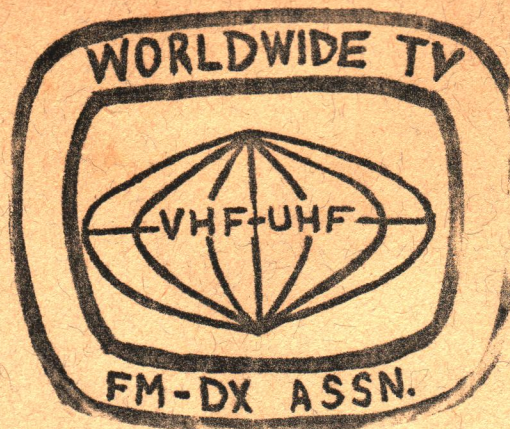


VHF-  
UHF  
DIGEST



Volume 7, Number 8 August, 1968

Monthly publication of the WTFDXA. Published at Box 5001, Milwaukee, WI. 53204 (USA). Address all correspondence and make checks payable to the club in Milwaukee. Dues: \$3.50 worldwide in US funds; samples 30¢.

I promised last month that this would be a special issue and so it is. It isn't quite what I had hoped for, (I hoped to have a new better way to reproduce fotos but this did not pan out). However, I believe this is the biggest & best Digest so far with more pages and more pictures than ever before. This issue will also be distributed at the ANARC convention, and of course the September issue will have a complete summary of the convention activities.

This is the last issue that will be sent to the following people:

Tom Mann Jim Borroum  
Tammy Tyson Charles Milhans  
Achim Von Risten Bob Rooney

We hope that you will send in your renewals during the coming month.

Paid members will also receive the long awaited membership list with this Digest. The first VHF column under new editor Bob Cooper appears in this VUD, and we are pleased to announce the FM column will return under new editor Roger Winsor soon.

I may be just wasting time as most of you have probably already made up your minds as to whether you're going to the ANARC convention in Omaha or not, for those regular members who have not made up their minds yet, please consider it. Registration begins at noon Friday, 16 August, at the Commodore Motor Inn, 24th & Dodge Streets in downtown Omaha. Partial tour of SAC HQ, tour of KFAB-AM and FM, featured speaker Saturday evening from NW Bell Telephone on "Communications and the National Defense", lecture with slides by Morrie Goldman on TV-DX, display of equipment by World Radio Labs from nearby Council Bluffs, other meetings, talks and discussions throughout the 3 days. Convention host is Ernie J. Wesolowski, 1416 Pasadena Ave., Omaha, Nebraska 68107. It's probably too late to write him now for reservation cards if you don't have them already, but prices range from \$9.50 single to \$15.50 for 3 in a room. I plan to room with Morrie Goldman and Bill Heusmann so I (or we) shall see you there, if YOU are there, that is. See you soon.

No official emblem has been adopted yet for the club, so I shall use Morrie's and my designs alternately until one or the other is decided upon. Voting on it has been slim and almost evenly divided. Also, the proposed name change by Glenn Hauser to WUVA (Worldwide UHF-VHF Association) has had mixed comments. Most people agree on a simplified name and initials but almost everyone has his own proposed name.-fsd

FCC NEWS and Data  
TV STATISTICS - AUGUST 1968

GARY A. OLSON  
5901 W. Brown Deer Rd.  
Apt. #107  
Brown Deer, Wis. 53223

STATIONS OPERATING (AS OF MAY 27, 1968)

UHF ETV 80  
UHF Com 148  
VHF ETV 74  
VHF Com 505

Total Authorized Stations On Air 807

New target dates reported:

KLNI-TV, ch. 15, Lafayette, La., 259 kw. (NBC) target Sept. 1968  
\*WTIU (TV), ch. 30, Bloomington, Ind., (NET) target Sept. 1968

FCC COMPLETED ACTION

New Grants:

\*Hastings, Neb., granted ch. 29, 272 kw. (NEB. ETV Commission)  
Atlanta, Ga., granted ch. 46, 834 kw. (Christian Broadcasting)  
Elmira, N.Y., granted ch. 36, 186 kw. (WENY Inc.)

Call Letter Changes:

WSCO-TV, ch. 19, Newport, Ky., granted WXIX-TV

New Call Letters Issued:

Elgin, Ill., ch. 66, (Elgin TV) granted WFMT (TV)  
Springfield, Ill., ch. 55, (Ill. Broadcasting) granted WPNG (TV)  
Denver, Colorado, ch. 31, (Comet TV) granted KTOV-TV  
Sarasota, Fla., ch. 40, (Sarasota-Bradenton TV) granted WKLT (TV)  
Rochester, Minn., ch. 47, (Rochester Telecasting) granted KCTR-TV  
Oneonta, N.Y., ch. 15, (Susquehanna Broadcasting) granted WCAF-TV

Other Changes Allowed:

WJKS-TV, ch. 17, Jacksonville, Fla., ERP to 725 kw. - ant to 980'  
WCIU-TV, ch. 26, Chicago, Ill., ERP to 543 kw.  
WDXR-TV, ch. 29, Paducah, Ky., ERP to 380 kw. - ant. to 920'  
WDAU-TV, ch. 22, Scranton, Pa., ERP to 750 kw. - ant to 1,560'  
WNOK-TV, ch. 19, Columbia, S.C., ERP to 1,046 kw.  
KORN-TV, ch. 5, Mitchell, S.D., ERP to 100 kw. - move transmitter  
to 6.5 miles south of Salem, S.D.  
WURD (TV), ch. 40, Indianapolis, Ind., ERP to 676 kw., - ant to 470'  
WCFT-TV, ch. 33, Tuscaloosa, Ala., ERP to 182 kw.  
WGCT (TV), ch. 33, Miami, Fla., ERP to 597 kw.  
KPLM (TV), ch. 36, Palm Springs, Calif., ERP to 309 kw. - ant. 630'  
KMOT (TV), Minot, N.D., ERP to 214 kw. - ant. to 680'  
WPHL-TV, ch. 17, Philadelphia, Pa., ERP to 2,450 kw.  
KVTV (TV), ch. 13, Laredo, Tex., ERP to 87.5 kw. - ant to 920'  
WVNY-TV, ch. 22, Burlington, Vt., ERP to 302 kw. - ant to 2,750'  
KFIZ-TV, ch. 34, Fond Du Lac, Wis., change ERP to 582 kw. - ant. 630'  
WSCO-TV, ch. 19, Newport, Ky., ERP to 925 kw.  
WKBD-TV, ch. 50, Detroit, Mich., ERP to 740 kw.  
KXGN-TV, ch. 5, Glendive, Mont., ERP to 7.4 kw.  
KTXL (TV), ch. 40, Sacramento, Calif., ERP to 622 kw. - ant. to 960'  
KNEW-TV, ch. 32, San Francisco, Calif., ERP to 510 kw.  
WHP-TV, ch. 21, Harrisburg, Pa., ERP to 512 kw. - ant to 900'

ACTION APPLIED FOR OR REQUESTED

Applications For New Stations:

Anaheim, Calif., ch. 56 (Golden Orange) 5,000 kw. - ant. 186'  
Nampa, Idaho, ch. 6 (Idaho TV)  
Terre Haute, Ind., ch. 66 (Alpha Broadcasting) 900 kw. - ant. 1,028'  
\*Marquette, Mich., ch. 13, (N. Mich. Univ.) 315.4 kw. - ant. 1,115'  
Davenport, Ia., ch. 30 (Standard Broadcasting) 232 kw.  
Syracuse, N.Y., ch. 62, (Broadcasting Affiliates) 310 kw.

That about wraps up the statistics info for this reporting period.  
Next month this column will have the latest FM FCC News and Data.

# EASTERN-DX

Editor: Morrie Goldman  
8046 S. Euclid Avenue,  
Chicago, Illinois 60617

This column is for all TV-FM reporters east of the Mississippi River.  
August 1968  
Deadline: 10th of each month

With skip openings occurring more and more often this season, with greater magnitude and higher MUF's one becomes even more perplexed as to its cause. For years man has observed the seemingly patternless occurrences of the natural phenomenon we've labeled Sporadic E skip. And still there is no positive information on its nature. What ever it is that does cause Es, it sure can make a VHF DXer feel pretty high. Just think, if Es could be bottled and sold it might even out sell beer!

Getting back down to earth, last month was indeed a prosperous one for most DXers. Skip was frequent, strong and on at least one occasion even hit the TV high band. Even though most openings seem to have been from the west, Es struck around the compass as far south as Cuba to as far north as Canada. DXer Bill Grant says that most openings he's observed were on channel 6, he wonders how many will report Es reaching channel 7. Bill Bens added 100+ new stations to his FM log in what he says has been a fabulous season. Frank Wheeler, a veteran DXer, said this of June, "It was one of the best months I've experienced in a long time."

Bill Draeb, Ellis st., RR#2, Kewaunee, Wis. 54216

(Rcvd after last months deadline.) May 18: tropo 0815 WANE-15, WKJG-33. May 28: Fd 1232 KATC-3, KACB-3 at 1900, 2000 WEAR-3, WRKG-5, 2037 KJAC-4, WFDM-6, 2130 WDFQ-2. The 31st also brought un-ids on 2-6, 1235. June 1: tropo 2305 WKNX-25, 2345 WANE-15, WPTA-21, WKJG-33, WINA-35, WKBD-50. June 4: tropo 1950 WCMU-14, WUCM-10, WAKB-23, WVIZ-25, WKBE-6. June 5: tropo 0730 WAKR-23, WVIZ-25, WKNX-25, WWL-4, WYTV-33, WANE-15, WPTA-21, June 8 tropo 0730 WICD-15, WLFI-18, 1230 Es chs 2-6 no ids. June 18 tropo 0650 WKNX-25, WANE-15, WPTA-21, WKJG-33. June 20 tropo 0650 WEEK-25, 1800 Es KFDX-3, KSYD-6 + un-ids on 2-6, 2200 WSAV-3. June 21 Es: WEDU-3 at 1625, WEAR-3, WKRG-5 at 1655. June 22 tropo 1300 WANE-15, WPTA-21, WKJG-33, WICD-15, WLFI-18. June 23 tropo 0650 WJAN-17 (NEW), WPTA-21, WAKR-23, WKNX-25, 0707 WNYP-26 (NEW), 0650 WKBN-27, WYTV-33, WKBD-50, 0715 WNEP-16, WBRE-28, 0735 WJET-24, WINA-35, WATR-16, WKEF-22, 0757 WANE-15, WKJG-33, at 0830 WSEE-35 at 0830. As you can see I had a pretty good opening on June 23d which netted me two more new stations and some I never expected to see again. WNYP-26 was in until 1035 when a thundershower moved in and put a damper on things. WJAN lasted about a half hour and faded out. I was on vacation this last week but really didn't see much in the way of DX with the exception of this weekend. The plans to put up a new water tower 2 1/2 blocks west of me, I hope it doesn't affect my reception any. The old one is 5 blocks east of here. Guess that's all for now, 73's and GOOD DX.....(Fine on your two new stations to your log. I hope the water tower doesn't hamper your reception either, ...let us know how it works out...MG)

Joseph Fela, 167 Goodwin Avenue, Newark, New Jersey 07112

This is my first report to the WFDXA. Receivers here are a '66 RCA B&W portable TV and a Lafayette LR-1500 T stereo FM tuner. Antennas consist of a JFD LPV-190 for VHF and FM and a 4 bay bow-tie with booster for UHF. I might add this is my first year of FM-DXing. This location isn't the

best for DXing as there are locals on 2,4 and 5 with semi-locals on 3 and 6 (Philadelphia) on TV and on FM 50 or 60 stations come in on g.w. depending on how many educationals are on the air. DX this season is as follows- Times EST- 5-8 2009 WDRC-102.9, Hartford, Conn., 2158 WRIO-101.7 Cape May, N.J., 2204 WDEL-93.7 Wilmington, Del., 5-14 1946 WWC0-104.1 Waterbury, Conn., 2041 WBMI-95.7 Meriden, Conn., 5-15 1739 KCUR-89.3 Kansas City, Mo. (first Es catch on FM) Also Un-ID Es on 91.5 & 91.9. 6-5 2102 WBJC-91.5 Baltimore, 2031 on 66 WISZ 95.9 Glen Burnie, Md., 2050 WBJC-91.5 Baltimore (much stronger than 6-5), 2102 WAMU-88.5 Washington D.C., 6-20 1745 KRSL-95.9 Russel, Kansas 1755 WDSU-93.3 New Orleans La. Es, over WMMR, 1757 WMAI-107.9 Panama City, Fla. (Es also noted on FM car radio, STRONG.) 1801 WFSU-91.5 Tallahassee, Fla., 1815 WKRC-99.9 Mobile Ala. (Es over WEEX). A few oddities have been noted in the schedules of some local FMers: WLIB-107.5 doesn't s/on until around noon EST; WQXR-96.3 is on till 0105 EST Sunday mornings and WNBC-97.1 is not AN, which is very surprising. I'll say 73 for now and will list my TV-DX next month. (Don't worry about lack of space for your reports, it's better to keep the reports current even if it means a long report. MG)

Roger W. Winsor, 718 N. Fremont Road, Valparaiso, Indiana (CDT)

6-1:10:30PM WBBC-94.1 Jackson Mich., WKHM-106.1 Jackson, Mich., 6-4: WRVB-102.5 Madison, Wis. at 930AM; 6-10: 7:00PM WIAA-88.3 Interlochen, Mich; 6-16: 11:30 PM WFKO-100.5 Kokomo, Ind.; 12:10 WAJC-104.5 Indpos., Ind./off. 6-22-68: 10:31 to 12:30 WJVM-94.3 Sterling, Ill. WIXN-101.7 Dixon, Ill., WSUW-91.7 Whitewater, Wis. (250 watts), WBCR-88.1 Beloit, Wis. (ID, but too much ch. 6 QRM to log). 6-23: 12:30 CFPL-95.9 London, Ont., 2:00 KSHE-94.7 St. Louis Mo., WVIC-94.9 also at 2:00 Bay City, Mich., WNEM-102.5 2:00 from Bay City, Mich., 2:03 WMKC-96.7 OshKosh, Wis., 2:10 WDET-101.9 Detroit, 2:20 WAPX-99.5 Detroit, 7:00 WJBK-93.1 Detroit, WWJ-97.1 Detroit at 7:05, 7:00 WWTW-92.0 Cadillac, Mich (s/on with booming signal.)....TV....6-23: 6:59 AM WJW-0 Cleveland, 6:59 WKTR-16 Dayton with tp, 6-4 WICU-12 Erie, Pa. at 1:00AM, 6:40AM WKRC-12 Cincinnati with tp and s/on, 6-9 WBRZ-2 at 6:30PM Baton Rouge, La., 6-19: 12:32AM WLBC-49 Muncie, Ind., (Delays Johnny Carson 1/2 hour) 6-20 7:00 KNME-5 Albeq. N.M., 7:30PM KARD-3 Wichita, Kans., 7:40PM KTVC-6 Ensign, Kansas, 6:30PM KID-3 Idaho Falls, Id./KTWO-2 Casper Wy. at 4:30PM on 6-22, 6-23 2:20AM WBAY-2 Green Bay, Wis with s/off, 6:20 WIIC-11 Pittsburg with tp when WTOL suddenly went off with their tp, WKBD-50 Detroit with color bars and s/on at 7:25AM. 6-30 11:00 KWGN-2 Denver, 11:30 KTVS-3 Sterling, Col., (2 hr delay on ABC cartoon), KOA-4 Denver at 12:00, 12:30 tent. WOW-6 Omaha with local interview pgm, 1:00 KTWO-2 Casper, Wy. (Having WTOL's tp was indeed fortunate giving you quite a catch in WIIC-11. MG)

Roderick Luma, Detroit, Mich.

