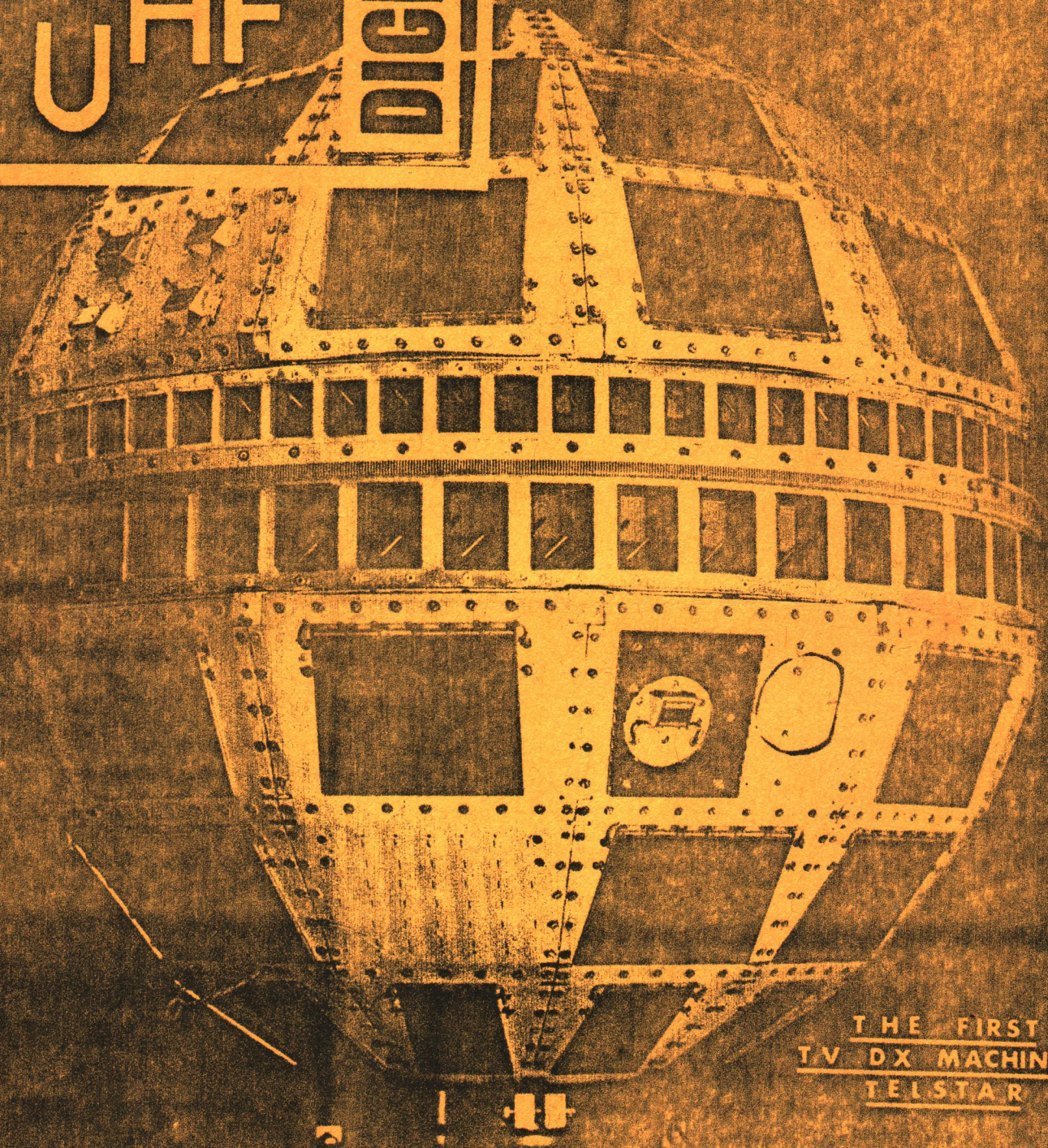


VHF  
UHF

DIGEST

JANUARY 1969



THE FIRST  
TV DX MACHINE!  
TELSTAR

TELSTAR The first of the now many satellites providing reliable television transmission and reception across the Atlantic. Telstar was first launched and tested July 10, 1963. (A.T.&T. photo)

# VHF-UHF DIGEST

is the official monthly publication of the WORLDWIDE TV-FM DX ASSOCIATION. Published on or about the first of each month at Milwaukee Wisconsin, (USA). Address all correspondence and make checks payable to the club at HQ:

W.T.F.DX.A., Box 5001, Milwaukee, WI. 53204

Dues \$3.50 worldwide in US funds. Samples 30¢ For first-class postage in North America, add \$1/year. For airmail, or foreign first-class or air-mail, write HQ for rates.

A belated seasons greetings to all members from HQ. Hope you had an enjoyable holiday season. Sorry I could not answer cards personally but time is limited here. Thanks a lot to those who did send cards.

Again last month we forgot to give credit where credit is due. The sun-spot count as always is furnished by Henry Gac of Detroit who obtains the info from the Swiss SW service.

The cover was drawn by Bill Heusmann of exciting Steger, Illinois, who drew this wondrous cover at HQ. The HQ page was the joint project of Morrie, Bill and I in one way or another. (Gary Olson often types up his own filler material such as "DX at Deadline" when helping out on publication day at Hq.)

We have lost a contest editor unfortunately, so we are now seeking editors for contests and ham TV (ATV). The February issue of "CQ" available in mid-January will see the resumption of our ads in that magazine. With the year-end financial report for the club, we now have a good picture of our financial situation, and will embark on new advertising campaigns and other improvements and expansions. We hope that by the end of 1969 we'll have contests and an ATV column; complete TV and FM station lists probably with TV channel maps included; reprints of our best articles from 1968, (the "booklets"). As always, we need more editors to work on these projects; so its in your interest to help us out, too. In 1968 we expanded and improved beyond the wildest expectations of many people, but not to the ultimate peaks which some expected us to achieve. Decisions were made solely by the exec in the past, so perhaps the Board of Directors will slve all problems, or most of them anyhow.-fsd

RENEWALS: this is the last issue that will be sent to the following unless renewal fees are received:

Chatterton, Kenneth  
Kowalski, Edward R.  
Krepper, Dan  
Fait, William D.  
Winsor, Roger  
Luoma, Roderick  
Grade, Stuart B.  
Dombrowski, Ferdinand S. (hi!!)  
Schumann, Todd  
Goldman, Morrie S.  
Webber, Curt R.  
Pomeroy, C, Dave  
Gragg, Joe  
Nordquist, Frederic J.  
Jacoby, Robert  
Leehan, Morton D.  
Miltier, Randy  
Hauser, Wm. Glenn

This is the first list of renewals of our first paid members. If it hadn't been for these people joining when they did, in December 67, before the first real VUD, this club might never have gotten off the ground. They are arranged by ZIP rather than any other order, and this list does not show those who initially paid for more than one year, (namely Gary Olson, Carl-on Howington and Ambrose Maxin). But we sincerely owe these people a debt of gratitude, so a hearty thank you from HQ! Most of you probably thought that you were taking a chance and we thank you for your confidence.

--fsd

### This Month's Cover:

Featured is the first communications satellite, Telstar.

Designed and assembled by EDX editor, Morrie Goldman.

# FCC NEWS & DATA

GARY A. OLSON  
5901 W. BROWN DEER RD.  
APT. #107  
BROWN DEER, WIS. 53223

FM

STATIONS OPERATING (AS OF DEC. 4, 1968)

Commercial FM 1928  
Educational FM 361

Total Authorized Stations On Air 2289

FCC COMPLETED ACTION

New Grants:

- Guntersville, Ala., 95.9 mc., (Guntersville Broadcast) 3 kw.
- Wynne, Ark., (E.Ark. Broadcasters) 92.7 mc., 3 kw.
- Jerome, Idaho, (A.D. Lee) 92.7 mc., 3 kw.
- \*Lincoln, Illinois, (Lincoln Chris. Col.) 88.7 mc., 10 w.
- Danville, Ky. (WHIR Inc.) 107.1 mc., 3 kw.
- Fresno, Calif., (KYNO Inc.) 95.5 mc., 50 kw.
- \*Wilmington, Del., (Board of Education) 91.7 mc., 10 w.
- Myrtle Beach, S.C. (Grand Strand) 101.7 mc., 3 kw.
- El Centro, Calif., (Imperial Valley) 98.5 mc., 19.5 kw.
- Pacific Grove, Calif., (L.Gahagan) 104.9 mc., 470 w.
- \*Morrison, Colo., (Western Bible) 91.1 mc., 30 kw.
- Savannah, Ga., (Regency Broadcasting) 97.3 mc., 100 kw.
- \*Wallingford, Conn., (Chaote School Foundation) 90.1 mc., 10 kw.
- Fosston, Minn., (Fosston Broadcasting) 107.1 mc., 3 kw.
- Clovis, N.M., (Friend Radio) 99.1 mc., 28.99 kw.
- Murfreesboro, Tenn., (Mid-Tennessee State Univ.) 89.5 mc., 185 w.
- \*Concord, Calif., (Clayton Valley Jr. H.S.) 91.1 mc., 7.8 w.
- \*Worcester, Mass., (Worcester College Radio Net.) 90.5 mc., 2 kw.
- Milford, Ohio, (Millford Assn) 107.1 mc., 3 kw.
- Norton, Va., (Radio WISE) 106.3 mc., 700 w.
- Boynton Beach, Fla., (Board of Public Instruction) 91.7 mc., 5.6 kw.
- Indianola, Miss., (Fritts Broadcasting) 105.5 mc., 3 kw.
- \*Downers Grove, Ill., (School Dist. #99) 88.3 mc., 10 w.
- Showhegan, Me., (Kennebec Valley Broadcasting) 107.1 mc., 2 kw.
- Hamilton, Mont., (Bitter Root) 95.9 mc., 2 kw.
- Altavista, Va., (Altavista Broadcasting) 105.5 mc., 3 kw.
- Logan, W.Va., (Logan Broadcasting) 101.9 mc., 15 kw.

Call Letter Changes:

- KALL-FM, Salt Lake City, U. to KQMU (FM)
- WTBO-FM, Cumberland, Md., now WJGO (FM)
- WRKO-FM, Boston, Mass., now WROR (FM)
- WNAT-FM, Natchez, Miss., now WQFZ (FM)
- WVHG-FM, Hornell, N.Y., now WHHO-FM
- KEEE-FM, Nacogdoches, Tex., now KEFM (FM)
- KGB-FM, San Diego, Calif., now KBKB (FM)
- WKLR-FM, Toledo, Ohio, now WKLR (FM)
- KXRQ (FM), Sacramento, Calif., now KZAP (FM)
- WHIY-FM, Orlando, Fla., now WORJ-FM
- WIKI-FM, Chester, Va., now WDYL (FM)
- KRWL (FM), Carson City, Nev., now KRWL-FM
- WHAT-FM, Philadelphia, Penn., now WWDB (FM)
- WFQM (FM) San Juan, P.R., now WKYN-FM
- WLMM (FM) Nashville, Tenn., now WSM-FM
- KDOK-FM, Tyler, Texas, now KNUE (FM)
- KFRC-FM, San Francisco, Calif., now KFMS (FM)

\*\*\*\*\*  
\* THANKS TO: \*  
\* \*  
\* Frank Merrill, \*  
\* Milan, Mich. \*  
\* William Campbell, \*  
\* Canandaigua, N.Y. \*  
\* Bill Fait, \*  
\* Cleveland; O. \*  
\* Bill Bens, \*  
\* Cincinnati, O. \*  
\* Stu Grade, \*  
\* Sioux City, Ia. \*  
\* \*  
\* CONTRIBUTORS TO \*  
\* THE FCC NEWS \*  
\* AND DATA COLUMN \*  
\* FOR JANUARY, \*  
\* 1969..... \*  
\* \*  
\*\*\*\*\*

New Call Letters Issued:

- Delano, Calif., (J.Koonce) KDNO (FM)
- Uniontown, Pa., (Warman Broadcast) WPQR-FM
- New Braunfels, Tex., (Comal Broadcast) KNBT-FM
- Dunnellon, Fla., (Rainbow Communications) WTRS (FM)
- Tuscola, Illinois, (F. Seibold) WITT (FM)
- Hannibal, Mo., (Great River) KGRC (FM)

New Call Letters Issued (Cont.)

- Guntersville, Ala. (Guntersville Broadcasting) WTWX (FM)
- \*Bangor, Me., (Univ. of Maine) WIEH-FM
- \*Raleigh, N.C., (Shaw University) WSHA (FM)
- Westerville, Ohio, (Mid-Ohio Comm.) WBBY (FM)
- Erwin, Tenn., (WEIB Inc.) WXIS (FM)
- Benton, Ark., (Saline Broadcasting) KOOM (FM)
- Saginaw, Mich., (Clark Broadcasting) WWWS (FM)
- \*Denison, Tex., (Grayson City Jr. College) KGCC (FM)
- \*Due West, S.C., (Erskine College) WARP (FM)
- \*Marshall, Mo., (Mississippi Valley College) KNOS (FM)
- \*Ashland, Ore., (State of Oregon) KSOR (FM)

Other Changes Allowed:

- WSLM-FM, Salem, Ind., ant. to 130'
- WDIO-FM, Duluth, Minn. ERP to 25 kw.
- WTOF (FM) Canton, O., ERP to 36 kw.
- WCJV (FM) Cleveland, O. ERP to 12kw.  
ant. to 630'
- WBNB-FM Charlotte Amalie, Virgin Is.,  
ERP to 50 kw.
- WBVB (FM) Union City, Pa., ERP 440w.  
ant. to 300'
- WFIM-FM, Baltimore, Md., ERP 6.3 kw.  
ant. to 830'
- KUWS-FM, Newton, Ia., ERP 3 kw -  
ant. 200'
- WSBT-FM, South Bend, Ind., ERP 10 kw.  
ant. to 960'
- KERN-FM Bakersfield, California  
ERP 4.7 kw.-ant.1280'
- \*WGUC (FM) Cincinnati, ERP to 12 kw.
- WFMD-FM, Frederik, Md., ant. to 1100'
- KRAV (FM) Tulsa, Ok., ERP 28.5 kw.
- \*WHMD (FM) Spring, Wis., ERP 37 kw.
- WCLV (FM) Cleveland, O., ERP 22 kw.
- KCVR (FM) Lodi, Calif., ant. 185'
- WCOS-FM, Columbia, S.C., ERP 10 kw.  
ant. to 420'
- WAEB-FM, Allentown, Pa., ERP 20 Kw.  
ant. to 87'
- KSYN (FM) Joplin, Mo., ERP 100 kw.  
ant. to 430'
- WJMD (FM) Bethesda, Md., ERP 50 kw.  
ant. to 300'
- KJLH (FM) Long Beach, Calif., ERP  
3 kw. - ant. 300'
- KITY (FM) San Antonio, Texas, ERP  
to 100 kw.
- KNWC-FM, Sioux Falls, S.D., ERP to  
100 kw.- ant.265'
- KFMG-FM, Tulsa, Okla., ERP to 61 kw.  
ant. to 295'
- WWGO-FM, Erie, Pa., ERP to 50 kw.  
ant. to 500'
- KWIC (FM) Salt Lake City, Utah, ERP  
13 kw.- ant. 3650'
- WESP (FM) Charlotte Amalie, V.I.,  
ERP 50 kw.-ant.1500'
- WMOD (FM) Washington, D.C., ERP 31 kw  
ant. to 485'

