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And Your Favorite Columns

TV and FM DXing ~~is~~ Never So Much Fun!

# THE WORLDWIDE TV-FM DX ASSOCIATION

*Serving the UHF-VHF Enthusiast*

THE VHF-UHF DIGEST IS THE OFFICIAL PUBLICATION OF THE WORLDWIDE TV-FM DX ASSOCIATION DEDICATED TO THE OBSERVATION AND STUDY OF THE PROPAGATION OF LONG DISTANCE TELEVISION AND FM BROADCASTING SIGNALS AT VHF AND UHF. WTFDA IS GOVERNED BY A BOARD OF DIRECTORS: DOUG SMITH, GREG CONIGLIO, BRUCE HALL, DAVE JANOWIAK AND MIKE BUGAJ.



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**NOVEMBER 2004**



Finally! For those of you online with an email address, we now offer a quick, convenient and secure way to join or renew your membership in the WTFDA from our page at:

<http://fmdx.usclargo.com/join.html>

Dues are \$25 if paid to our Paypal account. But of course you can always renew by check or money order for the usual price of just \$24. Either way, it's still a bargain!

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Well, you can tell it's fall. I've already had to scrape ice off my car windshield. You southerners are lucky. It's warm and you still have a bit of tropo in the air. Northern FM DX will not appear this month due to Keith and his family vacationing in Disney World for a week. NFM will return next month.

But instead we have some good reading from threads on the WTFDA list that are just too good to pass up. Also, notice that we really want to get rid of the 4 TV Guides we have left. If \$10 is too much, make us an offer. We want to get started on the next one.

*SALE SALE SALE SALE SALE SALE SALE SALE SALE*

## The WTFDA TV STATION GUIDE Clearance SALE!

It's the most comprehensive listing of North American Television stations in print! Just \$10 US will get you one of the four remaining guides. Mail your check or money order today. Make it payable to Dave Janowiak and mail it to John Ebeling, 9209 Vincent Avenue S., Bloomington, MN 55431-2157. Get your WTFDA TV Station Guide **now** at a special reduced price!

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Email John at [ijebling@aol.com](mailto:ijebling@aol.com) to reserve yours!





# The Mailbox

P.O. Box 501, Somersville, CT USA 06072  
MIKE BUGAJ MBUGAJ@SNET.NET

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## NOVEMBER 2004

Hello folks, and welcome to the Mailbox for November. As we head into late autumn we find ourselves slowing down a little. Bill Hepburn's tropo maps have been looking even more dismal lately. Although E skip could happen at any time, November is not the month for it in most of the Northern hemisphere. And tropo has gone to sleep for a while in most places. The mode that will probably keep us going for a while is meteor scatter. We have some good showers in the forecast, and we don't mean rain. Those little rocky raindrops should be around in enough quantity to give us all a few good catches if we have the time and patience. And if nothing is happening on TV or FM where you live, there's always AM Dxing to try. Or origami. Or pinball machines.

## MEMBERS AND MORE

Yes, this month we have members and then we have more. First, the members.

Joining us for the first time is **Paul Sojka**. Paul lives in Middletown, NJ. Here's what he told me: "I'm a member of NRC and IRCA. I'm into SWL, AM-DX and all the ham radio activities (call KS2S). I've decided to try FM-DX and thus the reason for joining WTFDA. I figured that I could get some tips, etc. I'd also like to get the FM station listing guide that is the equivalent of the NRC's AM station listing guide" (and that is Bruce Elving's *FM Atlas*. You should be able to read about it and order one from information elsewhere in this issue -Mikey).

"I just retired (30 years as a police officer) and purchased 12 acres of land in rural Virginia (Lunenburg County). I hope to move there around December of the first of the year. Are there any members in that area or is there a list of members available?"

Your mention of Lunenburg county sent me off to my road atlas where I found it about 60 miles SW of Richmond, and it's definitely rural. I would have to say we don't have any members out that way.

You also reminded me what I have to do one of these days, and that's run a list of the membership in the VUD. That used to be done around June but didn't get done this

year for one reason or another. Watch your VUD because a membership list will be printed probably in a month or two or three.

Next we have renewals. Because it's November, there aren't too many. But the renewals we do have are these: **Keith Short**(OH), **Karl Zuk**(NY), **Bill Smith**(MA), **Jeff Kadet**(IL), **Jim Renfrew**(NY), **Paul Kinnaly**(MA), **Cliff Rames**(FL), **Larry Weil**(NH) and **Jerry Rappel**(IA). If you check out my website you will find on my Mailroom page the current membership stats, which as of today (10/18) show us with 268 members. We took a slight hit in June when we ended list-only memberships. Club totals now only count members receiving either the VUD or eVUD. But 268 members for a club as specialized as ours is fine and the number has rebounded a bit. We are doing well. So, to all of you folks who renewed your membership, **THANK YOU!**

## BLAST FROM THE PAST UPDATE

All right gang, let's turn to page 25 in the October VUD. This is the page with the Channel Master Champion and Super Champ. Notice that the ad came from Radio's Master, 19<sup>th</sup> edition, year unknown. Well, here's **Gary Hickerson** with more info on that: "In the Oct. VUD which I received yesterday, on page 25 is a picture of the CM Champion antenna. It looks like the pictures that I sent you (yes, and you sent me tons of good stuff and *thanks-Mike*) It said "year unknown" The year was 1954..."

But wait! There's more..."Above the pix on page 25, it's from Radio Master, 19<sup>th</sup> ed. Let me explain what that is. We have a great electronics store in Ft. Smith called Wise Wholesale Electronics. It was owned by the Wise family and opened in 1927. In the 50s and 60s, Wise had a giant catalog assembled for them called Radio Master's. It was 1200 pages, listing all the products that they sold. I started buying things at Wise when I was about 9 years old. A friend, Paul Tucker, was the manager there for 50 years. He has a number of these Radio Master books which he let me borrow.

Also Paul has one of the largest collections of vacuum tubes that I have ever seen. In fact, he has a mail order business

selling them!"

So now we know about Wise Wholesale Electronics, Radio Master and vacuum tubes. Don't say this column isn't educational. Thanks Gary!

### FLORIDA PIRATES DEFIANT

An article passed on to me by Bob Cooper states "Florida Pirates Defiant as New Felony Law Goes into Effect". This article was dated August 24 and states: Now we know why we need communications lawyers. Getting a radio station license is harder than getting a car license –so says a Miami pirate.

"We know it's illegal. We're going to keep doing it anyway," says such a DJ to the Miami Herald.

But Florida recently passed a law that makes it a felony to broadcast without a license, empowering local law enforcement to arrest pirates and take away their equipment. Fort Lauderdale DJ "Pretty Boy" told the Herald his station operating at 89.1 mhz bought its equipment for between \$10,000 to \$15,000.

A Jamaican station operating illegally at 101.9 mhz decided to become legitimate. "Vibez" filed an application for an FM license but is frustrated by the process, according to the account. "We're trying to do the right thing," the Herald quotes O'Neil Samuel, a programming executive at the station who doesn't think new station frequencies should be auctioned to the highest bidder.

### MORE JEOPARDY

Inspired by **Matt Sittel's** DX Jeopardy at the WTFDA convention, **John Vervoort** sent in some questions of his own. Now since I am your all-knowing editor, you're probably not surprised to know that I know the answers to none of them. But go take your best shot at these:

1. On what TV station did Tom Brokaw begin his career as a news anchor in 1962? (WLWT-5, KMTV-3, KHQA-7, KHQ-6)
2. "Eyewitness News" made its debut in 1965 on which station? (WABC-7, KYW-3, WLAC-5, WTIC-3)
3. WEHT-25 Evansville, IN first signed on in 1953 on which channel? (31, 35, 50, 57)
4. The frequency of 100.5 is what assigned channel? (263, 201, 251, 300)

Oh heck, let's do one more...

5. What is the callsign for the NOAA weather station in Nashville on 162.55 mhz.

There's no multiple choice on that last one. Go look it up.

I'll try to post the answers somewhere in this VUD if I don't forget. But if I do forget, you're on your own.

### INTERESTING QUESTION

Here's a recent post from the WTFDA list. When was the first FM E skip reported? (a) on the 40 MHz band (b) on the 88-108 MHz band???

By June 1943 FM Es at 43 MHz was quite commonly reported. A note in Radio-Craft for June 1943 said, "Reception from distances of more than 1,000 miles is occasionally reported. One of the more interesting ones was from a fan in Timmins, northern Ontario who verified reception from W49FW in Fort Wayne, Indiana. A set owner in the Pennsylvania mountains received so many distant stations that General Electric engineers are studying the district. One doctor in Florida even receives the baseball broadcasts from W43B in Boston regularly."

It was in 1938 however that the F layer cycle produced many days of 41.5 audio and 45 megacycle video reception from the BBC (and on occasion from the German and French TV in the same frequency region) at the RCA Riverhead, Long Island facility. QST and other amateur magazines reported trans continental FM reception in Arizona and California via F layer from the east coast during the 1940 period. In the same vein, this item from Radio-Craft for February 1948:

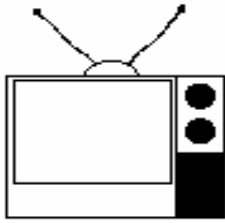
"Interference to British television programs from American FM broadcasts has become so severe that changes in American program schedules had been made. (Chicago's) WEFM, operated by Zenith on 45.1-mc, has received permission from the FCC to temporarily change the broadcasting hours to avoid interference with the London television station between the hours of 3 and 4PM Greenwich time. WEFM will begin broadcasting at 10AM Chicago time (4 PM Greenwich) so that its signal will no longer cause interference to London TV viewers."

