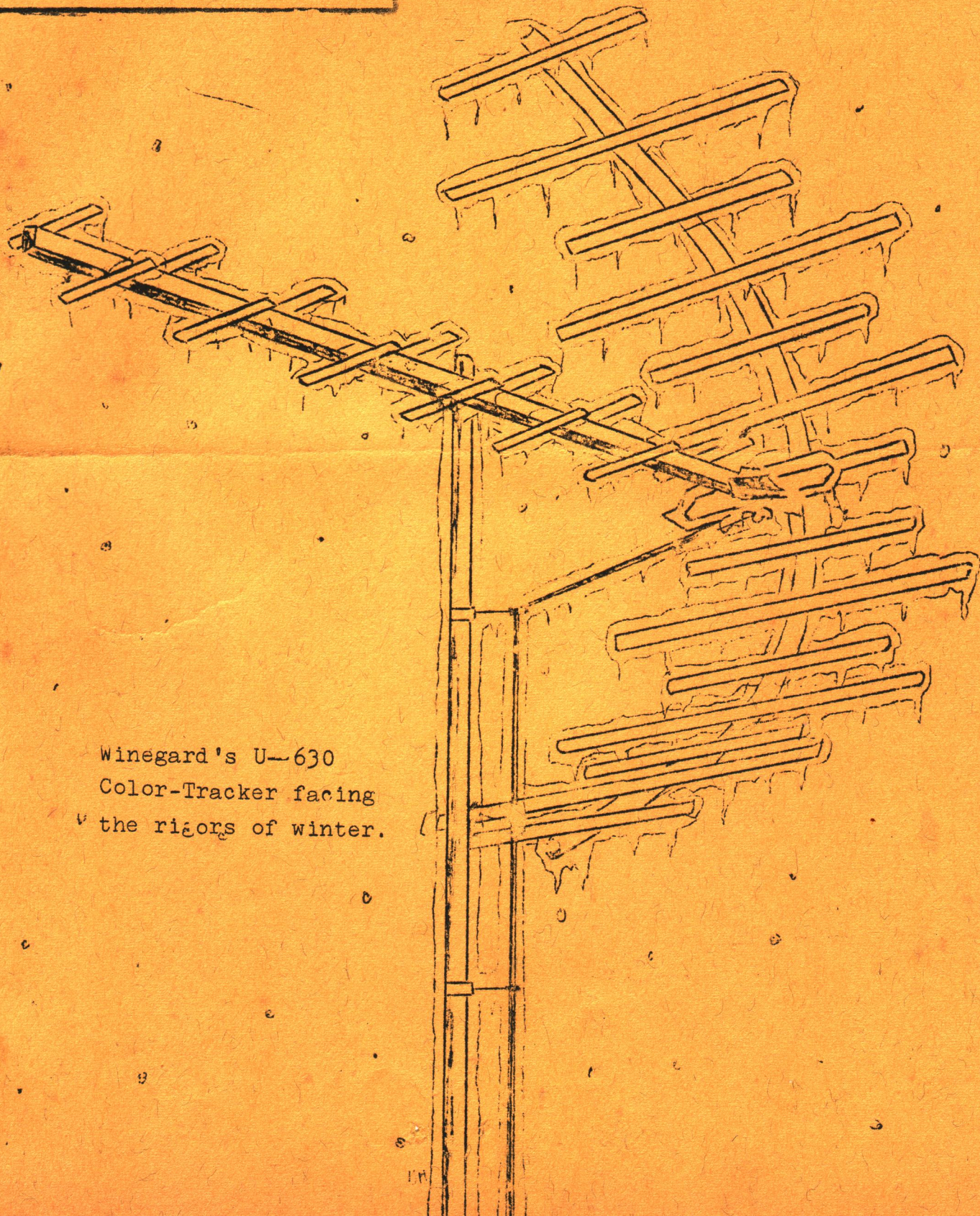


# VHF·UHF DIGEST



Winegard's U-630  
Color-Tracker facing  
the rigors of winter.

# VHF-UHF DIGEST

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

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## HELP!

In the past, some members have mentioned that they would like to see more feature articles on such topics as antennas, receivers, station profiles and other subjects. The only way the 'Digest' can fill this void is to have you, the members volunteer your services. If you are knowledgeable in a field which may be of interest to our readers and feel yourself qualified to write about it, your services are needed and would be appreciated.

We are constantly in need of good photos (or negatives which we can enlarge to approximately  $2\frac{1}{2} \times 3\frac{1}{2}$  TV screen size). If you have pictures of your DX which you would like to see appear in the 'Digest' by all means send them in. This is the chance for which you've been waiting! Boost your ego by showing off your DXing success to DXers worldwide!

Enclose a self-addressed envelope with your photos if you want them returned. When sending prints, it is more convenient for us if we may trim the print of excess margins and touch up parts of the photos which may not otherwise reproduce well. If you wish them untouched, please specify.

ID's and test patterns received recently with date & distance are preferred.

## FEEDBACK FROM THE WEST

There has been a swarm of criticism regarding the fantastic DX of Jim Stiles in last month's western TV column. Comments ranged from 'You shouldn't have printed such lies' to mere disbelief. A propagation expert in Los Angeles said that Mr. Stiles suffered from a vivid imagination and wishful thinking, adding also that he observed no favorable conditions at any of the times and dates mentioned in the report. However, he added, that when Mr. Stiles had reported receiving DYCB-3, actually KACB-3 was being seen in L.A.

Another DXer commented that there are no channel 4 stations in Korea and that the AFKN station reported is actually on ch. 6. All of the times generally checked according to WRTV68. However, powers of the stations reported from overseas are so low that it is virtually impossible to receive such stations at any great distance, certainly not on multiple-hop skip.

There is also a language problem since the Iranian station would be in Arabic, and the Filipino probably in Tagalog rather than in English.

A verification is meaningless since it can be faked by the DXer on the station, willingly or unwillingly. Every old-timer has at least one or two of these.

## SUNSPOT COUNTS

Highest average: May- 128.5  
 Lowest average: April- 81.0  
 July hi-152 lo-26 av-97.3  
 Aug. hi-178 lo-49 av-110.9  
 Sept. hi-197 lo-78 av-120.7  
 Oct. hi-139 lo-70 av-108.7  
 (See VHF column for further news)

VUD STAFF: Hq/Pub. F. Dombrowski  
 FCC/CCI G.A. Olson, FM R. Winsor  
 VHF R.B. Cooper, European Scene  
 R. Bunney, Prop/W.DX D. Smith  
 E. DX M.S. Goldman, ANARC A.  
 Maxim, Public Relations C. Webber  
 Statistics G. Hauser

# FCC NEWS

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

\*\*\*\*\*

## STATIONS OPERATING (AS OF NOVEMBER 1, 1968)

UHF ETV 93  
UHF Com 163  
VHF ETV 74  
VHF Com 510

TOTAL AUTHORIZED STATIONS ON AIR 840

TV

### New Stations Reported On Air:

KFIZ-TV, ch. 34, Fond Du Lac, Wis., Sept. 1968  
KMTC-TV, ch. 27, Springfield, Missouri, Oct. 1968  
WXON (TV), ch. 62, Detroit, Mich., Oct. 1968

Kentucky ETV Network: Eight of the projected Twelve new ETV stations took the air in October, 1968. No published data is available on which eight stations are on and which four stations have not yet made the air. All stations are UHF's.

### New Target Dates Reported:

\*WTIU (TV), ch. 30, Bloomington, Ind., (Indiana U.) Spring, 1969  
WBBH-TV, ch. 20, Fort Myers, Fla., November 20, 524 kw. NBC  
WJYY-TV, ch. 14, Jacksonville, Ill., February, 1969, ABC  
XTIM-TV, ch. 8, Mexico City, Mexico, Oct. 30, 1968

## FCC COMPLETED ACTION

### New Grants:

Patchogue, N.Y., (Granik Broadcasting) ch. 67, 276 kw.  
Birmingham, Ala., (Alabama Television Inc.) ch. 21 -- initial dec.  
Syracuse, N.Y., (Broadcast Affiliates) ch. 62, 310 kw.  
Reading, Pa., (Reading TV Broadcasters) ch. 51, 267 kw.  
Flint, Mich., (Flint TV Corp.) ch. 66, 31.1 kw.  
Utica, N.Y., (Roy Park) ch. 20, 826 kw.  
Yakima, Wash., (Apple Valley Broadcasting) ch. 35 -- initial decis.  
Savannah, Ga., (Lewis Broadcasting) ch. 22, 577 kw.

### Call Letter Changes:

KRIV-TV, ch. 36, Palm Springs, Calif., granted KMIR-TV  
WBKB-TV, ch. 7, Chicago, Ill., granted WLS-TV

### New Call Letters Issued:

Seattle, Wash., ch. 22, (Kings Garden Inc.) granted KTLF (TV)  
Hagerstown, Md., ch. 25, (Regional Broadcast) granted WHAG-TV  
Fayetteville, Ark., ch. 36, (Noark Broadcasting) granted KGTO-TV  
Anderson, Ind., ch. 26, (Anderson TV Corp.) granted WAIV-TV  
Durham, N.C., ch. 28, (Triangle Telecasters) granted WRDU-TV  
Sacramento, Calif., ch. 15, (Hercules Broadcast) granted KRAK-TV  
San Francisco, Calif., ch. 38, (Bay Broadcasting) granted KUDO (TV)  
Ft. Myers, Fla., ch. 20, (Broadcasting-Telecasting) granted WBBH-TV  
West Palm Beach, Fla., ch. 25 (Ch. 25 Inc.) granted WJUD (TV)

### Other Changes Allowed:

WCWB-TV, ch. 41, Macon, Ga., ERP to 760 kw. - ant to 790'  
KDNL-TV, ch. 30, St. Louis, Mo., ERP to 1255 kw. - ant to 540'  
\*KRNE-TV, ch. 12, Merriman, Neb., ERP to 182 kw.  
WNED-TV, ch. 17, Buffalo, N.Y., ERP to 910 kw.  
WJAN (TV), ch. 17, Canton, Ohio, ERP to 230 kw.  
KMIR-TV, ch. 36, Palm Springs, Calif., ERP to 164 kw. - ant to 680'  
WMSL-TV, ch. 23, Decatur, Ala., ERP to 700 kw. - ant. 1190'  
WHP-TV, ch. 21, Harrisburg, Pa., ERP to 1024 kw.  
WSUR-TV, ch. 9, Ponce, P.R., ERP 57.5 kw. - ant. 2770'  
\*WMAA (TV), ch. 29, Jackson, Miss., ant. 1958'  
KMST (TV), ch. 46, Monterrey, Calif., ERP 251 kw. - ant. 2530'  
KMTC (TV) ch. 27, Springfield, Mo., ERP 240 kw.  
WECO (TV), ch. 53, Pittsburgh, Pa., ERP to 1825 kw.  
WKBM-TV, ch. 11, Caguas, P.R., ant. to 1180'  
KVII-TV, ch. 7, Amarillo, Tex., ERP to 294 kw., - ant. 1700'

/December --- 1968 /

Other Changes Allowed (Cont.)

