

# dx news

*the magazine of the National Radio Club*



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NUMBER 25

"Twenty years is a long time with any organization, but I've enjoyed every minute of my two decades with the NRC!"  
(G. H. DeLeurere, WV)

## ON THE INSIDE.....

- "Hour of Decision" Station/Schedule List - Ernie Cooper
- More on the Dymek DA-3 Antenna - RJE
- Clipping Corner - Various
- Build a Handy Binder for Your Old DX News - Darryl Belanger
- Observations of TransAtlantic Medium Wave Radio Signals - C. W. Bailey

## NEW MEMBERS

- \* Mike Mitock, 975 Osborn Ave., Lorain, OH 44052
- \* Jerry Morris, Rt. 1, Box 203, Bells, TX 75414
- \* Kenneth G. Brown, Keats Cir., Salisbury, MD 21801
- \* Paul Q. Kalisz, 2321 Powell Ave., Bronx, NY 10462
- \* Jean-M. Gauvreau, 1233 Avenue Forget, Sillery, P.Q., CANADA G1S 3Y6
- \* Howard F. Schafer, 303 So. Spruce St., Appleton, WI 54911
- \* James E. Lawhead, 825 Caddy Lane, Wichita, KS 67212
- Donald C. Storms, 3475 Spring Valley Blvd., College Park, GA 30349
- \* John T. Arthur, P.O. Box 42, Bridgeville, CA 95526 (re-joins)
- \* Daniel G. Camp, 4870 SW 139th, Beaverton, OR 97005.

## RENEWALS

T. C. Skeats, R. Pietsch, R. Hanach, R. C. Evans, M. Joyce, W. Grant, W. T. Doyle, H. Frankel, J. Strang, W. Murphy.

## UPCOMING GETTOGETHERS INCLUDE.....

The 1st Annual Midwest DX'ers Rap & Bull Symposium, sponsored by the Great Lakes & Grand River DX Assns. will be held on June 21st. All bands and all facets of DX are the order of the day. For more info on this, contact Bill Whitacre, 2609 Devonshire, Lansing, MI 48910.

The Minnesota DX Club (also all-bands) publishes a bulletin and holds monthly meetings. There are no dues. Next meeting is 6/2/75, 7 pm, at the Walker Branch Library, 2901 Hennepin Ave., Minneapolis. Subsequent meeting will be 7/8/75, 7 pm, at the Twin City Federal Community Room, Village North Shopping Center, Brooklyn Park, MN. Meetings run alternate months 1st Monday at the location shown for June, and the 2nd Tuesday the intervening months at the location shown for July. More info can be gotten from the President, Tom Gavaras, 16920 - 17th Ave., No.; Wayzata, MN 55391. The membership roster which was included with the info sent by Miles Bredvold showed no NRC'ers are members.

A tentative July get-together in Suburban New York is being considered for the weekend of July 13. More details on this (if it comes to pass) in the next issue, which will be dated 6/16/75.

editor.. Alan Merriman  
P. O. Box 6  
Fairfax, Va. 22030

## international dx digest

Following Bill Coleman's comments in Musings about the Dymek DA-3 antenna, I have received a few comments. One comes from Pete Taylor, who wrote the review of the unit carried in reprints. He notes that he finally received a replacement unit from the manufacturer, but that it was worse than the first in terms of FM interference and lack of sensitivity and selectivity above 1300 kHz. He has sent this unit back also. Other DX'ers have encountered similar difficulties although not as severe. As I continue to receive requests about the unit, my personal opinion is that the unit is NOT INTENDED FOR SERIOUS DX'ERS! Much of McKay's sales are to broadcasters or plants where reception of semi-locals is even bad. As is the case with ANY loop, the user will notice a marked improvement over longwires, shortwires or no external antennas at all.

It should be noted that contrary to the manufacturer's publicity ("No one else make anything like it") the DA-3 is modelled after the Worcester Space Magnet, which is designed specifically for MW DX'ing, and costs less than 1/2 the price. Although the Space Magnet series do not sport many of the appearance improvements, its functions are not impaired by this lack. The info on obtaining manufacturer's spec on either unit is contained in the Antenna Reference Manual, available from HQ for \$2.25. This volume also contains two evaluations of the Space Magnet.

Also included in our mail was a "rebuttal" to Coleman's comments from McKay's Marketing Manager, Larry Engart, which was erroneously sent to Al Merriman. In part, Engart states, "Whether or not this product, or any product for that matter, is worth the price depends on how much good it does for the user." I can't agree more, and my knowledge does not turn up a single SERIOUS MW DX'er who has been truly pleased by the unit who has tried the alternative of the Space Magnet. As Engart further states, that one must also consider "whether or not he can get the same or similar product elsewhere for the same or lower cost." It is already evident that for the DX'er who values performance and care not about fancy looks that this consideration can be satisfied.

Referring to Coleman's comments of the Dymek AM-5 Tuner, Engart notes that it was originally produced in New Zealand as stated, but that "the replacement unit is nowhere near the quality that the first unit was." It is also noted that the basic DA-3 was never produced abroad as stated by Coleman, which is indeed true. It is truly enlightening to note that in Engart's description of the Tuner, he refers to it as a "true High Fidelity AM tuner". This contention may indeed be true, as most manufacturers have not attempted to achieve this end. For this reason also, we would caution DX'ers that this tuner is not designed for DX purposes.

As I have conversed personally with the manufacturer at a time shortly after the DA-3 was introduced, I can state at this time that my comments regarding the design of the DA-3 being patterned after the basic SM-1 are indeed fact, and can also state that my opinion regarding the intended purpose for the unit as stated to me at that time were indeed as I have noted herein.

- H. J. Edmund -

(This article is solely the personal opinion of the author, and does not reflect any official position of the NRC, which, of course, has none. Neither is it intended to cast aspersions on the functions of the units referred to in the proper performance of their INTENDED functions. - RJE)

\* Phone 703-354-2135 Before 2200 EDT \* All Times Are GMT \* Deadlines Are Friday \*

A very slim column this week - only 3 reports received. Ye Ed hasn't had his rx on for about 6 weeks, so I have no idea whats happening, hi. If you're still DX'ing, let us know whats being heard.

New stations, changes, skeds, etc. . . . .

ANGOLA Radio Clube do Huambo exchanges its listed frequency of 1151 khz for 1162 khz after 1900. (DX Corner, Radio RSA, 4/16, via Hauser)

CABINDA Voz de Cabinda has moved from 1570 to 1586 khz; power is much greater than 5 kw, and it is signing off later than before. (Richard Ginbey, on R. RSA DX Corner, 4/23, via Hauser)

HAWAII KIOE-1080 Honolulu (ex-KHAI-1090) has closed down. (Arthur Cuchen's April Report, via Hauser)

IRAQ Radio Baghdad is being heard on 1038 khz, with 1000 kw beamed toward North Africa. Power may even be greater than a megawatt. (BEC World Radio Club, 4/16, via Hauser)

ISRAEL Resumed summer time (GMT +3) on 4/20, which means all home services sign on and off an hour earlier. (Hauser)

NETHERLANDS WEST INDIES PJD2, Voice of Sint Maarten is now on 1300 khz. (FINNDX, 4/22, via Hauser)

PANAMA The 1120 khz station (listed WRTH 75 as Radio Montunita) is now Radio Continente. (R. Finland's FINN DX, 4/22, via Hauser)

SOUTH VIETNAM Among the many changes is the reversion to GMT +7 time, matching Hanoi, rather than GMT +8, as mentioned on a newscast. (Hauser)

And now, whats been heard . . . . .

- 540 -COLOMBIA Possibly HJKA as I heard Bogota mentioned several times between 1057 and 1100 on 4/24. Signals not too good. (Wilkinson)
- 555 -ST KITTS ZIZ Basseterre. In well at 0350 on 4/12 w/MoR and accented EE. Heard virtually every nite on Collins. (Brainerd)
- 575 -USSR FES station, location unknown. With light opera at 1122 on 4/16. Louder at 1205 on 4/28. (Wilkinson)
- 625 -COSTA RICA TIXE San Jose, Radio Omega. On Collins, this one booms in very often. First heard on 4/13 at 0352. (Brainerd)
- 647 -USSR FES (Vladivostock?) At good volume at 1110 on 4/16. Good again at 1148 on 4/20. (Wilkinson)
- 650 -HAWAII KORL Honolulu heard at good volume for past 2 weeks. Has program for Philippine population at 1200 week day mornings. (Wilkinson)
- 655 -EL SALVADOR YSS San Salvador, Radio Nacional atop North Korea at 1118 on 4/24. Turn of loop eliminated North Korea. (Wilkinson) \* In on 4/13 w/"R. Nacional" ID at 0445. (Brainerd)
- NORTH KOREA Pyongyang at good volume w/light opera type of music at 1133 on 4/26. (Wilkinson)
- 660 -JAPAN (JOAG/JOOG?) Atop South Korean stn at 1136 on 4/26. South Korean took over frequency after a minute or so. (Wilkinson) / (Brainerd)
- 675 -COSTA RICA TLJC San Jose, "Radio Sonora" ID weak but clear at 0422 on 4/13.
- 700 -AUSTRALIA 2NR Grafton, NSW broke through at 1220 on 4/26 w/different loop setting. "ABC" News starting at 1300. Stronger at same time on 4/27 and 4/28. (Wilkinson)