STARTS AUTHORIZED

- KAFF-FM, Flagstaff, Ariz.,  
92.9 mc., 30 kw.
- \*KCOE-FM, Cedar Rapids, Ia.,  
90.5 mc.
- KTWN (FM) Anoka, Minn.,  
107.9 mc., 57 kw.
- WRNS (FM) Kingston, N.C.,  
95.1 mc., 50 kw.
- WCFW (FM) Chippewa Falls, Wis.  
105.5 mc., 3 kw.
- KDNO (FM) Delano, Calif.,  
98.5 mc., 12.5 kw.
- KWWL-FM, Waterloo, Iowa,  
107.9 mc., 100 kw.
- KEYN-FM, Wichita, Kan.,  
103.7 mc., 58 kw.
- WBBC-FM, Columbus, Miss.,  
103.1 mc., 3 kw.
- WWTX (FM) Corinth, Miss.,  
95.3 mc., 3 kw.
- KCIV (FM) The Dalles, Ore.  
104.5 mc., 25 kw.
- KULP-FM, El Campo, Texas,  
96.9 mc., 27 kw.
- WRFW (FM) River Falls, Wis.  
88.7 mc., 410 w.
- \*WARP (FM) Due West, S.C.  
91.7 mc., 10 w.
- KVSR (FM) Rapid City, S.D.  
97.9 mc., 100 kw.
- WDMP-FM, Dodgeville, Wis.  
107.1 mc., 3 kw.
- KFRD-FM, Rosenberg, Texas,  
104.9 mc., 3 kw.
- WOTT-FM, Watertown, N.Y.  
97.5 mc., 41 kw.
- KABI-FM, Abilene, Kan.,  
98.3 mc., 3 kw.
- KHOM (FM) Houma, Louisiana  
104.1 mc., 56 kw.
- WOOR (FM) Oxford, Mississippi  
97.5 mc., 27 kw.
- WXIS (FM) Erwin, Tenn.  
103.9 mc., 3 kw.
- KNBT (FM) New Braunfels, Tex.  
92.1 mc., 3 kw.

Other Changes Allowed (Cont.):

KTSA-FM San Antonio, Tex., ERP to 100 kw., - ant. 660'

WHMS (FM) Hialeah, Fla., ant. to 110'

KRCB-FM, Council Bluffs, Ia., ant. to 175'

WVTS (FM) Terre Haute, Ind., ERP to 50 kw. - ant. to 500'

KMHL-FM, Marshall, Minn., ERP 3 kw.

\*WDSK-FM, Cleveland, Miss., ant. 215'

WRPI (FM) Troy, N.Y., ant. to 370' ERP to 10 kw.

WHNC-FM, Henderson, N.C., ERP 15.5 kw.

WGSA-FM, Ephrata, Pa., ant. to 500'

\*WFMO (FM) Lebanon, Tenn., ERP to 500 w. - ant. to 57'

KVET-FM, Austin, Tex., ERP 33 kw. - ant. 370'

WVEC-FM, Hampton, Va., ERP 50 kw., - ant. to 380'

KDUX-FM, Aberdeen, Wash., ERP 48 kw. - ant. to 155'

WELR-FM, Roanoke, Ala., ERP to 1.25kw.

KGUS (FM) Hot Springs, Ark., ERP to 16 kw. - ant. to 480'

WVCM (FM) Carrolton, Ky., ERP to 1.35 kw.

WTOF (FM) Canton, Ohio, ERP to 36 kw. - ant. to 570'

\*WRFW (FM) River Falls, Wis., ERP to 350 w.

KEPR-FM, Kennewick, Wash., ERP 100 kw.

KBLE-FM, Seattle, Wash., ERP to 20 kw.

KWIL-FM, Albany, Ore., ERP to 30 kw.

WKOF (FM) Hopkinsville, Ky., ant. to 140'

\*KRWG (FM) University Park, Md., ERP 2.45 kw. - ant. to 200'

WBBF-FM, Rochester, N.Y., ERP to 50 kw. - ant. to 500'

WLBG (FM) Larens, S.C., ERP to 97 kw. ant. to 450'

WVMS (FM) Chattanooga, Tenn., ERP to 100 kw. - ant. to 1260'

WTID-FM, Norfolk, Va., ERP to 50 Kw. ant. to 400'

ADDITIONAL STARTS AUTHORIZED

KQMU (FM) Salt Lake City, Utah 94.1 mc, 24 kw.

KKLP (FM) Pipestone, Minn. 98.7 mc., 100 kw.

KGRC (FM) Hannibal, Mo., 92.9 mc., 100 kw.

\*WSHA (FM) Raleigh, N.C., 88.9 mc., 10 w.

STATIONS REPORTED ON THE AIR

WGLN (FM) 105.5 mc., Sylvania, Ohio

WFLR-FM, 95.9 mc., Penn You, New York

KDSN-FM, Denison, Ia. 107.1 mc.,

KASI-FM, Ames, Ia., 107.3 mc.

\*KDCR (FM) 91.3 mc., Sioux Center, Ia.,

STATIONS REPORTED OFF THE AIR

KVRF (FM) 102.3 mc., Vermillion, S.D.

CHANGES IN STATION OPERATIONS REPORTED BY VUD READERS

WHFM (FM) Rock, N.Y., is now up to 50 kw.

WTRE (FM) Elkhart, Ind., now 3500 w. since 10/67

WEKU (FM) Richmond, Ky., began RS 10/7/68

WHOP-FM, Hopkinsville, Ky., 39,000 w. since 2/68

ACTION APPLIED FOR OR REQUESTED

Applications For New Stations:

Ardmore, Okla., 95.7 mc., 26.61 kw.

Aspen, Colo., 97.7 mc., 449 w.

\*Edwardsville, Ill., 88.7mc., 50 kw.

\*Murray, Ky., 91.3 mc., 13.2 kw.

Lawton, Okla., 98.1 mc., 54.2 kw.

Dunn, N.C., 103.1 mc., 3 kw.

\*Denton, Tex., 88.5 mc., .034 kw.

Randolph Center, VT., 90.7 mc., .01kw.

Wichita, Kan., 95.1 mc., 100 kw.

Chester, S.C., 99.3 mc., 2 kw.

Geneva, Ala., 93.5 mc., 3 kw.

\*Chico, Calif., 91.1 mc., 7.2 w.

Branson, Mo., 106.3 mc., 3 kw.

Lexington, Mo., 106.3 mc., 3 kw.

Poteau, Okla., 107.3 mc., 3 kw.

Groton, Conn., 105.5 mc., 3 kw.

Peoria, Ill., 105.7 mc., 50 kw.

Pontiac, Ill., 103.1 mc., 3 kw.

\*Univ. Hts., Ohio, 88.9mc., 15 kw.

Webster City, Ia., 95.9 mc., 3 kw.

Linton, Ind., 93.5 mc., 3 kw.

Las Vegas, Nev., 93.1 mc., 41.5kw.

\* Youngstown, O., 88.5 mc., 22.4kw.

Harrisonburg, Va., 104.3 mc. 15 kw.

\*Gresham, Ore., 89.9 mc., 1.26 kw.

\*Arkadelphia, Ark., 88.1mc., 10 w.

Applications For New Stations (Cont.):

- Havana, Ill., 99.3 mc., 3 kw.
- Oneonta, N.Y., 103.9 mc., 500 w.
- Smithville, Tenn., 101.7 mc., 3 kw.
- Buford, Ga., 102.3 mc., 3 kw.
- Lexington Park, Md., 97.7 mc. 3kw.
- Dover, N.H., 97.5 mc., 50 kw.
- North Syracuse, N.Y., 100.9 mc. 3 kw.

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST TO FM DXERS

WBFO (FM) Buffalo is 1000w. (not 6300 w. as reported in the new Jones Radio-TV Station Guide. Note: the Jones Log which contains a complete and quite accurate listing of all AM, FM and TV stations in North America is available from either Howard W. Sams in Indianapolis, Ind., or from the author Vane A. Jones, 6710 Hampton Dr., Indianapolis 46226. Price is \$2.95. The fifth edition was just recently published.

WSM-FM should be on 100 kw. (both horizontal and vertical polarization) by now which should give them good coverage at a 100 mile radius.

a word from your FCC News and Data editor-----

Membership response has been quite good from VHF-UHF Digest readers as far as contributions to this column are concerned. It would be helpful, however, if those of you who follow this column would drop a line and suggest changes or features which you would like to see. Due to the vast amount of "station change" data, a considerable amount of typing is done on this end; if you believe some of this material is expendable, let's hear about it. After all, if (for example changes in power and antenna height) all this material is of little use to you and just takes up valuable bulletin space, there is no sense in listing it all. On the other hand there may be those who would like to see even more detail presented. Please let me know so I can serve the best interests of you the members.

HGADLO

\*\*\*\*\*  
 "SHOOTING MOVIES FROM YOUR TV SCREEN"  
 \*\*\*\*\*

(as published in Kodak Movie News, Winter '68-69)

"Many readers have written to say what wonderful footage they have made from their TV screens. And it's fun to do. Although it is impractical to have an amateur movie camera perfectly synchronized with the television set, you can get satisfactory results.

For best results, adjust the picture on your TV screen so that it has slightly softer, or lower-than-normal, contrast. This will result in better highlight and shadow detail in your movies. Set up your camera so the TV image will fill the entire picture area. With a reflex-type camera, you can use the finder to line up the television image accurately. With other models, make sure the center of the lens is aimed at the center of the TV screen. Turn off room lights, and don't use flood lamps.

KODACHROME II Film, Daylight Type, or KODACHROME II film, Type A, with Type A filter in position is best for color TV images. For black-and-white images you can use the Type A film without the filter for a little more speed. Open your lens wide and make a test shot to be sure you like the results before doing much shooting. Your movies, particularly of color TV images, may be on the dark side. Some television programs may be copyrighted, and the mere making of movies of them might be deemed a violation of the copyright. Eastman Kodak Company undertakes no responsibility concerning copyright matters which might be involved."

Ed. Note: A number of our club members have been trying their hand at making movies of DX IDs, test patterns, etc. Those interested in experimentation should try writing Bill Heusmann or Morrie Goldman for more info. They've had good results!

### PART III. ALL ABOUT TRANSMISSION LINES

Of the many characteristics associated with T-lines, only some characteristics are important to DXers. Data may be obtained in catalogs or from local TV shops, but usually not enough is available for a thorough evaluation. A letter to the manufacturer is needed for complete data. Let's look at these important characteristics.

#### LOSS

The loss (attenuation) characteristic reveals the power lost between antenna and receiver in the T-line per distance at a given frequency under ideal conditions. Power loss is usually expressed in decibels (DB) for a 100 foot line at specified frequencies. Typically, loss for 300 ohm open line (Allied 1969, page 403) is given as 0.5 DB for 100 ft at 200 MHZ. (Catalog statistics can be vague, however. This same 300 ohm line is given a 1.9 DB loss over the "entire" UHF band in the 1969 Lafayette catalog. This is, of course, impossible; the 1.9 DB loss is probably for the low end of UHF band.) Line loss always increases with frequency.

For those not familiar with power losses expressed in DB, the following table is given:

| <u>DB LOSS</u> | <u>% OF POWER LEFT</u> |
|----------------|------------------------|
| 0.5            | 89%                    |
| 1.0            | 80%                    |
| 1.5            | 70%                    |
| 2.0            | 63%                    |
| 3.0            | 50%                    |
| 4.0            | 40%                    |
| 5.0            | 32%                    |
| 7.0            | 20%                    |
| 10.0           | 10%                    |

Losses are given under ideal, dry conditions. Since moisture increases losses, a more meaningful figure is the line loss when wet as well as dry. Manufacturers should supply this figure. "Low loss" lines usually mean low loss when wet. For example, good round T-line might have as much loss as cheap flat line when dry at a low frequency. But the loss for flat line might increase by 20 times when wet, especially at the high frequencies.

Since you, the customer, don't know if the wet loss is for a "damp" line or for a line totally immersed in water, even these characteristics can be misleading. But, the dry and wet loss is the most important characteristic when selecting a T-line. In the next installment (selecting a T-line for DX), I'll list typical loss figures for popular lines.

#### IMPEDANCE

Maximum power is transferred from antenna to receiver if impedances are matched. Usually, a 300 ohm line matches a 300 ohm antenna and receiver. But pre-1950 TV sets and some recent, quality color TV sets have 72 ohm input terminals also. A 72 ohm antenna can be connected directly to this input with 72 ohm coax. Some antennae have a built in matching transformer (balun) for converting the 300 ohm antenna to a 72 ohm T-line. The balun is discarded if 300 ohm line is used. However, the customer usually must purchase a balun whenever matching a 72 ohm line to a 300 ohm device. Some loss always occurs due to balun. For DXers, the 300 ohm antenna, T-line, and receiver are best under normal conditions.

#### INSULATORS AND CONDUCTORS

Except for coax and open T-line, stranded steel (or copper and steel) wire form the conductors. More wires in a given strand increase strength (wire size being the same).

Low cost T-line may use only four strands; these could weaken and break in a wind.

Web thickness indicates strength and possible resistance to moisture. Using Allied, 1969, page 403 again, Beldon type 8230 T-line has a 70 mil web. But Beldon 8235 has a 185 mil web. Not only is the 8235 stronger, but its wet loss per foot is less due to the greater distance from the conductor to the outer surface.

Polyethylene is the most common insulator. Cheap 1¢/foot flat line -- which may have a clear, cheaper type of insulator -- can be used, but indoors only. However, it may become brittle or crack after a year.

### NOISE

Open wire picks up man-made noise (power mower, shaver, neon lights) more than others for obvious reasons. Coax or shielded 300 ohm line pick up the least. (Noise due to bad auto spark plugs used to be a problem, but not so now.) Noise effects are discussed later.

