



DX NEWS

*the magazine of the
National Radio Club*

— SINCE 1933 —

Volume 55 Issue 14 Monday, January 11, 1988

AM Log Book Updater #4 is available. Order yours today. See your logbook for the order form. Send your order to the Publication Center and NOT to HQ.

From Fred Vobbe, "WVIC Sandusky, MI is now on 660KHz, ex-1560KHz and WLEM-1340 Bad Axe, MI has recently updated its transmitter facilities and should be 'DXable'. Send your reports to address in Log, attention John Vobbe, CE."

From David Schul, "Looking for Call letters, if there are any, for the following stations: Atlantic Beacon from Turks & Caicos Island-1570; Caribbean Beacon from Anguilla-1610KHz; the TIS station from Dayton, Ohio-530KHz. Any help would be appreciated." Send your answers to HQ, so we can know too!!

1988 NRC Convention in Milwaukee Wisconsin Update. Still in need of items for the Auction. Looking for sellable items. Just about anything will do. R390As, ICDMs, miles of wire, bumper stickers, tubes, and other assorted radio stuffs that you are willing to donate to the club auction. You can send those items to the HQ address, please mark on the box or envelope 'NRC Convention'. More news later. Hotel name and map will be presented in February.

ANARC Computer BBS is moving to a new number 509-534-6866. The board will be off-line until January 25, 1988 or thereabouts. If you haven't been on the board, give it a try when it comes back.

DXChange Wanted/Needed: Test Data supplement info for Jetrionics (U.S. Navy) TV3-C/U tube checker. I need the test settings for later 9-pin miniature triode-pentode tubes of the 6#8 variety. (Mike Tuggle, 224 Carroll Parkway, Frederick, MD 21701-4914).

CPC TEST (Times listed are Eastern Local Time)

Even if you don't hear the Test, why not send a postcard thanking the station anyway. Also, if you don't want to write to stations yourself to set up a test, you can still help us out. If you send some 22 cent stamps to Wayne Heinen, 4131 S. Andes Way, Aurora, CO 80013, he'll get a letter out for you, 1 station per every 2 stamps, you can even specify the station or frequency you would like to hear something on. And when a test is arranged your name will appear below! What a deal!

Jan. 24 WAW-630 St. Marys, WJ 0000-0030 Test will consist of music, tones, & IDs
Sunday A polite reception report to Robert Eddy, CE, Radio Station WAW, Box 374,
St. Marys, WJ 26170.

Test arranged for the NRC by John R. Malicky (with help from Mr. Eddy-Thanks)

LOOK INSIDE

2...AM Switch	3...Formats	4...DDXD-East
9...DDXD-West	10...AFR Graph	11...GYDXA
13...Solar, Earth & AM DXing	20...Musings	23...NRC Products
24...Winner of 5 Day Persian Gulf Boat Trip		

Are You Expired?

Take a look at the Address Label on the Back Cover of this issue. Look on the top line. That Date is your Expiration Date. Circle it on your Calendar. Another way to notice that you're about to expire is that about 3 or 4 issues before you are terminated there will be notices listed to the right of that date. They range from "First Notice" to "Time to Renew" to "Final Issue".

AM SWITCH

Jerry Starr, c/o WHOT Radio, 4040 Simon Road, Youngstown, OH 44512

FORMATS

Tony Fitzherbert, 356 Jackman Avenue, Fairfield, CT 06430

CALL LETTER CHANGES

OLD CALL:	NEW CALL:	OLD CALL:	NEW CALL:
1050 KANC CA	FRAZIER PARK KTNT	1340 KRAM NV	LAS VEGAS KMTW
1080 WALD SC	WALTERBORO WPOG	1390 KPPL CO	DENVER KMDK
1180 *New PA	QUAKERTOWN WBCQ	1550 KINC KS	WINFIELD KVFH
1310 WZZZ GA	WEST POINT WPLV		

APPLICATION FOR NEW STATION

870 NH SUNCOOK: 250/250 U3 (CORRECTS LISTING LAST ISSUE WHICH HAD SUNCOOK IN MO, ERROR FROM SOURCE. IS ALSO HARVEST BROADCASTING, SEE LAST EDITION OF AMS)

GRANTS FOR NEW STATIONS

NONE

APPLICATIONS FROM EXISTING FACILITIES

1480 KPHX AZ PHOENIX: DAY POWER TO 5000 WATTS, ANTENNA TO U4
1590 KXEM CA McFARLAND: CITY OF LICENSE TO BAKERSFIELD, CA (ADDITION TO APPLICATION TO MOVE TO 750 KHZ, SEE LAST ISSUE)

GRANTS TO EXISTING FACILITIES

NONE

OTHERNESS

NONE. LOOKS LIKE NOT MUCH IS GOING ON. SPARSE INFORMATION PROBABLY DUE IN PART TO THE HOLIDAYS-INDUCED SHORT WORK WEEKS IN DC.

73 AND GOOD DX, *Jerry & BKF* JERRY STARR & BUFFALO K. FOONMAN

LETS HEAR FROM YOU! REMEMBER THAT MUCH OF THE INFORMATION IN THE OTHERNESS SECTION OF AM SWITCH COMES FROM YOU, THE FAITHFUL READERS AND MEMBERS OF NRC. IF YOU HEAR A NEW STATION ON THE AIR OR NOTICE A STATION BEING SILENT, SEND THAT INFO TO AM SWITCH. SOME MEMBERS SEND THIS INFO TO OTHER COLUMNS IN DX NEWS WHICH IS FINE IF YOU ARE CONTRIBUTING TO THAT PARTICULAR SECTION AND WANT TO SAVE A STAMP. WE GLEAN DXN AND FIND THESE STRAY ITEMS AND INCLUDE THEM IN LATER AM SWITCH COLUMNS SINCE THIS IS THE PLACE MOST MEMBERS LOOK FOR THOSE ITEMS. THE ONLY PROBLEM IS IT SLOWS DOWN THE INFO FLOW A BIT. FORMAT CHANGES OR DXING A STATION WITH NEW CALLS GO TO OTHER APPROPRIATE COLUMNS, OF COURSE BUT NEW OPERATIONS, SILENT STATIONS, FREQUENCY CHANGES OR NEW FULLTIME OPERATIONS ON THE AIR SHOULD COME HERE. IT'LL SAVE ALL THE EDITORS THE TIME IT TAKES TO SHUTTLE AROUND INAPPROPRIATE ITEMS TO THE PROPER PERSON. AND THANK YOU FOR YOUR SUPPORT.



115 SOUTH JEFFERSON ST.
GREEN BAY, WISCONSIN 54301



1290 AM

Keil Road / P.O. Box 4647
Wichita Falls, Texas 76308



P.O. Box U
Salisbury, Maryland 21801



KDKA STAFFER LEAVING — Cheryl Morton, program manager at KDKA-Radio, will leave the station early next year to join the "transition team" at WMAQ-AM in Chicago. Group W, KDKA's parent company, just purchased WMAQ from NBC and plans to convert it from talk to an all-news format.

Mike Morton joined KDKA-Radio two years ago. No replacement has been named, and no departure date has been set.

By the way, WMAQ becomes Group W's first all-news station. (The company has 15 stations in 12 markets.) KDKA-Radio's ratings keep climbing, you may see news reports about that here as well.

From Pittsburgh Post
CHRIS CUOMO

Welcome to the Winter Solstice edition of Formats. This is the peak time for DX'ing, but did you ever notice that the veries pick up after the holidays. I would think that at most stations, everyone is selling time, wooing potential sponsors, and partying, as it should be. We must remember that the stations we hear are businesses, and they verify for us out of the goodness of their hearts. And when a station writes a verie, why not send the signer a picture post card from your location to thank the station for its kindness.

This edition of Formats is brought to you by Jody Hughes (JH), Geov Parrish (GP), The M Street Journal (M), and new contributor and rejoined NRC member Mark Strickert of Berkeley, CA. Welcome back, Mark, and to all contributors, thank you. And here we go.....Note that Mark updates us on all of the WC stations that we would love to hear on the East Coast.....

560	KSFO	CA	San Francisco	- oldies // KYA-FM, sports and talk evens(MS).
610	KFRC	CA	San Francisco	- "Magic 61" standards w/ L. King nights(MS).
630	KXDC	CA	Monterey	- "Exstasy", EZL // FM, ID's as "KXDC-FM and AM, Carmel-Monterey"(MS).
640	KFI	CA	Los Angeles	- "KFI-640", AC days, talk nights(MS).
670	WMAQ	IL	Chicago	- Purchased by Group W, to be all news like other Group W stations, such as WINS, and KYW (GP and TF).
680	KNBR	CA	San Francisco	- "KNBR-68", AC days, talk nights(MS).
690	XETRA	BCN	Tijuana	- "69 Extra Gold", oldies, was Gordon McLendon's all news station, also once was all want advs(TF). Info from MS.
710	KFIA	CA	Carmichael	- Rel(MS).
	KMPC	CA	Los Angeles	- MOR days, sports/talk evenings(MS). (MS)
740	KCBS	CA	San Francisco	- "News and More on 74" news/talk evenings and nights.
810	KGO	CA	San Francisco	- Talk, newsblocks during drive times(MS).
910	KNEW	CA	Oakland	- AC style CWM(MS). Modern Country??(TF).
930	KRTH	CA	Los Angeles	- Oldies (MS).
930	KRIA	TX	Terrell Hills	- Satellite Spanish from XEOR-1030, Mexico City, is this the first US station programmed by satellite from abroad???(GP).
960	KABL	CA	Oakland	- "Kable Music", EZL, // FM (MS). Another successful McLendon experiment(TF).
970	WVOP	GA	Vidalia	- CWM(JH).
970	WJMX	SC	Florence	- Stereo Soft AC, 24 hours(JH).
980	WAAV	NC	Leland	- News/talk(JH).
990	KKIS	CA	Pittsburg	- "Kiss" chr//FM(MS).
1010	KIQI	CA	San Francisco	- "La Grange" Spanish CHR days, Spanish AC Nights(MS).
1020	KTNQ	CA	Los Angeles	- Spanish AC(MS)
1030	KKSA	CA	Folsom	- "Legends" adult standards (MS), and (M).
1040	CXXX	BC	Vancouver	- CHR(MS).
1040	WYFX	FL	Boynton Beach	- Black programming(M).
1050	KOFY	CA	San Mateo	- Oldies "Nifty 1050", "Coffee"(MS).
1060	WBIV	MA	Natick	- Ex-WTTP, I heard Jazz at night, and Jewish Humor on Sunday Morning while driving back to CT, gives address in PO BOX 116, Stoughton, ID's as "Boston's Inspirational Voice"(TF).
1100	KFAX	CA	San Francisco	- "Life at 1100", REL and Ethnic in blocks(MS).
1110	KRLA	CA	Pasadena	- Oldies with a time tone after most time checks(MS).
1110	WCBR	KY	Richmond	- Satellite AC // FM(M).
1150	KPLS	CA	Santa Rosa	- CWM(MS).
1170	KLOK	CA	San Jose	- AC(MS).
1180	KERI	CA	Wasco	- REL/Spanish REL(MS).
1190	KNBA	CA	Vallejo	- CWM, REL on Sunday(MS).
1220	KDFC	CA	Palo Alto	- Classical, //FM(MS).
1230	WKHT	CT	Manchester	- CWM, // w/ WMAQ-1380, Naugatuck, "Connecticut Country", ID's on the hour for "Manchester-Hartford-Naugatuck-Waterbury"(TF).
1240	KNRY	CA	Monterey	- News/Talk(M).
1240	KSAC	CA	Sacramento	- "Sacramento's only 24 hour classical music station(MS).
1260	KOIT	CA	San Francisco	- "Koit", soft AC//FM(MS).
1260	WKDN	TN	Dickson	- CWM(JH).
1270	WKXR	NC	Asheboro	- AC(JH).
1280	WSQV	PA	Berwick	- Was news/talk, now rock oldies(GP).
1280	WTCX	TN	Dayton	- CWM(JH).
1290	KAZA	CA	Gilroy	- "Casa" Spanish MOR(MS).
1300	KWKW	CA	Pasadena	- "La Mexicana" Spanish MOR(MS).

William Hale
2610 Farm To Market Road, Johnson City, NY 13790

And on to a second page....again, thanks to our contributors!!!