04  
700 -JAPAN JOFB/JOXD (Hiroshima/Kitami) one of these atop frequency at 1138 on 4/26. Frequent visitor. (Wilkinson)  
720 -JAPAN Possibly JODP Morioka w/baseball game between 1216 and 1230 on 4/19. -UNID In SS w/"cuckoo clock" IS at 2342 on 4/12. Is this just Cuba or something interesting? (Brainerd)  
725 -NORTH KOREA Outlet fair w/"talk" at 1214 on 4/19. (Wilkinson)  
-SURINAM SRS Paramaribo, PZX26 at good volume w/heavy static at 0916 on 4/16. (Wilkinson) \* Generally my loudest split frequency in April using the R390A. Heard in EE and oriental languages w/AST plus 1/2 hour to's. (Brainerd)  
750 -JAPAN JOIB Sapporo v/good at 1212 on 4/19. Extra loud on 4/24,26. (Wilkinson)  
770 -JAPAN JOUB Akita good on 4/16, 4/24 and 4/28. (Wilkinson)  
825 -COSTA RICA TIOS San Jose, Titania heard on 4/13 at 0450 w/LA and rock music. Weak. (Brainerd)  
830 -JAPAN JOBB Osaka like local most mornings after 1200. Has newscast in EE. Don't confuse w/3GI in Australia! (Wilkinson) I won't. (ED)/(Brainerd)  
834 -BELIZE Radio Belize. "You are tuned to Radio Belize" ID heard on 4/10 at 0200, followed by nx w/YL ancr, ad for loan co., and a program called "Young Generation". Also some programming in what I assume to be an Indian language.  
835 -UNID Chinese speaker. Unknown ID. Heard many times this season. Very loud at 1228 on 4/28. (Wilkinson)  
840 -HAITI 4VEF. Heard many evenings without IDs, in FF, during April. Finally IDed via Linda Brodsky's report in 4/20 IDXD. Also discovered later that I had a FF ID on tape: phonetically "Radio Cat-rer Vay Er Ash (R. 4VEH). Besides "William Tell Overture", 4VEF uses a 4 note IS played on bells, I believe. (Brainerd)  
-JAPAN/SOUTH KOREA JOQK Niigata and HLYK Seoul battling at 1225 on 4/28. HLYK on top at 1226 1/2. HLYK has good variety programs. (Wilkinson)  
844 -GILBERT & ELLICE ISLANDS VSZ1, Tarawa, w/lots of volume this past week. S/off between 1000 and 1015. Varies each morning. (Wilkinson)  
880 -JAPAN/SOUTH KOREA JOPK Shizuoka and HIKI Taejon battling each other at 1247 on 4/20. JOPK topped frequency at 1251. (Wilkinson)  
890 -AUSTRALIA 5AN Adelaide, SA copied from 1313 1/2 to 1327 on 4/26. (Wilkinson)  
-JAPAN/SOUTH KOREA HLKB Pusan. w/sporting event at 1202 on 4/24. JOHK Sendai topped HLKB at 1211. (Wilkinson)  
1015 -EL SALVADOR (Tentative) YSC R. Internacional heard w/rally or ball game in SS on 4/13 at 0502. (Brainerd)  
1040 -CHINA Shanghai (?) is a regular most mornings after 1130. Woman announcers are quite the thing in China. (Wilkinson)  
1041,6 -CUBA (tentative) Strong ID taped at 0145 on 4/15, but some essential parts, like stn name and TC were fuzzy. ID sounded like "R. Cariba", so I believe it was R. Caribe running off frequency. Does this Cuban often stray from frequency? WHO inaudible. (Brainerd)  
1055 -UNID TP Asian station - ID unknown. Beautiful chimes/deep sounding bells sounded for full minute at 1200 on 4/28. Followed by succession of short and long beeps. Man spoke in Russian. Woman spoke in RR while mx played softly. The chimes sounded like the ones played on 575 khz. (Wilkinson)  
1100 -DOMINICAN REPUBLIC HIBE Santo Domingo, Radio Mil. While hoping for Radio Globo, heard this one w/"Radio Mil" ID after WHAM s/off at 0508 on 4/27. Deep fades. (Brainerd)  
1210 -JAPAN JOOR Osaka in at fine volume at 1248 on 4/26. (Wilkinson)  
1440 -JAPAN JOWF Sapporo w/baseball game at 1123 on 4/26. (Wilkinson)  
1475 -MALAYSIA SABAH Radio Malaysia, Sabah w/fine mx program at 1133 on 4/27. (Wilk)

That's it. I guess what has been one of the loudest DX seasons that I can remember since starting DXing in 1958 has really come to an end (did it ever get started?). We can always hope for next year, hi.

The reporters for this issue . . . . .

Sam BRAINERD - Newark, Delaware Collins R390A (on loan); Sears Com-Trek portable;  
Glenn HAUSER - Enid, Oklahoma HQ-160, SM-2, longwires /loop  
Hank WILKINSON - Santa Rosa, California SP600, Sanserino loop

If you're still DXing, report. Deadline for the next column will be June 6. I see the other club changed its convention dates, so I'll probably make both. 73 ex DX

# DOMESTIC X DIGEST

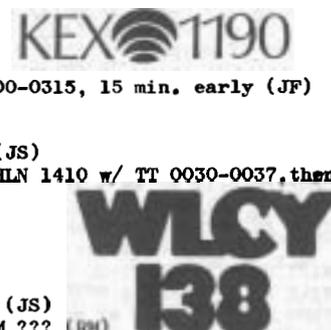


05  
editor.. Wes Boyd  
960 W. Liberty  
Girard, Ohio 44420  
216 545-4543

Hi group,

Looks like the season has really had it, only a handful of reports came in, and about 65% were used. As we're into the long summer breaks this will get back to you around 6/1. My cut date for this issue was 5/1 so if your stuff isn't here, it was to old...sorry.

r c's  
April::  
4th. MM:: WBFJ 1310 w/ 1K TT (JF)  
4th. THU: WSMG 1450 w/ dt, IDs @ 2 min--0300-0315, 15 min. early (JF)  
MAY:::  
1st. MM:: WCNC 1240 w/ TT (DS)  
1st. FRI: WRAN 1510 w/ TT 0045-0048 & off (JS)  
2nd. THU: WSFC 1240 w/ TT 0002-0015 (JS) WHLN 1410 w/ TT 0030-0037, then OC  
tfl 0044 ID & off (JS)  
3rd. MM:: WHSC 1450 w/ TT (DS)  
changes  
from reporters:  
790 WEAN RI net Ac (RM)  
1240 KWJB AZ not on air, CP recently sold (JS)  
1260 WEZE MA Sunday S/on 0500, SP: SM & MM ??? (RM)  
1350 WKLX VA omitted from log's alphabetical listing (JS)  
1500 WTOP DC Net C & AP  
600 WSOM OH Sunday s/on is 0830 (HWB)  
And now all the FCC stuff:  
1140 WAKK MS Authorized Pgm. Authority---is on RS  
1350 WKLX VA seeks change city of license to Norfolk, Va.  
1490 WSIB SC Initial decision refused license renewal, license revoked....  
THIS IS ONLY AN INITIAL DECISION--EXPECT COURT BATTLES TO FOLLOW!!  
FINES::  
KGEN Tulare, Ca---\$250 for operation with more than 105% licensed power.  
WEZK Monroe, Wi---\$500 for operation beyond licensed sunset time.



**Ckar**  
BOX 820  
HUNTSVILLE, ONT.  
POA 1K0

CALL LETTER ACTION:  
1090 KBOZ MT Granted this call--Bozeman "CP"  
1340 KGPC ND requests call KXPO  
1360 KRUX AZ requests call KNWZ  
1440 WBJW FL requests call WBNF  
1460 KYAC WA requests call KILO  
1470 KWSL IA ex: KTRI  
1510 KAAR WA ex: KURB



**CHARLOTTE, MICHIGAN 48813**

Applications and such:  
1170 K??? CA Another application for the facility in San Jose--this one is for 50Kw daytime.  
1170 W??? NC Clinton Granted 1,000 watts non-DA days  
1580 K??? AR Hardy application here for 250 non-DA days  
850 W??? CT Wallingford--INITIAL DECISION--granted license to this city, & refused Ridgefield, Ct application for same freq.  
MORE FINES:  
1150 KGMC CO Fined \$1000 for excessive power during pre-sunrise hours.  
1290 WEYE NC \$1500 for operating without regard to times of local sunrise, and either operating with excessive power of making false readings.  
1370 WTAB NC \$1000 for excessive power during pre-sunrise hours.  
1400 WFPR LA \$2000 for operating after sunset with full daytime power.

ODDS AND ENDS:  
980 WRC DC will go with new NBC NNIS net on 6/18, existing AM format goes over to WRC FM.  
1360 KRUX AZ Requests call KNWZ (Kay-News) & goes with NBC NNIS net 6/18.

And finally:: The World Series--League playoffs, & All Star game, normally heard on NBC moves to CBS this year & the next 3 years. This will be the first time since 1936 the World Series has been on CBS. Should provide some interesting DX chances as many station now can carry the baseball games. (I don't mean to say NBC stations don't carry them, but the different net will allow different stations to carry it) Might prove interesting for the west coast games and all star game.

#### sunset & evening

900 WFIA KY 5/5 Atop 2045 w/ s/off (JS)

1580 WFTW WI 5/5 Mostly dominating 2109 w/ lite concert mx to s/off 2115-no SSB (JS)

KTGR MO 5/5 S/off 2130--15 min. late (JS)

1600 WARU IN 5/5 Loud w/ early s/off 2056, uses good nite type jx, plug FM on 98,3--no SSB (JS)

#### midnight to sunrise

800 Unid ?? 5/5 Someone w/ ET & 1K TT 0152 to 0200 in CKLW null-No ID (JF) Maybe WDUX WI, they ET about 0200 every weak or so--HWB

860 WKKO FL 5/12 ET w/ RR 0110-0120 (FD)

\* KWRF AR 5/6 Think was the f/c--had IDs @ 3 min (FD)

980 WBS DC 5/12 On ET 0213 w/ OG (DS)

CKGM PQ 5/12 W/ RR & Ads 0330-0345 (FD)

**WKOV**

P. O. Box 190

WONE OH 5/12 ET to 0322 then ID as xmtr. ajd. (FD) WELLSTON, OHIO 45692

1060 CJRP PQ 5/12 Pinning meter w/ FF nx 0104, noted reverB in audio, this thru KYW OC & getting buried (DS)

1070 WAPI AL 5/13 ET-TT-OC 0120-0210+, ID 0205 atop all (JS)

+1140 WAKK MS 5/11 Noted 0710, fair w/ KSOO, how long has this been on?(SS)

KSOO SD 5/11 Fair w/ WAKK, O/ at 0705 & mentions Bicentennial station for the plains (SS)

1190 WIXE NC 5/5 TEST:: Hrd. by JF & DS

WANN MD 5/5 OC-ET, ID 0130, during WIXE ET/POP (JF)

1280 CHAM ON 5/12 Atop 0105-0130 w/ RR--No CJMS-WGSO this AM (DS)

1340 WALL NY 5/12 ET 0100-0105+w/ TT, ID 0103 (FD)

1370 WSPD OH 5/12 Noted off 0203, back 0230 (DS)

1390 WFMJ OH 5/12 ET w/ TT 0355-0359, ID 0400, o/ WFBL (FD)

1400 WBAT IN 5/5 Strong w/ CBS nc, PSA, s/off & SSB 0102-0107 (JF)

\*1440 WBCM MI 4/30 RUNNING OFF FREQ.--Measured on 1440.830 at 0030 and had a loud het. Still here 5/2..called CE & they fixed it (JS)

+1490 WNDU IN 4/20 ID hrd. 0500, log sez off 0000-0530 (JF)

1580 WORG SC 5/12 ET-RR-OC 0020-0040 (DS)

1590 WEHH NY 5/13 ET-TT killing WAKR 0100-0130+, ID 0118 (JS)

\*1600 WWRL NY 5/12 Seemed off again this AM..(JS-Silly-etc.)