The first 100-mc FM Es reports are more difficult to decipher but they apparently began in the summer of 1947 as the first FM stations previously using the 40-mc band converted to new assignments in the 100-mc region. The FM receivers available for several years at 100-mc were woefully insensitive and most people were using "twin lead dipoles" tacked on the wall until antenna manufacturers began offering outdoor FM antennas (1948 were the first such aerials).

Bob Cooper in New Zealand

That's it! See you next month! -Mike

1-KMTV 2-KYW 3-50 4-263 5-KIG79



# TV News

Douglas E. Smith  
1389 Old Clarksville Pike  
Pleasant View, TN  
37146-8098  
[w9wi@w9wi.com](mailto:w9wi@w9wi.com)

<http://www.w9wi.com>

**November 2004**

## Abbreviations:

AF	Applied For (a new station)	PC	Power (and/or tower height) change on the air
Aux	Auxiliary (backup) transmitter	PG	Power change granted
CC	Callsign change	PR	Power change requested
CL	City-of-license change	QC	Channel (?frequency??) change on the air
DE	License/permit deleted	QG	Channel change granted
FC	Programming (?format??) change	QR	Channel change requested
FTP	Failure to Prosecute	RE	Reinstated (previously-dismissed app.)
GA	Granted amendment (to table of channel allotments)	ROA	Request of Applicant
LC	License to Cover	SI	Off the air (?silent??)
MX	Mutually Exclusive	STA	Special Temporary Authority
NS	Permit granted for new station	XC	Transmitter site changed
NW	New station on the air	XG	Transmitter site change granted
PA	Proposed Amendment	XR	Transmitter site change requested

## News:

(full-power analog stations in **bold face**; LPTV and translators in regular type; full-power digital stations in ***bold italics***)



### Canada:

#### Ontario:

Hamilton 35 CITS-DT QR from ch. 21

#### Quebec:

Sainte-Famile 55 CBVT-2



### American Samoa:

Pago Pago 30 K30HO FC; sold by TBN



### Puerto Rico:

Aquadilla 20 WPRU-LP CC from W20CF

Aquadilla 30 WSJP-LP CC from W30CA

Mayaguez 10 W10BG-CA PC>3kw

Mayaguez 16 WOST CC for NS



### U.S. Virgin Islands:

Christiansted 52 W52DG FC; sold by TBN to another religious organization

### Alabama:

Berry 48 WSSF-LP QG from ch. 58

Birmingham 27 WBUN-CA FC; sold to Daystar

Mobile 15 WPMI-TV CC from WPMI

### Alaska:

Anchorage 45 K45HQ QC from K22FV, 35.5kw, 61-20-11/149-30-48

Juneau 15 K15FZ FC; sold by TBN

Juneau 3 KTOO-TV PR<500w/-323m; PG

### Arizona:

Globe 16; K16FB; FC, sold to

53 K53IR Telefutera

Lake Havasu 38 K38IR QG from K40FG

City			
Phoenix	10 KSAZ-TV	NW 105kw/500m	33-20-01/ 112-03-32 (aux)
Phoenix	44 KPHE-LP	PR<9.75kw,	33-20-01/ 112-03-44
Phoenix	45 KUTP	NW 934kw/502m	33-20-03/ 112-03-46 (aux)
Prescott	53 K53IJ	FC: sold by TBN	
Safford	15; K15GC;	PR<9.95kw,	32-39-00/ 109-50-55; FC, sold
	21 K21GC		to Telefutera
Verde Valley	23 K23FZ	QC from K65BK,	1.22kw; PR<920w;
		PG	

### Arkansas:

Bentonville 14 KMHF-CA CC from K14IT

Fort Smith 18 KUFS-LP CC from K18EU

Fort Smith 34 KWFT-LP CC from K34EN

Fort Smith 43 KXUN-LP PR>150kw; PG

Hindsville 59 KRBF-CA CC from K59ES

Siloam Springs 33 KCAF-CA CC from K33FG

### California:

Bakersfield 2 KTBV-LP CC from K02PZ

Chico 19 K19FY QG from K53FT, 20.5kw

Chico 33 KBIT-LP CC from K33HV

Concord 63 KTNC-DT PR>47.3kw/942m

37-52-54/  
121-55-05; PG

Corona 52 KVEA PC<680kw/907m,

34-13-32/  
118-03-52 (aux)

Eureka 13 KEET PC>550m

Eureka 35 KEAZ-LP PG>50kw,

40-43-36/  
123-58-18; NW

Fresno 32 KJEO-LP PC>150kw,

37-04-26/  
119-25-52

Huntington Beach 50 KOCE-TV PC>2354kw/949 34-

13-35/

Los Angeles	27	KNLA-LP	118-03-58 QC from ch. 68, 6kw			
Morongo Valley	18	K05CU	QR from ch. 5, 1.78kw, 33-55-28/ 116-36-53; NW	Gainesville	45	WYPN-CA QC from ch. 43, 30kw, 29-32-09/ 82-19-18
Morro Bay	9	K09UF	PG>3kw, 35-21-38/ 120-39-21	Jacksonville	7	WJCT PC 270kw/302m
<b>Oakland</b>	<b>56</b>	<b>KTVU-DT</b>	<b>NW 1000kw/433</b>	Jacksonville	9	WJKF-CA CC from W09CF
Palm Springs	42	KESQ-TV	PR>227m	Jacksonville	38	WJCT-DT NW 1000kw/288
Redding	2	K02QA	PR<120w, 40-34-10/ 122-26-10; PG	Key West	22	WDLP-TV CC from WSBS
Redding	42	KQSX-LP	CC from K42GQ	Kissimmee	15	WTMO-LP PG>50kw
San Diego	19	KSWB-DT	NW 323kw/598m	Miami	19	WBZL-DT PR<1000kw/239
San Diego	43	KBOP-CA	QC from ch. 25, 4.67kw, 32-41-52/ 116-56-02	Naples	7	WBSP-CA QR from ch. 9 dismissed; CX DE
San Fernando Valley	6	KSFV-LP	QC from ch. 26, 500w	Orange Park	10	WJXX-DT PR 11.1kw/307m
San Francisco	40	KMMC-LP	NW 44kw, 37-41-15/ 122-26-01	Orlando	24	WMFE-TV adds DA
Susanville	29	KNNC-LP	CC from K29FU	Orlando	50	WTOF-LP PG>87kw, 28-25-22/ 81-27-35
Ukiah	31	K31GK	QC from K67BV	Pensacola	12	WBQP-CA PC>2.89kw
<b>Colorado:</b>				Tallahassee	22	WTXL-DT PR<487m
Anton	29	K29GI	NW 3.71kw, 40-30-37/ 102-21-33	Tampa	46	WVEA-LP PR<49kw; PG
Carbondale	38	K38FO	QC from ch. 22, 39- 25-21/ 107-22-31	Vero Beach	19	WWAZ-LP QG from W57DM, 150kw; CC from W19CY
Colorado Springs	23	K23GJ	FC?, sold to KMGH- 7	West Palm Beach	27	WXEL-DT NW 400kw/440m
Cortez	29	K29GO	QG from K59CF, 3.31kw	West Palm Beach	41	WBPB-LP QG from W47BG, 125kw; CC from W41CY
Cripple Creek	30	K30IK	QG from K55CJ, 110kw, 38-59-13/ 104-55-12	<b>Georgia:</b>		
Cripple Creek	59	K59BZ	PG>150kw, 38-46-21/ 104-59-33	Atlanta	21	WPBA-DT NW 55.4kw/266m
Crystal/Frying Pan	35	K35HK	QG from K60AH, 1.7kw, 39-25-24/ 107-22-32	Augusta	49	W58CZ QG from ch. 58 rescinded
Denver	27	KCIN-LP	FC?, sold to KMGH- 7	Hazlehurst	56	WVOH-LP CC from W56DU
Denver	30	K55IO	QR from ch. 55, 10kw, 39-40-24/ 105-13-03	Vidalia	14	W14CQ PC>10kw, 32-12-19/ 82-29-40; NW
Durango	20	KRMU-DT	NW 46kw/130m, 37- 15-46/ 107-53-58	Vidalia	53	W53CG FC; sold by TBN
Estes Park	57	K57AA	FC?, sold to KMGH- 7	Vidalia	59	W59DS PG<140w, 32-14-02/ 82-28-52
Fort Collins	50	K39HL	QR from ch. 39, 66.5kw	<b>Hawaii:</b>		
Haxtun	33	K49AF	QC from ch. 49, 890w	Honolulu	8	KHON-DT PG<7.2kw/-12m, 21- 17-46/ 157-50-36
Trinidad/Valdez	15	K15GL	QG from K69CX, 640w, 37-08-45/ 104-28-09	Honolulu	22	KGMB-DT PG>1000kw/9m, 21- 17-39/ 157-50-18
<b>Connecticut:</b>				Honolulu	46	KHLU-LP PR<6.55kw
<b>New Britain</b>	<b>35</b>	<b>WVIT-DT</b>	<b>PG 250kw/434m</b>	<b>Idaho:</b>		
New Haven	10	WTNH-DT	PC>20.5kw	Ashton	13	K09VD QC from ch. 9
<b>Florida:</b>				Lewiston	15	K15CH FC?, sold to KWSU- 10 (PBS)
Clearwater	26	WXAX-LP	PC<50kw, 27-50-52/ 82-15-48	Twin Falls	38	KTFT-LP PC>150kw; QC from zero offset to plus
Destin	48	WFBD	CC for NS	<b>Illinois:</b>		
Fort Myers	9	WINK-DT	QR from ch. 53, 20kw	Blue Island	48	W48DD QC from W54AP, 20kw; FC?, sold to WCIU-26
Fort Walton Beach	50	WFGX-DT	QG from ch. 25, 1000kw/221m, 30-	Carthage	44	WCRD-LP PR<35.5kw, 41-59-46/ 89-12-11
				Chana	46	WBKM-LP PR>35.5kw, 41-49-46/ 89-12-11 suspect typo, s/b 41-59-46
				Freeport	41	WIFR-DT NW 100kw/176m
				Holcomb	7	WRDH-LP XR 41-59-46/ 89-12-11
				Quincy	34	WQEC-DT NW 58.6kw/153m
				Rochelle	25	WMKB-LP XR 41-59-46/ 89-12-11
				Rochelle	48	W48DH CX