3-18: 10:30PM WNYF-26 Jamestown, N.Y., 10:30PM WQLN-54 Erie, Pa. (both new), WSEE-35 Erie at 10:40PM, 10:40PM WICU-12 Erie, 10:40 WJAN-17 Canton, Ohio, 5-15: WANE-15 Ft. Wayne, Ind. at 9:10AM, 9:10AM to 9:30AM WPTA-21 Ft. Wayne Ind., WKJG-3B Ft. Wayne, WNDU-16 South Bend, Ind., WSBT-22 S. Bend, WSJV-28 Elkart, Ind., WAND-17 Decatur, Ill., WICS-20 Springfield, Ill., WIRL-19 Peoria, Ill., WTVH-25 Peoria, WMBD-31 Peoria, WCIU-26 Chicago, WAKR-23 Akron, Ohio, WLFI-18 Lafayette, Ind., WIMA-35 Lima, Ohio, WVIZ-25 Cleveland, Ohio, WKBF-61 Cleveland, WKYC-3 Cleveland, Ohio, WEWS-50 Cleveland, WJW-8 Cleveland Ohio, 6-23 7:30 to 9PM WFLD-32 Chicago. The reception of channel 32 on 6-23 was rather unusual, as I've never had this type of reception before. There was occurring at the time of reception a severe lightning storm west of here (probably 20 to 50 miles or more away) and it appeared that with each stroke of lightning which I believe causes intense ionization of the air in the immediate vicinity, the ch 32 signal popped in just for short periods of around one second. Otherwise there was no evidence of pix or sound. I was able to tell that there was a White

Som game on the air at the time. Has anyone else ever experienced this "lightning-pulse" reception? Of course the VHF channels were affected as they normally are by lightning at the time. (Previous to your mention I've never heard of such lightning induced ionization. Maybe some of the other members can help? MG)

Frank Wheeler, 6589 Wattsborg Rd., Erie, Penn. 16509 (EST)

All I have to say about June 1968 TV DX wise, is WOW!! It was one of the best months I've experienced in a long time. Here's how I made out: June 4: 4:33PM KWGN-2 Denver, 10:00PM WDIQ-2 Dozier, Ala., June 9: 7AM WAKR-23 Akron, Ohio, June 19: WDIQ-2 at 10:57PM, June 20: 4:30PM KGBT-4 Harlington, Texas, 4:45PM KPRC-2 Houston, 4:48PM KTBS-3 Shreveport, La., 5:00PM KETS-2 Little Rock, Ark., 5:15PM KRLD-4 Dallas, Texas, 5:29PM WKY-4 Oklahoma City, Okl., 5:30PM WBAP-5 Ft. Worth, Texas, 6:00PM KTVC-6 Ensign, Kans., 6:03PM KARD-3 Wichita, Kans., 6:05PM KCKT-2 Great Bend, Kans., 6:15PM KCMO-5 Kansas City, Mo., 6:17PM WKRG-5 Mobile, Ala., 6:28PM KFEQ-2 St. Joseph, Mo., 6:31PM WCTV-6 Tallahassee, Fl., 10:30PM WESH-2 Daytona Beach, Fl. I would have received more this evening but I was out from 6:45PM to 10 PM. Best night I've had in years. June 21 received these before but received this date from 6:13-9:20PM. KCKT-2, KARD-3, WKY-4, Others for this date are: 8:58 PMWBRZ-2 Baton Rouge, La., (9:00PM KVOO-2 Tulsa, Okl., 9:10PM KYTV-3 Springfield, Mo, June 29: 6:28PM KCEN-6 Temple, Texas 8:00PM KPRC-2 Houston, 8:05PM KIII-3 Houston, 8:38PM KJAC-4 Port Arther, Texas, June 30: 12 noon KTWO-2 Casper, Wy. Six new ones in June, the best month I've experienced in years. I had an unusual opening on the evening of July 1. On ch. 6 and ch. 2 I had a peculiar skip. It wasn't trop, but looked like Es, but was very short as I received the following: 9:00PM WTVN-6 Columbus, Ohio 263 miles and at 9:28PM WLWD-2 Dayton, Ohio 272 miles. It was the shortest skip I've ever seen. I heard two amateurs in Va. talking about it on short wave. WTVN TV came in 100% clear for 5 minutes and for a half hour from 80 to 95% clear. My totals are now 214 received with 183 veries. Too bad the TV contest wasn't all of June. 73's. You really grabed some odd conditions on July 1, as a matter of fact it looks like many DXers have noticed odd happenings on the band this year. "Lightning pulse reception", very short Es, who knows what the trop season may bring? MG)

GARY Olson, 703 Fersey Avenue, Apt. B-11, Bloomington, Ill. 61701

This is Gary's final report from Bloomington. Coming reports will be from his Wisconsin home. 6-20 5PM KRLD-4 Dallas, WBAP-5 Ft. Worth, 5:10PM WOAI-4 San Antonio, 5:14PM KPRC-2 Houston, 5:18 PM KRGV-5 Weslaco, 5:23 PM KJAC-4 Port Arther, 5:27PM KMID-2 Midland, 5:58PM KENS-5 San Antonio, 6:30 PM KWAB-4 Big Springs, KOB-4 Albuquerque, KNME-5 Albuquerque, 6:55PM KOAA-5 Pueblo, Col., 7:00PM KCKT-2 Great Bend, Kans., 7:30PM KWGN-2 Denver, KOA-4 Denver, KRMA-6 Denver, 8:30PM WUND-2 Columbus, NC, 8:47PM KUTV-2 Salt Lake City, 10:00PM KTWO-2 Casper, Wy., 6-21 4:10PM WESH-2 W. Palm Beach, Fla., Un-ID-6 Spanish show about words, WPTV-5 W. Palm Beach, 5:00PM WTHS-2 Miami Beach, 5:25PM WTVY-4 Dothan, Ala., 5:26PM WDBO-6 Orlando, Fla., 5:30PM WKRG-5 Mobile, Ala., 6:00PM WCIX-6 Miami, 6:30PM WTVJ-4 Miami, 9:00 PM WCIV-4 Charlestown, SC., 9:25PM WUSN-2 Charleston, 6-22 1:00PM KMID-2 Midland, Texas, 6-24 KTWO-2 at 1:30PM, 2:00PM KXLF-4 Butte, Mont., 2:29PM KXGN-5 Glendive, Mont., KDIX-2 Pickinon, N.D. at 2:30PM and at 3:00PM KOOK-2 Billings, Mont. Plus many Canadian UN-IDs. TOTAL received 121 for 11 months here! (Well now you start it again! I hope your sucess is as good in Wisconsin as it was for your 11 month stay in Bloomington. MG)

Bill Grant, 16 Goulding Street, Worcester, Mass. 01609

Times are in EDT with all DX via Es. The few hours I have been home during daylight hours has been limited to weekends leaving most DXing to evenings only. The few openings I have observed this season have been

very strong with most openings reaching ch.6. I wonder if any one will report a ch.7 by Es year? 5-29 1830 WEDU-3 Tampa, Fla., 6-4 2100 WDCN-2

Nashville Tenn., 6-18 2115 WMT-2 Cedar Rapids, Iowa, 2335 WDCN-2 Nashville, Tenn., 2350 WBBM-2 Chicago, 6-19 0000 WLW-D-2 Dayton, Ohio, 0005 KFEQ-2 St. Joseph Mo., 0015 WTWO-2 Terre Haute, Ind., 0030 KYTV-3 Springfield, Mo., 6-20 1890 WEAR-3 Pensacola, Fla., 1900 WDSU-6 New Orleans, WRBL-3 Columbus, Ga. 1905 WTVY-4 Dothan Ala., 1930 WKRG-5 Mobile, Ala. 2000 WTRZ-2 Baton Rouge, La., 6-21 2005 WDSU-6 New Orleans, 6-29 1930 WLBT-3 Jackson, Miss., 2030 WDSU-6, 7-8 1900 WBAY-2 Green Bay, Wis., 1925 KDAL-3 Duluth, Minn., 1930 WMT-2 Cedar Rapids, 2000 WISC-3 Madison, Wis., 2000 Kqlo-3 Mason City, Iowa, 2305 KTCA-2 St. Paul, Minn. 2315 WBAY-2 Green Bay, Wis. 73 & Best of DX. (Thus far the only hi band skip I've heard of for this season came from non-member Bedford Brown who noticed skip as high as ch 9 on June 29 when he was visiting at his old home in Ark. MG)

Bill Bens, 5575 Spruce Wood Drive, Cincinnati, Ohio 45239 (EST)

Lots of DX to report. Since my last report in the June issue, over 100 stations have been added to the FM log! My FM total is now at 256, all of which are vfd on tape. Skip has really been tremendous this year. The 6-21 opening was unbelievable- note an aurora was predicted for that day in the June VHF column. Here's a rundown of my latest better DX: 5-15 0030 KLYX-101.1 TN, 0031 WTJS-104.1 TN, 0539 WTCW-92.1 KY, 0928 WHFB-99.9 IL, 0930 WKAK-99.9 MI, 5-28 1108 KCFM-95.5 TX, 1121 KIKK-95.7 TX, 1330 KSJT-97.5 TX, 2059 WRNO-99.5 LA, 5-30 2315 KITY-92.9 TX, 6-2 0731 WLEN-103.9 MI, 0748 WBBB-102.7 MI, 0759 WNEM-102.5 MI, 0859 CFPL-95.9 ONT, 6-8 1223 KTRH-101.1 TX, 1230 WTOD-101.3 TX, 1233 KRBE-104.1 TX, 1244 KROB-99.9 TX, 1259 KITE-104.5 TX, 1305 KBER 100.3-TX, 1400 KFJZ-97.1 TX, 6-21 1525 WUSF-89.7 FL, 1559 WCOF 95.9 FL, 1600 WTAN-95.7 FL, 1616 WWPB-101.5 FL, 1729 WNNR-97.1 LA, 1736 WWMT 95.7 LA, 1757 WHSY-104.5 MS, 1759 WFTL-106.7 FL, 1813 WMR-100.7 FL, 1823 WWOG-99.9 FL, 1830 WOVV-95.5 FL, 1901 WXKL-97.5 FL, 7-1 2230 WJTN-93.3 NY. A few questions now: is KFJZ still 59,000 w, or have they boosted to 100,000? Is WOVV (x-WIRA) still 2400 w? Is WRPS the right call for x-WOHI-104.3 Ohio? Help on these would be appreciated. I think Frank Merril should be given a "tip of the hat" for all his hard work in compiling that valuable FM baseball station list. Thanks Frank. Trop DX has been limited here lately since I'm attending the U. of Cincinnati this summer. For now, 73. (Sorry I can't help on the power modifications or WOHI. My 1967 BC Yearbook still lists it as such. I also think Frank went "above and beyond the call of duty" in compiling the FM info. I'm sure it will be most valuable to many a FM DXer. MG)

Bill Heusmann, 3116 Sangamon Street, Steger, Ill. 60475 (CDT)

Having just joined WTFDXA in May, this is my first report. I've been actively DXing for over 3½ years and am using a Knight 3 Star VHF antenna and an eight bay bowtie array with Jerrold "Powermate" booster for UHF; all roof mounted only thirty feet a.g. My receiver also doubles as the family TV, an RCA model CTC 12. My records are KBOI-2 Boise (1465 miles) 675 miles for trop WJTV-12 Jackson, Miss., and 320 miles on UHF with WAKR-23 Akron. I've logged a total of 147 stations. I didn't find Es occurring as early as it did for some, probably being away at school, Drake University in Des Moines, was the reason. 6-5 Had WGBH-2 Boston during early afternoon. 6-20 1732 KIII-3 Corpus Christi, 1812 KID-3 Idaho Falls, 1820 WKY-4 Oklahoma City, 1830 KJAC-4 Port Arther, Texas, KOB-4 Albuquerque, N.M. 6-21 1715 KR0D-4 El Paso, Texas, 1730 KIII-3 Corpus Christi, Texas, 1747 Un-ID Spanish station on ch.3, 1800 WTVJ-4 Miami, 6-22 Best trop I've seen to east. Rcvd five new stations, WKBF-61 Cleveland, WXYZ-7 Detroit (thru local WBKB), CKLW-9 Winsor, Ont., (thru local WGN), WNEM-5 Bay City, Mich. and CFPL-10 London, Ont. 6-24 1357 KCPX-4 Salt Lake City, (NEW) 1429

KDIX-2 Dickinson, N.D. (NEW), 1500 KXLF-4 Butte, Mont., 1528 CHAB-4 Moose Jaw, Sask., 1600 CKCK-2 Regina, Sask., 6-29 1858 KATC-3 Lafayette, La., 1904 WDSU-6 New Orleans (NEW), 1958 WEDU-3 Tampa, Fla., 7-3 2215 un-ID NBC on 3, WNW., 2218 Non-net pgm on 2, W. 7-4 1034 KATC-3 Lafayette, La. 7-5 1044 KWGN-2 Denver, 1100 KREX-5 Grand Junction, Col. (NEW) BC Yearbook says they run 12.9 kw vid, 10ft below average terrain. Rcvd them thru local WMAQ. 1104 KOA-4 Denver, 1108 KTVS-3 Sterling Col., 1130 KFBC-5 Casper, Wyo., 7-8 1830 CBHT-3 Halifax, N.S., 1852 WTIC-3 Hartford, Conn., 1930 CHSJ-4 St. John, N.B., 1958 WGBH-2 Boston, 2000 WBZ-4 Boston. (By phone Bill has informed me he will soon have another Knight 3 Sta antenna stacked with his present. With this new addition you may even break your fantastic ch 12 trop record Bill! MG)

F. DOMBROWSKI, Hq.

DX since last report: June 21: WSB-2, KMID-2 tent., KPRC-2 and un-IDs up to ch. 6. June 22 Friend reported Es while I was at work. June 23: 2AM WXYZ-7 WJW-8, WEAU-13, un-id color bars on 10, WKJG-33 tent. at 9AM. June 24: KTWO-2, KOOK-2., June 30: KWEN-2 and Un-IDs, July 1: WJIM-6, July 5: KWGN-2 KFBC-5. July 8: WESH-2, WUSN-2 July 9: un-IDs Es for  $\frac{1}{2}$  hr. (those rabbit ears seem to do a great job for you. I wonder what you would have logged on the 23 had you had a good antenna. MG)