WUNR MA 5/12 This off 0204 this AM (FD)

\* WPOM FL 5/12 Noted w/ s/off 0158 (FD) 5/12 noted w/ Scott Ross stuff till 0158 s/off---NSP didn't last long!! (DS)

WTRU MI 5/12 RR 0302-0311, then ID & classical stuff, ID said was ET(FD) (Per phone call to WGIV who said "no" and WTRU who said "yes"-- RJE)

\* WTYM MA 5/12 The 2nd,MM f/c 0205-0207, right as WUNR went off,used 1K TT (FD)

Seems FD just found WWRL is off MMs now, but didn't realize it. He sez he had same WWRL type stuff ther, just weaker---didn't know that was KATZ. Also overlooked a C&W type "in there" while digging the above stuff out. So he missed KLAQ COLORADO. Lets get some 1600 tests going while the WWRL MM SP is in effect!! (HWB)

#### REPORTERS::

FD Frank Dailey Preston,CT HQ180-loop-beveridge

JF Jeff Falconer Clinton,ON Kenwood 9R59DS--SML

RM Ron Musco Windsor,CT HQ180-loop

DS Davski Schmidt New Castle,DE HQ180--SM2

SS Scott Strentzsch San Antonio,TX

JS Jerry Starr Hubbard,OH HQ180--loop

HWB Ye ED Girard,OH HQ180--loop P. O. Box 8 - Mansfield, Ohio 44901

OPPS:: RM hrd. 1230 WMOU NH 5/11 to 0021 s/off after Red Sox BB, went straight to s/off after game. Normally off 2300.

Someone also reported hearing WLAN 1390 running YANKEES PROMOS...

editor Ernest R. Cooper

5 Anthony Street

Provincetown, MA 02857

## musings of the members

The opinions expressed in this column are those of the individual members, and do not necessarily reflect those of the editors, the publishers, or the National Radio Club.

RICK SHAFTAN - 60 Gramercy Park - New York, New York - 10010 212-OR4-7542

Howdy gang! Mucho DX here so here goes: 4/12 SSS- WQNR u/WPAT & WASA through "da toiteen toity one" as we say here w/ RR, MBS, etc. Thanks to Phadez. 4/18 SSS- UnID SS on 1580 7:17pm o/WPGC. Like a jerk, I tuned away for more elusive stuff. CKIS blocks 900 @ SSS as shown tonight. TILX tentative through SRS w/SS, Super unID - Phadez & I are wondering who the constant TT u/ WCAU here is, noted daytime (1:20pm) 4/18 w/rr but too weak to ID. Nothing near & I doubt WKXN in day as Michigan is a bit far for the day, even if they beamed right at me. WRDI is o/WSUF here at late afternoons, no sign of c/w WCRV, hum. TRS gets WCRV & no WRDI, even though he is closer. WDAS busts through WHOM all day here, WWEL ditto w/WNJR. 6:58pm, WLAN o/all for newie. WEGP-1370 till 7:17. WVCH-740 s/off for another close unheard (closest are WITM WTNJ WBUD WOWW WENR WSNG & WHOL). These don't exist. WEUP s/off u/WWRU 8:15. CBEF is an SSS pest, also WHYX o/WFLL for a newie from N.Y.C. HJHJ, HJKL, on yop. WNYC OC/ETed that morn. CBO dominates 910 till s/off when WRNL o/WRCQ, on SM. Globo, HIBG, KFAB very strong as usual but one of the YVs was cutting u/KFAB, probably YVQT, umm. Sunday, Shel Swartz here & I ded my unID EL on 1570 as WPEP. He also advises those wanting WRKO (if anyone really would?) to try MMs when they run PSAs & stuff w/10kw day pattern which is less restricted. SSS, WLKW finally w/50,000 w, which reminds me HWB, that the only reason that I was wondering about WLKW PSA was that 500w seemed odd for being so close to CBY when WNYC was allowed to little and assumed this to be a requirement that WLKW would have to DA. Also how much does WEEP put my way & if it is a better bet to try for their 55w & PSA. How can WEEP cover City Hall in Pittsburgh w/5mw/m w/55w? Also WCTR w/1.8w to cover all of the town? Best of DX: WUFO, WNNX, WVKO um pest this month. MM 4/21- WOV o/CMW/WEEL null, CJRC on top whilst trying for KWKY r/c. Pattern is obviously out as is CJRP's. WKAQ umm, HJMM umm. CFTR w/EL & rr o/WRKO w/tele-talk on 10kw o/unID rr, WPIF? WGY Eting w/mx. 860 is perfectly clear here MMs w/the HI pest off except for a weak rr underneath, unID. WPAT pronounced the best hitter in baseball as Blomberg instead of Bloomberg, how droll. There is no "best" way to hear WEEP in NYC except one test. Your unid 1210 almost surely a SPUR!

PAUL MOUNT - 471 Emerson Avenue - Teaneck, New Jersey - 07666 - RJE

More semi-old DX: 2/17- WJW-850 s/off 12:01 w/vocal SSB weak. Unn WPOR-1490 (who does, hi) w/ID 12:24. Then black-formatted station took over, 12:24-12:34, unID, WUSS? WEJL 12:46 & various other times u/Mor-rr, probably WMAI. I called him up around 2:45, said he had calls from Providence, Alan in Chicago, & someone in Hartford who asked "Is that you?", he said yes, and Hartford caller hung up. That's keeping the phone bill down. The CFTR item in #19 DDXD is that they played four records in a row, had an ID (CFTR is not WRKO) & went into more mx. I sorta took this to be an ET. On 1580 I decided to stay with the TTer since I had nothing better to do. Of course it was WSRF which I guess everyone heard, new for me. Akron in well on 1590 & 1390 @ 3:05 & 4, no sign of WCRV so they must not have been on. 3:33-3:39: talk & mx way u/WPAT turned to be WBEW. Back to the #19 DDXD, I don't try for WINE too hard though needed since CHNS was coming in on 960 & I need to verie N.S. so I went to 960. I only tried for WINE for about 30 seconds. Rocker in EE on 1570, IFs CKLO more than CHLO. Would CHLO be on 4-4:21? WMEX Eting w/TT & part of AT 40 Show. 5, WCOJ s/on o/WSC- or WFO-. As for WMBG, I suggested 2/17 @ 3am so WCers may have a shot. (You can't always tell how far 500w will go). The card came back saying "Station WMBG will be conducting tests on third Monday or each month starting at midnight to 6am exp. period." At the bottom it said "as time & opportunity permits will delay monthly f/c until @ (sic) 3am local. GR." So if they have a r/c they're on whether heard in Parsippany or not? In Feb. seems they got W & S well but not N as even TRS heard them. I hope someone got a new logging on WMBG. They were heard as far as Chicago, and I'll find out more later. 73.

REMEMBER THE 30-LINE LIMIT. GIVE DATES, CALLS, FREQUENCIES & TIMES IN E.D.T.!

CARL W. DABELSTEIN - 3300 North 56th Street - Lincoln, Nebraska - 68507

I have had a very enjoyable time talking with several fellow DXers recently. A few weeks ago old friend Bill Mittler of McCook stopped here while he was in town with his son for a EKB tourney. On the weekend of 4/12-13, Neal Zank & I visited Bruce Reynolds at his home in Warrensburg & while passing through K.C. we stopped by & visited fellow NRCer John Tull. On the evening of 4/30, Neal & I had a most enjoyable visit with Jim Critchett here. Ironically, Jim lived about one mile S of my present address about 30 years ago. DX has been dropping off considerably. 4/10 brought the r/c-DT from WGNU-1010, Crestview, Fla. @ 2:33. The DX TEST from KVBR-1340 heard well w/code IDs on 4/14. The all-new KDMN-720, Las Vegas was heard on 4/15 from 10:00 for 15 minutes till pattern change. They ID as K-Dawn. 4/19 brought unnn KLT-1230 w/ET/TT @ 1:12. 4/20 brought unnn KODY-1240 ending f/c-TT @ 2. WJPD-1150 Tuscaloosa heard w/CBS NX @ 6 f/lo by s/ons from WNST, Mt. Sterling, Ky. @ 6:10 & WGGH Marion, Ill. @ 7, both also on 11:50. On 4/21 KGMO-1550 was heard until s/off @ 1:15. The programming was from their FM, but it appears as though they accidentally left their AM on. The announcer acknowledged calls from Ind. & Ill. but still thought nothing was wrong. On 4/29 I heard an ET/TT from WXAP-860 in Atlanta. Latest verifies to come this way have been v/l's from TIJC, KRBB, KVBR, KIUN, KQIA, WGNU. V/f's from KVRC, KNOR, WGGH. Total now at 1,717. For the individual who asked in a recent letter about CPC TEST arranging, the past season I contacted 122 stations and got TESTS from 31 of them. Last year it was 11 out of 56, so 25% would seem about the average response to expect. By the way, word from KBEW is that the verifies will be sent after the CE receives the new CIs from their printer. Hats off once again for another fine season to our fine editors and NJPC. Without their dedication, our club could not exist. (Carl might add too it takes a 'sixth sense' to know what stations to contact for a TEST! -ERC)