- 1310 KDIA CA Oakland - Black oldies(MS).
- 1310 WDOC KY Presonsburg - Oldies(JH).
- 1330 KFAC CA Los Angeles - Classical//FM(MS).
- 1350 KSRO CA Santa Rosa - News/talk (NBC Talknet)(MS).
- 1350 WCOP GA Warner Roberts - Contemporary Christian (JH). Remember when the call WCOP was 1150 in Boston, operating from the Copley Plaza Hotel, and was a rocker? Ironically, this frequency now uses the call of the even more popular rock station which killed it, WMEX(TF).
- 1370 KEEX CA San Jose - CWM(MS).
- 1380 WNAQ CT Naugatuck - CWM//WKHT, 1230, see 1230 for details(TF).
- 1400 KBLX CA Berkeley - AC/Jazz "Quiet Storm"//FM(MS).
- 1430 KNTA CA Santa Clara - "Kanta", Spanish CHR(MS).
- 1440 KVON CA Napa - Talk(MS)
- 1450 KEST CA San Francisco - REL/Ethnic/Misc Block Programs(MS).
- 1450 WFPG NJ Atlantic City - Ex-WIIN, now older oldies w/ BBM, and early rock(M).
- 1450 KNET TX Palestine - Ex-KYYK, rock oldies(M). Gordon McLendon's first radio statio(TF).
- 1460 KWFN CA Concord " - "W-FUN", oldies Same ID as the station on 970 in
- 1460 WPRW VA Manassas - CWM(M) and (GP). Ashtabula, OH(TF).
- 1480 KWUN CA Concord - "K-One", AC(MS).
- 1490 WAJA NC Franklin - CWM(JH).
- 1490 KTOB CA Petaluma - "Top of the Bay", ac/talk nights(MS).
- 1500 KHTT CA San Jose - Oldies(MS).
- 1500 WAKE IN Valparaiso - Automated AOR(M).
- 1510 KTIM CA San Rafael - Adult Standards(MS).
- 1510 WNLC CT New London - Oldies "New London County Gold"
- 1520 KTRC CA Port Huemene - "Radio Tiro" with gunshots after each ID, Spanish CHR(MS).
- 1520 KOLM MN Rochester - Oldies(M).
- 1530 KFBK CA Sacramento - Talk, now owned by Westinghouse so is "Group W"(MS).
- 1540 KSKQ CA Los Angeles - "Super Kah-Koo" - Spanish(MS).
- 1550 KKHI CA San Francisco - Classical "Full Stereo KKHI, //FM(MS).
- 1560 KLNG IN Council Bluffs - Silent(M).
- 1580 KDAY CA Santa Monica - Black CHR(S).
- 1580 KWKN CO Colorado Springs - Silent(M).
- 1590 KLIV CA San Jose - Adult Standards(MS).
- 1590 KOGO CA Ventura - Oldies(MS).
- 1600 KRXY CO Lakewood - Ex-KMVP, sports, now CHR w/ FM(M). WFAN take note (TF).

Well, a good column this time. Thanks again to our contributors. And have a very happy 1988, all of you!

73's.

Mouse Was No Fan Of Country Music

Times Staff & Wire Reports

PULASKI — Country music radio station WSCP-FM was back on the air Friday after being quiet as a mouse Wednesday and Thursday because a rodent short-circuited its transmitter.

Ricky Skaggs was singing "Highway 40 Blues" at about 10 p.m. Tuesday when 101.7-FM blacked out, said Daniel J. Dunn, station manager and part owner.

"That's when I got the blues," Mr. Dunn said.

"The night disc jockey called me up and we got our engineers down to the transmitter," Mr. Dunn said. "Three hours later we found out that a mouse had crawled into the transmitter through an air vent in the side and touched one of the high-power rectifiers, short-circuiting the whole system."

The station's AM broadcast was not affected.

But since the FM station did not have the proper spare parts on hand, it had to send for them in Florida.

By late Thursday, the station was fine, but the mouse never made it out of the transmitter box.

"The transmitter is out in the woods (in Orwell) about seven miles from the station, so we think the mouse probably crawled in to get warm," Mr. Dunn said, although it got a little warmer than it wanted to. "I am happy to say it was fried."

While the station's curious listeners, who deluged the switchboard with calls this week, found the mouse dilemma quite funny, Mr. Dunn was not so amused.

The 3,000-watt station has

competed directly with a country music station in Syracuse since it went on the air in April.

Mr. Dunn was fairly sure the mouse wasn't a WRRB-FM kamikaze bent on sabotage, and it caused the loss of \$3,000 worth of equipment and about \$5,500 in advertising.

Worse yet, the station was off the air during a ratings period, which could have an effect on the its competitive standing and advertising prices.

The ratings determine the official number of listeners for each station. The more listeners there are, the more the station can charge for its ads.

"Of all of the things you plan for, you just don't expect a mouse to screw things up," he said.

Mr. Dunn was not sure exactly what steps the station would take to prevent another Orwell mouse from playing electrician, but he has had plenty of suggestions from his listeners.

"A lot of people think we ought to put a cat up there," he said. "Another one said we should spread Ex-Lax on the ground around the transmitter.

because mice don't like it." But for now, he will be looking over his shoulder to make sure the Society for the Prevention of Cruelty to Animals doesn't treat him like a rat for being happy the mouse is dead.

"The last reporter I talked to used to have a rat as a pet," he said. "He told me I ought to be careful. Of all the thousands of reporters in the world, I had to get him."

MEDIUM WAVE RAMBLINGS...

■ First off, I'd like to point out that this column (along with GYDXA, and I'm pretty sure Nancy & Chuck will agree for their columns) is for members of The NRC. I cannot, in good conscience, print loggings from friends, neighbors or old pals, submitted by you. Even if they are members, I would prefer if they would send in the stuff themselves. There are many extenuating circumstances that enter into the picture if the data is not mailed in by the individual concerned. Non-members—absolutely, NO! There are, of course, special cases which would be considered. But, if the need arises to mail in individual catches from another member, I would prefer to see a note from him/her stating that those were, indeed, their loggings and it's OK to print them. I'm not sure if we're into legal-stuff here, but I'd hate to take a chance on behalf of the club. Tuff said.

■ Remember, try to submit your loggings in a timely manner. A few of those in this week's column came pretty close to ending up on the cutting room floor. My rule is...no more than a month old by the day I will mail the column to HQ. If you only have a few loggings, and don't want to spend 22¢ send a postcard. I get lots of those.

■ Since GYDXA appears only occasionally, I'm going to include new GY records. This week, some contributions from Ole Ah (which should have been included with the recent 1490 column—sorry, Ole), Eric Buseman, Mel Wolfish and Steve Witt are presented for your info. I've also received a ton of catches from Frank Merrill and Roy Hillar of Suburban Seattle. Unfortunately, due to the volume of loggings from Frank and Roy, I can only print their 2 best catches on each frequency. Space available, you know. But believe me, they've captured a lot of records, folks. Also received are a 'Totals' update from Don Voorhies. Look for GY Updates just before the reporter credits. Everything printed is a new record...

SPECIAL

- 640 WJTZ TN BLOUNTSVILLE - 12/3 1658 fair w/Tri-Cities Wx, ID 640 WJTZ, frequent J72 & AM 640 ments; AC mx; never hrd as WQGR (MS-ON)
- 820 WCZE IL CHICAGO - operating w/reduced power from 3 towers since 12/15 when a big wind from Winnetka blew down their fourth (KDF-IL)
- 1080 WRYT IL EDWARDSVILLE - 12/5 1710-44 fair-poor w/KRLD partially nulled; BBD mx, Sinatra, etc; Right Radio slogan, 500 watts, 4-225 ft towers, main DA lobe is WSW of town; ID/our're Right w/WRYT, Edwardsville-Collinsville; addr:WRYT, 9Cougar Rd, Edwardsville, IL 62025 per CE Glenn M. Sies; verie in 1 week; planning nite operation by May 1, 1988 (JFH-OK)
- 1150 WMST KY MT STERLING - 12/2 0600 s/on w/ment of PSA of 250 watts & PSEA of 54 watts (JH-KY)
- 1320 CFCM ON RICHMOND HILL - 12/11 1843 w/C&W mx, lcl ads (MS-ON) Re: question in Issue 9 about CLs...they are definitely CFCM; I used to live just up the road from their Richmond Hill studios (MS-ON)
- 1380 KLUE OK MUSKOGEE - 12/3 w/Clue Radio & All American mx slogans; ex:KMSU (JFH-OK)
- 1270 KWPR OK CLAREMORE - 12/1 now on at nite to 2900 BLT w/Jim Peters C&W show; talked w/PD Jack Stallings & he sez 500 watts; also, the ground system is not too good because only 3 radials are actually effective; fair poor in Vinita @ nite w/KESS (JFH-OK)
- 1460 WPRW VA MANNASSAS - 12/12 1744 w/C&W mx, The New Country Choice slogan; ex:CHR, I believe (GC-NY)
- WPRW VA MANNASSAS - 12/12 1748 v/good w/sps scores+wx & annc't Thanks for making the right country choice, 14-60 WPRW; ex:AC (so the log sez) (CC-PA)
- 1470 KVIN OK VINITA - 12/1 now on @ nite 'til 2200 (later for sps events) w/88 watts, per call to stn; hrd past then w/mx on 12/6; nite DJ is D.J. McMahan (JFH-OK)

DX & EQUIPMENT TESTS

- 1530 KTCR OK WAGONER - 12/13 0133 ET'ing w/4 kw, tweaking the XR to 5 kw; no mx, just IDs; way o/WCKY/unID Christmas mx; pwr info per call to stn (JFH-OK)

UNIDs & UNIDs ID'd

- 580 CKAP ON KAPUSHKASING - re logging by DP-IL was CKAP, not CFRA; CFRA usually IDs using their full CLs & plays mx of the 60s+80s; CKAP plays current T40 hits & seldom IDs beyond AM 58 (MS-ON)
- 690 UNID ?? - 12/4 0256 w/OC/TT (PRM-NJ)
- 1080 UNID ?? - 12/5 1718 wx 4cast w/ID sounding like WBSC, Tor D; the B may have been a T or D also; not WRYT or KRLD; faded back to KRLD/WRYT (JFH-OK) (CL may have been from an Flier!?!-WRH)
- 1470 UNID ?? - 12/4 0702 fair w/Canadian mx items & Newsradio ID (KDF-IL)
- 1490 UNID ?? - 12/13 0240 w/BBD & stds mx, Big Star Stn IDs; CLs sounded like WTSN or WGSN; in pretty well for much of the morning, so probably something close; would say WESL, but they're BLK (KDF-IL)
- 1530 UNID ?? - 12/12 2345-0149 continuous Christmas mx, incl a lot of Carpenters mx; no IDs, ads or breaks of any kind; fair w/WCKY (JFH-OK)

OVER-UNDER CLUB

- 5 NB ON NORTH BAY - 12/4 0250 fair, hrd at same spot on dial as YWA; freq & QTH unsure (Petawa?) (PRM-NJ)

MIDNIGHT TO MIDDAY

630 WQAM FL MIAMI - 12/4 0255 strong w/mx, then 56 Country WQAM; well o/WFIL (PRM-NJ)
640 KTIB LA THIBODAUX - 12/6 0758 ending AP Net pgn, LA Tourism promo & AP Nx @ :00;
to to unID strong signal that came on suddenly (KVJ-GA)
WJTZ TN BLOUNTSVILLE - 12/5 0900 noted ID mixing w/others (JH-KY)
740 CBL ON TORONTO - 11/22 0701 in w/CBC Nx (JH-KY)
790 WPIC PA SHARON - 11/22 0800 ID+ABC NX (JH-KY)
800 WSVS VA CREWE - 11/23 0847 WSVS AM & FM+C&W mx (JH-KY)
810 WBLW GA ROYSTON - 11/24 0635 in w/GA Network Nx, lcl ads (JH-KY)
900 WTOP OH CANTON - 11/26 0818 w/B'day greetings to Stn Mgr Tom, during REL (JH-KY)
910 KCLN AR BLYTHEVILLE - 11/28 0749 w/aps, ID, ads, AC mx (JH-KY)
980 WPHG VA BRISTOL - 11/21 0719 w/ID, AC, nx (JH-KY)
1130 WNEW NY NYC - 11/30 0847 w/ID, traffic rpt (JH-KY)
1210 WDAO OH DAYTON - 12/6 0719 snuck in w/Sunday Morning Gospel < WDGR blasted them
out (KVJ-GA)
1270 WTSN NH DOVER - 12/13 0111 annct Million dollar mx from the goldmine, WTSN+Great
Pretender (CC-PA)
1330 WFBC SC GREENVILLE - 12/13 0100 The Oldies Stn, WFBC, Greenville+NBC Nx (CC-PA)
1380 WIZO TN FRANKLIN - 12/7 0632 w/ID, s/on Franklin's Golden 1380+OLD (JH-KY)
1430 WBEV WI BEAVER DAM - 11/21 0840 ID w/ment on Hwy 151 south of Bever Dam (JH-KY)
FLTNG FL PANAMA CITY - 11/21 0840 ID & ad mentg Hwy 77 (JH-KY)
WPHK AL PELL CITY - 11/21 0924 in w/Walgreen ad in downtown Pell City (JH-KY)
1450 WVON IL CICERO - 12/8 0105 ID w/Your stn for information & information (JH-KY)
(Guess they have lots of information?!-WRH)
1480 WAJA NC FRANKLIN - 12/12 0757 Pwer 1480 request #, 369-5033 (JH-KY)
1490 WKIT WV CHARLESTON - 11/29 0200 fair, briefly o/WABJ/WESL w/ID; poss ment of Good
NewsRadio 15 (KDF-IL)
1580 WJBQ ME GORHAM - 12/4 0258 w/Stevie Wonder song, then AM \$ 15-90, WJBQ, Gorham
ID just o/WJRO QRM (PRM-NJ)