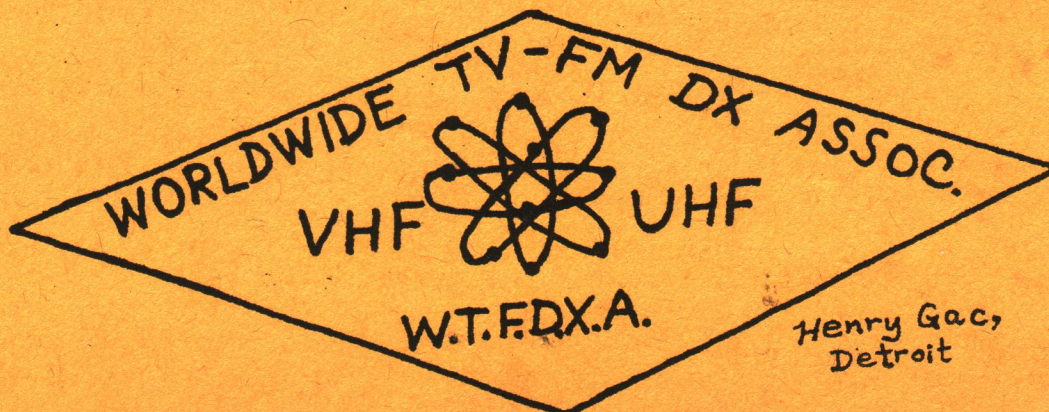
### COST

Like many items, you usually get what you pay for. Spare no cost when selecting a T-line. Five to \$10 per 100 foot will buy the very best T-line. Since this is a small part of the total antenna-receiver cost, don't cut corners here. (In an exaggerated case, I've known people who spent \$40 for stacking a second antenna, but never realized the 50% increase in power gain because they installed cheap, flat T-line in place of a better grade original!)

Part IV continues with "Selecting a T-line for DX".

Some interest has been expressed concerning selection of DX equipment, ratings, etc. Consequently, a special series of articles has been planned on these subjects. The first, "How to Evaluate and Purchase DX Equipment", has been written but is withheld due to the large size of the VUD this month. This article will be followed by one describing Consumer Reports magazine and the value of its ratings. After this, I'll publish their ratings -- and my own opinions -- about equipment they recently evaluated (TV & FM antennae, antenna preamps, TV sets, etc.). Also planned for a spring issue is a most interesting feature article, "See More E'skip By Repolarizing Your Antenna". The articles on T-lines will continue, but the order of articles might vary due to the size of the VUD.

73's Dave





# STATISTICS

Vol. 8

No. 1

JAN.

1969

EDITOR: Glenn Hauser, Box C 8638, Lowry AFB, Colorado 80230, USA. NOTE NEW ADDRESS!!!!

IMPORTANT: ALL TVDXers PLEASE READ

1. Your reports are urgently needed.
2. This column is going monthly.
3. Deadlines must be advanced; see below.
4. UHF records will run concurrently with VHF.

Your help is needed more than ever, now that we're about to enter the high VHF and UHF bands. In the past, only a "faithful few" have sent in their lowband loggings and distances, and this had three effects: assured them their records would not be overlooked; increased the accuracy of our compilations; and relieved your editor from searching thru their past published reports!

Will you help? -- To assure that your records are included--and to reduce a gargantuan task about to double? All I ask is that you send a list of the stations you have picked up on channels 7-83 (in instalments or all at once), preferably arranged in alphabetical order by state and city under each channel. But--all you need to show are the channel, call letters, and approximate distance.

If you have DXed from other locations than your "home" or present one, include any that may be potential records, but be sure to indicate which QTH applies, since all distances will be checked!--and it's just as important to know where the DXer was.

How do we compile this column, anyway? Each time, our starting point is the last AIPA records column covering that channel. These records are compared with those reported directly to me (by Bill Draeb, Frank Wheeler, Fred Nordquist, Robert Cooper, Paul Ciceri, Dennis Smith, and others). Then, subsequent AIPA report and records columns are checked for "breakers". Also, NNRC VHF columns from July 1964 to present are scanned, as are DXing/TV Horizons during their entire existence (January 1960-August 1961); and CDXC TVDX columns from May 1965 to March 1968; and of course all VUDs to date.

This covers a lot of territory, but it's not complete, and subject to all kinds of errors and the rather good possibility that I will overlook something. That's why it's better to have reports directly from each of you!

Altho distances reported are used in the first "trial eliminations," all those which appear to have any possibility of being the actual record are measured, on the same map whenever possible, the February 1968 NGS United States map. When necessary, other maps, usually NGS, will be used. And larger distanced are measured on the NGS 16" globe with geometer, since any flat map progressively becomes less precise at greater distances. All distances are rounded to the nearest 5 miles, but even this is probably implying too much accuracy.

Besides direct reports, we rely secondarily on reports published in the DX press, but avoid "third-hand" reports and especially, stations' claims--some of them are notoriously gullible and loose with their "verifications". Certain reporters, by making extravagant claims, are on the "black list"; I don't consider it safe to consider ANY of their reports, even the more possible ones. This is the risk a DXer runs by "pushing the facts" without adequate proof.

By "proof," I don't mean only verifications thru the mail, altho they can be a factor. Veries are NOT required, but credibility IS. With the exception of long-established records (allegedly?) set many years ago, this means that you'll have to convince me of any "fantastic" claims. Plus any advisors I feel it necessary to call upon!

This policy can be and probably has been unfair to some; I regret it, but see no way around it, short of abdicating my editorial responsibility. Such a case is that of Jim Stiles of Hollywood CA, whose report appeared in the November Western TVDX column. Jim and I began corresponding about his records even before that was published. As far as I can tell, he has been cooperative and sincere. Nevertheless, when all the evidence

(propagation factors, powers, hours of operation, etc.) was in, I could not bring myself to accept his overseas TVDX claims, much as I would have liked to. Nor does it seem likely that so many highbanders and UHF's from across the continent could be seen in such an unfavorable location. When presented with contradictory evidence, Jim withdrew his Iran and Philippines claims, which shows good faith, but implies that his others may be unreliable too. Until there is any further evidence overwhelmingly in his favor, I will be forced not to consider any of his claims for this column. Such are the pains of the position and of "DXing the impossible"; however, no case is ever totally closed....

Here is the schedule we plan to follow in TVDX records. Please observe the earlier deadlines and report! Late additions may, however, be sent in up to the 10th of the next month.

| Channels  | Issue Date | Deadline    | Channels  | Issue Date | Deadline  |
|-----------|------------|-------------|-----------|------------|-----------|
| 7, 14-17  | March      | 20 January  | 11, 30-33 | July       | 20 May    |
| 8, 18-21  | April      | 20 February | 12, 34-38 | August     | 20 June   |
| 9, 22-25  | May        | 20 March    | 13, 39-42 | September  | 20 July   |
| 10, 26-29 | June       | 20 April    | 43-83     | October    | 20 August |

CHANNEL 5 TVDX RECORDS

| Call    | Location                     | Miles | DXer, Location                 | Comments            |
|---------|------------------------------|-------|--------------------------------|---------------------|
| WKRG    | Mobile AL                    | 1125  | Glenn Hauser, Albuquerque NM   |                     |
| KPHO    | Phoenix AZ                   | 1865  | Robert Seybold, Dunkirk NY     |                     |
| KFSA    | Fort Smith AR                | 1390  | Dennis Smith, Wasco CA         | was KNAC            |
| KTLA    | Los Angeles CA               | 1290  | Ed Hopp, *Omaha NB             | *assumed QTH        |
| KPIX    | San Francisco CA             | 2405  | Don Ruland, Holly Hill FL      |                     |
| KREX    | Grand Junction CO            | 1525  | David Nieman, Buffalo NY       |                     |
| KCSJ    | Pueblo CO                    | 1370  | Norm Erint, Kenmore NY         | now KOAA            |
|         |                              | tie   | David Nieman, Buffalo NY       |                     |
| WTTG    | Washington DC                | 1145  | Glenn Hauser, Enid OK          |                     |
| WUFT    | Gainesville FL               | 1175  | Stu Grade, Sioux City IA       |                     |
| WPTV    | Palm Beach FL                | 1295  | Bill Draeb, Kewaunee WI        |                     |
| WAGA    | Atlanta GA                   | 1850  | Morris Foote, Middleton ID     |                     |
| WMAQ    | Chicago IL                   | 1215  | Fred Nordquist, W.S.M.R. NM    | was WNBQ            |
| WOI     | Ames IA                      | 1465  | Doris Johnson, Longview WA     |                     |
| KALB    | Alexandria LA                | 1800  | Ron Boyd, Truro NS             |                     |
| WABI    | Bangor ME                    | 1545  | Don Ruland, *New Orleans LA    | *assumed QTH        |
| WHDH    | Boston MA                    | 830   | Bill Draeb, Kewaunee WI        |                     |
| WNEM    | Bay City MI                  | 1915  | Robert Cooper, Fresno CA       |                     |
| KSTP    | Saint Paul MN                | 1280  | Ron Hilding, Phoenix AZ        |                     |
| KCMO    | Kansas City MO               | 1505  | Doris Johnson, Longview WA     |                     |
| KSD     | Saint Louis MO               | 1400  | Morris Foote, Middleton ID     |                     |
| KXGN    | Glendive MT                  | 1095  | Dennis Smith, Wasco CA         |                     |
| KFBB    | Great Falls MT               | 1630  | Robert Seybold, Dunkirk NY     |                     |
| KHAS    | Hastings NB                  | 1280  | Doris Johnson, Longview WA     |                     |
| KNME    | Albuquerque NM               | 1170  | Bill Meers, Lagrange KY        |                     |
| -CATV-* | White Sands Missile Range NM | 0     | Fred Nordquist, W.S.M.R. NM    | *KELP-13 El Paso TX |
| WNEW    | New York NY                  | 1315  | Glenn Hauser, Oklahoma City OK |                     |
| WPTZ    | Plattsburgh NY               | 2400  | Robert Cooper, Fresno CA       |                     |
| WROC    | Rochester NY                 | 1170  | Glenn Hauser, Oklahoma City OK | now ch 8.           |
| WHEN    | Syracuse NY                  | 1235  | Glenn Hauser, Enid OK          |                     |
| WRAL    | Raleigh NC                   | 1065  | Glenn Hauser, Enid OK          |                     |
| KFYR    | Bismarck ND                  | 1225  | Dennis Smith, Wasco CA         |                     |
| WLWT    | Cincinnati OH                | 1250  | Jim Dillon, Regina Sask        |                     |
| WEWS    | Cleveland OH                 | 2050  | Robert Cooper, Fresno CA       |                     |
| KOCO    | Oklahoma City OK             | 1480  | Doris Johnson, Longview WA     | was KGEO, Enid OK   |
| KTVM    | Medford OR                   | 1035  | Jim Dillon, Regina Sask        | was KBES            |
| WCSC    | Charleston SC                | 1055  | Karl Aiken, Kingston Jamaica   |                     |
| KDSJ    | Lead SD                      | 1235  | Mike Tilbrock, Pittsburgh PA   |                     |

|                       |                         |        |                                   |                     |
|-----------------------|-------------------------|--------|-----------------------------------|---------------------|
| KORN                  | Mitchell SD             | 1250   | Dennis Smith, Wasco CA            |                     |
| WMCT                  | Memphis TN              | 1285   | Jim Dillon, Regina Sask           | now WMC             |
| WLAC                  | Nashville TN            | 1160   | Ghislain Girard, Arvida PQ        |                     |
| WBAP                  | Fort Worth TX           | 1315   | Robert Cooper, Fresno CA          |                     |
| KENS                  | San Antonio TX          | 1765   | Doris Johnson, Longview WA        |                     |
| KRGV                  | Weslaco TX              | 1600   | Morris Foote, Middleton ID        |                     |
| KSL                   | Salt Lake City UT       | 1260   | Bill Draeb, Kewaunee WI           |                     |
| WCYB                  | Bristol VA              | 1000   | Ghislain Girard, Arvida PQ        |                     |
| KING                  | Seattle WA              | 2105   | Robert Seybold, Dunkirk NY        |                     |
| WJPB                  | Weston WV               | 960    | Glenn Hauser, Enid OK             | was ch 35; now WDTV |
| WFRV                  | Green Bay WI            | 1285   | Fred Nordquist, W.S.M.R. NM       |                     |
| KFBC                  | Cheyenne WY             | 1330   | Richard Nieman, Buffalo NY        |                     |
|                       |                         | tie    | David Nieman, Buffalo NY          |                     |
|                       |                         | tie    | Norm Erint, Kenmore NY            |                     |
| "CBXT"                | Edmonton Alta           | 1310   | Glenn Hauser, Albuquerque NM      |                     |
| CKX                   | Brandon Man             | 1670   | Ross Harvey, Goose Bay Labrador   |                     |
| "CBNT3"               | Marystown Nfld          | 1450   | Frank Merrill, Milan MI           |                     |
| CJCH                  | Halifax NS              | 1240   | Ferdinand Dombrowski, Okauchee WI |                     |
| "CBWCT"               | Fort Frances Ont        | 1140   | Glenn Hauser, Albuquerque NM      |                     |
| CKSO                  | Sudbury Ont             | 1120   | Jim Dillon, Regina Sask           |                     |
| CHAU                  | Carleton PQ             | 1130   | Ferdinand Dombrowski, Okauchee WI |                     |
| CKMI                  | Québec PQ               | 870    | Ferdinand Dombrowski, Okauchee WI |                     |
| CKBI                  | Prince Albert Sask      | 1430   | Norm Erint, Kenmore NY            |                     |
| CJFB                  | Swift Current Sask      | 1195   | Carter Bays, Culver IN            |                     |
| LRI                   | Buenos Aires, Argentina | 5290   | Bedford Brown, Hot Springs AR     | now off air         |
|                       | São Paulo, Brazil       | 5015   | Bedford Brown, Hot Springs AR     | TV Paulista         |
| CMHQ                  | Santa Clara, Cuba       | 1440   | David Nieman, Buffalo NY          |                     |
| CMLB                  | Santiago de Cuba        | 1460   | Steve Weinstein, Pittsburgh PA    |                     |
| XHAC                  | Tuxtla Gutiérrez Chis   | 1110   | Karl Aiken, Kingston Jamaica      |                     |
| XEJ                   | Ciudad Juárez Chih      | 1255   | Ferdinand Dombrowski, Okauchee WI |                     |
| XHGC                  | México DF               | 1720   | Robert Cooper, Fresno CA          |                     |
| WORA                  | Mayagüez PR             | 3650   | Doris Johnson, Longview WA        |                     |
| YVKA                  | Caracas, Venezuela      | 3785   | Robert Cooper, Fresno CA          | TV Nacional         |
| TOTAL for 68 stations |                         | 104675 | (ties counted once)               |                     |

**Analysis.** Your amazed editor finds himself leading with 9 records, but he had to DX from three different spots to do it. But some of them are pretty short, and there must be somebodies out there who can or have topped them. Dee Johnson and Bob Cooper are tied for second place with 6 each, and there are quite a few with 4. Distancewise, however, Cooper is the clear leader with 13185 miles, followed by Doris with 11145, me with 10465, and Bedford Brown with 10305 (and it took him only two 5000-mile-plus catches to do it!). Some unseen stations are KHEV Henderson NV, KTXT Lubbock TX, CJDC Dawson Creek BC, CHOV Pembroke Ont, XHFI Chihuahua Chih, and XHCC Colima. Thanks to Gary Olson and Bill Draeb for supplying the QTHs of Easter and Bay, who now take their rightful place as channel 4 recordholders, below.