<b><u>Indiana:</u></b>					47-58-38/ 96-36-18
Bloomington	48 WTTV-DT	QC from ch. 53			
Westville	49 W49CP	QG from W04CQ, 11.82kw, 41-31-17/ 87-01-26; CL from Chesterton	Duluth	10 WDIO-TV	PR<299m, 46-47-15/ 92-07-21
			Duluth	50 NEW-LP	AF RE 3kw, 46-47-20/ 92-07-28
<b><u>Iowa:</u></b>					
Des Moines	56 KDMI-DT	PG<589m	Redwood Falls	25 K54GH	QR from ch. 54, 720w
Ottumwa	10 KOTT-LP	CC from K1000			
<b><u>Kansas:</u></b>			<b><u>Mississippi:</u></b>		
Garden City	47 KGKT-LP	PR>9.6kw, 37-55-52/ 100-52-55; PG	Cleveland	34 W34CT	PR<150w; PG, but CX/DE?
Hays	49 KHKT-LP	PR<6.8kw, 38-56-33/ 99-21-19; PG	Greenwood	48 W48DI	NW 8kw, 33-31-29/ 90-09-52
Pittsburg	9 KPKT-LP	PR>3kw, 37-26-55/ 94-38-11; PG	Pascagoula	7 WKFK-LP	PR<800w dismissed ROA
Topeka	49 KTKA-TV	PC<2690kw/453	<b><u>Missouri:</u></b>		
Wichita	45 KSNW-DT	PR<891kw; PG	Kansas City	35 KCDN-LP	CC from K35CT
<b><u>Kentucky:</u></b>			Kansas City	48 KCUN-LP	FC; sold by Daystar; CC from K48FS
Danville	4 WDKY-DT	PG<26.5kw/327m 37-52-51/ 84-19-16	Mount Vernon	5 KDSI-CA	XR 37-11-40/93-55- 39; CL from Carthage; CC from K05KD
Glasgow	60; W60DC; 62; W62DC; 64 W64CR	FC; sold by TBN	Neosho	32 KCLG-CA	PC>5kw
Glasgow	64 W64CR	NW 20kw, 36-58-37/ 85-53-48	Rolla	16 K16FE	PC<9.8kw, 37-52-39/ 91-44-45
Madisonville	20 WAZE-DT	PR>258m, 37-59-01/ 87-16-13	St. Joseph	21 KTAJ-DT	PR<950kw but dismissed
Morehead	67 WUPX-TV	PC>446m	St. Louis	43 KTVI-DT	PC>1000kw
<b><u>Louisiana:</u></b>			<b><u>Montana:</u></b>		
Alexandria	2 K02QC	QG from K66EY, 3kw, 31-18-24/ 92-24-12	Billings	20 K20HB	PR<51.2kw, 45-46-00/ 108-27-27; PG
Lake Charles	20 KLTL-DT	NW 55kw/299m, 30- 23-46/ 93-00-03	Bozeman	8 KUSM-DT	PG>271m
Monroe	7 KNOE-DT	PR>17kw	Bozeman	13 KBZK-DT	PG>160kw/271m
New Orleans	6 WDSU	drops DA	Columbus	24 K24FL	NW 610w, 45-37-36/ 109-15-36
New Orleans	38 WNOL-TV	PR<2880kw/309 29- 58-57/ 89-56-58	Columbus	26 K26GL	NW 640w, 45-37-36/ 109-15-36
<b><u>Maryland:</u></b>			Helena	34 KJJC-LP	CC from K34HL
Hagerstown	25 WHAG-TV	XC 39-39-45/ 77-57-54	Kalispell	39 K46FD	QR from ch. 46, 1.32kw; CL from Blacktail
<b><u>Massachusetts:</u></b>			Kalispell	51 K51HT	QG from K52BL; CL from Blacktail
Cambridge	41 WLVI-DT	NW 550kw/345m	Miles City	16 K16DH	PC>15.06kw, 46-26-08/ 105-50-53
Lawrence	18 WMFP-DT	PR<357m	<b><u>Nebraska:</u></b>		
New Bedford	49 WLNE-DT	PG 350kw/284m, 41-51-54/ 71-17-15; NW	Columbus	36 KHJP-LP	QR from ch. 57, 43.6kw; CC from K57HV
<b><u>Michigan:</u></b>			Lincoln	35 KWAZ-LP	OG from ch. 56, 30kw
Bay City	46 960710KZ	NS 1600kw, 43-28-26/ 83-50-44	North Platte	30 KMBB-LP	FC; sold by TBN; CC from K30HV
Bay City	61 960723LC	AF 5000kw/308m, dismissed	Omaha	48 KOHA-LP	OG from ch. 65, 150kw, 41-18-40/ 96-01-37
Houghton	32 NEW-LP	NS 10kw, 47-06-06/ 88-34-11 (TBN)	O'Neill	27 KAZK-LP	PR>10.3kw; PG
Marquette	17 W17CS	NW 8.9kw, 46-30-52/ 87-28-36	O'Neill	48 KOAZ-LP	PR<9.9kw; PG
Pinconning	22 WKNX-LP	CC from W22CC	Valentine	33 KAZD-LP	NW 10kw, 42-53-22/ 100-33-15
Pinconning	52 WHNE-LP	CC from W52CU	<b><u>Nevada:</u></b>		
Traverse City	29 WGTU	PC>1303kw/393	Battle Mountain	3 KUVR-LP	CC from K03HL
<b><u>Minnesota:</u></b>			Duckwater	15 K55CR	QC from ch. 55
Crookston	16 KCGE-DT	NW 105kw/220m,	Duckwater	29 K66BU	QC from ch. 66