Frank Merril, Jr., 1790 Jewell Road, Milan, Michigan 48160 EST

LOTS of DX since last time, most being crammed into one very special date, June 20. DX since last time, all of them new: 6-12: CBC 94.1 Toronto at 0006, 6-20 Es 1730 KHFI-98.3 Austin, Texas, KUHF-91.3 Houston, KLBK-94.5 Lubbock, Texas, KTBC-93.7 Austin at 1801, 1815 WMTM-93.9 Milledgeville Ga., 1829 WTOG-94.1 Savannah, 1855 WMYB-92.1 Myrtle Beach SC, 1900 WISC-96.9 Charleston SC, 1920 WTMA-95.1 Charleston, SC, 1928 WUSF-89.7 Tampa, WIXX-105.9 Ft. Lauderdale, Fl., 1948 WFTL-106.7 Ft. Laud., 1957 un-IN-104.3 Way o/ WOMC. Any Fla. listed here? heard add for CAP flying school. 1959 WHOO-96.5 Orlando, 2000 WPBF-107.9 W. Palm Beach, 2015 WAEZ-94.9 Miami Beach, 2028 WGOS-93.9 Miami Beach, 6-21 Es CMBF-4 Havana at 1529, 1740 WFLA-93.3 Tampa, 6-22 1634 WAGO-96.9 Kewaunee Wis., 6-23 WJIV-Cherry Vally, NY. at 0202, 0440 WQAL-106.1 Philadelphia, 6-29 Es 1830 89.1-? (is KTCU the only Texan?) mentioned convalescent home (to my knowledge KTCU is the only Texan on 89.1 MG) 1901 KLEF 94.5 Houston, Texas, 1935 KVCL-92.1 Winnfield La, 1941 KBPO-94.1 Beaumont Texas, K... Beaumont, assume they're using KBPO-now? 2000 KALB-96.9 Alexandria La, 7-1 WFEM-92.1 Ellwood City Pa at 1928 with perfect music; I don't have them listed anywhere., 2030 WEEP-107.9 Pittsburg, Pa, 2045 WEDA-95.1 Grove City Pa, 7-2 0028 WXTA-94.3 Greencastle Ind., Cards BB-not on list. Despite all these new stations, I guess that I was expecting more trop openings, and more frequent Es openings. 6-26 and 7-8 are, I believe, the only dates besides 6-20, 21, 29 that I've noticed Es reception even on ch. 2. The 7-8 opening was directed at the Canadian Maritimes (CBHT, CJCH), and at times I thought I had stations on 96.1 and 98.9 but no ID's possible. Even as I write this, it looks like another trop may be in the offing, because stations like WCIU-26, WYTV-33, WJAN-17 are in. The 7-1 trop opening was really surprising, because Cleveland stations are almost always the first stations to improve when trop are in. Pat Flanagan, a Cincinnati DXer supposedly had good pictures from Erie and Jamestown UHF's from 300+ miles at the same time WEEP was in over WNOB here. Apparently these are connected. I guess that's about all the news from Milans only TV-FM DXer, and I hope to have more goodies to report next month. 73 (It looks like you too cashed in on that profitable 6-20 opening. 7-1 also provided quite a few thrills. MG)

David Cox, Box 16, Carrolton, Alabama 35447 CDT

6-3 CBWFT-3 Winnipeg, Man. 0930 testing, June 4 KMID-2 Midland, Texas 1030  
 KACB-3 San Angelo, Texas (NEW) 1030, 6-5 WBAY-2 Green Bay, Wis. 1030, CKVr-  
 3 Barrie, Ont. 1100, 6-6 KDIX-2 Dickenson, ND 1430, 6-7 YSR-2 San Salvador  
 , El Salvador 1400, 6-8 CBWFT-3 0940, 6-9 Un-ID 2&3 1800, KNOP-2 North  
 Platte, Neb. 2200, KDLO-3 Watertown, SD (NEW) 2215, 6-10 YSR-2 1905, 6-  
 19 Un-ID-2 0930, KCKT-2 Great Bend, Kans. 1130, KNOE-8 Monroe, La. (NEW)  
 1800, KTVE-10 El Dorado, Ark. 1805, WLAC-5 Nashville, Tenn. 1828, KTWO-2  
 Casper, Wyo. 1930, 6-20 WCBS-2 NY, NY 1558, WGBH-2 Boston, Mass 1600, (NEW),  
 CKCW-2 Moncton, NB (NEW) 1615, (TENT), WLBZ-2 Bangor Me., 1630, KLNE-3  
 Lexington, Nebr. 1700, CFCL-2 Kearns, Ont. 1700, CJIC-2 ~~Sault Ste. Marie,~~  
 Ont. 1700 (NEW) WTIC-3 Hartford, Conn. (NEW) 1715, CKSO TV1-3 Elliott Lake,  
 Ont. 1730, 6-21 KMID-2 Midland, Texas 1535, WUND-2 Columbia, NC 1530,  
 KFDX-3 Wichita Falls, Texas 1559, XEJ-5 Juarez, Chia. 1710, KDKA-2  
 Pittsburg, Penn. 1730, KWGN-2 Denver, Col. 1800, WSAV-3 Savannah, Ga.  
 (406 miles- shortest skip I've ever logged) (NEW) 1800, WUSN-2 Charles-  
 ton SC 1822 (NEW), WSCC-5 Charleston 1903, WTIC-3 Hartford Con. WHDH-5  
 Boston, Mass. 2200, 6-22 XEW-2 Mexico City 1100, KWGN-2 Denver, Col.  
 1300, KMID-2 Midland 1130, KOA-4 Denver 1300 (NEW) (way under WCBI sport  
 show, KOAA-5 Pueblo, Col. 1300, 6-24 KWGN-2 Denver 1025, 6-30 CKCK-2 Reg-  
 ina, Sask. 1137, YSR-2 San Salvador, 1600 (seems to be most frequent rcvd)  
 Cuban relay-3 1650, XEFB-3 Monterrey 1730, XEFE-2 Larado Mex 1740. June  
 brought 19 new stations - total now 109. I raised my 7 el log periodic  
 from 15° to 25° and aimed it south. It has greatly improved my southern  
 reception, which was badly needed. June 20 & 21 have so far been best  
 for DX. CKCW is my farthest logging to date at 1615 miles. BEST of DX  
 TO ALL! (About all I have to say is I wish YSR was my most common DX!  
 Living in the SOUTH does have it's definite advantages! MG)

Morrie Goldman, Editor CDT

6-20 Es KRID-4, KJAC-6 both at 6PM, 6:05PM KID-3, 6:23PM KAUZ-6, 6:30PM  
 KGNC-4, 6:38PM KOB-4, 7:05 Un-ID ABC-3, 7:30 WTVJ-4 7:42PM Un-ID-4 SE  
 First Thursday Night Movie, 8PM KOA-4, 8:30 KCPX-4, 8:33PM KLNE-3, 8:40  
 KTVC-6, 9PM KGNC-4, 9:26 Un-ID-2 Dean Martin, 10:10PM WCIV-4, 10:34PM  
 KRON-4 (NEW and first double hop) (verified) San Francisco, Calif. 6-21  
 7:30PM WCIX-6, 9PM WJXT-4, 9PM WSAV-3, 10:10 WCIV-4 (same time and sig-  
 nal as day before), 10:58 Un-ID-4 Joey Bishop (WEST), 11:00PM KTVS-3,  
 11:16PM KOA-4, Un-ID-6 at 11:40PM Negro Spiritual singing with rotor  
 west - no adds or breaks for over 45 minutes, 11:47 Un-ID-3 beginning of  
 Cimeron Strip WSW, 6-22 MS 12:34 WKY-4 with tp and again at 12:38AM, Es  
 weak WOAI-4 at noon, 3:30PM KJAC-4, 7PM good tropes to Green Bay, Toledo,  
 Peoria and all surrounding areas, 11:30PM WKBD-50 Detroit, 6-23 12:30 AM  
 WWJ-4 Detroit, 6:37AM WJRT-12 tp ~~Ray~~ Flint Mich., 6-28 6PM to 6:30PM WWL-  
 4, KATC-3, KTBS-3, WOAI-4, WDSU-6, 7:07PM KRIS-6, 6-30 11:30 AM KOA-4,  
 12:30AM KDUH-4, 7-4 11:15AM KATC-3, 1PM WTVJ-4, 7-8 5:23 PM Un-ID east  
 Es on ch 3-4, 6:15PM WBZ-4, CBHT-3, Un-ID weather show on 6 at 6:15PM,  
 6:18PM Un-ID-6 The Honeymooners (old), WTIC-3 tent at 6:28PM, 6:30PM  
 CHSJ-4, 6:45PM Un-ID-6 Perry Mason, Un-ID-6 at 6:46PM Cowboy in Africa,  
 7PM WNBC-4, 7:14PM WKTU-2 (tent. thru local 2), 7:40 PM WCSH-6, 7:50PM  
 Un-ID-6 (again!) The Lucy Show, Un-ID Es on July 12, 13, 14, 6-14 6:10AM  
 Got up for MS; didn't see any but did log WLWT-5, 7-14 4:55PM Un-ID Es,  
 7-16 Es 5PM CBC news till 5:10 then regional news, 5:16PM WCAX-3, 5:25PM  
 Un-ID-3 Lanne-3 News. The main reason I didn't include all the locat-  
 ions in my report is, I'm short on time- this typewriter has to be re-  
 turned tonight to my sister and I'd have to dig into another stencil  
 leaving it half blank. DX has been excellent of late with openings occur-  
 ing almost every day. On the 21st I was in Joliet, Ill most of the day,  
 but while there I heard Spanish stations on 344 & 6 but, darn the ant  
 was pointed north and only WTVJ, KIII and KGBT were IDed. Next month I'll  
 be using another typewriter again, this one with elite type.  
 Until Next Month 73 and BEST DX, Morrie



## INEXPENSIVE WAVETRAPS FROM TRANSMISSION LINE

### ADJACENT CHANNEL INTERFERENCE

All DXers are familiar with adjacent channel interference: interference caused by a strong signal from a local transmitter close to (in frequency) the selected channel. On TV, for example, the video carrier is only 1.5 MHz greater than the audio carrier of a lower adjacent channel (except between ch. 4 and 5, 6 and 7, 13 and 14). Often, the audio carrier from a strong local produces a moving herringbone pattern of bars that "beat" with the video carrier of the next higher TV channel. Video and audio interference from a strong local can dominate several adjacent TV channels (often interfering with higher channels via harmonics) and make identification difficult. Because some VHF communication receivers have either high sensitivity but poor selectivity (usually due to an untuned RF stage), the signals from even low power, narrow band, local transmitters often "spill over" for several MHz.

Selection of a highly directive antenna or an antenna for a small part of the band, careful antenna orientation, or fine-tuning adjustment might reduce or eliminate this problem. But most DXers use a single broadband antenna and must aim it toward the strong local to receive the weaker adjacent station; consequently, strong locals (or sometimes strong E skip or tropo signals) simply cannot be reduced enough to permit identification of an adjacent weaker signal unless special techniques are used.

### WAVE TRAPS

Commercial wavetraps are available -- although seldom advertised in the popular electronic catalogs -- for attenuating (reducing) by 100 times or more the signal strength of a specific frequency in the TV/FM band. However, since these traps are usually intended for permanent mounting and are quite expensive, they are impractical for most DXers.

Those DXers who use the Jerrold "Trap Ease" tunable traps know that they are "worth their weight in gold". But, unfortunately, these traps last appeared in about the 1965 Lafayette catalog and, presumably, are no longer available.)

### TRAPS FROM TRANSMISSION LINE, THEORY

Ordinary transmission line, when cut to  $\frac{1}{4}$  or  $\frac{1}{2}$  wavelength of the interfering channel (and corrected for the velocity factor of the specific line) and attached correctly at the receiver can reduce the interfering signal as much as 10 times and, therefore, reduce a mild case of adjacent channel interference. Such a device is called a stub. Since the stub can have high Q (be sharply tuned), it can be cut to either (1) the center frequency of a TV channel to reduce the audio and video about equally or (2) to the actual carrier frequency for maximum attenuation. (In the second case, however, some attenuation of the adjacent channel might occur.)

The theory of stub operation is quite simple. A  $\frac{1}{4}$  wavelength open or  $\frac{1}{2}$  wavelength shorted stub is actually a series resonant circuit that operates like a simple ON/OFF switch. This means that, when a stub is attached across the antenna input to the receiver, it appears as a closed switch (short) at the resonant (interfering) frequency and, consequently, will reduce the signal on that frequency. At frequencies other than resonance, the stub acts like a switch in the OFF (or open) position, and those frequencies will pass into the receiver as if the stub wasn't there.

Since the stub described is actually a circuit tuned to the interfering channel, any type of transmission line can be used; impedance is unimportant. However, since 300 ohm line is cheap and easier to work with than tubular line, its use as a stub will be described. (The use of other transmission lines is described later.)

The calculations in Table 1 are for a  $\frac{1}{2}$  wavelength stub based on a velocity factor of

0.83 since the velocity factor of most flat line varies from 0.80 to 0.85. Also, a 1/2 wavelength shorted stub is preferred to the shorter 1/4 wavelength open stub (at least initially) since it is easier to short the 1/2 wavelength stub at various points until the correct length is determined than to "clip off" short lengths of line for an open stub and possibly pass the correct point.

The approximate lengths shown in Table 1 are for the center of the TV channel to be attenuated. To compute a length for another frequency, use the formula on the right.

Ch. 2 = 86"	Ch. 9 = 25.75"	Length (inches) = $\frac{5900V}{F(\text{mhz})}$
Ch. 3 = 78"	Ch. 10 = 25"	
Ch. 4 = 71"	Ch. 11 = 24.25"	V = velocity factor of line. F = frequency of int. ch. in megahertz.
Ch. 5 = 62"	Ch. 12 = 23.5"	
Ch. 6 = 58"	Ch. 13 = 22.75"	
Ch. 7 = 27.5"	Ch. 14 = 10.5"	
Ch. 8 = 26.5"	Ch. 83 = 5.5"	

TABLE 1

### BUILDING THE TRAP

To build a trap for a given frequency, proceed as follows:

- 1) Tune to channel being interfered with and adjust for minimum interference from the interfering station. (Some interference must remain, however, so that the effect of the trap can be noted when probing for the correct length.)
- 2) From the chart, locate the length of stub for the frequency to be attenuated, add two inches to this total (for adjustment), and cut stub. For example, if ch. 3 is interfering with selected ch. 2 or 4, cut stub for 78" + 2" = 80".
- 3) Carefully strip off one inch of insulation from each conductor at one end of the stub; this is the "terminated" end that will attach to the antenna terminals at the receiver. Strip off four inches of insulation from the other end; this "unterminated" end will later be shorted for the correct length. Take care that the conductor is not cut. Conductor length must be equal.
- 4) Attach the terminated (one inch) end to the antenna terminals in parallel with the existing antenna as shown in Figure 1. Stub should be fully extended and as far from the antenna lead-in as possible for best effect. Repositioning it after tuning may "detune" it.

NOTE: The stub can actually be connected at any convenient point in the antenna line (at UHF converter, for example). However, if a mast mounted preamp with set side power supply is used, connect stub at the receiver only; connecting it at the antenna side of the power supply will cause the fuse to blow when the stub is shorted.

- 5) With a small piece of metal (preferably copper), short the two conductors at the unterminated end of the stub. Slowly slide this metal toward the terminated end (figure 1), keeping the metal in contact and perpendicular to the two conductors, and note where the interference is minimum. (The two conductors can be held shorted with the fingers, but this might detune the trap, especially at high frequencies.) Solder the two conductors at the correct point. If no soldering iron is available, twist the two conductors into a knot at the correct point (although this does not provide the best RF short).

6) If attenuation is so great that the selected weaker signal is attenuated too much, a low watt carbon resistor may be used in place of the short. Increasing the ohmic value of this resistor reduces attenuation and also the Q of the trap. A 18 or 22 ohm resistor should reduce attenuation to about 6:1; a 39 ohm resistor should reduce attenuation to about 3:1.

7) When the stub has been made, clip off excess conductors beyond the short (or resistor) and insulate conductors between the short and the insulated portion (if needed) to prevent accidental shorting.

The tuned stub is completed. For convenience, attach antenna clip to the terminated end for easy removal. If the shorted stub is satisfactory, but long length makes its use inconvenient (especially at frequencies below 100 MHz), carefully cut the stub in half (and discard the shorted portion) to form a 1/4 wavelength open stub with the same attenuation effect.

Don't expect to eliminate very strong adjacent channel interference. Even with my "Trap-Ease" which attenuates some signals by over 40db (100 times), I cannot eliminate adjacent channel interference from Milwaukee transmitters (eight miles away) when aiming the antenna in that direction.