ADDITIONS AND REVISIONS TO CHANNEL 2 TVDX RECORDS

|       |                        |      |                                |                    |
|-------|------------------------|------|--------------------------------|--------------------|
|       | Mendoza, Argentina     | 3550 | Robert Cooper, Frederiksted VI |                    |
|       | Recife, Brazil         | 2710 | Robert Cooper, Frederiksted VI | TV Jornal Comercio |
|       | Rio de Janeiro, Brazil | 3180 | Robert Cooper, Frederiksted VI | TV Excelsior       |
|       | São Paulo, Brazil      | 3130 | Robert Cooper, Frederiksted VI | TV Cultura         |
|       | Santa Marta, Colombia  | 765  | Robert Cooper, Frederiksted VI | TV Nacional        |
| OAX4U | Lima, Peru             | 2235 | Robert Cooper, Frederiksted VI | Teledós            |

ADDITIONS AND REVISIONS TO CHANNEL 4 TVDX RECORDS

|      |                 |      |                               |  |
|------|-----------------|------|-------------------------------|--|
| KVOA | Tucson AZ       | 1415 | Morrie Goldman, Chicago IL    |  |
| KXLE | Butte MT        | 1330 | Carter Bays, Culver IN        |  |
| KJAC | Port Arthur TX  | tie  | Stephen Dianne, Binghamton NY |  |
| CFCN | Calgary Alta    | 1410 | Morrie Goldman, Chicago IL    |  |
| CMBF | La Habana, Cuba | tie  | Jerry Easter, Vinton IA       |  |

Some late reports have come in for the FM survey, due to circumstances beyond their control. They are from Bruce Elving, Duluth MN, who is undoubtedly the No. 1 FM DXer known to us. Bruce, who celebrated his 20th anniversary as an FM DXer on 1 October 1968, comments modestly, "If my totals seem somewhat impressive, remember it's just because I've been around DXing FM longer than most people!" Still, 819 stations is nothing to sneeze upon. The ubiquitous Dennis Smith, stuck in a much less favorable QTH, Wasco CA, gets his report in too, and Bill Bens of Cincinnati is lucky to have his updated report printed, since it is not our intention to run updatings to the big survey every time. Finally, a curious report from Joe Gragg of Texas, filled out with zeros since he can't DX FM. Thanks, Joe, every little bit helps. Here's the stats:

| Category                                       | Elving      | Smith               | Bens    |
|--|-------------|---------------------|---------|
| Stations logged                                | 819         | 168                 | 287     |
| US stations logged                             | 811         | 168                 | 283     |
| Canadian stations logged                       | 8           | 0                   | nc      |
| Stations logged by Es                          | 329 40%     | 34 20%              | nc      |
| Stations logged by trop                        | 487* 60%    | 134 80%             | 261 91% |
| Stations logged by MS                          | 2 0%        | 1 0%                | nc      |
| Stations logged by aurora                      | 1 0%        | 0 0%                | nc      |
| "A" channel stns logged                        | 120 15%     | 27 16%              | 54 19%  |
| Channel MOST stations logged on, how many      | 94.5 26     | 92.3 93.3 96.3 97.1 | nc      |
| Channel LEAST stations logged on, how many     | 88.1 89.5 0 | 14 channels 0 each  | nc      |
| Superchannel MOST stations logged on, how many | 94. 66      | 97. 17              | 99. 25  |
| Superchannel LEAST station logged on, how many | 88. 5       | 91. 3               | 88. 5   |
| US states logged                               | 39+DC       | 7                   | nc      |
| Canadian provinces logged                      | 3           | 0                   | nc      |
| States logged by Es                            | 25+DC       | 6                   | nc      |
| States logged by trop                          | 19          | 1                   | nc      |
| States logged by MS                            | 2           | 1                   | nc      |
| States logged aurorally                        | 1           | 0                   | nc      |
| States logged on 88-92 MHz                     | 15+DC       | xx                  | nc      |

\*means unknown propagation included. nc means no change from previous report.

Dennis reports his "bests," now: Best station: KCSM 90.9 San Mateo CA 200mi 350w 120967; Best by Es: KFMN 99.3 Abilene TX 320w 010663; Best by trop: as "best"; Best by MS: KPOJ 98.5 Portland OR 020768; Most distant: WOW 92.3 Omaha NB 1360mi 280661; Lowest power: tie: KFMN, as "Best by Es" and KEDC 88.5 Northridge CA 320w 220368. Best 3 Es states: TX 24, OK 4, WA & NM 2 each; Best 3 trop states: CA 134 (only); Best 3 states, all props: CA 134, TX 24, OK 4. And Bill gives his lowest power now as WCRE 91.5 Greencastle IN 115w; and his best 3 states, trop and overall, OH 87, IN 64, KY 28.

In our lack of space last time, we neglected to mention that Hank Holbrook's totals represent stations verified thru the mail only; and William Bens', verified by tape recording only. The others' are "heard," verified or not. Another thing: FM distances were NOT checked or altered, in the lack of direct competition. And I should have pointed out that "trop" totals were to include locals and groundwave!

To fill up the remaining space, I'd like to express how pleased I am with the growth of the Worldwide TV FM DX Association, both in the quality of its columns and the quantity of its members. It is heartening to have such a good thing going, especially after a hiatus of several years without any VHF-specialty club at all--and now outshining even the American Ionospheric Propagation Association, r.i.p. To keep this good thing going, tho, all members must participate by reporting regularly to this and the other columns!!

Dennis Park Smith  
Music Department  
University of California  
Santa Barbara CA 93106  
Deadlines: 12th of each month

# WESTERN DX

JANUARY 1969

I just got home to Wasco after finishing the school term--so I hope I haven't missed any reports in the rush. There are a number of letters this time, many of them from new members so this will open up the New Year to some new locations.

Randy Miltier, 1760 Whitwood Ln. #3, Campbell, California 95008  
No DX since last report.

KTXL-TV ch 40 in Sacramento, Calif. is now on RS. They don't get in here at all except for some sound. KMST-TV ch 46 in Monterey, Calif should be on around Dec 1 (now scheduled for Feb. dps); their power will be 443 kw visual and 88.6 kw aural. Ch 46 will join CBS and KSBW-TV 8 Salinas, now NBC-CBS, will drop CBS and go with NBC. KNTV 11 San Jose will continue with ABC to the Salinas-Monterey area. I've also noted that KTSF-TV 26 San Francisco has started on their CP so they should be on sometime next year. KQEC-TV 60 also San Francisco is educational (a KQED offspring) and is expected on next year. My notes also show a KRAK-TV 15 Sacramento, ch 18 for Fresno, 31 Stockton, 38 San Francisco, KHCD 50 Santa Rosa, ch 58 in Stockton, and a ch 67 for Monterey, all with CP.

Glad to see the WTFDXA membership growing. I also like those picturesque front pages. Gud DX.

(It is difficult to say just how many of these Construction Permits are actually building or just waiting. dps)

Lance Clayton Muller, 8895 Halsted Street, San Diego, Calif. 92123

Hi everybody. As this is my first report as a new member, here's a summary of myself. I'm a junior at quiet San Diego State College, majoring in Broadcasting Advertising. On the DX side, I'm a member of the Int'l Radio Club of America (since 4/65) on the BCB, and a free-lance TV VHF DXer since 10/65 when KIII-3 surprised me by bopping in over KEYT-3. In the following 3 years, I've received and verified 17 states, 1 province, and 7 Mex states: Channel 2 stns are KWGN-TV Denver, KBOI-TV Boise, KCKT-TV Great Bend KS, KFEQ-TV St. Joseph MO, KOOK-TV Billings, KNOP-TV North Platte NB, KDIX-TV Dickinson ND (no answer to request for verie); KVOO-TV Tulsa, KOTI Klamath Falls OR, KATU Portland KUSD-TV Vermillion SD, KPRC-TV Houston, KMID-TV Midland, KUTV Salt Lake City, KREM-TV Spokane, KTWO-TV Casper WY, CHCT Calgary, XEW-TV D.F. (no answer to 2 requests), XHI-TV Ciudad Obregon, Sonora. Channel 3 stns are KIEM-TV Eureka CA, KTVS Sterling CO, KID-TV Idaho Falls, KLEW-TV Lewiston ID, KARD-TV Wichita, KTBS Shreveport, KYTV Springfield, KRTV Great Falls MT, KLNE-TV Atlanta (Lexington) NB, KMTV Omaha, KOTA Rapid City, KDLO-TV Watertown SD, KBTX-TV Bryon TX, KIII Corpus Christi, KACB TV San Angelo TX, KFDX Wichita Falls, XHBC Mexicali BCB, XEZ-TV Guanaajuato (no answer to 2 requests), XEFB-TV Monterrey NL, XHQ-TV Culican, Sinaloa. Channel 4 stns are KOA-TV Denver CO, WDAF-TV Kansas City MO, KXLF-TV Butte, KDUH-TV Hay Springs NB, KHTL-TV Superior NB, KOB-TV Albuquerque, WKY-TV OK City, KGNC-TV Amarillo, KGBT-TV Harlingen TX, KJAC-TV Port Arthur TX, WOAI-TV San Antonio, KOMO-TV Seattle, KXLY-TV Spokane XHTV D.F. (no answer), XHG-TV Guadalajara. Channel 5 stns are KFBB-TV Great Falls MT, WBAP-TV Ft. Worth, KTXT-TV Lubbock TX, KENS-TV San Antonio KRGV-TV Weslaco TX. Added to these totals are the local San Diego/TJ stns on 6,8,10,12; the L.A. locals on 2,4,5,7,9,11,13; and Santa Barbara KEYT-3. My TV set is a 1958 G.E. 18", and does not have UHF. The antenna used is a simple single-bay conical about 16 feet off the ground. Whether because of the antenna, or perhaps a poor location, or just not

seeing the conditions yet, I have not been able to receive any DX on Channel 6 (XETV QRM) or on the upper (CH 7-13) band. I value the stations received least more than the stns received more often. For that reason, and the coincidental correlation of shorter distances (500-900 miles) received less often than the longer distances (950-1325 miles), I believe XHI-TV, XHBC-TV, XHQ-TV, and KOB-TV to be my best catches. Of course, in the final analysis, it is impossible to rate for example, 2 600-milers against 1 1300-miler. Such an exact comparison is ridiculous although a general "feeling" for each station is compatible. Enough philosophy, hi. 73's and best of all DX to everyone, and my hopes for growing with and in this great club.

(Your KIEM-3 catch is interesting, Lance, as it points out a case of Es from one end of the state to the other, possible in long California. And, your over-hills ground-wave XHBC-3 is worthy of note, too; the base of their tower is actually below sea level. Your small antenna probably helps Es as it keeps Los Angeles from being too strong. Western terrain doesn't permit much high-band DX. You would do well to get UHF gear with increasing UHF stations on along the coast. dps)

Ronald F. Schatz, FTM3; T Div., USS Hoel, DDG-13; FPO San Francisco, California 96601

(Reporting from Drydock #2, Hunters Point, San Francisco)

Greetings! I'm a new member, having joined some months ago, though the November issue was the first one received. (A case of non-forwarding due to address change, maybe? dps) Many of you know me, as I'm a member of a few BCB DX clubs. Home base for me, theoretically, is North Miami Beach, Fla., where I have done 99% of my TV DX. Receivers there include a Westinghouse B&W portable and an Admiral(?) colour console. QRM includes locals on 2,4,6,7,10,17 and 23, with 2 and 17 being educational. Semi-locals are 5 and 12. WSMS-TV ch 51 should be on any time now. Sorry to say, my TV efforts are no match for my BCB accomplishments. Witness:

2 WBBM-TV, WTWO (or "W-2"), KCKT (on the K.S.N. at 1400 mi., my most distant), WMAR-TV, WGBH-TV (mostly with test pattern), WJBK-TV (with Tigers baseball), KTVI, WGR-TV, WCBS-TV, WLWD, KVOO-TV (my first ion. skip DX), KDKA-TV (only colour reception), WKAQ-TV ("Telemundo," often in all day), KPRC-TV, CBFT, XEW-TV, YSR-TV (very regular), and YVKS-TV (Maracaibo relay, only 625-line 25-frame reception).

3 KTBS-TV and KYW-TV.

4 KJAC-TV (thru local WTVJ).

5 WTTG (by nulling semi-local WPTV).

6 WOC-TV and WTVR-TV.

I have no non-trop skip above ch. 6—yet. Most interesting trop DX is CMQ-TV, with Castro and animated filmed ID. Because of my viewing hours I'm still waiting for multiple-skip DX of any kind. Many of the stations above are highly regular; in fact, I wish W-2 and KTVI would change channels, etc (KTVI was once a UHF station, dps). By the way, to receive 625/25 stations, such as YVKS-TV-2 and other Venezuelans, just make a slight adjustment of the horizontal hold. I had WJBK-TV and YVKS-TV in competition one Saturday AM; while one was in straight the other was out of horiz. sync. An up-to-date and accurate list of Mexican FM and TV stations (commercial only) was sent to HQ; I hope it appears before long. By the way, XHBC-TV-3 in Mexicali has colour, along with several other XH's. Many Mexican FM stations are broadcasting in stereo as well. New Mex. TV includes XHJMA-3 in Parral, Chih., XHMZ-7 Mazatlan, XHPT-9 Mérida, and XHK-10 La Paz, B.C.S.; XHMG-12 changed call to XHAW-TV. Well, I haven't had the chance to TV DX over the past several months, but I hope to do something soon. Thanks to Dennis Smith for getting me interested in WTFDXA. 73 and XHS-TV-23 to all.

(Ronald, that XHS-23 Ensenada thing you mention is odd, as are any Tijuana area FMs. San Diego TV-FM is heard but no sign of Tijuana FM or UHF in southern California. Your Floradã location is most interesting because of the Latin-American signals you can catch, as well as your experience with different standards. High-band skip DX is possible but most rare, compared to low-band. Good to meet you at IRCA Convention in Hollywood last August. dps)

Stanton Wigh, 2165 14th, Kingsburg, California 93631

The month of November began rather quietly as far as Es goes. The first Es in over a month came through on 11-17 at 1800 pst with KMID-2 in Midland, Texas. KMID was in and out for about an hour and was finally replaced by XHI-2 in Ciudad Obregon, Mexico at 1905. We watched XHI here for almost one and one half hours! KMID-2 was again logged on 11-28 and 11-30 at 1830 and 1915 respectively, along with a Spanish speaking channel 2 un-ID on 11-30 at 1810.

Since this is my first report to this column, let me describe the situation. The equipment in use at the present time is a Magnavox 12" BW portable. The lowband VHF antenna is a three element channel 2 yagi at 50'; along with it are two transistor pre-amps. We stacked 10 element yagis on channels 7, 9, and 12 but I haven't had the time to connect any lead wire to them yet. The UHF antenna is a 7' dish at 55'.

The lower part of the San Joaquin Valley is entirely UHF so just about anything we see on VHF is DX. The local channels are:

|    |                  |    |             |
|----|------------------|----|-------------|
| 17 | KLYD Bakersfield | 30 | KPRH Fresno |
| 23 | KERO "           | 47 | KJEO "      |
| 24 | KMJ Fresno       | 53 | KAIL "      |
| 29 | KBAK Bakersfield |    |             |

Stations usually visible on tropo are:

|    |                       |    |           |                    |
|----|-----------------------|----|-----------|--------------------|
| 2  | KNXT Los Angeles      | 73 | )         | Translators for    |
| 2  | KTVU San Francisco    | 77 | ) approx. | KQED-9 San Fran-   |
| 3  | KCRA Sacramento       | 80 | )         | cisco. Calls un-ID |
| 40 | KLXA Fontana(L.A.)    |    |           | as of this time.   |
| 40 | KTXL Stockton(Sac'to) |    |           |                    |

That's the word from here: good DX!

