc., for details).

The four types of receiver-generated spur listed above account for the majority of the spurious signals likely to be noted by most DXers. Fortunately all of these problems will be reduced if not totally eliminated by the same sorts of cure. If you have serious trouble with the sorts of spurious signals listed above try the following steps:

1. Check the tubes in the receiver, especially the RF and mixer tubes. Don't make the mistake of checking out a questionable receiver by putting it under power, replace weak tubes, testing high in the "good" ones. Week tubes can cause both crossmodulation and internal mixing.

2. If shortening the antenna. Most DXers are quite sensitive to the RFI and many DXers mistakenly believe that the longer the antenna the better the reception will be. Up to a certain point this is true; beyond that, however, some antennas will simply overload the receiver and create spurious responses. Experiment with the length of the antenna until a reasonable compromise is reached.

3. Get your receiver realigned with particular attention to the RF and mixer stages: this is usually effective in reducing birdies and crossmodulation.

4. Install a loop antenna coupling in the receiver as described in "The Basic Superheterodyne Receiver," by K8BS, Spring 1968. Other loop antennas will develop crossmodulation responses sufficient for large free-air errors. As the BCB and antenna trimmer is the most effective remedy. The head antenna will develop crossmodulation response sufficient for large free-air errors as the BCB and antenna trimmer is the most effective remedy. The receiver should be used as the most permanent cure of this caused by overload.

5. If you must use an outdoor antenna, build one of the simple antenna tuners described in past issues of DX. (A "V" Antenna packets available from most antenna supplies. Antenna tuning is of this type are particularly effective at eliminating true images and internal mixing spurs.

6. Replace your outdoor antenna with a good high Q loop antenna. The combination of the loop, loop feeder properties and the lowered signal input level usually eliminates all forms of receiver-generated spurious responses.

We have often found it useful to prepare a chart showing all possible cases and differences for local stations so that we can immediately check when we run across a weak station on a supposedly "clear" channel to make certain that it's not a mixing spur. A chart like this is particularly useful in large cities with many different combinations of stations. For the sake of illustration we'll only consider 4 of our 19 Boston area locals. Lay out a checkerboard as shown below for all of the locals you want to include. Now double the frequencies of the stations;
HOW TO LISTEN TO THE WORLD

By Ruth E. Pinckney

It's a "MUST"

For many years, "How to Listen to the World" has been the only general reference book on all types of DXing techniques. It has served as the standard for DXing in the hobby, and it is now available in a new, expanded edition. The new edition, available in March, will be the "how to do it" companion piece for the World Radio Handbook. The book will include such material as ham propagation, auroral effects, how to obtain a DXA, and much more. The book is a "must" for anyone interested in DXing.

Send an S.O.S. for a copy

The book is available for $3.95, postpaid. Order from your local ham radio dealer or from the publisher, Radio Electronics.

You may already know how to listen to the World, but there is a book that will improve your knowledge. It's called "How to Listen to the World."