

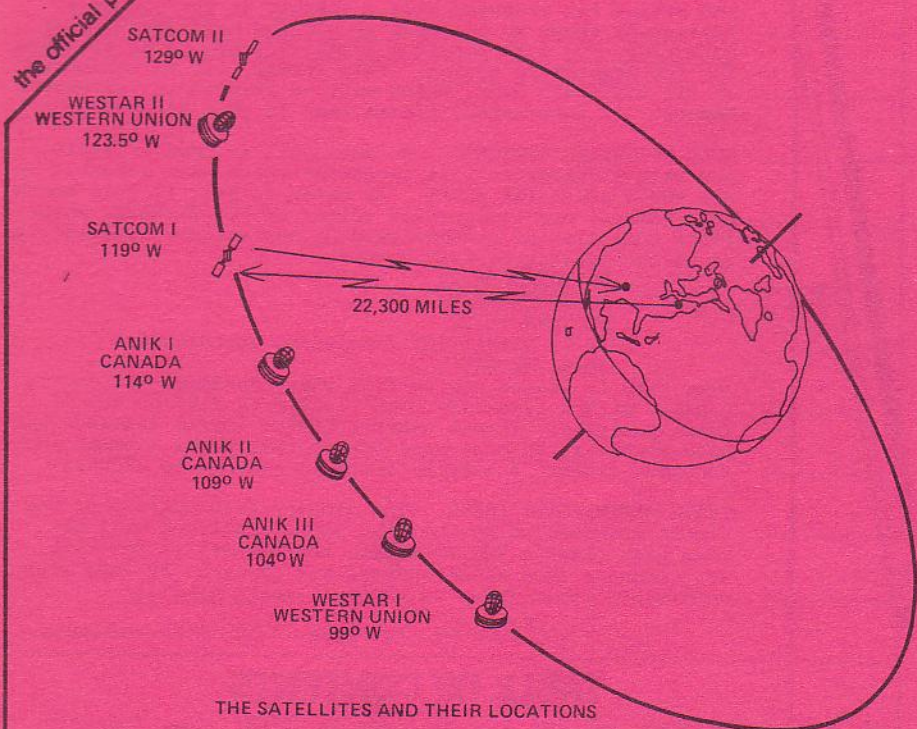


VHF-UHF DIGEST

the official publication of the Worldwide TV-FM DX Association

NOVEMBER 1977


IN THIS ISSUE:



YOUR OWN TVRO EARTH TERMINAL ?

From The Staff :

WTFDA Headquarters, P.O. Box 202, Whiting, Indiana 46394



CONVENTION 1978...As announced in the September VUD, WTFDA is now accepting bids for its 1978 convention site. So far, however, only one formal bid has been received--from Ted Fleischaker of Louisville, KY. This has prompted us to extend the deadline for bidding to December 31, 1977, but it would benefit everyone if those interested in hosting next year's WTFDA gathering would submit their bids as soon as possible. If you're interested in holding WTFDA's 1978 convention, please send your formal bid in writing to your editor (address on back cover). State proposed site and convention dates, and include if possible a paragraph on probable activities and information on transportation to and around the proposed site. Whether or not you have previously shown an interest in hosting next year's club gathering, you must submit a formal bid now to be eligible for the membership voting. This voting will be conducted on all confirmed bids, which will be printed in February's Digest. If interested, please send in your bid today!

MORE EDITORIAL OPENINGS...We are still in need of active and able WTFDAers to fill vacancies which have occurred in the VUD's editorial staff. As noted on page 12 this month, Dave Pomeroy has resigned as editor of FCC TV NEWS, which joins this list of columns needing new editors immediately or in the not-too-distant future:

NORTHERN FM DX
SOUTHERN FM DX
WESTERN TV DX
TV/FM STATISTICS (including Scoreboards)
ANARC REPORT

Your help is needed now to fill these openings. If you're capable with a typewriter and willing to take on any of these positions, please contact Clarke Ingram (address on back cover) as soon as possible so that these columns may continue without a lengthy break in service to WTFDAers.

TENTH ANNIVERSARY ISSUE...The January 1978 edition of our Digest promises to be the best ever. Included will be some past classic VUD articles, the history of our club, and comments from WTFDAers past and present. Be sure your membership isn't about to expire...don't miss it!

73, *Clarke* for Pete, John, Mike and Morrie

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MAILBOX

John Zondlo
6617 Maryland
Hammond, IN 46323
(219) 844-8694
Deadline: 15th

New Members:

| | | |
|------------------------|------------------------|-----------------------------|
| Walter Chmara | 2870 Clifton Drive | Cornwells Heights, PA 19020 |
| Felix Collier | 1421 Pinecrest Ave. | Charlotte, NC 28205 |
| Paul Hake | 1710 S. 1st | Conroe, TX 77301 |
| E. Peete Hardison, Jr. | 343 Woodcliff | Jackson, MS 39212 |
| Paul Krueger | 309 Charles St. | Westfield, MI 53964 |
| Robert Langridge, Jr. | 309 6th St. | Durant, IA 52747 |
| Albert S. Lobel | 10514 Caminito Baywood | San Diego, CA 92126 |
| David Nordmann | 6612 Villa Ave. | St. Louis, MO 63139 |
| John Topel | Box 550 | Lisle, IL 60532 |
| Barry Wallner | 331 N. Stevens St. | Orange, CA 92668 |
| David M. Williams | 305 Lindsley Drive | Morristown, NJ 07960 |

Renewals:

Tom Bishop, John Callarman, Bill Dulmage, Robert Eddy, Wayne Murphy, Dr. Joel Rosenberg, W.T. Ryan, Winston Smith, Larry Weil, Dr. Richard E. Wood.

Rejoins:

Chuck Michaelis-9498 Lancaster Road S.W.-Hebron, OH 43025
Richard Tidberg-RR 2, Box 119A-Winnebago, IL 61088
David Walcutt-Box 1051-Carbondale, IL 62901

Address Changes:

Peter Campbell-Tremonti Building, 5th floor-426 Clinton St.-Detroit, MI 48226
L.W. Gemar, USN - 442-60-5738 - F-S, VS41 NASMORTS - Coronado, CA 92135
Robert Goodman-5129 W. Roosevelt Road, Apt. B7-Cicero, IL 60650
Steve Rich-2117A Stoneham Drive-Indianapolis, IN 46260
Peter Sawatzky-RR #4-Cuelph, ON N1H 6J1

Renewals Due in December:

Michael Albanese, Dr. R.B. Ammons, Robert Babut, Mike Brewer, Dale Connolly, Leonard Gemar, Neil Grandjean, Al Kopec, William C. Palmer, John Peterson, Roger Sabella, Rick Samford, Richard Stein, Emery Swan, Harvey Woodworth, David M. Wurl.

A few new members have written their own introduction this month, including WALTER CHMARA: "I am 17 years old, a student in the 12th grade, and I DX anything possible, LW, SW, AM, FM, TV. I'm also a member of the North American Shortwave Association. I own a Midland 8 band portable receiver (FM, PSB, ATR) and a Philco portable color TV. They are both connected to a combination V-UHF color antenna, which is the second tallest in our borough, rotatable by hand a full 360 degrees. My best catch on TV in my location was Connecticut, on FM, Florida, but the all time surprier was when I watched Sioux City, Iowa, in Monroeville, NJ, while in the cellar and using no external antenna of any kind. I learned about WTFDA from the World Radio-TV Handbook, and was encouraged to write by an article in NASWA's bulletin FRENZY."

FELIX COLLIER is a systems analyst who also belongs to NRC. He found out about WTFDA in Communications World magazine.

The main receiver of PAUL HAKE is a Heathkit AR-29, which is connected to a Heath antenna with a rotor. Primarily into FM, Paul learned of the club in Elementary Electronics magazine.

Coming into the club with great technical ability is E. PEETE HARDISON, JR., who's an audio engineer. His DX gear includes a Macintosh MR78 receiver connected to stacked Channel Master 4408 FM antennas, and a Heath CR291 TV hooked up to a Channel Master 3617 antenna.

Reckon I'll let PAUL KRUEGER introduce himself: "I am 14 years old and I got interested in TV DX this summer after reading an article about it in Elementary Electronics. This is also where I learned about your club. For TV I use a CM Quantum U/V antenna at 55 feet on a 50 foot tower. I use a CM rotor and a CM O393 preamp. For FM I use 2 homebrew antennas. I am in the process of building a UHF antenna, and I have an old gigantic CM VHF wedge antenna I hope to get up soon."

When I think of ALBERT LOBEL, my most vivid thought is- do not, by any means, call him Al....it's Albert, hi. Albert's DX gear includes an RCA 16" black and white portable and a Realistic TR100 with antenna for FM. He's also a member of IRCA and NRC.

The NRC helped us get JOHN TOPEL into the fold. John's DX bag includes BCB and FM, and his equipment includes a Macintosh MR78 receiver and a Zenith 7000X.

Popular Electronics informed BARRY WALLNER of WTFDA's existence. A visit to Barry's DX shack shows that he uses a Heathkit FM tuner and a General Electric 16" TV.

Another DAVID WILLIAMS in the club? Yes, indeed! This one is not to be confused with the David Williams of Oregon fame. Here's his intro: "I am 15 and have only been interested in FM and TV DX for about one year. I also heard about the club a lot in DX News, as I have belonged to the NRC for quite some time. I have heard 114 FM stations and seen 32 TV stations. My receivers are a Panasonic stereo, a Realistic Patrolman 9, and an RCA XT-100 TV, all of which work out quite fine. As I live in an apartment, I have to settle for indoor antennas."

Tidbits.....

It's good to have David Walcutt back in the club! He attended the ANARC convention in Palatine, IL, where the WTFDA BoD worked hard to get him to rejoin. David is also a member of NASWA (and an editor for their magazine, FRENDX), SPEEDX, and NNRC. His DX gear includes a Sony ICF 5900W and an SCA adapter.

This just in from another rejoiner, Chuck Michaelis: "From January of 1972 to December of 1973 I had the pleasure of being a member of WTFDA. But because of declining interest and monetary problems (I was only 15 when I joined), I did not renew my membership. Now I have been bitten by the DX bug again and am active on the VHF and UHF TV channels. I have seen 74 stations in 3 provinces, 16 states, and DC. My equipment includes 2 stacked log-periodic beams at 45', a Kay-Townes tandem amp, and an RCA B&W TV with a 21" screen (an excellent receiver). I am now attending Ohio State University as a business major, and am a sophomore. I have been DXing actively since May of '77, and hope to be doing so for quite some time to come."

Here's a request for help that some WTFDAers may be able to answer. Sam Ward (104 S. Westmoor Ave., Columbus, OH 43204) is an avid collector of tapes of NOAA weather stations. He'd like tapes of the NOAA stations in these cities: Concord NH, Portland ME, Buffalo, Erie, Hartford, Atlantic City, Baltimore, Indianapolis, Portland OR, Los Angeles, San Francisco, San Diego, Sacramento, Miami, Tampa, Anchorage, Honolulu, Detroit, New York, Pittsburgh, Great Falls MT, Denver, and New Orleans. Open reel tapes are preferable, cassettes acceptable. Anyone who can help?

We have these words of wisdom from member John Callarman: "Sorry I've been such a poor member the first year, but there's been very little time to spend at the dials in any media, much less a relatively new one, and consequently I've not reported anything to any of the columns. The intent is there and perhaps in future years, I'll be able to explore the FM and TV bands extensively. My wife, who normally isn't very cooperative with my DXing plans, has accepted the idea that a really good fringe antenna for UHF and VHF as well will get us off the rather erratic cable system we have here....and will not object to throwing in a good FM antenna and rotor system to boot....but the project has not been as high on the priority list as it should be in order to get done!! I've taped a few catches in the 300 to 500 mile range....mainly last spring....but the only long-haul DX I've heard on FM this summer came on the car radio as we drove toward Douglas, Arizona, carrying KXL-FM in Portland on the car radio with local quality signals for about 40 miles."

And our next item comes from West Germany and Hans W. Schlotzhauer: "The Wuppertal DX and Tape Club is a club of some tape and radio friends. Everyone of us is specialized in a part of this great hobby. We want to offer all other hobby friends a very good series of tapes: 1) CB Radio in Germany, 2) What will be heard in Germany on shortwave, 3) FM broadcasting and TV, 4) Tape-clubs and music-scene, 5) Wuppertal, the home of WDXTC. I hope we will find some friends who are interested in our information. To make it cheap for you we will send it like a round robin (4 persons in a round). To get all five tapes in a time of 3 or four months you have to pay 2 dollars and we will send all tapes via air mail." It's best to write for more info before you partake of this offer. Hans' address is Sedanstr. 123, 56 Wuppertal-2, West Germany.

It's now safe to start sending mail to my home address again. A protest has been filed with the post office by most of those affected (including new member Albert Lobel) and several of us are contemplating legal action.

My thanks to Clarke Ingram for his kind words in last month's From The Staff column. We always welcome your suggestions on recruiting new members, and I encourage you to tell your friends about the club. Till next month....jz

Memorabilia


November 1977



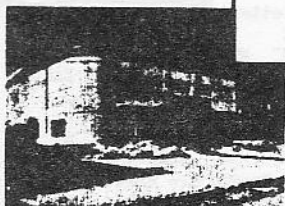
Robert J. Williams
251 6th Avenue East
Twin Falls, Idaho 83301
Phone: (208) 733-3621
Deadline: 10th of month

"MORE MEMORABLE QSL CARDS"

This month, MEMORABILIA presents some more QSLs of TV stations that have changed their call letters. These have been submitted by your editor (me):

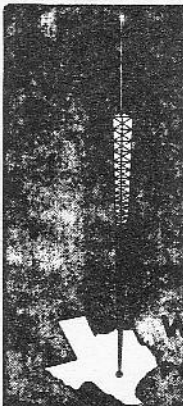
| | | |
|---|---|---|
| KGLO-TV Channel 3 100,000 watts vis. 20,000 watts aur. May 1954 |  | KGLO 1300 Kilocycles 5000 Watts Day and Night Licensed to operate full time January 1937 |
| MASON CITY, IOWA | | |
| This will confirm your reception of KGLO (Radio) (Television) on June 26, 1973. We appreciate your interest and the time you have taken to indicate your reception of our facilities. | | |
| LEE ENTERPRISES, INCORPORATED KGLO-TV - KGLO by <i>David R. Applegate</i> Chief Engineer | | |

From: KGLO - KGLO-TV
Mason City, Iowa



TO: Mr. Robert J. Williams
251 6th Avenue East
Twin Falls, Idaho 83301

KGLO-3 Mason City IA (now KIMT-3)

| | |
|--|---|
|  | VERIFICATION OF RECEPTION |
| | Thank you for your report dated <i>6/8/74</i> advising us of your WOAI-TV reception in <i>Twin Falls, Idaho</i> . Transmitter location: Elmendorf, Texas Studio location: 1031 Navarro Street Frequency: 66-72 megacycles — Channel 4 Video Power: 100,000 watts Audio Power: 11,200 watts Tower Height: 1531 feet; 1476 feet above average terrain WOAI-TV channel 4 P.O. Box 2641 San Antonio, Texas 78206 |

WOAI-4 San Antonio TX (now KMOL-4)

See y'all next issue, gang, with more happy DX memories. 73s, gud DX,

Bob

C.C.I. [UNIDENTIFIED DX]

Frank Aden, Jr.
1535 NW Ithaca
Bend OR 97701
Deadline: 10th

NOVEMBER 1977 TV GUIDE SENDS INFO ON FLORIDA SPLIT!


TV GUIDE Headquarters has reported in addition to the new Orlando Edition two other new editions have been formed from the former Central Florida and Northern Florida Editions. The new editions are Sarasota and Tampa Bay. The Sarasota Edition (use SAR for code) contains schedules for WEDU-2, WFLA-8, WLCY-10, WTVT-13, WXLN-40, WEVU-26, WINK-11, WBBH-20, WTOG-44, WUSF-16, WKID-51 (partial), WTHS/WPBT-2, WTVJ-4, WCIX-6, WFLG-10 and WTOG-17. The Tampa Bay Edition has WEDU-2, WFLA-8, WLCY-10, WTVT-13, WTOG-44, WUSF-16, WXLN-40 and WCIX-6. The TV GUIDE regional office in Miami no longer exists and has been replaced by 2204 Hollywood Blvd., Hollywood FL 33020.

If any changes occur in your local TV GUIDE editions please write as work is now being done to up-date the WFTDA TV STATION GUIDE and all TV GUIDE changes are now being recorded.

Unidentified TV DX

Robert Williams, 251 6th Ave. East, Twin Falls ID 83301 (1977 unIDs)

Sat Jun 4 Es ch 3 1900 MDT - NBC station with logo like one to right.

 There is a possibility that call was in top of the three. WSAV? WWAY? WRCE? (No logo available of WSAV but here are WWAY, WREG and WRCE. ---FEA)

Mon Jun 6 Es ch 2 2056 MDT - "Billy Graham" KNOP? Other?

ch 2 2133 MDT - "News Watch" Logo had open letters in upper right hand section of screen like "NEWS2 WATCH" WMT?

Wed Jun 8 Es ch 3 1843 MDT - "Billy Graham" Western Carolina Crusade. KFDX? KACB?

Jim Pizzi, 300 Park, Orcutt CA 93454 (1977 unIDs)

Thu Jul 28 Es ch 2 0936 PDT - Science program for children-Global Production. At 0954 "Scoop" and mention of Alberta. KOMO-4 and KATU-2 in at 1015. (TV GUIDES for Canada are negative. ---FEA)

Mon Aug 1 Es ch 2 1109 PDT - "Abbott & Costello" Antenna directly east.
1300 PDT - "Little Rascals" KMID-2, KOB-4, KENW-3 seen at 1200. (KMID has Little Rascals" at 1300 but no list of any movie at 1100. ---FEA)

Wed Aug 3 Es ch 3 1830 PDT - Logan County Fair promo. KTVS? (Yes. ---FEA)
2 1830 PDT - "Welcome to our World" KREM?
2 1846 PDT - "Star Trek" (TV GUIDES not any help. ---FEA)

Tue Jul 26 Es ch 5 2220 PDT - Same on 4. Snow and cold Survival Drama. CFCN-4? CFCN4-5? (CFCN does run a movie at this time. ---FEA)

Wed Jul 27 Es ch 3 1000 PDT - "Age of Uncertainty" KMTV? (TV GUIDE is negative. ---FEA)

Es ch 2 1030 PDT - "Sesame Street" KAID? (KAID has it from 1100 to 1130. ---FEA)

FACILITIES

CJCH-TV Halifax

- 2 colour studio cameras
 - 2 production studios (48' x 66' and 48' x 56')
 - 1 colour film chain complete with 16mm film projectors and 35mm slide projectors
 - 4 colour video tape recorders
- Complete colour production and editing facilities including photography and art departments

CKLT-TV Saint John

- 1 colour studio camera
- 1 production studio (20' x 20')
- 2 colour video tape recorders

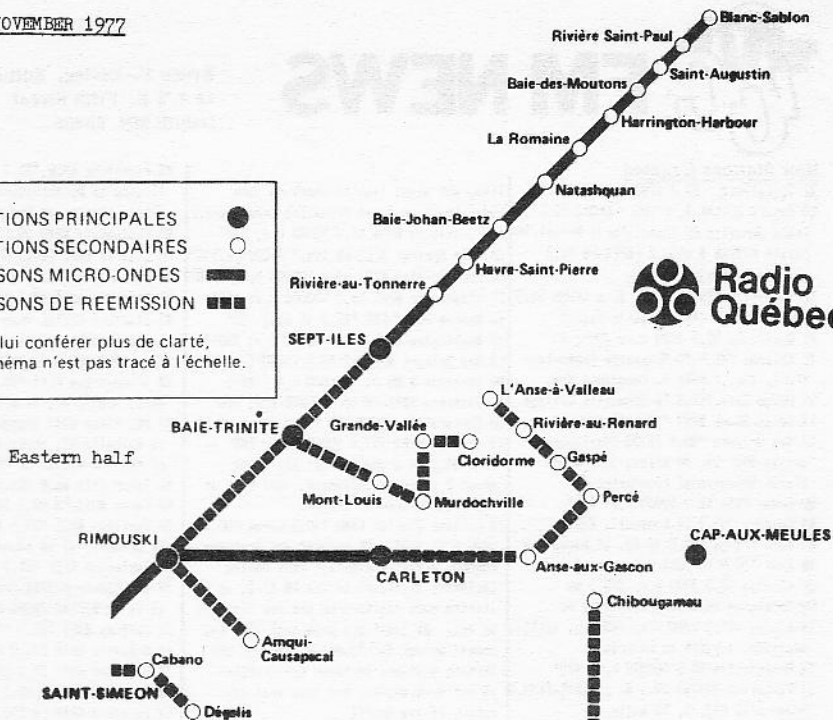
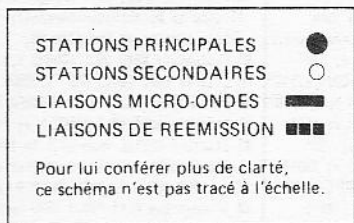


CKCW-TV Moncton

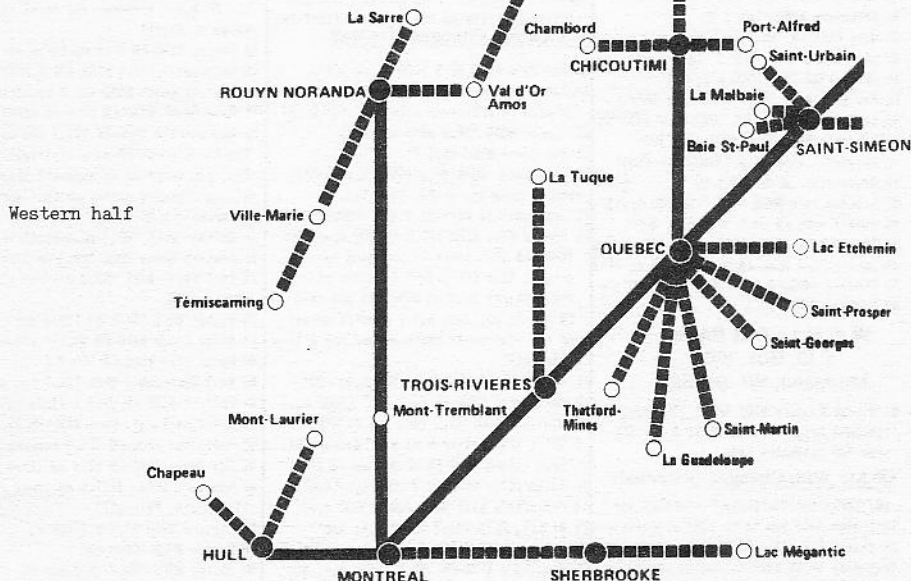
- 2 colour studio cameras
 - 2 production studios (28' x 36' and 48' x 66')
 - 2 colour film chains complete with 16mm film projectors and 35mm slide projectors
 - 6 colour video tape recorders
- Complete production and editing facilities including photography and art departments

CJCB-TV Sydney

- 2 colour Studio cameras
 - 3 production studios (78' x 38'; 40' x 35'; 75' x 35')
 - 1 colour film chain complete with 16mm film projectors and 35mm slide projectors
 - 2 colour video tape recorders
- Complete production and editing facilities including photography and art departments



Carte d'implantation des antennes UHF au Québec





FM NEWS

Bruce F. Elving, Editor
18 1/2 E. Fifth Street
Duluth MN 55805

New Stations Granted

AL Tuscaloosa 92.7 1260 h.v.; 430'
 CO Basalt K261AK \$, r 100.1 [KQIX 93.1
 Grand Junction CO translator]; Mutual, 10
 Basalt K272AM \$, m102.3 [KREX-FM 92.3
 Grand Junction]; 10 watts
 CO Leadville K296BA 107.1 \$, m (KVMN 98.9
 Pueblo CO); U. "K299" going legal?
 FL Macclenny 92.1 3000 h.v.; 300'; k
 IL Chicago 88.1 10 "Lakeside Communica-
 tions, Inc.," 6946 S. Constance Ave.
 KS Dodge City *91.9 10 Community College
 LA Baton Rouge WBRH *90.1 ON AIR! 10 w.
 LA New Orleans *90.7 25700 (horizontal
 only); 300' 24, 60 miles; jc, "Nora
 Slatch Educational Foundation."
 MO Ocean City 99.9 50000 h.v.; 316'
 MA Duxbury *91.7 10 Community Radio
 NJ West Orange *88.9 10 Bd. of Education
 MN Zuni *90.9 10 Zuni Radio Board
 OK Clinton 95.3 3000 h.v.; 300'; mk
 OR Hermiston 99.3 3000 h.v.; 78'; mc
 TN Athens 101.7 1200 h.v.; 440'; n. Initial
 decision, subject to reversal.
 TX Brownsville 99.5 100000 h.v.; 420'
 UT Panguitch K257AG 99.3 \$, p [KBRE-FM94.9
 Cedar City UT], 1, 10 watts
 PR Mayaguez W296AB 107.1 \$, English talk
 (English language TV audio) and rock
 music [WZAR 101.9 Ponce PR translator--
 granted over protests of Mayaguez FM
 stations], 1 watt. [rebroadcast].
 BC Crawford Bay 99.7 135; CBC-AM; CBU/
 PQ Ferment 105.1 16w; English; CBC-AM/CBM.

On Air and DX Ready (presumed)

AK Ketchikan KRBD *105.9 10
 AK Nome KICY-FM 100.3 84 h.v.; 40'
 AK Petersburg KFSK *100.9 10
 AR Salem KSAR 95.9 2500 h.v.; 325'
 FL Key West W11S 107.1 2000 h.v.; 96'
 GA Eastman WUFF-FM 92.1 2000 h.v.; 370' kr
 GA Valdosta WLGA 95.9 3000 h.v.; 300'
 ID Pocatello KSIH 94.9 73000 h.v.; 1000'
 IN Resnaisleaer WPUM *90.5 10 [1080
 ME Presque Isle WHEM *106.1 100000 h.v.; \$
 MI Howell WMI-FM 93.5 3000 h.v.; 300'
 TN Etowah WMCC 103.1 3000 h.v.; -14' [ks
 TN Springfield WDBL-FM 94.3 3000 h.v.; 215'
 TX Mineola KMCO-FM 96.7 3000 h.v.; 300'; m
 WA Spokane KWRS *90.3 10

WEM I - FM Radio

P.O. Box 100
Menasha, WI 54952

live, who might like to check on them
 under tropo or local receiving conditions.)
 AL Tuscaloosa WUDA 95.7 50000 h.v.; 320'
 CA Palm Springs KCE5-FM 104.7 42000h.v.; 540'
 CO Fort Collins KTCL 93.3 190000 h.v.; 1330'
 FL Clearwater WOKF 95.7 100000 h.v.; 450'
 ID Moscow KUDI-FM *89.3 45 h.v.; -95'
 IN Washington WFML 106.5 50000 h.v.; 340' \$; k
 LA New Orleans WYLO-FM 98.5 100000 h.v.; 360'
 MD Bethesda WJMD 94.7 21000 h.v. (780')
 NE Beatrice KWBE-FM 92.9 97000 h.v.; 310'
 OH Centerville WCWT-FM *91.9 (from 89.5)
 TX Abilene KFMN 107.9 100000 h.v.; 285' --
 from 99.3 -- a change that has taken
 about 2 years to implement. Now look at
 the next on-the-air change!
 TX College Station KAMU *90.9 (from *90.3)
 3200 h.v.; 340'. CP granted and frequency
 changed almost instantly; thus making
 decisions difficult in the FM ATLAS as to
 listing such stations on the new channels
 or not. At least one prominent DXer has
 checked me out for "jumping the gun" and
 listing stations on their construction-
 permit frequencies, but look what can
 happen if you don't!
 TX Fort Worth KTCU-FM *88.7 (from *89.1)
 3000 h.v.; 125'

Scheduled to Delete

NH Nashua W01W-FM 106.3; FCC gave it until
 Nov. 15, 1977, but further delays or an
 interim operation may forestall deletion.
 NB Saint John CHSU-FM 98.9 CRIC gave 6
 months' extension to March 31, 1978, but
 station has refiled for the same facility.

Facilities' Changes Granted

CA San Jose KSJD 92.3 50000 h.v.; -88'
 CA Santa Barbara KCSB from 91.5 to *91.9
 (to ease interference with KUSC *91.5 (A)
 CT Hamden WDAQ *88.3 adds vertical
 CT New Haven WYBC 94.3 " "
 FL Clearwater WQXM 97.9 29500 h.v. (440'),
 reduces coverage to 27, 66 miles.
 FL Jacksonville WAIV 96.9 420' (100000 h.v.)
 FL Panama City WPFM 107.9 100000 h.v.; 780'
 (WGNF-FM 98.5 there is supposed to
 delete, too; FCC didn't like one of
 the contests held on WGNF [AM] and said
 FM has to go, too; but I predict appeal
 and the station to stick around for a long
 while yet!)
 FL Okeechobee WLMC 103.1 1200 h.v.; 260'
 GA Hazlehurst WVOH-FM 93.5 300' (3000 h.v.)
 HI Honolulu KHUI 93.9 (not yet on air)
 1700'; transmitter 5 mi W of Waipahu HI.
 IL Rock Island WBRF-FM 98.9 adds vertical
 IL Taylorville WLEE 92.7 3000 h.v. (290')
 IN Plainfield WART 98.3 290' (3000 h.v.)
 KS Wichita KCYN 103.7 95000 h.v.; 860'
 MD Baltimore WDJQ 104.3 50000 h.v.; 420'
 MD Frostburg WFRD-FM 105.3 16500 h.v.; 860'
 MD Lexington Park WMDN 97.7 3000 h.v.; 300'
 MI Grand Rapids WGRD-FM 97.9 30000 h.v. 28500v
 directional (550')

MN Pipestone KR5W *91.7 changes city of
 license to Worthington-Marshall; trans-
 mitter remains at Chandler MN.
 MS Pascagoula WPMO 99.1 100000 h.v.; 350'
 MO Liberty KSAB 106.5 630' (100000 h.v.)
 MO Poplar Bluff KJEZ 410' (100000 h.v.)
 MT Missoula KDAT 93.3 36000 h.v.; 2440'
 MT Stanford K221AE from 92.1 to 104.9;
 calls to K265AJ, primary station changed
 from KOPR 106.3 to KLCM-FM 95.9 Lewiston.
 NM Albuquerque KLYT *88.3 1800 horizontal
 only; 4000'; 41, 84 miles' coverage
 NY Mt. Kisco W4RY changes city of license
 to Valhalla NY; probably the transmitter
 of this 10-watter on *88.5 moves, too.
 NC Labor City WKSM 104.9 1500 h.v.; 400'
 ND Fargo WDAY-FM 93.7 100000 h.v.; 1030'
 OH Hamilton WHSS *89.5 190 h.v.; 285', 11
 km primary; 47 km secondary; SCA, too.
 OK Tahlequah KEOK 101.7 3000 h.v.; 300'
 PA Mt. Pecono W272AA from 102.3 to 92.1;
 calls to W221AC (WGBI-FM 101.3 Scranton)
 SC Gaffney WAGI 105.3 1190' (100000 h.v.)
 TN McKenzie WKTA 106.9 480' (100000 h.v.)
 TX Beaumont KQXY 94.1 25000 h.v.; 600'
 TX Fort Worth KSCS 96.3 1680' (99000 h.v.)
 TX Hereford KPAF-FM 106.3 3000 h.v.; 260'
 TX San Antonio KZZY 100.3 500' (100000h.v.)
 WI Kenosha WLIP-FM 95.1 11000 h.v.; 260'
 WI Charlotte Analie WBS 97.9 1560' (50000,
 h.v.).
 PQ Montreal CBM-FM from 95.1 to 93.5, as
 of October 3, 1977.

Formats/Networks

AL Albertville WQSB 105.1 r (from mr); SCA
 has AP Audio network--the first such SCA
 known to exist!
 CA Fresno KYNQ-FM 95.5 rp (from r)
 CO Colorado Springs K1NX 101.9 r (from fm)
 FL Daytona Beach WQXQ 101.9 rp (from r)
 FL Palm Beach WJNO-FM 97.9 rp (from r)
 FL Gainesville WRUF-FM 103.7 CRS (one of
 the first known FM-only affiliations by
 CRS, representing an apparent change in
 a long-standing policy on CRS' part)
 GA Carrollton WRTR 92.1 Y (from A)
 IL Chicago WVIC *88.1 p, monophonic
 IL Downers Grove WDCG *86.3 jr (from m)
 IN Fort Wayne WAKX 103.9 r (from m); \$; \$,
 mystery SCA.
 IN Goshen WGS *91.1 gr (from gc)
 LA Baton Rouge WAFB-FM 98.1 r (from fm)
 MD Ocean City WBOC-FM 104.7 C
 MA West Barnstable WKKL *91.1 rj; some c
 MI Detroit WCAR-FM 92.3 k (from rs)
 MN Minneapolis-St. Paul WAYL-FM 93.7 U
 MN Rochester KRCC-FM 106.9 resumes R
 NV Las Vegas KENO-FM 92.3 rp (from k)
 NY New York WFIX-FM101.9 r (from rs-- is
 it dropping "disco")?
 NC Concord WPEG 97.9 r (from k)
 OH Canton WHLQ 106.9 rm
 OH Dayton WDFP *88.7 jk (some c)
 OH Medina WDBN 94.9 S
 OK Tulsa KWLN 95.9 rm; KRAV 96.5 rp

OR Lake Oswego KMJK 106.7 fm (from sj); an improved signal reported in the Victoria-BC area now that they are 94000 h.v.; 890'.
 TN Shelbyville WTCV ("The Christian Voice") g (from mr)
 TX Austin KOKE-FM 95.5 k (from r)
 TX Clear Lake City KMJQ 102.1 sr
 TX El Paso KXSM-FM 99.9 r (from mr)
 TX Houston "88.7 now all j, still mono, but stereo expected soon.
 TX Port Lavaca KGUL-FM 95.9 S (\$, kr) and on the air 3000 h.v.; 175'. (Not KGUL.)