MIDDAY TO MIDNIGHT

610 CHNC PQ NEW CARLISLE - 12/9 1848 o/CKTB/WIP w/FF tlc (GC-NY)
620 WVMT VT BURLINGTON - 12/6 2000 w/NFL FB; w/WSKQ (RS-NJ)
630 WSJS NC WINSTON-SALEM - 12/12 1858 w/ad for Winston-Salem Market Palace+lg1 ID &
2nd hour of Cruisin' America w/Cousin Bruclie (CC-PA)
CFOD ON CHATHAM - 12/8 2036 slogan Playing Favorites of the 60s, 70s & Today (RS-NJ)
WAEI PR MAYAGUEZ - 12/12 1819 SS EZL+SS ID, then ads mentg Mayaguez & PR (CC-PA)
640 WFNC NC FAYETTEVILLE - 12/4 1858 fair w/WFNC Forecast, Century 21 ad (MS-ON)
680 WZAP VA BRISTOL - 12/9 1701 GOS mx u/CBF; lgl ID hrd (GC-NY)
WZAP VA BRISTOL - 12/4 1700 fair w/country GOS mx, ID You're listening to WZAP,
Bristol, VA. It's 5 O'Clock, EST+pgmThe Arm of the Lord from Johnson City,
TN (MS-ON)
710 CKVM PQ VILLE-MARIE - 12/9 1705 o/WOR in CJRN null w/FF (GC-NY)
750 WHEB NH PORTSMOUTH - 12/9 1708 fair o/WSB w/AOR mx; probliuWHEB 100.3, Rock & Roll
100 (GC-NY)
WHEB NH PORTSMOUTH - 12/8 1707 poor w/CBL splatter; lcl nx ending w/item abt NH State
legislature, aps, wx, ID, feature on John Lennon's mx; anew state for me from
this QTH, although I've logged them B4 elsewhere in Ontario (MS-ON)
WRIK IL BROOKPORT - 12/3 1743 ID w/Rock 98; gone @ 1745 (JH-KY)
WRIK IL BROOKPORT - 11/29 1745 fair+poor u/WSB w/ROK mx; hrd River City Rocker @
scheduled s/off time, but no CLs hrd (KDF-IL)
780 WTAR VA NORFOLK - 11/22 1820 ID & temp+OLD (JH-KY)
800 WDEH TN SWEETWATER - 11/23 1811 ID w/address during REL (JH-KY)
810 CJVA NB CARAQUET - 12/4 1801 fair; in FF w/lcl ads, ments of Caraquet, ID (MS-ON)
820 WZYQ MD FREDERICK - 11/23 1851 82-Q+C&W mx (JH-KY)
WRFPA FL LARGO - 11/23 1857 WRFPA, Radio For America; C&W mx (JH-KY)
840 WKXE PR YABUCCA - 12/11 2128 Noti Uno Nx+computer-generated mx w/annct Noti Uno;
good+poor u/WHAS for PR #1 (CC-PA)
860 CJBC ON TORONTO - 11/23 1818 noted in w/FF (JH-KY)
WBGR MD BALTIMORE - 11/25 1832 ID w/All-Gospel Radio (JH-KY)
WSBS MA GREAT BARRINGTON - 12/5 1420 ID, EZL mx; u/WTEL (RS-NJ)
880 KIKR TX CONROE - 12/10 (no time) absolutely local-like signal, no sign of WCBS; w/
ABC Nx Brief, aps rpts & Seare ad (KVJ-GA)
900 WCOB TN LEBANON - 11/24 1835 ID out of TN Net Nx (JH-KY)
WDDT MS GREENVILLE - 11/24 2011 w/IDs, ads, # ment, SWN Nx @ 1858 (JH-KY)
930 CFBC NB ST JOHN - 12/9 2214 good o/nulled WBEN w/ID, TC (11:14), ad for Pony Village
Motors (Hyundai dir), horse race results (MS-ON)
960 WAGR TN LA FOLLETTE - 12/11 2205 annct by female You're listening to Mr. Gospel
Mx, Don Mack on Gospel 96; mentd social event @ Ashbrook HS (ian't this
supposed to be a daytimer, though? (CC-PA) (Everybody's gettin' PSSAs now!-WRH)
WEAB TN ADAMSVILLE - 11/25 1800 ID+USA Net; ex:1840 (JH-KY)
KZIM MO CAPE GIRARDEAU - 11/25 1805 SID+C&W mx (JH-KY)
OFFX ON KINGSTON - 12/11 1805 fair w/C-Fox Wx; ex:CKWS (MS-ON)
970 WJMX SC FLORENCE - 11/25 1857 ID w/# ment+ACmx, no nx @ 2000; 24-hr ment (JH-KY)
WESO MA SOUTHBRIDGE - 12/18 1506 OLD mx, ID; u/WWDJ (RS-NJ)

980 WCAP MA LOWELL - 12/18 1520 w/wx & ID (RS-NJ)
990 CBY NF CORNER BROOK - 12/13 2300 CBC Newfoundland hrd (RS-NJ)
1000 WSEF NC HICKORY - 11/28 1849 ID w/C&W ment, Dominoes Pizze giveaway (JH-KY)
1030 WNOV NC MINT HILL - 12/6 1715 poor+fair in WBZ null w/REL pgn & s/off (KDF-IL)
1040 KAIN LA VIDALIA - 12/5 1800 s/off by female, ments licensed to Vidalia, but facil-
ities in Natchez, MS; uses K-10 slogan; way on top of WHO (KVJ-GA)
1060 WFLE KY FLEMINGSBURG - 12/5 1838 w/KY/IN BKB game & KY season ticket offer (KVJ-GA)
KHYM TX GILNER - 12/5 1815 s/off ments of microwave relay & Christian format;
You've been listening to the Radio Ministry of KHYM (KVJ-GA) (I'M surprised
they don't use K-Hymm as a slogan,hi-WRH)
WCFB MS TUPELO - 11/28 1727 ID w/lcl ads (JH-KY)
1130 WISN WI MILWAUKEE - 12/4 1712 fair w/ID by female Talk Radio 1130 WISN (MS-ON)
1240 WBAX PA WILKES-BARRE - 12/12 2359 w/ad for auto body (shop) in Wilkes-Barre, +annct
ending w/All the favorites of your life, at AM 12-40 WBAX (CC-PA)
1250 WDVA VA DANVILLE - 12/12 1831 lcl ads; poor w/WTAE in CHWO null; new (GC-NY)
1280 WEZE MA BOSTON - 12/11 1804 fair w/USA Radio Net Nx, PSAs for lcl churches, ad for
Gordon College Bookstore+REL b'cast via satellite (MS-ON)
1270 WCBC MD CUMBERLAND - 12/12 1710 o/WHL D w/ending of Texaco Metropolitan Opera+lg1
ID; ABC Nx jx, but local nx (GC-NY)
WSPR MA SPRINGFIELD - 12/8 1807 good w/ID Supertalk AM1270 WSPR & disclaimer
stating that views expressed in following pgn were not necessarily those of the
staff & management of WSPR (MS-ON)
1280 WPVA VA COLONIAL HEIGHTS - 12/17 1700 ran s/off 2 times! (RS-NJ)
WOPY NC JACKSONVILLE - 12/17 1700 ID hrd u/WPVA (RS-NJ)
1300 WYTL IN TERRE HAUTE - 12/11 1952 w/Beatles tune, ID; new; poor (CC-PA)
1320 WGET PA GETTYSBURG - 12/13 1831 ID in mush (GC-NY)
1330 WOLD VA MARION - 12/13 1847 w/ID, Smith County Chamber of Commerce hrd (RS-NJ)
1350 WOYK PA YORK - 12/12 1811 Pontiac ad, annct Listen to the award-winning Larry King
show Saturdays @ ?? on 13-50 WOYK; fair (CC-PA)
1380 WMFC AL MONROEVILLE - 11/30 1807 state/local nx w/female annr, ad for Bailey Bros
Women's Clothing (KVJ-GA)
WBOB VA GALAX - 12/12 1834 ID hrd o/unID CHR stn: cx to SW VA seemed enhanced today
(GC-NY)
WDRG CT HARTFORD - 12/4 1502 fair w/nx, TC & WDRG Nx is next, lcl ad (MS-ON)
WHBG VA BRIDGEWATER-HARRISONBURG - 12/11 1558 fair w/nx, ad for Capt John's Seafood
Mkt @ 601 N. Main St in H'burg + other clustered lcl ads (MS-ON)
1370 WJWS VA SOUTH HILL - 12/3 1847 fair w/lcl & state nx, ad for auto dir in South
Hill (MS-ON)
1390 KJPW MO WAYNESVILLE - 11/30 1745 briefly w/Great Pumpkin Contest (guess weight of
giant pumpkin, win prize) (KVJ-GA)
WMPD OH MIDDLEPORT - 12/11 1700 fair w/s/off mentg WMPD Middleport-Pomeroy, 5 Kw,
BR-SS, studios & XR on Bradbury Rd, FM 92.1 invite, SSB & off (MS-ON)
1400 WJLD AL FAIRFIELD - 11/30 1754 promo for United Negro College Fund, nx, and
Birmingham trfx report (KVJ-GA)
WINC VA WINCHESTER - 12/12 1723 ads, PSA for charity drive, 92.5 WINC jx; good u/
WPHD; this is the 2nd time I've hrd this, why can't I hear the PA's like WKBI &
WICK? (GC-NY) (I think some guy who goes by the name of "Skip" has something
to do with it, hi-WRH)
CJFP PQ RIVIERE-DU-LOUP - 12/11 1836 w/FF CHR o/u the GY (CC-PA)
1410 WELM NY ELMIRA - 12/12 1720 ID mentg upcoming Bruce Springsteen concert (GC-NY)
WGGM VA CHESTER - 12/12 1700 s/off w/92.1 FM invite (RS-NJ)
1430 KSTB TX BRECKENRIDGE - 12/11 1820-59 w/distorted audio, but not fluttery; C&W mx,
ads mentg Breckenridge, call-in for Ice Capades tix, wx, ID, s/off w/AM-FM ID;
poor w/KSKS; new; TX #133 (JFH-OK)
KASI IA AMES - 12/6 1824 fair u/CJCL w/wx & several IDs; format seemed to be old
stds (KDF-IL)
1460 WBET MA BROCKTON - 12/18 1500 lgl ID+nx (RS-NJ)
1470 CKO PQ POINTE CLAIRE - 12/4 1857 fair w/CHOW null; business rpt, annct @ 1859 This
is the CKO Radio Network; clustered Montreal ads, pgn anncts (MS-ON)
1480 WISL PA SHAMOKIN - 12/11 1830 w/Rolling Stones tune+lg1 ID & nx (CC-PA)
WSDS MI YPSILANTI - 12/3 2356 fair w/ad for Highland Park Lincoln-Mercury, wx for
suburban Detroit; CKAN nulled (MS-ON)
WSAY VA SALEM 12/4 1808 nx ending, ID WSAY, Salem, VA; CKAN nulled (MS-ON)
1500 KCLF LA NEW ROADS - 11/30 1828 Gold Rush satellite OLD format; QRM from WTOP & WSB
harmonic (KVJ-GA)
1520 KOLM MN ROCHESTER - 12/3 1806 ID into OLD (JH-KY)
1530 KKCS CO COLORADO SPRINGS - 12/13 1840-42 up briefly w/end of old radio show, KCBS
AM-FM ID from 1852; I'm glad the KKCS ID/TC didn't fade out too fast, along w/
annr talking about pgn; WCKY back on top @ 1842 (JFH-OK)
1550 WKBA VA VINTON - 11/23 1718 ID into s/off (JH-KY)
WYNX GA SMYRNA - 11/23 1720 ID w/trfx rpt; o/SS (JH-KY)
WRHC FL CORAL GABLES - 11/23 1730 SS w/Coral Gables ment (JH-KY)
WYNX GA SMYRNA - 12/3 1828 fair w/PSAs, CLs by female, Smyrna ment (MS-ON)
WKBA VA VINTON - 12/4 1457 fair o/CBE on daytime skywave; ending Faith Sermon of
the air; ID WKBA 1550; wx warning for Western VA (MS-ON)
1570 CFOR ON ORILLA - 12/12 1801 w/annct (wx?) @ 15-70 CFOR; barely hrd u/WGTW (CC-PA)