- KAEC-TV, ch. 19, Nacogdoches, Tex., ERP 724 kw. - ant. 740'
- WBRE-TV, ch. 28, Wilkes-Barre, Pa., ERP to 2740 kw. - ant to 1640'
- KNDO (TV) ch. 23, Yakima, Wash., ERP to 295 kw. - ant. to 960'
- WLIW-TV, Garden City, N.Y., ERP to 661 kw.
- WNYS-TV, ch. 9, Syracuse, N.Y., ERP to 53.9 kw.
- WECT (TV), ch. 6, Wilmington, N.C., ERP to 83.2 kw. - ant. to 1940'
- KSEL-TV, ch. 28, Lubbock, Tex., ERP to 788 kw. - ant. to 840'
- WXOW-TV, La Crosse, Wis., change frequency from ch. 25 to ch. 19
- KMST (TV), ch. 46, Monterrey, Calif., ERP to 443 kw. - ant. to 2530'
- \*WMUL-TV, ch. 67, Huntington, W.Va., change frequency to ch. 33
- KLYD-TV, ch. 177 Bakersfield, Calif., ERP to 67.6 kw.
- KUDO (TV), ch. 38, San Francisco, Calif., ERP to 843 kw. - ant. 1310'
- \*WUCM-TV, ch. 19, University Center, Mich., ERP to 562 kw.
- KKBC-TV, Lubbock, Tex., ERP to 1185 kw. - ant. to 850'

ACTION APPLIED FOR OR REQUESTED

Applications For New Stations:

- San Jose, California, (California Enterprises) ch. 48, 2700 kw.
- Pocatello, Idaho, (E. Idaho TV) ch. 6, 100 kw.
- Battle Creek, Mich., (Ch. 41 Inc.) ch. 41, 498 kw.

Miscellaneous Requests:

- WTAF-TV, ch. 31, Marion, Indiana, has requested a channel change from ch. 31 to ch. 17
- Robstown, Texas, has requested that ch. 16 be allocated to that city
- WYES-TV channel 8, New Orleans, and WVUE (TV) channel 12, New Orleans have requested that they be allowed to switch channels. WYES-TV is educational -- WVUE (TV) is ABC affiliate.
- WTVU-TV, New Haven, Conn., has requested that it be allowed to change channels from ch. 59 to ch. 26.

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST TO TV DXERS

- # WZZM-TV, ch. 13, Grand Rapids, Mich., has bought WTVU-TV, ch. 41 and intends to operate the outlet, which is not yet on the air, as a satellite. It will carry ABC shows and will originate some Battle Creek shows for WZZM as well as the satellite itself. Plans to put the station on the air may be delayed as an additional party (see applications) has applied for ch. 41 and contested the sale to WZZM-TV.
- # KCOY-TV, Santa Maria, Calif., has been denied a CP to relocate its transmitter in Santa Barbara.
- # After a long, long fight KMSB-TV, WTCN-TV, WCCO-TV, KTCA (TV) and KTCI (TV) in Minneapolis and St. Paul will be allowed to move their towers to a new antenna farm. Three other TV stations and several FM stations in the area are expected to also move their towers to the new acreage.
- # ch. 43 has been assigned to Baytown, Texas for educational use by the FCC
- # The FCC has notified WNDT-TV, the educational station in New York City, that licensees are responsible for monitoring control of all programming at all times. Licensees are advised to substitute other shows or discontinue all programming if a loss of control of station output appears imminent. The warning to WNDT is the result of the station remaining on the air as a group of troublemakers broke into the station, took over the studio, and created a disturbance. The incident which took place several weeks ago made big headlines in the nation's press.

\*\*\*\*\* THANKS TO: \*\*\*\*\*

- \* Ron Azarkiewicz, Chicago \*
- \* Joseph Fela, Newark, N.J. \*
- \* Henry Gac, Detroit, Mich. \*
- \* our star \*
- \* contributors \*
- \* for December! \*
- \*\*\*\*\*

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST (CONT.)

- # In the Los Angeles area, there is talk about developing four 10-kw. UHF stations (total cost about \$750,000) for a pilot project in the Watts area designed to use television in job training, job offering, entertainment programming, informational materials for the downtrodden, etc. A firm proposal has not yet been submitted.
- # Channel 22 has been reserved for educational use at Las Cruces, New Mexico -- channel 48 has been substituted for commercial use.
- # The demands of land-mobile radio operators, which may have a great deal to say about what happens to the growth of UHF TV in the United States, have progressed to the following point: (1) land-mobile radio allocations would share UHF channels 14-20, (2) 115 mc. of spectrum space including UHF channels 70-83 would be turned over to land-mobile for allocations, or (3) land-mobile users would be given a block of space in the present UHF TV band. Although none of these proposals has been adopted, it is recommended that all DXers read up on the subject in the trade journals and inform yourselves. Tests where certain channels will be shared will probably be coming up in the near future; reports of interference from land-mobile stations to existing UHF TV stations should be immediately reported to the FCC.
- # The FCC has been instructed to vacate WFTV (TV) Orlando and WFGA-TV Jacksonville, Fla. Competitive hearings will begin over who is to operate on the two vacated channels. The old owners will be allowed to operate the stations until new grant winners are determined.
- # Channel 49 at Racine, Wis., will not be granted until a competitive hearing is held to determine which party should operate a station on that channel.
- # Word comes from Peoria, Illinois, that the Bradley University Trustees will actively seek channel 47 for an ETV station. Bradley U. has been quite active in ETV and ITFS (2500 mc.) television and will apparently attempt to get an outlet on the air in the very near future. Fund raising is expected to be underway by January 1, 1969.
- # Channel 40 has been assigned to Ft. Smith, Ark., by the FCC.
- # KNST (TV), a channel 46 station, which recently took the air in Monterey-Salinas, Calif., will take a full CBS affiliation around December 1. KSBW-TV, which formerly carried both CBS and NBC programs for the area will now be exclusively NBC.
- # "Three educators urge statewide educational TV" was the topic of a clipping forwarded to this location recently. Apparently leading educational people have come outstrongly for a four-station ETV network in New Jersey. According to the plan, the state would produce programs at operating costs estimated at \$2.8 million a year. Channels involved would be UHF stations Ch. 52 in Trenton, Channel 19 in New Brunswick, Channel 77 in Glen Ridge, and Channel 18 in Atlantic City.
- # Television Independente de Mexico -- a new network -- was scheduled to begin operations in late October. The base station would be XTIM-TV, ch. 8 in Mexico City. Other stations carrying the programming would be XEMO-TV, Monterrey; XHEM-TV Vera Cruz; and XPUE-TV, Puebla. The latter three stations would be linked by microwave to XTIM-TV in Mexico City. Programming will include U.S. network shows, Mexican produced dramas, comedy series and news.
- # A \$6.6 million request to put six new educational stations on the air and establish a network linking them with existing ETV state stations was passed by the Wisconsin state educational communications board. Under the proposal (CONT. NEXT PAGE)

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST (CONT.)

(Wisconsin cont.) ETV stations would be opened up near Green Bay, Wausau, Eau Claire, La Crosse, Platteville, and Brule. Other stations would possibly be built later near Oshkosh, Minocqua, and Lakewood; the last three sites were not approved in the \$6.6 million request. Presently existing stations in Wisconsin ETV system which would be the foundation points are WHA-TV ch. 21 and WMVS-TV ch. 10 (combined with WTVT (TV) ch. 36).

# "All 264 commercial VHF channels allocated to the top 100 TV markets were on the air as of Aug. 31," according to figures released by the FCC's Broadcast Bureau. The bureau's report also indicated that 94 of the 297 commercial UHF allocations provided for the top 100 markets were on the air; 102 more had been authorized but were not yet on the air and 17 more were applied for. This leaves only 84 commercial channel reservations in the top 100 markets that are still available.

A total of 35 VHF and 138 UHF top-100 market allocations are reserved for noncommercial educational stations. Out of this list 33 VHF stations and 52 UHF stations are listed as on the air by the Broadcast Bureau on August 31.

\*\*\*\*\*

DID YOU SEE? (more data on last month's report on the high cost of movies) Quoted from Broadcasting magazine.

"Pornovision shut down after one performance"

"The case of the Palm Springs, Calif., phantom pornographer was closed last week, at least as far as KPLM-TV Palm Springs was concerned. Two employes were discharged after images of nude cavortings were distributed by cable via the station's facilities to surrounding areas about 1 A.M. The station technically did not broadcast the illicit material over the air.

But the case wasn't closed as far as Palm Springs law enforcers were concerned. Last week KPLM-TV's ex-video operator Robert Veatch, was in custody but the charges and judicial jurisdiction had not been resolved. The fact that the public showing of some very private footage was not broadcast and was unaccompanied by an audio signal was reported to be complicating the legal situation.

Cause of the cable distribution of a video signal said to have been intended only for after-hours viewing on a monitor was an unthrown switch. Had it been thrown, the cable systems would have been fed less explosive fare--a war movie that was to have been imported from KABC-TV Los Angeles.

As it was, with KPLM-TV off the air and the KABC-TV signals blocked, the extracurricular signals traversed a microwave link to the cable systems' head ends and went out into subscribers' homes. Blinking viewers phoned local police, apparently more for confirmation on the unbelievable late-late show than in anger.

After the arrest of Mr. Veatch, the station aired an apology to viewers. The other employe discharged, James Dickson, was a transmitter technician at a microwave repeater point where the unthrown switch was located."