(Kingsburg is about 65 miles north of Wasco, also in the San Joaquin. Even though you are further north of Los Angeles than Wasco, Stan, you are probably better off to pick up Los Anggles UHF as you are further away from mountains in between. I haven't seen L.A. UHF at all in Wasco. Hope you can pin down those interesting translators. Your Es was the only skip reported here this time: on 17, 28, and 30 Nov. dps)

Dave Pomeroy, Lot 279 Lake Quivira, Kansas City, Kansas 66106

Though perhaps November would be a blank DX wise after good UHF reception in September and October, but the last few days of November have produced some results--non spectacular. One, however, is new and I was glad to see it since I will probably be leaving this area around January 1.

|        |                            |       |         |                       |
|--------|----------------------------|-------|---------|-----------------------|
| Nov 27 | KHNE-29 Hastings, Nebraska | Tropo | 6:30pm  | "Cornhusker Football" |
|        | KYNE-26 Omaha, Nebraska    | "     | 7:00pm  | ETV                   |
|        | KMEG-14 Sioux City, Iowa   | "     | 9:00pm  | CBS                   |
|        | UnID-19 (Norfolk, Nebr.?)  | "     |         | CCI on KCSD-19        |
| Nov 30 | KUHI-16 Joplin, Missouri   | "     | 10:30am |                       |
|        | KMTC-27 Springfield, Mo.   | "     | 11:00am | over KTSB-27          |

KHNE-29 was the first station seen upon my return from the NAEB Convention in Washington, D.C. where I was pleasantly surprised to see Gary Olson for the first time since the AIPA Convention in Royal Oak, Michigan. UHF dial had been moved slightly from KTSB-27 to channel 29 and KHNE-TV was in when I first turned the set on. Thought something

was wrong since channel 27 was so snowy but soon found out it wasn't KTSB!

I have uncovered the call letters for the two Kentucky Educational Network stations that I received on October 8 and did not have call letters for:

WKMA-TV channel 35 Madisonville

WKMU-TV channel 21 Murray

There is no channel 79 translator in Ottumwa, Iowa according to Stu Grade and to Don Gabel, president of the Ottumwa Area Translator System, Inc. Therefore, reception of channels 74, 76, and 79 is still tentative with K76BZ-76 the only near certainty.

Since this may be my last report from west of the Mississippi River, I am providing this list of recent verie signers for DXers in this area:

KMTC-27 Springfield, Mo.

Kenneth E. Meyer

President-Gen. Mgr.

Midland Television Corp.

3004 Cherry St.

Springfield, Mo. 65804

WUSI-16 Olney, Illinois

Paul McVickar

WUSI-TV Channel 16

P.O. Box 450

Olney, Illinois 62450

WKZT-23 Elizabethtown, Ky.

Bill McCarty

Transmitter Engineer

WKZT-TV

Rt. 1 Box 228

Big Clifty, Ky.

KXNE-19 Norfolk, Nebr.

KHNE-29 Hastings, Nebr.

William R. Ramsay

Director of Engineering

Nebraska ETV Commission

1600 R Street

Lincoln, Nebr. 68508

(Thanks for all the good information, Dave. Good luck on wherever you will be soon. dps)

Bill Lipis, PO Box 325, El Cajon, California 92022

Hi gang! No TV or FM DX recently. I recently got a NordMende Globetraveler II portable which should my FM DX greatly. This rx is excellent on FM, picking up most LA stns and KFMW-99.9 San Bernardino, clearly. The only FM DX I've ever gotten was KOOL-FM a couple years back. In TV DX I've gotten the more standard catches, KTWO, KATU, KBOI etc. For the past 2 years no TV DX due to crummy TV sets and the CATV system which brings in the LA signals to our valley. It seems that any outdoor antenna picks up the LA signals now from the cable radiation. Does anyone else w/ a CATV system notice this effect? I'm thinking of buying a color TV for DX, etc. I would like to hear from any Heathkit TV owners out there. I'm thinking of either the RCA Mark I chassis or the '681' Heathkit. I wish Heathkit still made their b&w set...who needs color after reading the Nov. Techni/Corner! 73's.

(Considering the terrain involved, KOOL-FM sounds like a very good catch, Bill. Bob Cooper sent some info on CATV interference, published in this column months ago. I'll send it to you, as it is a problem which occurs now and then. I understand that the best color set in the US presently is the Heathkit. dps)

Dennis Smith--Before I came home from Santa Barbara, I noted new KKOG-TV 16 Ventura testing on eve of 12 Dec. and first proprams 14 Dec. Xntr is on Red Mtn. about 2200' ASL (site of KVEN-FM) with announced ERP of 35½ kW, a few miles NW of Ventura and 30-40 mi from Santa Barbara. Comes into S.B. with trace of snow on our VHF antenna. KKOG-TV is independent--local-live community emphasis, in living black-and-white.

There were many comments on Jim Stiles' DX report, all disbelieving or condemning his extra-distant loggings, pointing out numerous errors and/or impossibilities. A Los Angeles propagation expert noted that when Jim received DYCB Philippines, KACB Texas was actually being seen in the L.A. area, indicating liklihood of misreading of call on Jim's part.



# EASTERN DX

Morrie Goldman WA9RAQ  
8046 S. Euclid Avenue  
Chicago, Illinois 60617

This column is for all television reporters east of the Mississippi River. JANUARY:  
New Deadline: 15th of each month

## An Unexpected Return

News from "VUD" VHF Radio editor, Bob Cooper, reveals that a secondary peak of the "every thirty-three year" Leonids meteor shower occurred on the weekend of November 17. Bob said this November peak was not expected since in the past the Leonids shower has almost always peaked out in a peak year and then dropped from sight for another thirty-three years. "This time around it fooled us and there was a secondary, much weaker, peak this November."

The Leonids shower has produced visual counts in excess of 1000 per durring its peak. According to Bob, "the Leonids shower actually peaked last year and will not peak again until 1999. Last year it was so good for six hours that two meter buffs could get on and call CQ and on CW make random contacts 800 to 1400 miles away. They had results this year also, but only on carefully timed schedules. .... Too bad we didn't pre-guess the shower this past weekend (Nov.17) as it probably would have produced some dandy bursts on the lower high band channels out to 1400 miles or so also."

Durring the shower, your editor received WCBS-2 New York several times on bursts over two minutes long and KRBD-4 Dallas on an unbelievable five and one-half minute burst, (see report further in this column) which at the time of reception I assumed to be Es.

Bob explains the cause of the long bursts and their Es like fading in the following: "When you get sufficient meteorite debris floating into our E layer, it will look like weak Es with heavy fading characteristics. One meteorite burns, entering the E layer and the spent particle ignites the E layer for a limited region around its entry path. This ignition ionizes the E layer in that small area, and it is this ignition that one can see at right as a 'falling star' or meteorite trail. In a heavy meteorite shower, as just passed, there are so many particles entering the E layer that as the ignition of the E layer in a particular area or spot fades from the first meteorite passage, another one falls into place and the E layer is ignited into ionization once again. The heavy fading is a combination of the time lapse between one ignition and the next, and multi-path reception. Multi-path means you get several distinct reflection points between you and the transmitter, and some of these arrive at your receiver slightly delayed in the time from the shortest or most direct of the paths involved. These slightly delayed by time offset paths appear as ghosts or go out of phase with the with the primary reflection point signal and if the primary reflection point signal level and the level of the off-path reflection point signals is (or are in the case of three or more) approximately equal in signal level, then one cancels the other briefly and you get what appears to be a fade at the receiving point. You could call the reception correctly Es since it is occurring in the E layer and the pure definition of Es relates only to the fact that reflection is from the E layer and does not pertain to the ionization mechanism (ie. whether meteorites, or some other agent about to cause E layer to assume reflective qualities)."

Before going to this month's reports, this TV S meter note. In the June VUD I described a TV S meter circuit. It has since occurred to me that many members may have a VTVM, in which case you can simply monitor your IF AGC voltage as an indication of video signal strength. This can be done by connecting one lead to the video IF AGC line and the other to the television's ground. Be sure to use a VTVM and NOT a VOM or other multimeter. A VTVM is a high impedance device and will not disturb the circuit, but a low impedance device such as a VOM may.

Robert R. Cooper Jr., PO BOX 1355, Frederiksted, St. Croix, VI 00840 (AST)

There was a magnetic storm on about Nov. 16<sup>th</sup> 17<sup>th</sup> and in addition to doing funny things to the F layer, it produced some off season Es from 1725 to 1900 AST from here to Guba (channels 2 and 3) on the 16<sup>th</sup> and later in the evening over the gulf states on the 16<sup>th</sup> and again over the gulf states and down into old Mexico around dusk on the 17<sup>th</sup>. However, even tho the Es was present, the magnetic storm killed both the F layer and evening TE, so as a result there was no possible evening link up between Es over the gulf coast area and TE to the south. Whenever we have magnetic disturbances, it kills TE completely and it may or may not produce auroral activity further north.

Frank Wheeler WPE3DX, 6589 Wattsburg Road, Erie, Pa. (EST)

I managed to log a new one on Nov. 4: 11:28PM WAU3 Lorain, Ohio -43 at 113 miles. No. 216 for me. That same evening WANE-15 Ft. Wayne, Indiana (261 miles) at 11:42 PM and at 12:05AM WKJG-33 Ft. Wayne, Indiana were seen. The first time in 2 months that any good tropo was coming in. 73.

Bill Grant, 16 Goulding St., Worcester, Mass. 01609 (EST)

Not much to report this month. Tropo has been about nil, Es is just starting up again, E2 has been sporadic and below 54MHz. Tropo: 11-24 0830 WIBF-29 Philadelphia, Pa., Es: 12-1 1930 KYTV-3 Springfield, Mo., E2: 11-9 0925-0935 ORTF audio (41.25MHz), 0855-0920 & 1115-1125 BBC audio (41.5MHz), 11-16 1005-1015 ORTF audio (41.25MHz), 0945-0955 & 1050-1055 BBC audio (41.5MHz), 11-17: 1130-1150 ORTF audio (41.25), 1125-1130 & 1145-1155 BBC audio (41.5 Hz), 12-1: 1005-1100 ORTF audio (41.25 Hz), 1005-1210 BBC audio (41.5 Hz).

Gary Olson, 5901 W. Brown Deer Road, Apt. 107, Brown Deer, Wis. 53223 (CST)

"Still no TV DX has been seen here in a couple of months. My TV has been acting up; it seems to lack its old snap. Not even the Chicago stations peek thru anymore. I'm afraid it's going to be a long winter."

David Cox, Box 16, Carrollton, Alabama 35447 (CST)

My loggings since the last report would be rather long and since it contained nothing unusual, I will only say DX dropped considerably for me in July and even more in August. Nothing out of the ordinary was seen in Nov. except an Un-ID @ 2130 w/ID as "Canal 2". Variety show followed as signal dropped rapidly. Probably XEW, maybe YSR. The 21" Motorola lost its pic tube on Nov.9. My father wanted to blame my DXing, but to prove to dad dxing only wore down the tuner contacts, I asked the repairman who agreed, thank goodness, Hi! The new tube has much more brightness, and the tuner was cleaned. WCFT-33 Tuscaloosa recently activated their higher power and it has made a world of difference. On December 2nd there was a tropo opening; here's how it went: WEBB-14 Allendale SC (405 miles) 1630 w/TP & tn; later w/ed. pgms. (New state and best uhf DX), WGTN-8 Athens, Ga. (280) 1710 Ga. Ed. Net pgms; s/off @ 2000, WCES Wrens, Ga. (345) 1710 same as WGTN, WAN-9 Savannah, Ga. (430) 1730 ID; Ga. Ed. TV, WTVK-26 Knoxville, TN (305) 1700 TD; Championship Bowling, WJPJ-17 Atlanta, Ga. (225) 1700 cartoons; tent., WACV Nashville possibility, WEDU-12 Augusta, Ga. (365) 1712 w/Pulse Nx, Sports, Wx; ID then CBS Wx @ 1730, WIS-10 Columbia, SC (425) 2200 w/nx, sports, wx; ID then Tonight Show @ 2230 after WFIQ s/off; pic under WALA mobile, WJHG-7 Panama City, Fla. (305) 2200 FL nx, sports, wx, ID then Tonight Show @ 2230 after WCIQ s/off; no sign of WDM which usually dominated. On wx anc mentioned that many calls had been rcvd about the "Venetian blind effect" on their TV. He went on to say it was called CCI and actually improved reception, but this time it was too good and was bringing ch.7 in Miami & Wattsburg also. How bout that? All of the above stations are new and reports are out to each. Total now at 129. All UHF's were very weak w/heavy snow and moderate fading. VHF were fairly strong. My reception of WAN is kind of funny to me. My 4 VHF antennas are switched at the rcvr by 2 knife switches which are connected to the set by abt 3' of TL. With any of the antennas switched in, I rcvd WTV-9 Columbus Ga. With both switches open, I rcvd WAN. Both were fairly strong and didn't interfere with each other. Another funny thing is Columbus Ga is practically in a straight line with Savannah and my shack! (This one really is a puzzler! Anyone have any ideas? MG)