FM Stereo
95.93 KW (ERP)
 Vert. & Horiz.

RADIO

KGUL

Serving The Texas Coastal Bend

VA Norfolk WOKI 102.5 s (from p)
 WA Bellevue KRCS "91.3 jr WA Spokane
 WA Cheney KENC "89.9 p KICN 98.9 g
 WA Edmonds KBQJ 105.3 g (uptempo q); was mc
 WA Yakima KUEZ 104.1 m (from k)
 KFFM 107.3 mr
 WI Kenosha WLIF-FM 95.1 p (from mr)
 WY Torrington KERM 98.3 A; \$

ON North Bay CMAI 93.7 nk (from mr)
 PG Rinoski CJRR-FM 101.5 c (from r); CBC relay; retains CJRR-FM call letters, in spite of CBC ownership, unlike Drummondville 104.3, whose call letters may now be CBF-FM-2, instead of CFDM-FM."
Dual-City Identifications

GA Camilla WEBI 105.5 adds Pelham GA
 MN Mankato KEEZ 99.1 adds Blue Earth MN
 OR Lake Oswego KMJK 106.7 adds Portland
 WI River Falls WWRV-FM 106.3 adds Hudson WI
New Transmitters Installed--Stereo?

MA Springfield WTRZ "89.1 NC Morgantown
 OK Durant KSEO-FM 107.1 I WQXX 92.1
 GA Atlanta WRFQ "89.3 I SD Sioux Falls
 KY Paducah WKYQ 93.3 I KCFS "90.1
 WA Spokane KREM-FM 92.9 stereo?
Off-Frequency

MN Fosston KEHG-FM heard on 107.3+ instead of 107.1: a station believed to have returned to "normal" after long being on 107.7. **Going 24 hours end of Nov.:**

KROC RADIO AM-FM

601 First Avenue S.W.
 Rochester, Minnesota 55901

KROC-FM 106.9, "The Enter-tainers." FLASH! ON AIR, 24 hours, 106.9;
WUPM \$ Ironwood MI, m, same k; l.

"Please don't leave out FM stations I give, O.K.?" writes Dick Clark, who says he is now running a bootleg FM station "WXEJ" 107.9, with an antenna aimed NW in Puerto Plata, Dominican Republic. He says he'll QSL. He admits running illegal stations when he lived in Pittsburgh and knew Clarke Ingram. Now I am leaving out some of his information, because the purpose of this column is not to run lists of existing stations—only changes in stations or new stations; and I'll freely admit a bias in favor of U. S. and Canada news as opposed to news of other regions, because that's where most of our readers are and where virtually 100% of their DX comes from. Mike Dorner's upcoming list of Latin American FM would be the more logical forum for presenting lists such as Dick sends. I am also not in favor of our members "creating" FM stations that are illegal. These can be dangerous

AL Mobile 94.9 WKJS-FM (frca WKJS)
 CA Pacific Grove "90.3 KAZU
 CA Salinas 100.7 KMYT-FM (from KMYT-FM)
 CA Shafter 97.7 KQEZ IN Angola
 FL Boynton Beach "88.7 WRMB "88.3 WEAX
 FL Key West 95.5 WVEK (WVAB) TN Vevay
 FT Port St. Joe 93.5 WGVV 95.9 WAUV
 GA Rome 102.3 WOTU (WRGA-FM) (from WNGH)
 ID Boise 105.1 KJOI IA Ankeny
 IL E. Moline "89.3 WOLM-FM 106.3 KANY
 IL Monmouth 97.7 WDRL (WVPC)
 IL Mt. Carmel "89.1 WVJC (WVJC-FM)
 IA Le Mars 99.5 KZZL (KLEM-FM)
 KY Hodgenville 105.3 WMO (WLCB-FM)
 LA Alexandria 100.3 KRRV (KUGS-FM); now k (from r); still monophonic! MT Shelby
 LA Bastrop 100.1 KJRS 96.3 KZLN
 LA Crowley 102.9 KAJN-FM (KHIO); heard testing in \$; g WNE Alliance
 ME Monticello "89.5 WXMN 132.1 KFAH
 MD Westbrook 100.9 WLOB-FM (WROG)
 MO Elkton "88.3 WDEL-FM" MN Dover 97.5
 MA Marshfield 95.9 WATD WNOQ (WONH)
 MI Elsie "91.3 WOES TN Las
 MI Niles 95.3 WADR (WNIL-FM) ; Cruces
 MN Fairmont 106.5 KFMC (KSUM-FM) 103.9
 MN Minneapolis "90.3 KFBI I KGRD
 MN St. Louis Park "91.7 KDXL I KGRD-FM
 MS Centerville 104.9 WZZB TN Taos 99.3
 MS Columbus 103.9 WACR-FM WJAS
 MO Boonville 99.3 KDBX (KWRT-FM) NY Albany
 NY Mansfield 95.9 KIRI-FM "90.9
 MT Livingston 97.7 KYBS " WDBE

SCA (67 kHz) Activities

AL Decatur WRSA 98.9 adds SCA
 CA Arcadia KPCC-FM 107.1 ethnic (Korean).
 "FM107" onid on main channel.
 CA Modesto KHOP 104.1 adds SCA
 HI Honolulu KMQQ 93.1 to add talking book
 IA Dubuque KJWI 105.3 no SCA heard; drop listing as an SCA station
 IA Fort Dodge KIGA 92.1 background music
 MO Kennett KTMO 98.9 music
 NC Charlotte WSOO-FM 103.7 no SCA
 OH Cleveland WZZF 136.5 changes from talking book to ethnic
 OH Findlay WMMO 100.5 music
 PA Erie WLVU 99.9 music; WCCC 103.7 no SCA; telemetry only.
 TX Anarillo KGIZ-FM 93.1 adds SCA [book.
 TX Austin KUTV-FM "90.7 adds talking/
 WI Suring WRVM 102.7 Mutual network, occasional WI network news items and a mysterious "WMMG, FM-103" closed-circuit "station" that sounds like it is received over a tiny wire from Madison.
 BC Victoria CFMS 98.5 music

Readers' Reports and Comments

NY Cazenovia "90.9 WITC
 NC High Point 95.5 WHEP-FM (WHEP-FM)
 NC Wilmington 100.9 WEMA (WVFD-FM)
 OH New Lexington 106.3 WXLN NC High Point
 OK Edmond "90.9 KOKE "90.3 WWHH
 OK Tulsa 92.9 KBZE (KARC-FM) TX Denison-
 OR Gresham "88.5 KMH0 Sherman 101.7
 PA Girard "88.3 WBAE KDSQ (KDSX-FM)
 PA Lancaster "90.3 WPTG
 PA State College "89.9 WTLR
 TN Cleveland 100.7 WOLS (WCLE-FM)
 TX Copperas Cove 103.1 KOOV
 TX Plainview 97.3 KATX (KPLA)
 UT Centerville 105.5 KCQL (KSTU); presumably dropping n; no NIS.
 WA Seattle 102.5 KZOK-FM (KZOK); rp
 WI Antigo 104.9 WRIO-FM (WATK-FM)
 WI Appleton 105.7 WAPL-FM (WOCR)
 WI Eau Claire 104.5 WAXX-FM (WEAU-FM)
 WI Portage 100.1 WDDC (WDFR-FM)
 WI Stevens Point 97.9 WSP1 (WSP1-FM)
 PR Mayaguez 97.5 WIGA (WORA-FM)
 PR Ponce 105.1 WIOC (WPRP-FM)
 PR San Juan 99.9 WIOB (WDBS-FM)
 MR Gods Lake Narrows (54-32-55; 94-27-40)
 "49.9 CBWN 1800 h.v.; 90'
 MB Manigotagan 101.3 CBWA 154 h.v.; 270'
 MR Oxford House 95.5 CBWN-FM 95.5 78 h.v.;
 100'; MB Waasagoagan 105.1 CBWN-FM
 1700 h.v.; 129'. ON Sandy Lake 101.1 CBQV

Nonidentifying Stations

OH Sylvania WZZZ 105.5 Z-105, now r
 WI Milwaukee WXXW "89.7 FM-90

\$tereo, to be \$tereo, \$ Resumed

AL Birmingham WDJC 93.7 Dollar sign
 CA Indio KCMS 103.1 means "stereo"
 CT Monroe WMMR "88.1
 MS Gulfport WGFU-FM 96.7 rn, "Stereo 97"
 MS McComb WCCA 94.1 SC Darlington
 MO Buffalo KREB "90.3 WDR-FM 105.5, k
 MO Columbia KCOU "88.1 pr
 MN Aztec WRYX 94.9
 NY Auburn KWLX 105.9 [no NBC.
 NY Buffalo WWOL-FM 104.1; now fulltime \$/
 OH Cincinnati WXXU "91.7, p VA Tasley
 WA Seattle KYYX 96.5 WESR-FM 103.3
 WI Platteville WJUP "90.5

Abbreviations Used (selected)

c classical, e ethnic, g gospel, j jazz, k country, m middle of the road music, n all news, p progressive rock, r rock oldies or top hits, s soul. Networks: A ABC-FM, C CBS, E ABC Entertainment, I ABC Information, M Mutual, N NBC, P National Public Radio, S Associated Press Audio, U United Press Audio, Y ABC Contemporary, v vertical.

playthings that do the cause of DXing no good. And they tend to be such little outlets that they have no real DX potential to others; besides which, their operating hours are usually so sporadic that who wants to pay any attention to them, even while driving through the areas they "serve"? I also advise against you or your friends creating stations because then you might count them in your DXing logs and artificially increase your DX totals. If you like radio, why not get into it the real way—either by working or buying into an existing station, creating a new licensed facility, or doing it another way which is legal but not really too tried. Consider cable radio, FM translators with 30-seconds per hour break-aways from the main station, or SCA. But let's cut out this illegal stuff! However, Dick does list HIDA 106.7 \$ Santiago, HIME 97.7 La Romana 120w, m (no AM!), HIRJ 107.7 La Romana 100 w, and HIDV 97.9 is not an STL anymore since HIDV-452 was added (what is HIDV's power?). Dick says my SCA 67 kHz format information was wrong in the Sept. VUD for WPRM 98.5, WKAQ 104.7 and WOLA 107.7 in PR that they all program affiliated AM stations (WAPA 680, WVOZ 1400 or WKAQ 580 all the time), but my SCA abbreviation list contains only "TM" for such stations, meaning talk and music. Mike Dorner writes and says the Ondas-FM Latin FM directory should be ready in Feb., along with the noncommercial FM list of operating hours and addresses. Mike says the new WBRH *90.1 Baton Rouge LA is causing local interference to WWNO *89.9 New Orleans. Mike reports a new FM, probably in Port-au-Prince, Haiti, 4VRD 102.0 MHz. "One thing you might do is ask through your column that all readers check the Atlas listings for stations nearest them, and report on changes in calls, stereo, format, network, etc. There are many members who never send in reports, perhaps because their time or equipment is limited, but they are in positions to report on locals or semi-locals. I note that... gaps seem to occur in certain areas of the country: southern Alabama, Georgia, northern Mississippi, much of Tennessee and Kentucky, the western Carolinas, the high Rockies and northern Rockies, the interior of the Pacific northwest, the southwest and western plains states. Perhaps we have no members there, but it might be worth a tryout. The Atlas, it is my impression, has the slimmiest information for these regions, relying mostly on E-skip, which may or may not be reliable." John Ebeling did a survey of 23 normally stereo stations broadcasting local high school football games on a Friday night, and found that only 4 turned off their stereo generators (KXEL-FM Waterloo IA, KWQA-FM Worthington MN, KOEL-FM Oelwein IA, KTWN Anoka MN). All the rest (19) left stereo on with mono remote football pickup. Minnesota Public Radio and "Southern Minnesota Corp. for Public Broadcasting" are both interested in a Mankato MN public radio channel, with the latter group already filing. MPR plans to file, but for a different frequency, but to compete for funds.

Doug Everitt sent some McIntosh propaganda, sent out by a local stereo store, saying of the MR78: "If you are an inveterate FM DXer, you will be amazed at how many signals you can separate and receive clearly... We were trying to listen to a weak signal originating some 120 miles from our listening location—one nestled between a stronger signal 200 kHz below it, and a much stronger local station, 200 kHz on the higher side of the dial. If you've ever tried to receive that kind of signal on a lesser tuner, you'll know what we mean. In any case, when we did switch to the super-narrow position, we actually were able to listen to the desired distant station." KBEZ 92.9 Tulsa m, Schulke.

WEKU *88.9 Richmond KY back on with 50000h, v; \$, having been 10-watts for a while. After my SCA articles were published DXer Ted Fleischaker had a phone interview with Muzak's president, U. V. Muscio, and he told Ted there's never, to his knowledge, been a case where anyone's been prosecuted for listening to SCA Muzak signals. He also said "they got Lafayette stopped from selling SCA-equipped sets not because they did not want people listening, but because the sets were a deception as they said the SCA was available in all locations, which it is not! Also, he told me, in response to a question in which I said 'Is it going to be possible one day to listen to SCA with a portable like someone once told me?' that 'this can never be obtained because the signals would not be good enough and such would not be technically possible.' I just hope he never comes to visit you or me, because he'll see the 'impossible' is technically possible!" says Ted. WMMG-FM Brandenburg KY 93.5 now signs off at midnight every night (they were 24 hours). KUMR *88.5 Rolla MO 'has a listing for T SCA, but when I heard it it had the oddest thing—they were playing WWV time on it!' Isn't WWV mainly a "talk" SCA? KUMR's been known to have WWV on its SCA for years, so who needs a short-wave receiver, with SCA and the ability to hear KUMR's rebroadcast of WWV? How about CHU on SCA? The PRN told Ted that they want a station in Atlanta, but no SCA is open, and they want one in Dallas, and are negotiating with WRR-FM. PRN=Physician's Radio Network.

From Canada, Joe Markewicz clears up a misunderstanding about Kingston 107.5. He heard their complete identification: "This is CBBC 95.5 Cornwall and CBCK 107.5 Kingston," the fullest ID he's ever heard from any CBC repeater. CBCN 96.1 North Bay IDs on the hour and half-hour as "You are tuned to the Mid-Canada service of the CBC. In Natawa we are on 1240 and in North Bay on 96 FM." Every time they give 2 of the 25 odd low power stations they relay. No sign yet of Sudbury 97.1, 98.1. The CBC plans to make Sudbury the regional studios for this part of the north. On Sept. 7 at 5:27 pm EDT CHAY 93.1 Barrie was knocked off the air when a plane hit the 300-metre antenna of CKVR-3.

All occupants of the plane were killed, five in all. Although the TV got on the air with a temporary tower, the FM has not been heard by three VUD reporters who have tried for it. In Manitoba, Joe tried for CBWY 92.7 Jackhead, 90 miles by an over-water path, and heard nothing. "One of many non-licensed FM stations in Canada's north is CHIMO-FM from Fort Chimo PQ. The CRTC tolerates them to some extent. CHIMO is 900 miles north of Montreal, mostly Eskimo language, some English." (Got a frequency, or power for "CHIMO-FM"?) From Sudbury at 75 miles, CIGM 92.7 noted with a much better signal at night than CKSO with 50 kw puts out on AM. "I'm sure if the CBC put 95.1, 96.1 North Bay on AM they would have had terrible coverage. Noted in August VUD a DXer from Waterloo reported two Manitoba FM repeaters of the CBC as a positive catch—101.5 and 94.5. I'm more inclined to think he heard CJUM and CHIQ," and not the lower-powered CBC relayers in north Manitoba.

The threatened start of a 1000-watt FM station in Provincetown MA is causing 10-watt WSDH 91.7* Sandwich MA to search for funds to increase power and avoid being blanked out by interference from across the water. WSDH wants 310 watts. Nearby Provincetown wants 1 kw on *91.5. WKKL *91.1 West Barnstable MA is on now with 10 watts weekdays 4 to 10 p. m. Music will be j, c, folk. Our reporter, Rod O'Connor, is a friend of the manager of WSDH, so guess who Rod's rooting for? He says that, for a 10-watt high school station, WSDH has a very impressive set-up.

Quebec's Walter Patton says there seems to be a policy within the CBC to downgrade all call signs. "They use them very infrequently and usually just say that they are CBC radio or television and give the city of origin and frequency." He hopes I can locate some of the towns getting new FM stations, like Petite Opinaca PQ. Some of these are James Bay construction sites. "I imagine many of them are only temporary camps and will probably disappear after construction of the power dams are complete. Some of them are not on any map I have including the provincial road map. I heard the full calls and frequency and location for CBOC-FM 95.5 Cornwall and CBOB-FM 100.3 Brockville given together at noon. I don't know about other times. The announcement was not professional and included an error by saying Kingston instead of Brockville." The CKO-FM news network is having rough times financially, but directors are asking for a fair trial. I think they're scared, knowing about NBC's abortive experiment with all-news radio in this country with its NIS (News and Information network) service.

Writes W. T. Ryan, KZOK-FM Seattle plans to simulcast parttime in mornings and evenings with its AM. No sign yet of KDUX 104.7 Ocean Shores WA. "I understand KXRO Aberdeen WA bought them, plans a beautiful music format." KPLU *88.5 Tacoma, says in their program guide they plan to go to 100 kw, move transmitter, and expand hours. No CP for this yet. "I don't know why KISW wants a translator in Seattle on 104.5, even if Seattle is hilly. KERI on 104.3 is probably right to complain. Wonder if KIXI's Everett translator on 106.3 blots out KLAY Tacoma 106.1 in Everett? I did have this translator in stereo earlier this year (10 watts; received in Victoria BC). Don't know just what to think of those translators. It may make sense for central Utah, but does it in or near a metropolitan area?" "After seeing literally dozens of ads for Pioneer's Supertuners," writes Rick Samford, "it was nice to see Peter Sawatzky's in-use product review. . . . However. . . he mentions that the KP-500 has a claimed IHF sensitivity of 1.1 microvolts while the Heath AJ-15 is rated at 1.5. The Heath is measured with a 300-ohm impedance while the other unit uses 75 ohms. "Of course, the 75-ohm impedance measurement will be half that of the 300 ohm. Thus, the KP-500 has a claimed IHF sensitivity of 2.2 microvolts when measured with the usual 300-ohm impedance. So, in effect, Pioneer doesn't claim better sensitivity than the Heath. Those DXers who like to read the measured specs of such products should consult Len Feldman's test report in the July, 1976 Audio."

A fellow music faculty member at Ball State, Muncie IN, wonders why Ralph Strobel is able to do so well in FM DXing. The other fellow has a Pioneer tuner with a 60' antenna and rotor and can rarely pull in WFMT Chicago. One of these days they are going to compare tuners side by side.

In Buffalo, WPHD 103.3 is still not the true progressive rock station that the change back to those call letters has implied, says Bill Thompson. WBEN-FM has been sold, with the new owners impressed with the "gorgeous signal and big audience" that the 102.5 mHz rocker has.

Dave Walcutt has been in Hawaii, and supplied some of the Hawaii station news here. He said KAIM discontinued SCA operations 7 years ago, due to "problems." He also sent copies of the application for a KAIM sister station on 97.1 in Hilo, KFSH, 28500hV; -237'. KFSH will be cg. Dave, like John Ebeling, a few months before, was nice enough to take along a portable radio with SCA to do station checking for us in the Hawaiian Islands. In San Francisco, Dave heard a peculiar grinding sound on KQED *88.5, and wonders if this is an SCA. KHSS 97.5 calls self "Kiss," "FM-97," plus many full ID's. Honolulu. KBIG 104.3 Los Angeles' SCA is Japanese, with news, spoken word and ads. Reporters this month:

Richard Clark, La Vega OR; Tom Cornell, Kokomo IN; Mike Dorner, Jr., Metairie LA; John Ebeling, Bloomington MN; Doug Everett, Enid, OK; Ted Fleischaker, Louisville KY; David Grim, Akron OH; Nick Lombardi, Atlanta GA (who thinks my column reads better when contributors' names appear at the end rather than scattered around in the middle, beginning, end, etc.; however, I have gotten flack for lack of attribution for the comments that appeared); Joseph A. Markewicz, Hornell Heights, Ont.; R. J. O'Connor, S. W. Harbor ME; Walter Patton, Montreal PQ; W. L. Ryan, Victoria BC; Rick Samford, Burnet TX; Ralph Strobel, Muncie IN; Phil Thomae, Port Lavaca TX; Bill Thompson, Buffalo NY; Paul Traska, Buffalo NY; John Timm, Milwaukee WI (who sent an attractive WLYF 101.5 S. Florida FM dial card); Dave Walcutt, Carbondale IL; Larry Weil, N. Babylon NY; Steve West, Havertown PA.



FCC NEWS AND DATA

Dave Pomeroy
KTWU--Channel 11
301 N. Wanamaker Rd.
Topeka, Kansas 66604

November 1977

TV Applications

| | | | |
|-------------------|------|--------|---------|
| Atlantic City, NJ | (53) | 1832kw | |
| Jacksonville, FL | (30) | 1662kw | 994AAT |
| Jacksonville, FL | (30) | 2612kw | 990AAT |
| Las Vegas, NV | (3) | 73.9kw | 1205AAT |
| Cocoa, FL | (52) | 194kw | 220AAT |
| Denton, TX | (2) | 100kw | 1085AAT |
| Milwaukee, WI | (30) | 762kw | 531AAT |

CP's Granted

| | | | |
|-------------------|------|--------|---------|
| Winston-Salem, NC | (45) | 1607kw | 562AAT |
| Bloomfield, CO | (12) | 152kw | 2416AAT |

New Stations On the Air

| | | |
|--------------|------------|--------------|
| WXNE-TV (25) | Boston, MA | Independent |
| KOET (3) | Eufala, OK | Oklahoma ETV |
| WHME (46) | South Bend | Independent |
| KTVZ (21) | Bend, OR | NBC |

Call Letter Applications

| | | |
|---------|------------------|---------------|
| WYIS | Phoenixville, PA | new |
| KBDI-TV | Bloomfield, CO | new public TV |
| KYEL-TV | Yuma, AZ | new KBLU-TV |
| WFFT-TV | Ft. Wayne, IN | new |
| WNYW | Hanover, NH | new |
| WHME | South Bend, IN | new |
| KIMT | Mason City, IA | new KGLO-TV |
| WTVG | Newark, NJ | new WBTB-TV |

Call Letters Granted

| | | |
|---------|---------------|-------------|
| WEQA | Red Lion, PA | new |
| WIFR-TV | Freeport, IL | was WCEE-TV |
| WANX-TV | Atlanta, GA | was WHAE-TV |
| WCME | Chicago, IL | was WXXW |
| KNBN-TV | Dallas, TX | new |
| WSET-TV | Lynchburg, VA | was WLVA-TV |

Translators Granted

| | | |
|-------|---------------------------|---------|
| W06AM | Montreat, NC | WLOS |
| K07PA | Manitou Springs, CO | KTSC |
| K02IW | Klawock, AK | various |
| K81AR | Cheyenne, OK | |
| W76AG | Charlottesville, VA | |
| K070Z | Grass Range, MT | KRTV |
| K02IU | Culberson, NE | KLOE |
| K12KW | Stapleton, NE | KWNB |
| K12KX | Grants Pass, OR | KSYS |
| K110B | Bouse, AZ | KPHO |
| K02IV | Hanover, KS | KTSB |
| K08JC | Hanover, KS | KHNE |
| K08JB | Heart Butte, MT | KFBB |
| K12KY | Heart Butte, MT | KRTV |
| K02ZT | Kake, AK | various |
| W47AB | Mansfield, OH | WOSU |
| K12LA | Kenai, AK | KAKM |
| W68AG | Altoona, PA | WOPC |
| W57AH | Altoona, PA | WOPC |
| K10KM | Cape Girardeau, MO | WSIL |
| K10KN | Fruitland, UT | KUED |
| K67BE | Silt, CO | KBTB |
| K69BM | Niobrara, NE | KXNE |
| K69BN | Wauneta, NE | KPNE |
| K02IS | Hydro Jet Mining Site, UT | KUTV |
| K04JB | Hydro Jet Mining Site, UT | KTVX |

Translators Granted (con't.)

| | | |
|-------|---------------------------|------|
| K070X | Hydro Jet Mining Site, UT | KUED |
| K09NU | Glenwood, WA | KPTV |

New Dominican Republic Stations on the Air

| | |
|--------------------|-----------------------|
| R TV Dominicana-12 | La Descubierta |
| R TV Dominicana-12 | Dajabon |
| R TV Dominicana-12 | Pico Isabel de Torres |

FROM THE READERS:

CKVR-3 in Barre, ON returned to the air on September 19 on a 400-foot borrowed tower following the September 7 collision of a small plane into their tower...CBLFT7-55 repeater was also on the tower--no word as to the status of that transmitter... Item in this column in September VUD about KVFD-21 still being off the air should have been for KVFD-50; KTIIN now occupies channel 21 in Ft. Dodge...University of Western Ontario is DX'ing UHF for research purposes; results could have an effect on future channel allocation near the Canada-United States border...Channel 26 has been applied for in Green Bay by some of the stockholders of WAUN-FM in Kewaunee; programming will be religious with some local sports...WFMZ-69 in Allentown, PA has upped power to 219kw with an attempt to pick up some audience in the Philadelphia area... Licensees of WPCB-22 and WPFO-40 (Pittsburgh and Greensburg, PA) are on verge of exchanging channels; if plan is approved, WPCB-40 should be on the air by spring and WPFO-22 on in Pittsburgh at about the same time--owners of WPFO also operate WBFF-45 in Baltimore...Kansas Public TV Board hopes to have first transmitter on the air in Garden City by 1979--plan calls for four stations to cover areas of the state not now receiving PTV signals...Construction is now underway at many PTV stations on satellite receiving antennas to be used to replace current AT & T interconnection used by PBS stations; satellite interconnection will make it possible for non-commercial outlets to choose from four programs at a time rather than the one which is now possible...KTVZ-21 signed on the air November 6 in Bend, OR with NBC programming; KTVZ is working on contracts which would also add some ABC and CBS programming. Thanks this month to Frank Aden, Jr., Bill Thompson, Ken Simon, Bruce Elving, Clarke Ingram, Bill Draeb, Doug Everitt, and Bob Baker.



This will be my last FCC column so I would like to receive your reports if you see the above logo on channel 11. You will receive a verification. Thanks for the support. dp

NORTHERN FM-DX



Fred Nordquist
7945 Roxford Road
Clay, NY 13041

November 1977

For FM DXers in Canada, the Northwest-Central states of WA OR ID WY ND SD NE MN IA, and all states east of the Mississippi River and north of the Mason-Dixon Line. Report your DX now. Reports of this summer's DX activities are still filtering in. Es openings in August were noted on the 2nd, third, and the 7th, with none reported since then. Trono was reported on 9/4 & 9/9. This will be my last column due to other pressing responsibilities. It has been enjoyable working with each of you. Let's continue to support our club's editors with reports.

Paul D. Traska - 64 Weaver Ave. - Buffalo, NY 14206

| | | | | | | |
|-------------|------------------|-------------------|--------------|------------------|---------------------|----------------|
| 9/8 Tr 1930 | <u>WBEI</u> | 90.1 IL Chicago | 9/22 Tr 1700 | <u>WNCQ</u> | 97.5 NY Watertown | |
| | <u>WNMU</u> | 90.1 MI Marquette | | 1745 <u>WHCU</u> | 97.3 NY Ithaca | |
| | 2030 <u>WHAD</u> | 90.7 WI Delafield | | | <u>WICB</u> | 91.7 NY Ithaca |
| | 2100 <u>WPNE</u> | 89.3 WI Green Bay | | 1820 <u>WKFM</u> | 104.7 NY Fulton | |
| 9/9 Tr 0015 | <u>WNIU</u> | 89.5 IL De Kalb | 9/28 Tr 1300 | <u>WVWR</u> | 89.1 VA Roanoke | |
| | | | | 1930 <u>WCUC</u> | 91.7 PA Clarion | |
| | | | 9/29 Tr 1930 | <u>WGTS</u> | 91.9 MD Takoma Park | |

Present logs: 184. 73's -- Paul.

Fred McCormack - Des Lacs, NJ 58733 (CST)

Eqt: Des Lacs - Heath AR-1500, JFD log. antenna
 Fargo - Heath AR-15, rabbit ears.

| | | | | | |
|-------------|------------------|----------------------|---------------|------------------|-------------------------------|
| 9/2 Tr 2015 | <u>CBW-</u> | 95.7 MB Fisherbranch | 9/3 Tr 0032 | <u>KAYE</u> | 91.7 MN Grand Rapids,r(380) |
| | 2024 <u>CBW-</u> | 104.7 MI Fairford | | 0103 <u>KWBE</u> | 101.3 MN Richfield,FM101(455) |
| | 2030 <u>CBW-</u> | 92.7 MB Jackhead | | 0118 <u>WWJO</u> | 98.1 MN St. Cloud,k(395) |
| | | (All CBW relays) | 9/4 Tr 0915 | <u>KIOV</u> | 104.7 SD Sioux Falls,k(400) |
| | | | *10/1 Tr 0910 | <u>KPRM</u> | 97.5 MN Park Rapids,ex-103.7 |

* From Fargo.

Very little time spent DXing since the end of E-Skip in July. 73 -- Fred.

John Ebeling - 9209 Vincent Ave. S. - Bloomington, MN 55431 (CST)

Eqt: Heath AJ-15, Sony ST-5130.

| | | | | | |
|-------------|------------------|-----------------------------|--------------|------------------|----------------------------|
| 9/7 Tr 2100 | <u>WLKI</u> | 100.1 IN Angola, rock | 9/7 Tr 2300 | <u>WLAK</u> | 93.9 IL Chicago |
| | 2229 <u>WASK</u> | 105.3 IN Lafayette, country | | 2301 <u>WORT</u> | 89.7 WI Madoson,rock |
| | 2230 <u>WBEM</u> | 96.1 IL Chicago | | 2330 <u>WXRD</u> | 105.5 IL Woodstock, rock |
| | 2230 <u>WACI</u> | 92.1 IL Freeport | | 2345 <u>WJVM</u> | 94.3 IL Sterling, rock |
| | 2231 <u>WOJO</u> | 105.1 IL Chicago,also SCA | | 2400 <u>WJKL</u> | 94.3 IL Elgin |
| | 2245 <u>WGCI</u> | 107.5 IL Chicago,SS on SCA | 9/21 Au 1617 | <u>WVPE</u> | 88.1 IN Elkhart, rock, |
| | | | | | ("request line" was open). |

September reception has been rather poor (no Es) but had one good tropo opening to northern IL & IN. Regards -- John.

Robert Eddy - Box 338, Newport, OH 45768 (EST)

| | | | | | |
|-------------|------------------|--|-------------|------------------|------------------------------|
| 8/3 Es 1822 | <u>KUNC</u> | 91.5 CO Greeley, sports,wx | 9/4 Tr 0021 | <u>WCEU</u> | 89.9 IL Peoria, rock |
| | 1829 <u>WCAL</u> | 89.3 MN Northfield, promo | | 0029 <u>WIFF</u> | 105.5 IN Auburn,bluegrass wx |
| | 1836 <u>KEMO</u> | 93.5 MN Benson, lcl news | | 0045 <u>WPNM</u> | 106.3 OH Ottawa,AT-40,PSA,wx |
| 9/3 Tr 2354 | <u>WNIU</u> | 89.5 IL DeKalb, folk fest.(1977 best ever for Es, poorest for Tr.) - Robert. | | | |

Eric Fader - 23-35 Bell Blvd - Bayside, NY (ELT)

Eqt: Concord CR-260, Bowtie. Log at 177.

| | | | | | |
|--------------|------------------|------------------------------|--------------|------------------|------------------------------|
| 7/30 Tr 0146 | <u>WAAF</u> | 107.3 MA Worcester, prog. r | 8/27 Tr 0300 | <u>WQRK</u> | 104.5 VA Norfolk,Q-1044 |
| | 0300 <u>WIHS</u> | 104.9 CT Middletown, gospel? | | 0323 <u>WDSB</u> | 94.7 DE Dover, country |
| | 0304 <u>WXCI</u> | 91.7 CT Danbury, s/off | | 0330 <u>WGMT</u> | 102.9 VA Norfolk,o/WDRG+WMGX |
| | 0415 <u>WHCN</u> | 105.9 CT Hartford, o/local | | 0437 <u>WRBS</u> | 95.1 MD Baltimore |
| 8/5 | 0230 <u>WCTY</u> | 99.7 CT Norwich, k,OK-98 | 9/5 | 0245 <u>WHIM</u> | 94.1 RI Providence,country |
| 8/8 | 0305 <u>WPGE</u> | 95.5 MD Morningside | | 0300 <u>WDAC</u> | 94.5 PA Lancaster |
| 8/27 | 0245 <u>WXRI</u> | 105.3 VA Norfolk, gospel | | 0314 <u>WHWV</u> | 97.7 NY Hyde Park, \$97.7 |

Bill Dulmage - R.R. 3 - Colborne, Ontario K0K 1S0 (EDT)

| | | | | | | | |
|---------|------|-------------|---------------------------|-----|------|-------------|----------------------|
| 7/7 | 0100 | <u>CBO</u> | 103.3 ON Ottawa | 9/5 | 1908 | <u>WKGW</u> | 104.3 NY Utica |
| 7/10 | 1803 | <u>CFMP</u> | 101.5 ON Peterborough | | 1929 | <u>CHUM</u> | 104.5 ON Toronto |
| 7/12 Es | 2006 | <u>KWIC</u> | 107.7 TX Beaumont | | 2200 | <u>CKXP</u> | 92.1 ON Brantford |
| | 2013 | <u>WPCV</u> | 97.5 FL Winter Haven | | 2240 | <u>CFPL</u> | 95.9 ON London |
| | 2028 | <u>KMOD</u> | 97.5 OK Tulsa | | 2247 | <u>WGRQ</u> | 96.9 NY Buffalo |
| | 2048 | <u>KOPM</u> | 104.1 OK Okla. City | | 2308 | <u>WWSE</u> | 93.3 NY Jamestown |
| | 2100 | <u>KFNB</u> | 101.9 OK Okla. City | | 2350 | <u>WFLC</u> | 102.3 NY Canandaigua |
| 7/15 GW | 1800 | <u>CFNY</u> | 102.1 ON Brampton (100kw) | 9/6 | 0000 | <u>CKO</u> | 99.1 ON Toronto |
| 9/5 | 0000 | <u>CKQS</u> | 94.9 ON Oshawa | | 0001 | <u>CING</u> | 107.9 ON Burlington |
| | 1622 | <u>WVOR</u> | 100.5 NY Rochester | | 0006 | <u>WRLX</u> | 106.9 NY Auburn |
| | 1627 | <u>WBEN</u> | 102.5 NY Buffalo | | 0102 | <u>WRVO</u> | 89.9 NY Oswego |
| | 1658 | <u>WKFM</u> | 104.7 NY Fulton | | 0109 | <u>CJET</u> | 97.1 ON Belleville |
| | 1703 | <u>CKFM</u> | 99.9 ON Toronto | | 1755 | <u>CJET</u> | 101.1 ON Smith Falls |
| | 1850 | <u>CHLQ</u> | 107.1 ON Toronto | | | | |

73's -- Bill.