DOMESTIC DX DIGEST - WEST ③

1580 WKVO OH COLUMBUS - 12/12 1714 ID as 16-WVKO+UC (GC-NY)
 1600 WTZR NC HENDERSONVILLE - 12/12 1845 w/wx+SID; good (CC-PA)
 WAYC PA BEDFORD - 12/12 1538 It's another ??? weekend @ WAYC u/WZMM (CC-PA)

Nancy Hardy, 2301 Pacific Avenue, Aberdeen, WA 98520

SPECIAL GRAVEYARD UPDATE-ALL NEW RECORDS

1230 KPRL CA PASO ROBLES - 2353 miles (FM-AK)
 WCUZ MI GRAND RAPIDS - 746 miles (NJW-MB)
 WMFR NC HIGH POINT - 565 miles (EB-MO)
 WBBZ OK PONCA CITY - 396 miles (EB-MO)
 KVOC WY CASPER - 2271 miles (FM-AK)
 1240 KWAK AR STUTTGART - 289 miles (EB-MO)
 KSMA CA SANTA MARIA - 2408 miles (FM-AK)
 KELK NV ELKO - 2140 miles (FM-AK)
 CJNS SK MEADOW LAKE - 561 miles (NJW-MB)
 TGK GUAT GUATEMALA CITY - 2106 miles (NJW-ON)
 HJFG COO ARMENIA - 3689 miles (EB-MO)
 1340 KRAM NV LAS VEGAS - 2460 miles (FM-AK)
 WKGN TN KNOXVILLE - 2138 miles (RM-WA)
 KDUB TX LUBBOCK - 1439 miles (RM-WA)
 CILW AB GRAND CENTRE - 4235 miles (OA-Abisko)
 BEC48 TAIWAN - 5332 miles (FM-AK)
 1400 KUKI CA UKIAH - 2068 miles (FM-AK)
 KVIS CA VISALIA - 2334 miles (FM-AK)
 KWNA NV WINNEMUCCA - 1176 miles (NJW-MB)
 WOND NJ PLEASANTVILLE - 3474 miles (SW-UK)
 WHLF VA SOUTH BOSTON - 2342 miles (RM-WA)
 KITZ WA SILVERDALE - 5332 miles (OA-Abisko)
 CKSQ AB STETTLER - 4579 miles (OA-Abisko)
 ZFK NSW PARKES - 8492 miles (RM-WA)
 1450 KTIP CA PORTERVILLE - 2375 miles (FM-AK)
 KEST CA SAN FRANCISCO - 6181 miles (OA-Abisko)
 KOBO CA YUBA CITY - 6021 miles (OA-Abisko)
 WGRE CO GREELEY - 2483 miles (FM-AK)
 KSIG LA CROWLEY - 2000 miles (RM-WA)
 WRKD ME ROCKLAND - 3013 miles (SW-UK)
 WCLI NY CORNING - 92 miles (GC-NY)
 WKAL NY ROME - 165 miles (GC-NY)
 WNCOS NC NEW BERN - 548 miles (GC-NY)
 WMOH OH HAMILTON - 970 miles (NJW-MB)
 KXKO OR EUGENE - 5645 miles (OA-Abisko)
 KFSL OR KLAMATH FALLS - 5761 miles (OA-Abisko)
 KMBL TX JUNCTION - 1680 miles (RM-WA)
 WMVA VA MARTINSVILLE - 439 miles (GC-NY)
 CFAB NS WINDSOR - 2705 miles; 11/11 0500 ELT, 2.5hrs after LSR in Scotland; a UK first! (SW-UK)
 VSB BE BERMUDA - 3414 miles (SW-UK)
 R. ANTILLES ST VINCENT - 4288 miles (SW-UK)
 1490 KWAC CA BAKERSFIELD - 5880 miles (OA-Abisko)
 KRKC CA KING CITY - 2311 miles (FM-AK)
 KOWL CA SOUTH LAKE TAHOE - 2157 miles (FM-AK)
 KLGR MN REDWOOD FALLS - 1322 miles (RM-WA)
 KNOW TX AUSTIN - 1779 miles (RM-WA)
 KEYG WA GRAND COULEE - 5311 miles (OA-Karesuando)
 CJYC PQ STE-ANNE-DES-MONTS - 3483 miles (OA-Stockholm)
 CJSN SK SHAUNAVON - 4785 miles (OA-Karesuando)

REPORTERS:

PRM-NJ Paul Mount//Parsippany, NJ//Mitsubishi Car rx (a rental)
 KVV-GA Karl Jeter//Stone Mountain, GA//HQ-150 + assorted beverages
 JFH-OK John Herman//Vinita, OK//R-388 + RW Loop
 JH-KY Jody Hughes//Lexington, KY//R1000 + RW Loop
 GC-NY Greg Coniglio//Clarence, NY//Various Boomboxes w/internal ferrite rods
 CC-PA Chris Cuomo//Verona, PA//
 RS-NJ Bob Smolarek//Whitehouse Junction, NJ//TRF + LW
 KDF-IL Karl Forth//Chicago, IL//HQ-160, IC-R70 + spiral loop
 MS-ON Morris Sorenson//Milton, ON//HQ-150 + SM-2, ICF-2010 barefoot

AND FROM THE GRAVEYARD...

NJW-MB Niel Wolfish//Winnipeg, MB//ICF-2010 + LW
 NJW-ON Niel Wolfish//Toronto, ON//
 GC-NY Greg Coniglio//Clarence, NY//Boomboxes
 EB-MO Eric Bueneman//Hezlewood, MO//
 SW-UK Steve Whitt//DXpedition @ Sheigra, Scotland (N56° 29' W6° 07')
 SW-NW Steve Whitt//DXpedition to Anglesey, North Wales
 OA-SW Olie Alm//Stockholm (N59° 21' E22° 30') & Abisko (N69° 21' E19° 30'), Sweden
 RM-WA Roy Millar//Marysville, WA
 FM-AK Frank Merrill//Nanena, AK

73, Bill

My deadlines here are Saturday. If you live in the Mountain or Pacific time zones send me your DX!

SPECIAL

1210 CFYM SK KINDERSLEY - 12/18 0600 new station heard with news, then "Coast-to-Coast" syndicated pop music program. ID 0623; "This is your music network, CJYM and CFYM...", local ads, then back to net. Fair o/u KQTL, // 1330. Blown away by KGYN s/on at 0631. New, SK #17. (ØW-CO)

MIDDAY TO MIDNIGHT

730 KIZN ID BOISE - 12/7 2021-2029 poor in CKLG null & unID with Alabama "Love in the First Degree," TC at 6:30 MST. (JD-WA)
 CKDM MB DAUPHIN - 12/8 2230-2250 in CKLG null with Winkler Flyers vs Dauphin Kings hockey. (JD-WA)
 820 WCZE IL CHICAGO - 12/17 1800 lite pop music, ID as "8-20 AM, Cozy Radio." Fair/good in WBAP null. Good copy until 1825, when KEYX faded in. Finally logged this old call change, ex-WAIT. (ØW-CO)
 900 CKBI SK PRINCE ALBERT - 12/15 2313 live broadcast of Prince Albert Raiders vs New Westminster Bruins WHL hockey game. Raiders cruise 10-5. Fair sig. with no fading in 30 min. of listening! Into news at 2337. (ØW-CO)
 1260 KWYR SD WINNER - 12/14 1749 local ads, ID; "We're south central SD's country music & news authority, KWYR." Music to 1800 ABC News. Good on peaks; QRM increasing toward sunset. (ØW-CO)
 1370 KXTL MT BUTTE - 12/14 2130 "Mutual PM," local PSA, then Dr. Toni Grant to 2200 news. Fair-good over XEHN. (ØW-CO)
 1400 KBLX CA BERKELEY - 11/3 2237 poor in KITZ null with ad for Biotech seminar in Santa Clara. (JD-WA)

MIDNIGHT TO MIDDAY

530 CJFT ON FT. ERIE - 12/14 0255 with Stapelton TIS nulled, rock music with news on the hour. (WH-CO)
 unID ??? - Toronto, ON? 12/14 0255 heard with mention of Ontario Road maps & duty free?? (WH-CO)
 560 KMON MT GREAT FALLS - 12/7 0011-0014 fair-good with "AM Stereo 560 KMON," request for Bellamy Bros. Mixing with KPQ's Talknet. MT #24. (JD-WA)
 570 KLUB UT SALT LAKE CITY - 12/7 0200-0205 ID after NBC News, into Talknet. Very poor in KVI null. (JD-WA)
 670 KPUA HI HILO - 12/18 0206-0215 ad for Longs Drugs, promo for auto-graph signing with Glenn Medeiros at sports shop. ID into Barry Manilow song. HI #3 (thanks to KBOI). (JD-WA)
 KBOI ID BOISE - 12/18 0206 off air for maintenance after Mutual News, weather with current temp. 23°. (JD-WA)
 690 KVNA AZ FLAGSTAFF - 12/16 0048 Suns-Lakers NBA game, followed by wrap-up, ID. Fair under CBKF-1. (ØW-CO)
 CBKF-1 SK GRAVELBOURG - 12/16 0041 classical organ music on CBC net; 0104 ID as "La Voix Francais du Radio Canada en Saskatchewan." Good in KGGF null, // xlnr 860. New, SK #16. (ØW-CO)
 890 CJDC BC DAWSON CREEK - 12/8 0100 doing fairly well with country music, ID. BC #40. (JD-WA)
 1000 WLUP IL CHICAGO - 12/16 0005 phone-in sports talk show, hosted by two men. Occasional pop song. Fair on loop in KTKO null; zilch on nondirectional wire. Ex-WCFL. (ØW-CO)
 12/19 0556 old rock music & female DJ o/u KOMO & KTOK. (WH)
 1110 KYKK NM HUMBLE CITY 12/10 0833 old rock music & spots o/u KFAB. (WH)
 1180 KKAR NE BELLEVUE - 12/8 0816 news format with lots of spots, "K-Car" slogan. (WH-CO)
 1200 CKDA BC VICTORIA - 12/14 0347 heavy rock music & severe snow warnings, "1200 CKDA." (WH-CO)
 1250 KXET TX SAN ANTONIO - 11/26 0604 Spanish/Mexican taking phone requests o/u KBRF. (WH-CO)
 KIKZ TX SEMINOLE - 12/18 0658 NA, s/on. Owned by Seminole Broadcasting Co., ann'd 1000 watts day & 250 watts PSA. Into area news, weather, ag. features. Fair in QRM. New, TX #82. Now have logged all 4 TX stations on 1250, thanks to the demise of WREN. (ØW-CO)
 1380 KSMJ CA SACRAMENTO - 12/14 0325 old soul music o/u KOTA. (WH-CO)

1400 KCOW NE ALLIANCE - 12/17 0200 ID, ABC News, weather, then Larry King. Pair in QRM. Quick s/off at 0306. (ØW-CO)
 KLIN NE LINCOLN - 12/17 0706. Area weather, then Larry King. KCOW also running LK on same freq. with a split-second time lag, so hard to differentiate the two most of the time. New, NE #32 (ØW-CO)
 1470 KERE KS ATCHISON - 12/21 1028 tentative with highschool BKB and local agriculture spots, poor with KFQX. (WH-CO) (Wayne reported this as KERE, but my listing shows them as KARE. Have they changed call letters??--NH)