JEFF KLEPPINGER - 502 East 2 Street - Northampton, Pennsylvania - 18067

Well, my GR-78 is finally fixed up to par for full service now. Images are gone, & sensitivity & selectivity are good. With my 30' LW (my house is aluminum-sided, cutting signals quite a bit), WLLX-540, WHAM-1180, WEZ-1030, KDKA-1020, & WBAL-1090 & WPIG-1080 & WGY-810 all come in in the daytime - most w/strong signals. Yesterday afternoon (4/21), WPM-1450 in Pottsville came in good & on 4/14, CMHC-660 in Santa Clara came in the WNBC SP. Even with the large gain my LW provides, WVAR-1110 comes in fairly well next to WCPA-1100 on the GR-78. On 4/18, I visited the WCPA studios. Except for a few instances, the programming is fully automated, including their FM outlet, WEZV on 95.1. The person who showed me around said a couple of Winters ago when they had a 250w TEST on a MM, someone from California called in reporting he had received them. Well, that is about it for now. Good DX to all & 73s. By the way, who knows WVAR-1110's power? One source says it's 50kw & another says it's 5kw. (I thought 'twas 500w! -ERC)

PER REVISED NRC LOG IS 500w. d. l. -RJC

TIM KERFOOT - 34 Cross Street - Weston, Ontario - M9N 2B9

While good CX prevailed throughout the first half of this season, there was a marked deterioration after January here. The first months of the season witnessed an interesting combination of Auroral QX bringing graveyarders from the So. U.S. & excellent openings to the NE into Quebec. There was a greater number than usual of potential good catches going unIDed. Yet CX made a complete turn-around after January, when the static became severe, & only two new stations were heard after January. In all, 61 new catches were made this season, 21 less than last season. Two new countries were heard, but no new states. Quebec was the leading province again w/seven new stations heard, & Pa. the leading state w/eight new ones. Ontario still leads in my overall province totals, with Quebec second. N.Y. is the leading state w/93 heard; Pa. follows w/80 heard; O. has 46, Va. has 33, & Mich. 31. Metro Toronto totals now stand at 740 heard, 346 confirmed. Countries are 17/13, provinces 10/10, states 42/42. Most-wanted station is WADD-1560. Thanks to ERC for another year of Musings. (Thanks, Tim, but the REAL thanks goes to those who have MUSED! -ERC)

GENE S. ALLEN - 134 Bret Harte Way @ Wallejo, California - 94590

For all DXers interested in a fine RX - the latest Eddystone model 958/7 covering 10k to 30m sells for \$8,850! (I presume that does not include air conditioning, sales tax, or license!) KNCL-1240 was heard w/r/c first M; 3:09 to 3:23 w/many IDs in code - very difficult y/KROY. Also, all first Sat. f/cs in Arizona as listed from Joe Fela were heard - KPGE-1340 was a new one for me. Latest

(Allen)

veries in from KBEW-1560 & KBRT-740 for a total of 2,839. Not much other BCB news except I'm still looking for a good RX - I have written to McKay-Dymek to ask them to design a good BCB DX receiver with modern features. 73. (How about one that translates SS into EE, Gene, hi? -ERC)

HANK WILKINSON Jr. - 384 Rockgreen Place - Santa Rosa, California - 95405

Asian DX was quite good from 4/16-4/28. Aussies broke through on 4/26. The Aussie on 700k was like a local on 4/26-27-28, especially good 1/2 hour after daylight. I will DX two to three mornings per week the rest of Spring & most of the Summer as an experiment. I did some comparative DXing with the HQ-180 and the SP-600 in the morning on 4/24. The SP-600 was better than the HQ-180 on split frequency stations. And that is where the DX is! It's nice to see Stan Morss, Frank Wheeler & Ralph Sperry's groups of verifies listed in DX NEWS of 4/20. I'm also happy to see Roger Anderson over the 100 mark in countries verified. A fine job! I am really enjoying retirement. I will be selling our home here and moving to San Diego late this Summer. 73.

DR. TOM WILLIAMSON - 43 Forest Hill Drive - Guelph, Ontario

Greetings DXers! This is my first Muse after nearly two years in NRC, so I guess some intro is in order. I'm 51, married with four children (no DXers!) & a medical doctor, specialist in laboratory medicine. I have been a keen DXer since 1936! but mainly on SW until recently. BCB DX has been increasingly attractive to me since immigrating to Canada eight years ago. On the Other Side of "The Pond" it's not so fascinating since there are less stations in Europe, and many with super-high power which ruins the channels for small stations. Also the wide geographical distribution of stations makes SSS DX for example, much less obvious, and less profitable. Well, since joining NRC, I've had a whale of a time, & am up to 40 states verified at present. This last season has perhaps not been too sensational, but lots of goodies were heard. Especially have I enjoyed the CPC TESTS, hearing WGSB, WTKM, WFIA, WAJR, WILL, WIVS, WHA, WPAR, WINE, KBEW, WBOK, WMBS, WLEK, WGIL, WPUT, WMBG. All verified except WFIA & KBEW reports; anyone hear from them? My location here in So. Ontario is not the best for DX with so many high power locals in Toronto, Kitchener, Hamilton London & Buffalo blocking paths to the West especially, but I can't complain. The biggest pest actually is local CJOY-1460 which has only an hour or two off.MMS, & even then keeps its beastly carrier on! Its splash also ruins 1450/1470 for me. My equipment is HQ-180/DX150B w/SM-2 & a 60 meter dipole used as an LW. I think I'm out of space now so 73 to all of you, and love live the NRC! (Welcome to you, Tom! We hope you'll be a regular here from now on and we so invite you! -ERC)

PAT HARTIAGE - 9200 Wendell Way - Jeffersonton, Kentucky - 40299

4/28. Not a while lot of DX lately. The amplifiers on my loop are inoperative at present and have had to be by-passed. However, I have been busy with other things to the exclusion of DX, mainly a new addition to the family a GIRL BORN 4/10. Recently added: 4/7- WSSA-1570 @ 7:58pm w/WHEL nulled. Same evening I heard 8:30 s/off of WFLR-1570. KCHA-1580 was heard w/full ID & FM plug @ 8:50pm. 4/8 brought WMPO-1390 @ 7:30pm w/Ae NX, WKKE-1380 @ 8pm pattern change \* WKUC-1350 @ 8:18 w/ID as "Home of Casey Jones." Numerous Ky./Ind. stations were added week of 4/9-16. "R. 143", WLCB-1430, Buffalo-Hodgenville, Ky. is now heard daily. Other new stations now heard regularly evenings: WGRK-1550, WOCH-1460, WLCK-1250, WKXO-1500. KSOH-1050 (ex-KMYO) heard 4/16 @ 8:45pm s/off, w/ID as "Little Rock's contemporary gospel station. I was very interested in the ISQA. I plan to build one this Summer! Welcome back to NRC, J. R. Bruner! If you get to Louisville, look me up. Phone here is 502-491-1789. I won't make it to Hartford this year. How about NRC in Louisville in '76?

ALAN DAVENPORT - 31 Madison Drive - Ogdensburg, New Jersey - 07439

Here is my DX for April. 4/2- WKBO-1230 Pa. up just long enough for an ad. 4/8- WHYP-1530 Pa. 5:50pm; WFLR-1570 N.Y. @ 6:07. 4/14- CMJN-780; I listened 45 minutes & thought it was a TTer but was they off WBEM. WGST-920 Ga. @ 3:04am w/NX/WX, soon lost to unnn WHEL. Who was TTer w/varying pitch TT 2-3:15am tuneout? 4/18- CKLY-910 Ont. @ s/off @ 2:09 w/GSQ; unnn WINZ-400 Fla. TTING w/ID @ 2:35; CJRP-1090 covering KYW 50% of the time & giving QRM 100% w/FF ID @ 3am. They had female DJ. 4/30- CRGO-1440 Ont. well u/R. Luxembourg het (sic), no audio from Luxembourg, though. 73.



On the dial	Station	Power, in Kilowatts	Broadcast hours per week		News, hours per week		Public affairs, hours per week		Public service announcement, number per week	Commercials, hours %		Number of employees	Total assets	Program format	General manager
			Past	Present	Past	Proposed	Past	Proposed		hours	%				
AM 59	KGMB	5	168	168	14	8	1	1	274	28	17.0	46	\$7.1 million	"Middle of the road" music	Earl McDaniel
65	KORL	10	163	163	13	13	82	71	158	14	8.8	28	574,000	Talk shows	Kenneth Chapin
69	KKUA	10	168	168	13	11	1/2	1	336	17	10.0	21	380,000	Contemporary music	Robert Wilson
76	KGU	10	126	163	10	10	4	4	201	14	11.5	27	161,000	Standard pops	Don Metzger
83	KIKI	10	168	168	8	8	6	6	148	10	7.4	19	400,000	Contemporary music	C. C. Lasson
87	KAIM	5	131	123	13	12	5	3	141	2	1.7	9*	320,000(1)	Religion and classical music	Cliff Scott
94	KAHU	10	162	162	12	11	5	5	191	19	11.8	16	630,000	Country-Western	Harry Chu
104	KHVH	5	132	132	75	70	24	17	470	13	9.8	29	636,000	All-news	Stewart Chifet
108	K-108	5	168	168	8	8	3	2	211	6	4.0	12	124,000	"Uptempo" adult music	Jack O'Neil
113	KLEI	10	130	131	9	9	0	3	210	7	5.5	8	80,000	Contemporary music	Terry O'Connell
117	KOHO	5	135	138	18	13	15	11	132	15	11.2	30	186,000	All-Japanese	Akikazu Ishida
121	KZOO	1	136	163	19	16	25	24	161	19	13.8	38	84,000	Japanese programs	Torao Kobayashi
127	KNDI	5	168	168	0	3	15	18	582	3	2.1	18	38,000	Religion, community service	James Ownby
138	K-POI	5	168	168	11	8	1	3	207	13	8.1	17**	600,000	Contemporary music	Steve Wrath
142	KCCN	5	136	135	9	9	2	2	415	12	9.2	14	3.3 million	Hawaiian music	Jim Wethington
150	KUMU	5	168	168	12	15	1/2	1/2	139	7	4.1	12	236,000(2)	"Good music"	John Weiser Jr.
154	KISA	5	82	82	7	6	1	1	77	4	5.2	23	112,000	Filipino	Ben Manayan
FM															
93.1	KGMQ	100	168	168	4	4	1	1	168	6	3.9	12	209,000	Standard pops	Tony Wrath
94.7	KUMU	60	166	168	9	9	1/2	1/2	134	7	4.1	14	(2) see AM	"Good music"	John Weiser Jr.
95.5	KAIM	37	116	115	9	9	3	3	110	1	1.5	9*	(1) see AM	Religion, classical music	Cliff Scott
97.5	KHSS	100	168	168	7	5	0	2	222	7	4.3	17**	400,000	Contemporary music	Steve Wrath

Notes: \*KAIM has nine employees for both AM and FM. \*\*K-POI and KHSS-FM have 17 employees together. (1) Total assets of KAIM AM and FM are combined. (2) KUMU AM and FM report combined assets. The chart does not indicate any changes that might have taken place since the filing of the application with the FCC—all information is from the application forms.