Stubs for narrow bandwidth channels will attenuate the desired channel somewhat. For example, if a strong 99.5MHz FM signal is trapped, adjacent 99.1, 99.3, 99.7 will also be attenuated. If 99.1 must be received, for example, shift the trap frequency above 99.5 until 99.5 is still attenuated (less) and 99.1 is not affected. Obviously, the 10:1 attenuation factor cannot be realized in such a case.

Any 1/2 wavelength tuned stub will also attenuate odd multiples (3/2, 5/2, 7/2) of the interfering frequency. Since all high band stations are third harmonics of low band TV stations, check effect at the higher channels. (For example, a stub cut for the center frequency of ch. 3 (63 MHz) will also attenuate the third harmonic (189 MHz), which is ch. 9.

NOTE: For the electronic-minded DXer, stub tuning is much easier with a grid dip meter (GDM) since the velocity factor and resonant frequency can be determined easily. Also, a wide range of adjustable capacitors can be added to each stub to tune it as required.

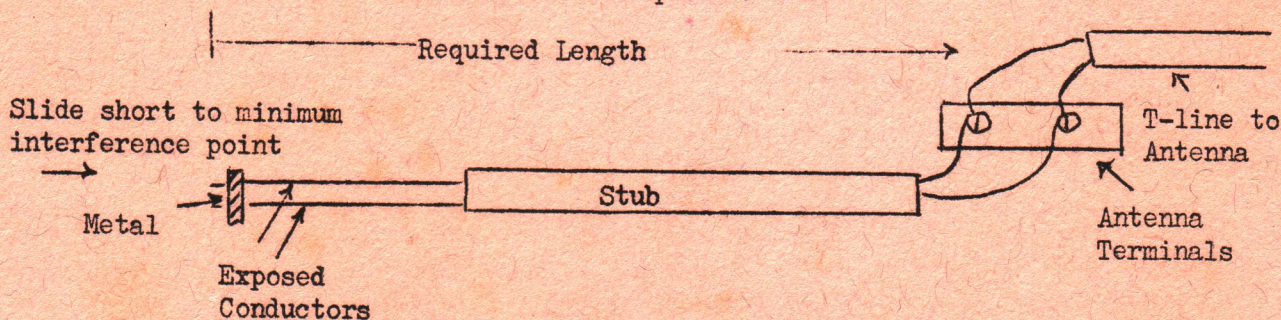


FIGURE 1

Next month, part II concludes this article with: adjustable traps, traps for UHF, and traps from other types of transmission line.

NOTE: For those DXers who need traps but do not care to experiment, I can build for you for only \$1.00 an all channel TV/FM adjustable (2 to 83 + FM) trap. This price (which covers material plus my precious time!) includes: (1) new 300 ohm low loss open wire for maximum attenuation; (2) full calibration so that the trap can be shifted rapidly from one station to the next, (3) shorting device, (4) antenna clip (if desired), (5) mailing.

# PROPAGATION Aurora

Conducted by Dennis Smith

Another mode of propagation affecting the VHF portion of the spectrum is auroral skip.

Amateur radio operators were the first to discover this method of DX on the VHF bands, in the early 1940's. They discovered that radio signals bounced from the aurora borealis (northern lights) whenever they were visible and often when not visible because of daytime or low-visibility conditions. A strong background rush would be heard across the spectrum generally, and their amplitude-modulated transmissions were often unintelligible along with a broadening of signal width and instability of frequency. Code seemed to be the only good way to work DX by this means and even this had to be done slowly because of the generally mushy signal effects.

As the 1950's began, TV-DXers found this type of DX, but attempts to identify signals by auroral skip were fruitless at first. Both video and audio were garbled beyond intelligibility by such characteristics as sliding jumbles of pictures that would not materialize and synchronize along with only hashy sound.

Television signals have been identified since then, however, since sunspot conditions and magnetic disturbances increased in the late 1950's and again in late 1960's and made aurora DX somewhat stronger. There seems, then, to be more incidence of auroral skip during high sunspot years than otherwise, although there is some in low years, also.

It has been found, too, that auroral skip, like meteor scatter, seems to have no definite maximum usable frequency (MUF) as does sporadic-E and F2 skip. On the VHF broadcast bands, the low TV band and FM respond to auroral conditions; the high band does also although less strongly than the low bands.

The directions and distance of aurora DX are unique. The transmitting and receiving points may be separated by more than 2000 miles or as little as 200 miles (possibly even less). What matters is that the signal is being bounced from the aurora, and the direction for best reception is northerly, in the direction of the aurora, rather than toward the station.

Apparently frequency-modulated signals are somewhat less distorted in auroral skip than are amplitude-modulated signals. Probably for this reason, FM-DXers have done quite well whenever aurora conditions exist. It is then asked why the FM audio signal of TV stations is often or usually as chopped-up as the AM video. The intercarrier-sound construction of the modern television receiver is the answer. This type of circuitry became popular with the manufacturers about the same time as TV-DX by aurora was defined, in the early 1950's. It is a more stable set with the sound actually made a 4.5-MHz subcarrier of the video signal in the receiver, but it is not as desirable for DXing since shortcomings of the video show up in the audio, too. The jumbled buzz-saw-type sounds from the speaker in a big Es opening are results of AM video interference while the FM audio may be a bit shwisy by itself but less distorted as would be obvious on an audio-only receiver. The effect with aurora DX is therefore multiplied; while a video signal can at times be identified, often the best way is to inject a video signal (using a signal generator or SW set radiation) and the audio will be less garbled.

Because the aurora borealis is the cause of this mode of VHF DX, the DXer who is further north sees more such DX than one further south. In North America, DXers in northern areas of the U.S. and in Canada have been treated to this propagation relatively frequently while the more southern enthusiast may never have seen it, although lucky DXers have been known to observe it as far south as Oklahoma and Georgia. Presumably, the aurora australis (southern lights) could also be a cause of aurora DX in southern areas of our earth.

# THE-EUROPEAN-SCENE

Roger Bunney, Trelawne, Cupernham Lane, Romsey, Hants, England, SO5 8JH.

I expect that a number of DXers in North America have wondered about TV-DX and the type of reception encountered here in the UK. To start, a word about equipment. As you may know, there are various TV standards in use in Europe. The 3 line-systems, (405, 625 and 819), and the two modulation polarities, (+ and -), do provide some difficulties. As dual-standard receivers are now available this has made things somewhat easier, altho a great many DXers (including myself) make do with an old 405-only receiver and modify it to cover the various standards. The UK single-standard 405+ (only) receiver, compares with the newer dual 405+/625- receivers. (North and South American stations use 525- as most of you know. If you receive a British or French or Belgian + station on an unmodified American receiver it will look like a photographic negative. Similarly, the difference in lines will make it appear out of horizontal sync, so internal modifications will be necessary to correct this.)

From literature at hand, it would seem that in NA very wide band aerials are available, mainly because there are so many more stations thus making cut-to-channel antennas impractical. Here in the UK and Europe there is usually available only one station in each band: BBC in band I, ITA in band III and a UHF station in band IV or V. There are exceptions in some areas but these are uncommon. The need for wide-band arrays has been unnecessary until recently. The DXer has been faced with using a number of antennas within each band to obtain maximum efficiency on each channel; often these are simply dipoles or H's. Alternatively, a 3 or 4 element may be used and tuned to mid-band. Over the last 2 years a wide band antenna has been gaining favour, altho it must be built at home. This has been seen in versions up to 7 elements on a 20 ft boom. A 3 element wide-band antenna has recently become commercially available. With the increasing use of band III, some manufacturers have gone over to wide-band antennas for band III, covering 170-220 MHz. (Band I is 40-68 MHz.) These are readily available in versions up to 11 elements. For UHF bands IV and V, the antennas are somewhat different. UHF has been divided into 3 groups: ch. 21-34, 40-51, and 52-68. (Recently an array has been introduced to cover ch. 40-66, but as a rule antennas are built only for the A, B and C groups. The conventional yagi is favoured, with up to 23 elements. All manufacturers make provision for stacking their arrays, also; and considerable use is made of pre-amplifiers from 1 transistor upwards. It is interesting to note that American UHF tuners and converters seldom use RF amplifiers, whereas in Europe all tuners do--whether valve (tube) or transistorized.

DXing is possibly somewhat easier in Europe due to the comparative lack of activity and fewer stations. In England especially, with only one band I transmitter in each area, this leaves the band relatively open for DXing, (altho we still complain about that one transmitter). Also, since the DX is usually opposite-going picture modulation (+ vs -) from the local station, this makes DXing somewhat easier. And of course the 3 MHz IF bandpass of UK receivers does provide some added degree of selectivity on foreign transmissions which have wider IFs.. This helps on closely placed channels such as E2 and OI for instance.

It is unusual to find a DXer in the UK with a tall mast (as compared to DXers on the continent). The tallest I have personally seen is a telescopic 60 ft mast. The restrictions imposed by local planning authorities are responsible for this probably. (Publishers note: masts in Europe are often 100-150 ft tall from personal observation, so 60' max in England compares with mast heights in North America as relatively short.)

Some news has come to hand relating to some really long distance TV-DX reception in Cyprus, at the eastern end of the Mediterranean Sea. A member of the UK armed forces recently sent to the island, a Mr. M. Bell (who was a DXer of some standing in the UK) reports reception of a Nigerian station on ch. E4 on 8 March at 2200 local time. The picture was smeary with fluttery double images; it was thought to be TE skip rather than F2 skip. Another DXer in Cyprus, Mr. Papafetychiou, has had considerable success in reception of such signals. His letter tells of almost daily reception via TE skip from Nigeria and central Africa. It appears that reception has also been received from the direction of Ceylon and an ID to that effect was heard; a letter from the Ceylon authorities is still being awaited.

Another letter from the latter Cypriot, postmarked 18 April, says the previous night he received the ch. E3 xtr from Jamasi, GHANA with a definite ID. (This xtr runs 15kw.) I personally have met a radar tech recently returned from Cyprus. Mr. Maden has a number of fotos of TE skip and his log includes Rhodesia on ch. E4 (definitely IDed).

I've learned from these people that the E3 xtr in Amman, JORDAN is using test card "C" and is transmitted from about 1500 local time. An ID on the card has "JORDAN" in English to the right of the "C", and Arabic characters to the left of the "C".

The sporadic E season started somewhat later than in 1967, and there are considerable gaps between openings. It seems that as the sunspot cycle increases, the Es decreases. Skip season has consistently opened later each year and closed earlier. The mid-Winter openings that had been seen mainly in December have not occurred at all the past 2 years. Many of us in the UK had hoped that as Es declined, the F2 and TE would increase, but this does not seem to be the case. Here are dates of the first loggings in 1968 which you may wish to compare with your own logs:

- 4 May 1300-1700 GMT: mainly Spain, Italy, Portugal.
- 19 May: 0815-1700: USSR, Poland, Hungary, Czech, Yugoslavia, Norway and East Germany.
- 26 May: 1100-1300: & 1820-2100: Spain, Italy, France, Portugal.
- 2 June: 1400-1900: USSR, Poland, Italy, Portugal + unidentified.
- 3 June: 1100-2000: Norway, Sweden, Spain + unidentified.
- 4 June: 1800-2000: Spain and Portugal.
- 7 June: 1700-1900: Spain, Portugal, + many East Eur unidentified.
- 9 June: 1300-2000: Spain, Portugal + East European unidentified.
- 13 June: 1900-2000: East Germany, Poland, possibly USSR, etc.

BELGIUM: "Belgische Radio & Televisie", "Radiodiffusion TV Belge"

Belgium is the only country in the world using 625 lines with POSITIVE-going video in band I, (same as the new French UHF system). There are only 2 stations in band I with reasonable power:

AALTER/RUISELEDE, ch. E2, 100kw. LIEGE, ch. E3, 100kw.

Two types of T/Cs are in use, either BRT or RTB depending on whether the language used is Flemish or French. (At times a test grid may be used, too.) Because this is a unique system, it is easy to ID if you receive it. (The Aalter xtr was received in Canada and Wisconsin during the 1958-9 sunspot maximum.) The E3 xtr produced the shortest recorded Es signal ever received in the UK on 20 May, 1966 at only 320 mi.

Hours of xmsn in local time:

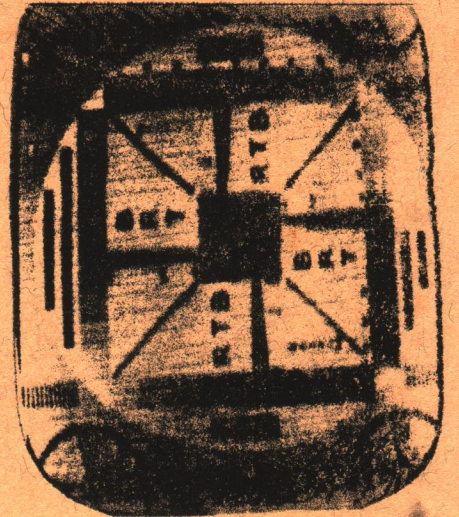
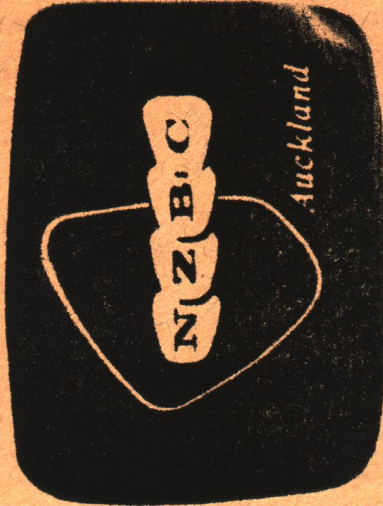
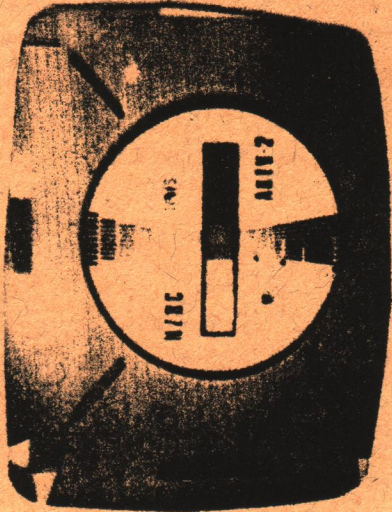
Monday thru Friday: 1405-1510 (schools)

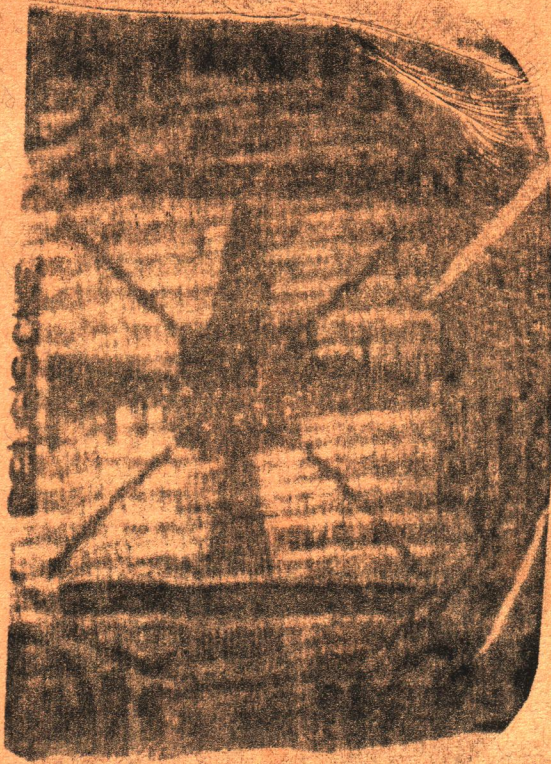
" " " 1825-2300

Saturdays: 1600-2300

Sundays: 1430-2300

Test cards radiated from mid morning throughout the day til programs begin.