\*\*\*\*\*

\* TV GUIDE EXCHANGE \*

\* Exchanging TV Guides and other TV and FM \*  
\* program listings from different areas of the \*  
\* country is one way DXers can be of assistance to one \*  
\* another. Please drop a note to your FCC NEWS AND DATA ed- \*  
\* itor and indicate which TV Guide editions or program list- \*  
\* ings you could trade with other DXers. If the idea catches \*  
\* on it is possible massive exchanges of old issues could \*  
\* be arranged thereby supplying all with info from all areas \*  
\* \* \* \* \*

# EASTERN-TV-DX

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

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This column is for all television reporters east of the Mississippi River-December  
Deadline: 10th of each month

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## More On Lightning Scatter

In the August 1968 issue of the V-U Digest Rod Luma noted that he had received WFLD-32 Chicago via what he believed to be "lightning pulse" reception. With each stroke of lightning from a nearby storm, channel 32's signal bursted in for about a second or so. At the time reported there was apparently no other experiences of this type known, but since then QST has reported a similar occurrence.

The November issue of QST reports that on September 16th, 1968, two amateur radio operators in Mississippi and Kansas apparently made the first 432MHz "lightning scatter" contact. The two stations, W5RCI and W0DRL, pointed their antennas at a very strong thunder storm over the adjoining borders of Oklahoma, Texas and Arkansas. The Kansas station, W0DRL, says some of the bursts he received from W5RCI lasted 25 seconds, peaking up to 40db over the noise. By employing similar techniques used in meteor scatter, the contact was concluded after 75 minutes.

QST made no mention of what "lightning scatter" results have been achieved on other bands - if any. So, next time you think a thunder shower is about to put a damper on DX, give "LS" a try and report your results!

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This month as expected DX dropped off. A couple of DXers reporting still had success at tropics, but the start of the "off season" is apparent. Aurora was noted, but once again that wicked flutter made any ID's impossible.

## Mark Lewis, 224 Honiton Street, Downsview, Ontario, Canada

Well, October was a great month for UHF tropics here in Downsview. We had a few fantastic openings. Back around October 7&8 there were a few good trop openings, in fact there was some good reception of Elmira & Binghampton for a few days. Loggings included WQEX-16 Pittsburg. One evening Wayne Plunkett came over (probably Oct.8) when we saw among others WEEK-25 Peoria (color), WCIU-26 Chicago, WMBD-31 Peoria, WXXW-20 Chicago, WIRL-19 Peoria, WSKG-46 Binghampton, NY, WVIA-44 Scranton, Pa., and a couple of mysteries which could be really fantastic. (Why not send those "Mysteries" to Gary's CCI column? MG) Also a few Indianas and tentatively some Wisconsin; a re-logging of WSBT-22 South Bend who stayed there for a couple of hours with a great signal in color. Perhaps the best logging that I got a verie from (in fact two, one from the manager and one from the CE) was Oct 13 at 11:34PM. There was some great activity out east and then I zeroed in on WVNY-22 Burlington Vermont. I at first thought it was WAKR-23 Akron on the back end; was I fooled! I am tied with Mr. Vincent Palmer of Hamilton Ont. for the furthest report. Also logged was CBOFT-9 Ottawa in French and WOUB-43 Lorraine Ohio. WOUB must be putting out some signal! I get some signal from them nearly every day; they always beat out both the Cleveland stations and the Eries who are closer. They run independent and are a 7 Arts station. Well, Wayne has some trouble with his UHF set up, the head end pre-amp is bad and we can't reach it. He'll probably be without it till the spring since winter is very nasty up here. He comes here to DX! Hi! Auroras have been unbelievably active the past few days, (dated Nov.3) but no positive loggings yet. Also, this evening tent Bangor Maine on 2 with NBC feed when WGR Buffalo had a local show. Nov.5: WANE-15, Ft. Wayne, WKJG-33 Ft. Wayne, and WPTA-21. At this morning, (Nov. 5?) there is an opening into S. Pa. Tent WITF-33 Hershey in color (new) with much interference from WKJG. Pittsburg-16 is also in. My total around 66 now. 73's and best of DX, Mark Lewis

Support WTFDXA...REPORT

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

Not much of a report this month. Only tropes of any importance occurred on the 14th & 15th. 10-4 2200-2230 WBOC-16 Salisbury, Md., WPHL-17 Philadelphia, Pa., WXTV-41 Paterson, NJ. 10-15 2100 WNEP-16 Scranton, Pa., 2105 WBRE-28 Wilkes-Barre, Pa., 2130 WDAU-22 Scranton, Pa. (through local in Springfield Mass.). I've been watching the UHF continue its slow rise. BEC & ORTF have been heard on 41.50 MHz and 41.25 MHz respectively. In addition, paging stations in LA, Sacramento and San Francisco have been heard on 43.22, 43.58 MHz. Nothing has been identified above 45 MHz by E2 as of this date (Oct. 31). Best of DXing Bill.

Gary Olson, 5901 W. Brown-Deer Road, Apt. 107, Brown Deer, Wisc. 53223

Nothing whatsoever in the way of TV DX has been seen here in weeks. I don't know if everyone else is suffering the same bad luck, but things just aren't perking DX wise. Of course, I am restricted by the VHF locals here in Milwaukee and the overlap they create. However, even on the channels where there is nothing but wide open space, not a thing has been seen. Due to the apartment building circumstances, my VHF antenna is mounted in a tree just outside the building which logically doesn't do too much good. No UHF antenna is outside. So, I guess in summary my DX possibilities will be rather limited as long as I live at this location. Brown Deer log now at 25 with little hope in sight. Best DX, Gary.

Bill Draeb, Ellis Street, Kewaunee, Wisc. (CDT-CST)

Oct 8: 1650 WICD, WAKR-23, WDHO, 1751 WPMJ-21, WKBN-27, 1754 WKBD-50, 1757 WTVS-56, 1842 WUCM-19, WKNX-25, 1849 WXON-62, 1852 WEEK-25, WWIZ-25, WKBF-61, WMBD-31, WICS-20, 1859 WLFT-18, 1907 WCMU-14, 1909 WAND-17, 1920 WJET-24, 1930 WUAB-43 (new) 340 miles Lorain Ohio, WPTA-21, WANE-15, WKJG-33, 2055 WIRL-19. Oct. 11: 1930 WICD-15, 2045 WLFT-18, 2055 KFSV-12, 2145 WSIU-8 Carbondale, Ill. (481 miles). Oct. 12 0550 WHAS-11, 0638 WLFT-18, 0640 WKNX-25, WANE-15, 0710 WPTA-21, 0734 WKBD-50, 1930 WKJG-33, WKTR-16, WKEF-22, WSWO-26 (new), 368 miles Springfield, Ohio, 2340 WIMA-35. Oct. 13: 0600 WJW-8, WBNS-10. Oct. 19: MS 0538 WCBS-2, WLWD-2. Oct. 28: MS 0515 (CST) WCBS-2, 1625 Es on chs 2-4 from east, no ids. Nov. 1 Aurora 2150-2215 strong on chs 2-6. Un-id signals on chs 3, 4, & 6 from NW. Nov. 2 Aurora 1900 chs 2-13, strong on chs 2-6 but no signals seen. My total is now at 389 including an even 100 on UHF. The Nov. 1 aurora was pretty good, but the strong signals that were in on 3, 4 & 6 faded rapidly making ids impossible. The new water tower here in town is practically complete. I haven't had any trouble with ghosts as a result of it being there, but I've heard some of the neighbors around here have. Yesterday I put up an Alliance U-100 rotor for one of my neighbors. He gave me his old inoperable CDR TR-11 rotor which I took apart, cleaned & oiled; it now works fine. I'm thinking of putting up another antenna (haven't decided what kind yet) as long as I have another rotor. I would like to make a side bracket to mount on my tower, but I think I'll have to wait until spring due to weather and the shorter days. Temporarily, I might put something on the house. 73's and good DX, Bill.

Bill Heusmann, 3116 Sangamon St., "Exciting" Steger, Ill. 60475 (CDT to 10-26)

10-12 WBNS-10 Columbus Ohio 1930, WTIC-11 Pittsburgh Pa. 2300 tent now vfd. 10-13: WLWD-2 Dayton Ohio 0537 TP, WNEP-5 Bay City, Mich. first via tropes then on a MS burst, WKTU-2 Utica NY MS 0556 ID (new), KYW-3 Philadelphia Pa. tent 0556, WLW-T Cincinnati Ohio tropes 0607 TP, WOAI-4 San Antonio, Tx MS 0630 TP, KGNC-4 Amarillo Tx MS 0643 TP (NEW). 10-19: WCBS-2 NYC MS 0455, WSM-4 Nashville Tn MS 0600 (NEW), 10-24: WKYC-3 Cleveland Ohio 0500 TP for short while, WTIC Hartford Cn MS 0511 TP, KGNC-4? Amarillo, Tx 0600 TP, WKY-4 Oklahoma City MS 0620 TP. 10-21: WKY-4 0621 TP. 10-27: WCBS-2 NYC 0528 TP on good long burst. CST 10-31: WCBS-2 NYC 0446. 11-1 Auroral hash noted at 1530 and kept getting stronger. QRM'd local 7 at 1620 - no ids. Trop: WIRL-19 Peoria, WAND-17 Decatur Ill, WICD-15 Champaign Ill., WEEQ-35 La Salle, Ill. All were around 22-40. 11-2: WHAS-11 Louisville Ky #0442 ID'd color bars. 11-7: WJBK-2 Detroit 0435 weak TP, WCBS-2 NYC MS 0443 TP. 11-14: 0435 WLWI-13 Indianapolis Ind. w/tp, 0458 WCBS-2 NYC via MS. Those transcoupler yagis I ordered still haven't come. I rec'd the British Chassis from Roger Bunney and hope to have it wired in in time for some F2.

Due to lack of time this month, my report will appear next month. Sry for the short column.....73's Morrie



Robert B. Cooper, Jr. (KV4FU)  
P.O. Box 1355  
Frederiksted, St. Croix, V.I.