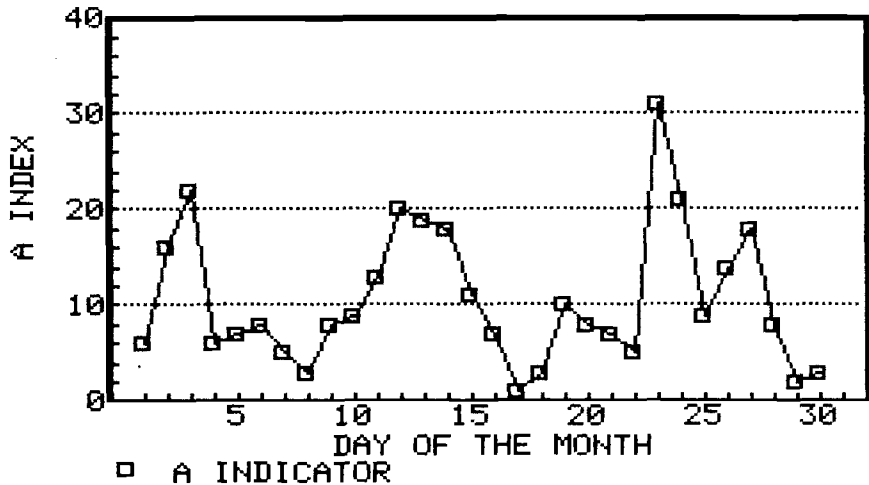
REPORTERS

(JD-WA) Jason Dolan, Seattle, WA/Sony ICP-2001
 (WH-CO) Wayne Heinen, Aurora, CO
 (ØW-CO) John Wilkins, Wheat Ridge, CO/R-390A, R-1000, 4' box loop

AfR GRAPH

Russ Edmunds, 753 Valley Road, Blue Bell, PA 19422

AFR GRAPH/NOVEMBER



This graph shows the daily variations in AfR, the Fredericksburg (VA) index of geomagnetic activity in the earth's magnetic field. High values (above 20) indicate that medium wave signals in upper latitude paths will likely be absorbed, thus resulting in "auroral conditions", with signals from the South and from local stations predominating due to this absorption of the more northerly signals. Low values over a period of time indicate a likelihood of more receptions of the higher-latitude paths and more northerly TA's and TP's. Several days of low values following higher ones are needed for conditions to return to "normal", due to residual absorption. Long periods of extremely low values (6 or less) are necessary to raise the possibility of good high-latitude conditions throughout the entire Mediumwave band, although this is not the only requirement. For additional information on the use of the AfR and related indices as a DX tool, consult the NRC Reprints List for relevant articles. The Reprint List can be obtained from the NRC Publication center, whose address is located on the back cover). ---RJE

GRAVEYARD DX ACHIEVEMENTS

William R. Hale

Distance Records for 1230, 1240, 1340, 1400, 1450, and 1490 KHz Frequencies

Date of Last Update: Dec 8, 1987

DXer and Location(s)	1230	1240	1340	1400	1450	1490	TOTAL
GENE ALLEN Vallejo, CA	76	98	116	117	130	102	639
STAN MORSE Boxford, MA	84	114	101	102	108	98	607
DON KASKEY Galva, IA	85	77	104	105	121	93	585
BOB KNOX Newton, NJ	50	80	64	73	86	50	403
HANK HOLBROOK Chevy Chase, MD	28/3	64/2	79/4	53/1	68/5	53/9	345/24
FRANK WHEELER Erie, PA	58	81	63	62	65	32	361
ROY H. MILLAR Marysville, WA	58	53	61	67	67	47	353
ROBERT KRAMER Chicago, IL	32	19	50	54	61	29	243
ERNIE WESOLOWSKI Omaha, NE	40	48	44	45	51	15	243
RALPH SPERRY Fairfield, CT	29	46	44	21	37	39	216
STEVE FRANCIS Alcoa, TN	28	37	21	33	47	46	212
RUSS EDMUNDS Kinnelon, NJ	22	34	33	38	36	48	211
JEFF FALCONER Clinton, ON	26	35	34	37	37	27	196
ALAN IMPRESCIA New York, NY	29	30	27	32	28	34	180
ANDY RUGG Montreal, PQ	29	29	31	23	25	32	169
DAN PHILLIPS Jacksonville, AL	25	19	37	25	24	36	166
JOHN KROMKA Montville, NJ	26	33	26	22	26	32	165
TIM KERFOOT Weston, CT	19	24	32	25	22	35	157
DON VOORHIES Oswego, NY	28	19	25	24	22	27	145
RON MUSCO Hartford, CT	21	25	21	25	27	24	143
JOHN WILKINS West Des Moines, IA	23	25	26	22	16	21	133
RICH EDDIE St. Louis, MO	15	20	22	30	23	22	132
CHRIS LUCAS Various Locations	20	13	13	26	27	32	131
DAVE FOX Reading, PA	15	24	16	23	24	27	129
DON KASKEY Sacramento, CA	15	17	22	25	29	17	125
GARY ATKINS Louisville, KY	21	8	29	21	18	26	123
GEOFFREY PARRISH Memphis, TN	17	21	20	22	23	20	123
FRANK MERRILL Various Locations	16	18	17	20	26	26	123
NEIL DICKERSON Sharptown, MD	21	19	32	16	19	15	122
DAVE SCHMIDT New Castle, DE	17	24	21	16	12	23	113
BILL HARDY Aberdeen, WA	18	22	17	18	18	18	111
RICK CARR Bloomington, IL & Austin, TX	12	18	24	16	20	19	109
NIEL WOLFISH Winnipeg, MB	16	6	17	26	24	19	108
TOM SUNDBSTROM Willingboro, NJ	13	26	17	23	20	8	107
SHARON SKOWERA Enfield, CT	12	19	25	21	15	15	107
HARRY HAYS Gouldsboro, PA	15	21	17	13	21	19	106
JOHN MALICKY Pittsburgh, PA	7	15	16	14	24	27	103
NIEL WOLFISH Toronto, ON	10	18	17	8	20	30	103
NANCY HARDY Aberdeen, WA	16	20	13	11	13	14	87
RODNEY VALDRON Petit Rocher, NB	16	21	7	9	17	17	87
JOHN WILKINS Wheat Ridge, CO	12	12	13	20	14	16	87
JIM HILLIKER Anaheim, CA	11	12	15	13	16	12	79
JOE KURETH Uniontown, MD	11	27	39	*	*	*	77
JIM RENFREW Rochester, NY	16	10	10	12	12	13	73
STEVE GOZOZOVAT Binghamton, NY	14	14	7	11	14	9	61
WAYNE HEINEN Colorado Springs, CO	8	6	19	17	3	8	61
JERRY ROBERTSON Crosswell, MI	16	8	6	7	10	13	60
BRETT HANAVAN Chula Vista, CA	13	3	10	11	14	6	57
TIM HALL Chula Vista, CA	6	7	9	11	14	9	56
GREG CONIGLIO Clarence, NY	3	12	7	8	15	11	56
DAVE YOCIS Fairfield, CT & East Lansing, MI	11	9	9	12	4	9	54
STEPHEN McINTIRE Des Moines, IA	10	15	9	2	4	9	49
LES CARPENTER El Toro, CA	8	6	8	8	10	6	46
DEBRA HIDDEN Orlando, FL	6	9	7	6	5	11	44
WAYNE HEINEN Buffalo, NY	13	10	8	2	6	5	44
PAUL MOUNT Teaneck, NY	5	8	8	8	8	5	42
KEN ONYSHUCK Hazel Crest, IL	6	7	6	8	10	5	42
MIKE HARDESTER NAS Miramar, CA	6	6	3	7	11	5	38
STEPHEN PONDER Bossier City, LA	6	5	6	6	7	7	35
GEORGE SANTULLI Cranford, MA	*	*	33	*	*	*	33
ERIC McINTOSH Invercargill, NZ	0	3	1	15	7	7	33
BILL LACKEY Kingsville, TX	6	9	4	3	5	4	31
MORRIS SORENSEN Leaf Rapids & God's Narrows, MB	5	6	5	7	4	4	31
ERIC BUENEMAN Hazlewood, MO	8	7	4	5	3	4	31
RICHARD E. WOOD Hilo, HI	5	5	8	4	4	2	28
JEFF KOSNETT Charleston, WV	4	8	3	4	6	1	26
GENE NIX Billings, MT	3	5	5	5	4	3	25
BILL HALE Various Locations	4	5	4	3	4	5	25
JEFF KOSNETT Chicago, IL	5	3	6	3	4	3	24

TODD WILLIAMS Hood River, OR	*	*	*	24	*	*	24
PAUL MOUNT Nelsonville, OH	4	4	2	3	3	5	21
DON DAVIS Warner Robins, GA	5	4	3	2	4	2	20
PAUL SWEARINGEN Moran, KS	5	3	2	2	2	5	19
RON RYCHALSKY Bridgeport, CT	3	2	4	3	2	3	17
LES CARPENTER Sandy, UT	2	1	0	2	5	5	15
SHARON WATERMAN Southwick, MA	*	*	*	*	5	8	13
RICHARD TURNER N. Yarmouth, MA	2	3	1	1	2	3	12
WAYNE HEINEN Aurora, CO	1	2	0	1	4	3	11
OLLE ALM Stockholm, Harnosand, Karesuando & Goteborg, SWEDEN	0	2	2	3	1	2	10
RICHARD WATERMAN Southwick, MA	*	*	*	*	8	*	8

You'll notice a new feature in **Hank Holbrook's** listings. He was kind enough to send his updates divided into pre-and post-1960 categories. Hope to hear from more DXers who have such logs. Welcome to newcomer **Roy H. Hillar** of suburban Seattle who checks in with 353 GY catches, all verified! Now to check out all the veries to see if they made the frequency scoreboard! Whew! I'm thinking of weeding out all the records held by any non-members (those who no longer belong to NRC), both from this and the frequency lists. What say you, the contributor?? Let me know, and I'll get the word out. If it's decided to clear out all the dead wood, I'll print what stations are up for grabs. Other updates have been received from **Don Voorhies**, **Greg Coniglio**, **Eric Bueneman**, **Niel Wolfish**, **Frank Merrill** and **Olle Alm** who included a photo of his DX site in Sweden. Super picture Olle!



Dan Neaverth Update: The morning man at WWKB-AM met with representatives of Capital Cities and Price Communications this week in an attempt to clear up his contract situation. He told this column he feels he'll have to sue to collect money he feels he's owed by KB's old owner, Cap Cities.

He met with the new owners, Price, to hear what they had to say about a future contract.

Neaverth, who slipped to No. 8 in the age-12-and-over audience in the latest Arbitrends report, adds he's also had discussions with WHIT-FM, WMJQ-FM and WYRK-FM about morning jobs at those stations.

One hot rumor has Neaverth and WHIT's Sandy Beach possibly teaming up at WYRK. If WYRK is serious, there must be a lot of money in country music. Neaverth and Beach both command healthy salaries.

Speaking of the latest Arbitrends measuring the age-12-and-over audience, WBEN-AM is No. 1, followed by WHIT, WJYE-FM, WKSE-FM, WYRK, WPHD-FM, WBUF-FM, WBLK-FM, WECK-AM and WMJQ-FM.

According to the trends, WBLK, WKSE, and WMJQ are on the upswing. WBUF and WYRK showed the sharpest declines.

WHLD-AM Expands Hours: Effective Jan. 29, WHLD-AM, 1270, will be able to stay on the air until midnight, according to a recent Federal Communications Commission edict. The station eventually will broadcast for 24 hours.

The Buffalo News/Thursday, December 3, 1987
Greg Coniglio

KTOP adds Talknet

KTOP 1440 AM-Radio has added NBC's Talknet to its program schedule, airing the new segments from 6 p.m. until midnight Monday through Sunday.

Talknet will include advice on money, real estate, family dilemmas, relationships, careers and other aspects of life by Bruce Williams, Neil Meyers and Dara Welles on weekdays, and Dr. Harvey Ruben and Bob Madigan on the weekend segments.

KTOP will continue to play music of the 40's, 50's and 60's each day until the Talknet series at 6 p.m., except when it broadcasts Washburn University basketball games.