Belgian (2) and New Zealand (2) fotos submitted by Roger Munney & brother. they are Belgische Television and the WTV/1953 test card, and WTV, ch 2 of the WTVG in Michland, New Zealand.

KVOA-TV, ch 4, Tucson, AZ, and KODU-TV, ch 3, Las Vegas, NV are submitted by Glenn Hauser; WVOA-TV, ch 4 recd 9 Sept 66 from Le Clair Lab, III, tropic C 230mi. KODU-TV recd 10 June 67 from David, CT, 950 miles, BS.



The JULY 2/AUGUST 2 issue of TV Guide featured a story on WMKG-TV Muskegon, Michigan, so here are fotos of it, courtesy Morrie Goldman. It is received well in Milwaukee (becuz its an all-water path), too.



Dennis Park Smith  
450 Poplar Ave.  
Wasco, California  
93280 U.S.A.

WESTERN DX

AUGUST 1968

For TV and FM reports west of the Mississippi River  
Deadlines: 15th of each month

The summer sporadic-E skip season in the West went into June quite well—and then died down in mid-month but came back somewhat and then died again as the following dates indicate. Perhaps this will be another early season blowing itself out early, too? Es reported here in June (FM underlined): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30. July so far: 1, 3, 4, 5, 6, 8, 9, 10, 11, & 12.

Randy Miltier, 1760 Whitwood Ln #3, Campbell, California 95008

DX starting to show; a few newies added to the list. On 5/25 @ 7-am I took a picture of an ID showing the call letters KSTL and the phrase "The International Kansans" above the call. The announcer IDed as the Kansas State Network. KCKT ch. 2 in Great Bend, Kansas is owned by the Kansas State Network, so, has KCKT changed calls to KSTL or is this a new station? Still 5/25, at 7:30am KNOP-TV ch. 2 North Platte, Neb. was noted with an ID which I got a poor picture of. The skip was noted on ch. 2, 3, 4, 5, & 6 but nothing else was IDed. 5/28 at 4:55pm an unIDed Canadian was in on ch. 2. "CARE Ottawa" appeared at 5pm; does this mean the station was from Ontario? I took a picture of the ID but it's very poor; it could probably be identified by the station or a Canadian DXer who knows the stations in Canada; any help would be appreciated. The ID looked like the call ended in A so I sent the picture and a tentative to CKSA-TV ch. 2 in Lloydminster, Alta. since they're the only Canadian station on ch. 2 ending in A. 6/1 KMID-TV ch. 2 Midland, Texas was in real well before local KTVU came on. This was at 7:50am until 8:15am when KTVU's test pattern wiped out KMID-TV. The "Fearless Fly" was noted on ch. 6 at 8:10am but faded out before the 8:30 ID. At 1:20pm the skip reappeared with the "NBC Baseball Game." Reception was poor with continuous fading; at 1:27 I took a picture of a possible ID; film still out. 6/5 from 7pm to 7:35pm CFRN-TV ch. 3 in Edmonton, Alta. was in with audio only through semi-local KCRA-TV. Is there a difference between this type of skip and a skip where sound and picture come in? The skip was noted on the other low band channels but nothing IDed. My latest catch was noted on 6/23 at 12:15pm until 1pm; it turned out to be KTWO-TV ch. 2 Casper, Wyo. with the CBS Soccer Game; Detroit and San Diego were playing. The same game was noted on ch. 3 also but no ID. KTWO was very poor fading in and out; the ID was at 12:31 in a negative form on the screen; I took a picture but I don't know if it's going to come out. They IDed as K2.

Local KSAN-TV ch. 32 is now KNEW-TV owned by Metromedia. They must be low powered as they come in here a little snowy (50 miles). My closest unseen station is KLOC-TV ch. 19 in Modesto, only 65 miles.

That's it; C U in 30. 73's.

(Randy, Ch. 2 Great Bend is still KCKT; KSTL has been a St. Louis radio station unless changed—anyone know for sure? "CARE Ottawa" may have been a public service announcement with Ottawa address. There is no difference in this skip you heard; video and audio from different sources are possible because of difference of power, modulation, and frequency of V & A from any one station. You're doing well with all those frustrating locals. dps)

Fred Nordquist, 411 Dart, White Sands Missile Range, N. Mex. 88002  
DX has been good here in HOT New Mexico. FM totals up to 40, and TV up to 94 as of 7/1. The mulberry tree is getting into my TV-FM an-

tenna, so trimming days are coming soon. Here is latest new loggings from 28 May to 1 July:

FM -by states-Date-Time	Remarks	TV -by date-
AL WQSB-105.1 6/22 1223	Farm NX	5/31 KTVN-2 NV 2010 NX
WJOF-104.3 " 1224	MoR MX	6/ 6 KDAL-3 MN 0031 Jacobson ad
WDRM-102.1 " 1227	UofA annts	CBWFT3 MB 0107 Test pattern
CA KMBY- 96.9 6/21 1312	Auto ad	WTMJ-4 WI 1900 Old Style ad
FL WKTZ- 96.1 6/30 1815	ID & NX	6/ 9 WMAQ-5 IL 2215 Local sports
GA WGOV- 92.9 " 1836	MoR mx	6/10 XEFB-3 MX 1243 Test pattern
IL WGNU-106.5 6/22 1338	Speedway ad	KCRL-4 NV 1330 ID
KY WSTO- 96.1 " 1316	MoR mx	KFDM-6 TX 1400 ID-audio only
MI WSWM- 99.1 " 1353	MoR mx	6/17 WCTV-6 GA 1259 ID-soap opera
OH WDAO-107.7 " 1336	RR	6/21 KEYT-3 CA 1056 Today in S.B.
TN WSMC- 90.7 " 1243	Relig. mx	KNBC-4 CA 1200 Personality
WKPT- 98.5 " 1253	CW mx	KTLA-5 CA 1215 Aames ad
WKDA-103.3 " 1258	ads	KSBY-6 CA 1230 Gold Coast Sta
WVSV- 97.1 6/30 1833	TomCompton-CWmx	WTVY-4 AL 1825 WX
WI WQFM- 93.3 6/22 1357	Pub. Sv. ad	WAGA-5 AL 1835 Billy Graham
WFAW-107.3 " 1408	ID MoR mx	sCKCK-6 SK 1900 Local sports
WHHI- 91.3 " 1418	WiscStBrdgSv	6/22 WBRC-6 AL 1200 ID AmerBdst
Es openings (ch. 2-6) noted on:		6/24 WCCO-4 MN 1245 As Wrld Turns
5/27 28 30 31, 6/1 5thru10 17 19 21 22 24 30.		7/ 1 XHZ -6 MX 1333 // to XHTV s/on

Many oldies seen, but not enuf space for them. Let's hope July will be a good month for Es; keep an eye out for MS openings. 73.

(Thanks again, Fred. You probably didn't catch ID—KMBY-FM 96.9 is now KWAU. My 1965 Factbook lists your CKCK satellite as CKCK-TV-2 ch. 6 Willow Bunch, Sask. with 9 kW visual ERP. dps)

Steve Kamp, 2639 Avenida Loop, Irving, Texas 75060

Skip has been pretty good the last few weeks, but the only new ones logged were WLWD-2 in Dayton, Ohio and KNXT-2 in Los Angeles. XEW (ch. 2) in Mexico City is coming in fine, as usual, but it came in better last year, though. Around this time last year, it came in with picture and sound as good as a local stn! YSR-2 El Salvador (1700 mi.), seen 15 Nov. 1967 was abt the same, but reception varied from fair to local-quality.

DATE	C.L. Ch	LOCATION	DIST.	PROP	TIME	Notes
27March	KPRC 2	Houston, Texas	235 mi.	Trop	1800	CST Audio only
28	KPRC 2			"	2000	CST
20April	KPRC 2			"	1200	CST Audio only
	KLTV 7	Tyler, Texas	100 mi	"	1950	CST
14 May	Unid 2	?	?	Es	1455	CDT
9 June	WLWD 2	Dayton, Ohio	900 mi.	"	1259	CDT
10	KNXT 2	Los Angeles, Cal.	1425 mi	"	1159	CDT
	XEW 2	Mexico City, Mexico	1000 mi.	"	1245	CDT
21	XEW 2	Guadalajara, Mexico	1100 mi.	"	1115	CDT
5 July	WBAY 2	Green Bay, Wisc.	975 mi.	"	1030	CDT

Best 73s and DX.

(Thanks for your TV-DX, Steve. Congratulations on your off-season double-hop catch of YSR-2 last November. Yes, some stations and areas seem to be better some years than others. dps)

Glenn Hauser, 1312 West Oak Avenue, Enid, Oklahoma 73701

For the hiatus between college graduation and military service, I've moved back home to Enid, and have resolved to DX the utmost while I have the chance. So far things have been great all-around: DXing FM from here with proper antenna for the first time; my first UHF TVDX; and what is surely another (my third) highband Es logging on channel 7! So far I've added about 200 FM stations to my log, and about a dozen TV stations. On 20/6, 76 FM Es stations were logged, and on 29/6, 72, including tentatives. UHF tropo has reached out to KHTV-39 Houston (480mi)

since late June, unfortunately, my TV antenna rotor has been stuck pointing toward Oklahoma City/Dallas/Houston, so I see a lot of them, hi. This crimps my UHF DXing toward Illinois, which should have been possible some days judging from FM; but it's nice for Mexican skip, and encourages me to DX FM even more, where the antenna is on a separate and much shorter pole (23 feet). I managed to repair my FM tuner by hooking up a wire left loose by the Albuquerque repairman, much to my amazement and satisfaction. There is rarely a time when FM reception out beyond 250 miles is not possible, with my sensitive H-K FløøøT tuner; JFD 10-element FM antenna, and JFD FTI FM antenna amplifier! Classical station WRR-101.1 Dallas (260mi) has become my favorite and most listened-to station.

I'd like to thank Frank Merrill for helping with many of my FM un-IDs! And I had a nice visit from Dave Pomeroy. I'd enjoy meeting many other DXers.

Some local station notes which may be of interest. WNAD-90.9 is off the air, this time permanently. KXLS-92.5 no longer carries "Young Sound," which became too rocky for them; instead they maintain the style themselves. They delay ABC-FM News until :25; KARD-107.3 also does this. KEBC-94.7 C&W duplicates INN in OKC w/KOFM originator. KOCY-96.1 is one of few station to alternate stereo channels during announcements and ads. KCRC-96.9 has left INN; carries various ABC newses instead. Still no OKC station on 98.9. KMAG-99.1 has news on the hour and other features from the Arkansas Radio Network, including a replaying or recreation of the oldtime series "Lum and Abner" weekdays at 1145 CST. KHEN-99.5 is going all-rock, since they think most people want top-40(!). KJEM-102.7 carries Cards BB. KORU-103.3 is still off weekday afternoons, but on a little later in evening, till 2100 CST. KVIL-10.7 has Spanish early in the mornings.

FM DX; distances given only for stations new to Enid log.

Jun	CST	Call	MHz	Prop	Location	Comments
<u>12</u>	0630	KWTO-	98.7	T	Springfield MO	news//560AM; 260mi; new on air
	0825	KCES	102.3		Eufaula OK	NavyC&Wpgm, 0831 ID; 160mi; new on air
	1241	KLBK-	94.5		Lubbock TX	popmx(ex-class), ID, fluc
	2200	KXXK	105.3		Dallas TX	"Wx spot"; \$; new call
<u>13</u>	0458	KEBE-	106.5		Jacksonville TX	IDs, area ads; 340mi
	0507	KZAK-	93.1		Tyler TX	Texas news; 315mi
	0513	KDOK-	101.5		Tyler TX	Nx; ID 0514; 315mi
	0516	KOSY-	102.5		Texarkana	local Gibson Discount ad
	0525	KPLT-	99.3		Paris TX	ID, C&W; 230mi
	0532	KDSX-	101.7		Sherman TX	Nx & Wx for Texomaland; \$; 200mi
	0537	KEEE-	103.3		Nacogdoches TX	IDas word; KORU on 0538; 0755 TSN Nx; 380mi
	0558	KSWM-	100.1		Aurora MO	Wx, ID; new on air; 230mi; no sign of KVCW
	0631	KSEO-	107.1		Durant OK	Swinny Drug ad; 185mi
	0730	KGRI-	100.1		Henderson TX	"Double-Barreled Radio"; synd mx; 340mi
	0759	KEEL-	93.7		Shreveport LA	ID; \$ pop mx; 360mi
<u>20</u>	1608	WPTF-	94.7	E	Raleigh NC	sports; 1609 Carrier ad; ID, 1610 wx; 1065mi
	1611	WGPL-	93.1		Winston-Salem NC	gospel; ID 1629. ex-WAIR, seems. 975mi
	1614	WIST-	95.1		Charlotte NC	Olston Temporary Services ad; 950mi
	1615	WOFM	94.9		Greenville TN	Church nx of Greene County by Rev. R.G. Valentine; 830mi
	1616	WDBJ-	94.9		Roanoke VA NY	Life agent Ireland Sloan ment; 1650 CBS; 985mi
	1627	WXRC	95.7		Hickory NC	Gospel rock; 1636 ment Granite Falls; 920mi
	1640	WKPT-	98.5		Kingsport TN	"Country Giant" sung ID; 845mi
	1640	WBBB-	101.1		Burlington NC	Glen Raven Fabric Shop ad; 1020mi
	1643	WBAG-	93.9		Burlington NC	"...here in Burlington..."; 1020mi
	1649	WGMS-	103.5		Washington DC	commentary; 1658 Blake Bldg. ad; 1145mi
	1651	CHIN-	100.7		Toronto Ont	Italian! 1734 E/I biling ad at 1196 St Clair Av W; 1735 relay SW-RAI? in again 1949; 1090mi

(Jun)