Bruce Elving - 18 1/2 East Fifth Street - Duluth, MN 55805

6/8 Es (Downtown Duluth MN)

0906 WDAC 94.5 PA Lancaster, \$, no SCA
 0926 WRFY 102.5 PA Reading, \$, m, music on SCA
 1837 WSUS 102.3 NJ Franklin, not \$, but letterhead from sta. says \$
 1840 WFOV 90.7 NY New York City
 1900 WNYU 89.1 NY New York City
 1903 WCTO 94.3 NY Smithtown, w/full legal ID

6/9 Es Hermantown (Adolph) MN

1630 KSUC 88.3 TX Keene, mono
 1747 KFBC 97.9 WY Cheyenne, mono, going into separate prog. from AM, m
 1800 KALL 94.1 UT Salt Lake City, at 1445 hrs reciting list of all their on-the-air xlters, \$, m, low frequency telemetry.

1830 KUER 90.1 UT Salt Lake City
 1833 KSOP 104.3 UT Salt Lake City
 1840 KKHJ 93.9 SD Rapid City, \$, R, 1st skip rcd from a state adjoining MN. New CL - ex-KKLS.
 1851 KSUB 92.5 UT Cedar City, \$
 1902 KLUB 97.1 UT Salt Lake City, w/legal ID, after many "Club" IDs.

6/14 Es Duluth, MN

1454 WREN 101.7 GA Warner Robins
 1506 WROY 97.7 FL St. Augustine, CBS & lcl nx
 6/20 Es
 1939 WAJB 107.3 FL Pensacola
 2028 WBOP 101.5 FL Pensacola
 2100 WONE 98.5 FL Panama City
 6/21 Es
 1900 WLTE 102.5 GA Waycross
 1920 WGYL 93.5 FL Vero Beach, \$, m plus SCA(mx)
 1935 WVOH 93.5 GA Hazlehurst
 7/3 Es
 1945 WCVU 94.5 FL Naples, full ID, \$, m, Sea-view

The Es season ended for me 7/3, although I tried many times after that. Was surprised to see so many Es loggings, even from the Duluth area by other DXers, much later into July and even early August by DXers other than myself!

9/1 Tr

KOSN 99.3 MN Thief River Falls, \$, m
 KVLR 95.3 MN Detroit Lakes, \$, rm, sta. ver., sent bumper stickers, pen, and even a tee-shirt. - Bruce.

W.T. Ryan - 65 Battery Street - Victoria, BC (PDT)7/7 Es

0845 KUNM? 90.1 NM Albuquerque
 0847 KTDB? 89.7 NM Ramah
 0914 KFYZ? 96.1 CO Greeley, gospel
 0915 KULL 94.5 KS Scott City, country
 1038 XHIS? 90.3 BCN Tijuana, \$, soul
 1042 KPBS? 89.5 CA San Diego, classical mx

7/8

1040 KVM? 93.7 CA Coachella, SS
 1050 Unid 101.9 SS, \$, Mexicali? (overmod.)
 1059 XHVG? 103.3 BCN Mexicali?, \$, rock, also at 1102, "The next dimension in radio"

1115 KILA 95.5 NV Henderson, gospel
 1125 KIOG 104.7 AZ Mesa
 1140 KUPD 97.9 AZ Tempe, \$, rock
 1204 KACV 89.9 TX Amarillo, \$, prog. rock

7/9 Tr

0419 KXXR 93.7 WA Spokane, EL, (275)
 0530 KMEI 107.9 WA Spokane, s/on, gospel (275)

7/9 Es

1015 XHIS? 90.3 BCN Tijuana
 7/11 Tr
 0559 KCNA 105.3 WA Kennewick, EL (250)

7/12 Tr

0630 KWIQ 100.3 WA Moses Lake, (200)

7/13 Es

1915 KAWY? 94.5 WY Casper, \$, rock
 1920 KSTC 96.7 CO Sterling, AM/FM ID

7/18 Es

1658 KRWG 90.7 NM Las Cruces, Tooth Fairy
 1702 KTDB 89.7 NM Ramah, ID
 1703 KASK? 103.1 NM Las Cruces, \$, rock
 1704 KEZB? 96.3 TX El Paso, EL
 1712 KSET? 94.7 TX El Paso, \$, country

7/20 Es

2130 KRPM? 95.5 AZ Phoenix, EL
 KMEO? 96.9 AZ Phoenix, EL
 KOOL? 94.5 AZ Phoenix, rock
 KMCR? 91.5 AZ Phoenix, jazz
 KUAT? 90.5 AZ Tucson, Classical music

7/21 Es

1824 XHIS? 90.3 BCN Tijuana, \$, soul
 2100 KCBY 90.1 CA San Luis Obispo, \$, lcl nx

7/23 Es

2140 KPFX? 90.7 CA Los Angeles, bagpipes
 7/25 Gw
 0220 KGRG 89.9 WA Auburn, rock, 10w. (90)
 0255 K292AL 106.3 WA Everett, \$ (KIV) (lcltr) (60)

7/26 Es

1532 KUAT? 90.5 AZ Tucson, \$, classical music
 1536 KXTC? 92.3 AZ Glendale, jazz
 1542 KOOL 94.5 AZ Phoenix, weather
 1605 KYEZ? 93.7 KS Salina
 1610 KSKU 102.1 KS Hutchinson, \$, rock
 1612 KJLS? 103.3 KS Hays
 1613 KARD? 107.3 KS Wichita, \$, Easy Listening
 1614 KWBN? 102.9 KS Hutchinson, \$, country
 1615 KSID 95.3 NE Sidney
 1630 KXXX 100.3 KS Colby, \$, Easy Listening
 1656 KLOV 102.3 CO Loveland, rock
 1700 KACV 89.9 TX Amarillo, \$, prog. rock
 1702 KOEZ? 9.3 KS Newton
 1706 KULL 94.5 KS Scott City
 1732 KARD? 107.3 KS Wichita, EL, o/KFFM

7/27 Tr

0105 KUEZ 104.1 WA Yakima, s/off (180)
 0108 KZEL 96.1 OR Eugene, prog. rock, \$, (300)

7/27 Es

1040 KANW 89.1 NM Albuquerque, rock
 1042 KQNM 93.7 NM Gallup, \$, Easy Listening
 1043 KGLP? 94.5 NM Gallup, \$, country
 1059 KTDB 89.7 NM Ramah
 1250 Phoenix stations in - to 96.9. Also 2115.
 1303 KILA 95.5 NV Henderson, gospel
 1623 KRWG? 90.7 NM Las Cruces

7/28 Es

1707 KQNM? 93.7 NM Gallup, \$, EL
 1708 KGLP? 94.5 NM Gallup, country music
 1820 KMCR? 91.5 AZ Phoenix, "All things Consid."
 1959 KCTB? 93.9 AZ Flagstaff, gospel

8/2 Es

1837 KANW? 89.1 NM Albuquerque
 KUNM? 90.1 NM Albuquerque
 KIPC? 91.5 NM Albuquerque
 2019 Phoenix stations to 104.7, also KUAT 90.5 Tucson, classical music.
 2032 KILA 95.5 NV Henderson

W.T. Ryan report - continued

8/2 Es
 2032 KVOR?100.3 CA Elythe
 2039 KVID? 93.7 CA Coachella, SS
 2041 KDSE?104.7 CA Palm Springs, EL
 2051 XHVG?103.3 ECN Mexicali
 2055 KXO? 107.5 CA EL Centro

8/12 MS
 0545 UNID 94.9 "K-ah-so"
 0550 KSIH? 94.9 ID Pocatello, lcl ad
 8/14 Tr
 0100 KAOS 89.3 WA Olympia, prog. rock(95)

Mike Bugaj - 69 Sherman Road - Enfield, CT 06082

Eq: Sony 5130 receiver, Finco FM-5 antenna @ 35' w/rotor. Total:833.

7/19
 Es 1829 KKEG 92.1 AR Fayetteville
 7/24
 Tr 2030 tropo to Norfolk area stations

7/26
 Es 1905 KQDE 92.1 MN Wauseca
 2105 KPCG 102.5 MO Joplin, gospel
 2126 KAMO 94.3 AR Bentonville, K-moe
 2130 KWFC 97.3 MO Springfield, gospel

7/31
 Es 1623 KGRC 92.9 MO Hannibal, ID
 1644 KPRS 103.3 MO Kansas City
 1658 WTHW 97.3 KS Topeka, movie spot
 1700 KNDM 95.3 MO Maryville, ID, nx
 1709 WRXX 95.3 IL Centralia, ID
 1724 KEYN 103.7 KS Wichita, ID, rock
 1731 KSWT 107.7 KS Topeka, K-sweet
 1737 KBBQ 104.3 MO Kansas City, ID, rock
 1741 KCFD 98.5 OK Tulsa, gospel
 1756 KMBR 99.7 MO Kansas City, nx spl rpt
 1807 KNEY 96.7 KS Manhattan, nx sports
 1900 KGNO 95.5 KS Dodge City, EL, ID

8/7
 Es 0303 CHMM 97.5 MB Winnipeg, excellent
 0303 CKY 92.1 MB Winnipeg, excellent
 0310 CHIQ 94.3 MB Winnipeg, Q-FM, "
 0401 KFJM 89.3 ND Grand Forks, ID
 0406 KKDQ 92.9 ND Grand Forks (Never
 stumbled in Es this early
 before)

8/12 MS 2225 WEZL 103.5 SC Charleston, ID
 Tr 2230 Central/Western NY & W. Ont. stas. up.
 2247 WGRQ 96.9 NY Buffalo, Q-FM, no WOUR
 8/13
 Tr 0002 CHEZ 106.1 ON Toronto, "Chay-106", r
 0103 WOOD 105.7 MI Grand Rapids, "Wood rad-
 io", \$, my longest Tr (670).
 8/14
 MS 2043 KWFC 97.3 MO Springfield
 8/28
 MS 0027 WQLR 106.5 MI Kalamazoo, ID
 9/4
 Tr 1420 CFCA 105.3 ON Kitchener, L&C
 1710 CKPC 92.1 ON Brantford, EL
 1710 CHFI 98.1 ON Toronto, ID, L&C
 1740 CHUM 104.5 ON Toronto, sports, L&C
 1755 WNUZ 103.5 MI Detroit, gospel, ID
 1840 WDVF 102.5 PA Pittsburgh, o/u WBEN
 1945 WGPB 107.5 MI Detroit, gospel
 1958 WMCB 104.3 MI Detroit, \$ o/WKGV Utica
 2037 WRIF 101.1 MI Detroit, \$, ID, rock
 2045 WRKY 103.5 OH Steubenville, r,\$
 2058 WSHH 99.7 PA Pittsburgh, ID,\$
 2015 WMNI 99.7 OH Columbus, \$, ID, o/u WSHH

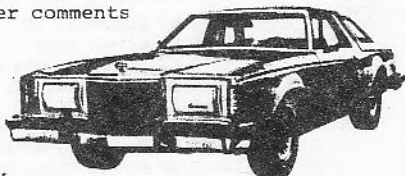
Frank Aden - 1535 NW Ithaca Ave. - Bend OR 97701 (PDT)

Receiver: TX-7500, ST-80F; Antenna: Winegard SC650 @25', rotor, preamp (20db gain).

6/09 1100 KSJR 90.1 MN NPR 6/10 1836 XHEM 103.5 CHI 6/11 2055 KUUZ 96.9 ID rock
 1105 KSJN 91.1 MN NPR 1842 XHTO 104.3 CHI mor 6/25 2325 KLON 88.1 CA NPR
 1105 KICC 91.5 MN class. 1900 KLOZ 102.1 TX 2328 KKLK 88.9 CA jazz
 1110 KDSU 91.9 ND NPR 1910 KAMA 93.1 TX 2330 KCRW 89.9 CA
 1130 KEMO 93.5 MN lcl ad 1912 KSET 94.7 TX 2334 KPCS 89.3 CA jazz
 1200 KDLO 96.9 SD 1914 KEZB 96.3 TX mor 2335 XHRM 92.5 BC
 1205 KSTI 88.5 SD class. 1915 KINT 97.5 TX KINT98 2336 KBCR 93.3 CA mor
 1207 KQAA 94.9 SD mor 1916 KASK 103.1 TX rock 2338 KVMJ 93.7 CA rock
 6/10 1425 KEFM 96.1 NE 1917 KOPE 104.9 MN 2340 KLRD 94.9 CA
 1428 KQHQ 98.5 IA rock 1920 KGRD 103.9 MN rock 2344 KALJ 95.1 AZ rock
 1430 KEZO 92.3 NE 1922 KISM 99.9 TX 2345 KYXY 96.5 CA
 1435 KVNO 90.7 NE 1924 XHPX 88.3 CHI 6/28 2000 WCAL 89.3 MN ID
 1437 KIOS 91.5 IA 1925 KTEP 88.3 TX Jazz 2003 KRLX 90.3 MN class.
 1440 KGOR 99.9 NE 1930 KRWG 90.7 MN ABC nx 2004 KQDE 92.1 MN k
 1445 KTTT 93.5 NE 1933 KSDL 92.3 TX rock 2010 KNUJ 93.1 MN news
 1446 KBRX 92.7 NE 6/11 1759 KTTT 93.5 NE rock 2013 KSJM 93.3 ND news
 1450 KXQR 103.7 ?? 1800 KROA 95.7 NE 2014 KYTN 94.7 ND
 1815 KMCR 91.5 AZ 1803 KRVN 93.1 NE lcl ad 2015 KDHL 95.9 MN k
 1820 KUTC 92.3 AZ 1840 KRGI 96.5 NE rock 2016 EDLO 96.9 SD mor
 1822 KWFM 92.3 AZ 1842 KSRD 96.9 NE rock 2017 KLOH 98.7 MN rock
 1824 KDKB 93.3 AZ 1844 KEZO 92.3 NE ID 2018 KBYC 99.1 MN rock
 1825 XKEW 93.7 AZ 1850 KBRX 92.1 NE 2022 KMIT 102.3 SD
 1827 KAIR 94.9 AZ 1915 KSEZ 97.9 IA Rock 2030 KYSM 103.5 MN k
 1828 KMEO 96.9 AZ mor 1917 KBCW 95.5 IA ID 2032 WCCO 102.9 MN "CCO"
 1829 KUPD 97.9 AZ 1920 KTPC 103.3 IA 2035 KPAT 97.3 SD rock
 1830 KBBC 98.7 AZ 1935 KIOV 104.9 IA 2036 KBHP 93.1 SD
 1831 KUAT 90.5 AZ class. 1937 KQHQ 104.1 IA Super Q 2038 KELO 92.5 SD mor
 1832 KCEE 96.1 AZ Gospel 1944 KWAT 96.1 SD 2040 KSEZ 97.9 IA rock
 1835 KJIS 103.3 KS 1951 KESD 88.3 SD 2100 KNWC 96.5 SD class.

CAR FM PART 1

With this issue, we begin a new 2-part series that will discuss FM in the car. This article will cover FM reception properties you will encounter while driving. Later in Part I, we'll be discussing the different auto antennas; and the final article to appear in the December VUD, will describe receivers. Reader comments and questions will be invited and may even lead to an additional article at some time in the future.

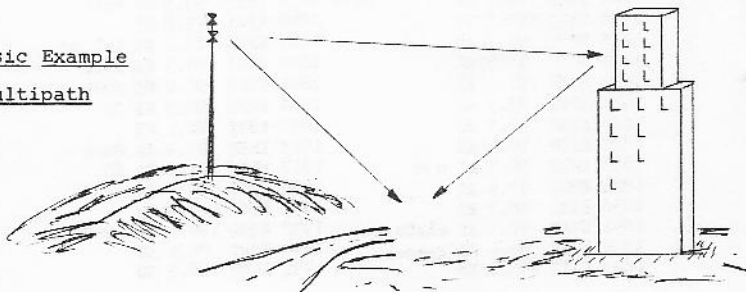


Because of our hobby, we DX'ers probably have a better than average idea about what VHF propagation is really like and can easily recognize the various phenomena when they occur. Everything that we can observe with our home sets also happens in the car. There is, however, one major difference between home reception and that in a car. Because a car can move, the condition called "multipath" becomes much more prominent. We must also realize that a car receiver may be expected to play with signals from a nearby transmitter that deliver a few tenths of a volt or a distant signal that may be down in the microvolts. And, in the space of about an hour, we can easily go from one extreme to the other listening to only one FM station.

FM signals behave much like light waves. They are radiated from nearly a point source and are reflected and absorbed by surfaces they strike. Both are refracted or bent by the atmosphere so that they will go around corners or follow the Earth's curvature. The net effect on FM signals of being reflected is to fill in shadow areas and cause multipath.

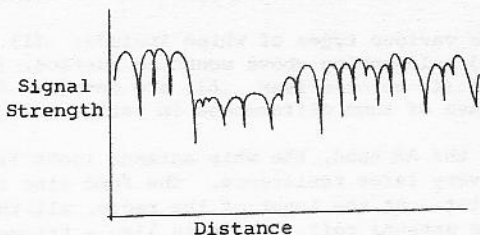
As the name implies, multipath means that signals received at a given point may be coming from several directions at the same time. Because of differing arrival times due to different path lengths, these signals may add, subtract or even cancel. Naturally, for cancellation to occur means that a minimum of two signals must combine and they must be equal in strength and opposite in phase. Fortunately, this is a relatively infrequent condition; however, incomplete cancellation can also be disruptive to reception. The following illustration shows how multipath can occur:

A Classic Example
of Multipath



If we were to plot signal levels at the input of the radio in this car against distance, the following curve might result:

Multipath-Distorted
Signals in a Moving
Car



The spacing of the nulls is typically from 3 to 15 feet, and the deepest part of the nulls is only around 6 inches wide. Of course, the deepest nulls will cause the greatest disruption to reception. If the signal level at the bottom of a null drops below the sensitivity of the receiver, then noise will be heard. Nulls heard while moving sound like a series of "spits." And, should you drive slowly through or stop in a null, you will hear the signal suddenly become very distorted. This is especially true if you are listening in stereo.

Obviously, the same thing can occur on your home receiver as there is a finite probability that your antenna might be located in a null for at least one station. However, we DX'ers usually use directional antennas that can be rotated to get rid of the reflected signal. Because a car antenna is low and purposefully non-directional, it tends to pick up a high percentage of reflected signals increasing the opportunities for multipath distortion. We must consider the other side of the argument, too. If signals were not reflected, then there would be shadow areas where reception was not possible at all.

Other nuisances more likely to be encountered listening in a car are strong signal overload and ignition noise. Those of us unfortunate enough to live close to an FM or TV transmitter already understand this problem; but consider that it is even easier to get close to a transmitter in a car. And, any of us that live near a busy highway appreciate the probable ignition interference problem faced in a car that is right among the sources of noise.

All of this negative thinking may make you wonder why anyone would want an FM receiver in their car. The fact is that reception is mostly very enjoyable. Bringing up the problems facing reception in the car is a good way of emphasizing the fact that auto receiver quality has quite a bearing on the quality of sound you hear. In many ways this is a much tougher requirement than your home receiver faces.

Antennas for Car FM



Now that we've discussed car FM reception, let's note the various antennas available for use on cars. Antennas in present use can be divided into three general groups: (1) whips, (2) the GM windshield antenna, and (3) miscellaneous types. In this section, we will compare the relative merits of these three groups both for general listeners and the DX'er, in particular.

Whip Antennas

As you will see, the familiar whip antenna is really a group of related types. Used for many years for AM reception, the whip could come in most any length. In fact, the longer the better. But, when AM/FM combination sets were offered, length was standardized at around 30 to 31 inches. This size is a compromise quarter wavelength for the FM band. Such a whip is actually a



"quarter-wave monopole." This antenna is well-suited to auto FM reception since it is (theoretically) omnidirectional, has good gain and is not cumbersome in construction or size. Theoretical feed point impedance is 36 ohms.

The various types of whips include: (1) fixed length (usually stainless steel) (2) telescoping above mounting surface, (3) telescoping below mounting surface, and (4) motor-driven. All are designed for both AM and FM use, and this is the cause of some differences in performance on FM.

On the AM band, the whip antenna looks like a small capacitor in parallel with a very large resistance. The feed line similarly looks like a parallel capacitor. At the input of the radio, all this capacitance must be tuned out by the antenna coil. There is also a trimmer capacitor on most radios that you can peak for best reception. Only a certain range of capacitance can be resonated by the antenna coil, and this usually requires use of low-C antenna cable. Such cable is inherently high impedance, typically 91 ohms or higher. Those of you familiar with transmission lines will quickly see the inherent mismatch between the coax and the FM antenna impedance mentioned above. Fortunately the compromise is not really that bad since the cable length is short and unlikely to introduce much loss in itself. But, if you never listen to AM or have an FM-only set, you can probably gain just a bit in overall system sensitivity by replacing the cable with RG-58 (50-ohm coax).

Motor-driven whips represent the ultimate in convenience since they can be raised and lowered from the driver's seat. The design poses a problem, however. So that the antenna can be fully lowered into the fender, a metal shroud surrounds the base of the antenna element, one section of which remains fixed below the fender. This fixed portion adds to the antenna capacitance requiring use of lower capacitance, higher impedance coax for AM. On FM, this means that a slightly greater compromise in impedance match must be tolerated. Motor-driven whips do have one advantage over other types. In strong signal areas, the antenna can very conveniently be lowered to reduce signal pickup. While this same thing is possible with other adjustable height antennas, you would have to get out of the car and do it manually each time changes were desirable.



Convenience or other mechanical aspects probably separate the other types of whips. Both telescoping types are more fragile than fixed length whips, but both can be lowered for car washing. The kind that can be completely lowered into the fender offers some protection against vandalism, especially if a key is required to pull it up as on some European designs.



All whip antennas suffer one major problem. Water can penetrate the base insulator and carry with it dirt and road salts. In time, buildup of this contamination will short out the antenna. Fortunately for us FM listeners, AM is much more affected; but in time, FM sensitivity will be reduced, too. The antenna, and probably the lead-in, must be replaced when this happens. This degradation problem is especially bad in those states that find it necessary to heavily salt their roads in winter.

Whip antennas, because of their usual mounting location on fenders, only approximate the ideal omnidirectional coverage pattern. Absence of a full ground plane around the base of the antenna causes reduced signal pickup in the direction away from the fender. The best direction is across the largest metal surface of the car or diagonally across towards the rear (or front) fender. The best mounting location, for those that care to consider it, is the center of the roof.

Rear-mounted whip antennas, regardless of their possible stylish appearance, should not be considered by DX-ers since the AM/FM compromise causes even worse problems for FM. Rear antennas insert a capacitor in series with the coax to allow tuning the antenna on AM. While this capacitor passes FM signals with little loss, the impedance mismatch problem between the antenna and coax becomes much harder to control.


Windshield Antennas

Erroneously thought by many to be a center-fed dipole sealed in glass, the windshield antenna is actually an approximation of the whip antenna. Examination of the base of the antenna will show that the two wires are connected together. Actually, this antenna is an inclined monopole with top capacitance loading. Only the vertical part does much for FM, and the top portion was probably added to improve AM reception.

This antenna was adopted by General Motors in many of their cars as a compromise between life (it is sealed and not subject to water damage), protection against vandalism (very effective), styling (almost invisible) and performance. It is this performance compromise that has upset many people, broadcasters especially. Because vertical height of the windshield antenna is restricted by the windshield opening size and is less than the quarter wavelength (about 30 inches), pickup of this antenna is not as good as that of a whip antenna. The typical windshield antenna provides about 50% of the signal voltage that a good quality whip antenna will produce, and this does mean a few miles reduced range. And, while this fact probably eliminates the windshield antenna from consideration by DX-ers who may want the maximum range possible, this antenna is still found satisfactory by many users. The DX-er can order his car with a whip antenna, whereas the more general listener should evaluate reception of both types for his particular needs. The windshield antenna like the whip is intended for vertically polarized FM signals and will therefore benefit when the station is transmitting a dually-polarized signal.

Miscellaneous Antennas

Some miscellaneous FM car antennas that you might encounter include: gutter-mounted dipoles, side-view mirror types and combination AM/FM/CB antennas.



Gutter-mount antennas are sold to allow use of portable radios and TV's in a car. This is not a DX antenna for several technical reasons: (1) coverage pattern is quite directional since the antenna is a modified dipole, (2) close spacing to the roof reduces signal pickup, and (3) a matching transformer is needed to match the balanced dipole impedance to the usual unbalanced car radio input. In addition these antennas are probably intended for only temporary use and not at highway speeds since they tend to be of flimsy construction.

Mirror antennas are an attempt at concealment. Because size must be very much less than a quarter wavelength, signal pickup has to be less than that of a whip. The mounting location just about guarantees a highly directional pickup pattern.

Combination AM/FM/CB whips have just recently been offered to car owners. They come in a variety of styles including fixed, manually raised and lowered and motor-driven. The primary appeal of such an antenna is that only one antenna is needed on the car for all three bands. And depending upon the design, the multi-band antenna may offer some degree of concealment to the fact that the car is CB-equipped. The main problem with these antennas is the fact that three rather different bands of frequencies must be covered, and this is a tall order! Combining AM with either FM or CB is not too bad, but adding the third range adds considerably to the design problem. The most successful and best performing three-band antenna is probably one that is center-loaded for CB and has a full quarter wavelength (about 28 to 30") below the loading coil for FM. Unfortunately, the designer yet has an opportunity to "screw up" in the splitter which serves to separate AM/FM and CB even if he has selected a good performance antenna style. Primarily, you can estimate the relative quality of the antenna for FM by measuring the length below the loading coil. If it is much less than 28 to 30", you should suspect that FM pickup will suffer.

(continued on page 43)

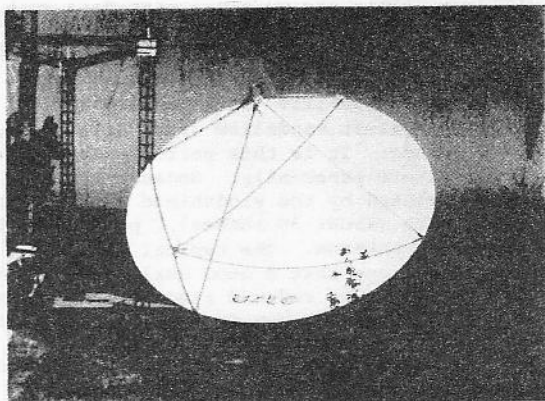
Bob's Tek-Notes

by Robert B. Cooper, Jr.

After twenty-seven years of being a more hooked-than-most TV DX enthusiast, I have (I believe) discovered the 'ultimate DX machine'.

That's it on the right. Or at least a major portion of it. That's a six meter or twenty foot diameter TVRO.

A what? A Television Receive Only satellite earth terminal. It sits in my yard, just outside the master bedroom window. Several 200 foot towers, remnants of another era when TV signals had to follow the rolling, curving gyrations of the earth's surface rise high above it's low profile.



In September of 1975 (September 30th to be exact) the first non-government owned TVRO (earth terminal) was installed in the CATV industry. Today there are nearly 200 such terminals in operation; perhaps the CATV system in your town has one. When I saw my first CATV terminal I vowed that I would be the first private individual to have one installed for my own home. It took me almost two years to put the pieces together.

A television earth terminal receives signals from space. Using a very high gain (my 20 footer has 46.5 dB gain over a dipole at the receive frequencies) parabolic antenna the terminal is 'fixed' on a spot high above the earth's equator. Surrounding the earth, at an altitude of 22,300 miles above the equator, there is a 'belt' which the nations of the world have agreed will be 'dedicated' to geo-stationary satellites. That means that if a satellite is thrown into space in a precise launch orbit so that it moves into the area directly above the equator, the relative forward motion of the satellite can be controlled so that it continues to circle the earth at precisely the speed at which the earth rotates on its own axis (that line drawn between the north and south true-poles passing through the center of the earth).

That means that for an observer on earth, the satellite is always in the same spot. Once you find the little buggar with your highly directional parabolic antenna, you simply lock up the azimuth (left and right adjustment) and the elevation (up and down adjustment) and from that point forward the satellite stays in line with your highly directional antenna. It is a rather neat system.

There are hundreds of satellites in orbit; and around 40 of these are in geo-stationary positions. Most are used by top secret military people for instant communications to far flung military bases, ships at sea and airplanes. A handful, or seven to be exact at this moment, are domestic or international communication carriers. That means they lease or rent out "time" or transponder channel space to whomever has the money to pay the fee.

One of the groups that is able to pony up the \$1.1 million per year for full time rental of a satellite channel is Southern Satellite Systems. SSS has an off-air receiving antenna in Atlanta where they pick up Atlanta's WTCG (channel 17). They process the signal and then send it towards the RCA SATCOM-II satellite that sits above the equator almost due south of San Diego (at 119 degrees west). The uplink signal is received by the SATCOM-II satellite, in the 6 GHz (6,000 megahertz) range, frequency converted to the 4 GHz (4,000 MHz region) and then re-broadcast or re-transmitted back towards earth. The satellite only utilizes a few watts of transmitter power, but it has a high gain quite directional antenna. Between you and the

WTCG-TV
CHANNEL 17
ATLANTA, GA.
1018 West Peachtree St.
Atlanta, Ga. 30309

satellite there is nothing but 'free space'. So the signal 'loss' along the path, while very high in terms of dB because of the distance involved, is virtually totally free of fading, interference, and other forms of degradation that plague normal earth or terrestrial transmission paths.

Of the seven satellites in geo-stationary orbit now serving the northern portion of the western hemisphere, three are Canadian. We'll talk about those shortly. The U.S. serving 'birds' are RCA's SATCOM-II (at 119 degrees west), SATCOM I (at 135 degrees west), WESTAR-I (at 99 degrees west), WESTAR II (at 123.5 degrees west) and COMSTAR at 128.5 degrees west. WESTAR I is primarily utilized for voice, teletype, data and message traffic to the North American continent and to points in the Atlantic. WESTAR II is used by such customers as the Spanish International Network (SIN), CBS, PBS and on occasion ABC and NBC. The photo to the right shows reception of the SIN program ID at my terminal. They program from 12 to 18 hours per day, some of the programming originating at San Antonio's KMEX, some at LA's KMEX and still other coming directly out of the studios of XEW-TV in Mexico City. The main 'customer' of WESTAR-II will ultimately be PBS; they are now testing what will be four channels of PBS programming operating simultaneously throughout the day (one channel per time zone; imagine having the same Sesame Street feed spread over four continuous hours!).



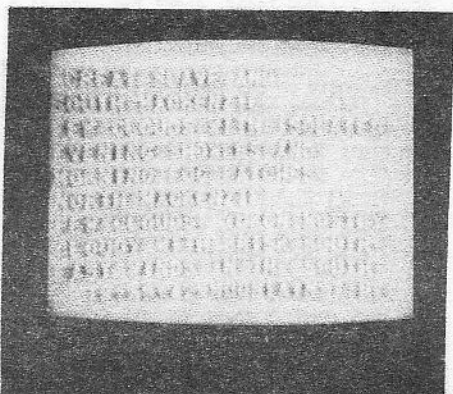
RCA is the biggest provider of satellite 'transponder' time. They have two 24 channel transponders up (the WESTAR birds are 12 channels each). SATCOM II, which carries most of the CATV program feeds, is the busiest and best known. For example, on my twenty-four channel TVRO receiver I always find Atlanta's WTCG on transponder 6, the Christian Broadcasting Network (CBN) on transponder 8, Home Box Office (first run, not yet released for TV movies and sports and special programs such as Neil Sedaka in concert, etc.) on transponders 20 and 24. For example as I type this the latest Charles Bronson flick is running on transponder 24 while the latest Jimmy Stewart flick is on transponder 20. Then on transponder 22 there are almost nightly live, full-color sporting events direct from Madison Square Garden. I get pro basketball, hockey and so on six or seven nights a week on transponder 22.