# Oahu's 21 Radio Stations

By Janos Gereben  
Star-Bulletin Writer

"YOU WANT to see the WHAT?" That was the initial reaction at most of Oahu's 21 radio stations when I walked in to ask for the public file.

To their credit, the station staffs all recovered quickly from the initial shock and did their very best to comply with the strange request.

The idea to check public files came from the announcements I heard on the air — that this is station license renewal time and the Federal Communications Commission requires a copy of the application to be placed in the public file, available to anybody's inspection during regular business hours.

BEING A TRUE blue radio fan, I set out during those regular business hours to inspect, not having the faintest idea what I might find — a real adventure.

What's in those applications? Does anybody ever look at them? Is there a way to get some comparative information about how big Oahu's stations are, what they do, how they do it?

At most stations, polite amazement greeted me — "Nobody ever looked at the public file . . ." "What does it look like? . . ." "What do you need it for? . . ."

I learned quickly what the major form — Section IV-A of the renewal application — looks like, what it contains and what I can find in it.

INFORMATION ABOUT broadcasting hours, the amount of news, program format, commercial time, number of employees, total assets, etc., gave a rough picture of Oahu's crowded airwave situation.

Compiling the information provided the first such comparative chart of facts about Oahu's commercial stations.

KTUH-FM, the University's radio station, is not included in this report because it is a noncommercial station operating under regulations and circumstances other than the commercial stations.)

SOME OF THE findings at the AM stations:

— Power ranges between 5 and 10 kilowatts, except for KZOO, an all-Japanese station with 1 kw broadcasting power.

— Broadcasting hours go from a low of 82 hours per week for KISA to 168 hours for many stations, meaning 24-hour-a-day broadcasting.

— There are no major differences between what was reported for past

## A rough picture of Oahu's crowded airwave situation has been obtained by checking the public files of Oahu's 21 commercial radio stations.

performance and what is proposed. Hours of broadcast, program format, etc., will be pretty much as before, according to the reports to the FCC.

— Hours of news broadcast during a week range from a low of zero for KNDI to a high of 75 for KHVH — which is an "all-news" station. The average hours of news came to about 10.

— Public affairs broadcasts took up between a half an hour a week (KKUA and KUMU) and 82 for KORL, whose talk show format comes under the definition of "public affairs."

— The number of PSAs, or public service announcements, during a week ran from 77 for KISA to a rather astronomical 582 for KNDI. Most stations run about one PSA per hour.

— The total of commercials, expressed in hours per week, went from a low of 4 for KISA to a high of 28 for KGMB. The percentage of commercials was a low of 1.7 for the KAIM to KGMB's 17.

— In the category of number of employees (including part-time help), KGMB was way out in front with 46, while KLEI reported the smallest staff — 8.

— Total assets, which mean more "paper figures" for accounting purposes than how "rich" a station is, range from under \$100,000 for KZOO and KNDI to \$3.3 million for KCCN

and a whopping \$7.1 million for KGMB.

THE ONE outstanding fact about Oahu's radio situation — easy to notice even without a "survey" — is how crowded the airwaves are. Twenty-one stations would represent a very large group even for a city four times the size of Honolulu.

How do they survive financially? There is no answer to that from the public file. Earl McDaniel, general manager of KGMB, explained that profit figures are reported to the FCC on a confidential basis.

The FCC uses this information for regional market figures so that the agency may make financially sound decisions about granting new licenses. If a city has a number of stations just struggling to stay in business — and Honolulu may be one of those cities — then the FCC does not license new stations.

HOW ABOUT range of programming?

Bob Berger, president of KHVH, said that "the spectrum is covered in Honolulu;" there are stations doing any and all conceivable forms

of broadcasting. "Each is trying to find a special place, a niche of its own on the dial."

A staff member of KPOI said that she thinks there's "overcoverage," that too many stations do the same thing.

For this reporter, a fan of classical music, it does appear somewhat inequitable that KAIM is the only station with that kind of program while more than a dozen stations do the same rock-pop bit.

WHILE THERE have been some surprising FCC decisions lately — renewal applications denied instead of the formerly routine approval — it appears from the public files of Honolulu stations that this may not happen here.

Complaints (part of the public file and closely scrutinized by the FCC) are at a minimum and even formerly controversial stations appear to have no big problem as far as sizable public opposition is concerned.

The FCC licenses are good for three years.

If all goes well, we'll go around the stations again in 1978, checking 'em out.



BILLY GRAHAM'S "HOUR OF DECISION" AM LIST, continued (3)

LOUISIANA (con'd)			
Monroe	K M L B	1440	10:05 p.m.
New Orleans	W W L	870	8:30 p.m. & 11:05 p.m.
Ruston	K R U S	1490	7:30 a.m.
Shreveport	K C I J	980	1:05 p.m.
	K W K H	1130	10:35 p.m.
Slidell	W S D L	1560	1:05 p.m.
MAINE			
Augusta	W R D O	1400	10:05 p.m.
Bangor	W L B Z	620	10:05 p.m.
Portland	W C S H	970	10:05 p.m.
Rockland	W R K D	1450	10:00 p.m.
Waterville	W T V L	1490	10:00 p.m.
MARYLAND			
Baltimore	W B M D	790	2:05 p.m.
	W B A L	1090	10:05 p.m.
Cumberland	W T B O	1450	10:05 p.m.
Hagerstown	W J E J	1240	1:05 p.m.
Towson	W T O W	1570	2:35 p.m.
MASSACHUSETTS			
Boston	W M E X	1510	9:35 a.m.
	W R Y T	950	1:05 p.m.
Brockton	W O K W	1410	1:05 p.m.
Fall River	W A L E	1400	10:05 p.m.
Lawrence	W C C M	800	1:05 p.m.
Worcester	W A A B	1440	10:00 p.m.
MICHIGAN			
Alpena	W A T Z	1450	10:05 p.m.
Battle Creek	W V O C	1500	1:05 p.m.
	W B C K	990	10:05 p.m.
Cadillac	W A T T	1240	10:05 p.m.
Charlotte	W C E R	1390	1:05 p.m.
Flint	W M R P	1370	9:00 p.m.
	W K M I	1360	9:30 p.m.
	W F D F	910	10:05 p.m.
Grand Rapids	W F U R	1570	2:00 p.m.
Hastings	W B C H	1220	8:05 p.m.
Holland	W H T C	1450	2:05 p.m.
	W J B L	1250	2:05 p.m.
Jackson	W I B M	1450	2:00 p.m.
Kalamazoo	W K P R	1420	3:35 p.m.
	W K Z O	990	9:30 p.m.
Lansing	W I L S	1320	9:30 p.m.
Lapeer	W M P C	1290	9:05 p.m.
Manistee	W M T E	1340	9:30 p.m.
Muskegon	W K B Z	850	6:30 p.m.
Petoskey	W M B N	1340	10:05 p.m.
Port Huron	W P H M	1380	10:05 p.m.
Rogers City	W H A K	900	8:30 a.m.
Royal Oak	W E X L	1340	10:00 p.m.
Saginaw	W S A M	1400	10:05 p.m.
St. Johns	W R B J	1590	1:05 p.m.
Three Rivers	W L K M	1510	1:05 p.m.
Traverse City	W T C M	1400	10:05 p.m.
Whitehall	W L R C	1490	9:30 p.m.
MINNESOTA			
Auston	K Q A Q	970	1:05 p.m.
Duluth	W W J C	850	2:35 p.m.
	W D S M	710	10:05 p.m.
Faribault	K D H L	920	1:05 p.m.
Minneapolis	K T I S	900	2:35 p.m.
	W W T C	1280	9:30 p.m.
	W C C O	830	11:05 p.m.
Pine City	W C M P	1390	2:00 p.m.
Rochester	K O L M	1530	4:00 p.m.
Roseau	K R W B	1410	12:35 p.m.
St. Cloud	K F A M	1490	10:05 p.m.
MISSISSIPPI			
Columbus	W F F F	1360	9:30 a.m.
Greenville	W J P R	1330	1:05 p.m.
Greenwood	W G R M	1240	10:05 p.m.
Gulfport	W G C M	1240	1:05 p.m.
Hattiesburg	W F O R	1400	10:05 p.m.
Iuka	W V O M	1270	1:30 p.m.
Jackson	W S L I	930	9:05 p.m.
Laurel	W A M L	1340	10:05 p.m.
Maridian	W M O X	1010	1:00 p.m.
Pascagoula	W C I S	1460	1:05 p.m.
MISSOURI			
Bolivar	K B L R	1130	1:05 p.m.
Caruthersville	K C R V	1370	1:05 p.m.
Kansas City	K B E A	1380	10:05 p.m.
	W D A F	610	10:05 p.m.
	K C C V	1510	3:00 p.m.
Piedmont	K P W B	1140	9:45 a.m.
Poplar Bluff	K W O C	930	5:35 p.m.
St. Louis	K S D	550	12:00 noon
	K S T L	690	3:30 p.m.
	W E W	770	8:35 p.m.
Springfield	K W T O	960	6:05 p.m.
	K G B X	1260	10:05 p.m.
Waynesville	K J P W	1390	1:05 p.m.
MONTANA			
Billings	K G H L	790	10:00 p.m.
Bozeman	K B M N	1230	10:00 p.m.
Butte	K B O W	550	10:00 p.m.
	K X L F	1370	10:05 p.m.
Dillon	K D B M	1490	9:00 p.m.
Glasgow	K L T Z	1240	9:00 p.m.
Great Falls	K M O N	960	10:00 p.m.
	K A R R	1400	10:05 p.m.
Helena	K T O M	1240	10:00 p.m.
Lewiston	K X L O	1290	9:00 p.m.
Libby	K L C B	1290	9:00 p.m.
Livingston	K P R K	1340	10:00 p.m.
Miles City	K A T L	1340	10:00 p.m.
Shelby	K S E N	1190	9:00 p.m.
Sidney	K G C X	1480	9:05 p.m.
Missoula	K Y S S	990	9:00 p.m.
Wolf Point	K V C K	1450	6:05 p.m.
NEBRASKA			
Alliance	K C O W	1400	9:00 p.m.
Chadron	K C S R	610	9:00 p.m.
Grand Island	K M M J	750	2:30 p.m.
Lexington	K R V N	860	5:35 p.m.
McCook	K B R L	1300	1:05 p.m.
Ogallala	K O G A	960	9:00 p.m.
Omaha	K L N G	1490	10:30 p.m.
Scottsbluff	K N E B	960	9:30 p.m.
Sidney	K S I D	1340	10:00 p.m.
Valentine	K V S H	940	9:00 p.m.