'The radio world from 30-54 MHz: VHF radio' 00840

### WHY THE BOTTOM FELL OUT

The daytime  $F_2$  MUF's were heading up at a spectacular rate late in October. Observers in Los Angeles were reporting day-after-day morning reception of the BBC and ORTF TV audio broadcasts in the 41.5 MHz region. An observer in Southwest Africa (a six-meter amateur enthusiast) was logging daily TV broadcasts over 4-6000 mile paths from England, France and Spain, well up into the 52-60 MHz region. On the east coast reporters were getting traces of 45 and 48 MHz BBC transmissions.

Then it hit (on October 31st) and  $F_2$  MUF's went into a fast tail spin and they have not recovered by mid-November as this is written. What happened in early November - just when the peak month of this fall and of Cycle 20 was upon us?

It is axiomatic that with an increase in actual sunspot numbers there is also an increase in magnetic disturbances. In North America and Europe we know magnetic disturbances by another more vivid name - aurora.

An aurora is actually a visual sign of magnetic disturbance, and that is in fact a disturbance of the magnetic lines of flux which surround our earth. We all know that our earth has its own magnetic field, formed by the rotation of the earth on its own molten core. Every boy scout knows that a properly magnetized piece of metal, a compass needle, will always point north, or to the north magnetic pole, located not at the actual north pole but some distance south near the Baffin Bay of the Canadian far north.

When a large sunspot or group of sunspots erupt, huge quantities of energy are discharged from the sun in the vicinity of the sunspot(s). This energy travels outward from the sun and within a short period of time some of this energy approaches earth. The energy released by the sunspot eruption is caught up by our own magnetic field which surrounds the earth, and most of this energy is drawn toward the north magnetic pole, just as the north magnetic pole also draws the point of a compass needle.

As this energy is first intercepted by the earth's magnetic field, thousands of miles up in space, it begins to accelerate or speed up. The closer and closer it is drawn to the north magnetic pole the faster it travels. In its last few millionths of a second this energy races through the  $F_1$ , then the  $E$  layers of our ionosphere. This creates a turbulence within the  $E$  and  $F$  layers and this turbulence is properly called a magnetic storm. In the  $F$  layer, the normally ionized layer begins to break up and where only minutes before the magnetic energy hit the  $F$  layer that  $F$  layer was capable of reflecting back to earth signals of, say, 40 MHz, the sudden turbulence of the layer and its breaking apart under the turbulence may knock the MUF from 40 MHz down to 15 or 20 MHz in a matter of minutes.

Just the opposite effect hits the  $E$  layer. The  $F$  layer ionizes well when it is not disturbed, and like a battery, it is able to take on a gradual trickle charge, day by day, with the MUF rising just a notch with each passing day. The  $E$  layer ionizes well when it is is disturbed. Sporadic  $E$  skip, in the summer time and to a lesser extent during other times of the year, is the result of turbulence within the  $E$  layer. A sporadic  $E$  (skip) cloud is actually a small, localized storm within the  $E$  layer of the ionosphere. It drifts around, expands in size and then contracts, as the agent responsible for its initial formation strengthens and then weakens.

The turbulence within the  $E$  layer causes it to ionize. And we see

this visually as aurora. We see this on TV as auroral skip.

This is not intended as a full treatment of any of these subjects. This is intended to pave the way for an explanation of the sudden and drastic tailspin the F2 layer went into after October 31st.

On the 31st a proton event occurred on the sun's surface. This is a particularly severe eruption on the sun's surface, within a sunspot or a group of sunspots. Proton events are rare, for they occur as a rule only once in 8-12 sunspot eruptions and then usually only near the actual period of peak sunspot activity for any given solar cycle. The last major proton event occurred December 30-31, 1967.

The October 30-31st proton event was unusual for another reason; its longevity. The energy from the solar eruption was still arriving on earth on November 4th, and where the more typical solar eruption may send energy out for a period of a few hours up to a day at most, this eruption lasted for nearly five days, apparently.

A severe magnetic disturbance lasting a few hours will usually result in a short aurora, and disruption of F2 conditions for a period of one or two days. However, the October 31st event was well stretched out and it was apparently followed by lesser eruptions between the 4th and 8th of November. As a result, the F2 layer went without its beneficial trickle charge from the regular sunspot energy for days on end, nearly ten in all. Consequently the battery simply ran down during the long dry spell. The long term September-October trickle charge period we normally depend upon for peak DX conditions in November is now set back by not only the lost time when we were under the 'influence' of the event that began October 31st, but also by that amount of time again because the 'charge' was running down during that period. So in truth we lost not only ten days but twenty days of F layer charging. It is a moot question of semantics whether we will have enough time left in November for the charge to even regain its pre-31st stature. One more good magnetic storm will just about do in the F layer for this fall altogether, and perhaps for the whole of cycle 20, since this fall (and November) were expected to be the peak periods for the current sunspot cycle.

There is one bright ray of hope inter-mixed within all of the 'learned' data that fills the in-mail basket of any student of ionospheric propagation. At least one Stanford University ionospheric physicist suggests the 'possibility' that the actual peak sunspot count has not and will not be reached during calendar year 1968 - 'there is a ten percent probability' he reports 'that 1969 will be the peak year for cycle 20.'

Alright all of you ten percenters - the line follows on the right, behind the chief optimist of them all, your writer!

#### ABOUT TE TV-DX

I have been taken to task by a few club members for the off-hand way I casually mentioned the TE loggings of channels 2, 3, and 4 from Brazil and channels 2 from Argentina and Lima, Peru, from my TE-advantageous location here in the Virgin Islands.

Not so - not offhand and not unusual enough to merit anything more elaborate than that.

TE was first observed in October of 1947. It has been around for three-four years of every sunspot cycle peak since that time. TE TV-DX is just as commonplace to people south of 20 degrees latitude as 300 mile tropics is to a midwest DXer. Maybe more common. The 2000-3000-4000 plus mile distances may be greater, but the frequency of occurrence is no less often during the 'right' months of the year. During the last sunspot cycle DXer-Extra-Ordinaire Gordon Simkin spent some time on Bikini Atoll in the Pacific. Gordon logged Hawaii and the Phillipines night after night during the 'right' months of the year. Again distances

of 2-6000 miles. I've never talked with Gordon in person, about the quality of his TE reception, but I can assure you that from here the quality of my nightly reception from Rio de Janerio (approximately 3000 miles) and other stations is so bad that no one but another DXer could appreciate the mish-mosh that tries to become a television picture. The fading is at a rate of from 10 to 100 or more times per second. This is complete fade from no picture at all to an overpowering local quality picture. When the picture is strong at the top of a fade it has from 5 to several hundred ghosts in it, each as strong (usually) as the primary picture. I usually 'watch' it on a lab quality DC wide-band oscilloscope in my shop because the curious waveforms I can catch and suspend (time-wise) on the scope are much more informative to the trained eye than the 'mess' on the picture tube of my 25 inch Heath receiver.

Is TE truly TV Dx? Yes - it is, if you consider DX to be the long range or distant reception of television signals. Is it something you can proudly show off to a neighbor? No - not unless your neighbor is also a TV Daxer, or has been nipping some Cruzan rum!

#### JUST BEFORE THE CRASH

Stan Savage and Harley Herndon, Los Angeles area, report BBC-TV on channel B-1 (audio only) first October 24. French TV audio on 41.25 also came through. This was the first reported reception on west coast of U.S.A. for this sunspot cycle, and this type of reception persisted until October 30th.

MUFs across the U.S.A. reached 47.5 MHz several times during this one week 'peak' period.

Too bad - the F layer battery was building so nicely. It could have been a GREAT November.

Bob Cooper, Jr.

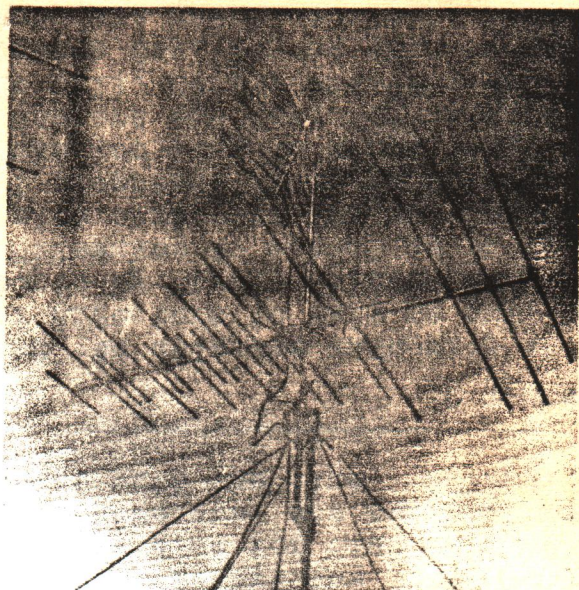
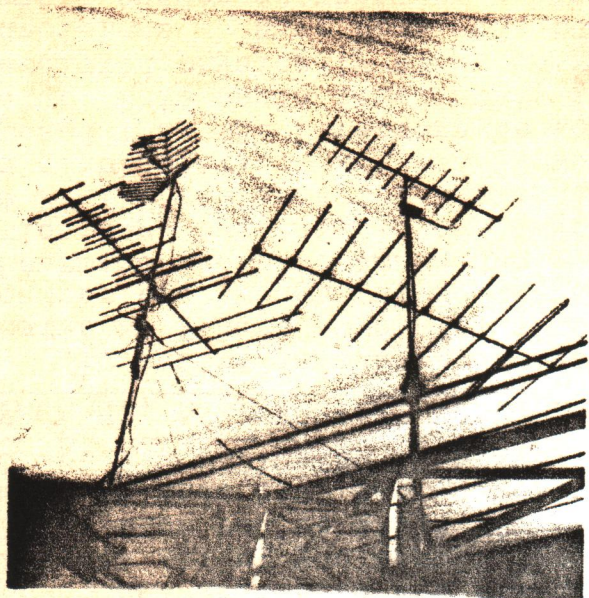
#### Member or Subscriber?