The TV networks are making increasing use of the SATCOM-II and WESTAR-II satellite services for remote pick ups and relays from coast to coast. One week in early October the TODAY program was doing remote broadcasts with Jane Pauley from Iowa farm country. To get the Iowa portions of the program back to New York City for network processing, NBC utilized SATCOM-II. My wife and I enjoyed it immensely because during those 50 or so minutes an hour when New York was programming, they left the satellite uplink transmitter running out in Iowa. We got to know the 'real' Jane Pauley as nobody else does, let me assure you (!). In other words, off camera she is not all sweetness and light. Sunday's are a football fans dream come true. If you are a pro fan you note that as they announce the games each week, at some point in the country a 'regional' telecast is being made of each and every pro game that day. Guess where they all go, between their respective football stadiums and back to New York's network control. That's right, via satellite. All of the NBC games are on one or more of the SATCOM-II channels and all of the CBS games are over on WESTAR. A man could lose his popcorn trying to keep up with five or six simultaneous pro football games!

The Canadians have three domestic satellites in orbit. They are ANIK I, II and III. ANIK I (at 114 degrees west) is the primary 'bird'; it provides CBC English and French language television to both coasts and to the northern territories.

ANIK II and III are primarily either voice, data and communication birds, or they are simply 'in reserve' in case something happens to ANIK I.

That's a weather forecast for Great Slave (Lake) and the Mackenzie River area to the right. Off of ANIK transponder 10. On ANIK I the Canadians use full time French language channel (8) and two English channels (10 and 12). The two English channels are split



between piping CBC programs to the far north (Yellowknife, Inuvik, etc.) and sending pre-network feeds to Vancouver, St. Johns and so on. We have a choice each evening of (among other things) the local Vancouver news, Toronto news, Montreal news (in French) or St. Johns news. Because of the wide time-zone expanse in Canada the Canadian channels run much beyond our normal CDST bedtime. There are late night movies on weekends well past 4 AM CDST here.

But late night is not all there is. WTCG is on all night of course, as is CBN. And the HBO west coast channel (20) runs to nearly 4 AM CDST most nights.

Having access to all of this 'out-of-bounds' television, on a routine studio-quality basis (the color and fidelity far surpasses anything you have ever seen in your home; comparable on a 1 to 1 basis with what you would see in the network control center in New York) is bound to change your perspective on the world. For example, the Canadian's report things in their newscasts about the U.S.A. that we simply don't hear here. And the way the U.S. broadcast media ignores important events in our sister country of Canada is almost criminal! My wife and I are even studying a Berlitz French course so that our high school language base will allow us to enjoy the fine quality Canadian French fare.

Virtually every week somebody else 'announces' they will be 'going up on the bird'. For example, WGN (9 Chicago) and KTVU (2 San Francisco) are due to join WTCG next year. PTL is testing now on transponder 16 of SATCOM-II; to join CBN. Several special movie and entertainment cable-only (satellite delivered) channels are due on during 1978.

Meanwhile over on SATCOM-I at 135 degrees west RCA Alaskan Communications is beaming 4 to 6 of the Philadelphia area TV stations (all three nets, PBS and one to three indies) to Anchorage; usually 18 or more hours a day. In Anchorage the full days run on all of the Philadelphia channels is taped, edited and re-arranged. Then it goes back from the Anchorage receiving/taping studio to SATCOM-I again, delayed by both the taping requirements and the five hour time differential between Philadelphia and Anchorage, to be re-satellite broadcast to some 35 'bush country' TV receiving terminals spread throughout Alaska. Sitting here in Oklahoma I can watch at will any of the Philadelphia TV stations. Some fun!

Every so often somebody uses a transponder for some special purpose. The top photo on this page is the KPIX-5 (San Francisco) ID. For one full week in October we had 90 minutes of KPIX through SATCOM-II. Don't ask me who was doing it or for what reason. But there it was. I've seen NBC Burbank feed dozens of news feeds to the east coast for the NBC Evening News, and Johnny Carson several hours early. And those clowns that do the NBC and CBS between halftime pro football score board shows? You haven't lived until you've watched them mess around in their studios between live-air periods. Better keep the kids away though ... the language on occasions makes the HBO 'R' rated movies tame by comparison.

You say you want a TVRO in your backyard? Who wouldn't! All it takes are some bucks and some guts. When TVRO's first hit the CATV industry in September 1975 they went for around \$100,000 each; installed. Prices have dropped fast. If you install your own they are down to around \$13,000 today. About the same as a first class swimming pool. Except you can use it all year long. Or several neighbors could get together on the project.

The photo on the right was fun to take. The left hand twin-screen display was WTCG-17 on 758 mile tropo one night in September. The photo on the right is simultaneous reception of WTCG over a 44,600 mile path... via SATCOM-II. It just shows that while the space route is much longer, it is also much better.

The future of TVRO's? One in every back yard? I doubt it. The FCC and the broadcasters wouldn't allow that. So it looks like it will be-



come a project for the technically minded guy or gal; with some resources.

I will make this prediction. The lid will blow off of the whole TVRO scene during 1978. I predict you'll start seeing articles in your paper, in your general circulation magazines, and even on television about TVRO's. It is the coming thing, to be sure.

If all of this has piqued your interest, these double comments/warnings:

- 1) There is some real-world legal question concerning whether or not people can own and operate their own private earth terminals. Like it may be a federal offense. I won't go into why here, but it is a possibility. I will note that I've had the best communication law attorneys in Washington research it, and no two agree on this.
- 2) This is no project for amateurs. There is very little margin for error. The satellites use an FM/FM modulation format and when the signals are good they are fantastic. Better than you have ever seen, even in local station control rooms.

Some groups are extremely sensitive about your receiving their signals. The TELESAT group that operates ANIK in Canada is a good example of this. It's a good thing I have some close friends in Canadian high communication circles ... or I never would have been able to get my hands on technical data concerning ANIK. The Canadian's get very irate when you tell them you enjoy watching '90 MINUTES LIVE' in Oklahoma every weekday evening.

The US space communications people are not much less sensitive. "You are doing what!!!!..." is a typical reaction. "I'll pretend I didn't hear you tell me that..." is another reaction. People get very uptight over this whole scene.

So my final piece of advise ... if you decide to do this, don't get a big head and charge off granting interviews to the local newspaper. You'll probably enjoy brief fame and fortune, followed by lots of federal harassment.

I've dealt primarily with the satellites that serve North America here. There are a couple of dozen others of course. The INTELSAT series provide world wide coverage of an equator circling nature. Can you watch TV from Europe via INTELSAT? I'd rather not say ... but my azimuth adjustment on my twenty foot dish does have a spot marked 'INTELSAT'. You figure it out. The SATCOM and WESTAR birds put signals down into the Caribbean and out into the Pacific. I've seen copies of photos of Atlanta's WTCG as received down in Puerto Rico and out on Hawaii, in addition to the oil fields on Alaska's north slope.

Can you scrounge around and find surplus (military, telephone company or whatever) equipment and do this really cheap? I know a fellow in Portland, Oregon who put together a whole terminal for \$2,500. He works for TekTronix, that high technology test equipment house. He begged and borrowed and for all I know stole parts. It took him a year but he did it. It worked just fine until it rained. Then the whole thing blew up.

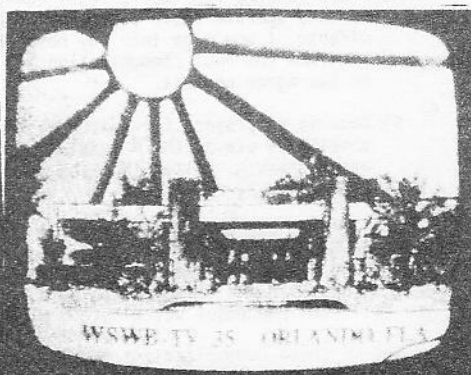
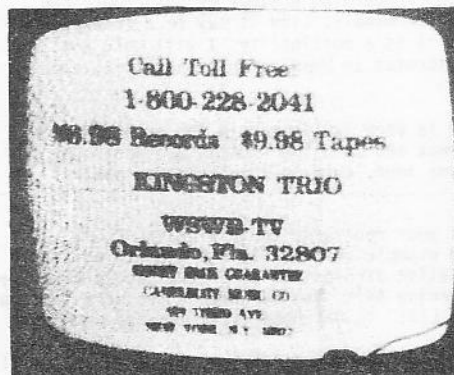
Because my terminal has had some exposure through the pages of my CATJ (Community Antenna Television Journal) I have a little different posture than say somebody 'totally private' might have (I have an FCC application for an experimental/developmental license pending). The CATJ exposure has resulted in my hosting around 80 CATV, and other visitors in recent months. People are coming out of the woodwork to see the terminal. I've had no fewer than a half dozen large international aero-space firms here with proto-type TVRO receivers under their arms. A group from Indonesia (which recently put up two domestic satellites of their own) were amazed how well this relatively small terminal worked. They spent \$400,000 each for some 30 foot terminals they bought. Mine cost about 5% of that. They said it worked everybit as good as theirs. An engineer who came here from Idaho late in October is thinking about offering installed terminals to remote ranchers in the northwest for around \$20,000 a shot.

This brief report has barely scratched the surface of what there is to know and what you MUST know before you start this type of project. For reference material I recommend CATJ because it devotes from five to 40 pages a month to the new technology. The December 1977 issue is devoted entirely to building your own 'small' terminals. Beyond that, I can direct you to a \$35.00 'TVRO PLANNING BOOK' that says it all. But ... because of the schedule I have chosen to live under, I cannot answer letters or engage in correspondence with fellow members. I say this in closing because I know how excited people get and I don't want to disappoint anyone who thinks a letter to me will bring answers to dozens of questions.

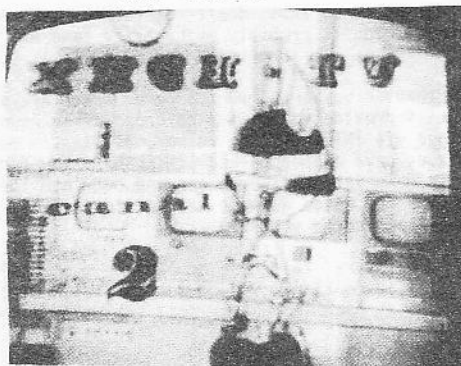
Will TVRO's change TV DXing? I've not yet chosen to 'count' the transponder channels logged. nor do I have any suggestions as to how you count mileage. Are all stations suddenly 44,600 miles away or do you measure the terrestrial distance? Egads ... Technology moves ahead and there are never easy answers!

November, 1977

This month, we have 2 pages of photos, each page by 10 photographers. Don't miss the long-haul UHF tropo catches of WSWB-35 by Steve West! The WSWB-35 photos on this page are from color originals, remade into black-and-white (for publication) by our editor.



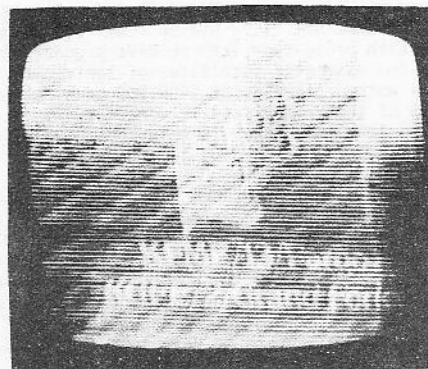
WSWB-35 Orlando, Florida 870 mile tropo 4/19/76 (West)
appx 0135 EDT 0143 EDT



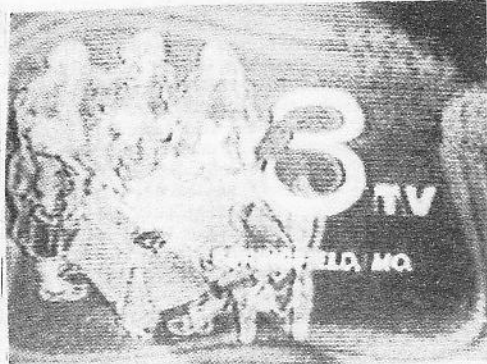
XHCH- 2 Chihua, CH Mexico
E-skip
6/26/75, 1245 CST (Hauser)



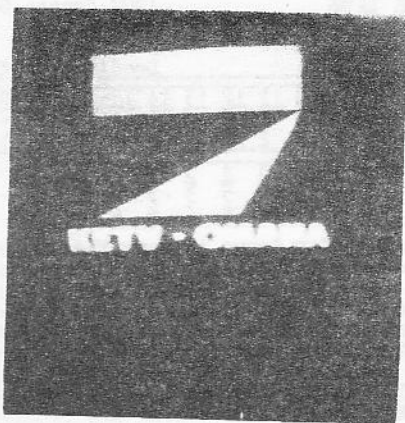
CKYB- 4 Brandon, Manitoba
E-skip (Thompson)



KGFE- 2 Grand Forks, ND
E-skip
6/7/76, 1400 PDT (Aden)



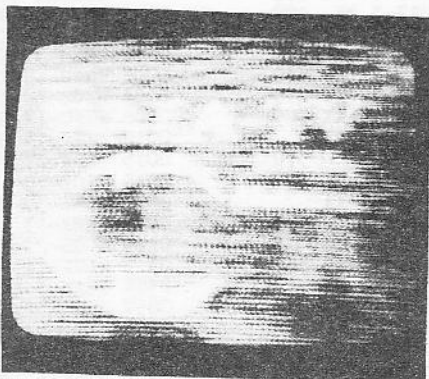
KYTV- 3 Springfield, MO
780 mile E-skip
6/19/76, 1600 EDT (Brindle)



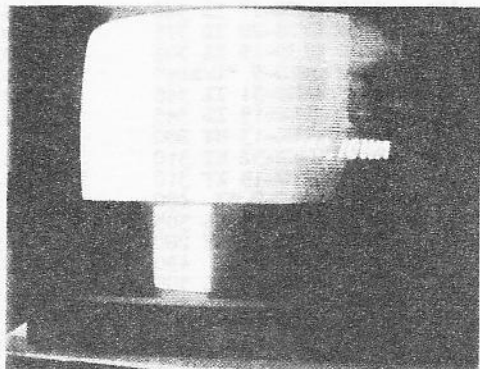
KETV- 7 Omaha, NE
350 mile tropo (Everitt)



KTCA- 2 Minneapolis, MN
920 mile "built-in" E-skip
6/7/77, 1800 EDT (Egan)



WALA-10 Mobile, AL
415 mile "built-in" tropo (Combs)



WOT- 5 Ames, IA
410 mile tropo (Gould)



WEAU-13 Eau Claire, WI
440 mile tropo (Gaines)

Contributors:

- Steve West, Havertown PA
- Glenn Hauser (photo taken at Enid, OK)
- Bill Thompson, Buffalo NY
- Frank Aden, Bend OR
- Ed Brindle, Latrobe PA
- Doug Everitt, Enid OK
- Dave Egan, Valleyfield PQ
- John Combs, Orlando, FL
- Jim Gould, Kokomo IN
- Paul Gaines, Detroit MI

73 and good DX, *Jim*

EASTERN TV-DX

Bill Thompson
1907 Seneca Street
Buffalo, NY 14210

November 1977

Deadline: 10th

| July B-skip dates: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---------------------|----|----|----|----|---|----|----|---|---|----|----|----|----|----|----|----|----|----|----|
| number of reporters | 16 | 17 | 23 | 12 | 6 | 16 | 20 | 5 | 6 | 4 | 1 | 17 | 4 | 6 | 1 | 5 | 5 | 6 | 6 |
| MT reported into: | FM | FM | 8 | 7 | 5 | FM | 7 | 6 | 4 | 3 | 2 | FM | 4 | 6 | 2 | 5 | 5 | 5 | 4 |

| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | August: | 1 | 2 | 3 | 4 | 5 | 7 | 12 | 13 | 28 |
|----|----|----|----|----|----|----|----|----|----|----|----|---------|----|----|----|---|---|---|----|----|----|
| 5 | 3 | 10 | 11 | 3 | 9 | 12 | 15 | 12 | 14 | 7 | 18 | 1 | 6 | 9 | 14 | 5 | 3 | 3 | 6 | 1 | 1 |
| 5 | 3 | FM | FM | 4 | FM | FM | FM | FM | FM | FM | 7 | 6 | FM | FM | 5 | 6 | 5 | 6 | 5 | 2 | |

September turned out to be a fairly good month for tropo in many Midwestern locations, with the best openings centered around the early and late parts of that month. In much of the Northeast, it was quite a different story; record amounts of rain fell in some places, and cooler temperatures started to take over as rapidly moving weather systems crossed that region during the month. Still, September did produce some interesting tropo in the Northeast; a few good coastal openings are reported by Roy Barstow. October so far has not been too great in many areas due to lots of cold weather over much of eastern North America. As this is being written, some Northeastern locations are receiving their first measurable snowfall of the season—not a very encouraging sign!

Paul Gaines 15920 Puritan Street Detroit, Michigan 48227 (EDT)

| August | 4 | tr | 0153 | WOMK-13 | WV | 280 | 8 | tr | 0913 | WBEK-25 | IL | 345 | | | | | | | |
|-----------|----|----------|--------------|---------|-----|------|---------------|---------|------|---------|---------|---------|---------|-----|-----|--|--|--|--|
| 9 | ES | 0423 | WCBS-2 | NY | 490 | 0340 | WBAY-2 | WI | 275 | 0948 | WHRM-20 | WI | | | | | | | |
| | tr | 0431 | WSAZ-3 | WV | 280 | 0347 | WLWK-11 | WI | 275 | | Wausau | WI | 360 | | | | | | |
| 11 | | 0140 | WOMK-13 | WV | 280 | 0350 | WSAZ-3 | WV | 280 | 1019 | WMTV-15 | WI | 315 | | | | | | |
| 12 | | 0017 | WAND-17 | IL | 340 | 0726 | WLEK-18 | KY | 305 | 1023 | WHA-21 | WI | 315 | | | | | | |
| | | 0018 | WIGS-20 | IL | 375 | 0738 | WLKY-32 | KY | 310 | 9 | 0000 | WMBD-31 | IL | 345 | | | | | |
| | | 0020 | WICD-15 | IL | 305 | 0740 | WDRB-41 | KY | 310 | | 0004 | WRAU-19 | IL | 345 | | | | | |
| | Es | 1300 | WHD-5 | "trace" | | 0754 | WKOH-52 | KY | 275 | | 0004 | WIGS-20 | IL | 375 | | | | | |
| 15 | tr | 0843 | WHRD-31 | IL | 345 | 0758 | WKLE-46 | KY | 305 | | 0006 | WTVO-17 | IL | 300 | | | | | |
| | | 0847 | WRAU-19 | IL | 345 | 0813 | WKSO-29 | KY | | | 0012 | WMTV-15 | WI | 315 | | | | | |
| 17 | | 0150 | WOMK-13 | WV | 280 | | Somerset | | 370 | | 0015 | WKOW-27 | WI | 315 | | | | | |
| 19 | | 0914 | WEEKY-32 | NY | 310 | 0814 | WKRH-38 | KY | 290 | | 0018 | WIGD-15 | IL | 305 | | | | | |
| | | 0939 | WKPC-15 | KY | 310 | 0844 | WKHA-35 | KY | | | 0038 | KDNL-30 | MO | 450 | | | | | |
| 20 | ES | 0354 | WCBS-2 | NY | 490 | | Hazard | | 355 | | 0043 | WRKX-13 | IL | 300 | | | | | |
| 30 | tr | 0022 | WICD-15 | IL | 305 | 0856 | WKZT-23 | KY | | | 0111 | WCEE-23 | IL | 325 | | | | | |
| | | 0145 | WOMK-13 | WV | 280 | | Elizabethtown | | 345 | | 0312 | WLWK-11 | WI | 275 | | | | | |
| | ES | 0238 | WCBS-2 | NY | 490 | 0939 | WKPT-22 | KY | | 11 | 0355 | WSAZ-3 | WV | 280 | | | | | |
| 31 | | 0003 | WICD-15 | IL | 305 | | Pikeville | | 345 | 25 | 0857 | WKON-52 | KY | 275 | | | | | |
| | | 0008 | WAND-17 | IL | 340 | 0944 | WKAS-25 | KY | | | 0906 | WFLD-32 | KY | 310 | | | | | |
| | | 0019 | CIG018-18 | OH | | | Ashland | | 275 | | 0910 | KDNL-30 | MO | 450 | | | | | |
| | | relaying | WOTV-29 | NY | 7 | 0001 | WMBD-31 | IL | 345 | | 0917 | WPIE-14 | IN | 375 | | | | | |
| | | on | channel 19 | | | 0010 | WRAU-19 | IL | 345 | | 0921 | WBAK-38 | IN | 290 | | | | | |
| | | 0826 | CHEX-12 | OH | | 0026 | WIGS-20 | IL | 375 | | 0924 | WDRB-41 | KY | 310 | | | | | |
| | | | Peterborough | 270 | | 0028 | WICD-15 | IL | 305 | | 0953 | WICD-15 | IL | 305 | | | | | |
| September | | | | | | 0035 | WAND-17 | IL | 340 | | 0954 | WTVO-17 | IL | 300 | | | | | |
| 1 | tr | 0138 | WOMK-13 | WV | 280 | 0041 | WEEK-25 | IL | 345 | | 0957 | WILL-12 | IL | 305 | | | | | |
| 3 | | 1152 | WAND-17 | IL | 340 | 0917 | KDNL-30 | MO | 450 | | 1025 | WMBD-31 | IL | 345 | | | | | |
| | | 1155 | WICD-15 | IL | 305 | 8 | 0838 | WIGS-20 | IL | 375 | | 1026 | WRAU-19 | IL | 345 | | | | |
| | | 1157 | WMBD-31 | IL | 345 | | 0841 | WMBD-31 | IL | 345 | | 1027 | WEEK-25 | IL | 345 | | | | |
| | | | WRAU-19 | IL | 345 | | | WRAU-19 | IL | 345 | | 1030 | WCEE-23 | IL? | T | | | | |
| 4 | | 0014 | WBAK-38 | IN | 290 | | 0842 | WAND-17 | IL | 340 | | 1040 | WTHI-10 | IN | 290 | | | | |
| | | 0031 | WKPT-19 | IN | 405 | | 0844 | WICD-15 | IL | 305 | | 1048 | WAND-17 | IL | 340 | | | | |
| | | 0127 | WIGS-20 | IL | 375 | | 0857 | WTVO-17 | IL | 300 | | 2214 | CHEX-12 | OH | 270 | | | | |
| | | 0155 | WKYT-27 | KY | 305 | | 0858 | WRKX-13 | IL | 300 | | | | | | | | | |

"That's it! Still holding at 314 IDs. 73s"

October

2 Tr 0405 WSAZ-3 WV 280

Frank Wheeler 6589 Wattsburg Road Erie, Pennsylvania 16509 (EDT)

| July | 2 | tr | 0700 | WTAJ-10 | PA | 3 | Es | 1401 | KWGN-2 | CO | 1401 | | | | | | | | |
|--------|----|------|--------|---------|------|----|------|--------|--------|------|------|--------|--------|---------|------|-----|--|--|--|
| 30 | Es | 1628 | WPBT-2 | FL | 1098 | Es | 2128 | KDIX-2 | ND | 1169 | 1430 | ECKT-2 | KS | 1015 | | | | | |
| | | 1758 | KARD-3 | KS | 953 | 3 | 1000 | KPRC-2 | TX | 1210 | 1904 | KHAS-5 | NE | 946 | | | | | |
| | | 1829 | ECKT-2 | KS | 1015 | | 1030 | WEDU-3 | FL | 994 | 1911 | KDUH-4 | NE | 1138 | | | | | |
| | | 2230 | WDIQ-2 | AL | 815 | | 1100 | WBRZ-2 | LA | 1020 | 2245 | ECKT-2 | KS | 1015 | | | | | |
| 31 | | 1728 | WDAP-4 | MO | 779 | | 1102 | WMAB-2 | MS | 840 | 4 | 1925 | WWL-4 | LA | 1005 | | | | |
| | | 1731 | KTVI-2 | MO | 595 | | 1130 | KETS-2 | AR | 825 | 9 | Tr | 0657 | WWUP-10 | MI | 369 | | | |
| | | 2130 | KNOP-2 | NE | 1066 | | 1224 | KATC-3 | LA | 1056 | 11 | 0200 | WNEM-5 | MI | 272 | | | | |
| August | | | | | | | 1231 | KTEW-2 | OK | 943 | | | | | | | | | |
| 1 | Es | 1730 | KTEW-2 | OK | 943 | | 1315 | KAMR-4 | TX | 1271 | | | | | | | | | |

Present log total: 267, with 214 verified.

William J. Draeb Ellis St. R.R. #2 Kewaunee, Wisconsin 54216 (GDT)
 "A shorter report this time due to Es coming to an end. The last week has produced some tropo openings. About every day and a half there seems to be a front moving through; as a result, rapid changing weather and above normal rain."

| August | | September | |
|--------|------------------------|------------------|----------------------|
| 6 Tr | 2120 WKPC-15 KY 437 | 25 Tr | 0731 KINL-30 MO 432 |
| | WKLY-32 KY 437 | | 0820 WVU-24 WV 513 |
| | WKBN-27 OH 420 | | 0841 WMU-33 WV 498 |
| | WJET-24 PA 405 | | WKAS-25 KY 486 |
| | 2323 WSEB-35 PA 405 | | 2000 WUTV-29 NY 445 |
| 7 | 0625 CKSO3-11 ON T | | 2048 WQEX-16 PA 480 |
| | CKNY-10 ON 415 | | 2128 WVIR-29 VA T |
| | 0645 CKNC-9 ON 350 | | 2135 CBLFT-25 OH 410 |
| Es | 1640 unID-4 3/4 CB N.W | | CIGA-19 OH T |
| | KMOL-4 TX T | | 2153 WTIU-30 IL 376 |
| | KRNS-5 TX T | | 2157 WZTV-17 TN 585 |
| 8 Tr | 2138 KINL-30 MO 432 | | "snow free" |
| | WKYT-27 KY 473 | | WKGB-53 KY 530 |
| 10 | 2008 KINL-30 MO 432 | 2203 | WAAY-31 AL 685 |
| 11 | 2023 WHUL-33 WV 498 | | WKMU-21 KY 553 |
| | WKAS-25 KY T | | 2211 WKMA-35 KY 499 |
| | WKYT-27 KY 473 | 26 | 2318 WJAN-17 OH 395 |
| | 2043 WOSU-34 OH 395 | | 0718 Youngstown U's |
| | 2053 KOZK-21 MO T | | 0740 WJET-24 PA 405 |
| | KMFC-27 MO T | | WSEB-35 PA 405 |
| 12 | 0758 WPMJ-21 OH 420 | | 0800 WKPC-15 KY 437 |
| | WKBN-27 OH 420 | | WKLY-32 KY 437 |
| Es | 1800 KATC-3 IA 1026 | | 0807 WUTV-29 NY 445 |
| | KJAC-4 TX 1080 | | 0858 WUSL-16 IL 402 |
| | 1820 KDFW-4 TX T | 30 | 0720 KINL-30 MO 432 |
| | KXAS-5 TX T | | WJAN-17 OH 395 |
| | 2014 KOB-4 NM T | | Youngstown U's |
| | KXLF-4 MT T | | KINL-30 MO 432 |
| | KID-3 ID T | | 4 |
| | 2030 KWGN-2 CO 952 | | 2010 WKFR-27 KY 473 |
| | KOA-4 CO T | | WTIU-30 IL 376 |
| | KRMA-6 CO 952 | | 2030 WOSU-34 OH 395 |
| | KTVS-3 CO 837 | | WUTV-29 NY 445 |
| | 2038 KINL-3 NE T | | WJET-24 PA 405 |
| | 2043 KWNB-6 NE T | | W2GA-26 NY 446 |
| Tr | 2048 WYTV-33 OH 420 | | WPKP-16 PA 630 |
| | Erle PA U's 405 | | WDAU-22 PA 630 |
| Es | 2058 KTWO-2 WY T | | WBRB-28 PA 630 |
| Tr | 2143 KGBJ-17 MO 450 | 2043 | WERY-36 NY 575 |
| | KOZK-21 MO 588 | 2057 | CIGA-19 OH 410 |
| | KMFC-27 MO 588 | | CBLFT-25 ON 410 |
| | 2253 WTIU-30 IL 376 | | CITY-79 ON T |
| | WXIX-19 OH 400 | | 2110 WKON-52 KY 437 |
| | WCET-48 OH 400 | | WTVQ-62 KY 473 |
| | WKLY-32 KY 437 | | 2132 WCVN-54 KY 407 |
| | WDRB-41 KY 437 | | WQLN-54 PA 405 |
| | WKYT-27 KY 473 | | WCET-48 OH 400 |
| | 2302 WLPB-49 IN 319 | 2146 | WQEX-16 PA 480 |
| 13 | Es 1932 KFTS-2 AR T | 2202 | WNPE-16 NY 600 |
| | KPSM-5 AR T | | CBLFT5-15 ON T |
| | 1940 KPRC-2 TX T | | 2324 WPGH-53 PA 480 |
| | 1950 KDFW-4 TX 957 | September | |
| 20 | Tr 0745 KMBG-14 IA 462 | 1 Tr | 2015 Youngstown U's |
| | WKBN-27 OH 420 | | 2027 WPGH-53 PA 480 |
| 21 | 1955 WPMJ-21 OH 420 | | 2029 WQEX-16 PA 480 |
| | WKBN-27 OH 420 | | 2105 K55AW-55 MI 205 |
| | WFTV-33 OH T | 3 | 0802 WKLY-32 KY 437 |
| | WQEX-16 PA 480 | | WDRB-41 KY 437 |
| | WUTV-29 NY 445 | | WBAK-38 IN 348 |
| 23 | 0315 CKNC-9 ON 350 | | 0813 WTIU-30 IL 376 |
| | 2101 WKYT-27 KY 473 | | WXIX-19 OH 400 |
| 25 | 0715 Youngstown U's | | WCET-48 OH 400 |
| | WJET-24 PA 405 | 1737 | WHUL-33 WV 498 |
| | WSEB-35 PA 405 | | WKBN-27 KY 420 |
| | WAKR-23 OH 380 | | WKYT-27 KY 473 |
| | 0728 WPGH-53 PA 480 | | KDNL-30 MO 432 |
| | | | 1701 KOZK-21 MO 588 |

William J. Draeb (continued)

September

| | | | | | | | | | | | |
|------|------|-------------|-----|------|------|--------------|-----|------|------------|------------|-----|
| 5 Tr | 1701 | KMTC-27 MO | 588 | 5 Tr | 1934 | KTIV-4 IA | T | 6 Tr | 0540 | KBLO-11 SD | 560 |
| | 1730 | WUFT-29 NY | 445 | | 2017 | KHAS-5 NE | T | | 0551 | KOLN-10 NE | 530 |
| | 1748 | CHFTS-34 OH | 374 | | 2218 | KMTV-3 NE | | | 0606 | KGIN-11 NE | 600 |
| | 1754 | WBJA-34 NY | T | | | Omaha | 481 | | 0608 | KCCI-8 IA | 371 |
| | | WQLN-54 PA | 405 | | | "under WISC" | | | | KCHA-8 NE | T |
| | 1924 | KHNE-29 NE | 617 | | 2239 | WQWT-6 NE | T | 0630 | KTSB-27 KS | 560 | |
| | | KYNE-26 NE | 481 | | | KTVO-3 IA | T | | | KYNE-26 NE | 481 |
| | 1934 | KXNE-19 NE | T | | 2247 | KCPT-19 MO | T | | | KNEG-14 IA | 462 |
| | | KHNS-14 IA | 462 | 6 | 2253 | KXNE-19 NE | 525 | | 0637 | KXNE-19 NE | 525 |
| | | | | | 0540 | WHO-13 IA | 371 | | 0640 | KHNE-29 NE | 617 |

"On 9-5 I added a Blonder-Tongue Mighty-Mite 'S' line amplifier between my CMA-Ub and power supply. It seems to have increased gain somewhat. WFNE-38 (local) slops over more of the UHF band now; but is still tolerable."