BILLY GRAHAM'S "HOUR OF DECISION" AM RADIO NETWORK, continued (4)

NEVADA			
Elko	K E L K	1240	5:00 p.m.
Las Vegas	K O R K	1340	9:05 p.m.
Reno	K O H	630	6:35 p.m.
NEW HAMPSHIRE			
Exeter	W K X R	1540	1:05 p.m.
Nashua	W S M N	1590	5:00 p.m.
NEW JERSEY			
Bridgeton	W S N J	1240	1:05 p.m.
Camden	W T M R	800	1:00 p.m.
Trenton	W T T M	920	4:00 p.m.
NEW MEXICO			
Albuquerque	K O B	770	9:30 p.m.
Artesia	K S V P	990	1:05 p.m.
Farmington	K E N N	1390	10:00 p.m.
Gallup	K Y V A	1290	9:00 p.m.
Roswell	K S W S	1020	10:35 p.m.
Taos	K K I T	580	5:00 p.m.
NEW YORK			
Albany	W O K O	1460	9:30 p.m.
Auburn	W M B O	1340	1:05 p.m.
Babylon	W G L I	1290	10:30 p.m.
Beacon	W B N R	1260	1:00 p.m.
Binghamton	W I N R	630	10:05 p.m.
Boonville	W B R V	900	8:15 a.m.
Brockport	W A D D	1960	1:05 p.m.
Corning	W C L I	1490	1:05 p.m.
Elmira	W E N Y	1290	10:05 p.m.
Fulton	W O S C	1300	1:05 p.m.
Jamestown	W J T N	1240	10:05 p.m.
Malone	W I C Y	1490	2:05 p.m.
Massena	W M S A	1340	1:00 p.m.
New York	W O R	710	7:00 p.m.
	W N B C	660	10:05 p.m.
	W H N	1090	11:00 p.m.
Niagara Falls	W H L D	1270	1:05 p.m.
Rochester	W H A M	1180	9:35 p.m.
	W R O C	1280	10:05 p.m.
Schenectady	W S N Y	1240	9:00 p.m.
Syracuse	W S O Q	1220	2:00 p.m.
Rome	W K A L	1490	2:05 p.m.
Warwick	W T B Q	1110	1:05 p.m.
Watertown	W A T N	1240	2:00 p.m.
NORTH CAROLINA			
Asheville	W W N C	570	1:00 p.m.
Black Mtn.	W F G W	1010	1:05 p.m.
Charlotte	W S O C	930	10:05 p.m.
	W B T	1110	10:30 p.m.
Gastonia	W G N C	1420	1:05 p.m.
Greensboro	W G B G	1400	1:05 p.m.
Hickory	W H K Y	1290	2:00 p.m.
High Point	W H P E	1070	1:05 p.m.
Kinston	W I S P	1230	9:35 a.m.
Lenoir	W J R I	1340	1:05 p.m.
Morganton	W M N C	1430	10:05 p.m.
Murphy	W C V P	600	4:00 p.m.
Raleigh	W P T F	680	11:00 p.m.
Roanoke Rapids	W C B T	1230	12:30 p.m.
Rocky Mount	W E E D	1390	1:00 p.m.
Shallotte	W V C B	1410	2:30 p.m.
Spring Lake	W F B S	1450	9:00 p.m.
Tabor City	W T A B	1370	1:05 p.m.
Washington	W E E W	1320	1:05 p.m.
Weldon	W S M Y	1400	6:15 p.m.
Wilmington	W K L M	980	4:00 p.m.
Wilson	W L L Y	1350	10:35 a.m.
NORTH DAKOTA			
Devils Lake	K D L R	1240	9:05 p.m.
Fargo	K F N W	900	2:30 p.m.
	W D A Y	970	10:05 p.m.
Williston	K E Y Z	1360	5:00 p.m.
OHIO			
Akron	W B L R	1390	9:35 p.m.
Cincinnati	W L W	700	12:00 noon & 10:05 p.m.
	W C K Y	1530	11:05 p.m.
Cleveland	W J W	850	6:35 p.m.
	W W W E	1100	10:05 p.m.
Dayton	W O N E	980	9:05 p.m.
Lima	W I M A	1150	9:00 p.m.
Sandusky	W L E C	1450	8:05 a.m.
Waverly	W P K O	1380	1:05 p.m.
Zanesville	W H I Z	1240	10:05 p.m.
OKLAHOMA			
Enid	K C R C	1390	8:30 p.m.
Lawton	K S W O	1380	10:05 p.m.
Oklahoma City	K B Y E	890	3:00 p.m.
	K T O K	1000	10:30 p.m.
Shawnee	K G F F	1450	9:30 p.m.
Stillwater	K D P I	700	1:05 p.m.
Tulsa	K F M J	1090	2:30 p.m.
OREGON			
Albany	K W I L	790	5:00 p.m.
Cottage Grove	K N N D	1400	1:00 p.m.
Eugene	K U G N	990	9:30 p.m.
Grants Pass	K A G I	990	1:05 p.m.
Medford	K M E D	1440	9:05 p.m.
Portland	K P D Q	800	2:30 p.m.
	K W J J	1080	9:00 p.m.
PENNSYLVANIA			
Altoona	W F B G	1290	10:00 p.m.
Beilefonte	W B L F	1330	1:05 p.m.
Coudersport	W F R M	600	1:05 p.m.
Doylestown	W B U X	1570	1:05 p.m.
Johnstown	W C R O	1290	1:05 p.m.
	W J A C	890	10:05 p.m.
Lancaster	W L A N	1390	5:30 p.m.
	W G A L	1490	10:05 p.m.
New Kensington	W K P A	1190	1:05 p.m.
Oil City	W K R Z	1340	10:05 p.m.
Philadelphia	W T B G	990	8:00 a.m.
	W F B E	990	9:30 p.m.
Phillipsburg	W P H B	1260	2:35 p.m.
Pittsburgh	W E B F	1080	1:00 p.m.
	W P I T	730	4:30 p.m.
Roaring Spring	W K M C	1370	12:00 noon
St. Marys	W K B I	1400	2:05 p.m.
Scranton	W I C K	1400	1:05 p.m.
	W S C R	1320	10:05 p.m.