WTFDXA was organized as a group venture to fill the needs of the club-less TV, FM and VHF DXers. In the past year, due to the support of loyal members, we have continued on the road to success, ever improving, surprising those who thought we were destined to failure. Were you among those members who helped make our club a success, or have you only been a subscriber? Those DXers who have supported WTFDXA by reporting, writing features, sending in photos, contributing ideas and practical criticism and recruiting new members are the true members. I'm not saying you should drop everything else for club work, but at least show you're still alive! We now have over one hundred members, many of whom have had no active contact with the club. **SUPPORT YOUR CLUB, ITS DEDICATED TO SERVE YOU!**

#### FROM HQ, AN IMPORTANT NOTICE:

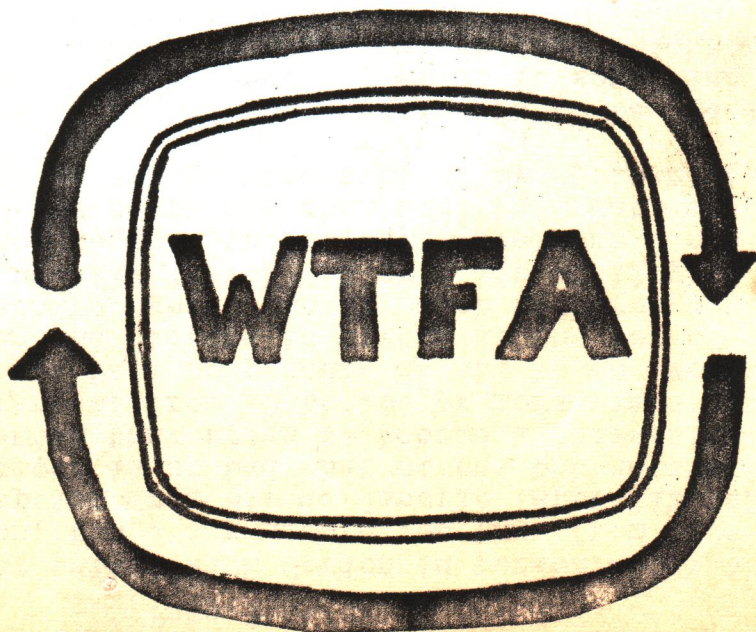
30 November

To assist in making decisions and to delegate authority in some matters, I have appointed a board of directors to help me out. This matter was brought up in the last month by Morrie Goldman and Bill Heusmann who have again come up to Milwaukee to assist me on publication day. Last night Dave Janowski also came over and my proposal for a B of D was accepted basically as I proposed. Since we do not have a club constitution and it would take too long to draft one, I proposed that the Directors be active members who have done most for the club. This would immediately include Bill, Morrie and Gary who have assisted physically at HQ on publication day. Beyond this no definite decisions have been made but others are under consideration. This was a sudden decision so we haven't worked out all particulars yet.



Top left and right are the antennas of EDX editor Morrie Goldman. At left is the test pattern of XEFE ch. 2 Nuevo Laredo, Mexico as received by CCI/FCC editor Gary Olson in Bloomington, Ill. Bottom left is a TV Guide ad for new KFIZ ch. 34 Fon Du Lac, Wis. At bottom right is a proposed club emblem by M. Goldman.

**MOVIES  
EVERY  
NIGHT!**  
7:30 P.M.  
On Wisconsin's exciting new  
independent television station  
**TUNE IN TONIGHT!**  
KFIZ-TV  
**Channel 34**



# FM-DX REPORTS

This is a re-type of last months messed up stencils. I think I have my problem fixed, so will go on from here. My apologies to those reports not in Oct. VUD.

Carlton Howington 13880 Greenland Ave. Uniontown, Ohio 44635

8/7 WLEW 92.1 Bad Axe, Mich AN w/local election returns. 8/10 local WKNT 100.1 off, so took log on WVUD 99.9 and WVAF 99.9 from 1-3PM. 8/12 WDEF 92.3 12:20A WBIR 103.5 Knoxville, Tenn 1AM s/off. WMC 99.7 @1:30A w/local like signal at 600 miles. WGPL 93.1 @12:45A. WKIX 96.1 @1:02A, WBAG 93.9 @1115 w/RR and WAAA 107.5 @1:30 w/BB game. 8/23 WEXI 92.7 @2:00A w/nx and WTMB 98.9 @2:30A. 8/17 WEEC 100.7 o/WHK @10:00A. 8/16 WEPM 97.5 @12:05 w/BB game. 8/23 WBTM 103.3 in o/WVQM @1:15A. 8/24 WSAJ NEW tes ting 89.5 @1:59A 12 watts ERP. 9/12 WBKE 89.5 Manchester, Indiana @8:00P w/10 watts and 210 miles via trop. 9/15 WCAL 89.3 Northfield, Minn. @12:45A, KSJR 90.1 1AM at 720 miles. WKPS 88.9 @8PM very weak here. 9/20 WOMI 92.5 @12:41A, WCSM 96.7 on late w/BB game @1AM, WFMW 93.9 @1:24A, WMST 105.5 @1:41, WTJS 104.1 s/off @2AM at 540 miles. KODA 99.1 @2:05A, 1090 miles trop, KOTN 92.3 Arkansas @2:12A at 740 miles, KBNO 93.7 @2:50A 1090 miles, WSTM 103.1 @4:00, KNRO 106.9 @4:00A @1080 miles, KCFM 93.7 @4:30A after KBNO fade out. (Beautiful work Carlton RWW). This is by far the farthest trop I have heard in Ohio. Some local news, WJER 101.7 RS 5AM to midnight stereo. WHK 100.7 jas changed calls to WMMS now RR and AN and WTVN 96.3 to WBUK and is AN-6, MM off. FM veries up to 224 in 25 states and 4 countries. My KSJR verie sat a new trop record for me, then KNRO 106.9 in Conroe, Texas 36kw @1080 miles set my new trop record and KODA 99.1 set even another record. Does anybody know if 1090 miles is a new record for trop? So far I have 7 FM veries at 600 or more miles on trop. They are WOI 90.1, KNXR 97.5, KYSM 103.5, KNRO 106.9, KODA 99.1, KSJR 90.1 and WMC 99.7. 73.

Joseph Fela Jr. 167 Goodwin Ave. Newark New Jersey 07112

Quite a few fair-good trop openings were noted during late Sept and early Oct, but for the most part, I didn't take advantage of them since I have been trying to get away from TV/FM and back on BCB until next spring. (mee too Joe) However, I did take advantage of 2 openings. 9/25 WABC 95.5 NY, a strong local, was off AN for a change, so I managed to log/report WPGC 95.5 Md, another ANer, and WROW 95.5 Albany, NY just after midnight EST. WABC was off AN a few other times in this period, but it's back on now. They normally are AN-6. 10/2 WMAL 107.3 D.C. was added, weakly @7:15A and WTSR 89.7 good @7:30 w/only 10 watts 50 miles. WRTC 89.7 Conn good @9:00A. 10/3 WRVA 94.5 @12:07A AN w/cw mx. WXYW 92.9 Va @12:21 weak thru heavy WPAT 93.1 QRM. Newie WDAB 95.9 Pt. Pleasant, N.J. hrd testing. Not hrd yet on RS. WCMS 100.5 Va @12:45 saying AN-7 w/cw mx. WNCT 107.7 Nc hrd @12:59 s/off, m y furthest trop to date @425 miles. WXRI 105.3 Va. also noted along w/various Atlantic City stations. WKDN 106.9 NS is still WKDN, not WTMR like AM. WKDN now carries AN religious pgmning. WKIP 104.7 NY changed calls to WSPK. Totals for 6 months of FM DXing - 140 hrd, 12 verified.

OHIO Bill Bens 5575 Spruce Wood Drive Cincinnati, Ohio 45239

HI GANG! DX has really slacked off in October and Nov. because of college. It looks like I messed a "super heavy" trop opening on 10.9. I'll have almost a month off for Xmas, so maybe I'll be able to catch an opening then. Totals after 11 months of FM DXing stands at 287, consisting of 261 tropes and 26 skips, all of which are confirmed via tape recording. DX during Sept. went like this: (all tropes)

9/12	2213	WBKE	89.5	Manchester, Ind.	Campus Bulletin Board
9/19	2345	WEKY	88.9	Richmond, Ky.	ET w/RR and YL DJ
"	2357	WITZ	104.7	Jasper, Indiana	Reds BB game on late
9/20	0029	WPKE	92.1	Pikeville, Kentucky	ditto above
"	0100	WTJS	104.1	Jackson, Tennessee	s/off. Also taped 0453 s/on.
"	0146	WMC	99.9	Memphis, Tennessee	HI AN
"	0501	WHOP	98.7	Hopkinsville, Ky.	S/on
9/24	1211	WRED	101.1	Youngstown, Ohio	cw mx? Doubt it Bill. BY
					1968 says dup. 50% WHOT RR.
9/25	0530	WTNS	99.3	Coshocton, Ohio	News
"	0531	WCLW	105.3	Mansfield, Ohio	end of farm report
"	0604	WNCO	101.3	Ashland, Ohio	end of MBS nx
"	0711	WGRE	91.5	Greencastle, Ind.	Time and ID
"	0729	WBOE	90.3	Cleveland, Ohio	Has interval like WHA net.
"	0829	WVSH	91.9	Huntington, Ohio	Beginning of news.

I also have a report from Dennis Smith dealing with DX of late March 68.

3/23	KECR	El Cajon, California			New taller tower, more consistent.
"	1435	KSDS	88.3	San Diego, Calif.	Tentative.
"	1504	KPCS	89.3	Pasadena, Calif.	tropo burst over mountains.
"	1505	KEDC	88.5	Northridge, Calif.	In to 1545 over mountains.
"		XETRA	91.3	Tijuana, B.C.	Seemed consistent.

3/23 0820 KSFV 106.3 San Fernando, Cal. SS hrd. o/KYMS only 1kw

Four definite new loggings were #159 to 162. Also hrd KUSC 91.5 in LA, now consistent w/17kw, ex 2.9kw. I finally found out ERP of our 10 watt (xmitr power) Univ. of Calif. FM station KCSB 91.1 Santa Barbara. It is 9/8 watts. Due to change to 91.5 anytime.

The following is a list of HI AN FM stations drawn from Oct-68 Jan 69 HI booklet. These stations make good targets for MS DX. Sent by Glen Hauser.