Paul Swearingen

**RELATIONSHIPS BETWEEN SOLAR ACTIVITY,
THE EARTH'S MAGNETIC FIELD AND
MEDIUM WAVE DXING**

Randy Seaver, Chula Vista, CA
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1. INTRODUCTION

The relationship between "good" high-latitude or trans-polar medium wave DX openings and "quiet" Earth geomagnetic field activity has been postulated, debated and discussed over the last 25 years in the medium wave DX bulletins (e.g., Nelson (1969-77), Scrimgeour (1968) and others). DXer's have faithfully listened to the WWV broadcasts of A Index and solar flux in hopes of finding that rare DX opportunity. The tables or plots of the A index have been published regularly in the DX bulletins. The promise of the "next sunspot minimum" has been held out each decade to DXers as a "golden age" of good high-latitude DX.

In order to help DXers understand the relationships of the sun, the geomagnetic field and high-latitude DX, this article will cover some of the basic geophysical phenomena, the records for the past 30 years, and a projection of what we can expect in the next year or ten.

This will not be a comprehensive study of the geophysical phenomena, but will only address the general characteristics. If more detail is desired by the reader, the listed references can be reviewed. Ratcliffe's Sun, Earth and Radio (1970) is an excellent introductory book, while Rishbeth and Garriott's Introduction to Ionospheric Physics (1969) provides a more detailed discussion of the ionospheric processes. Davies (1965), Ionospheric Radio Propagation, is an excellent technical book. A layman's description of solar phenomena, the Earth's magnetic field and basic ionospheric processes can be found in encyclopediae and other general physics reference works. The best available details of the effects of the auroral zone and geomagnetic activity on medium wave DX are found in the Nelson (1969-77) articles.

Most of the statements, ideas and figures in this article have come from the reference material.

2. SOLAR ACTIVITY

The sun produces a prodigious amount of energy over a wide range of wavelengths. The most important wavelengths in the radiation spectrum are those of hydrogen alpha, Lyman alpha, and helium. This energy provides the light and heat required for the Earth to sustain life. Some of the energy produced by the sun is in the form of an unsteady stream of charged particles, mostly protons and electrons, from the sun's corona along lines from the sun's magnetic field, called the "solar wind". This stream of particles varies with time, both short-term (minutes or hours) and long-term (year-by-year). The solar wind travels away from the sun at speeds of 300 to 1000 kilometers per second.

The sun's energy output is remarkably constant, varying by no more than a few tenths of one percent over several days. But variations in the energy output exist. Atmospheric disturbances on the sun, such as sunspots, result in additional energy release in the form of electro-magnetic waves at certain wavelengths. An intense local magnetic field on the sun is associated with sunspots, creating anomalies in the sun's magnetic field characteristics.

"Solar flares" are bursts of energy, usually at the hydrogen alpha wavelength but often including X-rays and cosmic rays, that are usually associated with sunspots, are short-lived, and vary in strength and frequency of occurrence. High energy particles can travel at nearly the speed of light, reaching the Earth in about eight minutes.

The sun has a rotation period of approximately 27 days, so variations in the sun's magnetic field, sunspot number, solar wind and energetic particles tend to repeat in 27 day cycles. These cycles are called Bartels cycles after a physicist who defined the period to track times of unsettled magnetic field conditions related to the solar rotation period.

Until the nineteenth century, the only measure of solar activity was the number of sunspots observed on the face of the sun by astronomers and solar physicists. Figure 1 shows the historical record of average monthly sunspot number from 1700 to the present. The data indicates that there is an approximate eleven year period between sunspot minima. The actual sunspot cycle is 22 years, when account is taken of the alternation of the magnetic polarity of the sun. There is also some evidence of an 90 year cycle in the maximum sunspot number. The increase from the minimum sunspot number to the maximum averages about 5 years. The maximum sunspot number varies from cycle-to-cycle, with the highest mean value ever recorded in the mid-1950's.

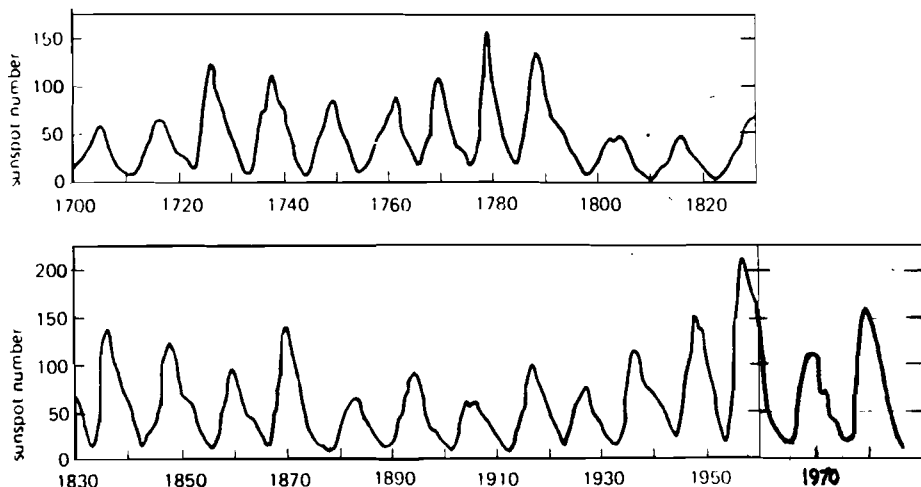


FIGURE 1. Sunspot record for 1700 to 1985.

The solar energy output is monitored in many ways by physicists all over the Earth. The National Oceanic and Atmospheric Administration, centered in Boulder, Colorado gathers information on a regular basis and produces a wealth of data. Measurements of the daily solar indices of relative sunspot number and 2800 Mhz solar flux, solar radio waves, solar wind, solar magnetic field, etc. are collected and published on a monthly and yearly basis by NOAA.

3. EARTH'S GEOMAGNETIC FIELD

The Earth is surrounded by a magnetic field, within which it behaves as if it were a ball of magnetized iron with north and south magnetic poles. More than 95% of the Earth's magnetic field originates from within the Earth's interior. The remainder comes from electric currents induced in the Earth's crust, and from electrical currents flowing in the upper atmosphere of the Earth resulting from ionization by solar radiation.

Figure 2 shows an idealized distribution of the Earth's magnetic field, showing the geomagnetic axis and equator displaced from the geographic axis and equator. Geomagnetic field lines flow from one pole to the other along lines of force very similar to a dipole with an Earth-centered axis. The magnetic intensity at the poles is twice that at the equator. The actual magnetic field of the Earth is somewhat different from that of a uniformly magnetized sphere because the distribution of magnetic elements over the Earth's surface is not uniform.

The geomagnetic North Pole was located at 78.5 degrees North latitude and 69.1 degrees West longitude in 1965, according to the *Encyclopedia Britannica*. The geomagnetic South Pole is approximately opposite the North Pole at 78.5 degrees South latitude and 111 degrees East longitude. The location of the geomagnetic poles varies somewhat over decades of time.

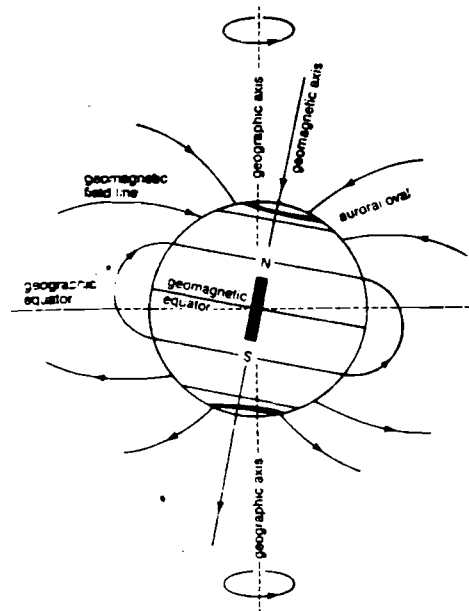


FIGURE 2. Earth's Idealized Magnetic Field.

The main magnetic field creates a cavity in interplanetary space called the magnetosphere in which the Earth's magnetic field dominates any field carried by the charged particles of the solar wind. The magnetosphere shape, shown in Figure 3, resembles a comet due to its interaction with the solar wind. It is compressed on the side of the Earth towards the sun and tail-like on the side away from the sun. Some particles from the solar wind or from solar radiation penetrate the magnetosphere and, with other charged particles are trapped by the magnetic field in a circular belt around the Earth known as the Van Allen belt.

The geomagnetic field lines are concentrated near the magnetic poles, but are displaced pole-ward on the side of the Earth towards the sun by the solar wind effects on the magnetosphere. The field lines are displaced toward the equator on the night side of the Earth.

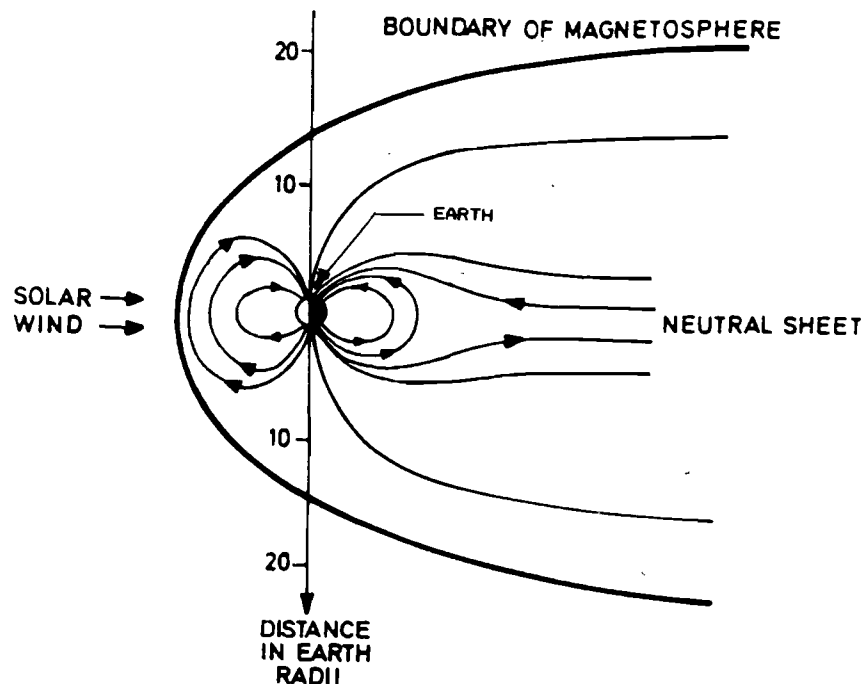


FIGURE 3. The Earth's Magnetosphere.

The Earth's ionosphere is composed of neutral molecules, ionized molecules and free electrons. The ionized molecules and electrons are caused by various forms of radiation, including solar radiation. The ionosphere has been defined in several regions, with the D-region between 50-80 kilometers altitude, the E-region between 80 and 120 kilometers, and the F-region above 120 kilometers. The D-region largely disappears at night, but the E-region and F-region retain a significant number of free electrons.

Radio wave propagation occurs by a series of ionospheric refractions from the E and/or F-regions (depending on wave frequency and incidence angle) and Earth surface reflections. Radio wave absorption occurs during the transit of the ionosphere by a wave, with most absorption occurring at altitudes below 90 kilometers. More absorption occurs at lower altitudes for a given electron density than at higher altitudes because the number of electron collisions per second decreases exponentially as altitude increases.

The charged particles carried by the solar wind and the higher energy particles caused by solar activity such as solar flares can precipitate into the Earth's upper atmosphere along the geomagnetic field lines, resulting in higher-than-normal electron densities. The auroral oval is a band within which the charged particles precipitate into the ionosphere. The auroral oval is 5 to 10 degrees wide, typically between 65 and 75 degrees geomagnetic latitude, and is roughly centered on the magnetic pole, as shown in Figure 4 for the Northern hemisphere.

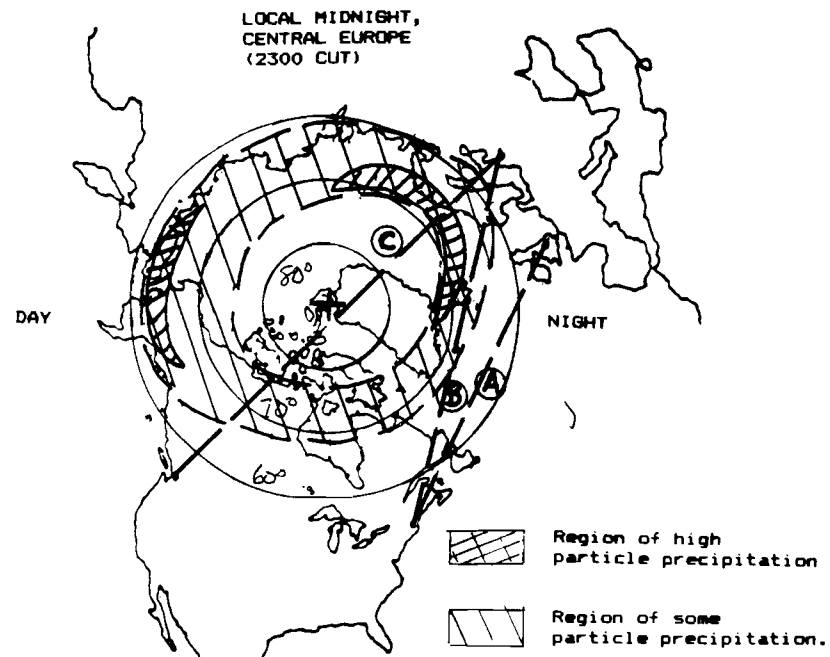


FIGURE 4. Northern Hemisphere Auroral Zone Location.