Elko	19 K19FZ	QG from K52CF	Rocky Mount	45 W45CN	QC from W66DK, 8.3kw
Elko	29 K29GQ	QG from K57GR	Wanchese	6 WMTO-LP	XR 35-54-38/ 75-40-13
Elko	31 K31IC	QG from K59EV			
Las Vegas	17 KEEN-LP	FC; sold to religious organization	<b><u>North Dakota:</u></b>		
Las Vegas	28 KVPX-LP	PR>54kw	Jamestown	18 KJRR-DT	GA from ch. 14
Pahrump	30 KPVT-LP	CC from K30HX	Minot	40 KSRE-DT	NW 146kw/249m
Panaca	43 K43DS	PC>6kw	<b><u>Ohio:</u></b>		
Reno	46 KAZR-CA	QC from ch. 68, 10.9kw; CC from KUVR-CA	Akron	50 WEAO-DT	NW 180kw/305m
			Bucyrus	54 WCSN-LP	CC from W54AF
			Cleveland	29 WCDN-LP	PR>35kw, QR from ch. 53 dismissed
<b><u>New Jersey:</u></b>			Dayton	32 WWRD-LP	PG>33.23kw, 39-40-48/ 84-04-56; CL from Centerville
West Milford	29 WFME-DT	NW 200kw/167m, 40-47-18/ 74-15-19	Newcomers-town	29 WIVN-LP	PG>74kw, 40-21-32/ 81-30-02; CL from Cambridge; CC from W29CU & PC
<b><u>New Mexico:</u></b>			Oxford	28 WPTO-DT	NW 400kw/276m, 39-07-19/ 84-32-52
Carlsbad	47 K47FX	PG<12.1kw, 32-28-28/ 104-11-54	Steubenville	25 WSSS-LP	CC from W25C1
Farmington	40 K40FI	PR<200w; PG	<b><u>Oklahoma:</u></b>		
Hobbs	45 K45IL	QG from K47CF, 16.7kw	Allen	18 KDNT-LP	CC from K18GO
Las Cruces	48 KTDO	CC from KTYO	Altus	17 K17FP	PR<210w, 34-38-34/ 99-20-01; NW
Roswell	38 KOBR-DT	PR<499m, 33-22-31/103-46-12	Cheyenne	12 KWET	PR<283kw/303m
Santa Fe	9 KNMD-DT	PG<200w/1241m, 35-12-45/ 106-26-58; NW	McAlester	61 K61HM	PG<140w
Santa Fe	19 KWBO	PC<1422kw/1275 35-12-48/ 106-27-00	Poteau	59 KSJF-CA	CC from K59GJ
			Tulsa	47 KWHB	PR<835kw
<b><u>New York:</u></b>			Tulsa	48 KWHB-DT	PR<29kw/460m, 36-01-15/ 95-40-32
Hempstead	32 W29CF	QR from ch. 29, 20kw	<b><u>Oregon:</u></b>		
Hudson	21 W21BU	PR<300w, 42-08-09/ 73-53-11	Bend	41 K41HA	PR<6.5kw, 44-04-39/ 121-19-57; PG
Kingston	48 WRNN-DT	NW 950kw/378m, 41-29-18/ 73-56-56	Coos Bay	44 K44FH	PR>5.52kw; PG
Plattsburgh	38 WCFE-DT	PG>100kw	Medford	18 K18GB	NW 12.6kw, 42-17-43/ 122-45-00 (KBLN-30)
Rochester	28 WUHF-DT	NS 320kw/161m	Merlin	33 K33GJ	NW 1.63kw, 42-35-59/ 123-21-54 (KBLN-30)
Saranac Lake	61 950809KF	NS 545kw/440m, 44-09-35/ 74-28-34; two competing apps dismissed	Portland	40 KOIN-DT	PG>1000kw
Syracuse	25 WCNY-DT	PR>97kw/393m, 42-56-44/ 76-07-07	Portland	54 KPXG-LP	PC>105kw, 45-31-21/ 122-44-45
Watertown	46 WLOT-LP	QC from ch. 66, 19kw, 43-58-30/ 75-54-34	Salem	57 KPOU-LP	CC from K57IF
<b><u>North Carolina:</u></b>			<b><u>Pennsylvania:</u></b>		
Buxton	14 W14CR	NW 15kw, 35-15-49/75-31-41	Altoona	32 WTOO-CA	CC from W32AX
Buxton	41 W41CM	NW 100kw, 35-15-49/75-31-41	Freedom	31 WWBP-LP	QC from ch. 25, 29kw
Charlotte	3 WBTV	NS 25kw/204m, 35-17-50/ 81-06-56 (aux)	Lancaster	23 WLYH-DT	NW 500kw/381m
Charlotte	21 W21CK	QG from W34BN, 16.79kw, 35-11-56/ 80-52-36	Philadelphia	42 WTXF-DT	PG>1000kw/281 40-02-26/ 75-14-19
Cherokee	33 WUNF-1	NS 2.7kw, 38-28-24/ 83-19-22	Philadelphia	45 WELL-LP	QG from ch. 15, 50kw; CL from Willow Grove
Fayetteville	45 W45CO	QC from W66DF, 41.5kw	Pittsburgh	25 KDKA-DT	PC>1000kw
Lumberton	35 W35CC	QC from W67DU, 27kw	Reading	25 WTVE-DT	PR>900kw/395m, 40-19-52/ 75-41-41
Raleigh	60 WHOA-LP	FC?, sold to Hispanic company	<b><u>South Carolina:</u></b>		
			Allendale	14 WEBA-TV	PR>2307kw/241
			Allendale	33 WEBA-DT	PR>427kw/241m
			Beaufort	16 WJWJ-TV	PR>2553kw/385 32-



Beaufort	44	WJWJ-DT	42-42/ 80-40-54 PR>468kw	Mexican Hat	13	K13XO	Kanarraville NW 37-09-00/ 109-51-34
Charleston	24	WTAT-TV	PR<3500kw/583	Ogden	9	KUEN	CC from KULC
Orangeburg	45	W45CQ	QG from W55CQ, 29.4kw, 33-31-36/ 80-49-44	Oljeto	4,	K04OZ, 11, K11US, 13 K13XP	NW <5w, 37-02-28/ 110-19-48
Rock Hill	15	WNSC-DT	PR>403kw/212m	Price	3	KUTF-DT	NW 9.4kw/658m (converts from analog on same channel)
Rock Hill	30	WNSC-TV	PR>2674kw/212	Provo	32	KCBU	PG 3072kw/812m FC, sold to Univision
<b>South Dakota:</b>				Salina	24	K24GK	NW 140w, 38-52- 37/111-52-32
Eagle Butte	25	KPSD-DT	NW 31kw/489m, 45- 03-14/ 102-15-47	Vernal	7	K07CY	PR>1.2kw; PG
Pierre	21	KTSD-DT	NW 34kw/457m, 43- 58-05/ 99-35-40	Vernal	9	K09CY	PR>1.2kw; PG
Vermillion	34	KUSD-DT	NW 27kw/204m, 43- 03-01/ 96-47-01	Vernal	11	K11DF	PR>1.2kw; PG
Vernal	13	K13HF		Vernal	13	K13HF	PR>1.2kw; PG
<b>Tennessee:</b>				<b>Vermont:</b>			
Chattanooga	3	WRCB-TV	PC>377m	Newport	36	W36CP	PG>24.9kw, 44-21-18/ 72-01-17
Knoxville	28	WEZK-CA	FC; translates WMAK-DT 7	<b>Virginia:</b>			
Nashville	23	WNAB-DT	PC>350kw	Charlottesville	16	WVAW-LP	QC from ch. 64, 150kw
Nashville	58	WNAB	PC>3980kw/434 36- 15-50/ 86-47-39	Danville	40	WYAT-LP	QG from ch. 55, 150kw
Sevierville	22	WJZC-CA	FC; translates WMAK-DT 7	Portsmouth	17	WKTD-CA	PG<15kw, 36-49-14/ 76-30-41
<b>Texas:</b>				<b>West Virginia:</b>			
Abilene	9	KRBC-TV	XC 32-17-06/ 99-44-23	Charleston	8	WCHS-TV	PG 49.6kw/532m
Amarillo	41	KEYU-LP	NW 123kw, 35-20-33/ 101-49-20 (Univision)	Wheeling	56	WVWV-LP	CC from W56DX
Beaumont	64	KUIL-LP	PR>150kw; PG	<b>Wisconsin:</b>			
Big Springs	21	NEW-LP	AF RE 10kw, 32-13-05/ 101-27-08	Eagle River	28	WYOW-DT	PR<70kw/144m
Corpus Christi	7	KTOV-LP	CC from KCBO	Eau Claire	15	WQOW-DT	PR<200kw
Corpus Christi	21	KCBO-LP	CC from KTOV-LP	Elk Mound	45	W45CF	PR<140w, 44-48-00/ 91-27-56; CL from Chippewa Falls; PG;
Corpus Christi	34	KYDF-LP	QG from ch. 64, 9kw, 27-47-59/ 97-23-30	Janesville	32	WBUW-DT	NW 200kw/387m, 43-03-03/ 89-29-13
Gainesville	69	KBFW-LP	NW 150kw, 33-19-42/ 97-03-56	Janesville	57	WBUW	PC>415m, 43-03-03/ 89-29-13
Hereford	33	K33GH	PR<170w; PG	La Crosse	14	WXOW-DT	PR<250kw
Killeen	16	KADT-CA	CC from K16CY	Milwaukee	10	WMVS	PG 223kw/339m, 43-05-46/ 87-54-15
Lufkin	9	KTRE	PG>316kw	Waukesha	47	WTAS-LP	QG from ch. 43, 150kw
Nacogdoches	19	KYTX	PC>4270kw/457 31- 54-20/ 95-05-05; CC from KLSB-TV	<b>Wyoming:</b>			
Pecos	59	NEW-LP	AF 999w, 31-25-45/ 103-28-45 RE	Casper	13	KCWY	PR 10.9kw/488m, 42-44-45/ 106-21-14
San Antonio	8	KLRN-DT	NW 8.3kw/259m	Casper	23	NEW-LP	AF RE 10kw, 42-50-32/ 106-13-04
San Antonio	23	K48DS	QR from ch. 48, 9kw, 29-26-29/ 98-30-22; dismissed, going for ch. 40/7kw instead	Cheyenne	14	K14LV	PG>11.2kw, 41-10-01/ 104-45-21
<b>San Antonio</b>	<b>58</b>	<b>WOAI-DT</b>	<b>PG&gt;776kw; PC</b>	Cheyenne	40	KKTU-LP	CC from K40HP
Victoria	17	KMOL-LP	CC from K17FS	Freedom	31	K31DC	PR>200w, 43-07-08/ 111-07-46; PG
Victoria	19	KVCT	PG>1000kw/312 28- 50-42/ 97-07-33	La Barge	42	K42GZ	QG from K04FV, 1kw
Victoria	21	KUNU-LP	PR>23kw	Mountain View	31	K31FW	NW 1.38kw, 41-06-19/ 110-12-13
<b>Utah:</b>							
Cedar City	47	K47IS	PR>1.2kw, 37-38-18/ 113-01-52; CL from				

Riverton	28 K28HL	QC from K08GO, 1.19kw, 43-27-00/ 108-14-00
Shoshoni	30 K30GV	NW 1.19kw, 43-27-00/ 108-14-00

Note that the towers for LPTV stations WCRD-44 (Carthage), WBKM-46 (Chana), WRDH-7 (Holcomb), and WMKB-25 (Rochelle) are all at the same site in northern Illinois. Likewise, the sites of K28HL, Riverton and K30GV, Shoshoni (Wyoming) are also identical.