Donald B. Enland 4448 68th Place Kenosha, Wisconsin 53142 (GDT)

| | | | | | | | | | | | | |
|-------|------|----------------|------|-----------|------|----------------------|------------|------|------|----------------|------------|-----|
| July | | | | 31 Rs | 1700 | KPRC-2 TX | 980 | 6 Tr | 0555 | KOLN-10 NE | 460 | |
| 11 Tr | 0600 | London U's | 340 | | 1730 | KIII-3 TX | 1160 | | 0620 | KGIN-11 NE | 550 | |
| | | WPMJ-21 OH | 380 | | | KRIS-6 TX | 1160 | | 0629 | KCCY-8 IA | 310 | |
| | | WQGN-27 OH | 380 | | 1800 | WHL-4 LA | 890 | | | KTIV-4 IA | | |
| | | Arie U's | 400 | | | KBTX-3 TX | 930 | | | Sioux City | 430 | |
| | | WABE-23 OH | 340 | | 1830 | KFDX-3 TX | 830 | | 0650 | KXNE-19 NE | 480 | |
| | 0630 | WPGH-53 PA | 430 | | 1900 | KATC-3 LA | 900 | | 0700 | KYNE-26 NE | | |
| | | WJKN-8 OH | 330 | | | | | | | Omaha | 430 | |
| | | WUAB-43 OH | 330 | August | | | | | 0730 | WHO-13 IA | 310 | |
| | | WOTA-3 SD | | 2 Rs | 1830 | KATC-3 IA | 900 | | 1900 | WPGH-53 PA | 430 | |
| | | Rapid City | 440 | 3 | 1800 | WRC-4 DC | 630 | | | Youngstown U's | | |
| | | WAAA-5 CO | 920 | 31 Tr | 0700 | WAKR-23 OH | 340 | | | WJAN-17 OH | 360 | |
| | | WBNW-3 MN | 1010 | | | Youngstown U's | | | | WAKR-23 OH | 340 | |
| | | | | September | | | | | | Cleveland U's | | |
| | | | | 3 Tr | 1645 | Cincinnati U's | | | | WNBO-45 OH | 360 | |
| 13 Tr | 2145 | WPGH-53 PA | 430 | | | WDRB-41 KY | 330 | | | WKLE-46 KY | 360 | |
| | 2200 | W31AA-31 OH | 340 | | | WKWJ-68 KY | 330 | | | WKON-52 KY | 330 | |
| 14 | 0600 | Arie U's | 400 | | | WCVN-54 KY | 310 | 1930 | | Cincinnati U's | | |
| | 2030 | KLLP-4 MT | 1230 | | | WFB0-42 OH | 370 | | | WCVN-54 KY | 310 | |
| | 2100 | KID-3 ID | 1200 | | 1730 | WTVN-47 VA | 480 | | 2000 | WKWJ-68 KY | 330 | |
| 19 Tr | 2130 | Cleveland U's | | | | WVTV-46 KY | 360 | | 2030 | WRAQ-49 OH | | |
| | | WBO-45 OH | 360 | | | WKYH-57 KY | 440 | | | Akron | 340 | |
| | | Youngstown U's | | | 4 | 0500 | WERC-12 OH | 300 | | 2130 | WTVQ-62 KY | 360 |
| 20 | 0550 | WHIZ-18 OH | 360 | | | WHNS-10 OH | 320 | | 2200 | WFB0-42 OH | 370 | |
| | | WAKR-23 OH | 340 | | | WJKN-8 OH | 330 | 7 | 0550 | Youngstown U's | | |
| | 0610 | WCHN-27 OH | 380 | | | CESH-11 OH | 420 | | | WUAB-43 OH | 330 | |
| | 0710 | Cleveland U's | | | 0505 | WIIC-11 PA | 430 | | | WPGH-53 PA | 430 | |
| | 0735 | WPGH-53 PA | 430 | | 0515 | WCPO-9 OH | 300 | | | WAKR-23 OH | 340 | |
| | | WOSU-34 OH | 320 | | | CECO-13 OH | 400 | | 0600 | WHAG-25 MD | | |
| 22 | 2200 | KYIN-24 IA | | | 0520 | WSAZ-3 WV | 420 | | | Hagerstown | 560 | |
| | | Masson City | 270 | | 0523 | WLEX-18 KY | 360 | | | WVFB-31 MD | | |
| | 2245 | WFB0-42 OH | 370 | | 0530 | WHAS-11 KY | 330 | | | Hagerstown | 560 | |
| 23 | 0545 | KCHD-3 MO | | | | WTVN-6 OH | 320 | | 0610 | WIXX-19 OH | 300 | |
| | | Kansas City | 430 | | 0545 | WCNH-4 OH | 320 | | | WPTA-21 OH | 380 | |
| | | KHNS-4 MO | 300 | | | WTRF-7 WV | 420 | | 0645 | WFLB-14 IN | 320 | |
| | | KPLR-11 MO | 300 | | | WCHS-8 WV | 430 | | | WBHT-25 IN | 320 | |
| | 0600 | KHNS-41 MO | 430 | | 0550 | WDTV-5 WV | | | 0700 | WHIZ-18 OH | 360 | |
| | 0633 | W3AA-49 IL | 220 | | | Weston | 450 | | 0715 | WOSU-34 OH | 320 | |
| | 2300 | WFB0-42 OH | 370 | | | WOWK-13 WV | 420 | | | WFB0-42 OH | 370 | |
| 24 | 0500 | WCPO-9 OH | 300 | | | WUAB-43 OH | 330 | | 0730 | W3AA-31 OH | 340 | |
| | | WERC-12 OH | 300 | | | WPGH-53 PA | 430 | | | WDRB-41 OH | 330 | |
| | | WJKN-8 OH | 330 | | | WAKR-23 OH | 340 | | | WTVQ-62 KY | 360 | |
| | | WHNS-10 OH | 320 | | 6 | 0530 | KIMT-3 IA | 270 | | WCET-48 OH | 300 | |
| | | WIIC-11 PA | 430 | | | "new call...ex KGLO" | | | 0830 | WVWU-24 WV | 450 | |
| | | WTRF-7 WV | 420 | | | 0530 | WTCN-11 MN | 320 | | WMUL-33 WV | 420 | |
| | | WCHS-8 WV | 430 | | | | KEL0-11 SD | 450 | | 0900 | WSVN-47 VA | 480 |
| | | WDTV-5 WV | | | | | KHNS-14 IA | 430 | | | | |

"Log at 448, with 9 new. Tropo conditions picked up markedly September 3, and has been hot for past four days (as of 9-7). Didn't get up 'til 0550 today (9-7) and likely missed some 400+ mile loggings on VHF from VA-WV-PA area."

| Scott & Mark Levitt | | 3132 Woodland Avenue | | South Plainfield, New Jersey 07080 | |
|----------------------|---------------------|----------------------|---------------------|------------------------------------|-----------------------|
| June (all times EDT) | 2 Es 2200 | WSB-2 GA | 725 | 25 GW 1700 | W59AA-66 NY 23 |
| 6 Es 1700 | WOWT-6 NE | 3 1300 | WBRZ-2 LA 1170 | | New York(WABC7) |
| | Omaha | | WPBT-2 FL 1075 | 26 Es 1030 | KTVY-4 OK |
| | 1800 KKOK-5 SD 1233 | | KATC-3 LA 1215 | | Oklahoma City |
| | 1815 WABG-6 MS 994 | 1330 | WNAB-2 MS 931 | | KYTV-3 MO 1035 |
| | 1830 WDBO-6 FL 918 | 1400 | KFTS-2 AR 1062 | 2000 | KMTV-3 NE 1125 |
| | 1930 KDAL-3 MN 985 | 2100 | WLBT-3 MS 1031 | | KTVO-3 MO 897 |
| | 1950 KBJR-6 MN | 4 1330 | KDAL-3 MN 985 | 27 Tr 0530 | WNAC-7 NA 212 |
| | Duluth 985 | 5 1205 | ICRB-3 CUBA | Es 1850 | WERC-6 AL |
| 8 1930 | KGFB-2 MD | 6 Tr 0750 | WWPB-31 MD | | Birmingham |
| | Grand Forks | | Hagerstown 175 | 2140 | KPDM-6 TX |
| | 2100 KDAL-3 MN 985 | Es 1430 | WESH-2 FL 869 | | Beaumont |
| | WERG-5 AL 1026 | 1600 | WLBT-3 MS 1031 | 28 Tr 0700 | W59AA-59 CT |
| 11 1200 | WEDU-3 FL 981 | 1900 | WABG-6 MS 994 | | West Haven 95 |
| 12 1535 | WTVJ-4 FL 1075 | | WREG-3 TN 927 | | (WHBB-30 xltr) |
| 14 Tr 0715 | WBWT-12 VA 261 | 7 1030 | WEDU-3 FL 981 | 0800 | WTFP-33 PA |
| Es 1600 | WOWT-6 NE 985 | 1100 | WSB-2 GA 725 | | Hershey 127 |
| Tr 2310 | WFVZ-69 PA | 1600 | CBHT-3 FS | 29 2215 | WBDY-65 CT |
| | Allentown 54 | 1630 | WNAB-2 MS 931 | | New Haven 95 |
| 16 Es 2000 | WPBT-2 FL 1075 | 1700 | CKRH-4 QB | 2310 | WLVI-56 NA 212 |
| 19 1100 | WPBT-2 FL 1075 | | Rouyn 576 | | W59AA-59 CT 95 |
| | WEDU-3 FL 981 | 1830 | CJCB-6 NS | 2330 | WBBX-44 NA 212 |
| | 1755 WEAR-3 FL 1003 | | Inverness | | WSEK-36 RI 176 |
| | 1800 WSB-2 GA 725 | | CJCB-4 NS | 2340 | WSEK-38 NA 212 |
| | 2100 WNAB-2 MS 931 | | Sydney | | |
| 20 1305 | WVPT-2 IA 900 | 2000 | unID-3 "6 ATV" | August | |
| | 1900 KFTV-3 MO 1035 | 2100 | WCIA-3 IL | 2 Tr 0945 | W59AA-59 CT 95 |
| | 1925 WESH-2 FL 869 | | Champaign 734 | 0950 | WSEK-38 NA 212 |
| | 1930 WEDU-3 FL 981 | 2200 | KFTV-2 MO 850 | Es 1725 | WLVI-56 NA 212 |
| 21 1600 | KATC-3 LA 1215 | 12 2200 | WBRZ-2 LA 1170 | 5 Tr 0650 | KTBS-3 LA 1206 |
| 23 2030 | WEDU-3 FL 981 | 2230 | KATC-3 LA 1215 | | WSEK-38 NA 212 |
| Tr 2345 | WCNC-40 NJ 126 | 13 Tr 2140 | "NYC power | 0700 | WLVI-56 NA 212 |
| | 2350 WYAH-27 VA 280 | & | failure...all | 7 0640 | W59AA-59 CT 95 |
| 26 Es 1630 | WPBT-2 FL 1075 | GW | NYC stns off:" | 14 MS 0400 | WBWT-12 VA 261 |
| | 1900 KFTV-3 MO 1035 | | Washington & | | "A total of 2 |
| | 2030 ICR6-3 CUBA | | Baltimore WHFS | to | bursts were |
| | Santa Clara | 15 Tr 2225 | WHAG-25 MD | | seen on rabbit |
| | | | Hagerstown 175 | | ears on channels |
| July | | | 2230 WFPB-31 MD 175 | 0600 | 4 & 5, |
| 1 Es 1745 | ICR2-4 CUBA | 17 1000 | WRRT-36 NC | GW 0534 | both unID..." |
| | Camaguey | | Charlotte 513 | | W57AB-57 NY 23 |
| | 1750 WESH-2 FL 869 | 22 Es 1830 | WESH-2 FL 869 | September | New York (WBR4) |
| | 2200 WEAR-3 FL 1003 | 25 GW 1700 | W71AK-71 NY 23 | 1 Tr 0740 | WVIR-29 VA |
| 2 1700 | WEDU-3 FL 981 | | New York(WOR-9) | | Charlottesville 296 |
| | WPBT-2 FL 1075 | | W75AM-75 NY 23 | | "Washington-Balti- |
| | 1900 WEAR-3 FL 1003 | | New York(WHBT13) | | more U's snowfree" |
| | 2100 KATC-3 LA 1215 | | | | and DC UHF stations." |

Not listed here are frequent relogs of eastern PA, MD, CT, and DC UHF stations. "The big surprise this time was WRRT-36. The Washington-Baltimore stations, which around 0900 were snowfree, had faded considerably by 1000, so I took a look around the dial, and there were the 'Flintstones' on ch 36! At first I wasn't sure it was them, but I wrote to them and they QSLed. At that time I was using my 5 foot dish which was on my bedroom floor. You probably noticed my new address. We moved on the 25th, and our house is located on the highest hill in SP, accounting for the NYC xltr loggings. In our new house, I receive WTKH-8 and NYC xltrs on 53, 66, 64, 71 and 73 all the time. My Emerson TV images at any chance it gets, so they are a problem: WTVG-68 (ex-WBTE) on 53, WNJB-58 on 43, WHJT-52 on 37, WNJM-50 on 35, WKBS-48 on 33, WNJU-47 on 32, WKTV-41 on 26, WNYC-31 on 16, and WTAF-29 on 14. I have noticed during tropo openings that these images are not exactly on the channels they are supposed to be. When WITF-33 was in, it was lower than the image of WKBS, putting the image at about '33'. (In most U.S. sets, the images on the UHF tuner appear just a bit more than 15 channels--or usually about 91.5 MHz--below the channel of the station you are actually viewing. If the tuner is selective enough, it may allow you to see a station that would otherwise be "covered up" by the unwanted image, if the image had appeared exactly 15 channels below the true video carrier frequency -bt) I added three new political units in June and July--Illinois, Quebec, and Oklahoma, giving me 27 states and 6 provinces plus Cuba...and DC gives me 35 TPU. My log now at 171, Mark's at 120."

| Roy Barstow | | 70 Heritage Circle | | Teaticket, Massachusetts | | 02536 (EST/EDT) | | | | |
|--------------|------|--------------------|-------|--------------------------|---------------------------------|----------------------|-------------|------------|-----------|------------------------------|
| <u>March</u> | | | | | | | | | | |
| 8 Tr | 2030 | "NJ KTV UHF's" | 17 Tr | 0915 | WFMZ-69 PA | 6 Es | 1830 | WCBI-4 MS | | |
| | 2100 | WHRO-15 VA | | | Allentown | | 1930 | WCCO-4 MN | | |
| | | WYAH-27 VA | | | WHP-21 PA | | 2000 | KSTP-5 MN | | |
| | 2330 | W59AA-59 CT | 20 | 2200 | WTFP-33 PA | | 2200 | CBWF-3 MB | | |
| | | W62AB-62 RI | | | WYAH-27 VA | | | Winnipeg | | |
| 9 | 1000 | WHRO-15 VA | | | WHRO-15 VA | | 2300 | CKPR-2 ON | | |
| | | WDCA-20 DC | | | WCVB-23 VA | | | WCIA-3 IL | | |
| | | WBOC-16 MD | 21 Es | 0900 | WUNK-25 NC | 7 | 0100 | KUSD-2 SD | | |
| 10 | 1000 | WHRO-15 VA | 22 Tr | 0130 | unID 2, 3 | | | KGLO-3 IA | | |
| | | WYAH-27 VA | | | WVIA-44 PA | 8 | 1810 | WRBC-3 TN | | |
| | 1300 | WCPB-28 MD | | | WCVB-23 VA | | 1900 | KTCA-2 MN | | |
| 11 | 2115 | WSPB-26 ME | | | WDCA-20 DC | | 1907 | WCCO-4 MN | | |
| | | WVTA-41 VT | | | WBFF-45 MD | | 1913 | KDAI-3 MN | | |
| 13 | 0300 | WGBB-10 ME | | | W53AA-53 NY | | 2000 | KYTV-3 MO | | |
| <u>April</u> | | | | | New York (WCBS2) | | | KSTP-5 MN | | |
| 10 Tr | 2000 | WCPB-28 MD | | | W57AB-57 NY | | | WVAB-2 MS | | |
| | | WBOC-16 MD | | | New York (WNBC4) | 9 | 1800 | WEAR-3 FL | | |
| | | WHRO-15 VA | | | W59AA-59 CT | | 2100 | WRCB-3 TN | | |
| | 2200 | "NJ UHF" | | | W64AA-64 NY | | | WSJK-2 TN | | |
| 13 | 2200 | "NJ UHF" | | | W66AA-66 NY | 12 | 0930 | WBYA-2 WI | | |
| | | WBOC-16 MD | | | New York (WABC7) | | 1000 | KGLO-3 IA | | |
| | | WCPB-28 MD | | | W73AP-73 NY | | 1115 | CKPR-2 ON | | |
| | 2400 | WUNK-25 NC | 26 | 2100 | New York (WPIX11) | 20 | 1811 | KARK-4 AR | | |
| 19 | 2200 | WWSB-26 ME | | | WHRO-15 VA | | 1835 | WCIV-4 SC | | |
| | | WGAN-13 ME | | | WBOC-16 MD | | 1930 | WBDU-3 FL | | |
| | | WLBZ-2 ME | | | WYAH-27 VA | | 2000 | WJXT-4 FL | | |
| | | WVTA-41 VT | | | WUNK-25 NC | | | WUFT-5 FL | | |
| | | WFLZ-22 VT | 27 | 2100 | "Same stations as above (5-26)" | | 2130 | WPTV-5 FL | | |
| | | WSTK-33 VT | 29 Es | 1200 | WSB-2 GA | | 2200 | WHRO-15 VA | | |
| | | WENH-11 NH | | | WSAV-3 GA | | | WYAH-27 VA | | |
| | | WUHF-9 NH | | | 2200 | WCIA-3 IL | 22 Es | 0700 | WNGE-2 TN | |
| 20 | 2400 | WHRD-15 RH "rare" | | | 2230 | KTVI-2 MO | | 23 | 0715 | WREC-3 TN |
| | 2100 | WBFF-45 MD | | | KQTV-2 MO | | | | | WHP-21 PA |
| | | WBOC-16 MD | 31 | 0045 | WISC-3 WI | | | | | WBRB-28 PA |
| | | WCPB-28 MD | | | to WMT-2 IA | | | | | WTPA-27 PA |
| | | WDCA-20 DC | | | 0135 | WCIA-3 IL | | | | WBFF-45 MD |
| | | WHP-21 PA | | | <u>June</u> | | | | | |
| | | WETA-26 DC | 2 Es | 1230 | WRBC-3 TN | | 25 Es | 1000 | | WJXT-4 FL |
| | | WTFP-29 PA | | | WCBI-4 MS | | | 1100 | | WBDU-3 FL |
| | | WLVT-39 PA | | | 1300 | KTVI-2 MO | | 1130 | | WTVJ-4 FL |
| | | WCVB-57 VA | | | 1330 | WTTV-4 IN | | | | WPBT-2 FL |
| | | WTFP-33 PA | | | | Bloomington | 30 | 1830 | | KTIV-4 IA |
| | | to Hershey | | | | WTVJ-4 FL | | | | Sioux City |
| | | WCVB-23 VA | | | | Miami | | 1900 | | KTVO-3 MO |
| | | WVTV-53 VA | | | | WCIV-4 SC | | 1930 | | KYTV-3 MO |
| | | Annandale | | | | Charleston | | | | |
| | | WSBA-43 PA | | | | WUFT-5 FL | <u>July</u> | | | |
| | | WBRB-28 PA | | | | 2200 | 1 Es | 1800 | | WREC-3 TN |
| | | WHP-21 PA | | | | WESH-2 FL | | 1830 | | WTVY-4 AL |
| | | WAPB-22 MD | | | | 2200 | | | | Dothan |
| | | WLXH-15 PA | | | | Tr 2200 | | 1900 | | WSAV-3 GA |
| | | WTPA-27 PA | | | | 1130 | | 2000 | | WUFT-5 FL |
| | 0830 | WBRB-28 PA | 3 Es | 1130 | "NJ BTV U's, 16 & 28 MD" | | | | | WKRK-5 AL |
| | | WTPA-27 PA | | | WDTN-2 OH | | | | | WPTV-5 FL |
| | | WNEP-16 PA | | | Dayton | | | | | WPBT-2 FL |
| | | WVIA-44 PA | | | 1200 | WLBT-3 MS | 3 | 0900 | | WVRC-13 VA |
| | | WVTV-53 VA | | | 1830 | KYTV-3 MO | 4 Tr | 0700 | | WYAH-27 VA |
| | 0855 | WCVB-57 VA | | | | WBBM-2 IL | | | | WBOC-16 VA |
| | | WSBA-43 PA | | | | WMT-2 IA | | | | WJPM-33 SC |
| | 0900 | WBFF-45 MD | | | | WHRO-15 VA | | 0730 | | WRLK-35 SC |
| | | WTFP-33 PA | | | | WYAH-27 VA | | | | Columbia |
| | | | | | | WJCL-22 GA | | | | "also unIDs on 18, 19, & 41" |
| <u>May</u> | | | | | | "in fair to good" | | | | |
| 16 Tr | 2200 | "NJ BTV UHF" | | | | 1000 | 6 Es | 1830 | | WSIL-3 IL |
| | | WNEP-16 PA | | | | 1000 | | 1900 | | WOL-5 IA |
| | | WUNK-25 NC | | | | 1000 | | | | Ames |
| | | WLVT-39 PA | | | | 1030 | | | | 1955 |
| | | WSBA-43 PA | | | | Camaguey | | | | WTVY-4 AL |
| | | W64AA-64 NY | | | | "first Cuban in here | | | | 1957 |
| | | New York (WNEW-5) | | | | Camaguey | | | | WSM-4 TN |
| | | | | | | "first Cuban in here | | | | 2000 |
| | | | | | | Camaguey | | | | 2030 |
| | | | | | | Camaguey | | | | KSD-5 MO |
| | | | | | | Camaguey | | | | 1200 |
| | | | | | | Camaguey | | | | WESH-2 FL |

Roy Barstow (continued)

| July | | 27 Es 1230 | | KQTV-2 MO | | 3 Es 2300 | | WNGE-2 TN | | | |
|------|---------|------------------|----|-----------|----------------|-----------|----|-----------|--------|---------|----|
| 10 | Es 1200 | WEDU-3 | FL | 1830 | WNGE-2 | TN | 13 | Tr 0900 | CBFT-2 | PQ | |
| 11 | Tr 2200 | WFMZ-69 | PA | | WSM-4 | TN | | | 0905 | WEZF-22 | VT |
| | | "also eastern PA | | | WLAC-5 | TN | | | 0910 | WHPI-18 | NY |
| | | and NJ UHF" | | | Nashville | | | | 0920 | WLBZ-2 | ME |
| 12 | Es 1800 | WTVY-4 | AL | | (call now WTVF | -bt) | | | 0930 | WCAX-3 | VT |
| | 1830 | WRBL-3 | GA | | 1900 | WMC-5 | TN | | | WEMT-7 | ME |
| | | WSJK-2 | TN | | 1915 | WCBI-4 | MS | | | WGAN-13 | ME |
| | 1930 | WCBI-4 | MS | | | WLBZ-3 | MS | | | WABI-5 | ME |
| | | WMAB-2 | MS | | 1925 | WSIL-3 | IL | | | | |
| | 2100 | WVL-4 | LA | | 1930 | KETS-2 | AR | | | | |
| | | New Orleans | | | 2130 | KARK-4 | AR | | | | |
| 19 | 1800 | WDIQ-2 | AL | | | WRCC-3 | TN | | | | |
| | | WSB-2 | GA | | 2300 | WTVY-4 | AL | | | | |
| | | WEAR-3 | FL | 31 | 1000 | WPBT-2 | FL | | | | |
| | | WSIL-3 | IL | | | WCHD-2 | SC | | | | |
| 22 | 1900 | WEDU-3 | FL | | | WSAV-3 | GA | | | | |
| 25 | 2100 | KARK-4 | AR | | 1025 | WRBL-3 | GA | | | | |
| | 2200 | CKPR-2 | ON | | 1730 | KMTV-3 | NE | | | | |
| | 2300 | KDAL-3 | MN | | | | | | | | |
| | 2400 | KUSD-2 | SD | | | | | | | | |
| 26 | 1900 | KSTP-5 | MN | | | | | | | | |
| | | KTVO-3 | MO | | | | | | | | |
| | | WHRF-4 | IL | | | | | | | | |
| | | KQTV-2 | MO | | | | | | | | |
| | 1905 | WRAY-2 | WI | | | | | | | | |
| | 2000 | WCIA-3 | IL | | | | | | | | |
| | | WDAP-4 | MO | | | | | | | | |
| | | WTWO-2 | IN | | | | | | | | |
| | 2130 | KYTV-3 | MO | | | | | | | | |
| 27 | 1215 | WRZZ-2 | LA | | | | | | | | |
| | | WESH-2 | FL | | | | | | | | |

September

| | | | | | | | | | | |
|---|---------|---------|----|--|--|--|--|--|--|--|
| 1 | Tr 2100 | WYAH-27 | VA | | | | | | | |
| | | WHRO-15 | VA | | | | | | | |
| | | WBOC-16 | MD | | | | | | | |
| | | WNEP-16 | PA | | | | | | | |
| | | WDAU-22 | PA | | | | | | | |
| | | WAFP-22 | MD | | | | | | | |
| | | WRRB-28 | PA | | | | | | | |
| | | WCPB-28 | MD | | | | | | | |
| | | WHP-21 | PA | | | | | | | |
| | | WVTA-44 | PA | | | | | | | |
| | | WLVT-39 | PA | | | | | | | |
| | | WYAH-27 | VA | | | | | | | |
| | | WCVB-23 | VA | | | | | | | |
| | | WCVW-57 | VA | | | | | | | |
| | | WHRB-15 | VA | | | | | | | |
| | | WKTV-2 | NY | | | | | | | |
| | | WLBZ-2 | ME | | | | | | | |
| | | WMTW-8 | ME | | | | | | | |
| | | WGAN-13 | ME | | | | | | | |
| | | WHRO-15 | VA | | | | | | | |
| | | WYAH-27 | VA | | | | | | | |
| | | WVBC-13 | VA | | | | | | | |

"It was a good season here with loads of Es and some good tropo at times. A new state, a new province, and a new country were seen. Here's hoping there's some good tropo coming up this fall and winter. Happy holidays to all."

Joseph A. Markewicz C.P. 1503 Hornell Heights, Ontario P0H 1P0

Not too much in the way of TV DX from this location since moving here in Dec. '75. This is due to working full time and going to university. Right now, am still using a 1973 12" Fleetwood B/W. My location is on a 1000 foot hill overlooking Lake Nipissing and the CATV leakage in this building is terrible. It's so bad, I am not connected up to the cable but I still receive CATV as good as if I'm connected. This city has the worst CATV system I've ever seen. They try to con you into paying 8 bucks just to watch a bunch of Canadians and WREN-TV. A normal day's reception from a location 25 miles north of here using a 26" colour set with a rotor antenna produces CKO-2, CKVR-3, CHNB-4, CKSO-5, CBFST-7, CKNC-9, CKNY-10, CBFST2-12, CBFST1-13. Unfortunately, I don't have a UHF antenna, so no UHF DX seen. The CBC does it again by switching the programs on CBFST relays from CBOFT-9 to CBLFT-25 Toronto--and the local movies seem to have gone down hill. Was watching CKVR-3 on Sept. 8, when they went off the air around 1827. A plane hit their 300 metre high transmitting antenna at the 750 foot mark (228m), toppling it on the TV station building. Their antenna is on a 950 ft. hill south of Barrie. This tower relays CBLFT7-55, and CHAY 93.1. CKVR said the cost to replace the tower is close to a million dollars. It was built in 1973 at a cost of \$350,000 and went into operations in Jan. 1974. CKVR noted back on the air on Sept. 19 with a 400 foot tower borrowed from the CBC in London. 73's"

Bill Dulmage R.R.#3 Colborne, Ontario K0K 1S0 (EDT)

| | | | | | | | | | | | |
|------|---------|---------|---------|---------|----|---|---------|---------|---------|--------|----|
| June | | 28 | Es 2055 | WKRQ-5 | AL | 3 | Tr 0730 | CKVR-3 | ON | | |
| 27 | Tr 2315 | WCNY-24 | NY | | | | | 1500 | WPSX-3 | PA | |
| | | 2340 | CBFT-5 | ON | | | | Es 1900 | KFDX-3 | TX | |
| | | 2345 | WKXI-21 | NY | | | | Tr 2245 | WUAB-43 | OH | |
| 28 | Es 0000 | WUPT-29 | NY | | | | | 7 | Es 2100 | WUFT-5 | FL |
| | | 2000 | WTVJ-4 | FL | | | | | 2200 | WCBZ-2 | SC |
| | | 2015 | WPBT-2 | FL | | | | 14 | 1925 | KDLO-3 | SD |
| July | | 2 | Es 1755 | WEDU-3 | FL | | | | | | |
| | | 3 | Tr 0600 | CKCO-13 | ON | | | | | | |
| | | | 0630 | WIGU-12 | PA | | | | | | |
| | | | 0655 | CKGN-22 | ON | | | | | | |

Bill also includes a list of his recent verifications.

Jim Gould R.R.#3 Kokomo, Indiana 46901 (317)452-9585 (CDT)

| Month | Time | Call | Station | City | State | Zip | Notes | | | | |
|--------|---|---|---|-----------------------------|---|----------------|--|----------------------|------------|-----------------------|----|
| August | 2 Tr 0700 | WAAY-31 AL 410 | 1042 WHME-46 IN 65 | 6 Tr 1723 | WENY-36 NY? | T | | | | | |
| | | KOIR-10 MO 445 | "South Bend; back on air w/call slide..." | 2100 | WBRE-28 PA? | T | | | | | |
| | Es 1800 | unIDs 2,5 SS | Tr 1720 | WBRE-28 PA 540 | 2110 | WKBS-48 PA | 580 | | | | |
| | | XEPB-2 MI? T | WSRA-43 PA 492 | 2203 | KOLN-10 NE | 552 | "conditions open from Philadelphia to Hastings NE" | | | | |
| | | CKOW-2 NB? T | WBFF-45 MD 508 | | 0610 | WWPB-31 MD | 445 | | | | |
| | 1830 | CJRW-3 QD 1020 | 1732 unID-41 | 7 | 0612 | WBRE-28 PA | 536 | | | | |
| | | CJCH-4 NS 1240 | 2032 WKBS-48 PA 580 | | 0615 | WNEP-16 PA | 540 | | | | |
| | | CHAU-5 QD? T | 2250 WHLA-31 WI 339 | | 2000 | WHWC-28 WI | 408 | | | | |
| | 1853 | KMTV-3 MN 1035 | 4 0210 | WPHL-17 PA Philadelphia 580 | 2155 | KTTC-10 MN | 396 | | | | |
| | 1854 | HAJD-4 Spanish | 0214 | WDAU-22 PA 545 | 2157 | KYTC-12 MN | 463 | | | | |
| 1900 | CBIT-5 NS 1240 | 0220 | WCAU-10 PA 580 | 2220 | KMSP-9 MN | 480 | | | | | |
| 3 | 1800 | KDKL-2 ND 970 | 0250 | CHLFT4-44 OH? T | | | | | | | |
| | | KTWO-2 WY 1090 | 0252 | CHLFT6-32 OH 545 | | | | | | | |
| | | KOTA-3 SD 940 | | CHLFT5-45 OH? T | | | | | | | |
| | | KDUE-4 NE 900 | 0319 | WJZ-13 MD 508 | 8 | 2230 | WXOW-19 WI | 342 | | | |
| | 1802 | KYCU-5 WY 970 | 0330 | WPVI-6 PA Philadelphia 580 | | 0225 | WCGO-4 MN | 480 | | | |
| | 1816 | KPHY-4 SD 770 | 0340 | WAVY-10 VA 584 | | 0620 | WSAU-7 WI | 367 | | | |
| | 1836 | KHGO-3 SD 628 | 0344 | WABC-7 NY New York 640 | | 0622 | WTCH-11 MN | 480 | | | |
| | 1840 | KPBN-5 MT 1330 | 0420 | WTAP-29 PA 580 | | 1830 | WFIQ-36 AL | 405 | | | |
| | 1857 | CHWPT-3 ME? T | 0442 | WSPA-7 SC? T | | 2008 | WTON-4 MI Cheboygan | 360 | | | |
| | 1930 | KRNS-2 CO 990 | 0500 | WRBT-36 NC 473 | 17 | 2118 | WJMN-3 MI Escanaba | 360 | | | |
| 2028 | KDAA-5 CO 1000 | 0520 | WHAG-25 MD? T | | 0930 | KOLR-10 MO | 445 | | | | |
| 2115 | "call from Tom Cornell; California is in on 6 meters" | 0522 | WPGA-20 DC? T | 19 | 1015 | KETA-13 OK? T | "under local" | | | | |
| 4 | Tr 0630 | "very strong signals from Kitchener ON to St Louis" | 0522 | WPHL-17 PA 580 | | 2000 | KOLR-10 MO | 445 | | | |
| | 0704 | unID-55 Canada | 0535 | WVIA-44 PA 540 | | 2105 | KAFT-13 AR? T | "strong under local" | | | |
| | Es 1840 | WPRB-2 FL 1090 | 0545 | WBOC-16 MD 576 | 20 | 0546 | KTVH-12 KS | 660 | | | |
| | 1957 | CKOW-2 NB 1125 | 0559 | WHP-21 PA Harrisburg 483 | | 0655 | KHIN-36 IA | 473 | | | |
| | 2130 | WHEB-2 MA 785 | 0616 | WXII-21 NY 472 | | | KYNE-26 NE | 515 | | | |
| | 2148 | WLEZ-2 ME 925 | 0628 | WNEP-16 PA 540 | | | KHNE-29 NE | 642 | | | |
| | 2157 | CHPT-2 QD? T | 0631 | WETA-26 DC 492 | | | KMTC-27 MO | 445 | | | |
| | 1845 | KOTA-3 SD 940 | 0650 | WKBS-48 PA 580 | | 0718 | KTUL-8 OK? T | | | | |
| | Tr 1852 | KMAA-41 MD 458 | 0651 | unID-48 | | 0744 | KAFT-13 AR Fayetteville | 537 | | | |
| | Es 2053 | KTVO-2 MT 1220 | 1030 | WLVT-39 PA 555 | | 0745 | "weak CCI on ch 39 from S.W." | | | | |
| 5 | Tr 2200 | KHIN-36 IA 470 | 1031 | HNJT-52 NJ Trenton | | 1900 | WKNO-10 TN | 433 | | | |
| | 2230 | KTWO-11 KS 510 | 1032 | WFOZ-69 PA Allentown | | 2210 | KMBC-9 MO | 458 | | | |
| | 2236 | KTSD-27 KS 510 | | 1115 | "WKBS-48 & all Pittsburgh stations snow free" | | 2230 | KTHV-11 AR | 520 | | |
| | 0349 | WROC-8 NY 472 Punder WJKW" | | 1139 | WLVI-56 MA? T | | 2000 | WHLA-31 WI | 339 | | |
| | 0401 | CFPO-9 OH 410 | | 1152 | WENB-30 CT New Britain | 704 | | 2250 | WHAA-29 MS | 620 | |
| | 0420 | WTAJ-10 PA T | | 1215 | WWPB-31 MD 445 | | | 2300 | WMAO-23 MS | 543 | |
| | 0900 | KHIN-36 IA 473 | | 1230 | WNJU-47 NY New York | 640 | | 2302 | WHTV-24 MS | 590 | |
| | 0200 | KOLR-10 MO 445 | | 1240 | WATV-41 NY New York | 640 | | 0250 | WAPT-16 MS | 619 | |
| | 2100 | "CCI from ch 41 Kansas City" | | 1248 | WBTB-68 NJ Newark | 623 | | 0259 | WAPI-15 AL | 405 | |
| | 2205 | KMBC-9 MO 458 | | | (call now WTVG -bt) | | | 0621 | WTVV-9 MS | 464 | |
| 18 | 0220 | CFPO-9 OH 410 | | 1330 | CHLFT4-44 ON Peterborough | 470 | | 0703 | WHEB-42 AL | 490 | |
| | 0222 | CHLFT6-32 ON Kingston | | 5 2135 | KMEG-14 IA 540 Des Moines V's | | | 2200 | KOLR-10 MO | 445 | |
| | 0230 | unIDs 3 & 5 N. CMTY-10 OH? T | | 2205 | KTTC-10 MN 396 | | | 0650 | KMBC-9 MO | 458 | |
| | 0230 | CKSO3-11 OH? T | | 0656 | KYTC-12 MN 463 | 24 | | | 0659 | W65AH-63 OH Maplewood | 94 |
| | 0245 | CHLFT5-15 ON Belleville | | 0657 | KUCW-12 NE Lincoln | 552 | | | | | |
| | 0257 | unIDs on 7 N.E. CJCH-13 OH? T | | 0700 | KETV-7 NE 515 | | | | | | |
| | 0503 | WROC-8 NY 422 | | 0702 | KYNE-26 NE 515 | | | | | | |
| | September | 2 Tr 2200 | KHIN-36 IA 473 Des Moines V's | | 1723 | KHIN-36 IA 473 | | | | | |
| | | 2217 | WOI-5 IA 410 | | | | | | | | |
| | | 2222 | KMBC-14 IA 540 | | | | | | | | |
| 2227 | | unID-33 W. | | | | | | | | | |
| 2327 | | KMAA-41 MO 458 | | | | | | | | | |

Jim Gould (continued)

September 25 Tr 0800 W67AJ-67 MI 28 Tr 0710 KODE-12 MO 515 28 Tr 1900 WAAV-31 AL 410
 Ann Arbor 170 "under WHIH" 2000 WBMG-42 AL 490
 (WJIM-6 xltr) 1900 WKNO-10 TN 433 2100 WGIQ-43 AL 613
 WATT-36 GA 485

Jim notes that W63AE Maplewood OH was picking up CGI on its input and relaying
 WAND-17 Decatur IL on ch 64 on the morning of September 25.