PENNSYLVANIA (con'd.)			
Shippensburg	W S H P	1480	11:30 a.m.
Towanda	W T T C	1550	1:05 p.m.
Tyrone	W T R N	1340	1:05 p.m.
Uniontown	W M B S	590	5:30 p.m.
Washington	W K E G	1110	9:30 a.m.
Wellsboro	W N B T	1490	2:05 p.m.
Williamsport	W R A K	1400	10:05 p.m.
RHODE ISLAND			
Providence	W R I B	1220	2:00 p.m.
SOUTH CAROLINA			
Beaufort	W S I B	1490	1:05 p.m.
Charleston	W O K E	1340	10:05 p.m.
Columbia	W I S	560	9:35 p.m.
Conway	W L A T	1330	1:05 p.m.
Florence	W J M X	970	2:35 p.m.
Greenville	W E S C	660	3:35 p.m.
	W F B C	1330	10:05 p.m.
Greenwood	W G S W	1350	12:35 p.m.
	W M T Y	1090	1:05 p.m.
Hampton	W B H C	1270	1:05 p.m.
Hartsville	W H S C	1450	1:05 p.m.
Hemingway	W K Y B	1000	11:30 a.m.
Laurens	W L B G	860	6:30 p.m.
Marion	W A T P	1430	12:35 p.m.
SOUTH DAKOTA			
Aberdeen	K S D N	930	4:05 p.m.
Huron	K I J V	1340	9:00 p.m.
Lemmon	K B J M	1400	11:00 a.m.
Pierre	K G F X	1060	10:00 a.m.
Rapid City	K I M M	1150	5:00 p.m.
Sioux Falls	K N W C	1270	1:00 p.m.
	K S O O	1140	6:05 p.m.
Yankton	K Y N T	1450	1:05 p.m.
TENNESSEE			
Camden	W F W L	1220	12:30 p.m.
Chattanooga	W D E F	1370	10:05 p.m.
Crossville	W A E W	1330	1:05 p.m.
Dayton	W D N T	1280	2:00 p.m.
Fayetteville	W E K R	1240	1:05 p.m.
Jackson	W T J S	1390	5:35 p.m.
Johnson City	W E T B	790	1:05 p.m.
Kingsport	W K P T	1270	10:05 p.m.
Knoxville	W S K T	1580	3:35 p.m.
	W E T E	620	10:00 p.m.
La Follette	W L A F	1450	9:30 a.m.
Maryville	W G A P	1400	1:05 p.m.
McKenzie	W H D M	1440	1:00 p.m.
McMinnville	W F M C	960	8:45 p.m.
Memphis	W R E C	600	10:05 p.m.
Milan	W K B J	1600	2:00 p.m.
Millington	W T N N	1380	1:00 p.m.
Nashville	W N A H	1360	1:00 p.m.
	W S M	650	10:05 p.m.
Union City	W E N K	1240	8:30 p.m.
Waverly	W P H C	1060	12:35 p.m.
TEXAS			
Abilene	K C A D	1560	1:05 p.m.
	K N I T	1280	10:05 p.m.
Amarillo	K G N C	710	9:30 p.m.
Atlanta	K A L T	900	2:30 p.m.
Austin	K L B J	590	1:05 p.m.
Beaumont	K L V I	560	9:00 p.m.
Brownfield	K K U B	1300	8:30 a.m.
Corpus Christi	K C T A	1030	5:00 p.m.
Dallas	K S K Y	660	4:00 p.m.
Del Rio	K W M C	1490	8:30 a.m.
El Paso	K T S M	1380	10:05 p.m.
Galveston	K G B C	1540	1:00 p.m.
Houston	K T R H	740	11:00 p.m.
	K W B A	1360	6:05 p.m.
Lampasas	K C Y L	1450	1:05 p.m.
Lufkin	K L U F	1420	6:05 p.m.
Muleshoe	K M U L	1380	1:30 p.m.
San Antonio	W O A I	1200	9:30 p.m.
Stamford	K D W T	1400	5:00 p.m.
Waco	K W T X	1230	9:00 p.m.
Weslaco	K R G V	1290	10:05 p.m.
UTAH			
Blanding	K U T A	790	1:00 p.m.
Cedar City	K B R E	940	5:00 p.m.
Logan	K V N U	610	10:00 p.m.
Moab	K U R A	1450	9:30 p.m.
Ogden	K V O G	1490	1:05 p.m.
	K L O	1430	10:00 p.m.
Price	K O A L	1230	5:00 p.m.
Provo	K O V O	960	10:00 p.m.
St. George	K D X U	1450	5:00 p.m.
Salt Lake City	K A L L	910	10:00 p.m.
Vernal	K V E L	920	5:00 p.m.
VERMONT			
Burlington	W V M T	620	10:05 p.m.
Rutland	W S Y B	1380	10:05 p.m.
VIRGINIA			
Clintwood	W D I C	1430	12:00 noon
Crews	W S V S	800	1:05 p.m.
Danville	W B T M	1330	1:00 p.m.
Gretna	W M N A	730	1:05 p.m.
Hampton	W V E C	1490	12:35 p.m.
Harrisonburg	W S V A	550	10:05 p.m.
Luray	W R A A	1330	1:05 p.m.
Martinsville	W M V A	1450	10:05 p.m.
Narrows	W N R V	990	1:05 p.m.
Quantico	W P W C	1530	1:05 p.m.
Richmond	W R V A	1140	9:30 p.m.
Roanoke	W R I S	1410	1:05 p.m.
	W S L S	610	10:05 p.m.
Staunton	W T O N	1240	9:05 p.m.
Winchester	W I N C	1400	9:00 p.m.
	W H P L	610	10:05 p.m.
WASHINGTON			
Bellingham	K O G T	1550	2:30 p.m.
Centralia	K E L A	1470	6:05 p.m.
Colfax	K C L X	1450	1:05 p.m.
Olympia	K G Y	1240	10:00 p.m.
Port Angeles	K O N P	1450	1:05 p.m.
Quincy	K P O R	1370	1:05 p.m.
Seattle	K G D N	630	3:30 p.m.
	K I R O	710	10:30 p.m.
Spokane	K C F A	1330	3:00 p.m.
	K H Q	590	9:35 p.m.

WEST VIRGINIA			
Bluefield	W H I S	1440	10:00 p.m.
Charleston	W K A Z	950	10:00 p.m.
Clarksburg	W B O Y	1400	10:05 p.m.
Fisher	W E L D	690	2:05 p.m.
Grafton	W V V W	1290	1:05 p.m.
Huntington	W G N T	930	10:05 p.m.
Logan	W L O G	1230	1:05 p.m.
Martinsburg	W E P M	1340	1:05 p.m.
Morgantown	W A J R	1440	10:05 p.m.
Wheeling	W W V A	1170	6:00 p.m.
WISCONSIN			
Beloit	W G E Z	1490	1:05 p.m.
Eau Claire	W B I Z	1400	5:00 p.m.
La Crosse	W K T Y	580	9:30 p.m.
Madison	W I B A	1310	10:30 p.m.
Marinette	W M A M	570	10:05 p.m.
Racine	W R J N	1400	10:15 p.m.
Rhineland	W O B T	1240	10:05 p.m.
Sheboygan	W K T S	950	1:05 p.m.
Wisconsin Dells	W N N O	990	1:05 p.m.
WYOMING			
Buffalo	K B B S	1450	5:00 p.m.
Casper	K V O C	1230	10:00 p.m.
	K T W O	1030	10:35 p.m.
Cheyenne	K T B C	1240	10:00 p.m.
Gillette	K I M L	1270	5:00 p.m.
Jackson	K S G I	1340	5:00 p.m.
Kemmerer	K M E R	950	5:00 p.m.
Laramie	K O W B	1290	10:00 p.m.
New Castle	K A S L	1240	5:00 p.m.
Powell	K P O W	1260	5:00 p.m.
Rawlins	K R A L	1240	5:00 p.m.
Riverton	K V O W	1450	5:00 p.m.
Rock Springs	K V R S	1360	5:00 p.m.
Sheridan	K W Y O	1410	10:00 p.m.
Torrington	K G O S	1490	5:00 p.m.
Worland	K W O R	1340	5:00 p.m.
ALBERTA			
Calgary	C H Q R	810	10:00 p.m.
Drumheller	C J D V	910	1:30 p.m.
Camrose	C F C W	790	5:30 p.m.
Lethbridge	C J O C	1220	10:00 p.m.
Lloydminster	C K S A	1080	1:00 p.m.
Medicine Hat	C H A T	1270	9:00 p.m.
Peace River	C K Y L	610	9:30 p.m.
BRITISH COLUMBIA			
Abbotsford	C F V R	1240	9:30 p.m.
Chilliwack	C H W K	1270	9:30 p.m.
Dawson Creek	C J D C	1350	3:05 p.m.
Hope	C K G O	1490	9:30 p.m.
Kitimat	C K T K	1230	10:00 p.m.
Nanaimo	C H U B	1570	9:30 p.m.
Port Alberni	C J A V	1240	9:00 p.m.
Prince Rupert	C H T K	1230	9:30 p.m.
Quesnel	C K C Q	570	9:35 p.m.
Terrace	C F T K	590	10:00 p.m.
Trail	C J A T	610	1:30 p.m.
Vancouver	C J V B	1470	7:30 a.m.
MANITOBA			
Altona	C F A M	950	1:30 p.m.
NEW BRUNSWICK			
Campbellton	C K N B	950	5:30 p.m.
Edmundston	C J E M	570	1:30 p.m.
Frederickton	C F N B	550	5:00 p.m.
Moncton	C K C W	1220	9:30 p.m.
Newcastle	C F A N	790	5:00 p.m.
St. John	C F B C	930	10:00 p.m.
Woodstock	C J C J	920	1:00 p.m.
NEWFOUNDLAND			
Corner Brook	C F C B	570	6:00 p.m.
Grand Banks	C J O X	610	5:30 p.m.
Grand Falls	C J C N	680	5:30 p.m.
St. Johns	C J O N	930	5:30 p.m.
ONTARIO			
Ajax	C H O O	1390	1:00 p.m.
Blind River	C J N R	730	1:00 p.m.
Brampton	C H I C	790	4:00 p.m.
Branford	C K P C	1380	9:30 p.m.
Chatham	C F C O	630	11:30 p.m.
Cornwall	C J S S	1220	10:00 p.m.
Fort Frances	C F O B	800	10:00 p.m.
Guelph	C J O Y	1460	9:30 p.m.
Huntsville	C K A R	630	1:00 p.m.
Kenora	C J R L	1220	10:00 p.m.
Kingston	C K W S	960	1:30 p.m.
Kirkland Lake	C J K L	560	9:30 p.m.
Kitchener	C H Y M	1490	10:00 p.m.
Leamington	C H Y R	710	4:30 p.m.
Midland	C K M P	1230	10:00 p.m.
North Bay	C F C H	600	9:30 p.m.
Owen Sound	C F O S	560	1:00 p.m.
Peterborough	C H E X	980	9:30 p.m.
	(May-Sept.)	-	7:30 p.m.
Pembroke	C H O V	1350	1:30 p.m.
Port Arthur	C F P A	1230	3:30 p.m.
St. Thomas	C H L O	1570	5:00 p.m.
Sarnia	C H O K	1070	10:30 p.m.
Sault Ste. Marie	C J I C	1050	10:05 p.m.
Smith Falls	C J E T	630	10:00 p.m.
Stratford	C J C S	1240	2:30 p.m.
Thunder Bay	C K P R	580	6:00 p.m.
Timming	C K G B	680	9:05 p.m.
Toronto	C K F H	1430	8:00 p.m.
Welland	C H O W	1470	6:30 p.m.
Wingham	C K N X	920	9:05 p.m.
QUEBEC			
Montreal	C F M B	1410	4:30 p.m.
Sherbrooke	C K T S	900	1:00 p.m.
SASKATCHEWAN			
Moose Jaw	C H A B	800	9:00 p.m.
N. Battleford	C J N B	1050	1:30 p.m.
Prince Albert	C K B I	900	9:30 p.m.
Rosetown	C K K R	1330	1:00 p.m.
Saskatoon	C K O M	1250	9:00 p.m.
Swift Current	C K S W	1400	1:30 p.m.
Yorkton	C H G Y	940	1:00 p.m.
	C F S L	1190	5:30 p.m.