The dismissed application for channel 61 at Bay City, Michigan and the granted application for channel 46 were from the same application group. The allotment was originally channel 61; the surviving applicant successfully petitioned to get the channel changed to ensure the station could actually be built. (and not lost to the removal of channels 52-69)

K48DS in San Antonio originally applied to move to channel 23. I have no idea how they managed to forget about 2,000kw KHCE-23, licensed to the same city and with a transmitter less than 20km (15 miles) away! The application was promptly dismissed; they're going to try for channel 40 instead...

The FCC has released rules for the digital conversion of TV translators, LPTV stations, and Class A stations. The highlights:

- ⌘ The Commission concludes federal law requires these stations be eventually compelled to convert to digital operation. However, they conclude that no fixed date for the end of analog low-power operation is required nor advisable, at least not until issues in the full-power digital transition are resolved.
- ⌘ DTV translators may choose any of three operation modes:
  - ⌘ *Regenerative*, where the DTV signal is received off-air, demodulated to a stream of data, remodulated, and rebroadcast.
  - ⌘ *Heterodyne*, where the DTV signal is received off-air, converted to a different frequency, and rebroadcast without demodulation. This is essentially the same process used by many analog translators, and indeed there is no difference between a heterodyne translator for analog service and one for digital service.
  - ⌘ *Modulated*, where the signal to be translated is delivered by some means other than off-air reception. (microwave, optical fiber, etc.)

The Commission expresses a strong preference for regenerative operation. The technical advantages are obvious. Heterodyne operation will be permitted, but VHF heterodyne translators will be limited to a transmitter output power of 3 watts; UHF translators will be allowed 30 watts.

- ⌘ VHF digital low-power stations will be limited to 300 watts average effective radiated power. UHF stations will be allowed up to 15 kilowatts. These powers are 10% of those allowed for analog low-power operation. (however, digital and analog power are calculated differently and cannot be directly compared)
- ⌘ DTV translator licensees will be allowed to modify existing analog translators for digital operation in the field.
- ⌘ DTV translators must rebroadcast the signals of a primary station without modification. There are limited exceptions. For example, two digital translators in Gunnison, Colorado may wish to translate the signals of KKCO-DT Grand Junction and KKTU-DT Colorado Springs. Both primary stations' "major channel number" is 11; if both were

translated verbatim, many DTV receivers would only receive one of the two stations. The translators would be allowed to change the major channel number of one or both stations to resolve the conflict.

- ⌘ The FCC declined to create a digital booster service. They did, however, authorize DTV translators to operate on the same channel as their primary station. Which is the same thing... "While allowing operations that are technically equivalent to boosters, applications for these stations must be filed as a new TV translator or LPTV station." Uh, OK...
- ⌘ DTV translators will, like analog units, be allowed to solicit financial support, with announcements of up to 30 seconds per hour. DTV translators will also be allowed to originate emergency warnings.
- ⌘ A single DTV translator will be allowed to translate more than one primary station. (through "multicasting", it would be possible to translate as many as six stations over a single translator, on a single channel.)
- ⌘ Analog translators will be allowed to rebroadcast the signals of DTV stations. (by downconverting to analog) (this is already happening, under special temporary authority, in Utah)
- ⌘ DTV translators will be allowed to rebroadcast the signals of analog stations.
- ⌘ And, DTV translators will be allowed to "mix and match" – carrying the signals of digital stations on some subchannels, and those of analog stations on others. (all subchannels will be digitally transmitted; any analog station carried will be converted to digital before being translated)
- ⌘ Digital LPTV and Class A stations must transmit at least one free video service intended for reception by the general public. Additional services, including subscription and/or data-only services, may be optionally transmitted.
- ⌘ **The Commission decided not to require digital low-power stations to identify!** "As NTA notes, a station can be located by triangulation on its signal." Identification could also be done by monitoring information about the primary station in the signal being rebroadcast, or by looking up the station on the FCC website.
- ⌘ While stations won't be required to use them, they will receive call letters. Digital LPTV stations with four-letter calls will receive a -LD suffix, like WNPX-LD. Digital Class A stations will receive a -CD suffix, like WMAK-CD. Five-character stations like W61AK will receive a -D suffix, becoming W61AK-D.
- ⌘ Channels 52-69 will only be available for existing LPTV/translator/Class A stations. A channel above 51 will be available for digital use by a station:
  - ⌘ - whose analog operation is already on that channel, or;
  - ⌘ - which has been displaced from its channel (by a Class A or full-license operation), or;
  - ⌘ which seeks a "companion" digital channel and can certify no channel below 52 is available. In this case, only channels 52-59 are available.
- ⌘ Upon receipt of notice that a primary 700MHz wireless licensee is preparing to begin operations on a particular channel in the 52-69 range, the low-power TV station must leave the air within 4 months, unless it's able to negotiate an agreement for continued operation with the wireless licensee.
- ⌘ LPTV/translator/Class A stations may request a "companion" channel, a second channel for simultaneous analog and

digital operation – much as is being done with full-license stations. The major difference is that low-power stations are not guaranteed a second channel.

- ⌘ A filing window will be opened for these companion channels. During this period, applications may be filed.
- ⌘ Mutually-exclusive applications must, by Act of Congress, be resolved through auctions. However, by another Act, Class A digital conversion applications must not be resolved through auctions...

Therefore, if any application is filed that's mutually exclusive with a Class A digital conversion application... the parties involved will be given a period to find engineering solutions to resolve the exclusivity. If they fail, all mutually-exclusive applications will be dismissed.

- ⌘ Low-power stations wishing to convert to digital on their existing channels need file only a "minor change application". The digital signal contour must overlap *some portion* of the existing analog coverage. Such applications may be filed as soon as the rule changes covered in the proceedings become effective and the application form is approved.

There have been two major actions involving indecency in the last month. In one, CBS was fined \$550,000 for the Janet Jackson "wardrobe malfunction" incident. Actually, each CBS-owned affiliate was fined \$27,500, the statutory maximum. (there are twenty such stations) The FCC has little direct jurisdiction over networks; they generally can sanction only the affiliates.

The Commission considered fining all CBS affiliates – not just those owned by the network – but in a non-unanimous decision decided not to. However, they did fine third-party affiliates in another case.

The second case involved a Fox program called "Married by America". This program aired footage shot at bachelor and bachelorette parties – I'll leave the content to your imagination. All Fox affiliates that aired the program were fined \$7,000 each.

Presumably the Commission felt Fox affiliates could have predicted something indecent would be part of this program. CBS affiliates, presumably, couldn't have predicted nudity during a football game!

In many cases, failing to predict a violation is not a defense; if a station is caught operating at 150% of authorized power, not knowing that the power-control circuits were about to fail will not protect it from a fine. On the other hand, wilful violation usually does result in greater sanction.

The FCC did suggest that local affiliates need to consider instituting a brief delay in live programs, to allow them to "dump out" of any unexpected unacceptable material.

(personal opinion: In many smaller markets, this is not practical.: Delay equipment is quite expensive, especially equipment with adequate capacity and reliability to delay everything you air.

So is the staff time to operate this equipment. Usually, master-control operators have other duties. (dubbing commercials, setting up satellite equipment to record syndicated programs, tuning in live remotes, visiting the ladies' room!) Might a delay requirement force stations to hire additional operators?

Many live broadcasts take place from locations beyond the physical control of the stations. If you're interviewing the Mayor live on the front steps of City Hall, can you prevent someone from climbing the steps and "mooning" the camera? There have been at least two recent incidents where "streakers" – carrying advertisements – have run onto the field during sporting events. Reasonable security was present at these venues, but it's awfully difficult to prevent an unarmed person from taking their clothes off in front of the cameras!

If local affiliates are put on notice that unexpected indecency will lead to sanctions, many will simply stop airing live programs from locations beyond their control. I have already heard from one small-market broadcaster who said his station decided not to launch a new live local program for just this reason.)



# SATELLITE NEWS

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Glad to be back with a few changes. The first area to look at is **Satcom C4/AMC10**  
XPDR 11 - Speed Channel here in analogue VC2

XPDRs 100 through 109 - The Starz Encore Plex - all have moved to Galaxy 5 using the same transponder numbers for each service..  
XPDRs 860 through 867 - the DMX Hispanic music Canales N is no longer here. Where did it go ???

**Galaxy 1** - XPDR 10 - MSNBC is probably going to shift to a digital format very soon.

Intelsat Americas 7 - XPDR 21 - sub-carrier Yesterday USA no longer here - probably someplace on MPEG2 - anyone know where and can let us know?

**Galaxy 5** - XPDR 18 - Spike East - now moved to digital someplace.

**Galaxy 11** - XPDR 800 - Blue Highways - color bars only noted lately

That's all of note this time around - see you, hopefully, in 30.'73's

*George*

November 2004

A mixed bag this month. First we start with a few photos from "Old Roy" Barstow up at old Cape Cod, MA:



WECT-DT-44 Wilmington, NC  
644 mi Tr seen 6/21/04  
@2315 EDT



WITN-DT-32 Washington, DC  
565 mi Tr seen 6/21/04  
@2210 EDT



WCSC-DT-47 Charleston, SC  
778 mi Tr seen 6/22/04  
@0015 EDT

And here's a nice DTV catch from David Austin of Columbia, SC:

Equipment: Radio Shack LP-190 log periodic, Zenith HDV-420 DTV receiver (into RCA analog receiver)



WTLV-DT-13 Jacksonville, FL  
259 mi Tr seen 08/10/04  
@ 0725 EDT



Here's some great E-skip from Andrew MacKenzie of Greenville, NY:

Equipment: 1982 Sony KV1547R 15" color TV, Radio Shack VU-190XR antenna and 30 dB preamp. Hauppauge WinTV-D video card for screen shots.