Bob Zent 1835 Fruit Street Huntington, Indiana 46750 (EST)

September 8 Tr 2010 WPNE-38 WI 285 17 Tr 0630 KPLR-11 MO 305
 2 GW 1132 WHMR-46 IN 65 WLJK-11 WI 285 0650 KFVS-12 MO 340
 "back on the air, WGTU-29 MI 270 0700 KOLR-10 MO
 new call letters" 2015 WPEM-7 MI 270 Springfield 500
 7 Tr 0800 WPGH-53 PA 290 WWTU-9 MI 250 KMTG-27 MO
 Youngstown U's 2200 WNDP-10 MI 0715 W49AA-49 IL
 Sault Ste. Marie 395 Springfield 235
 0817 WIIC-11 PA 290 2205 WBAY-2 WI 285 (WCIA-3 xltr)
 WTRP-7 WV 260 2220 WFRV-5 WI WICS-20 IL 235
 Green Bay 285 0750 KETC-9 MO 305
 0900 WVVU-24 WV 300 2228 WGNL-6 MI? T 18 GW 2100 W17AA-17 OH
 2200 KWWL-7 IA 375 9 0700 WAAV-31 AL 445 Celina 50
 KCBG-9 IA Cedar Rapids 335 0700 WYUR-48 AL 445 W63AE-63 OH
 2205 KRIN-32 IA 375 WHNT-19 AL 445 Maplewood 50
 2215 KFTM-24 IA Mason City 425 2240 KIDN-30 MO 305 (WPTD-16 xltrs)
 KDUB-40 IA Dubuque 295 11 0730 WUSL-16 IL 22 Tr 0608 WYUR-48 AL 445
 2217 WHLA-31 WI La Crosse 355 WKZT-23 KY 245 WAAV-31 AL 445
 La Crosse 355 2040 WSWP-9 WV Beckley 325 WHNT-19 AL 445
 Erie U's 295 14 2040 WOUU-44 OH 215 KTVI-2 MO 305
 2330 WKOW-27 WI 260 WVVU-24 WV 300 0050 KSD-5 MO 305
 WMTV-15 WI 260 2100 WKAS-25 KY KIDN-30 MO 305
 2337 WKOW-19 WI La Crosse 355 Ashland 235 0055 KETC-9 MO 305
 WKBT-8 WI La Crosse 355 WOUU-20 OH KPLR-11 MO 305
 WQAD-8 IL 270 Athens 210 0108 KNOX-4 MO 305
 2350 WQAD-8 IL 270 Athens 210 0700 Evansville U's
 2355 KPTC-10 MO Rochester 425 2200 WSAZ-3 WV KIDN-30 MO 305
 WRAU-13 WI Huntington 245 0730 KPLR-11 MO 305
 8 0002 WRAU-13 WI Huntington 245 0755 KDUB-40 IA 295
 San Claire 415 2203 WOWK-13 WV 245 0830 London V & U's
 0013 WLUK-11 WI 285 2210 WCHS-8 WV 265 0930 CHLFT-76 OH 300

"This has been a most productive month for me with 19 new loggings. Total: 287"

Michael L. Hogan 9224 Cottage Grove Ave. Highland, Indiana 46322 (219)924-2361

*The biggest TV-DX development at this location is the purchase of a B/W portable Magnavox TV with, of course, detent UHF tuning. This new set replaces the 10-year-old receiver which finally put up the white flag and will never be seen again. For UHF DX a 4-bay bowtie is up at 22 feet being hand rotated. Total log now up to 70 stations with 30 on the UHF frequencies included. Stations with an * were seen at work in Gary, Indiana which is about 9.6 mi. away from the home location. Excellent tropo noted on 9/6 and 10/4. Remember to contribute information for the new TV Station Guide. Its success depends upon you, the members of WTFDA."

September 25 Tr 1000 WUAB-43 OH 300 30 Tr 0730 WKOW-27 WI
 14 Tr 0545 WHIH-10 IN 1028 WANE-15 IN 1100 WIPR-23 IL
 0927 WLFY-18 IN 1100 WPTA-21 IN (ex-WCKE)
 0959 WRAU-19 IL 26 0630 WICS-20 IL
 1013 WREK-25 IL 28 2355 WCBM-40 IN
 1025 WMBD-31 IL 29 1250 WBAK-38 IN
 15 0600 WDEO-24 OH 250 1330 WFTI-20 IN
 October
 4 Tr 0500 WILX-10* MI
 0540 WISH-8* IN
 0600 WIKY-52* KY

Paul D. Traska 64 Weaver Avenue Buffalo, New York 14206 (EDT)

September 8 (continued) 8 Tr 2308 WTVF-47 IL 9 Tr 0050 WICS-20 IL
 Peoria 0058 KIDN-30 MO
 Tr 2115 WPNE-38 WI 2335 WRAU-19 IL 0100 WICD-15 IL
 2255 CHLFT9-68 ON 9 0022 WFTO-17 IL WAND-17 IL
 Sarnia 0050 WCKE-23 IL 0245 WISN-12 WI
 2308 WMBD-31 IL WVTU-18 WI
 Present log totals: 471

Dr. Joel Rosenberg Apt. 909 - 40 Godstone Road Willowdale, Ontario M2J 3C7

"I've managed to catch a few openings despite a busy internship & now, since July 1, my own family practice."

| | | | | | | |
|-----------------------|-------|------|-----------------------------------|-------|------|-----------------|
| April (all times EDT) | 27 Tr | 1100 | WWNY-7 NY | 14 Tr | 2325 | unIDs 17 & 29 |
| 30 Tr | 1015 | | <u>CHLFT5-15 ON</u> Belleville | 2 Es | 1820 | WJXT-4 FL |
| | | | WKPX-16 NY | | 2000 | unIDs to 4 |
| | | | W46AB-46 NY | 7 | 1900 | unIDs 2, 4 ATV? |
| | 1200 | | W5AAA-50 NY | | 1930 | CFCM-4 QB? T |
| May | | | | 9 Tr | 0800 | WGYC-35 MI |
| 16 Tr | 0800 | | WSHR-35, WJET-24 | | | WKBD-50 MI |
| 21 | 0830 | | <u>CHLFT6-32 ON</u> Kingston | | | WUHQ-41 MI |
| | | | <u>CHLFT2-40 ON</u> | | | WKAR-23 MI |
| | | | WUAB-43 OH | | | CRGH29-29 ON |
| | | 10 | WKBD-50 MI | 14 | 1100 | WCHY-24 NY |
| | | 14 | WTVS-56 MI | | 1000 | Detroit U's |
| | | | WSPR-62 MI | | | unIDs 57 & 35 |
| | 1035 | | <u>CKCO3-42 ON</u> Sarnia | | 1045 | unID-15 CBS |
| | | | "finally!" | | 1130 | WCMU-14 MI |
| | | | | | 2200 | Scranton U's |
| | | | | | | Binghamton U's |
| June | | | | | | WPGH-53 PA |
| 6 Es | 1800 | | unID-4 French | | | Elmira U's |
| | | | CJCB-4 NS | | 2300 | WKBS-48 PA |
| | | | Sydney | | | unIDs 63 & 39 |

William J. Drach Ellis St. R.R.#2 Kewanna, Wisconsin 54216 (CDT)

"A few good trope openings during September. The one on the 21st was about the best. I managed to ID WFIQ-36 fifteen seconds after WMTV-36 signed off. WATL-36 Atlanta was also in, even overrode WMTV, but no ID. WFIQ was in all evening, but no ID until WMTV s/off. Sure is frustrating trying to get an ID."

| | | | | | | |
|-----------|------|------|--|-------|------|----------------|
| September | 8 Tr | 2110 | WMBK-11 MI 205 | 15 Tr | 0752 | WNEO-45 OH 406 |
| 6 Tr | 2200 | | "over local" | | 0758 | WNEP-16 PA 630 |
| 7 | 0704 | | <u>CHLFT1-76 ON 345</u> | | 0805 | WPGH-53 PA 480 |
| | 0732 | | "snow free" | | 1843 | WUTV-29 NY 445 |
| | | | WQLN-54 PA 405 | | 2001 | Springfield MO |
| | | | CICO-19 OH 410 | | | U's 21, 27 588 |
| | | | CHLFT-25 ON 410 | | | KINL-30 MO 432 |
| | | | CITY-79 ON 410 | 2134 | | KCBJ-17 MO 450 |
| | 0741 | | WKRN-27 OH 420 | | 2020 | KDOG-26 TX? T |
| | 0829 | | CKCO-13 ON 345 | | 2058 | KTVV-36 TX? T |
| | | 9 | 0110 <u>CHLFT5-15 ON</u> Belleville | 16 | 2014 | WUTV-29 NY 445 |
| | 1732 | | 502 | | 2035 | WMUL-33 WV 498 |
| | 1739 | | 0120 <u>CHLFT6-34 ON 374</u> | | | WOSU-34 OH 395 |
| | | | 0130 <u>CHLFT4-44 ON 458</u> | 17 | 2056 | KINL-30 MO 432 |
| 8 | 0000 | | "snow free at times" | 21 | 0643 | KMTC-27 MO 588 |
| | 0805 | | 0130 <u>CHLFT6-32 ON 543</u> | | 0657 | KCBJ-17 MO 450 |
| | | | 0135 WBJA-34 NY 600 | | 0707 | KTVJ-16 MO 633 |
| | 0809 | | 0146 CFTO-9 OH 410 | | 0715 | WLKY-32 KY 437 |
| | | | WKRW-7 NY 445 | | | WKHA-35 KY 551 |
| | | | WHIO-7 OH 368 | 20 | 2140 | KMTC-27 MO 588 |
| | | | 0212 <u>CHLFT7-27 ??</u> | | 2154 | KHIN-36 IA 457 |
| | | | "where is it??" | | | KTSB-27 KS 560 |
| | | 10 | 2000 KINL-30 MO 432 | | 2218 | KSIN-27 IA 463 |
| | | | 2009 WMBR-46 IN 208 | | 2248 | KTVJ-16 MO 633 |
| | | | "ex-WNSH, back on" | | 2323 | KNEB-14 IA 463 |
| | 0840 | | 0845 WKRN-27 OH 420 | 21 | 0715 | WKYT-27 KY 473 |
| | | | WJAN-17 OH 395 | | 0718 | WDRB-41 KY 437 |
| | | | WJET-24 PA 405 | | | WKLB-46 KY 473 |
| | | 12 | 2006 WUTV-29 NY 445 | | 1832 | KINL-30 MO 432 |
| | 2000 | | WKYT-27 KY 473 | | | WBAK-38 IN 348 |
| | | | WKLE-46 KY 473 | | | WHTT-25 IN 420 |
| | | | 2019 WMUL-33 WV 498 | | | WUST-16 IL 402 |
| | | | 2025 WKSO-29 KY? T | 1848 | | WKPC-15 KY 437 |
| | | 13 | 1906 KINL-30 MO 432 | | 1857 | WKMA-35 KY 499 |
| | | | 1944 KHIN-36 IA 457 | | 1930 | WCMU-21 KY 553 |
| | 2007 | | 0749 Youngstown U's | | 1947 | WAAV-31 AL 685 |
| | 2018 | | WJET-24 PA 405 | | 2012 | WKSO-29 KY 538 |
| | 2102 | | WSEB-35 PA 405 | | | WFIQ-36 AL? T |
| | | | WOKR-13 NY? T | | | |

(This report will be continued next month -bt)

WESTERN TV-DX

Doug Everitt
1710 W Maine
Enid OK 73701
(405) 233-4890
Deadline: 10th

For TV DXers in all states west of the Mississippi and Canadian provinces Manitoba & west

John Phillips has pointed out to me that I accidentally did not include the Finco P-7 in his dish comparisons in the August issue of VUD. His point was that he could detect no real difference between the CM, Jerrold & Finco products, other than ease of assembly. This should be very interesting for those contemplating the purchase of a dish.

A good publication for those interested in TV DXing is Roger Bunney's LONG DISTANCE TELEVISION, available from Weston Publishing, 33 Cherville Street, Romsey, Hants SO5 8FB, England, for \$3 in US currency. And, if you're into test patterns, check out Keith Hamer and Garry Smith's GUIDE TO WORLD-WIDE TELEVISION TEST CARDS, which can be ordered from HS Publications, 7 Epping Close, Mackworth Estate, Derby DE3 4HR, England, also for \$3. Hard currency or a draft on a London bank are acceptable payment, and both books are worth the price. The former includes interesting technical data on European television, which should be of interest to DXers who are looking forward to the upcoming F2 peak.

Incidentally, my modification of the 'under 200-mile' rule is intended to affect only this column, and shouldn't be interpreted as changing other columns' distance limits. This provision allows the more difficult conditions of the Western zone to be taken into account, although editorial care must be taken to restrict very repetitive relogs. If anyone has comments on this, please drop me a note.

After being cancelled due to apparent member apathy, letters finally started arriving in support of the WESTERN TV DX Es Chart. Interested readers are referred to the end of this month's column.

By the way, I'd like to thank everybody who sent their report in slightly earlier than usual, since this helps relieve an almost impossible time situation on my part. Early mailings are always preferred, and I hope you'll keep them up. Thanks again!

John Phillips, 4459 Downing Ct., Pleasanton, California 94566

| | | |
|---------------------------|-----------------------------|----------------------------|
| July 1977 | 20 Es 2100 CKCK 2 SK 1253 | 27 Es 1612 KNOP 2 NE 1144 |
| 06 Es 1400 KTWO 2 WY 908 | 24 tr 1800 xltr? 46, 10 kHz | 1622 KTVS 3 CO 1016 |
| 1413 KOA 4 CO 932 | offset to KMST-46, not | KYCU 5 WY 942 |
| 1415 KRMA 6 CO 932 | KBSA, PTA: sw... | 1630 KDUH 4 NE 1060 |
| 1430 KLNE 3 NE 1193 | 27 Es 1000 KDIX 2 ND 1159 | 1640 KOTA 3 SD 1065 |
| KWNB 6 NE 1127 | KARD 3 KS 1353 | 1650 KTWO 2 WY 908 |
| 1500 KTVS 3 CO 1016 | 1008 KCKT 2 KS 1243 | 1653 KUSD 2 SD 1356 |
| 07 Es 0900 CKCK 2 SK 1253 | 1055 KTVY 4 OK 1348 | 2000 KCKT 2 KS 1243 |
| 08 Es 0900 KNME 5 NM 863 | KOCO 5 OK 1348 | 2350 KWGN 2 CO 932 |
| KAVE 6 NM 1055 | 1130 KENW 3 NM 1055 | 28 Es 0900 KCKT 2 KS 1243 |
| 0916 KMID 2 TX 1183 | KFDX 3 TX 1327 | 0930 KWGN 2 CO 932 |
| KENW 3 NM 1055 | KAMR 4 TX 1140 | |
| 0930 KAMR 4 TX 1140 | KAUZ 6 TX 1327 | August 1977 |
| KOB 4 NM 863 | 1140 KMID 2 TX 1183 | 01 Es 1015 KMID 2 TX 1183 |
| 0955 KWGN 2 CO 908 | 1240 KTXT 5 TX 1150 | KTVY 4 OK 1348 |
| KRMA 6 CO 908 | with 3/4 cb tp w/ID | 1030 KAMR 4 TX 1140 |
| w/modified RETMA tp | 1247 CFAC 2 AT 992 | KAUZ 6 TX 1327 |
| 1000 KTVC 6 KS 1186 | 1405 KTVC 6 KS 1186 | 1033 KFDX 3 TX 1327 |
| 1010 KTVY 4 OK 1348 | 1430 KCKT 2 KS 1243 | 1040 KNME 5 NM 863 |
| 1030 KOTV 6 OK 1421 | KARD 3 KS 1353 | 1050 KENW 3 NM 1055 |
| 1058 KOAA 5 CO 977 | KLNE 3 NE 1193 | 1104 KAVE 6 NM 1055 |
| 1130 KTVM 6 MT 750 | 1437 KHAS 5 NE 1267 | 1106 KWAB 4 TX 1206 |
| 1230 CKCK 2 SK 1253 | 1450 KDIX 2 ND 1159 | 03 Es 0850 KMID 2 TX 1183 |
| 1305 KDIX 2 ND 1159 | 1500 KWNB 6 NE 1127 | 0935 KENW 3 NM 1055 |
| 1355 CKCK2 6 SK 1144 | 1530 KWGN 2 CO 932 | 0940 KFDX 3 TX 1327 |
| 1401 CKBI 5 SK 1327 | ROA 4 CO 932 | KAUZ 6 TX 1327 |
| 1430 CKSA 2 AT 1241 | 1600 KTVQ 2 MT 888 | 05 tr 0700 xltr? 5, 20 kHz |
| 1433 CFAC 2 AT 992 | 1602 KSNB 4 NE 1280 | offset to KPXI-5, ne. |

This skip season is the best I've seen in a long time. MUFs have hovered at ch.6 and above in just about every opening. July 27th produced one of the very finest openings out here in a long time. Conditions fired up around 0930, bounced north and south, in and out until midnight that night... truly a West Coast blitz. Tropospheric conditions have also been above normal, due to much high pressure centered over northern Calif., as well as lots of extended coastal fog when the heat's not around. Redding, Bakersfield, San Luis Obispo & Santa Barbara stations in almost daily.

NO CCI?!

Frank Aden, 1535 NW Ithaca Ave., Bend, Oregon 97701

| | | |
|----------------------|----------------------|----------------------|
| June 1977 | 24 Es 2135 KLNE 3 NE | 24 Es 2235 KCKT 2 KS |
| 24 Es 1830 KDCC 4 TX | 2205 KTVY 4 OK | 25 Es 0000 KTEW 2 OK |
| 1832 XEPM 2 CH | KFDX 3 TX | 0050 KNXT 2 CA |
| 2100 KDIX 2 ND | 2230 KOCO 5 OK | XETV 6 BCN |
| 2130 KSNB 4 NE | KARD 3 KS | 0055 KTCA 2 MN |

Frank Aden, Jr. continued...

26 Es 1230 CKSA 2 AT
 1630 KTVS 3 CO
 1730 KENW 3 NM
 1830 KEPM 2 CH
 28 Es 1800 CBWFT 3 MB
 2000 WCGO 4 MN
 2005 KSTP 5 MN
 2100 KAAL 6 MI
 2115 KPLO 6 SD
 2120 WOI 5 IA
 2200 KPRY 4 SD
 2205 KXON 5 SD
 2230 KXGN 5 MT
 2300 CKBI 5 SK
 2340 CBKMT 4 SK
 CKYB 4 SK
 2355 CKCK6 2 SK
 29 Es 0000 KTVQ 2 MT
 0005 KDLO 3 SD
 0020 CFQC1 3 SK

July 1977

01 Es 1800 KENW 3 NM
 1850 KTVY 4 OK
 1900 KOAA 5 CO
 1925 KUAT 6 AZ
 KTXT 5 TX

06 Es 1810 KTVK 3 AZ
 09 Es 0930 KTVK 3 AZ
 13 Es 1830 CKX 5 MB
 1835 CBWFT 3 MB
 1920 KRTV 3 MT
 ran KSL ID, then MTN ID
 (wonder why KSL? ..de)
 1930 KFBB 5 MT
 15 Es 2100 KTVK 3 AZ
 18 Es 0800 KARD 3 KS
 KTVK 6 KS
 2000 KMID 2 TX
 2005 KENW 3 NM
 20 Es 1800 KTVK 3 AZ
 2000 KLNE 3 NE
 2030 KTVS 3 CO
 2100 XHBC 3 BCN
 21 Es 2030 KORK 3 NV
 2200 KOAI 2 AZ
 26 Es 1800 KLNE 3 NE
 1830 KMTV 3 NE
 1900 KNOP 2 NE
 27 Es 1830 KFDX 3 TX
 KAMR 4 TX
 1840 KMID 2 TX
 2000 KENW 3 NM

27 Es 2030 KTEW 2 OK
 XEJ 5 CH
 2330 KDLO 3 SD
 28 Es 0000 KOAI 2 AZ
 1830 KTVK 3 AZ
 KOAI 2 AZ
 1855 XEPM 2 CH
 1900 KENW 3 NM

August 1977

02 Es 1830 KCKT 2 KS
 KARD 3 KS
 KTVK 6 KS
 1845 KRMA 6 CO
 11 ms 2355 KTVS 3 CO
 12 ms 0455 KOTA 3 SD
 1855 KTVK 3 AZ
 1930 KLNE 3 NE
 13 ms 0100 KRTV 3 MT
 14 tr 1330 KOMO 4 WA
 KOTI 2 OR
 15 Es 2000 KMID 2 TX
 2005 KENW 3 NM
 27 Es 1900 KTCA 2 MN
 1905 KDAL 3 MN

That is it so far. Es really died out after

the second, except for some seen at the convention, but these appeared to be weak openings. MS in August was not bad, and I seemed to be in luck to catch many IDs on bursts. Early morning produced many bursts, the best being August 12th, but many TPs and CBs seen unIDed. Now have a 4990 (Winegard AC-4990 UHF amp..de), but need hardware before getting UHF up. Have also ordered a ch.7-13 yagi to see what tr might be coming in here.

Jim Pizzi, 300 Park, Orcutt, California 93454 (includes vacation loggings)

May 1977

29 Es 1958 MUF 3, se
 30 Es 1935 MUF 4, se
 2001 KWAB 4 TX
 2002 XEPM 2 CH
 2003 KMID 2 TX

June 1977

01 Es 1858 MUF 4, se
 En Route to Fairbury NE:
 04 Es 1000 MUF 2
 tr 1000 KMNE 7 NE
 (south of Shelton NE)
 In Fairbury NE:
 04 Es 2100 KOAI? 2 AZ
 MUF 3, west
 tr 2105 KLNE 3 NE
 to KMTV 3 NE
 KSNB 4 NE
 0100 WDAF 4 MO
 KHAS 5 NE
 " WQWT 6 NE
 KETV 7 NE
 " KWWL 7 IA
 KCNA 8 NE
 " KCCI 8 IA
 KOMC 8 NE
 " KPNE 9 NE
 KCRG 9 IA
 " KOLN 10 NE
 KGIN 11 NE
 " KUON 12 NE
 KHGI 13 NE
 " WIBW 13 KS
 KMEG 14 IA
 " KXNE 19 NE
 KYNE 26 NE
 " KTSB 27 KS

04 tr 2105 KXIN 27 IA
 to KHNE 29 NE
 KBIN 32 IA
 0100 KRIN 32 IA
 KHIN 36 IA
 " KBMA 41 MO
 K75BC Beatrice
 " K80CP Beatrice
 05 Es 0930 WKTU 2 NY
 WGR 2 NY
 to WTVH 5 NY
 1030 WBEN 4 NY
 1055 WKYC 3 OH
 1100 WCBS 2 NY
 tr 1130 KXON 5 SD
 Es 1640 CFAC 2 AT
 tr 2157 KCPT 19 MO
 KXNE 19 NE
 KBIN 32 IA
 KHIN 36 IA
 2204 KYNE 26 NE
 2218 KMEG 14 IA
 KSIN 27 IA
 KTSB 27 KS
 06 tr 0812 KMNE 7 NE
 Es 0830 WKYC 3 OH
 0900 WTAE 4 PA
 0927 WAVE 3 KY
 WFMY 2 NC
 1025 KRTV 3 MT
 KTVQ 2 MT
 KFBB 5 MT
 2200 CFAC 2 AT
 KREM 2 WA
 2207 KOIN 6 OR
 2309 KID 3 ID
 2328 KBCI 2 ID

07 tr 2322 KLNE 3 NE
 KMNE 7 NE
 08 Es 1845 KVVU 5 NV
 1855 CKGN2 2 ON
 Double-hop possible in CA,
 and here I am in the mid-
 dle! (DXers luck...de)
 1901 CBFT? 2 PQ
 2103 KBCI 2 ID
 2300 CKRN 4 PQ
 09 tr ?? WDAF 4 MO
 Es 0110 CHNB 4 ON
 CKS01 or 2 3 ON
 tr 0845 KCAU 9 IA
 KTIV 4 IA
 KXON 5 SD
 Es 0900 KTVN? 2 NV
 10 tr 0030 KMNE 7 NE
 0826 KQTV 2 MO
 Es 1300 CKSA 2 AT
 CFRN 3 AT
 1400 CKCK 2 SK
 1430 KREM 2 WA
 KHQ 6 WA
 En Route back to Orcutt:
 11 Es 1730 MUF 6
 1800 KIII 3 TX
 (west of Albuquerque NM)
 2030 KTVU 2 CA
 KCRA 3 CA
 KRON 4 CA
 (from eastern Arizona)
 12 Es 1115 KCMO 5 MO
 (20mi. east of Needles CA)
 1400 CFAC 2 AT
 KYUS? 3 MT
 CFCN 4 AT

Jim Pizzi continued...

12 Es 1530 KLEW 3 WA
1600 KREM 2 WA
(in & around Barstow CA)
Back in Orcutt:
12 Es 2000 KWGN 2 CO
location. It has only one strong local, KOLN-10. It is also very close to the center of the USA, and in easy Es range for all the (continental) US, northern Mexico & southern Canada. I was using a small folded dipole for UHF, VHF rod antenna & an all-channel 2 thru 13 S&A ST-23, about 25 elements at 10 feet above ground. It was good to see old friends and again see tropo DX... it's been 12 years since I left Rochester NY and tropo DX... Wish I'd had all my gear in Fairbury; as it was, I logged 62 TV stations in six days. (Wonder why you didn't haul your 70' tower along, hi...de) Someday when I retire, I'll go back to stay. The people are very friendly, and the pace is nice and easy.

(The rest of Jim's report is from his home QTH in Orcutt CA...de)

| | | |
|-----------------------------|-----------------------------|------------------------------|
| <u>17</u> Es 1012 KDIX 2 ND | <u>04</u> Es 1618 KXLY 4 WA | <u>15</u> Es 2159 K MID 2 TX |
| 1013 KXJB 4 ND | 1658 KTWO 2 WY | <u>20</u> Es 1829 MUF 5, ne |
| KFYR 5 ND | 1700 KHAS 5 NE | 1833 KTWO 2 WY |
| 1028 KXGN? 5 MT | 1702 KOB 4 NM | KTVQ 2 MT |
| 1101 CKCK 2 SK | 1707 XEJ 5 CH | 2018 CKCK 2 SK |
| 1104 KTVQ 2 MT | 1713 KAVE 6 NM | 2130 CFAC 2 AT |
| 1632 KTVQ 2 MT | 1720 KDBC 4 TX | 2132 CFCN? 4 AT |
| KFBB 5 MT | 1723 KENW 3 NM | <u>23</u> Es 1833 XEPM 2 CH |
| <u>24</u> Es 1500 KTVQ 2 MT | 1734 KMID 2 TX | 1901 MUF 4, east |
| 1530 KXLF 4 MT | 1759 CBXT 5 AT | 2129 KTVQ 2 MT |
| 1545 KTVM 6 MT | 1800 KTVQ 2 MT | 2133 KWGN 2 CO |
| 1600 KRTV 3 MT | CFAC 2 AT | 2136 CFAC 2 AT |
| KFBB 5 MT | 1808 CFCN? 4 AT | 2146 KTWO 2 WY |
| 1614 CFCN 4 AT | 2034 KWGN 2 CO | <u>26</u> Es 2134 KTVQ 2 MT |

25 Es 1330 MUF 3, se
26 Es 1027 KMID 2 TX
1031 KACB 3 TX
1107 XEPM 2 CH
KDBC 4 TX
1116 KMOL? 4 TX
1133 KENS 5 TX
1230 KDIX 2 ND
1820 MUF 4
1929 KYUS 3 MT
1930 KTVQ 2 MT
2030 KDIX 2 ND

Very odd today. Skip bouncing in & out from the north to se... no rhyme or reason...
06 Es 1400 KTWO 2 WY
1500 KATU 2 OR
1820 XEPM 2 CH
1835 KDBC 4 TX
1854 KMID 2 TX
1928 KWGN 2 CO
1929 KTVS 3 CO
KOA 4 CO
1930 KREX 5 CO
1943 XEPM? 2 CH

27 Es 0942 XEPM 2 CH
0952 KMID 2 TX
28 Es 1820 XEPM 2 CH
KDBC 4 TX
29 Es 1130 KMID? 2 TX
1131 KACB? 3 TX
1136 KWAB? 4 TX
1139 MUF 6

07 Es 1712 KDIX 2 ND
1730 KTVS 3 CO
KOA 4 CO
1734 KWGN 2 CO
1830 KTVQ 2 MT
1900 KTWO 2 WY
08 Es 0840 KNME 5 NM
KOB 4 NM
0858 KOAA 5 CO
0900 KTWO 2 WY
0913 KTVS 6 KS
1022 KTVM? 6 MT
Spent most of time on FM...

03 Es 0925 XEPM 2 CH
tr 1000 KCET 28 CA
KXLA 40 CA
Es 1057 MUF 2, east
1637 KTVQ 2 MT
1640 KRTV 3 MT
04 Es 1200 KMID 2 TX

snowfree, very brief
1538-1600 ch.2,
ne & se, five deep
13 Es 2139 MUF 2, east
14 Es 2033 MUF 3, east
15 Es 1601 MUF 2, east
2132 KTEW? 2 OK
2139 MUF 4, east

While in Fairbury, I found it to be an excellent DX

location. It has only one strong local, KOLN-10. It is also very close to the center of the USA, and in easy Es range for all the (continental) US, northern Mexico & southern Canada. I was using a small folded dipole for UHF, VHF rod antenna & an all-channel 2 thru 13 S&A ST-23, about 25 elements at 10 feet above ground. It was good to see old friends and again see tropo DX... it's been 12 years since I left Rochester NY and tropo DX... Wish I'd had all my gear in Fairbury; as it was, I logged 62 TV stations in six days. (Wonder why you didn't haul your 70' tower along, hi...de) Someday when I retire, I'll go back to stay. The people are very friendly, and the pace is nice and easy.

(The rest of Jim's report is from his home QTH in Orcutt CA...de)

| | |
|-----------------------------|------------------------------|
| <u>15</u> Es 1030 KREM 2 WA | <u>15</u> Es 2159 K MID 2 TX |
| KXLY 4 WA | <u>20</u> Es 1829 MUF 5, ne |
| MUF 5 | 1833 KTWO 2 WY |
| | KTVQ 2 MT |
| | 2018 CKCK 2 SK |
| | 2130 CFAC 2 AT |
| | 2132 CFCN? 4 AT |
| | <u>23</u> Es 1833 XEPM 2 CH |
| | 1901 MUF 4, east |
| | 2129 KTVQ 2 MT |
| | 2133 KWGN 2 CO |
| | 2136 CFAC 2 AT |
| | 2146 KTWO 2 WY |
| | <u>26</u> Es 2134 KTVQ 2 MT |
| | 2140 KDIX 2 ND |
| | 2144 CKCK 2 SK |
| | 2146 KRTV 3 MT |
| | 2205 KID 3 ID |
| | 2220 CFCN? 4 AT |
| | 2221 CFCN4? 5 AT |
| | 2229 CFAC 2 AT |
| | <u>27</u> Es 0930 KNOP 2 NE |
| | KTIV 4 IA |
| | 0935 KLNE 3 NE |
| | 1000 KMTV? 3 NE |
| | 1012 KHAS 5 NE |
| | 1015 KSNB 4 NE |
| | 1019 KWGN 2 CO |
| | 1028 CKCK 2 SK |
| | 1130 KAMR 4 TX |
| | 2123 KXLF 4 MT |
| | KTVQ 2 MT |
| | 2124 KTVM 6 MT |
| | 2128 KRTV 3 MT |
| | 2157 KCKT 2 KS |
| | 2201 KARD 3 KS |
| | 2230 KTWO 2 WY |
| | 2237 KSNB 4 NE |
| | <u>28</u> Es 0936 CFAC 2 SK |
| | 0939 KTVQ? 2 MT |
| | 1015 KOMO 4 WA |
| | 1016 KATU 2 OR |
| | <u>29</u> Es 1141 KMID? 2 TX |
| | KACB? 3 TX |

Very odd today. Skip bouncing in & out from the north to se... no rhyme or reason...
06 Es 1400 KTWO 2 WY
1500 KATU 2 OR
1820 XEPM 2 CH
1835 KDBC 4 TX
1854 KMID 2 TX
1928 KWGN 2 CO
1929 KTVS 3 CO
KOA 4 CO
1930 KREX 5 CO
1943 XEPM? 2 CH

07 Es 1712 KDIX 2 ND
1730 KTVS 3 CO
KOA 4 CO
1734 KWGN 2 CO
1830 KTVQ 2 MT
1900 KTWO 2 WY
08 Es 0840 KNME 5 NM
KOB 4 NM
0858 KOAA 5 CO
0900 KTWO 2 WY
0913 KTVS 6 KS
1022 KTVM? 6 MT
Spent most of time on FM...