(20) 1657 WOMP-100.5 Bellaire OH ID and plug Grand Ole Opry; 955mi  
 1659 WVEC-101.3 Hampton VA ad for chl3. ID; 1180mi  
 1700 WFRB-105.3 Frostburg MD WFRB News; 1045mi  
 1702 "CBC-" 94.1 Toronto Ont ID; ex 99.1; 1090mi  
 1703 WCAO-102.7 Baltimore MD ID, "Ultra Fine Music"; 1165mi  
 1704 WEBR- 94.5 Buffalo NY Info R Nx; then ment Eric County; QSL rules out WRWR-OH; 1100mi  
 1706 WKEE-100.5 Huntington WV soul, ID, WV ment; 855mi  
 1707 CHSE-105.7 StCatharinesOnt "Sound of Music," ID; 1090mi  
 1708 WDCX 99.5 Buffalo NY Buffalo nx; 1100mi  
 1709 WBFM 98.7 Detroit MI ment churches in Detroit; 885mi  
 1712 CKFM 99.9 Toronto Ont Ontario in nx; 1090mi  
 1716 WBNO-100.9 Bryan OH Lil League BB at Garber Park; 790mi  
 1721 WBLK- 93.7 De Pew NY ID, fone-on-air dedications; 836-pfx; 1105mi  
 1723 CFMO- 93.9 Ottawa Ont Fulton & Truman ad; 1300mi  
 1724 WJBK(?) 92.7 Detroit MI Studio 8 Theatre ad; list 93.3; 885mi  
 (Both Frank Merrill & Jones list WJBK 93.1 & WCAR 92.3 Detroit. dps)  
 1729 CFPL- 95.9 London Ont Wingham wx; 1736 remarking on skip from Miami! 990mi  
 1730 WLDM 95.5 Detroit MI ID; 885mi  
 1730 CKQS- 94.9 Oshawa Ont W.B. White Insurance, ID; 1120mi  
 1732 WHFI 94.5 Birmingham MI ment Tigers: ID 1749  
 1740 WBRB-102.7 Mt Clemens MI remote from Mt Clemens racetrack; 900mi  
 1742 WOIA-102.9 Ann Arbor MI rock; "R. 129 FM in Ann Arbor"; 855mi  
 1748 WJR- 96.3 Detroit MI ad for St. Clair sailboat co.; 885mi  
 1752 WKHM-106.1 Jackson MI Jackson Commy College ad; sungID; 820mi  
 1754 WBCM- 96.1 Bay City MI Bay City ad; 885 mi  
 1755 WCEN- 94.5 Mt PleasantMI AM&FM ID; 1927 RosebushLumber ad; 850mi  
 1755 WIAA 88.3 InterlochenMI class mx; 1758 MI wx; 2003 relay R. Nederland; 855mi  
 1756 WWTW- 92.9 Cadillac MI Tiger BB; again 1938; 850mi  
 1803 WBON 107.7 Milwaukee WI local ads as pgm closed; 700mi  
 1807 WJML- 98.9 Petosky MI easy mx; 1810 local ad; 910mi  
 1812 WHKW 89.3 Chilton WI drama; 1824//91.9; 2019opera//88.7; 735mi  
 1814 WTCM-103.5 TraverseCityMI Tiger BB; 1834 again; 865mi  
 1816 WRBS 95.1 Baltimore MD Manchester bible campment&local ad; 1165mi  
 1817 WDMJ- 95.7 Marquette MI FNB Negaunee ad in BB; 885mi  
 1818 WGAY 99.5 Washington DC RoyalMotors; 1902PalmerFordads; QSLed; 1145mi  
 1824 WHRM 91.9 Rib MountainWI //89.3; 725mi  
 1832 WCCW- 92.1 TraverseCityMI ID 1833; CCI; 865mi  
 1859 WJBR 99.5 Wilmington DE local Lafayette R. ad, ID, wx; 1220mi  
 1929 WMIL- 95.7 Milwaukee WI "Big-M"; AM s/off; 700mi  
 1933 WQFM 93.3 Milwaukee WI ID; 700mi  
 2019 WHA- 88.7 Madison WI opera//89.3; 645mi

Also 20Jun following tentatives: WLOE-94.5-NC WATO-94.3-TN WLXN-94.1-NC WEGO-97.9-NC WSID-92.3-MD WFMD-99.9-MD CKLW-93.9-Ont WNEM-102.5-MI WAJC 104.5-IN WDTN-90.9-MI WQDC-99.7-MI WPBC-101.3-MN WISM-98.1-WI CKWW-88.7 Ont WXYZ-101.1-MI WGPR-107.5-MI WLFM-91.1-WI WSAU-95.5-WI WDUX-92.7-WI WVIC-94.9-MI ABC-FM Nx-96.1-??.

21 1536 WKTZ- 96.1(E) JacksonvilleFL Sears ad; 1546 "Gateway City"; 1547 Kaplan VW; 1558 ID; 1020mi  
 1541 WTNT- 94.9 TallahasseeFL local Hammond Organ ad; state capitol comment; 880mi  
 1544 WCKS 101.1 CocoaBeach FL ID, "Cape Canaveral City"; ex-WXBR; 1150mi  
 1544 WIVY-102.9 JacksonvilleFL fone-in 356-0558; 1557 CBS; 1645 Lowell Thomas; 1020mi  
 1545 WEZY- 99.3 Cocoa FL Pines Theatre ad; 1140mi  
 1551 WMFJ-101.9 DaytonaBeachFL QRM w/KFNB; 1615 FL ment in sports-wear ad; 1090mi

(Jun)

- (21) 1559 WQIK- 99.1 JacksonvilleFL talk abt races; 1090-AM ID: 1020mi  
 1600 WNDB- 94.5 DaytonaBeachFL netnx, 1604 News-Journal ad: 1605 ID; 1090mi  
 1606 WJAX- 95.1 JacksonvilleFL Mets sports report; 1608 ID; 1020mi  
 1615 WYNR-101.5 Brunswick GA C&W; 1627 ID, Nx headlines; 1005mi  
 1619 WDEC- 94.3 Americus GA GAnx, 1620Uniroyal in Americus ad; 830mi  
 1622 WGIG-100.7 Brunswick GA hard-soul mx; 1630 Mutual nx; 1636  
 sung ID "Big Double G"; 1005mi  
 1632 WMTM- 93.9 Moultrie GA Sung "Radio" PSA; "WMTM \$ Sound" ID  
 o/KSPI; 880mi  
 1632 WEAS- 93.1 Savannah GA Mathismx; 1646 ID "full power, full \$"; 1000mi  
 1636 WPGA-100.9 Perry GA mx; 1637 Perry Dodge ad; 845mi  
 1652 WBAW-101.7 Barnwell SC "here in Barnswell"; Allendale ad;  
 stn Negro but announcer Green; 955mi  
 1705 WTMA- 95.1 Charleston SC "QuickClean in Charleston"; wx: "hot"; 1040  
 mi; previously hrd via 27.54MHz spur or ute  
 relay; at this time ch7 TV skip stn also seen!  
 1723 WTSB- 95.7 Lumberton NC soul; 1740 EDT; 1743 Roveson County  
 ment; pgm: "Night Train"; 1060mi  
 1913 KFBK- 92.5 Sacramento CA "Nx from KFBK-FM"; 1285mi  
 Also 21 Jun tentatives: WITA-93.7-PR (North FL is midpoint for double-hop  
 path to PR, but this is probably hoping too hard, hi!) WBGW-98.9-FL WYRL  
 102.3-FL WRUF-103.7-FL WBBQ-104.3-GA WGOV-92.9-GA WTOG-94.1-GA WFNC-98.1  
 NC WITN-93.3-NC KCIB-94.5-CA (this last one is now KFIG, dps).
- 24 0524 KXTR 96.5 G KansasCity MO ID: 255mi  
 1239 CFRW- 94.3 E Winnepeg Man pop mx; Portage-la-Prairie ad; 1240AM  
 ID, CDT; 1307 mx; 930mi  
 1257 KSJN 93.3 Jamestown ND pop vocal; 1301 sung ID: new on air; 725mi  
 1300 CFMQ 92.1 Regina Sask Regina nx; QRM w/CKY(?); 1025mi  
 1305 KVBC- 94.7 Grand ForksND folk mx; 1328 local bank ad; 795mi  
 1309 "CBW-" 98.3 Winnepeg Man class mx; very strong! o/KCRC AM&FM  
 mix on 98.29  
 1311 CJOB- 97.5 Winnipeg Man C&W; 1313 Nielson's Malted Milk Bar  
 Solid Gold Contest; 1314 ID  
 1332 KWNS- 93.1 L Pratt KS Still very poorly modulated; in addi-  
 tion, subcarrier audible on each side  
 of main carrier mixing with it
- Also 24 Jun tentatives: WDAY-93.7-ND CKY-92.1-Man KQWB-98.7-MN KVOX-99.9  
 MN KFNW-97.9-ND; and by MS, WMAZ-99.1, hrd at 1511 with what sounded  
 like-"5:11 in Waco," but which was probably Macon, bursting over KMAG.
- 28 0614 KITTY- 92.9 T San AntonioTX ID as "Kitty"; vy strong at 0843; 480mi  
 0621 KHOB- 95.7 Hobbs NM local ad  
 0628 KDJW- 94.1 Amarillo TX local ad incl ID, back on after xmtr troubles  
 early June as I visited; ex-KVII  
 0646 KTBC- 93.7 Austin TX local ad in nx/wx  
 0657 KNFM 92.3 Midland TX TSN Nx, KJRG nulled; ID 0754; 385mi.  
 No KRST Albuquerque, but hoping.  
 0707 KSJT 97.5 San Angelo TX Spanish, rules for pedestrians, ID. 370mi  
 0814 KLVI- 94.1 Beaumont TX Gibson Discount local ad; 490mi  
 0931 KITE-104.5 San Antonio TX Hemisfair ad, 0932 wx, ID; KIXL care-  
 fully nulled. 480mi  
 1018 KVPI- 93.5 VillePlatteLA local ad; 510mi  
 1014 KSMB 94.5 Lafayette LA ID, ABC FM Nx; 1130 Lafayette wx; no  
 sign of KWKH-Shreveport; 545mi  
 1032 WCKW 92.3 Laplace LA Louisiana wx; still 1215! 610mi  
 1035 WDSU- 93.3 New OrleansLA "Music '68 from WDSU-FM"; 630mi  
 1044 WQXY-100.7 BatonRouge LA 4th July Scroll-to-Washington-from-Louis-  
 iana PSA, ID. Still in at 1400! 565mi  
 1048 WWWW 106.7 MS Detroit MI Merrill Lynch etc Report "for W-4  
 Listeners"; 885mi

(Jun)					
28	1059	WMC-	99.7	T	Memphis TN "Nite and day Giant of the Mid-South" ID; 1110 "FM 100"; rock; again 2120
	1102	WHBQ-	105.9		Memphis TN "FM 106 News," Memphis Wx, 1106 ID; again 2027 w/BB; new on air; 445mi
	1118	KELD-	103.1		El Dorado AR Local Sears ad; 370mi
	1119	WJDX-	102.9		Jackson MS MS nx, ID, weak mod; agn 2058; 520mi
	1120	KLYX	101.1		Memphis TN ID
	1122	KRIL	99.3		El Dorado AR "New FM sound" ID; 370mi. NOT KQIL.
	1130	WREC-	102.7		Memphis TN "103" ID; KJEM nulled; again 2100; 445mi. No sign of WNTL here or at 104.5
	1150	WNAT-	95.1		Natchez MS ID "WNAT \$ FM," TC; 500mi
	1158	KVCL-	92.1		Winnfield LA ID, Nx; 430mi
	1158	WSLI-	96.3		Jackson MS synd mx; 1200 ID; WBAP nulled: 520mi
	1300	WJBO-	102.5		BatonRouge LA NBC Nx; 1305 YL ID, wx. No KOSY; 565mi
	2118	KVEE-	105.1		Conway AR ID, ment KVEE-AM no longer C&W; 315mi
	2125	KMMK-	94.1		LittleRock AR Little Rock wx promo; 325mi
	2131	KMYO-	95.7		LittleRock AR ID; 325mi
	2140	KLTB	106.3		Bolivar MO re local auto accident, ID; 260mi
	2203	KNWA	103.9		FayettevilleAR ID "NW AR's sound of Mx in \$"; 210mi
	2215	KARK-	103.7		LittleRock AR local ad, ID as "Kay-Rock"; 325mi
29	0530	KMIX-	94.1		MountVernonIL Nx, ID; again 1953 ID; 2020 SSB, then s/off msg; off 2021; 505mi
	0532	WHAS-	97.5		Louisville KY "Station of the Arts" ID, class; 670mi
	0534	WRAY-	98.1		Princeton IN Mutual nx; 0535 A&Pad, 0536 sports; 575mi
	0542	WVHI	105.3		Evansville IN ID; 575mi
	0545	WMRY	101.1		E. St. LouisIL ID; Nx
	0555	WSOY-	102.9		Decatur IL local ad
	0556	WOKZ-	100.3		Alton IL ID
	0601	WSAB	94.9		MountCarmelIL local ad; 565mi
	0603	KMOX-	103.3		St Louis MO CBS Nx; KORU on soonafter
	0617	KWWR	95.7		Mexico MO local wx; 365mi
	0622	WGEM-	105.1		Quincy IL IDs in passing; 425mi
	0624	WSMI-	106.1		Litchfield IL ID
	0629	WIFE-	107.9		IndianapolisIN ID
	0630	WASK-	105.2		Lafayette IN ID, Nx; 650mi
	0644	KCFM	93.7		SaintLouis MO "KCFM Capsule Calendar"
	0659	WFML	106.5		Washington IN Contemp nx, ID; 605mi
	0705	WSEI	92.9		Olney IL local ad in nx by local; 555mi
	0826	KCNM	92.1		Clovis NM loud mod; nx, reverbed ID; 330mi
	1701	WFDR-	93.3	E	Manchester GA ID, "Sunset Serenade"; 790mi
	1702	WXYW	92.9		Suffolk VA ID, "55 min of mx every hr"; 1743 Norfolk ad; 1751 ID; 1170mi
	1708	WTAR-	95.7		Norfolk VA mx, 1710sports, 1714 VaBchad; 1809ID; 1185mi
	1708	WDEH-	95.3		Sweetwater TN CBS; 1710 E&W ad; 1715 ID; 745mi
	1709	WRVA-	94.5		Richmond VA C&Wstrong! Agn1724; 1734 localwx; 1115mi
	1710	WHPE-	95.5		High Point NC mx o/KRMG; 1825 "Radio One," ID; 990mi
	1711	WMFR-	99.5		High Point NC mx; 1819 ABC Nx; 1824 EDT, top 75 "Country mx time," 1829 ID; 990mi
	1712	WNNT-	100.9		Warsaw VA mx, EDT, C&W requests to phone xxx-6900; 1155mi
	1714	WRFK-	106.5		Richmond VA CBC story; ID 1728; 1115mi
	1717	WDBJ-	94.9		Roanoke VA Look ad, 1724 commentary, 1737 Roanokement
	1717	WBGI-	96.5		WilliamsburgVA C&W; w/DJ; 1734 plug Pat Collins pgm 1753 AM&FM ID; 1160mi
	1722	WVEC-	101.3		Hampton VA religious nx, 1730 ID
	1723	WNOR-	98.7		Norfolk VA mx; 1759tone; 1805 playing w/wowing tape; 1815 Tidewater/Suffolk ad; 1185mi
	1724	WLRJ	92.3		Roanoke VA Reese's Am Svc Stn ad; 985mi
	1726	WSVS-	104.7		Crewe VA commentary off SW(?); 1729 ID; 1085mi
	1727	WSLS-	99.1		Roanoke VA class mx; 1753 ID; 985mi