This precipitation can occur down to 50-60 kilometer altitudes, and causes high absorption to any radio wave that passes through the auroral oval above those altitudes. This is why the auroral ovals act as a curtain or shield for radio waves traversing the ovals, as shown in Figure 5. Radio waves can pass under the "curtain" but they suffer high absorption if they enter the "curtain" above 50-60 kilometers altitude.

When the Earth's geomagnetic field is quiet, the oval is located closer to the pole and the area of high precipitation is reduced. When the magnetic field is active, the auroral oval is located further from the pole and there are larger areas of high particle precipitation down to a lower altitude. There is some indication that the auroral oval width decreases and "shrinks" toward the geomagnetic pole at the start of a major geomagnetic disturbance, then "expands" as the disturbance progresses.

When a geomagnetic storm occurs, defined as a geomagnetic disturbance of large amplitude, an auroral display is often noted in parts of the auroral ovals. Precipitation of very high energy particles and solar X-rays or ultraviolet rays can cause other more severe events, such as polar cap absorption in which the precipitation occurs over the entire polar region. This can cause high radio wave absorption and refraction within the auroral oval.

When there is a major geomagnetic storm, the auroral ovals may be located in the mid-latitudes, and radio waves from the North, West and East may suffer high absorption because their path passes through the auroral "curtain". Radio waves from the South are unaffected by the auroral oval, unless the oval boundary is south of the receiver. This is the familiar "auroral" conditions experienced frequently in the Northern United States, where Caribbean and South American stations are dominant on most medium wave frequencies.

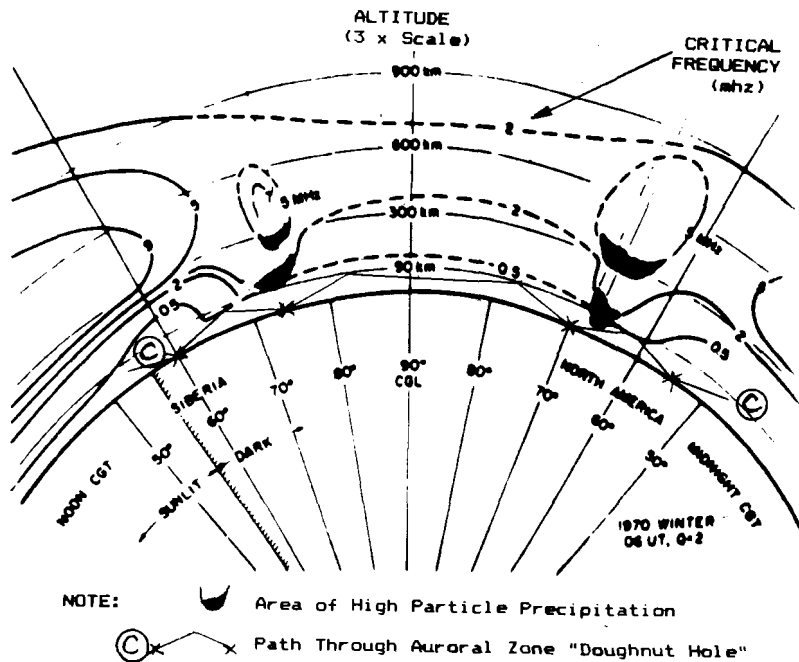


FIGURE 5. Typical Auroral Zone Cross-Section.

4. GEOMAGNETIC FIELD INDICES

The Earth has an average magnetic field strength that varies from about 0.3 gauss at the equator to about 0.7 gauss at the poles. The variations in the magnetic field strength are measured by many observatories all over the Earth's surface. During the period of a quiet sun, the geomagnetic force varies during the day by about .00020 gauss at the equator and 0.00050 gauss at the poles (20 and 50 gammas, where a gamma is 0.00001 gauss). There are seasonal variations and sporadic disturbances caused by solar activity and lunar effects. Charged particles flowing in the magnetosphere and ionosphere generate electric currents, which cause variations in the magnetic field intensity.

Geomagnetic activity indices, such as the K index and the A index, are used to measure the variations in the magnetic field strength. The K index is a local index of the 3-hourly range in magnetic activity relative to an assumed quiet-day curve at the recording site. It consists of a single digit 0 through 9 for each 3-hourly interval. However, there are 28 potential values of K because each number can have a + or - associated with it. For instance a K value of 3+ is one-third of the difference between 3 and 4, while 4- is two-thirds of the difference. A planetary K index (Kp), based on the K index for 13 selected stations around the world, is available since 1932.

The local aa index is based on the local K index by:

K	=	0	1	2	3	4	5	6	7	8	9
aa	=	0	4	7	15	27	48	80	132	207	400

The aa value can be multiplied by two to get the geomagnetic intensity in terms of gamma. For example, a disturbance of 66 gammas is an aa = 33 and a K of 4+.

The A index for a given station is calculated by finding the mean of the eight aa index values for the given day.

The planetary Kp index for each three-hour time period is calculated from the K index from 13 observatories around the world. The planetary ap index is based on the Kp index. The planetary Ap index is the mean of the eight ap index values.

Since the K and A indices are based on the variations in magnetic field intensity, some of which are caused by solar activity, we would expect a strong relationship between the indices and sunspot number or solar flare activity.

TABLE 1. Sunspot Number and Planetary A Index Data (1956-1986).

Year	Sunspot	Mean Ap	Ap < B	7(Ap<16	Ap>15	Ap>80	Con A(B	Con A(16	Con A)15	
56	1956	141.7	18	97	127	142	8	10	13	9
	1957	189.9	20	93	124	148	13	5	11	9
	1958	184.6	19	91	123	151	8	7	18	25
	1959	158.8	21	85	114	166	13	8	12	13
	1960	112.3	24	84	95	188	14	5	9	12
61	1961	53.9	14	146	114	105	6	11	24	9
	1962	37.6	12	143	129	93	0	7	24	7
	1963	27.9	13	163	109	96	2	8	23	9
	1964	10.2	10	193	102	71	0	13	59	4
	1965	15.1	8	240	92	33	0	19	40	4
66	1966	46.9	10	209	100	56	3	15	54	5
	1967	93.7	12	175	119	71	4	8	29	6
	1968	105.9	13	124	146	97	4	9	22	3
	1969	105.6	11	168	131	66	2	10	26	6
	1970	104.7	12	167	125	73	5	13	27	6
71	1971	66.7	11	166	126	73	0	8	28	6
	1972	68.9	13	161	126	79	5	11	26	5
	1973	38.2	17	108	112	145	5	6	20	12
	1974	34.4	20	71	101	193	4	3	15	13
	1975	15.5	14	134	127	105	1	10	22	8
76	1976	12.6	13	152	121	94	3	11	23	7
	1977	27.5	12	154	138	73	0	8	49	5
	1978	92.7	17	117	123	125	10	8	18	7
	1979	155.3	15	108	152	105	1	6	23	12
	1980	154.7	11	165	120	82	0	12	33	8
81	1981	140.5	16	93	148	124	4	6	16	9
	1982	116.5	23	50	125	191	9	6	12	10
	1983	66.6	19	75	117	173	2	5	18	14
	1984	45.9	19	58	143	165	3	5	14	12
	1985	17.9	14	123	135	107	1	9	29	7
86	1986		12	167	113	85	4	13	26	10
AVERAGE		81.4	15	132	122	112	4	9	25	9

CONTINUED NEXT ISSUE.....

MUSINGS

Paul Swearingen

3132 S. E. Irvingham Street - Topeka, KS 66605-2948

The opinions expressed in this column are those of the individual writer and do not necessarily reflect those of the Editors, Publishers, or the National Radio Club, Inc., or its subsidiaries.

Times are local per Muse.

Wow ... 100% participation in the theme this week: city dwellers! Little did you know that when you sent your Muse ...

Our next deadline, Jan. 16, will be for the theme of former/present broadcasting employees, for which we already have a Musing from Phil Boersma, and then Jan. 23 will be our St. Valentine's Day theme for married couples and the ladies. And while you ponder these ... on with it!

Ken Onyschuk - 19110 Pine Dr. - Country Club Hills, IL 60477

It took us six months, but I never gave up and finally found my family a three-bedroom apt. - actually a condo, and nice, back in So. Cook Co. Sunday night, 12-6, we moved in, and I was finally able to lay my tired body down and turn the Superadio on and close my eyes. If Paul was happy to return to Topeka, I was happy to return to the area of my best DX years. I'm going to enjoy it here. The only aggravation is WLS, now just seven miles west and destroying 870-910. (I can imagine; I have trouble with it here! -pls) Sat. night, 12-5, I tried to tape a piece of WCBS for "memories" but it wasn't in, in Oak Lawn. I also taped some educ. FM to check for stn coverage areas. Recently in Oak Lawn, at SSS, I tried for southerners at LSS but instead wound up with KPMW, which really isn't bad to hear, even with reli. programming. They gave out their address to listeners for some Christmas programming coming up. So I copied it and told 'em about y DX'ing habits and received a CM and promo card. Nice. So I'm approximately at Rt. 50 and Flossmoor Rd. and no power lines to drive me nuts.

I've worked plenty of OT lately so I'm too tired to DX nights. So I'm restricted to Sat. after work and Sun. Sat. 12-19 it was raining, in the 30's, with the previous Tues. 6" snowfall still around. So around 4 pm I decided to try 1040 and looped WHO easily. After ABC news, WJOR-ten dominated with area nx, obits., ads, rather steady, though a rock oldie stn got in there at times. Only one on 1040 I know is WHBO-FL, but no ID hrd. Just a Tampa-St. Pet nxcast and temps by a T-40'ish DJ - taped at 4:10 pm. In/out with WJOR, till pattern change at 4:30 during another oldie.

A local item from the **Sun-Times** 12-7: the WMAZ takeover is scheduled for Feb. 15, and would you believe Group W wants to dump the WMAQ call? Is nothing sacred? Gee, even when Tichenor took over 560, at least WIND remained, although it's Spanish.

Some final notes on local cx. WGGI-1390 with its four towers at 7900 So. on Kedzie Ave. is nullable and I can hear 1380 and 1400 good again. 940 is poor due to WBYG-930 and WJPC-950. Notre Dame's flagship, WSET-960, is better here. 1310 and 1330 are nearly impossible due to WKAN-1320 and WJOL-1340. But I did hear WSSY-1330, Evanston's pop adult outlet. Its competition on 1590, WONX, is still heard clearly, even next to local WCGO-1600. Other than that, DX'ing looks better. Happy new year.

David F. Gleason - Calle E, #F 1-4 Villanova - Río Piedras, PR 00926

Greetings from the tropical Caribbean! It has been interesting to read recent comments about AM vs. FM fidelity and related issues regarding AM broadcasting quality. Albert Lobel mentions his belief that AM stations "overmodulate". Without getting technical, when you drive an AM transmitter ... any AM transmitter ... beyond 100% negative peak modulation, you get what is called "carrier suppression". This means that the carrier ceases to exist for the duration of the modulation peak. While this may occur occasionally due to transients of extremely short duration (which can not be seen on a VU meter), no AM broadcaster will intentionally cause frequent occurrences, as it makes the station nearly impossible to tune in, and actually is perceived by the listener as lower volume. Positive peaks may exceed 100% by FCC regulation, as they do not cause distortion except when well in excess of the legal limit of 125%. The problem with the AM band in the United States is the fact that very few AM stations cover as broad an area as a class B or C FM. With the phenomenon of suburban sprawl, a huge number of larger city AM's could no longer cover their own market area. Directional antennas further complicated this, producing AM's that can be heard in one part of town and not in another.

As an example, in San Juan, the 31st largest metro area in the U. S., less than half of the AM stations cover 100% of the population, while every one of the FM's do. If a large percentage of the potential listeners of a station can not hear it reliably, a station is effectively dead.