09 Es 0901-33 MUF 2
1850 KTVQ 2 MT
1852 KSNB 4 NE
1900 KLNE? 3 NE
1904 KTVS? 3 CO
11 tr 2320 KFMB 8 CA
(now ABC)
KCST 39 CA
(now NBC)

13 Es 2139 MUF 2, east
14 Es 2033 MUF 3, east
15 Es 1601 MUF 2, east
2132 KTEW? 2 OK
2139 MUF 4, east

03 Es 0925 XEPM 2 CH
tr 1000 KCET 28 CA
KXLA 40 CA
Es 1057 MUF 2, east
1637 KTVQ 2 MT
1640 KRTV 3 MT
04 Es 1200 KMID 2 TX

snowfree, very brief
1538-1600 ch.2,
ne & se, five deep
13 Es 2139 MUF 2, east
14 Es 2033 MUF 3, east
15 Es 1601 MUF 2, east
2132 KTEW? 2 OK
2139 MUF 4, east

09 Es 0901-33 MUF 2
1850 KTVQ 2 MT
1852 KSNB 4 NE
1900 KLNE? 3 NE
1904 KTVS? 3 CO
11 tr 2320 KFMB 8 CA
(now ABC)
KCST 39 CA
(now NBC)

13 Es 2139 MUF 2, east
14 Es 2033 MUF 3, east
15 Es 1601 MUF 2, east
2132 KTEW? 2 OK
2139 MUF 4, east

Jim Pizzi continued...

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| <u>03</u> Es 1830 KCKT 2 KS | <u>04</u> Es 2128 KNOP 2 NE | <u>15</u> Es 2105 KNOP 2 NE |
| KREM 2 WA | KWGN 2 CO | KTVS 3 CO |
| 1846 CFAC 2 AT | KSNB 4 NE | KSNB 4 NE |
| 2000 MUF 4 | <u>10</u> Es 2156 MUF 2 | 2110 KYCU 5 WY |
| <u>04</u> Es 1228 MUF 2 | <u>15</u> Es 2105 KWGN 2 CO | 2159 KCKT 2 KS |

John Anderson, Box 186, Lowe Farm, Manitoba ROG LEO (204) 746-8887

Delhi 1057 at 64', CM traps, amp, Panasonic 12" b&w. UHF: 2-bay hand-held bowtie at 15'.

July 1977

| | | |
|-------------------------------------|----------------------------------|----------------------------------|
| <u>03</u> Es 1730 WNGE 2 TN 1048 | <u>18</u> tr 0020 KTTK 10 MN 432 | <u>28</u> Es 0800 MUF 2 |
| WSM 4 TN 1048 | 0030 KMSP 9 MN 360 | Au 2330 Intense 2-6 |
| 1800 WOAY 4 WV 1123 | (wiping out CKND) | <u>29</u> AE 2245 CKRN 4 PQ 900 |
| 1900 WGR 2 NY 1000 | 0125 KELO 11 SD 405 | CFCL2? 2 ON (T) |
| WKTV 2 NY 1140 | KDLO 3 SD 305 | 2310 CBOT? 4 ON (T) |
| 2000 KDKA 2 PA 1041 | 0800 VHF ditto 17th | <u>30</u> AE 0110 WBN 4 NY 1000 |
| WTAE 4 PA 1041 | PM & 18th early morn... | WTVH? 5 NY (T) |
| <u>06</u> tr 2100 WTCN 11 MN 360 | WHRM 20 WI 470 | <u>31</u> Es 1740 WJXT 4 FL 1540 |
| 2345 WDIO 10 MN 300 | Starting to improve, but | 2E? 1705 Cuba? 4 (T) |
| (snowfree) | had to leave... | Lat. Am. vid. in briefly |
| <u>07</u> tr 0000 WEAU 13 WI 416 | 1200 KSFY 13 SD 405 | (maybe Es + tropo? ..de) |
| 0015 KEYC 12 MN 386 | 1230 KOLN 10 NE 570 | Es 1730 WSB 2 GA 1270 |
| 0101 KSFY 13 SD 405 | (Quick check over lunch | 1800 WDIQ 2 AL 1361 |
| vy. weak, CCI WEAU-13 | hour at Harms' place...) | 1900 WCBD 2 SC 1437 |
| Au or AE 0110 ch.2, nw Canada | 2000 KPSD 13 SD 345 | 2000 WNGE 2 TN 1048 |
| tr 0145 KELO 11 SD 405 | KQSD 11 SD 300 | August 1977 |
| <u>09</u> Es 1830-1930 MUF 4 | <u>19</u> tr 2015 WTCN 11 MN 360 | <u>01</u> Es 1130 KOAI 2 AZ 1215 |
| tr 2230 KEYC 12 MN 386 | <u>21</u> tr 2030 KSFY 13 SD 405 | KMID 2 TX 1233 |
| <u>10</u> tr 0030 WTCN 11 MN 360 | KELO 11 SD 405 | <u>02</u> Es 2100 WTAE 4 PA 1041 |
| <u>12</u> Es 1830 Intense 2-6 + FM, | 2100 KEYC 12 MN 386 | MUF into FM |
| total chaos thru 2008. | 2350 K1ØIL? ND (T) | <u>03</u> Es 0020 WSB 2 GA 1270 |
| 1900 WVAR 2 MD 1228 | <u>22</u> tr 0030 KOLN 10 NE 580 | 0027 MUF 6 |
| tr 2330 WTCN 11 MN 360 | New from home location | 1825 WRAL 5 NC 1325 |
| <u>15</u> tr 0055 K1ØIH MN | KSFY 13 SD 405 | 1830 WSAV 3 GA 1458 |
| Thief River Falls, 103mi. | KELO 11 SD 405 | WFMY 2 NC 1266 |
| 0110 WAE0 12 WI 450 | 0225 KCCI 8 IA 560 | WUNC 4 NC 1298 |
| Deve Harms of Altona noted | Es 2038 WTVY 4 AL 1392 | 2100 KALB 5 LA 1263 |
| FM to 540mi. into WI... | <u>23</u> tr 1330 KDIX 2 ND 300 | WWL 4 LA 1386 |
| <u>17</u> tr 0031 CKCKL 12 SK 288 | Es 1530 WDIQ 2 AL 1361 | 2130 KDFW 4 TX 1140 |
| 0050 CBKFT 13 SK 342 | 1600 WMA6 2 MS 1185 | 2132 KATU 2 OR 1220 |
| (snowfree) | 1610 MUF 5 | <u>07</u> AE 0125 CBFT? 2 PQ (T) |
| KXMD 11 ND 300 | 1630 WCIV 4 SC 1437 | 0130 three deep on 2 |
| 0100 CKCK 2 SK 342 | tr 2000 KXMD 11 ND 300 | 0155 CHNB 4 ON 861 |
| 0125 CICC 10 SK 263 | <u>26</u> Es 1845 WTAE 4 PA 1041 | 0157 CKSO 5 ON 786 |
| also ch.12 sat. CICC | 1845-2000 MUF FM | 0205 WCVB 5 MA 1344 |
| 0132 CBWST 11 SK 448 | 2030 WKTV 2 NY 1140 | 0206 WCBS 2 NY 1279 |
| 0315 Two ch.11s, same | 2100 WCAK 3 VT 1187 | 0240 MUF 107.1 MHz |
| direction as above, stronger | 2105 CEGN 2 ON 963 | 0258 WNEW 5 NY 1279 |
| one s/off 0325. Very odd, as | 2130 WSYR 3 NY 1098 | <u>12</u> Es 1900 KARK 4 AR 1045 |
| only other 11s listed in AT. | New from home location | WSJK 2 TN 1150 |
| 0335 CFQC 8 SK 448 | 2133 WTVH? 5 NY (T) | 1930 WFBC 4 SC 1240 |
| 1730 KEYC 12 MN 386 | 2200 CHNB 4 ON 861 | 2135 MUF 107.1 to AR |
| 2100 KTCA 2 MN 360 | <u>27</u> Es skip noted in eve. | <u>13</u> AE 0120 C### 2 SK |
| WCCO 4 MN 360 | with MUF 4 | (North Battleford) |
| WTCN 11 MN 360 | <u>28</u> tr 0800 K1ØIH MN | Es 1820 MUF 4 Texas? |
| 2120 KSFY 13 SD 405 | Thief River Falls, 103mi. | <u>18</u> AE 2355 WKTV 2 NY 1140 |
| 2345 WEAU 13 WI 416 | KSFY 13 SD 405 | WGR 2 NY 1000 |

Good tropo in July, especially on the 17th, 18th & 22nd. Weather was very unusual during this period, temperatures in 90sF, high humidity, and most unusual of all, a tornado on the 17th, 20mi. southeast of Winnipeg. The rest of North America appeared to be sweltering under a heat wave as well. Weather was unusually cool latter half of August... Cool weather and good DX don't mix, it seems. (that's debatable...de) 73 & Good DX = John

W.T.Ryan, 651 Battery Street, Victoria, British Columbia (PDT)

July 1977

| | | |
|---------------------------------|-----------------------------|--------------------------------|
| <u>07</u> Es 0837 KOAI? 2 AZ | <u>08</u> Es 1200 KORK 3 NV | <u>12</u> Es 1153 MUF 92.3 MHz |
| 0910 MUF 96.1 MHz | 1430 Ktwo 2 WY | 1203 KMTV 3 NE |
| 1000 KTVK 3 AZ | 1431 KNOP 2 NE | 2E? 1300 KTVI? 2 MO |
| 1059 KNXT? 2 CA | <u>09</u> Es 0830 KOAI 2 AZ | Es 1400 CBWFT? 3 MB |
| 1200 KORK? 3 NV | 0932 KNXT? 2 CA | <u>13</u> Es 1920 MUF 96.7 MHz |
| <u>08</u> Es 1059 MUF 107.9 MHz | 1015 MUF 90.3 MHz | 1959 Ktwo 2 WY |
| | 1858 KTVK 3 AZ | <u>14</u> Es 1837 KTVK 3 AZ |

W.T.Ryan continued...

| | | |
|--------------------------------------|---------------------------------------|---------------------------------------|
| <u>18</u> Es 0948 <u>KNX?</u> 2 CA | <u>23</u> Es 2137 <u>KORK</u> 3 NV | <u>28</u> Es 1720 <u>MUF</u> 96.1 MHz |
| 1030 <u>KNOP</u> 2 NE | 2140 <u>MUF</u> 90.7 MHz | 1730 <u>KOAI</u> 2 AZ |
| 1045 <u>KLNE?</u> 3 NE | <u>26</u> Es 1530 <u>KOAI</u> 2 AZ | 1915 <u>XHBC?</u> 3 BCN |
| 1702 <u>MUF</u> 103.1 MHz | 1600 <u>KTVK</u> 3 AZ | <u>30</u> Es 1705 <u>XHBC?</u> 3 BCN |
| 1720 <u>XEPM?</u> 2 CH | 1613 <u>MUF</u> 107.3 MHz | 1935 <u>KUTV</u> 2 UT |
| <u>20</u> Es 1730 <u>KTVK?</u> 3 AZ | 1835 <u>XHBC?</u> 3 BCN | 2024 <u>KORK?</u> 3 NV |
| 1900 <u>KORK</u> 3 NV | 2200 <u>KTVK</u> 3 AZ | <u>August</u> 1977 |
| 2130 <u>MUF</u> 96.9 to AZ | 2215 <u>KOAI?</u> 2 AZ | <u>02</u> Es 1900 <u>KENW</u> 3 NM |
| <u>21</u> Es 1721 <u>XHBC?</u> 3 BCN | <u>27</u> Es 1256 <u>MUF</u> 97.9 MHz | 2030 <u>KORK?</u> 3 NV |
| 1806 <u>KNXT?</u> 2 CA | 1304 <u>KORK</u> 3 NV | 2048 <u>XHBC?</u> 3 BCN |
| 1824 <u>MUF</u> 90.3 MHz | 1622 <u>XEPM?</u> 2 CH | 2055 <u>MUF</u> 107.5 MHz |
| 2120 <u>XHBC?</u> 3 BCN | 1700 <u>KENW</u> 3 NM | 2114 <u>KNXT?</u> 2 CA |
| 2138 <u>KORK</u> 3 NV | <u>28</u> Es 0850 <u>KOAI?</u> 2 AZ | <u>03</u> Es 2030 <u>KGFE</u> 2 ND |
| <u>23</u> Es 2114 <u>KNXT?</u> 2 CA | 0851 <u>KORK?</u> 3 NV | <u>21</u> Es 2007 <u>KNXT</u> 2 CA |

Fred McCormack, Des Lacs, North Dakota 58733 (CDT) (July 1977)

* indicates DX received in Fargo w/rabbit ears; other, Des Lacs w/Winegard CW-48.

| | | |
|---|---|---|
| * <u>01</u> Es 2000 <u>KOAI</u> 2 AZ | <u>16</u> tr 0859 <u>KETV</u> 7 NE 550 | * <u>17</u> tr 2358 <u>WEAU</u> 13 WI 320 |
| <u>09</u> Es 2037 <u>MUF</u> 95.5 MHz | <u>11</u> SD 210 | * <u>18</u> tr 0002 <u>KSFY</u> 13 SD 230 |
| 2128 <u>WDIQ</u> 2 AL 1400 | 0930 <u>KMNE</u> 7 NE 400 | 2300 <u>KMOT</u> 10 ND 230 |
| 2210 <u>KJAC</u> 4 TX 1310 | 0955 <u>KEVN</u> 7 SD 300 | * <u>23</u> Es 1500 Es to ch.5 |
| 2230 <u>WWL</u> 4 LA 1405 | 1030 <u>KBHE</u> 9 SD 300 | 1530 <u>WMAB</u> 2 MS 1015 |
| <u>10</u> Es 1028 <u>KACB</u> 3 TX 1150 | <u>17</u> tr 0729 <u>KNMT</u> 12 MN 345 | 1750 <u>WPSX</u> 3 PA 990 |
| 1158 <u>KPDX</u> 3 TX 1005 | 0738 <u>WNMU</u> 13 MI 650 | * <u>26</u> Es 2159 <u>WNGE</u> 2 TN 905 |
| * <u>14</u> Es 2205 <u>MUF</u> 3 | * <u>17</u> tr 1041 <u>WHWC</u> 28 WI 270 | 2201 <u>WRGB</u> 3 TN 1005 |
| <u>15</u> Es 2129 <u>WTWO</u> 2 IN 940 | 2306 <u>KYIN</u> 24 IA 310 | * <u>27</u> Es 2235 <u>MUF</u> 3 |

A fairly slow month, but the tropo on the 16th and 17th made up for that. WNMU-13 is my most distant high band logging. It was seen with IDed color bars moments before local KXMC-13 signed on, so I was very lucky. 73 & Good DX = Fred

B.W.Battin, 4305 Pitt, Duluth, Minnesota 55804 (July 1977)

| | | |
|---|---|---|
| <u>03</u> Es 1800 <u>WTVY</u> 4 AL 1160 | <u>13</u> tr 2000 <u>WGTU</u> 29 MI 350 | <u>18</u> tr 0130 <u>KXJB</u> 4 ND 230 |
| <u>11</u> tr 0030 <u>KTTC</u> 10 MN 195 | WSNS 44 IL 405 | 0140 <u>KCCI</u> 8 IA 370 |
| <u>13</u> tr 0100 <u>WQAD</u> 8 IL 375 | 2005 <u>WKAR</u> 23 MI 485 | 1900 <u>WUHQ</u> 41 MI 475 |
| 0105 <u>KWWL</u> 7 IA 300 | <u>16</u> IN 470 | WGVC 35 MI 425 |
| WMT 2 IA 340 | 2007 <u>WGVC</u> 35 MI 425 | 1920 <u>WKAR</u> 23 MI 485 |
| 0110 <u>WITI</u> 6 WI 335 | 2010 <u>WUHQ</u> 41 MI 475 | 1935 <u>WKBD</u> 50 MI 555 |
| 0120 <u>KELO</u> 11 SD 320 | 2020 <u>WCMU</u> 14 MI 430 | 1940 <u>WEYI</u> 25 MI 475 |
| 0130 <u>WMAQ</u> 5 IL 405 | <u>19</u> MI 470 | 1945 <u>WGTU</u> 29 MI 350 |
| Es 0135 <u>KENW</u> 3 NM 1170 | 2021 <u>WEYI</u> 25 MI 475 | <u>26</u> Es 0110 <u>WESH</u> 2 FL 1410 |
| KAMR 4 TX 965 | 2030 <u>WKBD</u> 50 MI 555 | <u>28</u> Es 1200 <u>WSB</u> 2 GA 1010 |
| tr 0140 <u>WLS</u> 7 IL 405 | 2100 <u>WZZM</u> 13 MI 425 | <u>30</u> tr 0105 <u>WISC</u> 3 WI 295 |
| 0145 <u>WGN</u> 9 IL 405 | 2150 <u>WTVS</u> 56 MI 555 | <u>31</u> Es 0145 <u>KPRC</u> 2 TX 1200 |
| 0150 <u>WTMJ</u> 4 WI 335 | <u>18</u> tr 0050 <u>KCMT</u> 7 MN 170 | 0230 <u>KENW</u> 3 NM 1170 |
| 0230 <u>WBBM</u> 2 IL 405 | <u>3</u> SD 280 | Duluth log total at 123. |

I didn't do much DXing during July, but I did enough to see some of the first decent tropo to occur here. Thanks to Bruce Elving for tipping me off to the opening of the 13th. My best tropo logging here is now Detroit at 555 miles. It's a little disappointing when you figure I'm using a seven-foot dish with a CMA-Ub. In Louisiana, I got out to 770mi. with just a JUP-4 and no preamp. (just a JUP-4, eh? ..de) The Es season this year was disappointing at this location. Admittedly, I really wasn't on top of things during July, but the times I did check, there was usually nothing there. (like a watched pot? ..de) At no time this season did I see any of the overpowering super-intense stuff I've seen in the past. The one unique thing about this season, though, continues to be Es activity at 2 AM. Even if the day has shown no signs of any serious skip, I may find something in the wee hours of the morning. Of course, the locals are off then, and it makes things easier. (I tend to think that wee-hours skip is fairly common in northern latitudes; comments on this anyone? ..de) Good DX to all = Buck (Thanks for your Duluth reports, Buck, and I hope you get a new DX set-up again soon...de)

Patrick Martin, P.O.Box 14192, Portland, Oregon 97214 (PDT)

| | | |
|------------------------------------|------------------------------------|------------------------------------|
| <u>June</u> 1977 | <u>25</u> Es 0015 <u>MUF</u> 5 | <u>July</u> 1977 |
| <u>17</u> Es 1330 <u>KDUH</u> 4 NE | 2300 <u>KEYT</u> 3 CA | <u>01</u> Es 1730 <u>KNBC</u> 4 CA |
| KOTA 3 SD | KNBC 4 CA | <u>04</u> Es 1730 <u>KNBC</u> 4 CA |
| 1400 <u>KMTV</u> 3 NE | 2345 <u>KVVU?</u> 5 NV | 1900 <u>KOA</u> 4 CO |
| <u>24</u> Es 1730 <u>KVOA</u> 4 AZ | <u>28</u> Es 2005 <u>KDUH</u> 4 NE | 1930 <u>KTVS</u> 3 CO |
| 2017 <u>KPRY</u> 4 SD | 2130 <u>KFYR</u> 5 ND | <u>18</u> Es 1730 <u>KENW</u> 3 NM |
| 2330 <u>XHBC</u> 3 BCN | 2200 <u>KPRY</u> 4 SD | KOB 4 NM |
| 2345 <u>KORK</u> 3 NV | 2315 <u>KMTV</u> 3 NE | 1800 <u>KNME</u> 5 NM |
| <u>25</u> Es 0000 <u>KTVK</u> 3 AZ | <u>30</u> Es 2215 <u>KARD</u> 3 KS | |

| Pat Dyer, WA5IYX, 5315 Silvertip Dr., San Antonio, Texas 78228 (CST) | | |
|--|----------------------------|---------------------------|
| June 1977 | 10 Es 1959 | 15 Es 1059 |
| 07 Es 1010 KOA? 4 CO (T) | 2059 KSBY 6 CA 1335 | 1100 WCB? 2 SC (T) |
| 1013 KWGN 2 CO 810 | 2115 KNXT? 2 CA (T) | 0225 KNXT 2 CA 1190 |
| 1510 Cuba? 5 (T) | XHBC? 3 BCN (T) | 0240 KNBC 4 CA 1190 |
| 1515 Cuba 2 & 3 | | 0244 KTLA? 5 CA (T) |
| 1517 TGV? 3 Guat (T) | 11 Es 0840-1000 thru 3 | 0928 WESH 2 FL 1055 |
| 1528 WTVJ? 4 FL (T) | 1000 KNBC? 4 CA (T) | 0929 WEDU 3 FL 985 |
| WPBT 2 FL 1150 | 1015 XETV? 6 BCN (T) | 0948 WPTV? 5 FL (T) |
| 1735 WEDU 3 FL 985 | 1046 MUF 107.9+ | 0950 MUF 93.5 MHz |
| 1745 WCIX 6 FL 1150 | 1059 KNXT 2 CA 1190 | 0958 Cuba? 3 (T) |
| 2056 KORK 3 NV 1050 | 1135 KVOA? 4 AZ (T) | 0959 WTHS 2 FL 1150 |
| 2059 KUTV 2 UT 1080 | KVVU? 5 NV (T) | WTVJ 4 FL 1150 |
| 2102 KCPX? 4 UT (T) | 1222 TGV 3 Guat 1120 | 1000 WCIX? 6 FL 1150 |
| KSL? 5 UT (T) | 1245 KPHO 5 AZ 835 | 1045 WUFT? 5 FL 975 |
| 2150 MUF 98.3 MHz | 1341 KTVK 3 AZ 835 | 2120-2215 thru 6 |
| 2232 KID? 3 ID (T) | 1605 XHBC? 3 BCN (T) | 2222 MUF 99.1 MHz |
| 08 Es 1059 KDIX 2 ND 1225 | 1615 KNBC? 4 CA (T) | 2230 KFYR? 5 ND (T) |
| KOTA 3 SD 1040 | KTLA? 5 CA (T) | 2300 KUSD 2 SD 920 |
| 1115 MUF 5 | 2130 apx f/outs | 1628 CKPR? 2 ON (T) |
| 1159 KTWO 2 WY 1015 | (busy with FM and the | 1708 CBWFT? 3 MB (T) |
| 1658 KNXT 2 CA 1190 | ARRL VHF Contest...) | 1838 WMT 2 IA 945 |
| KNBC 4 CA 1190 | 12 Es 0745 KNOP? 2 NE (T) | 1945-2115 thru 3 |
| 1745 XHBC 3 BCN 1010 | 0758 KDIX 2 ND 1225 | 2010 WCB? 2 SC (T) |
| 1805 KTLA 5 CA 1190 | 0825 KXJB 4 ND 1205 | 2045 WPBT? 2 FL (T) |
| 1820 MUF 98.7 MHz | 0829 KORN? 5 SD (T) | 1612 WDTN? 2 OH (T) |
| 1830 XETV 6 BCN 1100 | 0900 KFYR 5 ND 1200 | 1659 WMT 2 IA 945 |
| 2205-2350 choppy 2-4 | 0958 WCCO 4 MN 1110 | 1729 KDIX 2 ND 1225 |
| 09 Es 0005 WESH 2 FL 1055 | KSTP 5 MN 1110 | 1730-1840 thru 5 |
| tr 0020 XHAB 7 250 | 0959 KDAL 3 MN 1250 | tr 2050 WLPB? 27 LA (T) |
| XHFW? 9 TAM (T) | KTCA 2 MN 1110 | WRBT? 33 LA (T) |
| Es 0103 KUTV 2 UT 1080 | 1029 KDLO 3 SD 1070 | WAFB? 9 LA (T) |
| 0110 KID 3 ID 1215 | 1037 MUF 89.3 MHz | 19 Es 1530 & 1645 MUF 2 |
| 0155 KUTV still | WDAY? 6 ND (T) | 20 Es 1017 KDKA 2 PA 1280 |
| 0215 lull to 0250-0310 | 1410-35 thru 4 | 1025 WSAZ 3 WV 1100 |
| 0900 KDIX? 2 ND (T) | 1525 XKLF 4 MT 1365 | 1029 WAVE 3 KY 945 |
| 0920 KFYR? 5 ND (T) | 1559 WPBT 2 FL 1150 | WDTN 2 OH 1075 |
| 1113 KDLO 3 SD 1070 | WTVJ 4 FL 1150 | 1112 MUF 98.9 MHz |
| 1125 KXJB? 4 ND (T) | 1950 apx f/outs | 1255 f/outs |
| 1130 CBWPT 3 MB 1410 | 13 Es 1516 TGV 3 Guat 1120 | 1440-1455 thru 3, se |
| 1229 KDIX 2 ND 1225 | 1522 YSR 2 E1 S 1200 | 1935-2040 thru 5 |
| KOTA 3 SD 1040 | 1600 YNTC 2 Nic 1420 | 1959 KTCA 2 MN 1110 |
| 1337 WDAF? 4 MO (T) | 1658 WUND 2 NC 1360 | 2220-2255 thru 3 |
| 1458 KDLO 3 SD 1070 | 1659 WPBT 2 FL 1150 | 21 Es 0725 thru 5 |
| 1500 KPLO 6 SD 955 | 1725 WWAY 3 NC 1250 | 0759 KDKA 2 PA 1280 |
| 1605 MUF 99.1 MHz | 1729 WCB? 2 SC 1120 | 0800 WTAE? 4 PA (T) |
| 1754 KID 3 ID 1215 | 1730 WCIV? 4 SC (T) | 0820 WAVE 3 KY 945 |
| 1930 KTCA 2 MN 1110 | 1829 WPMY 2 NC 1175 | 0859 WJBK 2 MI 1225 |
| WCCO 4 MN 1110 | 1932 WESH 2 FL 1055 | 0905 WWJ? 4 MI (T) |
| 2045 KNBC 4 CA 1190 | 14 Es 1029 WBAY 2 WI 1190 | 1029 WBAY 2 WI 1190 |
| 2059 KNXT 2 CA 1190 | 1059 WBBM 2 IL 1045 | 1059 WJMN 3 MI 1280 |
| tr 2250 WRBT 33 LA 450 | 1100 WKZO 3 MI 1140 | 1101 WMT 2 IA 945 |
| 10 Es 0615 thru 3, brief | 1240 YSR 2 E1 S 1200 | 1115 KDLO 3 SD 1070 |
| 1105 KTVQ 2 MT 1245 | 1329 KTVS 3 CO 815 | 1129 KNOP 2 NE 815 |
| 1108 KOTA? 3 SD 1040 | 1358 KTWO 2 WY 1015 | 1145 MUF 94.5 MHz |
| 1329 KTCA 2 MN 1110 | 1553 YSR 2 E1 S 1200 | 1259 WDTN 2 OH 1075 |
| 1359 KDIX 2 ND 1225 | 1629 KNBC 4 CA 1190 | 1329 WBAY 2 WI 1190 |
| 1433 WBAY 2 WI 1190 | 1635 KTLA 5 CA 1190 | 1522 WCIV? 4 SC (T) |
| 1447 WMT 2 IA 945 | 1645 XHBC 3 BCN 1010 | 1530 WCB? 2 SC 1120 |
| 1455 KTLA? 5 CA (T) | 1759 WUND 2 NC 1360 | 1545 WSCS? 5 SC (T) |
| KNBC 4 CA 1190 | WWAY? 3 NC (T) | MUF 89.3 MHz |
| 1513 KEYT 3 CA 1270 | 1810 WECT? 6 NC (T) | 1805 apx f/outs |
| 1529 KNXT 2 CA 1190 | 1821 MUF 93.5 MHz | 1935-2015 thru 4 |
| 1530 KVVU? 5 NV (T) | 1955 f/outs | 2059 KDIX 2 ND 1225 |
| 1559 KORK 3 NV 1050 | 15 Es 0759 KID 3 ID 1215 | 2024 MUF 99.1 MHz |
| 1628 MUF 107.9+ | 0836 MUF 99.1 MHz | 2215 f/out |
| 1729 KID 3 ID 1215 | tr 0845 KCB? 11 TX 340 | 23 Es 1203 WPMY 2 NC 1175 |
| KUTV 2 UT 1080 | Es 0905 KPVI? 6 ID (T) | 1213 WRAL? 5 NC (T) |
| 1815 KCPX? 4 UT (T) | 0925 KORK 3 NV 1050 | 1240 WCB? 2 SC (T) |
| KSL? 5 UT (T) | KVVU 5 NV 1050 | 1259 WBTV 3 SC 1105 |
| 1959 KOAI 2 AZ 855 | 0929 KOTA 3 SD 1040 | 1435 Cuba 2 |
| | 1029 WPMY 2 NC 1175 | |

Pat Dyer continued...

| | | |
|---|--|--|
| <u>23</u> Es 1525-30 Cuba 2 1605-2130 thru 6 1718 WDTV? 5 WV (T) 1812 MUF 107.9 MHz 1859 WOAY 4 WV 1150 1929 WFMY 2 NC 1175 | <u>26</u> Es 1842 XHBC 3 BCN 1010 1859 KPVI 6 ID 1195 2059 WMT 2 IA 945 2102 KTVO 3 MO 835 tr 2230 WJTV? 12 MS (T) KALB? 5 LA (T) 2324 WAFB 9 LA 450 2333 KPLC 7 LA 325 2338 WAPT 16 MS 525 2350 XHX? 10 NL (T) | <u>28</u> Es 1845 WCIX 6 FL 1150 1920 WPTV? 5 FL (T) 1929 WBAY 2 WI 1190 1957 WAVE 3 KY 945 2040 f/out 2140-2330 thru 3, nw 2201 KTWO 2 WY 1015 |
| <u>24</u> Es 1210 KOTA 3 SD 1040 1229 KDIX 2 ND 1225 WMT 2 IA 945 1230 KOA? 4 CO (T) 1256 MUF 98.5 MHz 1325 KWGN 2 CO 810 1359 KNOP 2 NE 815 1559 KUTV 2 UT 1080 1630 f/out 1705-15 ch.2 SS 1745-1800 ch.2 1955 ch.2 brief 2125 WMT 2 IA 945 2129 KGFE 2 ND 1240 | <u>27</u> tr 0015 XHAB? 7 TAM (T) XHF? 9 TAM (T) 0050 XET? 6 NL (T) Es 0859 WSB 2 GA 880 0920 WCB? 2 SC (T) 0929 WESH 2 FL 1055 0945 WSAV? 3 GA (T) WBT? 2 NC (T) WFM? 2 NC (T) 0958 WRAL 5 NC 1230 1029 WJBR 2 MI 1225 1050 MUF 107.1 MHz 1259 WMAB 2 MS 615 WLBT? 3 MS (T) WTVY? 4 AL (T) 1305 WCIX? 6 FL (T) 1325 WPBT? 2 FL (T) 1329 WSJK 2 TN 1010 1336 WTWO 2 IN 935 1500 f/out 2045-2100 ch.2 | <u>29</u> Es 1345-1425 ch.2 1359 KNOP 2 NE 815 1530-1645 SS thru 5 1535 MUF 89.7 MHz XHTV? 4 DF (T) XHGC? 5 DF (T) 1710 WMT 2 IA 945 1829 KDKA 2 PA 1280 1845 WTAE? 4 PA (T) 1950 f/out 2045-2100 thru 4 2100 WMT 2 IA 945 |
| <u>25</u> Es 0000-30 ch.2 spotty 0840-2140 thru 6 0900 WESH? 2 FL (T) 0925 WSAV? 3 GA (T) WCIV? 4 SC (T) 0930 WCB? 2 SC (T) 0937 WJXT? 4 FL (T) 0956 WPTV? 5 FL (T) 0959 WEDU 3 FL 985 1043 WCIX 6 FL 1150 1258 MUF 107.9 MHz tr 2240 WGNO 26 LA 510 | <u>28</u> Es 1025 WTHS? 2 FL (T) 1059 WEDU 3 FL 985 WCB? 2 SC 1120 1129 WESH 2 FL 1055 1134 WWAY 3 NC 1250 1150 WECT? 6 NC (T) 1259 WSJK 2 TN 1010 WBAY 2 WI 1190 1325 KFVR? 5 ND (T) 1329 KDIX 2 ND 1225 (vid, WSJK aud) 1540 KQTV 2 MO 750 1559 WSJK 2 TN 1010 1610 WFMY 2 NC 1175 1620 WATE 6 TN 990 1623 MUF 99.3 MHz 1659 WHIS 6 WV 1125 1830 WEDU? 3 FL (T) | <u>30</u> Es 0829 WSB 2 GA 880 0913 WTWO 2 IN 935 0959 WTHS 2 FL 1150 1015 WTVJ? 4 FL (T) 1025 WCIX? 6 FL (T) 1035 WJXT? 4 FL (T) 1059 WEDU 3 FL 985 1129 WBAY 2 WI 1190 1200 KOAI 2 AZ 855 1205 KVOA? 4 AZ (T) KPHO? 5 AZ (T) XETV? 6 BCN 1100 1228 MUF 98.7 MHz 1229 KTVK 3 AZ 835 KOAI 2 AZ 855 1259 KORK 3 NV 1050 1328 KWGN 2 CO 810 KOTA? 3 SD (T) KOA? 4 CO (T) 1333 KLN? 3 NE (T) 1450 MUF 98.7 MHz 1502 WBBM 2 IL 1045 1510 f/out 1605-2055 thru 6 1630 MUF 107.9 MHz |
| <u>26</u> tr 0050 WRBT 33 LA 450 Es 0959 KID 3 ID 1215 KOAI 2 AZ 855 1028 KNBC 4 CA 1190 KTLA 5 CA 1190 1029 KNXT 2 CA 1190 1045 KVOA? 4 AZ (T) 1129 KEYT 3 CA 1270 1245 f/out 1400 ch.2 brief 1505 WESH? 2 FL (T) 1515 WEDU? 3 FL (T) 1529 WAVE 3 KY 945 1555 WDTV? 5 WV (T) 1559 WSAZ 3 WV 1100 1627 KWNB 6 NE 855 1715 MUF 107.9 MHz | <u>July 1977</u> <u>01</u> Es 0959 WKZO 3 MI 1140 1059 MUF 89.7 MHz 1159 KTCA 2 MN 1110 1259 KTVS 3 CO 815 | |