- (29) 1729 WVVV 104.9 Blacksburg VA "Axion Centl N"; co-ID w/WJJJ(AM), Christiansburg; 96Cmi
- 1731 WKEE-100.5 Huntington WV local nx, ID, "Hit Mx"
- 1735 WNRG- 97.7 Grundy VA ID ment that carries Reds BB; 865mi
- 1740 WNMA-106.3 Gretna VA sermon; 1807 "Teentime," EDT; 1807 AM&FM ID. Listed 103.3--?? 1015mi
- 1745 WFLS- 93.3 Fredericksburg VA Oriole BB; 1115mi
- 1756 WLOE- 94.5 Leaksville NC Twin-Oriole BB; 995mi
- 1757 WRVC 102.9 Norfolk VA nx by local, Tidewater wx; 1185mi
- 1758 WXRI 105.3 Norfolk VA religious mx; Tidewater ment. 1185mi
- 1800 WCMS-100.5 Norfolk VA ID; 1185mi
- 1801 WMVA- 96.3 Martinsville VA Grand Ole Opry promo; 1822 Pure Oil, Martinsville ment; 915mi
- 1807 WJWS-105.5 South Hill VA wx; ID 1808; taken as WJWN....1015mi
- 1809 WDOV- 94.7 Dover DE Redwing BB; 1225mi
- 1812 WGUS-102.3 Augusta GA vocal countryish; 1833 rock; 1904 "Big GUS radio," Jay's R&TV ad; 915mi. Not listed, but QSled
- 1815 WKPT- 98.5 Kingsport TN "CowboyClassic," verbose DJ,C&W; 1821 AM ID
- 1824 WCPS-104.3 Tarboro NC C&W "Country Giant," ID 1846; 1125mi
- 1831 WMDE 98.7 Greensboro NC Piedmont ad; 1832 ID; 1000mi
- 1835 WKIX- 96.1 Raleigh NC soul "Big KIX time," 1843 ID; 1065mi
- 1837 WGPL- 93.1 Winston-Salem NC comedy, 1843 still; 1852 relg.ID, promo class; 1851 ID "State Capitol's Fine-Arts Music Station"
- 1838 WRAL-101.5 Raleigh NC EG mx; 1857 nx incl Davidson County bombing; 1065mi
- 1840 WAAA-107.5 Winston-Salem NC Oriole BB, ad; 1847 E&W ad in W-S; 975mi
- 1908 WUOM 91.7 Ann Arbor MI class mx; 1812 ID; 855mi
- 1916 KFMM 94.9 Kansas City MO ID, CBS promo; ex-KCMM--
- 1916 WTSB- 95.7 E Lumberton NC rock; 1921 ID
- 1930 WMJU- 94.5 Greenville SC Bob Jones Univ ID; 870mi
- 1934 WMYB- 92.1 Myrtle Beach SC ABC-enter nx, 1935 rollercoaste ad; QSled
- 2042 KTBC- 93.7 T Austin TX ch7 promos; San Angelo ment; later gone
- 2222 WTAD- 99.5 Quincy IL ID, "Mood after Dark"; 425mi
- 2231 KJPW(?)102.3 Waynesville MO nx; not listed or alloc; 325mi
- 29 Jun tentatives: WCCV-97.5-VA WLXN-94.1-NC WRNL-102.1-VA WFMV-103.7-VA WBT-107.9-NC WBBJ-92.7-VA WRFL-92.5-VA WDMS-101.7-VA WSSV-99.3-VA WAMU-88.5-DC WWS-91.3-NC WVOT-106.1-NC WFBC-93.7-SC WCAO-101.7-NC WFOS-90.5-VA WGLS-89.7-NJ WBBB-101.1-NC WABZ-100.9-NC WIAM-103.7-NC WSPA-98.9-SC WFTC-95.1-NC WRSN-99.3-Where??? WFNC-98.1-NC WNCT-107.7-NC WFMX-105.7-NC WBAG-93.9-NC WWOD-100.1 WRCM-92.1-Where??? WDKD-100.1-SC.
- 30 0630 KPAN-106.3(T)Hereford TX ID; 275mi
- 1039 WMJR-100.7 E FtLauderdale FL Pompano Beach ad; 1516 So. Miami ad; 1260mi
- 1042 WSWN- 93.5 Belle Glade FL mx, 1104, again 1415; 1535 wx, "\$ mx", 1556 at last, ID! 1210mi
- 1103 WAEZ 91.9 Miami Beach FL mx; 1430 Globe Cleaners, 1431 TC as "Ways \$ time"
- 1119 KSJN 91.1 New Brighton MN ID as KSJR which it apparently relays; "Commercial-free \$ Service," poor mod; plug free "Preview" mag for contributors; 645mi
- 1126 WAYL 93.7 Minneapolis MN mx, 1230 ID as "Official wx stn"; 640mi
- 1129 KNUJ- 93.1 New Ulm MN pop mx; 1131 ID, "Fabulous Sound," tornado watch 1232; 575mi
- 1133 KWOA- 95.1 Worthington MN "KWOA-land" ment in tornado watch; rather short Es of 515mi
- 1155 KQWB- 98.7 Moorehead MN rocky; local ad; 725mi
- 1157 KVBC- 94.7 Grand Forks ND gospel organ mx, local ad
- 1159 CKY- 92.1 Winnipeg Man ID; overmodulated; 930mi

(Jun)

- (30) 1200 WDAY- 93.7 Fargo ND NBC Nx; 725mi
- 1347 WNFM 94.5 Naples FL synd mx; 1400NBC Nx, 1420 ID, CCI; 1180mi
- 1350 WFLA- 93.3 Tampa FL mx, 1409 "WFLA \$ FM Nx Service"; 1070mi
- 1352 WFTL-106.7 FtLauderdaleFL mx; 1504 Broward County wx; 1260mi
- 1354 WKAT- 93.1 MiamiBeach FL opera, 1310, 1421 synopses; 1508 ID  
as Miami-Miami Beach; 1275mi
- 1358 WYRL 102.3 Melbourne FL C&W o/KCES; "24 hrs of country," ID  
1627; 1155mi
- 1359 WLOQ 103.1 WinterPark FL ID, "Mx for Sunday"; 1095mi
- 1401 WARN- 98.7 FortPierce FL CBS nx; 1405 local ad, agn 1636; 1195mi
- 1403 WWSO 97.9 Palm Beach FL NBC Nx, 1405 Lakeworthad; 1406 local wx; 1240mi
- 1404 WVFM 94.1 Lakeland FL ABC-FMpromowID; 1417 G. Wallace; 1090mi
- 1404 WMCF 92.7 Stuart FL MBS; Martin County wx; 1405 ID w/  
WSDU(AM); ID again 1435; 1210mi
- 1418 WCOF- 95.9 Immokalee FL relig pgm de Glendale CA, 1433 still,  
1444 C&W; 1545 ID; 1185mi
- 1419 WCKS 101.1 CocoaBeach FL mx; 1635 class; 1656 "Keyboard  
Immortals" end and Merritt Is. ad
- 1457 WFYN- 92.5 Key West FL o/KXLS; 1500 Red Cross; 1501 ID as  
"One of most modern-equipped radio stns in the  
country; IDs 1730, 1801, finally out around 1845!
- 1508 WEDR 99.1 Miami FL Arab mx!!! 1525 talk in Eng abt Arab  
convention at Deauville Hotel:  
Catholic-oriented; 1270mi
- 1511 WGBS- 96.3 Miami FL BG mx; 1533 Ft Laud ad; 1270mi
- 1514 WWPB 101.5 Miami FL Hurricane tips by Awning Co; other  
local ads; 1270mi
- 1532 WSPB-106.3 Sarasota FL CBS Face Nation; 1095mi (Only stn this  
fq anywhere in SE; AM affl is CBS)
- 1600 WYOR 105.1 CoralGablesFL 24-hpd ID (ex-WVCG); 1270mi
- 1603 WFLM(?)105.9 FtLauderdaleFL C&W; 100.7 movie ad; 1608 WIXX (FM?)  
ID; again 1626; 1260mi
- 1615 WEZY- 99.3 Cocoa FL vocals, ID
- 1628 WDBO- 92.3 Orlando FL interview Smaters; 1629 ID; earlier  
Braves BB here; 1100mi
- 1639 CMB24 90.5 La Habana Cuba Spanish; 1659 TC 20secs fast; ID w/  
"año del guerrillero heroico"; 1815 Rebelde ID,  
"Danzón Cubano"; amazingly steady but weak reception  
clear thru until 1945! 1310mi; list 250 watts!

Tentatives on 30Jun: KOB-93.3-NM (numerous MS bursts from west, 0830-1100);  
WSRF-103.5-FL KSJR-90.1-MN KLIZ-95.7-MN KVOX-99.9-MN WTAN-95.7-FL WEMI-  
WGMB-101.5-FL WIRA-95.5-FL WPRK-91.5-FL WKIS-100.3-FL WWOQ-99.9-FL WPKM  
104.7-FL WPBF-107.9-FL WWQS-105.1-FL WIOD-97.3-FL WEPD-103.3-FL WATL-100.7-FL

TV DX; distances given for stations new to Enid log.

Jun	CST	Call	Ch	Prop	Location	Comments
10	1359	KORK	3	E	Las Vegas NV	ID
	1424	KCRA	3		Sacramento CA	ID
	1429	KTVN	2		Reno NV	stock report slide
	1429	KRON	4		SanFranciscoCA	ID
	1429	KPIX	5		SanFranciscoCA	ID
	1440	KTVU	2		Oakland CA	Oakland Tribune ad
	1830	XEW/0	2		México/Guadalajara	
	1830	XEZ	3		El Zamorano Gro	//2
11	0708	KTSB	27	T	Topeka KS	"Today"; 0859 ID. My first UHF DX; 220mi
	0810	KUHI	16		Joplin MO	CBS; ID 0829; pix; 200mi
17	2002	KMEC	33		Dallas-FtWorthTX	ID, movie, lucky \$ bill; pix; 260mi
	2005	KD TV	39		Dallas-FtWorthTX	2036ID urging "Join the 39ers"; pix; 265mi to CedarHillxmtr; KTVT-11 in w/local quality
	2008	KFWT	21		Fort Worth TX	2041 ID; much weaker than others; 255mi



- 18 0612 KFDW 12 Clovis NM //KFDA-10; xmtr has been moved closer to Portales  
 0640 KETV 7 Omaha NB TP & TT; later ETV programs  
 0655 KOUN 12 Lincoln NB IHTP inscribed Neb ETV net; seen only once before  
 0655 KTSB 27 Topeka KS "Today" again; pix 0725  
 0740 KTVT 11 Ft Worth TX Romper Room; nice colour on parents' set!  
 0740 KDTV 39 Dallas TX colour bars; 0800 begin 6 hours of stock  
 reports, with commentary  
 0820 KMEC 33 Dallas TX also stock quotations, but w/background mx  
 0942 WQAD 8 Moline IL Davenport ad in YL interview pgm  
 0959 KTVH 12G Wichita KS pix of KBS logo copying CBS colour logo  
 2322 WSIX 8 TNashville TN TP & silence; 2326 voice ID by engineer(?);  
 weird opening: nothing else seen from area  
 2326 WMAR 2 MS Baltimore MD usual TP w/CL  
 -2338 KTHV 11 TLittleRock AR VCI at s/off. QRM from same direction....  
 19 1733 XEW 2 E México DF  
 1833 KBOI 2 Boise ID ID in delayed "Invaders"  
 1837 KREM 2 Spokane WA news  
 1859 KLEW 3 Lewiston ID local PSA, then news  
 1922 KTVN 2 Reno NV local promo, then wx; no ID 1929; then  
 ABC News viewed in colour  
 1959 KID 3 Idaho Falls ID Idaho Falls ment  
 2015 KCRA 3 Sacramento CA nx/wx/sport in beautiful colour; strong  
 QRM-free signal  
 2020 KVIE?6 Sacramento CA? Reagan news conference  
 20 1559 WCYB 5 Bristol TN ID  
 1559 WSJK 2 Sneedville TN s/on, "What's New?"; 805mi  
 1601 WHIS 6 Bluefield WV news set showing CL  
 1603 WBTW 3 Charlotte NC ment death stats in Charlotte  
 1803 CKSO 5 Sudbury Ont "Hogan's Heroes"; 1829 PPA for Vote for  
 Germa, ID, CBC Butterfly Colour logo; IDs again 1944,  
 1959; 1115mi; my first Canadian from here on ch 5!  
 1846 CKCK 2 Regina Sask polit anmt  
 2118 CKPR 2 PortArthurOnt ID, again a minute later, tnx!  
 21 0541 KOED 11G Tulsa OK relay WIBW-13 audio until KETA-13 came on  
 w/TP at 0550  
 0545 KOMU 8 TColumbia MO IHTP after blank; QRM KFDO-8  
 0656 KRCG 13 JeffersonCityMO County Agent Reports  
 1540 WCTV 6 ETallahasseeFL local ad  
 1629 WJBF 6 Augusta GA ID on for full minute after ABC dot  
 1643 WITV?7 E! CharlestonSC? animated puppets; rapid untrops like in-&  
 out fades; FM band wide open; offset-minus QRM w/  
 KOAM; not KAYS; negative QSLs from WDBJ and KATV.  
 1658 back in w/kids singing in studio as credits  
 rolled; 1702 in briefly w/man exhibiting something.  
 Virtually certain it was WITV, altho Stn. Supervisor  
 L.F. Simpson III only says it "could have been." They  
 run only 27kw ERP visual! Am inquiring further.  
 1759 WUND 2 Columbia NC ID ment "in NE NC"; ex-WUNB  
 1858 WGR 2 Buffalo NY ID, plug TBQ-The Big Question  
 1903 KPIX 5 SanFrancisco CA local nx  
 1904 KTVU 2 Oakland CA pgm promo  
 1929 KCRA 3 Sacramento CA ID and news  
 1959 CKCK 2 Regina Sask local ads, then Peanuts//3//6  
 2059 KOOK 2 Billings MT ID  
 2100 KRTV 3 Great Falls MT ID  
 22 1120 XEW 2 México DF animated puppets, Spanish; 1153 dubbed  
 Popeye ("poh-pay-yay")  
 1138 XEZ 3 El Zamorano Gro //2  
 1153 KIII?3 CorpusChristiTX? ABC //KOCO-5; tentative

- (Jun)
- (22) 1329 KDBO 6 Orlando FL "Central FL Showcase"  
 1329 WESH 2 DaytonaBeachFL Sanford ad  
 1339 WWAY 3 Wilmington NC local ad in C&W show; 1359 ID  
 1359 WBTW 3 Charlotte NC local theatre ad  
 1858 KTVU 2 Oakland CA Oakland Tribune ad; 1900 ID
- 24 1225 "CBWFT"3 Winnipeg Man CBC-Winnipeg TP, TT; still 1343  
 1229 KDIX 2 Dickinson ND ID  
 1233 CKCK 2 Regina Sask news by local: "Telepulse"  
 1259 CKCK2 6 WillowBunchSask "ch 2, 6, 7, 12" ID  
 2058 KORK 3 Las Vegas NV local ads  
 2228 KBOI 2 Boise ID ID
- 25 0927 XEW/0 2 México/Guadalajara usual stuff...easily recognized
- 28 0714 KTXS 12 T Sweetwater TX pix of new call; ex-KPAR  
 0757 KVKM 9 Monahans TX joint KVKM/KAVE slide w/9 and 6 combined;  
 under KWTW mostly  
 0757 KMID 2 Midland TX ID, photoed  
 2152 WHB 13 Memphis TN local weather; their new FM in also  
 2302 KHTV 39 Houston TX 20-kHz beat w/KDTV noted before their s/  
 off. Sermon, 2305 ID and KDTV s/off msg hrd weakly  
 by feeding converter into FM: ment 257kwA; off 2308; 480mi
- 29 0658 KPLR 11 St Louis MO TP  
 1229 WWAY 3 E Wilmington NC ID; 1929 ID  
 1230 WFMY 2 Greensboro NC local ad  
 1258 WTAR 3 Norfolk VA end Twilight Zone, ID photoed, 1559 ID  
 1829 WRAL 5 Raleigh NC ID  
 1943 WEDU 3 Tampa FL ID in BostPopsConcert; QRM de ABC  
 2003 WUSN 2 Charleston SC ID
- 30 1030 CKPR 2 Port Arthur Ont s/on after TP; again 1259  
 1158 "CBWFT"3 Winnipeg Man TP; also seen by my step-aunt and  
 thrilled her greatly.  
 1214 "CBWT"6 Winnipeg Man ID, hrd on FM 87.74 MHz  
 1327 WEDU 3 Tampa FL TP w/distinctive stylized W; 1328 diff. TP  
 as hourglass design on wristwatch; 1332 Fr Chef;  
 still in at 1800 along w/Cuba on FM  
 1617 XEZ 3 El Zamorano Qro 1636 Bullfight  
 1636 XEFE 2 NuevoLaredoTams TP w/CL at upper left; "Laredo" believed  
 in lower right; just a glimpse; 620mi  
 1710 XHY 3 Mérida Yuc Yucatán on slide  
 1759 WTHS 2 Miami FL ID, Fulton Sheen

Finally, a warning for any of you viewing Texas ch 3 skip (or tropes for that matter); if you see Roman numeral III on the screen, don't assume it's KIII; KFDX has become very fond of this symbol and displays it frequently. (I already fell into that trap, Glenn, hi!! dps) Until next, 73 de Glenn. (And, FLASH, a later card from Glenn:)

In a letter dated 8 July 1968, Mary de Hernández, Chief of Public Relations, verified my tentative report of Radio Caracas Televisión, channel 2, monitored in Albuquerque, New Mexico on 30 May 1968 at 2135-2142 CST. She confirmed that the program at the time was "Actualidades Terepaima," about the city of Maracay, which I had heard mentioned. "We are completely sure that it was our station you tuned in to." According to recent lists, R. Caracas TV, (YVKS-TV) has two outlets on channel 2: Maracaibo, with 600kw vis ERP, at 2770 miles from Albuquerque, and Caracas, 62.6kw, 3050 miles. This is my first multiple hop Es reception and needless to say my first Venezuelan television. Elation! It brings my final Albuquerque TV total to 107 stations.