92.7	WEXI	Atlington Hts, Ill.	92.9	WBOS	Boston, Mass.
93.7	WJFM	Grand Rapids, Mich.	93.7	KSEL	Lubbock, Texas
94.5	KAWY	Casper, Wyoming	94.7	KMET	Los Angeles, Calif.
95.1	WMIV	Rochester, N. Y.	97.3	WIOD	Miami, Florida
97.7	WVFC	Mormouth, Ill.	99.1	KODA	Houston, Texas
99.5	KDEN	Denver, Colorado	99.7	WMC	Memphis, Tenn.
99.9	WKRK	Mobile, Ala.	100.3	KSL	Salt Lake City, Utah
101.9	WJIV	Albany, N.Y.	102.5	WNEM	Bay City, Michigan
103.3	WBRD	Bradenton, Florida	103.7	WEIV	Ithaca, N. Y.
104.1	WWCO	Waterbury, Conn.	104.1	KRSI	St. Louis Park, Minn.
104.7	WCWA	Toledo, Ohio	105.1	WOIV	Syracuse, N.Y.
106.1	WQAL	Philadelphia, Pa.	106.5	WSEO	Kalamazoo, Mich. NSP
107.7	WBIV	Weathersford, N. Y.			All stereo except for NY network W-IV

Well, here goes with another attempt at making a readable stencil. If this doesn't work, somebody will have to contact me to let me know what I am doing wrong. No FM DX here at all, as solely on BCB now. Things must still be popping occasionally, as evidenced by reports from the following:

OKLAHOMA Glenn Hauser 1312 West Oak Avenue Enid OK 73701

This report covers DX observed during a leave in Enid following my Air Force Basic training. After good trop opening to the north and even an ES opening to the east. FMDX ground to an abrupt halt when my antenna blew over in high winds October 16. The antenna was badly bent at one end, but managed to straighten it out before stashing it in the attic to await my next opportunity to use it. Now DX.

10/12	0101	KAWY	94.5	Casper, Wyo.	HI nighttime AN pgmning.
"	1642	KCSC	90.1	Edmont, OK	ID Beginning mx mentioning 28.5kw.
"	1659	KSKU	102.1	Hutchinson Ks	ID "KSKV radio 102 in Hutchinson".
10/13	0929	KDNM	92.1	Carlsbad, NM	KGEM/KCNM ID and Lifeline
"	0940	KBIM	94.9	Roswell, NM	ID
"	1000	KMUL	103.1	Muleshoe, Tx	KMUL air news ID
10/14	0810	KDCR	91.3	Sedux Center, Ia	Family Room, ID still in at 10:30.
"	0812	KBRK	94.3	Brookings, S.D.	Local news
"	0813	KMHL	100.1	Marshall, Minn	
"	0814	KIOD	107.7	Spencer, Iowa	Local Neilson Tire Co. Ad
"	0836	KJAN	103.7	Atlantic, Iowa	Tenative
"	0904	KEYC	99.1	Mankato, Minn.	Mankato weather
"	0905	KYSM	103.5	Mankato, Minn.	NBC mx and local ad.
"	0908	KTFC	103.3	Sedux City, Ia.	Local talk, ads, etc.
"	0925	KLEM	99.5	LeMars, Iowa	Local PSA's
"	0930	KRVN	93.1	Lexington, Neb	ID
"	0931	KWOA	95.1	Worthington, Minn	YL ID bad QRM from KWNS
"	0932	KRNY	98.9	Kearney, Neb.	Mx and AM-FM ID
"	1016	KGBI	200.7	Omaha, Neb.	Sermon and Grace Bible Institute ID
"	1927	WFDD	88.5	Winston-Salem, NC	ID "voice of Wake Forest Univ".
10/15	1930	KOSU	91.7	Stillwater, OK	ID

Ed. note: Glenn, will you please tip me off to what some of these abbreviations as \$, T and these % totals are. It will be much easier to copy your report if I know. Tnx Rog.

Maryland Hank Holbrook 7211 Chestnut St. Chevy Chase, Md.

Have a bad line noise on lower frequencies at the cottage this winter, so have continued to tune the FM band from time to time. 9/21 WSPK, Ex WKIP 104.7 Poughkeepsie, NY, hrd @0658 EDT. 10/11 WADB 95.9 Pt. Pleasant, NJ @ 1932. New station. WPKN 89.5 Bridgeport, Conn @2159. Verie says I hrd them on 1st nite of operation on 89.5 w/new power of 700 watts. 10/18 WRTC 89.3 Hartford, Conn @2335. Veries now stands at 509 stations, 31 states, 4 Provinces, Bermuda and Puerto Rico. Best verie for 1968 KUMD 89.1 Duluth, Minn. @190 watts. Most distant trop catch goes to CKWW 88.7 Windsor, Ont 160kw. Lowest powered trop verie this season was WEJL Scranton, Pa 102.7 w/125 watts.

Hank Holbrook 7211 Chestnut Street, Chevy Chase, Maryland 20015

The following stations were logged and reported in August:

8/3	WERI	Westerly, R. I.	103.7 @3:07A w/an pgmning. Hrd. often
8/4	WKWK	Wheeling, West Virginia	97.3 @4:04A w/AN show and good signal
"	WBVP	Beaver Falls, Pennsylvania	106.7 @4:49A w/s/on in clear
8/10	WHUN	Huntington, Pennsylvania	106.3 @3:58A s/on in clear. Usually @4:00
"	WINE	Brookfield, Massachusetts	95.1 @11:02P in clear after WRBX/WRNS s/off
"	WNUF	New Kensington, Pa.	100.7 @11:35P w/fairly good signal
8/11	WEJL	Scranton, Pennsylvania	107.1 @12:59A s/off in clear, only 125w.
8/16	WJJS	Lynchburg, Virginia	101.7 @3:18 audible daily. Ex WDMS
8/17	WCLI	Corning, New York	106.1 12:51A s/off after BB game. WQAL QRM.
"	CHIN	Toronto, Ontario	100.7 @1:03 w/AN pgmning. 50kw per VJ#5
8/19	WEFG	Winchester, Virginia	102.5 @8:56 Ex WHPL regular reception
"	WRSC	State College, Pa.	96.7 Copied for 3hrs. Extreme WSTC/WHAG QRM

Most listening limited to weekends when at cottage. Totals now stand at 499 FM stations verified from 31 states, 3 Provinces, Bermuda and Puerto Rico. In the next month or two will send in a complete listing of all FM stations add to log this season along with a list of verie signers. Just joins WTVFMDXA and glad to be aboard. Enjoyed the August issue. Ed. Note: Hank, your 106.5 midwesterner might be WSEO AN NSP w/HI. Re CJOL 97.5. Only thing close is CJOB 97.5. Any help?

Glen Hauser 1312 West Oak Avenue Enid Oklahoma 73701 CST.

DX greatly reduced after mid-august, attributable to both CX and receiver.

8/22	KHQ	98.1	Spokane, Washington	NBC news end @3:05, then "stereo Q in the air everywhere".
8/24	KMOD	97.5	Tulsa, Oklahoma	Ex KOCW w/RR pgmning
8/26	WMC	99.7	Memphis, Tennessee	@4:15A w/Radio 100 ID on wake up show
"	WSWG	99.1	Greenwood, Miss.	@4:17 w/Greenwood wx and cw mx.
"	WAPI	94.5	Birmingham, Ala.	@4:35 w/Ala and Birmingham wx and ID
"	KHEN	99.5	Henryetta, Oklahoma	@5:16A w/station ID

Now off to basic training at Lackland AFB, San Antonio, Texas. Until the next, 73 de Glenn. Good Luck Glenn!

Well, that's it. I didn't have anything except WDAO 107.7 back in Sept as far as new stations. I have hrd. WNIL 95.3 Niles, Michigan on w/RS now, but weak. They never did verify my AM reception, so phewie on them. Supposed to have a colorful QSL card, but maybe they're stingy with it.

Roger Winsor, 718 North Fremont Road, Valparaiso, Indiana 46383



# TAPE-SPONDERS

Joe Gragg  
1002 Hilltop Drive  
Palestine, TX 75801

compiled by Joe Gragg; additions made by Ferdinand S. Dombrowski.

## Tape-Sponders of the WTFDXA:

Name and QTH	Make & model	Speeds	Tracks	Drive	Reel Max.	Interest
Bill Bens 5575 Spruce Wood Dr. Cincinnati, OH. 45239	Wollensak 1220	3-3/4 7-1/2	4	caps.	7"	FM-DXing
Joe Gragg 1002 Hilltop Drive Palestine, TX. 75801	Roberts 778-X	1-7/8 to 15	4	caps.	7" & 8"	helicopters FI-DX electronics cartr. horses
Al Imwalle 4245 Mad Anthony St. Cincinnati, OH. 45223	Panasonic RQ-113S Pentron President	1-7/8 3-3/4 3-3/4 7-1/2	2 4	caps. caps.	3 1/2" 7"	S L fotografy
Dennis P. Smith Music Dept., UCSB Santa Barbara, CA. 93106	Voice of Music 711A	3-3/4 7-1/2	2	caps.	7"	stamps class. & electr. music
Sandy Smith 123 Northampton Terr. Chapel Hill, NC 27514		1-7/8 3-3/4 7-1/2	4		7"	S L, BCB TV-FI hi-fi
Michael Northam Box 605 Beaverton, OR 97005		3-3/4 7-1/2	2 4		7"	radio, mx SWLing sport cars

That is all we have now; at least these are the only ones we know. If you have any additions or changes send all above info to Palestine. If you want to tape-sond, just send a letter or tape & we'll begin.

### NOTE from HQ:

In the past few weeks, 5 people in the midwest have bought tape cassette recorders. Ye exec started the trend, followed by Lorrie Goldman, Bill Heusmann, Dave Janowiak and Bedford Brown. Due to the rapid sequence of events, not all information is available but I presume all are portables, 2 tracks at 1-7/8 ips, capstan drive. It is not known if Bedford and Dave wish to tape-sond, but the others do. QTHs can be found elsewhere in this VUD except Bill's: 3116 Sangamon, Steger, IL.

60475

## DX NOTES:

From Radio & TV News in Electronics World, December issue:

Federal Trade Commission has decided what may be called a transistor in advertising. Unless it detects, amplifies or receives it may not be counted as a transistor. It may not be wired as a diode, in parallel or cascaded and be counted unless proved that it helps performance. The FTC wording excludes AGC, AFC, stereo-light and other auxiliary functions, so watch for a rewording of ads to such as "10 semi-conductors" meaning 5 active and 3 inactive transistors with 2 diodes.