## OBSERVATIONS OF TRANSATLANTIC MEDIUM WAVE RADIO SIGNALS

by C. W. Bailey

Since the middle of March 1974 observations have been conducted at Holden, Massachusetts practically nightly about thirty to ninety minutes past local sunset on approximately fifty specific medium wave radio frequencies. Records covering more than 320 sessions have been accumulated and collation of some of the results is in progress. Transatlantic Radio Stations (TA's) located by certain degrees latitude and transmitting on certain wave lengths were selected. The medium wave radio frequency band was divided into four (4) parts: (I) 520-699 Khz; (II) 700-999 Khz; (III) 1000-1399 Khz; (IV) 1400-1615 Khz. An examination of Table 2 should clarify the TA selection process used.

Observation sessions were conducted about as follows. A station's signal strength in decibels was observed on the receiver "S" meter for several seconds and then recorded; readability of the signal was also adjudged.\* Noise level readings were recorded for identical channels nightly in each of the four frequency bands (I, II, III and IV). Readability and signal strengths of a number of mid-west United States stations and those in a few Latin American countries also were noted and recorded. Daily WWV-WWVH propagation data for the observation period was logged, but the tables accompanying this article will not attempt to summarize band conditions or "A" indices. (Presumably you know of those conditions first hand). Except in very extreme and unusual cases terrestrial weather conditions were not recorded nor was any attempt made to equalize (in the raw data) for transmitter power or antennae patterns of the various stations. Sporadic "E" and auroral conditions were observed and noted, but will not be summarized here.

The receiver used and maintained at the best level of efficiency in the operator's capabilities was an R390A/URR in the 1 Khz selectivity and fast AGC positions; the "S" meter, calibrated normally in decibels, was checked from time to time with the Carr meter adjust potentiometer that is standard in the receiver. A 1200 foot, unterminated, long wire (Beverage) bearing 90-270 degrees was the antenna used and the receiver was located at the west (270°) end of the Beverage. Several other antennas are in the area but were not used for observations.

The area soil is granitic, fairly level to rolling, covered by a forest of deciduous and coniferous trees and shrubs. WTAG (5000 watts) 580 Khz transmitter is 1½ miles east of receiving position and when transmitting its daytime pattern delivers a measured 200 millivolts/meter at our location. The WTAG night pattern results in a slight null toward the receiver position. Three other medium wave broadcasters are within 7 miles of receiver location, but of these, only one (WAAB, 1440 Khz) delivers minor distortions. Holden is approximately 30 air miles west, north-west of Boston so WBEZ, WRKO, WHDH, and other east coast stations present no great problems although at times weather conditions (humidity etc.) seem to contribute to various phasing and inter-modulation effects.

Table I shows the number of nightly observations conducted in the various months on certain TA stations including Sinkiang, China. TA's were heard 319 of 324 nights (about 99% of the observation times) and of these nightly receptions 34 (about 10%) were considered unreadable to poor. During these observations Sinkiang was heard 135 nights and of these receptions, the signal was fairly readable about 46% of the time. Table 2 shows an extract of stations

\*Seven degrees of readability from non-existent (-) to barely heard (0) with BFO on, to readable with attentive listening (3), and (4) indicating good readability, were used. R5 was practically impossible to obtain in the operator's opinion.

observed by frequency segments and by degrees bearing from Holden for March 1974. For the sake of brevity, not all TA observations are included in either Table I or Table 2.

Some tentative conclusions are offered:

1. Almost daily TA reception is possible under certain conditions.
2. Stations higher in frequency and lower in latitude are more consistently heard.
3. Sporadic "E" propagation occurs from time to time on the medium wave band.
4. In the northern hemisphere, in summer months, transpolar propagation through what seems to be, at least, a partial daylight path, seems possible. Then again it might be long path.

Special credit should go to Gordon Nelson who suggested certain aspects of this project, was often consulted, and is currently processing some of the data obtained.

## OBSERVATIONS OF TRANSATLANTIC MEDIUM WAVE RADIO STATIONS

TABLE No. 1.

Month/Yr.	#nightly obs.	#nights TA's heard	#nights vy. marg. rec.	#Sinkiang, China receptions	
				Nights heard (inc. next col.)	#nights heard R3 or better
March '74	17	17	(0)	9	7
April "	24	24	(3)	9	6
May "	27	27	(4)	7	3
June "	30	28	(5)	9x	3
July "	28	26	(8)	13	3*
Aug. "	26	26	(4)	7	4
Sept. "	24	24	(2)	4	2
Oct. "	25	24	(5)	6	3
Nov. "	29	29	(3)	11	4
Dec. "	29	29	(0)	13	3
Jan. '75	27	27	(0)	19	14
Feb. "	14	14	(0)	12	3
March "	24	24	(0)	16	11
Totals	324	320	(34)	135	62

xSinkiang (1525 Khz) signal indicated but with no positive ID on 3 longest days of the year.

\*Russian language and music format @ 0045 on 27 July '74. Signal was 32db, R4 in possible transpolar (partial daylight) path. Am 95% sure it was Sinkiang since the format matched completely. Did not tape.

I am sure other DX'ers have gotten the same static from wife, mother or sister about the condition of your "shack" what with Rx, antenna and a multitude of DX reference material hanging around for them to dust and straighten up. The problem seems to be widespread.

It occurred to me one day as I was punching holes in some DX information sheets that I wished to save in 3 ring binders that I had all the issues of DX News since I became a member just lying around gathering dust.

While the other information that I required for future reference was printed normally on an 8 1/2 by 11 sheet and could be easily stored by the binder method, the printed format and staple binding of DX News prevented this form of storage. Noticing also that the central "gutter" was not large enough to use spiral binding, the problem of storage of DX News without mix-up and loss of issues was increasing with every copy received.

Obviously the solution is to get it all together in an attractive looking binder that will keep the ladies from forever hounding you about the mess.

The answer came to me as I was perusing my latest copy of National Lampoon - in it they suggest keeping your copies in a special binder that they also sell. Fine, but these binders are hard to come by in the size required and are also fairly expensive. This is a factor to be considered if you are a student or father of 10 and don't have a great deal of money to throw around.

So, if they cost so much, why not make your own, to the size you need, preferably with low cost material that's readily available.

Aha, you're saying - that seems to be an ambitious undertaking, and so did I until I actually started on the project. In the end, you can finish up with an eye pleasing product and at low cost.

First, if anyone has ever noticed the Lampoon binders, they consist of the whole magazine being held in place by a sturdy wire placed through its' central pages, the wire being held in place by grooves in the end of the binder. Therefore, to begin.....

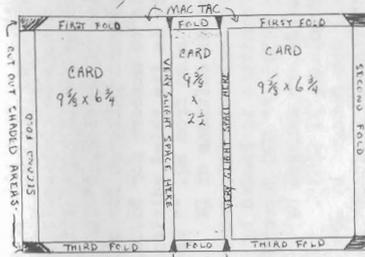
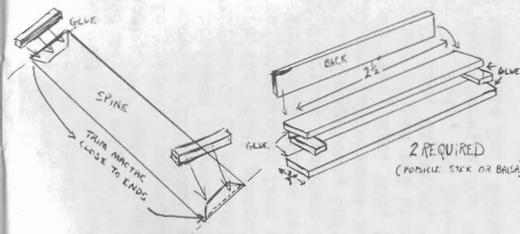
At the local hobby crafts store purchase the correct amount of heavier gauge wire lengths that are used by hobbyists to make the stems for imitation flowers, they are about 18" in length and cost about a cent each. Next, to the hardware store for the required length of MAC TAC adhesive covering in whatever pattern you like (I used a dark wood grain to match my shelves). The measurements following permit three (3) binder coverings per yard of material.

If there is a small printing plant nearby or stationery store, buy a 4-ply card or heavier if available and cut the necessary number of pieces 9 and 5/8 by 6 and 3/4 inches and a smaller piece 9 and 5/8 by 2 1/2 inches for the spine of the binder. I couldn't get balsa wood locally so I could construct the groove portion but the hobby shop provided popsicle sticks which proved adequate. The only other things necessary are a tube of white bondfast resin glue for wood, plastic and paper and several sheets of 24 pound bond paper cut slightly smaller than the sizes mentioned above.

The construction is very straight forward - per diagrams. After the MAC TAC is folded in place, apply the smaller sized sheets of bond over the folds to hide cutting imperfections. Glue the pre-assembled grooves to the finished spine, set aside until dry. Cut wire to fit, open DX News at center pages, slip wire in place, close magazine and place wire in the grooves, continue until the binder is filled, then set on shelf.

Following about an hours' total work even with a couple of kids to "help" I ended up with some attractive binders that now contain part of my DX News collection. Now all I need spare time to finish all the binders I'll require. Of course, it's not necessary to follow my measurements, you can make the spine of the binder any size you wish.

Good luck and enjoy your "new" hobby.



\* The second and third folds should be transposed, I didn't feel like drawing it over, HI.

TABLE 2.

MARCH 1974 TA RECEPTIONS

Frequency Segment	Station	Rec.	Station	Rec.	Station	Rec.	Station	Rec.	Station	Rec.
I 520-699 Khz	Great Britain	4(0)	Switzerland	4(2)	Spain	683 Khz 10(8)	Morocco	529 Khz 10(4)	Portugal	665 Khz 17(13)
II 700-999 Khz	Holland	7(6)	Italy	845 Khz 12(10)	Spain	737 Khz 12(8)	Portugal	782 Khz 11(7)	Senegal	764 Khz 15(3)
III 1000-1399 Khz	Germany	1268 Khz 11(6)	Albania	1394 Khz 9(7)	Spain	1223 Khz 11(8)	Spain	1385 Khz 11(8)	Portugal	1034 Khz 15(6)
IV 1400-1615 Khz	Germany	1586 Khz 11(5)	Monaco	1466 Khz 11(8)	France	1554 Khz 16(4)	Portugal	1578 Khz 15(7)	Portugal	1594 Khz 17(11)

Bearing to stations from observation post

Figures in parenthesis ( ) represent marginal receptions i.e. readability considered less than R3.

HQ NOTE: A similar, although nowhere nearly as exhaustive in terms of per centage of nights in a given period monitored was made some 3-4 years ago by PR & RJE. These results were never published due to time problems involved in sorting the data. As space permits, we will attempt to collate about 2 seasons' worth of monitoring and present it for publication.