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

As of late when DX has been bad, it's very, very bad and when it's been good, it's very good (for the off season). Thanks to a very good trop opening and excellent IS from the Geminids shower, I've added five new stations to my totals; the closest being 580 miles distant. 11-17 MS 0434 Long, weak program burst, undoubtedly WCBS-2 NYC. 0438 UnID, but Cled wedge tp on 5, SE. 11-21 0432 WJBK-2 Detroit in weakly. 11-23 0422 WNEW-5 Bay City, MI. WJBK-2 Detroit strong enough to block channel for MS. MS 0507 Un-ID modified wedge -5 SE. 0524 Un-ID wedge TP on 3 to SE. 0528 Un-ID CBS tp, 3 SE latter IDed as WRBL Columbus, Ga. 0537 un-id bullseye tp on 3 SE. 0547 trop WJRT-12 Flint, Mi. good w/tp and mx, WTOL-11 Toledo likewise. 0550 Un-ID trop IHTP, 5 SW. Tent as KSD St. Louis, but never have any way to ID before local WMAQ-5 s/on. 11-27 2200 WHO-13 Des Moines, Ia. w/nx. 2220 tent WEAU-13 Eau Claire, WI w/very heavy QRM on ch. At 2229 glimpsed a slide for a farm implement dealer in Hastings, NB. Tentative report to KHOL Kearney, NB vfd. Verie was written on the back of my report! Needless to say, thats new. 11-28 MS 0623 KFDX-3 Wichita Falls, TX w/IDed IHTP. Then WKY-4 Okl. City and an unCled IHTP 3 SW. 0627 UnID s/on w/ anthem on 4 to SW in color. 0638 UnID tp, white square on black with vert. line at left, 3 NW(KDAL?). 12-8 MS Various UnID brsts on 5 SE, 0500-0600. 12-12 Geminids MS 0444 WGR-2 Buffalo, NY w/wedge tp (NEW). 0448 WCBS-2 NYC. 0500 UnID modified IHTP-4 E. 0517 Strong color bars then CBS type tp in same burst-3 S. 0525 WRBL-3 Columbus Ga. (NEW) w/CBS tp, finally IDed. 0526 unID wedge TP to SE on 3, CLs were washed out by overly bright screen for filming DX. Probably WSAV, Savannah, Ga. 0530 UnID ID panel, 3 SE. 0550 one or two very weak bursts on 7 ESE. 0628 IDed color bars on 6 SW. Suspect KTAL, Shreveport, La. Seen a number of times. 0629 Un-ID ID panel 6 SW. 0644 s/on w/planes flying, 6 SW. 0650 unCled RETMA tp on 6 SW. 12-14 Core MS 0424 color bars, 6 S (WBRC Birmingham, AL?) 0449 quick burst WCBS-2 NYC. 0551 WOAI-4 w/modified bullseye tp. 0611 UnID color TP, 4 SW (WKY?). 0622 KPLD-4 Dallas, TX finally IDed (NEW). 0629 UnID ID panel (KJAC?). 0640 unCled RETMA TP 6 SW. Tent. report vfd by KOTV, Tulsa, OK. 0646 KRIS-6 w/color tp. 12-15 MS 0431 UnID wedge tp, 2E. (WGR?) 0534 UnID bullseye tp 5 E. Filmed. Still haven't heard from WSAV-3, WRCB-3, WBTW-3, KCBW-6 KTAL-6 and KAUZ-6 on tent reports. With luck I might still get one or two new stations out of that shower. My New yagis have finally arrived, so now to wait for warm weather to get them up. Putting up antennas in cold weather is my second favorite thing in the world. My first is throwing a bowling ball up in the air and catching it with my teeth! Hi! The British TV chassis sent me by Roger is finally wired into a US set. The E2 outlook is bleak, to say the least, but you never know. In a way it's good that there isn't any European TV coming in (GOOD FOR WHO?!!) It might take me a while to figure out why I can't get anything with it, even locals! Best of DX in '69!

Ferdinand S. Dombrowski, PO BOX 5001, Milwaukee, Wis. 53204 (CST)

Nov. 30 KFLZ-34 Fond du Lac, Wis. ALL Chicago, Rockford, Green Bay, Grand Rapids, Madison and Wausau stations, also. Dec. 1 WKBT-8 La Crosse, Wis, KROC-10 Rochester, MN. Only antenna used was a "Snyder" VHF rabbit ears and an indoor JFD "LPU" for THE TV receiver is a Sylvania Color set.

Morrie Goldman, Editor (CST)

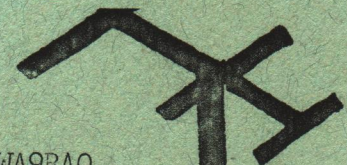
Since I was unable to include my report last month, I'll add it now: 10-26: 0520 On 4 to E two tp's together on same burst, no IDs. 0530 WKY Ok. City w/tp. 10-27: 0521 WCBS-2 w/tp about 3 or 4 times and again at 0528; 0532 WLWD-2 Dayton (via IS); 0535 UnID IHTP-2 E; 0537 WCBS-2, 0540 WCBS-2, 0544 WKTV w/ID slide Utica NY, 0548 WLWD-2 (via trop); 0602 KDKA-2 Pittsburgh w/IDed color bars; 0613-0616 several Un-ID pgm bursts on 5 E; 0626 IHTP on 4 w/call but UnID due to roll; 0653 Very good burst of WSM-4 Nashville w/tp. 10-31: Aurora noted from about 12noon to 6PM, no IDs. 11-1: Aurora noted all day, no IDs, but very strong around 5PM. 1-2: Aurora noted on 3 & 4 all day. 11-3 0520-0507 various UnID pgm bursts on ch 2 & 5, total of about 8. 11-17 0513 WCBS-2 NYC w/tp on burst lasting over 2 minutes! 0520-0521 WCBS-2 again; 0521 on 5 E color bars then bullseye tp w/5 in small circle in center; WCBS-2 again at 0524; and again at 0526 and 0528; 0529 WCBS-2 again for well over 1 min.; 0539 WLWD-2 Dayton w/tp; 0543 and 0544 WCBS-2 again! 0556 weak pgm burst on 2 SE; 0602 KDKA-2 Pittsburgh w/IDed CB pat; 0617 At first unID film on 3, via trop, latter vfd as WAVE-3 Louisville;

0615 Color tp to east on 5, 0800-0805;30 KRLD-4 Dallas, via MS activated Es? 11-23: UnID color bars to east on 5 at 0504; 0518 CB pat. again on 5; 0530 WTOL-11 Toledo w/IHTP by trop; 0556 WWJ-4 Detroit; UnID dead carrier on 10 to SW via trop? at 0610. 12-11: about 10:23PM very strong MS burst of pgming seen from SW on 13! No ID. 12-13 MS 0415 audio tone burst to S on 6 (WPRC?), 0432 audio of pgming, religious, on 6; 0443 2 high pitch audio test tone to east (higher than usual); color bars at 0445 on 2 E; 0458 KDKA-2 w/IDed CB pat. 0502 4 SE mod. IHTP, UnID; 0509 WNBC-4 NYC w/ID slide & tone; 0510 4 SE "Pastors Study" UnID; 0519 UnID RETMA TP on 4 to SE and again at 0520; 0521 4 UnID CBC TP & tone, CBOT? -Can anyone help?- UnID RETMA on 4 again at 0521; 0531 WCIV-4 Charleston w/ID & mx; 0532 Low pitched audio test tone on 4 ESE; 0533 UnID ed. pgm; 0535 Same CBC TP & tone; 0544 WJXT-4 Jacksonville, Fla. w/ID slide; 0546 Same CBC TP again; 0547 WCIV-4 Charleston SC w/ID slide & mx; 0549 WCIV-4 again; 0551 Same CBC TP; 0553 ed. pgm UnID-4; 0555 WJXT-4 Jacksonville w/ID slide; 0556 UnID-4 CB pat.; 0557 WCIV-4 w/ID & mx; 0603 several bursts of the "Today show" news, could have been any one of a number of NECers; 0605 UnID mod IHTP with slanted call letters at top on 4; 0608 RETMA TP, looked like WWL-4; 0610 Positive of WWL-4 New Orleans w/RETMA TP; 0610 - 0615 several 4 bursts inc. WWL-4 and UnID mod. IHTP; 0615 WKY Ok. City-4 w/TP; 0616 KRLD-4 Dallas w/tp; 0626 KGNC-4 Amarillo, Tx w/tp and again at 0634; 0635-0638 several bursts on 4 to SE and SW all unID; 0638 UnID RETMA-4 to SW; 0639 UnID mod ID to SW on 4; 0640 WOAI-4 w/tp; 0641 UnID RETMA-4 SW; 0642 mod IHTP on 4 to SW; 0644 WOAI-4 San Antonio again w/tp (much weaker this time); 0644 KGNC-4 w/tp; 0645 KGNC-4 w/tp again; 0646 RETMA UnID on 4 to SW; 0650 ID slide KJAC-4 Port Arthur, Tx; 0652 UnID CB pat.-4 SW; 0653 KJAC-4 again; 0655 UnID RETMA-4 SW; 0658 KJAC-4; 0658 UnID S./on w/ ships and anthem; 0701 Looked like WKY ID slide with distinctive "4" in oval; 0710 CBC TP-4 again! 12-14: 0435 WCBS-2 NYC w/tp; and again at 0439, 0441 and 0442; 0503 WHDH w/ wedge tp & tone; 0510 CB pat on 5 east; 0531 religious pgm burst on 5; 0548 color tp on 6 over WFMB; 0551 audio test tone on 5; 0607 very short burst to SE on 7; 0618 color test pattern w/call on 4, they looked like WKY-4; 0644 E 4 unID tp w/ large call letters on top of TP, did not fully sync; 0645 SE 4 UnID RETMA; 0701 Audio tone and very weak tp SE on 3; 0735 color tp on 4 to SW; 0740 UnID TP EE W 4; 0754 UnID IHTP W 4. 12-22: 0526 tp & tone on 5 east w/small "5" in tp center in a circle; 0545 trop WLWT-5 Cincinnati. The MS of the December 13 shower was the best I've ever seen. Many, many more unID bursts were flashing in, too quickly to keep up with. With this many low band bursts and my ch 13 burst of December 11, I was expecting plenty of hi band DX. But no such luck and I later found out why. Durring a severe wind storm on the evening of Dec. 12. the feed line to my yagi was just blowing in the wind, connected to nothing. Few signs of Es have appeared and most trop are poor if at all. Now to top it off my UHF converter finally went out, way out. I can't even get the locals well anymore, so I'll have to get a new one.

Before closing this month's column, I would like to extend my New Years Greetings to all and thank those of you who have reported durring 1968. DX prospects for 1968 are looking up with many new UHF stations on the air and the sunspot cycle in prime position for aurora. So get ready to make a point of reporting all your DX in 1969. It'll make a great New Years resolution!

73 and REST of DX in the NEW YEAR,

Merrie Goldman WA9RAQ



WTF

# Horizontal vs Vertical POLARIZATION

H  
O  
VERSUS  
E I  
POLARIZATION  
T O  
I N  
C T  
A A  
L L

by  
Joe  
Gragg

Lets begin by stating the difference between horizontal and vertical. Horizontal polarization is when the electric field of the radio wave is parallel to the earth. Vertical polarization is when the electric field is perpendicular to the earth. For instance, a flagpole is vertical whereas a street is horizontal.

For the first part of this article, we'll go into theory, and then into practice. First of all we have to assume 3 things:

1. The earth is a perfect conductor, (zero resistance).
2. The parallel (horizontal) field close to a boundary between two mediums is exactly the same on both sides.
3. the perpendicular (vertical) electric field very close to a boundary between two mediums depends on the permittivity of the medium you are considering and the electric charge at the surface of the boundary.

Now lets explain these big book words before you say HUH?

1. If the earth is considered a perfect conductor of electricity, any electric field in it would exert a force on electrons within it and make them move, and they would continue to move until the electric field was nullified. Since the electrons move in a direction seeking to nullify (counteract) the field exerted upon them, eventually they will bunch up and nullify that external field. The electrons in the earth would bunch up and exert a field opposite to that of the radio wave and cancel it; hence, the end result is no electric field at all.

Statement #2 cannot be proved without 100 pages or so, so you'll have to take my word for it. The statement says that the electric field above the horizon (earth's surface) equals the field below the horizon, or:  $E_{ah} = E_{bh}$  where ah=above horizon, and bh = below horizon.

Statement #3 would also take 100 pages to prove. It says:

$$e_a E_{av} = e_b E_{bv} + Q, \text{ where: } e_b = \text{permittivity of earth below surface}$$
$$e_a = \text{permittivity of air above surface}$$
$$E_{av} = \text{vertical field above surface}$$
$$E_{bv} = \text{vertical field below surface}$$
$$Q = \text{electric charge on surface}$$

Permittivity is a property of everything, (and different for everything), which indicates the relative ease with which it conducts electricity. Surface electric charge is merely the excess of electrons on surface. Now lets put the equation to work.

As we have shown earlier in #1, the electric field inside the earth is zero, and the horizontal field above the earth is also zero, from statement #2. Conclusion: any horizontally polarized wave directly above the earth is zero.

Now statement #3: again the vertical polarization inside the earth is zero, but the vertical field above the earth depends on the permittivity and charge at the earth's surface.

In other words, a horizontally polarized wave approaching the surface of the earth will be cancelled due to electron shift in the earth.

The vertical field inside the earth will also be zero, but the vertical field above the surface will induce a charge at the surface to sustain it.

Now I realize that there are plenty of loopholes in the above process, but my fingers get tired when I type a hundred pages. If you do not understand the above statements in a few minutes, don't feel alone; it took me 3 years. Of course the earth is not a perfect conductor, so the effect is not quite zero for horizontal waves. This effect does not apply to line-of-sight signals but 99% of DX stations aren't line-of-sight. In relation to the earth's dimensions, our DX antennas are still very close to the earth's surface remember. And also we've skipped the magnetic field equations, (every signal is composed of a magnetic and an electric component). However, magnetic equations still prove that only a vertical field is present at the earth's surface.

So now we come to actual practice. Using a vertically polarized dipole, 40 feet high, in College Station, TX, the only vertically polarized station in Dallas, WRR-FM, (250 miles), was heard here 24 hours a day, BUT not a peep was heard from any other Dallas station that is only horizontally polarized. The receiver being used is a (20 AI-FM 5-tube set bought at a hardware store, so you can imagine the sensitivity. Antenna used was 73 ohms fed to the receiver with 300 ohm line. I'll let you figure out the signal loss due to mismatch.

Back home in Palestine, TX, (90 miles to Dallas), the same station is also heard 24 hours a day using a 14 ft vertical dipole still mismatched from 73 to 300 ohms. With a horizontal folded dipole in the same location, (matched 300 to 300 ohms), that station is only heard about 30% of the time. WRR-FM uses 100kw vertical and 100kw horizontal so all that really matters is the polarity. Listening by ear, the difference in signal strength is about 100:1. Also, KAYD-FM in Beaumont, (150 miles, 50kw vertical), comes in 24 hours a day, without "snow" about 80% of the time.

Why do most stations use only horizontal polarization? Well I asked and was told that most receiving antennas are horizontally polarized. And most receiving antennas are horizontally polarized because most stations are too---or because the listener doesn't know the difference. Vicious circle, isn't it?

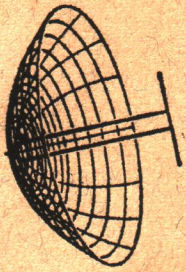
but the picture is changing; if you'll notice in latest FCC action, most FM stations are requesting vertical along with horizontal polarization. None are requesting horizontal only. Probably the greatest reason for this however is the increasing use of FM in car radios, which already have vertical AI radio antennas. Currently, a horizontal loop or something must be added to the AI antenna for FM, but if FM stations are vertically polarized then this becomes unnecessary.

If there are any questions about the above junk, just ask me and I'll try to explain in detail.

73, Joe Gragg

#### PUBLISHER'S NOTE:

Recent discoveries here, on the advice of Dave Janowiak, indicate that when skip is in and you suffer from CCI from fringe stations, a vertical antenna will cut down the ground wave and may not affect the skip wave appreciably if it is arriving with a variable polarity. For F2 skip you may use horiz or vert antenna becuz the signal shifts in polarity constantly anyhow. For Es the signal may or may not shift appreciably but it may be worth a try. With rabbit-ears as your only antenna this is no problem, but with an outdoor you'd need another similar antenna mounted vertically, or use an added horizontal dipole in parallel used similar to a phasing stub. This dipole should be mounted on the roof also, and may be twin-lead on a board rather than an ant.