FCC plans to rule that UHF tuners must be as easy to tune as VHF; industry will get less than a year to comply. (Halleluyah! Now if they would also add an RF or IF amplifier---)

C/M Laboratories has come up with a digital-readout FM receiver; four nixie tubes show the frequency, and tuning can be done in three different ways. Unfortunately the price is about \$1000.

# EUROPEAN SCENE

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

In this months article, I will cover the Iberian peninsula countries in Band I; to recap: these use 625 lines, 50 c/s frame and with negative-going picture modulation. FM sound is used on all the above channels.

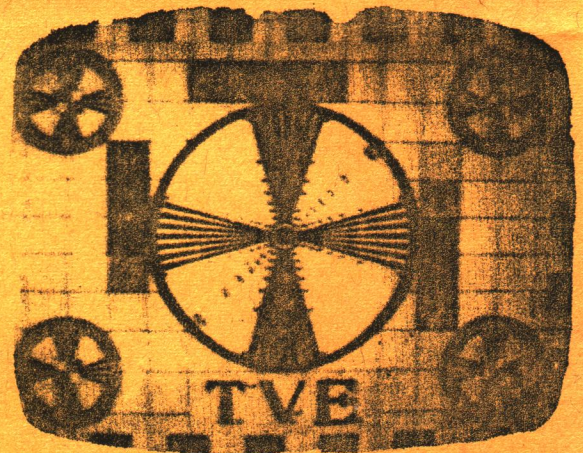
## Portugal: RTP: Radiotelevisão Portuguesa

Muro ch. E2 40 kw. vert. (NW corner of the country) Lousa ch. E3 60 kw. horz (near Lisbon). These stations carry a test card similar to the BBC and is usually type E. At times they have been seen using type D. Test transmissions seem to follow no particular pattern, although the station is usually radiating a test signal by 1430. The test card alternates with another well known pattern, the checkerboard. No program guide is on hand, but follows a pattern: weekdays - educational progs at approx. 1700. Between each program is the test card. Normal progs start at approx. 1900. Sundays transmissions include a church service at Midday, followed sometimes with an agricultural prog. Test transmissions start mid-afternoon and progs. start around 1800. I must apologize for the vague discription of this countries television, it is bases upon Es observations. If a program guide comes to hand, I will pass on the more accurate details.

## TVE: Spain:Television Española (Commercial Network)

Madrid ch. E2 250kw horz. (1st net)  
Santiago ch.E2 40kw horz. (2nd net)  
Gomoniteiro-  
Asturias ch.E3 70kw horz. (2nd net)  
Zaragoza ch.E3 35kw horz. (1st net)  
Barcelona ch.E4 150kw h. (1st net)  
Guadalcanal ch.E4 120kw h.(1st net)  
Santiago ch E4 120 kw. h. (1st net)  
Balbao ch. E4 60 kw. horz.(1st net)  
(Note: TVE Canary Islands Tenerife-Izara ch. E3 350 kw. horz. See VUD number 4.)

All these stations use the same test card, with the exception of the 2nd net. transmitter, which carries an ID in a black rectangle, otherwise this one is the same as the others. The only test transmissions apparently are before the days programs. At 30 minutes prior to transmission is a test grid for 15 minutes; then follows the test



card for the remaining 14 minutes, followed by the opening routine, a spinning globe surmounted with a transmission mast. From this comes in large letters, TVE. Program times approx: Mon.-Fri. 1350-1700,

CET, Central European Time

all 1st net.

Sat..... 1350-0100

Sun..... 1000-0015

The 2nd network has reduced hours, 2030-2330 all days, with Sun.1830-2400.

Best of TV/DX,

*Roger*

A good response on our CCI column from November as two DXers have sent info in which is helpful. Our sincere appreciation to Bill Bens and Stu Grade who assisted in helping some of us log our mystery UNIDS.

In summary:

Bill Bens notes -- Bill Heusmann's ch. 10 station on 10/8/68 is likely not WBNS or WTHI. He suspects WBIR-10 in Knoxville (which he notes is a good area for Country and Western music). Morrie Goldman's unid ch. 4 on 7/14/68 was most likely an NBC station carrying "Today" which was in their 6:25 break which lasts for five minutes; either WJW or WJWC is the suspect station. Morrie's channel 12 station on 8/23/68 was definitely WKRC-TV according to Bill as they run a RETMA TP, carry a religious puppet show at 5:45 and run "Discovery 68" @ 06:00 CDST; WKRC has been IDing as "Tall 12" for sometime as they have the tallest tower in Cincinnati.

Both Bill and Stu Grade believe Gary Olson's unid ch. 2 on 6/24/68 @ 3:05 P.M. was CKCK-2 Regina. (Their radio outlet ID's as CK-radio Stu notes) Stu suspects the simulcast of the game show might well have been CKCK-TV-1 on ch. 6 in Willow Bunch, Saskatchewan.

Many thanks gentlemen for helping our initial efforts to be a success and for assisting us to ID these unidentified stations.

If there are any more reports (or IDs you think might help answer the previous month's unids) send 'em in. We'll be glad to take all the reports you can send!

Late CCI reports:

Morrie Goldman, 8046 S. Euclid, Chicago

1. November 17, 1968 - 0602 CST, ch. 2 - MS reception. A real puzzler for Morrie and several other midwest DXers is a station running color bars with small white call letters in the lower right corner and a large 2 following the call. It seems to be from the east and would likely be an east coast or near east coast station.
2. November 17, 1968 - 0617 CST, ch. 3 - tropo reception. A station (direction south east) featured a narrated film with a cante (?), and mentioned a Dr. Roco. (Morrie thinks it may be WAVE-3 --- any ideas?)

Bill Heusmann, 3116 Sangamon, Steger, Ill. 60475

1. Bill also reports the color bar Unid above only on Saturdays @ 0430-0500 CDST.
2. Bill reports a unid ch. 5 wedge TP to the South East at 0445; he wonders if this might have been WAGA-TV Atlanta. Does anyone know if WAGA-TV uses the wedge TP and what time it is on the air. (Ed note: Bill, I believe WAGA-TV does use the wedge or did in the East)

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A FEW QUICK NOTES --- AT PUBLISHING TIME.....

A private aircraft struck the tower of WAEQ-TV, ch. 12 in Rhinelander, Wis., killing three people, destroying much of the tower and station, and injuring some station personnel. The NBC affiliate may not return to the air according to rumors.....DXer Mark Lewis reports that WED-17 in Buffalo, N.Y., went up to 1,150 kw. ERP on Nov. 15..... AND your FCC News and Data editor had the great pleasure seeing WFTDA member Dave Pomeroy at the recent NAEB convention in Washington. Many hours were spent tipping the old elbow and talking TV DX. Yours truly hadn't seen Dave since DX convention in '61.

### Japan All UHF?

In Japan, the announcement that uhf television broadcasting will completely replace vhf in 10 years has been met with both delight and dismay. TV set and transmitting equipment manufacturers are delighted because they foresee sharply rising sales, but broadcasters are dismayed by the prospect of equipment replacement.

The decision to go all-uhf was created by the need for more channels, since the vhf frequency is all used up. For example, there are seven channels in Tokyo and six in Osaka, the two largest cities. Other areas have two or three channels. A preliminary step in the switchover was the recent assignment of 23 uhf channels in 19 districts; 14 additional allocations are expected.

The 70 megahertz to be vacated in the vhf band will be given to additional mobile stations for public safety, security, and utilities. About 5,000 applications are being received a month. To provide more channels, the 40-kilohertz bandwidth used by mobile vhf services will be halved in 1969.

Set makers feel the plan will pull sales out of the doldrums. Monthly domestic B & W sales are about 300,000; 140,000 for color sets. It's estimated that by the end of 1968, 70,000 sets will be all-channel, and sets will cost \$10 or \$15 more. Brisk sale of uhf converters for old sets (there are 27 million of them) at \$20 to \$30 apiece is predicted.

### 22 Inch Color Sets for the British

22-inch color television sets should be on the British market by spring, 1969. Mullard Ltd. is tooling to mass-produce the 22-inch tubes, and a sister company of the Philips' Gloeilampenfabrieken group (Philips Electrical Ltd.) will use them in a single-standard receiver. Most color sets marketed now are bishandard: 625 lines for the British Broadcasting Corp. second network and 405 lines for BBC-1 (which broadcasts only B & W programs). Philips says that the 22-inch size solves the common complaint that current 25-inch sets are too big for many British living rooms. Also, the compromise size avoids the "too small" label that has plagued 19-inch sets.

Mullard expects that several set makers will market with 22-inch receivers about the same time as its sister company. If the sets sell well (cost is tentatively about 10% below the 25-inch sets), the two other U.K. picture tube makers would, presumably, follow Mullard's lead. British set makers would then almost surely build 22-inch sets exclusively.

### PAL Most Popular

The West German phase-alternation-line (PAL) color-tv system remains popular. In Asia, Thailand, and Hong Kong have adopted PAL. In three years -- says its developer Telefunken -- PAL most likely will be introduced in Finland, Sweden, Denmark, and Norway. This would make Northern Europe solid PAL, except for France, where the competing SECAM system was developed.

### Novel FMTuner

For the FM DXer or FM stereo bug who wants something new and different, CM Laboratories of Norwalk, Conn., has the answer. It's the model 804 FM tuner, featuring a unique digital Nixie tube tuning system, a crystal frequency synthesizer instead of the variable tuned local oscillator, a double-balanced diode mixer in place of the usual transistor type, and double conversion for improved image rejection. Stations are tuned in by a lever that advances the readout counter to the desired frequency. When the lever is depressed, two 10-position stepping relays advance the counter a step at a time from station to station. The Nixie tubes provide indication of the frequency selected. In the semiautomatic mode the entire band is tuned in five seconds. However, since the counter doesn't read down, the unit has to be recycled to pick up stations below its last setting (not a DXing aid). The channel selector portion is actually pretuned to each of the 100 discrete stations in the 88 to 108 mhz FM band. Thus, although the stations are spaced a mere 0.2 mhz apart, the frequency cannot be mistuned.

The 804 features remote operation through a preprogrammed memory drum that is driven by a clock mechanism which enables it to change channels at a preslected time. In strong signal areas, the signal picked up by the antenna is fed directly to the mixer, which results in a very low noise figure and excellent image rejection. In fringe reception areas, a dual-gate MOS FET amplifier in a cascade configuration is switched in.