It's unfair to compare the U. S. system of commercial broadcasting to the predominantly state-run or controlled system prevalent in most of Europe. If you have a non-directional 300 kW station, you don't worry too much about maximizing the signal you have through consistently high modulation levels. Additionally, if you only have to contend with four or five competing signals, you don't worry much about programming, either. Then, again, comparative media is another subject.

In the U. S., long before FM came on the scene, power was limited so as to permit a large number of local broadcasters to exist. This policy seemed sound through the '50's and reflected our country's belief in self expression. However, the patterns of population growth and urban sprawl defeated this well-intentioned plan. If clears had been given 100 kW, regionals 10 kW, and locals (Class IV stations) 5 kW, AM might still be alive and well. But in the '30's, regulators could not have been expected to foresee the need for such power 50 years later.

As a case in point, I can remember driving to school in Cleveland, OH in the early '60's and losing the signal of both Top 40 stations (WHK-1420 and WERE-1300) half way there on dark winter mornings. I ended up listening to classical WCLV-FM, which did cover the whole route.

Even in essentially rural areas, FM's have overpowered small AM's because the economics of running a regional FM permit better programming than the owner of a little Class IV can provide with his limited advertising revenue base. In the most recent Traverse City-Petosky ARB ratings, only one AM shows up, way at the bottom following about 14 FM stations. People learn to depend on the stations that they can tune in wherever they are in the area they live in. An interesting contrast is San Francisco, where the terrain makes FM difficult to receive consistently. There, a healthy percentage of the top stations are AM: KGO, KCBS, KNBR, KFRC, KABL, and KNEW, to name the major ones. These stations, all with good signals, can be received all over the Bay area with no fading, multipath, and other FM problems.

The nail in AM's coffin is obviously the overwhelming bad quality of commercial AM receivers. (I couldn't agree more -pls) I have operated AM stations that sounded absolutely beautiful on a special wide-band receiver. But the public does not have wide-band receivers. The new NRSC bandwidth-limiting plan is a decent solution for the satisfactory use of crummy receivers. At one of the stations I consult, I just helped install a new AM Optimod (a modulation leveling and controlling device) which uses the NRSC response and preemphasis curve. The station now sounds good on my car radio. It still is not FM quality, but is not so objectionably bad that I want to turn it off. It also makes tuning easier, as the suppression of audio above 10 kHz removes the high frequency components that heretofore made tuning very difficult (99% of receivers can't reproduce transmitted audio above 8 or 9 kHz anyway). That station, WNEL-1430, can now continue to provide a local news, sports, and opinion service to a smaller market that has no local TV or print media. It will never again be dominant in its market, but it can be economically viable on a limited scale.

As an aside to this AM station's story, it is interesting to note that the owner for many years sustained a money-losing FM. As that band developed on the island, the FM began to overtake the AM. It is now the #1 station in all Puerto Rico and has regional coverage far better than any AM. The owner, a good broadcaster as shown by his FM success, did not intentionally kill his AM. Receiver quality and limited coverage did that.

Cincinnati Ramblings

Tony Fitzherbert - 356 Jackman Ave. - Fairfield, CT 06432

In mid-October, I had the luck to attend a training manager's convention in Cincinnati, and along with a little spare time during the conference, I took an extra day and visited several local radio stations. During a couple of free hours, I went down the street from the convention center to the studio and office building housing WCKY-1530. Chief Engineer Ted Kendrick and retired CE Jim Raney, who was with the station for 40 years, helped greatly in the preparation of a station profile and gave a very complete tour of the station. This station has quite a history, developed by the activities of a colorful former owner. Stay tuned! The following day, the conference ended at 1:00 pm, and, having arranged several station visits via phone earlier in the week, I headed to the studios of "WNDP-Jazzradio 740". Here were some of the most fun people I have ever met in radio - and perhaps the most unusual studio building in the United States. After walking around the back of a local well-known restaurant, through a gate, past the garbage cans, here looms the station structure - designed in a bar, modeled after three beer cans! Stay tuned for the profile on this - it will be only the second illustrated station profile that I have done! If you thought that WDMF-1340's studio in Dover-Foxcroft, Maine, in an old Amtrak car was unusual, this surpasses it! Even the plumbing is unusual.

Then to the airport to rent a car, camera in hand. The car obtained, the first stop was in Cold Spring, KY, to see the immense WKRC-550 array - four huge towers in line, and then almost a quarter of a mile away, another huge tower, all on some one's farm, atop a hill. The WCKY CE had supplied directions to all of the locations. The back into Cincinnati, listening to WCKY, whose talk show host was conducting a show on the history of bathroom fixtures (!!), to see the WDJ0-1230 rooftop antenna - a 100-foot tower atop a six-story warehouse built into the side of a hill - you can walk upstairs in the side of the hill and look down on the tower - WDJ0 is an automated rock oldies station, and I understand that they are building a new antenna and this one will be gone shortly.

The next day, I started at WDNW-Fairfield, OH, where I enjoyed the rather colorful operations manager - you will, I hope, enjoy the profile on this fine, very interesting southern gospel station, which uses two patterns, one during the day and the other for critical hours. Then down to WTSJ-1050, who has owed to an ultramodern suburban office condominium. Chris Roberts, the operations manager, is a DX'er and he wants DX reports. Chris helped with a station profile, which you will enjoy. Next stop was in Covington, KY to see the WTSJ antenna, in the middle of a playground, with the transmitter building under

the tower. This via a side trip to see the WNNK-1360 array, three very tall towers in line, north of Compton Road in Hamilton township. After WTSU's antenna visit, the next stop was at WNOP's three-tower triangular array in the middle of a nature preserve in the west side of Cincinnati - the story of how WNOP got this site, high on a bluff over the Ohio River is yet another interesting chapter in the story of a very unconventional radio station. The towers are down from the top of a hill. I had to stand on a picnic table for pictures. The next stop was at WCIN-1480, and you have read the station profile. The last stop was at the WKY-1530 transmitter site, atop a 450-foot rise over the Ohio River - kind of hard to get to, but the four-tower array is interesting. Then off to the airport and home. All of the folks that I met in Cincinnati radio were totally cordial and helpful.

On another topic, I wish all of you a happy and healthy 1988! And, I do hope to share the pictures of this trip at an NRC convention. In 1988, I hope to visit radio stations in Halifax, Dallas, and Indianapolis - as well as Milwaukee, around Labor Day. But time will tell. 73's to all, and Season's Greetings.

Karl Porth - 2714 N. LeClaire Ave. - Chicago, IL 60639

In local radio news, WCZE-820 lost one of its four transiting towers in strong winds that followed a major snowstorm here on 12-15. The chief engineer, interviewed on local television, said that he was happy that a "domino effect" had not occurred, knocking down all four towers. They'll be operating with reduced power through the remaining three towers from their Elmhurst transmitter site. Tom Snyder's network radio talk program can now be heard on WLS, starting at 11 pm CST. Cap Cities apparently didn't like Phyllis Levy's "Sex Talk" program.

A trend that seems to be reversing itself: several local stations that have been NSP for years are going off the air once a week. WIND-560 now has a regular Monday morning SP, and WPNA-1490 goes off on Sunday mornings. The WPNA SP is especially interesting, since they never had a regular silent period and there are a lot of nearby stations on that frequency that are needed here.

Other than 560 and 1490, DX has been slow through the fall and early winter. Here are the highlights: 11-2: CFOS-560 with s/off at 1:08 am EST just after WIND went off. 11-8: KRIB-1490 with s/off anmt at 2:01 am. Three weeks later, I heard another new one during WPNA's SP; this was WXIT, which was briefly over WABJ and WESL with ID at 2:00 am on 11-29. 12-6: WNOW-1030 hrd with REL pgn and s/off anmt at 5:15 pm in WBZ's null. Later that same afternoon, I heard KASI-1430 with several ID's and a weather report at 6:24 pm. Finally, an unidentified station on 1490 that was heard on the morning of 12-13. They had big band and old standards music and used a "Big Star Station" slogan. Call letters sounded like WTSN or WGSN. It was in for much of the night, so it was probably something close.

My big radio-related project this winter will be to go through all my DX bulletins and get rid of a lot of them. I have NRC bulletins going back to 1968 (with a couple of short breaks), just before the Boston Publishing Committee started publishing DX News in the offset booklet format. I also have IRCA bulletins going back to 1967 (several years before I became a member). That was when Don Erickson published the stenciled DX Monitors on blue, yellow, and red paper. I also have plenty of NASWA, WFDIA, CADX, and even old Midwest DX Club bulletins from as far back as 1971. I wouldn't think of actually throwing these away. They'll be donated to the next NRC or IRCA convention I attend. Happy New Year and best wishes for a DX-filled 1988!

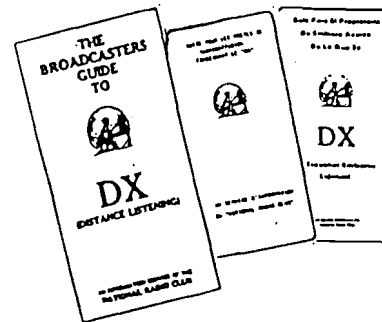
Ernest Cooper - 5 Anthony St. - Provincetown, MA 02657 (617) 487-9337

When I didn't get relieved at the promised 12 noon on Sat. Nov. 28 at WQMR, I fussed and fumed and finally phoned Ray Arruda to tell him I wouldn't be able to make his GTG that starts at noon that day, 'cuz I couldn't get away from the board at WQMR till 1 o'clock and it's a two-hour drive. But he, and Chris Hansen and Bob Smolarek all talked me into coming anyway, and I cooled off and did, and I'm glad I changed my mind, for I had a great time, as usual. Ray and Arlene always put on a great sialogogue for us DX nuts! (Look it up in your Funk and Wagnall's, hi!) Two more veries here: WPNS-700 MA, ex-WCAT, and WQVT-900 Philadelphia. Total: 4,327, about 800 less than Kermit Geary. DX: Wed. 12-2: WJMX strong in WYNZ's null at 1:36 am; been a long time since I've heard that one - usually there's only WRZ in that null. The AU cx also brought in another long-gone oldie, WNDL-1150 FL on L. King net, in WMEX's null. PM: WLWL-770 probably the one u/WABC-770 with ROK; unns as I have them verified from when they were on 1500. 12-3: WRQL-1460 in in AU u/WBET/WCMB. 12-4: My third "annual" report to WQVT-900 this time produced a v/1 and CM. If at first you don't succeed...! Sat. 12-5: The AU is gone, and another "oldie" was noted at 1:42 am: WOKY-920 u/CKX; WHJJ nulled. At twilight, finally I had a great signal from "Sandy Arabia" on 1521 with 1520 impossible, and a report sent. Wed. 12-9: Great Northern TA cx today! New were Hanover-828 at 1:51, and the prize, Finland-963 at 2:15-2:45 am with a healthy signal, and conveniently switching to EE at 2:30 with nx, then Finnish lessons in EE! Made to order for a DX report! Thur. 12-10: Someone in EE on 747 at 1:47 am, with songs in FF, WTHJ? (Who The Heck Izzit?) I lost 'em at 2:08 without ID'ing them. WKY-1530 was off this morn, but WPTK-1540's slop killed any chance for exotic loggings there as it does to 1550, the nation's sloppiest signal. They were this bad even before AM stereo! PM: WCCZ-1550 FL made it against WPTK at 5:44 pm. Sat. 12-12: On 930, I was amazed to hear the top station with EZL ID after every selection as "KOST" and I wondered if the FCC had made an exception, giving a K call to somebody in the East. They didn't give location till 3 am when came the legal ID - WKOS, Rochester, NH! This is their legal ID, but is it permissible to give phony ID's at other times? I would imagine not. Opinions? Forward - March into '88!



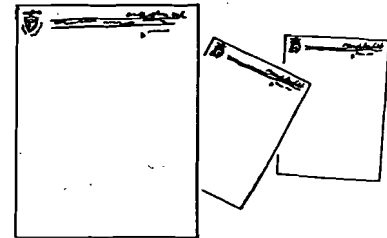
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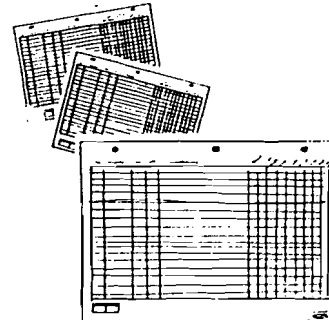


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