# V.H.F. RADIO

(Usually devoted to long range reception reports and items of interest to members monitoring DX reception in the VHF region of 30 to 54 MHz.)

Conducted by: Bob Cooper, Jr. KV4FU  
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00840

## WHAT IS NORMAL FOR TV-FM DX?

More or less as a result of correspondence with (among others) Glenn Hauser, following publication in the November Digest of a report of some most 'unusual' TV DX loggings by a Hollywood, California 'DXer', the following has been prepared.

This is intended to serve as a guide, or quick reference, to the types of reception and distances that can be reasonably be expected during DX openings. This information is the cumulative result of this individual's own DXing experiences (beginning with July 1950), the cumulative results of hundreds of other DX'ers during that span of time, the statistical channel-by-channel tabulations recently begun by Glenn Hauser, and as a cross check, results obtained by amateur radio operators between 1946 and the present time, using the amateur 50,144,220 and 432 MHz bands. The correlations between the various amateur bands noted and our VHF-UHF TV channel groupings is explained in the text.

Please bear in mind that the data presented here is based upon past experience, encompassing untold hundreds of thousands of hours of DX observations by probably 1,000 plus TV-FM DX enthusiasts (as they have come and gone through the 18 year period) and the approximately 5,000 BHF-UHF minded amateur radio enthusiasts. The facts and figures that follow do not mean that loggings in excess of these distances or by propagation modes yet unknown will not one day occur. It does suggest, however, that if we can place any validity in nearly 18 years of semi-organized TV-FM DXing, that we should always examine with a most critical eye loggings reported which tend to exceed these basic 'norms' - which we ourselves have established through the years.

### Correlation With Amateur Radio Work

The amateur six meter (50-54 MHz) band has propagation (DX possibilities) roughly comparable with TV channels 2 and 3. However, F2 layer skip will occur on a ratio of approximately 500-1 when you compare the amateur six meter band with TV channels 2 and 3. For all other forms of propagation, the correlation six meters to TV 2-3 is basically 1 to 1. F2 reaches as high as six meters only on rare instances ... and the F2 TV DX loggings on channel 2 can be counted on one hand. No valid loggings have ever been reported on channel 3 or higher, via F2.

The amateur two meter band (144-148 MHz) compares roughly with channels 7-13 for tropo (extended ground wave) reception, with channels 7-13 for the extremely rare high band E<sub>s</sub> reception (although favoring channels 7-8) and with channels 12-13 for the almost unheard of high band MS (meteor scatter).

The amateur 1-1/4 meter band (220-225 MHz) compares favorably with channels 11-13 for tropo work.

The amateur 432 MHz band compares favorably with the lower UHF TV channels (14 to approximately 40) for UHF tropo.

### Channels 2 to 6

Tropo - or tropospheric propagation is so named because from the radiation point at the transmitting antenna to the receiving antenna site, the signal(s) is trapped close to the ground (within the troposphere layer of the atmosphere) by weather fronts and other weather (temperature, humidity) related phenomenon.

Extended tropo (ie. reception beyond the normal service area of a station) efficiency improves with frequency. The higher the TV channel number, up to and including UHF channel 83, the more efficient the propagation agent. To illustrate; given six test transmitters, all transmitting with the same power, same antenna height and gain, from the same location - and given a single receiving location, 400 miles distant. Place between the test transmitter location and the test receiver location the proper type of weather conditions to produce 'tropo'. NCW (and this is where theory separates from practice) install exactly equivalent receiving antennas, transmission lines and receivers.

Measure the received signal strength from each of the six test transmitters, on channels 2,6,7,13,14 and 83, at the receiver location. What will you find? That channel 2 will be the weakest, channel 6 slightly stronger, channel 7 quite a bit stronger, channel 13 stronger yet, channel 14 considerably stronger than channel 13 and channel 83 the strongest of all!

(This is theory - in practice we all know that high band channels ..7 to 13.. are usually the best for producing tropo reception, although the slowly improving quality of UHF receivers and antennas is beginning to result in some truly exceptional strong UHF tropo loggings. When and if receiver manufacturers turn out a UHF receiver that has the same type of relatively low noise, high gain, tuner as VHF receivers now do, and with completely equivalent gain .. stage for stage .. right through the set, then we'll really see some really exciting UHF tropo hauls.)

In practice, channels 2-6 tropo loggings are usually in the 200 to 500 mile range. There have been a few in excess of this, but these usually occur over such excellent tropo regions as the Gulf Coast, the middle to northern Atlantic seaboard, and the upper mid-west line from eastern Nebraska into western New York state. Any loggings on low band, via tropo, over 500 miles, are exceptional.

E Skip ( $E_s$ ) - the physical mechanics of E skip are well known. A 'blob' or patch of ionized gaseous material coagulates (forms), and either:

- (1) Stays stationary (in which case it may dissipate soon)
- (2) Begins to move (if it does start to move, it will usually follow well established patterns of movement)
- (3) Grow larger in size and area affected (in which case it may link up or join with others)

Eventually it will dissipate (cease to exist). However it may only cease to exist as far as TV DX is concerned, continuing to be active propagating DX signals down in the 30 to 50 MHz range. If an  $E_s$  cloud goes 'dormant' like this, chances are it will revive later in the day or the next day, bringing TV DX anew.



$E_s$  can and does occur at anytime of the day or night. Over the years it has probably hit every date on the calendar (including February 29th as I recall).

It is most likely to occur, however:

- (1) Between April 1 and August 15; December 1 and January 15.
- (2) Between 7AM and 10 AM local time; around 12 noon local time; after 4 PM and before 10 PM local time. (It has been observed throughout the day and night however)

Meticulous long term study programs have studied the  $E_s$  mechanism, most of these studies sponsored by one or another U.S. Government agencies, or by recognized college and University research programs (the latter usually under federal grants). From these studies we know that:

- (1) An  $E_s$  patch or blob is in truth a storm within our ionosphere, occurring within the E layer. The E layer extends as close to earth as 50 miles and as high as 80 miles, but is usually located approximately 55-60 miles up.
- (2) The length of the skip path propagated by  $E_s$  (ie. distance from transmitter to receiver) is determined by the following purely mathematical considerations:
  - (1) The elevation above ground of the  $E_s$  cloud (the most important consideration of all)
  - (2) The elevation above mean sea level of the transmitter antenna (which is important enough to extend the maximum distance possible by up to 10 percent in the case of 10,000 foot high channel 2, Denver, which is ideally situated for  $E_s$  to the east)
  - (3) The elevation above mean sea level at the receiving antenna

The maximum possible single hop  $E_s$  on channels 2-6 is 1500 miles, if:

- (1) The transmitter is roughly at sea level
- (2) The receiver is roughly at sea level
- (3) The  $E_s$  cloud is right at the top of the E layer zone, or 80 miles up, right at the mid-way point between the transmitter and receiver

It is theoretically possible that if tropo conditions existed at one end, or both ends, of the path, that this 1500 mile maximum distance could be extended by tropo. However this is a very rare occurrence.

In actuality the  $E_s$  cloud is seldom (less than 1 percent) above 70-72 miles. So the maximum distance usually found on  $E_s$  is less than 1500 miles.

When double hop  $E_s$  occurs, you have two separate  $E_s$  clouds forming. One cloud provides the first skip or hop, the second cloud provides the second hop. When the signal returns to earth from the first hop, it strikes the ground and rebounds off again, traveling on in a straight line away from the transmitter eventually entering the E layer once again. If the E layer is ionized at the point of the second entry of the signal into the layer, the signal is again reflected - or refracted - back to earth. Typically, the first hop covers 900 to 1200 miles, the second hop an equal distance.

A third hop is possible - but rare. For one thing three isolated  $E_s$  clouds must line up, all in the same line, from transmitter to receiver, and all so spaced that they affect a reflection point at

the mid-point (or halfway mark) of each of the three individual skip or hops, almost perfectly.

Any multiple hop  $E_s$  (two or more) is rare, for the above mentioned reasons, plus these additional factors:

- (1) When the signal strikes the earth upon returning from the first reflection in the E layer (ie. at the one hop reception point), much of the energy is lost when the signal encounters (and is reflected back off from) the ground. Thus the amount of signal that heads off for the second hop or skip is only a small fraction of the total energy that entered the E layer from the transmitter, on the first hop.
- (2) Most double hop  $E_s$  is in the 1800-2500 mile range. The most common paths are across the United States, which conveniently is just about 'two E hops wide' at most points. WUSN, 2, South Carolina for example single hops into southern Oklahoma. The signal arriving at the ground in southern Oklahoma always strikes the earth and always heads on west. If another E cloud exists between Oklahoma and California at the right point, the ground reflected signal from the first hop is reflected back to earth once again and shows up in California as double hop  $E_s$ . However the signal is relatively weak in California, because of the loss of signal at the ground reflection point in Oklahoma. And if KVOC in Tulsa is on the air at the time, it will be (on single hop) much stronger than WUSN, in California. End result - WUSN is there but it is lost due to co-channel QRM from the single hop KVOC.

Double hop  $E_s$  is not all that rare - but identifying it through the single hop QRM is rare!

$E_s$  Summary - maximum single hop distance, un-assisted by tropo, 1500 miles. Usual distances covered are 900 to 1300 miles.

Maximum double  $E_s$  theoretical distance is 2800 miles. Distances usually covered - 1800 to 2500 miles.

Longest pure  $E_s$  hauls known: 3500 to 3800 miles.

Amateur six meters - for stations on east or west coasts, double hop occurs approximately 30 % of the time that single  $E_s$ . Amateurs do not have to fight the co-channel QRM problems we have. Longest pure  $E_s$  hauls on six meters, 3800-3900 miles.

Meteor Scatter - is simply short lived  $E_s$ , caused by the entry into the E layer of minute dust particles known as meteorites. Distances tend to be slightly less than regular  $E_s$  due to the fact that most dust particles do not ignite (ie. burn up) until they enter the lower levels of the E layer (usually 40-55 miles up) where the friction between meteorites and the rarified gases is higher than at a point higher up in the E layer.

#### FM

Tropo - distances are more like high band than low band, stretching out to 1,000 miles. This greater distance is primarily due to the greater number of FM channels (ie. affording more 'clear channels in your locale' on which to identify weak, distant stations), and, the much greater sensitivity of FM receivers as compared to TV re-

ceivers. A good FM tuner offers 20 db of quieting (a good, readable signal) for as low as .2 or .3 microvolt of input signal. A good television receiver provides a picture that you can make up numbers and figures that make up 10 percent or more of the screen when the signal measures 20 microvolts or more. A not so good television receiver will require 50 microvolts for a recognizable picture, such as making out the call letters on a test pattern.

Es on FM - for every occurrence of Es on TV channel 2, there is a statistical chance that you have 6 % chance of seeing (or hearing) Es on the FM band. In other words, for every 15 Es openings that affect channel 2, you will have one FM Es opening, from your receiving location to the same transmitting location.

This past summer was, seemingly, exceptional for FM Es. There is good reason to believe that the coming summer will be as good.

Double hop Es on FM should not be as rare as double hop on TV channels 4,5 and 6, for these reasons:

- (1) FM receivers are more sensitive than television receivers
- (2) You have more FM channels to work with - if some of your FM channels are filled with local signals, and others are likely to be filled with (say Oklahoma and Texas) skip signals (you DX from Pennsylvania) ... a worthwhile winter project would be to prepare a list of clear channels in your area - super-imposing over this a list of 'expected' to be filled channels when skip is open in a particular direction. This should result in a third set of channels - still clear - against which you can check known high power stations operating at double hop distance from your receiving location. And this third set of channels would be the ones to watch for most closely when FM Es is occurring.

Es and double hop Es distances are comparable on FM with channels 2 to 6 on television.

### Channels 7-13

Es - not impossible, just darn rare. Approximately 15 validated DX loggings in as many years. Highest channel ever known to reach, 11. Most likely to be affected - if any are: channels 7,8. Distances up to 1500 miles maximum but past experience indicates 800 to 1300 miles is most likely.

Almost all validated loggings have occurred east of the Rockies, and most of these have been south of the Mason-Dixon line. The best time periods seem to be around noon local time and between 4 PM and 8 PM local time.

Tropo - fertile ground for channel 7-13 watchers. Distances up to 1200 miles have occurred, a few just beyond that mark. 1,000 mile hauls are not exceptional (although you will think so the first time you get one!) except in and west of the Rockies where 300 miles is considered pretty fair doings.

Like low band, across the Gulf coast and the waters of the Gulf, up and down the eastern seaboard from North Carolina to Nova Scotia, and from western New York west into eastern Nebraska are the best areas.

Amateur two meter work (144 MHz) has exceeded 1400 miles on only a handful of occasions, 1200 miles is considered darn good!

The big problem, again, is with co-channel QRM (interference) from other stations closer by. High band tropo is frequently selective in the way it works and stations only 200 miles distant can be covered by others 400 miles away. The 300-500 mile distant stations are often the strongest in a tropo opening.

MS - like E<sub>s</sub> not impossible. The big problem with meteor scatter on high band is the (relatively) insensitive TV receivers and (for meteor scatter work) almost totally ineffective antennas.

Using ultra sensitive equipment, very large antennas (by TV DX standards), and high speed CW amateurs are now exchanging (morse code) contacts on two meters (144 MHz) almost nightly over 1,000 mile distances. These are random meteors. But amateurs have been communicating via meteors for nearly 11 years. 144 MHz is roughly comparable to TV channel 7, except that our TV DXing gear is far from comparable to amateur 144 MHz equipment. The ability to communicate via meteors falls off very rapidly above 144 MHz (and channels 7-13 are well above 144 MHz) and it was just this past August during the annual Perseids Meteor Shower that the first 220 MHz amateur meteor contacts were made. 220 MHz compares with TV channel 13.

#### Channels 14-83

aah ... here is the real potential. So many channels, so much less co-channel QRM, and all of that beautiful strong tropo!

E<sub>s</sub> - never known, not likely. If it happens and you are there, consider it a once in a lifetime opportunity because it will be!

MS - like E<sub>s</sub>, highly unlikely. This is not to rule out burst-like reception however, which may originate in the troposphere in heavy weather (storms), such as lightning scatter.

Tropo - The UHF tropo records will slowly edge out to 1,000 miles, where it is likely they will stagnate until such time as receiver manufacturers produce some truly acceptable TV receivers for UHF. The theoretical limits will be around 1400 miles when we get the equipment to see it.

Amateur results with 432 MHz had stagnated until just recently. Much improved amateur receiving equipment, bigger antennas and more amateur use of the 432 amateur assignment has produced some near 1,000 mile contacts this past year.

At the present state of the art, 600 miles is good on UHF; 700 miles is better and 800 miles is exceptional. But with new, more powerful UHF stations coming on the air, and the slow but gradual improvement in UHF receivers, the future is all in UHF.

The TV DX'er of the future, at least east of the Rockies, will concentrate on the un-tapped potentials that UHF has to offer.