WMAB-2 State College, MS  
1036 mi Es seen 6/26/04  
@1930 ET



WLBT-3 Jackson, MS  
1140 mi Es seen 7/5/04  
@1220 ET



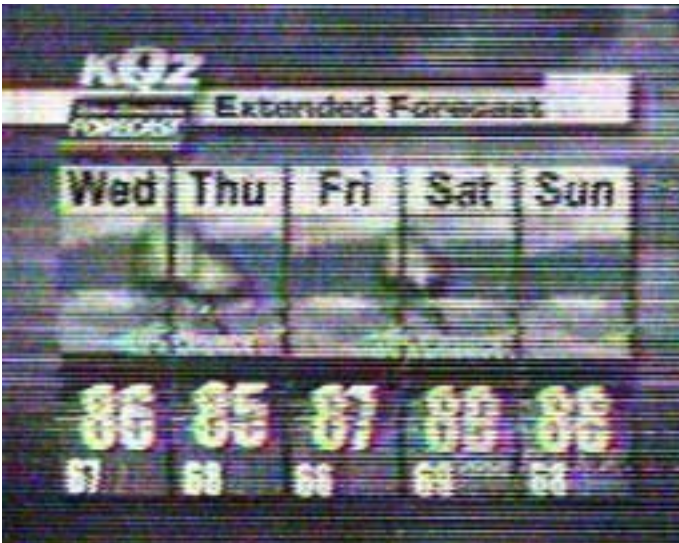
KTVI-2 St. Louis, MO  
900 mi Es seen 7/2/04  
@2018 ET



WPTV-5 W. Palm Beach, FL  
1146 mi Es seen 7/26/04  
@1257 ET

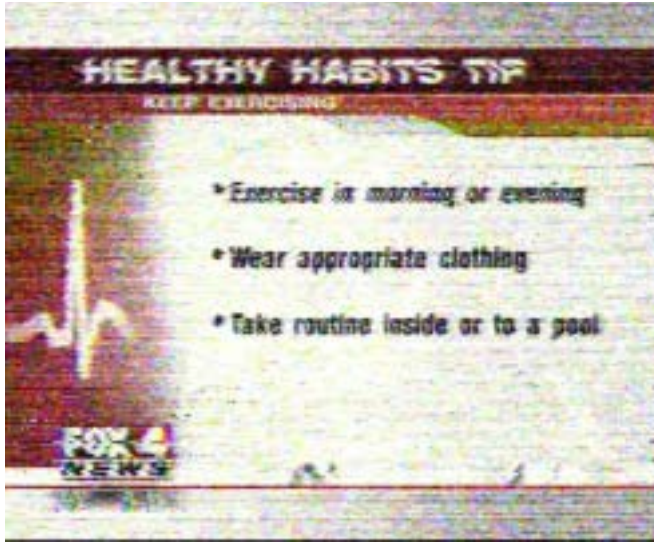


KCTV-5 Kansas City, MO  
1101 mi Es seen 7/26/04  
@1919 ET



KQZ-2 St. Joseph, MO  
1098 mi Es seen 7/26/04  
@1914 ET





WDAF-4 Kansas City, MO  
1101 mi Es seen 7/26/04  
@1813 ET



WESH-2 Daytona Beach, FL  
1015 mi Es seen 7/26/04  
@1207 ET

My apologies to Greg Barker of Greensburg, IN, who apparently also decoded KOTA-DT-2 Rapid City, SD on the same day as Glen Hale and Girard Westerberg:



KOTA-DT-2 Rapid City, SD  
972 mi Es seen 5/26/04  
@1855 ET

And finally, here's a couple from Jason Koralja of Surf City, NJ:  
Equipment: WinTV-D card, Zenith ZHDTV1 antenna



WCTX-59 New Haven, CT  
131 mi Tr seen 6/3/04



WFMZ-69 Allentown, PA  
95 mi Tr seen 6/3/04

73's,  
JEFF

# Eastern TV-DX

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November, 2004

Dec. 2004 column deadline: Nov. 12

Eastern TV-DX is for reporters from the following states: AL, CT, DE, FL, GA, IN, KY, MA, MD, ME, MI, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT and WV, plus Washington, DC. Also for reporters from the following Canadian provinces: NB, NF, NS, ON, PEI and PQ. Overseas reports welcome!

Jim Renfrew, Byron NY

renfrew14422@juno.com

Equipment: Zenith TV, UHF antenna on rotor and VHF antenna hand-aimed.

## 7/21 Es

1959 KATC 3 LA Lafayette  
2107 WREG 3 TN Memphis

## 7/24 Es

1245 KMTV 3 NE Omaha

## 8/1 tr

2320 WHIZ 18 OH Zanesville  
2322 WOUC 44 OH Cambridge  
2359 WPGH 53 PA Pittsburgh  
2359 WNGS 67 NY Springville (rare)

## 8/2 tr

0142 WVIZ 25 OH Cleveland  
0335 WBNX 55 OH Akron  
WNEO 45 OH Alliance  
WUAB 43 OH Lorain  
WOIO 19 OH Shaker Heights  
0400 WJW 8 OH Cleveland  
WGTE 30 OH Toledo

## 8/4 Es

1827 CBHT 3 NS Halifax  
1830 KYTV 3 MO Springfield  
1847 KTVI 2 MO St. Louis  
1850 KOTV 6 OK Tulsa

## 8/6 Es

1630 unID 3 KDLO or KMTV

## 8/31 Es

1645 KATC 3 LA Lafayette

## 9/13 tr

2130 WCFE 57 NY Plattsburgh 256  
2135 WFFF 44 VT Burlington 261  
new TV state, #24  
2140 CFGS 34 PQ Hull 201  
2141 CIVO 30 PQ Hull 201  
2142 CFMT2 60 ON Ottawa 201  
2143 CKWS1 66 ON Brighton  
2205 WTVU-LP 22 NY Syracuse 97  
2207 WIVT 34 NY Binghamton 129  
2210 CHCH3 67 ON Severn Mills  
2215 WFXV 33 NY Utica 143  
2227 WSKG 46 NY Binghamton 129  
2301 CJOH 13 ON Ottawa 201

## 9/14 tr

0047 CFJP 35 PQ Montreal 278  
0050 CHRO43 43 ON Ottawa 201  
0845 WVTA 41 VT Windsor 288  
through CIII!  
0850 CITY3 65 ON Ottawa 201

## 9/15 tr

1200 WSHH-LP 36 NY Rochester, new calls

## 9/20 tr

1127 WEYI 25 MI Saginaw 298  
1137 WOUB 20 OH Athens 334  
1142 WOUC 44 OH Cambridge 279  
2129 CFMT2 60 ON Ottawa 201  
2236 CBLN5 20 ON Wiarton  
2305 WHIZ 18 ON Zanesville 297  
2310 WVPX 23 OH Akron 225  
2315 W30BW 30 NY Olean, TBN 71  
2324 WEWB 45 NY Schenectady 211  
2335 CBOT1 59 ON Foymount

## 9/21 tr

0005 WQPX 64 PA Scranton, Pax 169  
0007 CIVO 30 PQ Hull 201  
0030 CHOT 40 PQ Hull 201  
0042 WBRE 28 PA Wilkes-Barre 169  
0050 WYOU 22 PA Scranton 169  
0056 WMHT 17 NY Schenectady 211  
0103 WXXA 23 NY Albany 218  
0104 W29BJ 29 NY Burlington, SAH 261  
0108 WYPX 55 NY Amsterdam, Pax 196  
0112 WVIA 44 PA Scranton 169  
0118 WETM 18 NY Elmira, NBC 93  
0250 WGTE 30 OH Toledo, PBS 299  
0305 WWJ 62 MI Detroit, CBS 261  
0310 WXIN 59 IN Indianapolis 477

## NEW STATE

0315 W48CH 48 PA Erie, TBN 122  
0446 CICO93 42 ON McArthur's Mills  
0448 CFGS 34 PQ Hull, TQS 201  
0451 CBOT5 33 ON McArthur's Mills, TP  
0452 CBOT2 19 ON Barry's Bay, TP  
1756 WTVS 56 MI Detroit, PBS 261  
1800 WVFX 46 WV Clarksburg, Fox 288

## NEW STATE

1802 CKCO3 42 ON Sarnia, "CKCO"  
1804 CHCH2 51 ON London 161  
ghost under WPXJ  
1806 WKBD 50 MI Detroit 261  
1807 WCWB 22 PA Pittsburgh 207  
WB22  
2025 WQEX 16 PA Pittsburgh, SAH 207  
2027 WTOV 9 OH Steubenville 230  
2036 WLPX 29 WV Charleston, Pax  
2044 WBGN-LP 59 PA Pittsburgh 207  
2045 W61CC 61 PA Pittsburgh, HSN 207







1739	WSIL	3	IL	Harrisburg	961	0200	WUHF	31	NY	Rochester	260
1801	WCIA	3	IL	Champaign	842	0205	WXXI	21	NY	Rochester	260
<u>9/4 tr</u> back in St-Lambert											
1840	<u>WIXT</u>	9	NY	Syracuse	217	0210	WNLO	23	NY	Buffalo	318
1844	WXXA	23	NY	Albany	202	0235	WNED	17	NY	Buffalo	318
<u>9/5 tr</u>											
0159	WUTV	29	NY	Buffalo	318	0240	<u>CICA</u>	19	ON	Toronto	317
						2035	<u>CIVV</u>	8	PQ	Chicoutimi	248
						2040	CFRSt	4	PQ	Chicoutimi	248