Joseph A. Markewicz, Camp Morton, Manitoba ROC OMO (CDT) (July 1977)

| | | |
|--|--|--|
| <u>15</u> tr 2302 WIRT 13 MN 500km 2305 KNMT 12 MN 450km | <u>20</u> Au 2330 CBFT 2 PQ 1860km | <u>29</u> Es 2315 CKSO 5 ON 1275km 2320 CHNB 4 ON 1920km thru CBWT2-4 MB |
| <u>18</u> tr 1000 KXMB 12 ND 550km Ch.12 open now w/KCND off. 1030 KXMC 13 ND 430km 1100 CKYD 12 MB 340km | <u>25</u> Es 1000 thru 6 <u>26</u> Es 1030 FM to TX & OK 1100 KTEW 2 OK 1700km 1600 WGR 2 NY 1600km 1700 CBLT 5 ON 1600km 1730 WBEN 4 NY 1600km 1830 Ohio 2-6 relogs | 2325 CKCO 2 ON 1400km 2331 CKVR 3 ON thru CBWFT-3 MB 2350 CKGN 6 ON |
| <u>19</u> GW 1900 KGFE 2 ND 300km CKND 9 MB 100km 20 tr 1030 CKYB 4 MB 250km KXJB 4 ND 430km | <u>28</u> Es 1030 KTVI 2 MO 1480km <u>29</u> Es 2300 CBFT 2 PQ 1860km | It's been quite a while since I've used this particular location, and as |

always, it's been very good for DX. A number of new stations have shown up in my absence, namely CKND-9, which blows my chance to relog South Dakota on ch.9. Stations that put a local signal here include CBWFT-3 (105km), CBWT2-4 (90km), CBWT-6 (105km), CKND-9 (100km), and CBWGT-10 (75km). Semi-locals which are in every day include KGFE-2 (300km), CKX-5 (250km), WDAZ-8 (320km), KTHI-11 (430km), and CKY-7 (200km)--the farthest of the Winnipeg stations. Winnipeg newspapers list a CKY? on ch.8, but no sign of it yet. It's about 40km from here. 73... (Thanks for the report, Joseph. If you're seeing KTHI at 430 kilometers on a daily basis, conditions there can't be all too bad, hi. We'll look forward to more reports in the future...de)

Dave Pomeroy, 131 Woodlawn, Topeka, Kansas 66606

July 1977

30 Es 1800 WMAR 2 MD
31 Es 1200 WMAB 2 MS
WEAR 3 FL
WTVY 4 AL
1300 WSB 2 GA
1900 WECT 6 NC

August 1977

20 tr 0900 KMNE 7 NE

September 1977

23 tr early AM: KAIT 8 AR
KTHV 11 AR, KMTC 27 MO
KWTU 9 OK, KOTV 6 OK
PM: KTTN 21 IA, KYNE 26 NE

27 tr 0830 WOC 6 IA
KDNL 30 MO
0930 WLF1 18 IN
WICS 20 IL
1100 WCUI 26 IL
28 tr 0700 KMOS 6 MO
29 tr 0700 WXIA 11 GA

DX since last report has been somewhat strange, with a few surprises--particularly Atlanta on channel 11, one of my best ever tropo catches. Channel 18 from Lafayette also quite a surprise. Tropo on 27th weird with many unID UHF's. There were many in for short periods of time. Haven't ever experienced tropo that way before. Have seen KMOS-6 several times in last week--first time in several years. Best of DX = Dave

B.W. Battin, 4305 Pitt, Duluth, Minnesota 55804 (218) 525-2448

August 1977

04 tr 0110 Milwaukee Vs
06 Au 0050 thru 4
07 Es 0030 CKCW 2 NB 1340
0050 CFCM 4 PQ 1015
CJBR 3 PQ 1140
0150 CFCL2 2 ON
CFCL5 5 ON 685
10 tr 0120 WMT 2 IA 340
11 tr 0120 KEYC 12 MN 205
me 0131 WFSB 3 CT 1050
0149 KTW 3 PA 1000
0206 WTAE 4 PA 765
20 tr 0005 KAAL 6 MI 220

September 1977

03 tr 1635 Chicago Us 405
WHMB 40 IN 585
1925 WKLE 46 KY 735
1935 WKYT 27 KY 735
1940 WGVC 35 MI 425
1950 WPBO 42 OH 740
2010 WEYI 25 MI 475
WKAR 23 MI 485
WGTU 29 MI 350
WKBD 50 MI 555
WUHQ 41 MI 475
2020 WSBT 22 IN 470
WNDU 16 IN 470
2025 WAKR 23 OH 675
2045 WUAB 43 OH 635

03 tr 2115 WXIX 19 OH 660
05 tr 1440 WGTU 29 MI 350
1745 KHIN 36 IA 435
1945 KSIN 27 IA 365
2000 Chicago Us 405
2100 WNIT 34 IN 470
other South Bend Us

Milwaukee Us
Rockford Us 350
WFIE 14 IN 655
WMEG 14 IA 365
2230 WEEK 25 IL 445
06 tr 0050 WISN 12 WI 335
0055 WMAQ 5 IL 405
0205 KCCI 8 IA 370
07 tr 1300 KDUB 40 IA 310
1715 WEEK 25 IL 445
WHO 13 IA 370

1725 South Bend Us
1730 KIIN 12 IA 360
1845 KCRG 9 IA 340
1850 Rockford Us 350
1910 WTVF 47 IL 445
WRAU 19 IL 445
1915 WMBD 31 IL 445
1950 WPTA 21 IN 540
WHMB 40 IN 585
2000 WLF1 18 IN 525
2015 WKJG 33 IN 540
08 tr 0001 WIIL 38 IN 570

08 tr 0015 WLKY 32 KY 690
0100 WICS 20 IL 510
0110 WTHR 13 IN 585
0115 WLS 7 IL 405
0155 WRTV 6 IN 585
WISH 8 IN 585
0200 WMVS 10 WI 335
09 tr 1930 WUHQ 41 MI 475
WGVC 35 MI 425
1935 Milwaukee Us
1945 South Bend Us
2000 Chicago Us 405
2040 Rockford Us 350
11 Au 0230 thru 6
17 Au 0210 thru 6, audio IDs
from WTMJ-4 and WMAQ-5.
20 tr 1830 KHIN 36 IA 435
1920 ch.19 & 57 east
1950 Sioux City Us
2210 KBMA 41 MO 550
2215 KCPT 19 MO 550
2255 KTSB 27 KS 570
21 tr 0105 WHO 13 IA 370
1815 Rockford Us 350
1830 KSIN 27 IA 365
1835 WIIL 38 IN 570
1900 WNDU 16 IN 470
1915 WTIU 30 IN 610

(DXing equipment includes
Finco P-7 UHF dish, Blonder-

Tongue CMA-Ub preamp, Jerrold 10-el. HB & LB yagis at 35 & 25 feet, three small-screen b&w TV sets, RG-11/u foam coax on UHF, and RG-59/u foam coax on VHF.) August was very poor for DX here, but in September I had a few gangbuster tropo openings. Late in the month, winter like weather moved in and shot things down, but hopefully there will be a few more decent openings before real winter weather moves in for good. Duluth log total stands at 164. (Buck, I have WIIL listed as changing calls to WBAR, as April FCC-TV NEWS lists it...de)

Doug Everitt, 1710 W Maine, Enid, Oklahoma 73701 (405) 233-4890 (CDT)

July 1977

12 Es 1900 WCBD 2 SC 1060
1929 WWAY 3 NC 1140
WCIV 4 SC 1060
WUNC 4 NC 1070
1931 WRAL 5 NC 1080
1959 WECT 6 NC 1140
14 Es 1759 KUTV 2 UT 810
KTVX 4 UT 810
1805 KNBC 4 CA 1150
KTLA 5 CA 1150
18 Es 1110 WCBD 2 SC 1060
WCIV 4 SC 1060
WCSC 5 SC 1060
21 Es 1159 KATC 3 LA 550
1229 WBRZ 2 LA 570
(previously by ms)
1231 WTVY? 4 AL (T)

21 Es 1250 XEW 2 DF 1200
1330 XEZ 3 QR 1200
1930 XEZ 3 QR 1200
22 Es 1045 XEZ? 3 QR (T)
24 Es 1305 XEW 2 DF 1200
XEZ 3 QR 1200
25 Es 1705 WSJK 2 TN 810
26 Es 1215 MUF 107.9 MHz
1225 KXLF 4 MT 1000
1229 KHQ 6 WA 1270
1230 KREM 2 WA 1270
KXLY 4 WA 1270
27 Es 1129 KTVN 2 NV 1210
KORK 3 NV 960
KCRL 4 NV 1210
KVVU 5 NV 960
1405 MUF 107.9, east

29 Es 1820 MUF 107.9 MHz

29 Es 1825 WWAY 3 NC 1140
1827 WESH 2 FL 1100
1829 WDBO 6 FL 1110
WUFT 5 FL 1020
WJXT 4 FL 1030
1841 WJBF 6 FL 930
1859 WCTV 6 GA 890
31 Es 1159 WNGE 2 TN 630
WSM 4 TN 630
WBTV 3 NC 970
1859 KDKA 2 PA 1020
WPSX 3 PA 1060
WTAE 4 PA 1020
1900 MUF 107.9 MHz

August 1977

02 Es 1315 XEFE 3 NL 750
1320 KRGV? 5 TX (T)
03 Es 1100 CKGN2 2 ON 1190

The new chart will generally appear on a monthly basis, covering a two or three month period, with an overlap of one month per issue, at minimum. The chart is not intended as a complete reference, since many contributors do not report often enough to keep it fully up to date. However, it provides a general look at Es conditions in the WTV zone over recent periods, and makes MUF data more readily available. The listing is by date, with the number of DXers reporting Es activity that day after the "# reporters" heading, and the highest MUF noted among them after the "MUF at least" heading. The MUF is the Maximum Usable Frequency, and indicates the highest frequency or channel apparently propagated by an opening. Actual MUFs may be higher, especially when the MUF noted is 107.9. Single and two-digit numbers are television channels, where channels 2 thru 6 are located between 54 and 88 MHz, and channels 7 thru 13 are between 174 and 216 MHz. Figures with decimals are FM frequencies in MHz. Auroral, AE, double-hop, TE openings, etc. will be mentioned separately, although AE and double-hop MUFs will be included with the regular Es for the day as well. FM DXers are invited to send Es MUF information, even if you are not a regular reporter to this TV DX column, just so long as you are located in a state west of the Mississippi River, or a province west of Ontario. I'd appreciate it if all reporters would include MUF info in their reports, as this improves the accuracy of the chart. Another thing which helps is frequent reporting... Comments on the chart are invited, both pro and con. Remember, it's here to serve you...

| Date | July 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------------|---------|-------|-------|------|----|------|------|-------|------|----|----|-------|-------|------|----|
| # reporters | 13 | 7 | 12 | 7 | 3 | 4 | 6 | 5 | 6 | 2 | 1 | 4 | 5 | 5 | 4 |
| MUF at least | 107.9 | 106.7 | 107.9 | 94.5 | 6 | 98.9 | 98.7 | 107.9 | 95.5 | 4 | 4 | 107.9 | 107.9 | 99.1 | 5 |

| 16 | 17 | 18 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | August 01 | 02 |
|----|----|-------|------|-------|------|------|----|----|-------|-------|------|-------|-------|-------|-----------|-------|
| 1 | 1 | 5 | 5 | 5 | 3 | 5 | 2 | 2 | 8 | 8 | 7 | 4 | 4 | 4 | | 7 |
| 3 | 4 | 105.5 | 96.9 | 107.9 | 97.9 | 90.7 | 4 | 3 | 107.9 | 107.9 | 96.9 | 107.9 | 105.9 | 106.9 | 6 | 107.5 |

| 03 | 04 | 05 | 07 | 09 | 10 | 11 | 12 | 13 | 15 | 16 | 17 | 18 | 19 | 21 | 27 | 28 | September 12 | 14 | 15 | 16 | |
|------|----|----|-------|----|----|----|-------|-------|----|----|----|----|----|----|----|----|--------------|----|------|----|---|
| 6 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | 2 | 3 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | 1 | 1 | 1 | 1 |
| 95.5 | 4 | 5 | 107.1 | 2 | 2 | 4 | 107.1 | 107.3 | 5 | 6 | 2 | 2 | 6 | 2 | 3 | 2 | 2 | 5 | 94.1 | 2 | |

27 28 Auroral DX was noted by John Anderson on July 1st, with an MUF into FM, and on 2 1 July 28th with an MUF of ch.6. Possible Au or AE was spotted by John on July 7th, 4 3 with a northwestern Canadian station noted. On the 29th & 30th, John had AE with an MUF of ch.5, and on August 7th, with an MUF of 107.1 MHz. John also had AE on the 13th and 18th of August with MUFs of ch.2. Au was noted by Buck Battin on August 6th, with an MUF of ch.4, and on the 11th and 17th of September, with MUFs of ch.6. Double-hop skip was seen on July 1st by Bill Block into Texas, and W.T.Ryan had tentative 2E into Missouri on the 12th of July. John Anderson had tentative double-hop from his QTH in Manitoba into Cuba on July 31st.

***A SPECIAL NOTICE: Due to plans for a very special Anniversary Issue in January, the WESTERN TV DX column will not appear that month. We can all look forward to a blockbuster issue, thanks to the hard work of our Editor-in-Chief, Clarke Ingram. Reports received for that deadline (December 10th) will be held until the February column. Don't let winter get you down... there's always the chance of some spectacular winter Es. At any rate, let's hope our winter reporting holds up better this year than it has in the past, alright? However, only you can make the difference, so DON'T FORGET TO REPORT!! Good DX to all until next month. 73 = Doug

FM IN YOUR CAR (continued from page 19)

NOVEMBER 1977

Although there is no one ideal antenna design for auto FM because of the wide variety of listener needs, the fixed length whip probably will give the best range if that is your sole consideration. For the DX-er, the bother of having to replace the antenna and lead-in after a year or so due to road salt contamination is no big thing. The more general listener might balk at this, and his choice is a bit more difficult. The preceding article provides a quick look at some of the options, and we hope that this discussion of advantages and disadvantages will help you make a more informed choice. The best recommendation is "try before you buy."

The final article of this series which will appear in next month's VUD will cover a number of aspects about FM car radios. Since this series of articles was intended to be both informational and thought provoking, we anticipate that you may have questions on the subjects covered. In a later issue of VUD, we will try to tackle some of your questions if you will send them to Clarke Ingram, Editor-in-Chief. Here's hoping that you will find these articles on auto FM interesting and revealing.



VHF UTILITY DX

Pat Dyer
5315 Silvertip Drive
San Antonio, TX 78228
Deadline: 10th of month

November 1977

Hank Holbrook, 7211 Chestnut St., Chevy Chase, MD 20015 QSLed, GMT

| | | | |
|--------------|--------------|--------|--|
| <u>6-11:</u> | 1504, N780AC | 132.85 | ov DC(American Cyanamid Co., Lear 25B, 2e, 10s) |
| <u>12:</u> | 1741, N58886 | 119.4 | 7 mi s Balt.(Mr. Ward Woodbury; Cessna 182R) |
| <u>18:</u> | 1826, N9297P | 119.7 | 5 mi w Annap.(Dr. William J. Savory; PA-24-260) |
| <u>19:</u> | 1733, N4799L | 118.7 | Martin Arpt, Balt.(Mr. Millard P. Surratt; Piper Cherokee 180, 1-engine, 4-seat; 5 watts) |
| | 2100, N9345P | 119.7 | Ches. Bay Br.(Mr. Louis A. Koehler; Piper Comanche PA-24-260, 1-e, 4-s; 25 watts) |
| <u>20:</u> | 0101, N8453A | 119.7 | lvg Kentmore(Alan W. Goughnaur; Beech A35; 6w) |
| <u>25:</u> | 1647, N5604W | 128.65 | ov Patuxent NAS, MD(Jerry Marchette; Piper Cherokee PA-28-150, 1-e, 4-s; 12 watts) |
| | 1657, N19HP | 133.1 | s Harrisburg, PA(Hershey Foods, Corp.; North American Sabreliner, 2-e, 6-s; 10 watts) |
| <u>26:</u> | 1228, N223M | 135.0 | Kennedyville Inter.(29 mi fm Wilmington, DE) (Mr. Raymond L. Gordon; Bonanza, 1-e, 5-s; 8500') |

Martin J. Theil, 12 Princeton Dr. E., Holiday, FL 33589 EDST, Bearcat 201 w/rod

| | | | |
|--------------|-----------|---------|--|
| <u>8-4:</u> | 1810, - | 156.21 | Cape May, NJ (police) (Bearcat 101 w/rod ant) |
| <u>9-19:</u> | 1800-1830 | | |
| | KJH 959 | 35.960 | Tampa (Elec. Protect. Corp.) |
| | KBG 831 | 154.54 | St. Petersburg (Citizens Police Patrol) |
| | KIB 857 | 153.590 | Tampa (Electric Co.) |
| | KIB 354 | 153.710 | Pinellas Co. (Electric Co.) |
| | KJE 330 | 152.360 | Largo Cab Co. |
| | - | 152.270 | Tampa Yellow Cab |
| | - | 152.270 | Zephyrhill Yellow Cab |
| | - | 152.300 | Tampa Ind. Cab |
| <u>22:</u> | 1435, | 38.50 | (Spanish) also, 32.82, 32.96, 35.02, 35.22, 35.28, 35.78, 36.15, 36.35, 36.45, 36.55, 36.90, 37.00 (1340-1800) |

My loggings. Hallcrafters SX-62, Hammalund SP-600-JX-10; 2 30' long wires at 12' (ne-sw, nw-se runs); all F2 unless noted (bs-backscatter) with daily peak noted; GMT used; t-tentative

| | | | | | | | | |
|--------------|-------|--------------|--|------------|------------------|----------------|--------------|------------------|
| <u>9-11:</u> | 1800, | 35.28 | | 20: | 2155, mid-42 | | 28: | 1915, KKI 445 bs |
| <u>12:</u> | 2120, | 35.58 bs | | <u>21:</u> | 2227, | 37.000 | <u>29:</u> | 1700, 40.45 |
| | 2230, | 35.28 | | <u>22:</u> | 2145, | 38.85 | <u>30:</u> | 2100, 36.55 |
| <u>13:</u> | 1815, | 35.28 | | <u>23:</u> | 2220, OK City bs | | <u>10-1:</u> | 1930, 35.02 |
| <u>14:</u> | 1958, | 37.000 | | | 2253, | 42.06 | | 2208, 35.22 bs |
| <u>15:</u> | 1810, | 35.28 | | <u>24:</u> | 2100, | 38.85 | <u>2:</u> | 2218, 32.96 |
| | 2250, | 35.62 bs | | <u>25:</u> | 2215, | 37.000 | <u>3:</u> | 2125, 30.42 Can |
| <u>16:</u> | 1930, | 37.000 | | <u>26:</u> | 1903, | 37.000 | | 2140, 36.45 |
| <u>17:</u> | 2202, | 35.58 bs | | | 1910-3, | sol.noise | | 2219, KKI 445 bs |
| | 2235, | 32.96 | | <u>27:</u> | 1634, | S Diego-a (Es) | <u>4:</u> | 2247, 37.000 |
| <u>18:</u> | 1735, | 30.30 | | | 1652, | KOE 257 (Es) | <u>5:</u> | 2000, 35.98 |
| <u>19:</u> | 1905, | 36.35 | | | | KME 438 (Es) | <u>6:</u> | 2227, 36.45 |
| <u>20:</u> | 0010, | 37.000 | | | 2145, | 39.18 | <u>7:</u> | 2235, 37.000 |
| | | KLP 527-t | | | 2358, | AFRTS | <u>8:</u> | 1915, 32.16 |
| | 0030, | AFRTS-t | | <u>28:</u> | 0020, | 30-32 US nw | <u>10:</u> | 2110, 36.45 |
| | 0058, | low-33 US nw | | | 1808, | 36.45 | | |

| | | | | | |
|---------|-------|--------------|-------|-------|------------------|
| KKI 445 | 35.58 | Houston, TX | - | 35.58 | OK City, OK |
| KLP 527 | 35.22 | Honolulu, HI | - | 35.38 | San Diego, CA-mp |
| KME 438 | 35.22 | Orange, CA | AFRTS | 30.66 | CA (harmonic) |
| KOE 257 | 35.22 | Phoenix, AZ | | | |

As shown above, F2 levels are up fairly well. Oct 11-12 magnetic storm did a lot more.

73, Pat WA5IYX

PART 2

TIPS AND TECHNIQUES FOR THE DXER AND DXER/BUILDER

Last time, we discussed signal strength indication (via meters and AGC line), and the functions of pads and attenuators. This time, we'll discuss how you can build your own attenuators and pads; dipoles and folded dipoles--uses and construction; and draw a few conclusions as we wrap up this two-part feature.

Pads & Attenuators: Build 'Em

As I noted last month, any DXer with a fair-sized "junk box" should have no trouble building a few pads. All you need is enough of the correct resistors.

Figures 1 and 2 show common circuits used for 72 and 300 ohm type pads. The tables opposite give resistor values for attenuation desired. Wattage values are unimportant in receiving work; $\frac{1}{2}$ to 2 watt are fine, whatever you have or can get the cheapest. Resistor tolerances affect results, of course, but for your less than critical needs, 20% resistors should be OK.

| ATT. IN DB | R1 | R2 |
|------------|-----|-----|
| 3 | 27 | 430 |
| 6 | 56 | 220 |
| 9 | 91 | 160 |
| 12 | 130 | 120 |
| 15 | 200 | 110 |
| 18 | 300 | 91 |
| 21 | 430 | 91 |
| 24 | 560 | 82 |

TABLE 1. RESISTOR VALUES FOR 72-OHM LINE

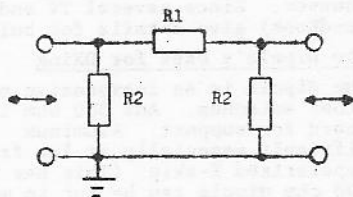


FIGURE 1. PAD FOR 72-OHM LINE

| ATT. IN DB | R1 | R2 |
|------------|------|------|
| 3 | 56 | 1600 |
| 6 | 110 | 910 |
| 9 | 180 | 620 |
| 12 | 270 | 510 |
| 15 | 390 | 430 |
| 18 | 560 | 390 |
| 21 | 820 | 360 |
| 24 | 1200 | 330 |

TABLE 2. RESISTOR VALUES FOR 300-OHM LINE

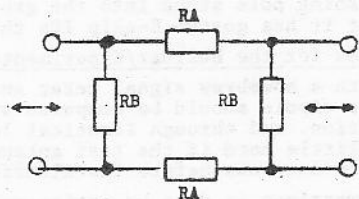


FIGURE 2. PAD FOR 300-OHM LINE

Nonconducting circuit board or vector boards can be used for a homebrew, 300 ohm type of pad. Spacing at input/output should be close to actual T-line conductor spacing. Short lengths of T-line and antenna clips allow rapid insertion and removal. Antenna clips aren't the best method, but who cares if you add 0.5 dB loss to a 12 dB pad by using clips?

I have used two or three 300 ohm pads in a row on a vector board for FM DXing, connecting to the lowest value of attenuation needed to remove CM on some frequencies when I aim at my "friends," the Milwaukee locals. The clip method is a bit clumsy, but I use the pads so seldom it doesn't matter.

The 72 ohm types should be mounted in small metal boxes, making sure you have good shielding, symmetry, etc. Use your favorite 72 ohm connector. Since 72 ohm type pads involve a little more expense and care in building, you might elect to purchase instead of build.

Dipoles and Folded Dipoles: What They Are

A dipole or folded dipole is an antenna cut to $\frac{1}{2}$ wavelength of a desired frequency. It is, therefore, resonant at that frequency, allowing more pickup at that frequency than at other frequencies. Both antennas, although different in impedance, deliver identical power to a receiver or transmitter.

The dipole is split at its electrical center for connection to 72 ohm T-line. Radiation is maximum at right angles to the axis. The dipole can be called dipole antenna, doublet, half-wave dipole, or plain dipole.

The folded dipole, shown in Figure 2, has 300-ohm impedance. It also is split in center for connection to the T-line. Maximum radiation is also at right angles to the axis. This antenna obtains its name from the fact that the conductor is bent, or folded, at the ends.

These antennas, especially folded dipoles, have been most popular for TV/FM receiving work. Because of their popularity, dipoles have become the basis for plotting gains of other antennas. That is, dipoles are used as reference, assigned a "gain" of zero, and compared with other antennas to determine the gain or loss. Dipoles, therefore, are sometimes called "zero-gain" antennas, not because they can't increase the signal, but because they have been given a gain of zero only as a starting point. Indeed, many all-channel antennas on some channels have gains less than the cut-to-channel dipole!

The isotropic source is sometimes used as a reference also, but not nearly as much as the dipole. However, gain of an isotropic source is about 20% less than a dipole. It is impossible, therefore, to make a correct judgment of antenna gain if a gain of X dB over a "reference" antenna is claimed. Judging by the difference between actual antenna gain and that claimed for some all-channel antennas, I believe some manufacturers compare their antennas to a leg iron at San Quentin! In fact, some omit gain claims entirely, but use equally ridiculous mileage claims in ads.

Dipoles can be made from any conductor: solid wire, tubing, transmission line. The physical length of the conductor must be shortened by the velocity factor, however. Since several TV and antenna books (especially the ARRL antenna handbook) give details for building dipoles, this will not be covered here.

The Dipole's Uses for DXing

The dipole is an inexpensive method of receiving a frequency not covered by other antennas. Any 300 ohm line, for example, can be cut and mounted on a board for support. Aluminum tubing can be used if available, but support is difficult especially at low frequencies. Best use of a dipole is for catching polarized E-skip. (This has been described previously in TECHNI-CORNER.) A 300 ohm dipole can be cut in minutes for the channel desired and mounted to suit. For E-skip, it needn't be mounted high, since local tropo signals would just be that much stronger. A dipole cut from 300 ohm line and taped to a fishing pole stuck into the ground has made Morrie Goldman's neighbors wonder, but it has gotten E-skip IDs that weren't seen on a horizontal antenna.

Uses for the Builder/Experimenter

With a homebrew signal meter and pads, it is easy to compare gains of antennas. The dipole should be compared with the test antenna at the same height and location, and through identical lengths and types of transmission line. This is a little hard if the test antenna is already mounted on the tower--so, ground test antennas before installation if possible.

Comparison is done by noting voltage differences on the S-meter between dipole and test antenna. If the S-meter is not calibrated, you can add attenuation until both readings are identical (or close). For example, if voltage equals -1.0 with dipole connected, but -3.0 with test antenna connected (more gain), add attenuation until reading with test antenna is close to -1.0. The amount of attenuation equals gain of test antenna over the dipole. (NOTE: Comparing strength by using pads only--no S-meter--isn't an accurate test.)

If a channel 2-13 antenna is tested, check gain against select cut-to-channel dipoles (channels 2, 4, 6, 10, and 13, for example). Typically, gain "rolls off" at ends of the band, especially for yagi types.

Experimenters can check actual gain against calculated gain of homebrew antennas by using the dipole/S-meter/attenuator method. Some DXers might be surprised to learn that they can build a four- or five-element yagi for a low band channel that will out-perform any all-channel VHF antenna on that frequency. Cost should be little or nothing, especially if you have access to junk tubing, old antennas, etc.

CONCLUSION

The intent of these two articles was to describe how several simple devices such as pads, S-meters, and dipoles could be used individually or together to increase your "DX-ability." True, most of these devices and techniques will aid the DXer/builder, who represents a minority among active TV and FM DXers. However, as I now conclude this series, letters received from other DXers convince me that it all was worthwhile.

We certainly have a greater share of DXers in WTFDA trying to improve their "DX-ability" by building various devices than we had in the old AIPA. But most

important of all, some non-technical DXers think enough of their DXing hobby to try to build, or arrange for others to build, DX devices for their own use. The "awareness" of DX potentials is something that Bob Cooper and I have been trying to instill in WTFDAers through our columns over the years.

No, TV repair men or design engineers we're not trying to make you. But I'd feel no pity for a DXer who, for example, complains that stacking a second all-channel antenna "didn't improve the picture much" when all that fellow had to do was reread VUDs on the subject of stacking and spend maybe 30 minutes of time and 50 cents worth of parts building a 3 dB pad so he could "see" on the tube what a 3 dB signal level change looks like at various signal levels. (Of course, maximum gain increase when stacking or combining is actually 2.5 dB, or 28% at best, and lower at other frequencies. But improved directivity and front-to-back ratio is chancey, at best, with multi-channel antennas.)

Summing up our tips and techniques for the DXer and DXer/builder:

S-METER:

- 1) See signal changes, although AGC voltage swing is not directly proportional to signal levels.
- 2) Record relative signal changes daily, during openings, etc. to broaden your scope of weather/DX relationship.
- 3) Use to "tune up" traps, filters, amplifiers, etc. where viewing the tube is not good enough for optimum results.
- 4) Detect failures in preamps, receiver RF and IF stages.

PADS AND ATTENUATORS:

- 1) Reduce or remove receiver cross-modulation (CM) and overload.
- 2) Remove preamp CM and overload.
- 3) Show what a change in signal of X dB does to actual signal level.

DIPOLES:

- 1) Cover portion of band not covered by other antennas.
- 2) Mount vertically to receive repolarized skip.

S-METER/PADS:

- 1) Calibrate S-meter, so actual changes in signal strengths can be computed in terms of percent or dB change.
- 2) Compute gains and losses of preamps, and insertion losses.
- 3) Compute differences in gain, front-to-back ratios, etc. of various antennas.
- 4) Check results when building antennas, etc. against results anticipated.

S-METERS/PADS/DIPOLES:

Determine actual antenna gain, front-to-back ratio, etc. 73, Dave Janowiak

Thomas J. Vingling, Jr.
221 Pinewood Road
Baltimore, MD 21222
Phone # 1-301-282-5648
Deadline: 10th

QSL CORNER

- SK CKCK 2 Regina, box 2000, S4P 3E5. Letter signed by Alex White. Apologized for a long delay (was for reception in July 16th, 1976!). Receive 16th of May. Aden
- CT WEDH 24 Hartford, 24 Summit St. 06106. Letter in 10 days from Rita Dorman Admin. Asst to the Pres. I used a SASE with report. Goodman
- WEDV 65 New Haven, same address as above. A member of CPTV. Letter from John W. Keam Vice Pres of Eng. Reply in 2 1/2 weeks with a bumper-sticker & tells of low power of 4.43kw. Vingling
- WHNB 30 New Britain, 1422 New Britain Ave, West Hartford, CT 06110. Card from William A. Canora, CE in 1 week. Used SASE. Goodman
- FL WDFE 24 Orlando, 2908 W. Oak Ridge Road, 32809. Letter from Lee Watkins, CE in 24 days with apology for late reply, so maybe would be soon for others. Swartz
- WESH 2 Daytona Beach-Orlando, 540 Corporation Ave, Holly Hill, FL 32017. QSL Card in 8 days. from Mac Gable, CE Swartz
- WESH 2 Daytona Beach, Box 1551, 32015 qsl card from Mac Gable, CE Goodman. 2 different addresses for same station for 2 dx'ers with same reply. ed.
- WBBM 20 Ft. Myers, 3719 Central Ave, 33901. Letter & coverage-map from David A. McKelvey, CE in 10 days. Samford
- WUFT 5 Gainesville, 234 Stadium Bldg, 32611. Letter & brochure from Brent Williams Promotion Director in 1 week. Lowery

This is an all tv qsl month, with some good dx qsl'ed. Lets have more reports to this column. With the club having about 342 members only a handful report regularly. I would like a report from each state, at least that would bring in 50 reports. I'm kind of running low on items again. Next month will be more fm qsl's, which I get more reports of. 73's

Tom



Post Office Box 202 - Whiting, Indiana 46394
WORLDWIDE TV-FM DX ASSOCIATION

**ENOUGH
 TO DEATH**

Established 1967

SERVING THE
 VHF-UHF DX
 ENTHUSIAST



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