73, Bob Cooper, Jr.

001

GARY A. OLSON  
5901 W. BROWN DEER RD.  
APT.107, BROWN DEER, WIS.

We're pleased to report another good response to the TV CCI column. Last month saw a number of letters come in -- most with info nailing down Unids for other DXers.

Those members sending material in may note that some of their unids may not be listed. As we indicated when the column was started, there is some material which is virtually unidentifiable; reports with very little information or items which cannot be traced are sifted out since there is no possible way we can find out what station it was. For example, one DXer sent in a report which said "0115-0200 EST ch. 5, many bursts of an old movie, seemed to be coming from the west" -- without knowing the definite direction, the type of movie, and a few more specifics it is absolutely impossible to identify. So, please try to include unids which can be traced or include more specific information when forwarding reports. Otherwise, printing them will do little good for anyone.

IDs - Morrie Goldman and Bill Heusmann's unid color bars with call letters from last time has been tentatively IDed as KDKA-TV in Pittsburgh. (Jerry Pulice adds that he is sure that the station in question was definitely not WMAR, WCBS, WUND, WKTV).

Bill Heusmann confirms (as do several others) that Gary Olson's unid of 6/24/68 was CKCK-2. Bill thinks the unid involving the Wexburn colosseum might have been misheard (he thinks it might be Weyburn colosseum since there is a town of Weyburn in SE Saskatchewan); therefore he feels CJFB-TV or CKX-TV might be the mystery station (ed. note: I doubt it Bill -- this sounded like a large city station which had an interview program with a number of fairly important guests on it).

Stu Grade says Gary Olson's unid of 8/13/68 was WOI-5 as suspected since the Ames and Des Moines stations all carry ads for Midcontinent Bottlers.

Frank Merrill indicates Gary Olson's unid of 6/24/68 on ch. 5 at 3 PM may have been CKBI-TV because the phone number of the station begins with the digits 763 duplicating those heard on the air. Frank also notes that the ch.2 and ch. 6 game simulcast was likely CKCK-2 and CKCK-TV-2 ch. 6

UNIDs - Frank Merrill Jr., 10673 Saline-Milan Rd., Milan, Mich.  
7/24/68 - ch. 4 - 6:25 P.M. EDST... Eastern Canadian station (English speaking) which carried ads for a Maritime grocery-store chain. QRM was zero-offset with WJ-4 (which uses an even offset assignment)

Jerry Pulice, 143 Gibson Ave., Staten Island, NY, 10308

#1. 7/8/68 - skip - ch. 3 - 6:30 P.M., noted a slide with "The Professionals Report, KSTL (?) News". ID followed shortly after but the call letters were unreadable; a small NBC emblem was seen on it. During the opening KTCA-2 and KTIV-4 were seen so the opening apparently was centered in the Iowa-Minnesota area.

#2. 7/17/68 - skip - ch.3 - 11:39 A.M. Skip from Georgia and Tennessee area (WREC-3, WRBL-3 were being seen). Color bars with heavy fading was seen on ch. 3. (ed. note: I would suspect WEDU-3 in Tampa for a starter)

#3. 8/14/68 - trop - ch. 6 - 6:45 A.M. - at 6:45 a unid ch. 6 station changed to a test pattern, call was unreadable. At 9-9:30 a telephone quiz program hosted by one man was featured. (Jerry suspects WRGB-6 - can anybody help).

That's all the space for this month. Keep the reports coming. And if you are interested, please let us know if you'll support the TV Guide exchange!!!!

# EUROPEAN SCENE

Roger Bunney  
Trelawne, Cupernham Lane  
Romsey, Hants, England  
SO5 8JH (zip)

Re the auroral activity at the start of November; on Nov. 1, in the very early hours, a DXer in Ayrshire, Scotland, had a signal which seems to have originated in North America. The time was around 0030 or so, the local BBC stations were off. A negative going video signal was seen, and on a higher frequency, FM sound was heard. The picture was very distorted and with smearing, etc. The frame speed did differ, and the frame hold had to be reset from the normal 50 cs. to lock this signal in. The pictures were of the end of a programme, and briefly a test pattern came up. From the sketch he was able to draw, it looks like the bullseye type test card. Then another programme started. I do not have his letter to hand, but that is basically what he saw.

Holland has only one transmitter in Band 1, that of Lopik, ch. E4, 100 kw. hor. Programmes are provided by NTS and various programme boards of directors.

Approx. prg. times---

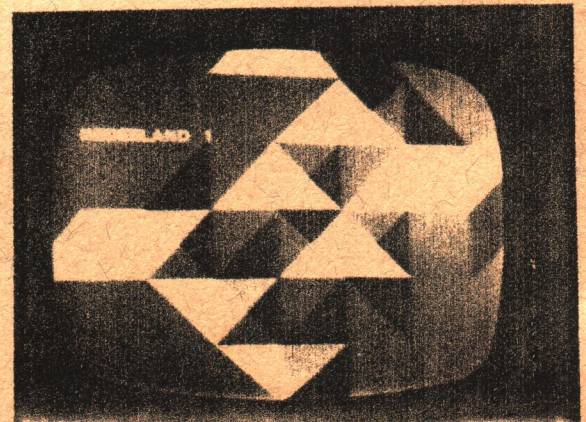
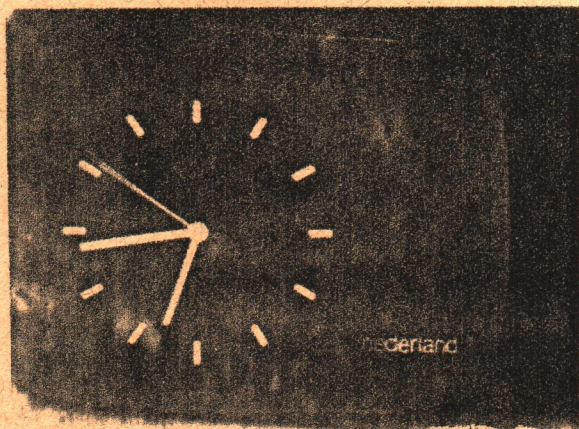
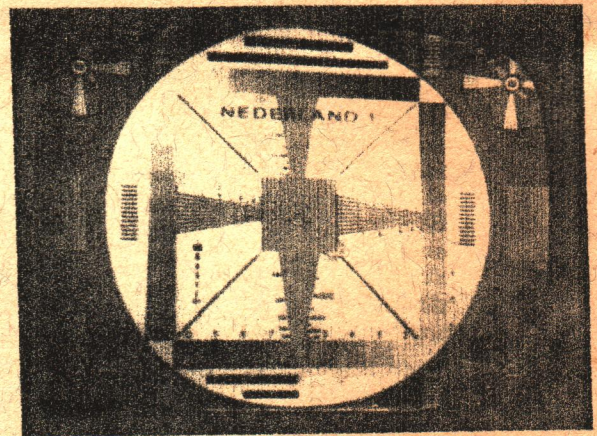
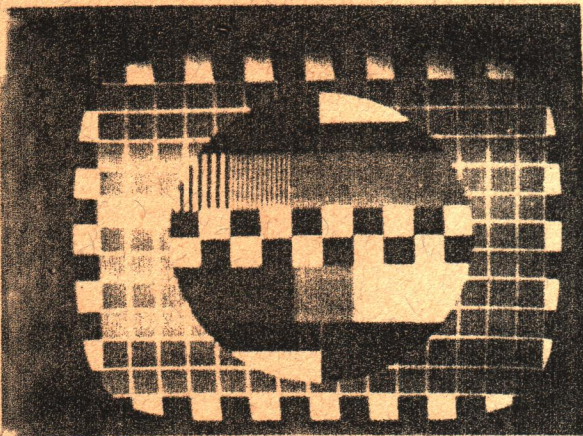
Mon.-Fri. 1850-2300 LT

Sat. 1330-2300 LT

Sun. 1100-1200, 1400-2300

There are several school programmes and national programmes, between 1020-1130 on a few weekdays. Test card is radiated from about 0900, and throughout the afternoon until programmes.

Below are typical Dutch test patterns and IDs from H. Demming.



This being issue #13 of the WTFDA, we are beginning our second year of existence. As we look back on a surprisingly successful year, we can't help wondering if our second year will be as phenomenal, also. With every confidence in the future, we have ordered an addressing machine to conserve time and assure members of receiving bulletins. The Board of Directors mentioned last month has not come into being due to lack of agreement on standards and procedures; however, the HQ staff of five will continue to share in decisions and work-load whenever present at HQ on press-day. The tremendous growth in our first year has shown itself in a vastly improved Digest, as you no doubt have noticed. We haven't fulfilled all our promises promptly but we shall endeavor to do so eventually. Putting out such a large bulletin every month takes a great deal of time so we are not able to do everything we wish. We are always in need of more editors to write regular columns, people to write special features, every now and then, etc. The station list is one of our headaches.

During our recent staff meeting it was decided that we should ask for a volunteer to type up our station lists. This requires a good deal of time which no one at H. has. We have a TV Factbook which contains all the information to be included in the list, so all a volunteer must do is put this down on stencils. (The list would contain call letters, channel, city, ERP, tower height, offset frequency, network affiliation --- for all USA and Canada, and hopefully Mexican stations, also. Without someone stepping forward to assist, the list must be postponed indefinitely.

NOTE: WISC-TV, channel 3, Madison, WI. had a telethon on 14-15 December from 2230 to noon, CST. It was called the "Empty Stocking Club."

It is regrettable that we were not organized sooner as a club so that we could have presented a better information program on the upcoming F2 skip during the sunspot cycle, but this was not a very good cycle after all, as it turned out.

At our latest staff meeting, it was officially decided that the club's initials are WTFDA!

The staff and publisher are to operate the club and publish the VUD. (This is in lieu of the Board of Directors or any other governing body.)

Other staff decisions:  
There will be no change in name of the club since the present name is now well-established.

Selection of an emblem is temporarily tabled.

It is advisable that club stationery be printed for HQ use & offered for sale to members.

73, Ferdie

Answers to TV-FM DXers Quiz II:

- | <u>Across</u> | <u>Down</u>   |
|---------------|---|
| 1. Yagi       | 1. year   |
| 5. tropics    | 2. aurora   |
| 10. Eur       | 3. ground   |
| 15. on        | 6. RI   |
| 17. aroma     | 8. POW  |
| 22. two       | 9. snow   |
| 25. roust     | 13. (if you missed this its my fault; C/W is a format)) |
| 31. W         | 20. MS  |
| 34. trap      | 22. trade   |
| 38. ads       | 34. triode  |
| 41. radio     | 35. raster  |
| 47. Kaiser    | 37. pirate  |
| 53. WOAI      | 40. skip  |
| 57. OT        |   |
| 62. DE        |   |
| 64. tp        |   |
| 66. six       | 46. owns  |
| 69. Erie      | 52. rate  |

I admit some of the words used were a little on the tricky side, like POW!, roust and aroma. You'd be amazed how tough it gets hard to find enough words (DX words) to go around! Anyway, I hope all those who tried it enjoyed it. Your comments on whether or not you'd like to see more puzzles in the future would be appreciated. 73, Morrie G.

by Ferdinand S. Dombrowski Jr.

ANARC is now seeking a site for the 1969 ANARC Convention. ANARC would like to see several bids, and receive some healthy competition between the prospective sites for the 1969 get-together.

Three ANARC conventions have been held so far, and each has been a big success. The 1968 meeting in Omaha brought together top SW, BCB, TV, FI and utilities DXers from all over the United States, and one DXer from Sweden was in attendance, also!

Would you like to host the 1969 ANARC Convention in your city? If you are interested, you are invited to write to:

BRUCE REYNOLDS, Route 2, Warrensburg, Missouri 64093

Bruce would also like to know the dates of the other planned conventions so they will not conflict. Also remember that it takes time to finalize reservations for a meeting place and hotel/motel accommodations, so do not wait until the last minute.

-----  
The ANARC "Man of the Year" Committee, now in its second year of existence will soon be conducting the 1969 selection of the ANARC M.O.Y. The committee requests ANARC club members to participate in the nomination of candidates for the award. The committeemen make the final selection on each candidate's individual merits and DXing activities; but they DO need nominations. The M.O.Y. Committee asks all club members to make an effort to make an effort to nominate someone they think worthy of the award. The person we are searching for should be an active DXer, a club supporter, and a believer in ANARC's goals; in short, a truly outstanding individual. When nominating someone for this award, please send his name, address, qualifications, and your reasons for nominating him to: Ralph Irace, 311 W. 14th St., Riviera Beach, FL. 33404

HEADQUARTERS column (continued)

January, 1968

I have purchased the complete set of "Emergency Radio Service Monitoring Bulletins" from Gilfer and find them grossly overpriced and of limited use to us. They contain mostly fire, police and highway patrol stations in the hi and lo VHF bands, but no paging stations whatsoever. Radio-TV Experimenter has begun printing the lists in White's Radio Log now, so if you aren't in a big hurry you can wait to see it in RTVE.

Gilfer is also accepting advance orders for RTVH69 now, and the new "How to Listen to the World", both due in early 1969 apparently.

Gilfer also has some of the ITU lists for sale, but not for our part of the spectrum. For brochure of all they have available, write:

Gilfer Associates, Inc. Box 239, Park Ridge, NJ 07656.

A new problem has arisen concerning possible new members behind the Iron Curtain. As you may know, in many countries it is forbidden to send money and other negotiable items out of the country, even including unused postage stamps. Hence, it is difficult for a citizen of such a country to send dues to join a club such as ours. The AIPA had a member in Cuba because someone donated the price of his dues which he was not able to send himself. Glenn Hauser has a prospect in the DDR (East Germany) who says he could send picture post cards or souvenirs; I said I'd like to get the magazine "Radio und Fernsehen". Roger Bunney will be sending "Practical TV" magazine to Morrie Goldman in lieu of his dues, also, so this is not limited to Communist countries. If any member would like to help out foreign members by receiving magazines, picture post-cards, souvenirs, stamps, etc please write Hq.

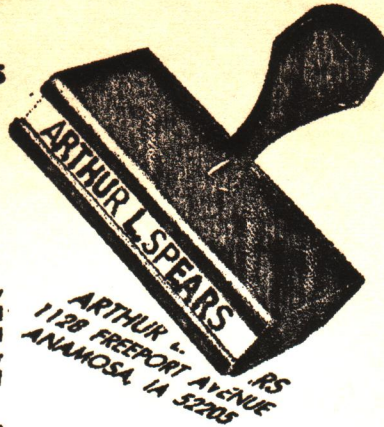


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| \$2.40 . . . . . | 2    |
| \$3.20 . . . . . | 3    |
| \$4.00 . . . . . | 4    |
| \$5.20 . . . . . | 5    |

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### SUGGESTION:

Order the usual 3-line personal stamp with your PE or ham letters, & add a 4th line with your club's name. For deluxe ink pad, add \$1 each.

### NOTE:

If more than one rubber stamp is ordered, give this same information on a separate sheet of paper.

Please print or typewrite wording wanted.

We also carry a full line of stock stamps for home and office:

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