Roger Gravelle, St. Thomas, ON, Canada

9/18 tr

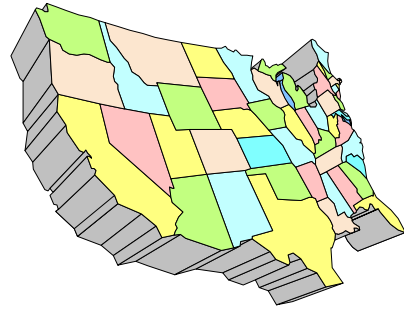
0530	WKEF	22	OH	Dayton, ABC	
0530	WRGT	45	OH	Dayton, Fox	
0600	WKOI	43	IN	Richmond, TBN	
0601	WYFX	36	OH	Youngstown	
0602	WBKI	34	KY	Campbellsville, WB	
0603	WLKY	32	KY	Louisville	
0604	WKON	52	KY	Owenton, KET	
0605	WKZT	23	KY	Ellizabethtown, KET	
0610	WTLN	44	OH	Lima, Worship TV	
0610	WXCB	56	OH	Delaware, rel.	
0615	WXIX	19	KY	Newport, Fox	
0625	WPTD	16	OH	Dayton, "Think"	
0630	WBDT	26	OH	Springfield, WB	
0631	WAVE	3	KY	Louisville	
				ID visible under 3 Cleveland	
0632	WHIO	7	OH	Dayton, CBS	
0633	WDRB	41	KY	Louisville, Fox	
0633	unID	19	KET		
0634	WKYT	27	KY	Lexington	
0635	WDKY	56	KY	Danville	
0635	WSTR	64	OH	Cincinnati, WB64	
0640	WRGT-DT	30	OH	Dayton	
0640	WDTN-DT	50	OH	Dayton, ABC	
0641	WTVG-DT	19	OH	Toledo, ABC	
0645	WSTR-DT	33	OH	Cincinnati, WB	
0645	WNDY-DT	32	IN	Marion, UPN	
0647	WLWT-DT	35	OH	Cincinnati	
0650	WWHO-DT	46	OH	Chillicothe	
0650	WPTD-DT	58	OH	Dayton	
0657	WXIX-DT	29	KY	Newport	
0700	WHAS	11	KY	Louisville	
0725	WLKY	32	KY	Louisville (clear)	
0730	WKMJ-DT	38	KY	Louisville, KET2	
0731	WPTO-DT	43	OH	Ozford	
0732	WHIO-DT	41	OH	Dayton, CBS	
0802	WCPO	9	OH	Cincinnati	
0930	unID	60	TBN		
				suspect Bethlehem, PA	
0940	WTVQ	36	KY	Lexington	
<u>9/19 tr</u>					
0545	WDWO	18	MI	Detroit, TBN	
0546	unID	19		"UPN Indiana 19"	
				suspect Madisonville, KY UPN	
				(it doesn't sound like them, their slogan is "Evansville's WB 19"-mcs)	
0548	WSBT	22	IN	South Bend	
0549	WSBT-DT	30	IN	South Bend	
0550	unID	60		Spanish, WXFT?	

0550	WFLD	32	IL	Chicago	
0600	WDBW-DT	20		unknown, no city ID	
0808	WLNS-DT	59	MI	Lansing	
0820	WDCQ-DT	15	MI	Bad Axe	
0821	WEYI-DT	30	MI	Saginaw	
0822	WWHO	53	OH	Chillicothe	
0830	WJRT-DT	36	MI	Flint	
0830	WFUM-DT	52	MI	Flint	
0831	WTLJ	54	MI	Muskegon, TCT	
0855	WILX-DT	57	MI	Lansing	
0855	WLLA	64	MI	Kalamazoo	
0857	WXMI	17	MI	Grand Rapids	
0900	WNEM-DT	22	MI	Bay City	
0930	WLUK	11	WI	Green Bay	
0930	WGBA	26	WI	Green Bay, NBC	
0931	WHPR	33	MI	Detroit, Aviation TV	
0945	WPXI-DT	48	PA	Pittsburgh	
				still in at 1210	
0955	WWCP-DT	29	PA	Johnstown	
1000	WOUC-DT	35	OH	Cambridge	
1000	WQED-DT	38	PA	Pittsburgh	
1001	WPGH-DT	43	PA	Pittsburgh	
1001	WNPA	19	PA	Jeanette, UPN	
1008	WSBT-DT	25	IN	South Bend	
				(this is on 30, not 25-mcs)	
1015	WLNS-DT	59	MI	Lansing (still in)	
1040	WPBY-DT	34	WV	Huntington	
1215	WYMT	57	KY	Hazard	
				"Mountain News"	
<u>9/20 tr</u>					
1700	WBGU-DT	56	OH	Bowling Green	
1705	WPCB-DT	50	PA	Greensburg	
1900	WPCB	40	PA	Greensburg	
1920	CKXT-DT	66	ON	Toronto	
1922	Omni 1	52	ON	Toronto	
2000	WNPB	24	WV	Morgantown	
2002	WWCP-DT	29	PA	Johnstown	
2003	WOUC-DT	35	OH	Cambridge	
2015	WYTV-DT	36	OH	Youngstown	
2240	WBGN	59	PA	Pittsburgh	
2255	WWPX	60	WV	Martinsburg	
2257	WUPV	65	VA	Ashland, UPN	
2300	WPGH	53	PA	Pittsburgh	
				thru 53 London	
2300	KDKA-DT	25	PA	Pittsburgh	
2302	WEAO-DT	14	OH	Akron	
2302	unID-DT	25		mystery, on screen ID box shows "CRRS 25-10"	

This was the most exciting DXing that I have enjoyed in many years!! Robert Ross of London told me to keep watch for enhanced reception when Hurricane Ivan got out of the way-boy was he right! Thanks Robert! 73's Roger.

# WESTERN TV DX

**VICTOR FRANK**  
**12450 SKYLINE BLVD.**  
**WOODSIDE, CA 94062-4554**  
**Victor.frank@sri.com**



**Dennis Park Smith**, 3605 San Remo Drive, Santa Barbara, CA 93105-2523 (805)687-7803

This report is for August and September 2004. I lost my August notes so wrote them down again from memory, hopefully generally accurate. During these months, the weather overall cooled down with Summer going into Autumn so the inversion layer temperature and humidity difference have become not as pronounced, and therefore the southern-California coastal tropo DX has become not as good.

Aug 1-5: Variably poor-fair  
 Aug 6-8: Very good (lower inversion layer boundary)  
 Aug 9-16: Variably good-fair  
 Aug 17-30 am: Poor  
 Aug 30 eve: Very good  
 Aug 31: Good  
 Sept 1-3: Variably good+  
 Sept 4-12: Out of town  
 Sept 12 eve-13: Fair  
 Sept 14-15 am: Poor  
 Sept 15 eve-17am: Good  
 Sept 17 eve-18: Poor  
 Sept 19-22: None (windy)  
 Sept 23: Fair  
 Sept 24-26: Good  
 Sept 27-28: Fair  
 Sept 29-30: Very poor

While I was in Wasco, there was a bit of tropo, all poor to fair.:

Sept 9 am: KTXL 40 (Fox) Sacramento (215 mi) (KVPT-DT) 40 Fresno 85 mi off), Offset CCI u/local KVVG-LP 31 Porterville (40 mi), probably KMAX 31 Sacramento (215 mi)  
 Sept 11 am: KTXL 40 Sacramento (215 mi), (Fresno DT still off), KQCA 58 (WB) Stockton/ Sacramento (215 mi) (local KBFX-CA 58 Bakersfield apx 45 mi off), Offset-31 CCI (prob. KMAX 31 Sacramento), Zero offset 15 u/local K15CO Porterville (40 mi) (may be LP in Sacramento at 240 mi?)  
 Sept 11 eve: Offset CCI u/KVPT 18 Fresno (85 mi), SE (Bakersfield direction, something new?)

Best of DX to All. Dennis

**William Draeb**, 1304 Ellis St., Kewaunee, WI 54216-1802

Equipment: 1994 Sylvania 25" TV; Rohn 25G 40' tower; ch 2026, Y713, KU420(screened) antennas. CMA-Ub, CMA-HB; preamps; TR44 rotor; etc.