(It can only be assumed that it was the 600kW signal seen—but in any case, Glenn, congratulations for this exceptional catch!—as well as your 3rd highband skip logging. Also, found clarifications to two FM loggings toward end of your 29Jun log (p7): 102.3 Waynesville MO is new

CP as of Jan68, apparently on air now. WRCM 92.1 is ex-WJNC-FM Jacksonville NC. Glenn's early July TV & FM DX will be held to next time, although the amount already here may set some record, hi. dps)

Dennis Smith—Your editor has some corrections from last month. At the last minute, KCSB 91.1 Santa Barbara decided to remain on air for summer session, 0700-2400 PDT, through July. The ch 8 KEYT translator is not at Carpinteria—my info source was erroneous—but is closer to Santa Barbara; I'll find out where when I get back there.

I arrived home in Wasco 17 June but it appeared that the best part of this early skip season had passed; the openings have been fair but not spectacular. TV-DX; new loggings underlined.

Jun	PST	Call	Ch.	Location	Miles	Prop.	Program notes
<u>23</u>	1059	KREM	2	Spokane, Wash.	850	Es	Political ad, ID
	1159	KUTV	2	SaltLakeCityUT	500		ID; first Utah logging
<u>24</u>	0729	KARD	3	Wichita, Kansas	1260	Es	KansasStateNetwork, local ads, NBC
	0915	KFDX	3	WichitaFallsTX	1220		"k III News"
	0928	KACB	3	SanAngelo, Tex.	1160		furniture ad, dual ID w/KRBC-9, NBC
	0959	KMID	2	Midland, Texas	1050		bug spray ads, ID, NBC
<u>30</u>	1429	KLEW	3	Lewiston, Idaho	780	Es	local programs (Yakima) and ads
	1432	KXLY	4	Spokane, Wash.	850		lcl ad, ID, movie; also 1434 & 1505
<u>Jul</u>							
<u>1</u>	0729	KDUH	4	HaySprings, Neb	1050	Es	ads; comb ID w/KOTA-3 & KHSD-11, CBS
	0829	KTWO	2	Casper, Wyoming	860		ads, ID ("K2" slide), NBC
	0829	KRLD	4	Dallas, Texas	1325		ads, ID, CBS; 0902ID (animated), News
	0900	KCKT	2	GreatBend, Kans	1170		KansStNetwk, ads, TV2 Mid-Day News
	1059	KWAB	4	BigSpring, Tex.	1050		GiantDiscountFoodad, ID; also 1129
	1159	KREM	2	Spokane, Wash.	850		promos, ID, ABC; also 1229
	1759	KIII	3	CorpusChristiTX	1400	Es	PSA, ID
	0935	KOTA	3	Rapid City SD	1070	Es	CBS promos, comb ID, CBS
	1029	WKY	4	OklahomaCityOK	1250	Es	promos, ad Rainbo, PSA, ID, NBC
	1059	KGNC	4	Amarillo, Tex.	1010		promo, ad Imperial marg., ID
	1010	?	3	?		Es	Spanish, movie, outdoor setting
	1159	KDIX	2	Dickinson ND	1200		local ad, ID, CBS
	1214	KOOK	2	Billings, Mont.	930		lcl ads, IDs, lcl pgms thru 1240
	1328	KRTV	3	Great Falls MT	950		slide "krtv NEWS"; 1429 "Montana C.A.P., ID, CBS News
	1344	KTWO	2	Casper, Wyo.	860		ID; 1359 Sears ad, ID
	1459	KFBB	5	Great Falls MT	950		end of sit. comedy, "News at 5"
	1459	KXLF	4	Butte, Montana	850		ad, PSA, promo, 3 Star Final (Nx)
	1737	KCKT	2	Great Bend KS	1170		K.S.N., ads, ID, All-Star Baseball
	1831	KNOP	2	NorthPlatte NB	1100		NWnServ ad, All-StarBB, 1837 ad & ID
<u>10</u>	1900	KCKT	2	Great Bend KS	1170	Es	ID, K.S.N. News
	1929	KREM	2	Spokane WA	850		ID; mixed w/KCKT
<u>11</u>	0829	KMID	2	Midland TX	1050	Es	ID
	0829	KWAB	4	Big Spring TX	1050		Sears ad, Big Spring
	1110	?	2	?			"NBC All-Star Baseball" w/Spanish commentary; ads CartaBlanca(drink) at 1113, 1116, 1125, 1131
	1857	KOCO	5	Oklahoma City	1250		ID, polit ad, News w/RichardHickox
	1859	WKY	4	Oklahoma City	1250		ID, adGWhitfieldVW, Nx w/Geo. Tomik
	1959	?	2	?			slide "XERPC" (not sure)
<u>2</u>	0829	KTWO	2	Casper WY	860	Es	ID
	0829	KOTA	3	Rapid City SD	1070		end CBS News, ID
	0854	KCKT	2	Great Bend KS	1170		Kansas State Network; 0900 News
	1429	CHCT	2	Calgary, Alta.	1110		Palace Theatre ad, ID, CBC
	1449	CFRN	3	Edmonton, Alta.	1300		slide "WideWorldofSportsCTV"; tent.

Equipment includes a 1954 Zenith 21" console (chassis 19L28) with 1954 Walsco 2-bay VHF-UHF Stacked V antenna 46 feet above ground. Ground elevation is 325 feet. Wasco TV total heard is now 126.

FM-DX: new loggings underlined.

Jun	PST	Call MHz	Location	Miles	Prop	Program notes
17	....	<u>KUZZ-107.9</u>	<u>BakersfieldCA</u>	45	Lo	new local, C&W, 24hrs, dupl. KUZZ-800 daytime; xmtr Mt Breckenridge apx7600ft, 350 watts H., strong and clear nevertheless. \$.
24	....	<u>KJAX 99.3</u>	<u>Stockton,Cal.</u>	195	Tr	new on air; some sep and some dup KJOY-1280. Heard often. Probably 3 kW. \$.
		<u>KAVR-102.3</u>	<u>AppleValleyCA</u>	140	Gr	new on air; dupl daytime KAVR 960 & on nights. Fairly consistent. 1300 watts.
Jul						
2	0645	<u>KPOJ- 98.5</u>	<u>Portland,Ore.</u>	725	MS	local nx; confirmed by CE; ERP temp at 4100 W. My first MS ID.
11	1925	<u>KXLS 92.5</u>	<u>Oklahoma City</u>	1250	Es	end mx, ID, ABC-FM News
	1929	<u>KRLD- 92.5</u>	<u>Dallas Texas</u>	1325	mx,	ID
	1939	<u>WBAP- 96.3</u>	<u>Ft Worth, Tex</u>	1325	ID,	bank ad, vocal mx
	1945	<u>KLUR 99.9</u>	<u>WichitaFallsTX</u>	1220	KLUR	Weather Report

Equipment includes 1957 Fisher FM-90X mono tuner and 1958 TACO 10-element FM yagi 40 feet above ground: 325 feet ground elevation. Wasco FM total heard is now 167.

Calif. FM activities: KMBY-FM 96.9 Monterey is now KWAV. Our strongest local KIFM 96.5 Bakersfield is changing owners and temp. on only 1200-1800 PDT. Local KGFM 101.5 Bak. is not regularly using their Mt Breckenridge 350W xmtr—they don't feel it is strong enough (I do. though..) so still using 33kW in town. KJAX, KAVR-FM, and KUZZ-FM are new on the air as noted above.

A technique is explained by Glenn Hauser which can be used extensively by DXers. It is the free direct-dial longdistance information service. You can reach information anywhere in the US or Canada by dialing the area code, then 555-1212. There is never any charge for these calls. When an FM Es opening comes along, one can, as Glenn does, concentrate on getting as much significant detail (local businesses, names, addresses, phone numbers, etc.) from as many stations as possible, and never stay with one station long afterwards waiting for an ID. This accounts for the huge number of stations in Glenn's FM report—many of them were IDed by a session at the telephone following the opening, calling the various possible cities and asking if they had a listing for the various items. (Of course this is only feasible only when one already knows the approximate region the skip is coming from and there are but a few possibilities.) This saves many a tentative report and helps to build up the totals quickly. The only requirement is that you always act as if you want the phone number of the business; after that most operators will give addresses, and often other general information about their area, which may be of help.

Another highly useful aid to DXing is from the "Directory of Post Offices"—an alphabetical list of POs, branches, and named stations. With this you can immediately tell which states have a town with a name mentioned over the air. Glenn uses a 1957 edition, probably not as out-of-date as you might think, considering the number of POs which have been eliminated or consolidated, while the towns still exist. An alphabetical listing of all 3000-plus US counties would serve a similar purpose; does anyone know of one? Thanks to Glenn for these DXing hints.

Joe Gragg, 1002 Hilltop Drive, Palestine, Texas 75801 reminds us about submitting info for the tapesponders list in a letter to Joe or in a report with: Manufacturer & Model #, Speeds, Type track (full,  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $1/8$ ), Type drive (capstan rim), largest reel you can take, your interests and hobbies. Joe tapesponds with his tape or yours; his info: Roberts 778X  $1\frac{7}{8}$ ,  $3\frac{3}{4}$ ,  $7\frac{1}{2}$ , 15ips speeds,  $\frac{1}{4}$  &  $1/8$  track, capstan drive, up to 7" reels, taping-FM DX-helicopters-horses interests. Lack of response to this list may be due to big DX season yet. Best of DX to all Dennis

VHF Radio

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THE RADIO WORLD FROM 30-54 MHz, prepared for the WFFDXA by RBC.

NEW LOOK:

With this issue of the Digest, the "VHF Radio" column, covering the radio spectrum from 30-50 MHz takes on a new editor. And a slight expansion to include the 6 meter amateur band, 50-54 MHz. In the future we also hope to include other VHF and UHF radio bands if interest warrants.

At the risk of consuming valuable space, allow me a brief introduction of myself, and of the guidelines under which this section will be administered. I began TV-DXing from Ithaca, NY in 1950, with Es reception from Cuba on ch. 2 and 4. When I moved to California in mid 1953 I had logged 72 TV stations from Ithaca; (I believe there were 107 operating TV stations in the USA at the time). I did extensive DX work on TV and FM from such places as Fresno and Lafayette, CA. and Oklahoma City. My work has recently brought me to the island of St. Croix in The US VI south of Puerto Rico in the Caribbean Sea.

I became a devotee of VHF-UHF amateur radio in 1953, and in 1957 I was the 21st amateur to work the then 48 states on 6 meters, (50-54 MHz.) I have been an avid student of VHF-UHF propagation for 18 years now, and have authored a number of magazine articles on the subject in QST, etc.

This column will be devoted to the exchange of information, loggings and ideas centered around 30-54 MHz and up.. We are this Fall approaching the peak period for long-range F2 signal propagation for the current, (10th on record), sunspot cycle. Reporters to this column will include those devoted to logging the unusual, far-away, 2-way radio signals that occupy this range, and the extremely devoted and active amateur radio operators who inhabit, (like I do,) the 50 MHz band, (6 meters). There are numbered among the latter group a sizeable contingent of hams who daily monitor and record the loggings they hear in this range. This is to them an important part of their interest in 6m becuz 6m band openings can be predicted and anticipated by listening below 6m to the 2-way radio services operating between 30 and 50 MHz.

Of prime interest will be the radio paging services on 4 channels: 35.22 MHz, 35.58 MHz, 43.22 MHz, and 43.58 MHz. These paging services are on the air 24 hours a day, usually with 1kw of power and relatively tall, effective antennas. They identify themselves every few minutes by call letters and location usually. They normally cover radii up to 50 mi but when skip conditions prevail, distances of several thousand miles are not uncommon, even as far as Europe and beyond.

Right now, in Summer, just about any skip reception you might hear in this band is undoubtedly via the E layer, the same E layer of the ionosphere that produces TV and FM DX. However, because all forms of known E or F layer skip propagation affect lower frequencies first, there will be skip from distant paging stations heard on the paging channels BEFORE skip conditions reach TV and FM frequencies. The time lapse may be 10 minutes, several hours, or the MUF may never reach channel 2. In any case, it is a very convenient warning device for hams and TV DXers.

As we approach late August, the daytime F layer skip will slowly build up back up to for us here in the northern hemisphere. Indications are that the F layer skip throughout the Summer has dropped from daily highs of 43-45 MHz last Fall, ( east-west paths across USA), to Summer daily highs of 26 MHz. This is a good indication that this Fall we shall have 48050 MHz F2 skip across the USA, & from USA to Europe, etc.

Conditions may also be favorable for USA to Africa and parts of Pacific.

If you are new to TV DXing since the 1957-59 sunspot cycle, you should note that this Fall we may again have reception from European TV stations in the USA and Canada via the F2 layer skip over much of the area east of the Rocky Mountains. To receive this type of DX, you will need a 45 MHz antenna of some type, (a dipole will do), and a converter to tune this portion of the band, (40 MHz+). More about the converter next month hopefully. This type of reception will probably not be seen again after this Winter, until at least 1978! In the last peak period (1957-59), only a handful of TV enthusiasts bothered with this fascinating form of truly long-distance reception. We hope many more will be excited enuff about the prospects for DX from the BBC in England, ORTF in France and ABC in Australia, to want to try for this reception this Fall and Winter. Next month we'll have as much info as we can of what you will need to receive to receive such trans-oceanic TV-DX.

It is our intent to show you in this column that listenning for DX in the 30-54 MHz range isn't any different than TV or FM DXing. Normal range of stations is 50-100 miles as in TV-FM, but becuz skip starts low in frequency and works up toward the TV/FM spectrum, this VHF area will produce more skip sooner, and regular monitoring for signs of skip signals can be a real asset to anyone that is interested in TV/FM DX.

The cost of being able to monitor these frequencies isn't too expensive either. A modest FM monitor radio to cover 30-50 MHz costs \$50 to \$90 and are readily available from Allied, Lafayette and others. Lower priced receivers and converters are also available, as noted in the Digest's special February feature "The 30-50 MHz Band." (A few copies of this issue are still available, as well as the March issue which lists more recievers and some 70-80 paging and other stations. Copies are available at 30¢ each or both for 55¢.)

With a receiver or converter of this type you will be able to at least hear the audio portion of the BBC and ORTF telecasts this Fall and Winter from Europe, as well as keep tabs on conditions (skip) that are moving up toward channel 2. This should give you something to think about until next month.