For those who think the 804 is the ideal Xmas gift, it's available for a mere \$1,050.00.

WESTERN DX for DECEMBER 1968

Deadlines: 12th of each month

Dennis Smith, Music Dept., Univ. of Calif., Santa Barbara CA 93106 USA

Ann Wm Glenn Hauser, AF15935294, Box C 8638, Lowry AFB, CO 80230

Since my last report, I've completed Air Force basic training at San Antonio, had a short leave in Oklahoma, and now settled down in Denver for a year or so. The only high spot of my stay in Texas was a visit from Wayne Plunkett and Andy Rugg on their way to Central America (I had hoped to accompany them). No DX at all observed there, but it was nice to see KWEX-41 as a local.

I had picked up KUTV-2 Utah <sup>on ch3</sup> just before leaving Enid, and now have some replies to inquiries. Reid Carpenter, Dir. of Eng. at KUTV, said "It is not at all uncommon for the front end of a TV set to be aligned so that a particular channel will actually receive a signal that is broadcast on an adjacent channel." I agree, but this certainly doesn't apply to my 1961-vintage portable! Ferdie checked his TVF and came up with four KUTV translators on channel 3, KØ3AS Elsinore, KØ3BF Enterprise, KØ3AU Loa, KØ3AR Parowan, all in SW-central Utah, a likely area. I sent inquiries to all and have heard from Elsinore and Enterprise. Elsinore is directional WNW and there is an 11,000-ft mountain four miles from there in my direction. Enterprise looks more likely, per a friendly letter from E. M. "Al" Hadley, who has TVDXed himself, and is ham WA7HMS. He confirms that KØ3BF was on the air at the time (translators are frequently "down"); station has two 5-element yagis, one beamed S, the other SE (close to my direction). Furthermore, there is a KUTV xltr only 12 mi. away on ch 2 where I also saw something weird. One thing doesn't jibe, tho: both Enterprise and Elsinore say they're not offset. Al would like to discuss skip propagation on the air, so perhaps some of you hams would like to arrange a sked with him at Box 167, Enterprise UT 84725.

During my October stay in Enid, there was both Es and tropes in small quantities, and 2 new stations were added, bringing the total to 345 (KUTV xltr still not counted). Dates Oct. Times CST.

- 12 1029 Es WESH 2 Orlando FL Colonial Plaza ad
- 14 0805 T KHTL 4plus Superior NB TP/TT o/KY but wiggly, 0807 pix, 0808 ID slide w/mx; 0929 ID showing photo of road sign "You're in KHTL Country."
- 0820 KMEG? 14 Sioux City IA CBS via FM-fed audio; tentative, but what else?
- 0825 KHQL 8 Albion NB 13-6-8-4 combo ID slide; mx, nTn logo (Neb TV net); 1000 pix; new; 345 miles
- 0825 KHPL 6 Hayes Center NB //8
- 0829 KLNE 3 Lexington NB Neb ETV ID
- 0945 KXNE 19 Norfolk NB lecture via FM audio, 0959 "Neb ETV net." new: 390 mi. 42.7 kW
- 1915 Es WUNC 4 Chapel Hill NC almost//KETA; also Es on 2,3,5,6.

As long as I live in the barracks here at Lowry AFB, it looks like I'll not be able to have exterior TV/FM antennas. Nevertheless, the bunny ears have already brought in some off-season Es, plus regular fringe reception from: KFBC-5 Cheyenne WY (95mi--a stn never seen at any of my previous QTHs); KKTU-11 and KRDO-13 Colorado Springs (65 mi to Cheyenne Mtn; these stations often schedule net programs at different times than Denver affiliates) and occasionally some QRM to KFBC, which must be KOAA-5 (95). It's not clear why KFBC comes in so much better than KOAA here at the same distance. Denver has five locals: KWGN-2 (ind), KOA-4 (NBC), KRMA-6 (NET), KLZ-7 (CBS), KBTU-9 (ABC), and two UHF channels are applied for but far from on the air: ch 20 by the Denver Post; ch 31 by Comet TV Corp, which doesn't even have a local telephone listing yet. Es DX occurred on 29/10, when XEFB-3 Monterrey NL (1000) appeared at 1200 CST w/ Spanish caricatures (cartoons) via audio, VCI to eliminate adjacent-channel QRM, 1214 ID. At 1203 an ABC station on 3 was heard, probably KIII; and a 4-plus station gave KOA a run for its money, probably KGBT. (All the locals are about 20 miles away, on Lookout Mountain). ... So my TV total here is now an unimpressive 9. A couple of 14000'plus mountains have roads to the top, and I hope to DX from up there--but that'll probably have to wait until next summer. Until the next, 73 de Glenn. (We'll look forward to your Colorado DXing, Glenn--good luck. dps)

# PROPAGATION:

# TE SKIP

The Propagation discussion this time is transequatorial scatter. Like many other modes of propagation affecting VHF, TE scatter was discovered by radio amateurs, this in late 1940's around the time of the peak years of sunspot Cycle 18. In the Fall of 1947 (October and November), hams found reliable contacts which didn't coincide with the usual VHF F2 skip--with paths between such areas as Mexico & Argentina, Australia to Hawaii, and Southern Rhodesia to southern Europe, occurring after sunset with higher usable frequencies than by F2. F2 skip was good in daylight hours with maximum usable frequencies reaching up to 50 MHz in peak years in winter months. But these contacts, with a north-south path characteristic, took place for about three hours after sunset with MUF's exceeding F2 expectations, sometimes up to 75-plus MHz well into TV frequencies, before the real VHF F2 season. Further experiments were continued by interested hams. It was found that signals were quite reliable, with the path open night after night with fairly strong signals characterized by rapid flutter such as noted on many SW signals. Distances were in the area of 4000 miles, more or less, with TV signals definitely heard, as from Europe to southern Africa. These conditions were reported in two excellent articles in April 1963 QST, detailing also the nature of TE scatter as being a breakup of the F2 layer in the area over the magnetic equator (somewhat south of the geographic equator in the Western Hemisphere and north in the Eastern Hemisphere) into "clouds" of higher ionization and upward tilts in the layer which causes signals to come in contact with the layer at a smaller angle and to be bent back to earth more gradually, resulting in higher MUF's and greater distances than with regular F2. The scattering of the gradually bent signals across the ionized clouds produces the flutter-fading effect although still reliable. It was found that distances by TE were sometimes increased by such as sporadic-E acting as an extension. Some of our Western Hemisphere TV channel records may be by TE scatter or combination with Es.

Transequatorial propagation has been studied more recently by Bob Cooper, K6EDX, and other hams working with him to further clarify details of this mode. In the Americas, the magnetic equator is about 20 degrees south of the geographic equator. The radio path is best when the magnetic equator is midway between the stations; greatest distance is obtained on straight north-south paths (90 degrees to the equator), with smaller distances when path is more east-west. It is best around 2000 to 2300 local time at the mid-point, and the MUF seems to be  $1\frac{1}{2}$  times greater than the daytime north-south F2. It occurs in equinoctial periods of the year; that is, September to November, and March to early May. Signal strengths are good, even by ham power uses, so that other VHF services such as television are certainly of sufficient transmitted strength along with good receiving installations. And, since the MUF of TE is higher than F2, it is usable more often than just at sunspot peaks. These details and more have been reported in the 30-Mc column of the September 1968 QST.

Why hasn't much TV-DX by TE scatter been reported in recent years? Good question. Of course, sunspot levels for the current peak have not been as high as before, which may affect it, and possibly it has also been overlooked by many since it doesn't occur in the active summer months or in mid-winter. Perhaps there has been a lack of suitable high-gain receiver and antenna installations. 30-50-MHz and 6-meter receivers would be helpful to give us a warning when conditions are good for this interesting propagation mode.

Dennis Smith

II

ACROSS

- 1. Type of parasitic design antenna.
- 5. Weather caused mode of propagation.
- 10. Europe (abrev.)
- 15. Opposite of off
- 17. Smell from kitchen when you're DXing past dinner
- 22. WBBM's channel
- 25. After you hear #8 down from your rcvr, you \_\_\_\_\_ it!
- 31. First letter of most US broadcast station call letters east of Miss. R.
- 34. Filters unwanted signals
- 38. commercials (abrev.)
- 41. "wireless"
- 47. owners of WKBD
- 53. Ch. 4 in San Antonio
- 57. Overseas Television (abrev.)
- 62. HAM's abrev. for "this is".
- 64. Test Pattern (abrev.)
- 66. WOC's channel
- 69. Home of WJET-TV

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16		
17	18	19	20	21	22	23	24	
25	26	27	28	29	30	31		
	32	33		34	35	36	37	
	38	39	40	41	42	43	44	45
46			47	48	49	50	51	52
53	54	55	56	57	58	59		
60			61	62	63	64	65	
66	67	68		69	70	71	72	

DOWN

- 1. This one has 366
- 2. Northern lights
- 3. For lightning protection your antenna should have a good one.
- 6. Home state of WDOM-FM (abrev.)
- 8. Noise you hope your rcvr never makes.
- 13. C/W is a \_\_\_ mat.
- 22. equipment exchange
- 34. three element vacuum tube

- 9. noise seen in video
- 35. blank illuminated screen.
- 37. Unauthorized radio or TV station operating outside territorial boundaries.
- 40. Es and F2 are two types.
- 46. The Milwaukee Journal \_\_\_ WTMJ.
- 52. Most commercial TV and radio stations have a special \_\_\_ for ads.

SOLUTION will be published next month.  
 \*\*\*\*\*  
 Your comments on this quiz and the last one would be appreciated. Good or bad! MG

Application for membership:

name \_\_\_\_\_ age \_\_\_ call letters \_\_\_\_\_  
 address \_\_\_\_\_ interest: TV \_\_\_ FM \_\_\_ VHF \_\_\_  
 city/state \_\_\_\_\_ dues are \$3.50 worldwide, US funds  
 equipment used for DXing: \_\_\_\_\_

mail remittances to: WTFDA, Box 5001, Milwaukee, WI. 53204, USA.

WORLDWIDE TV-FM DX ASSN.  
Box 5001, Harbor Station.  
Milwaukee, WI. 53204

*Dez*  
*#12*

~~THIRD CLASS~~

news matter....  
return requested.