August 2004

31 Es	1543	WFSB	3	
		WEDU	3	
		WLNE	6	
		WBZ	4	
		WGBH	2	
		WCVB	5	
	1558	WNBC	4	
		WCBXt	2	
	1617	WCAX	3	
		unID	3	Canada
	1622	WCSH	6	ID in LR of screen
	1624	WLBZt	2	
		WABIt	5	
	1631	CJCH6	6	ATV News
	1634	CBHT	3	CBC News
	1640	CHSJ	4	CBC News
tr	1938	S.Bend U's; WAAT-69 w/"ABC Now"		
		Cable News Channel.		
		<u>September 2004</u>		
1 tr	1124	WLUK	11	Much weaker than normal, WTTW-11 overriding them easily.
		W12BK	12	In again
		W22BW	22	Off again
	1900	WMKE-LPt	7	
5 tr	2012	MDA Telethon, ch. 15, SSE		
		W15AM?		
8 gw	2000	W22BW		Back on, but must have changed offsets. They used to be zero offset, same as WSBT-22. Now they are closer to a + or - (minus) 10 kHz, but not zero anymore.
tr		CICOTVt	20	
9 tr	2000	WILLt	12	Zero beat w/WISN-12
10tr	1900		68	TBN (WWTO-35)
		Palantine, IL?)t		
			48	3ABN, South
	1924	WLLA	64	Family Network Pgm
	1944	W64CG	64	FOX 33, Cadillac
		W54??	54	" " N. Lower MI
11 tr	0507	WFWA	39	
	1000	WANE	15	
		WFFT	55	
		W47ABt	47	Mansfield OH, Educ.
		(WOSU)		
	2050		29	UPN Baseball, SE
12tr	1900	WXSP-LP	33	I.D.
		unID	41	ABC, S. (not WOTV-41 or WMLW-LP-41)
13tr	0620	Ft. Wayne,	15, 33, 39	
14tr	0630	W22BW	22	Looks like they're back to zero offset.
18tr	0615	Ft. Wayne	15, 21, 33, 39, 56	
	0630	Dayton	16,22,45	
		Cincinnati	48, 64	
	0655	Huntsville	48 (tent)	
	0925	Louisville	15t, 21t, 32t, 41t, & 68	
	1958	Family Net	68	
		W64CG		
		Petoskey	20	TBN

2100 WBUP 10 Color bars  
 19tr 1900 WBUP 10 Color bars  
 1940 W64CG 64 Not as good as  
 yesterday, when they were snow-free.  
 16 (tent)  
 CBLFT 23  
 Petoskey MI 20, TBN  
 22tr 1928 CKCO 13 Snowfree  
 WICU 12 Snowfree  
 1946 CITYTV2 31 Snowfree  
 1958 WIVB 4 Weak sig.  
 24tr 2020 WBIJ 4 Fair sig.  
 29tr 2015 unID 48 Catholic Pgm. S.  
 (Chicago area?)  
 unID 48 Shop at Home Net, S.

25Es 1123 C\_\_\_ 2 FR  
 1123 C\_\_\_ 3 CBC  
 1123 CFM 4 QC  
 1123 C\_\_\_ 5 English  
 1136 CJPM 6 QC TVA  
 1138 CFRS 4 QC TQS  
 1150 CKCW 2 NB CTV/ATV  
 1154 CBAT 4 NB T.  
 1157 CKLT 3 NB ATV  
 1215 WGBH 2 MA  
 1226 WLNE 6 RI  
 2031 WLBY 2 ME  
 2105 KBEQ 2 TX  
 2117 XEFB 2 NL

26Es 1509 KMID 2 TX  
 1952 KREX 5 CO  
 1954 KCNC 4 CO  
 2001 KCWC 4 WY  
 2007 KVBC 3 NV  
 2012 KBEQ 2 TX  
 2027 KWGN 2 CO  
 2027 K\_\_\_ 5 CBS  
 2030 KTFL 4 AZ  
 2030 KTVK 3 AZ  
 2110 WPBT 2 FL  
 2131 KNAZ 2 AZ  
 2137 XEPM 2 CI  
 28Es 1457 C\_\_\_ 2 FR Soap  
 1500 C\_\_\_ 3 CBC FR Cartoons  
 29Es 1418 KMID 2 TX  
 30Es 1435 WCBD 2 SC  
 1441 WUND 2 NC  
 1500 WUNC 4 NC

**Marvin Shults**, RR 1, Toulon, IL 61483

June 2004 CT

20Es 2115 KDFW 4 TX  
 2120 KIII 3 TX  
 2121 KBEQ 2 TX  
 2140 WOAI 4 TX  
 2140 KENS 5 TX  
 2152 X\_\_\_ 2  
 2213 KPRC 2 TX  
 21Es 1139 WSAV 3 GA  
 1139 WESH 2 FL  
 1149 WEDU 3 FL  
 1245 WJXT 4 FL  
 1534 WESH 2 FL  
 1535 WFOR 4 FL  
 1550 WPBT 2 FL  
 1619 KBEQ 2 TX  
 23Es 2025 KRGV 5 TX  
 2030 KPRC 2 TX  
 2035 KIII 3 TX  
 2120 KBEQ 2 TX  
 2121 KBTX 3 TX  
 2134 KACV 2 TX  
 2135 KENW 3 NM  
 2204 KSWK 3 KS Lakin  
 2214 KBME 3 ND  
 2219 KWGN 2 CO  
 2227 KCNC 4 CO  
 2235 KREE 3 CO  
 2250 KUTV 2 UT  
 2310 KTVQ 2 MT  
 24Es 0638 WGBH 2 MA  
 0936 KWGN 2 CO  
 0936 K? 5 CBS, MDT  
 0936 K? 4 PBS  
 0954 KIDK 3 ID  
 1000 KGWL 5 WY  
 1005 KSL 5 UT  
 1006 WPTV 5 FL  
 1010 WKMG 6 FL  
 1012 WJXT 4 FL  
 1018 WSAV 3 GA  
 1024 WPBT 2 FL  
 1030 WTVJ 6 FL ID LR  
 1035 WESH 2 FL  
 1052 WUFT 5 FL  
 1055 WEDU 3 FL  
 1200 KFBB 5 MT  
 1214 KTVQ 2 MT  
 1308 3-5 Canada  
 1310 CFRN 3 AB  
 1311 CKCK 2 SK  
 1316 CBXT 5 AB  
 1327 CFQC 3 SK

July 2004  
 6 Es 1730 K\_\_\_ 5 CBS  
 1740 KCNC 4 CO  
 1740 KRMA 6 CO  
 1744 KREG 3 CO  
 1748 KTVS 3 CO T.  
 1800 WSKY 4 NC  
 1816 WUND 2 NC  
 1859 WUFT 5 FL  
 1908 WKMG 6 FL T.  
 1929 WJBF 6 GA? ABC  
 1940 WCSC 5 SC  
 1947 WRAL 5 NC  
 2004 WUNC 4 NC  
 2048 WJXT 4 FL  
 2055 WEDU 3 FL  
 2102 WESH 2 FL  
 2122 WCIV 4 SC  
 2135 WSAV 3 GA  
 8 Es 1500 WBRZ 2 LA  
 1510 WLBT 3 MS  
 1511 WWL 4 LA  
 1513 KATC 3 LA  
 1530 KPRC 2 TX  
 1542 KENS 5 TX  
 1545 KBEQ 2 TX  
 1549 KBTX 3 TX  
 1609 KMID 2 TX  
 1905 WESH 2 FL  
 1936 WEDU 3 FL  
 9 Es 1624 WPBT 2 FL  
 2021 KASA 2 NM  
 2029 WUND 2 NC  
 10Es 0700 WFMY 2 NC  
 11Es 1019 WEDU 3 FL  
 1026 WPTV 5 FL  
 1028 WFOR 4 FL  
 1030 WTVJ 6 FL

	1030	WPBT	2	FL	Digital Interferenc
	1039	WESH	2	FL	
	1057	WUFT	5	FL	
	1145	WKMG	6	FL	"Local 6"
	1230	WCTV	6	GA	
	1246	WSAV	3	GA	
	1300	WJXT	4	FL	
	1330	WCSC	5	SC	
17Es	0815	WUND	2	NC	
	1121	X	2		
20Es	1853	KTVQ	2	MT	
	1856	KHMT	4+	MT	T.
	2007	KNAZ	2	AZ	
21Es	1917	KDBC	4	TX	
	1918	XEPM	2	CI	
	1920	KENW	3	NM	
	1924	WESH	2	FL	
	2010	WUND	2	NC	
<u>August 2004</u>					
4 Es	2100	C	2		
	2102	CBAFT-3	3	NB	T. SRC FR News
	2123	WGBH	2	MA	
	2145	WLBZ	2	ME	
	2147	WBZ	4	MA	
31Es	1830	WGBH	2	MA	
	1830	WFSB	3	CT	
<u>September 2004</u>					
6 Es	2000	KNAZ	2	AZ	

**Dave Pomeroy**, 2321 SE Libra Ct.  
Topeka, Kansas 66605-3505  
weberbosco@earthlink.net

September 2004

08 Tr	PM	WSIU-DT 40*	Carbondale, IL
09	0630	KDLT-46	Sioux City, IA
	0650	WHO-DT 19	Des Moines, IA
	0700	KYIN-24	Mason City, IA
	0750	KUSD-DT 34	Vermillion, SD
	0800	KMEG-14	Sioux City, IA
		KWSM-20	Worthington, MN
	1100	KDNL-30	St. Louis, MO
		WICS-20	Springfield, MO]
	1115	KDIN-DT 50	Des Moines, IA
		WEAU-DT 39	Eau Claire, WI

This one was interesting as I watched it battle with analog channel 39 from Des Moines (Newton). I had an analog set tuned to channel 39 and the tuner card to digital channel 39. As Des Moines disappeared in digital snow Eau Claire decoded. That is the first time I have noticed that phenomenon.

1120 KTIN-21 Ft. Dodge, IA

	2200	KRIN-DT 35	Waterloo, IA
		KCRG-DT 52	Cedar Rapids, IA
		KTVO-DT 33	Kirksville, MO
	2230	WBUW-57	Janesville, WI
	2240	WMSN-47	Madison, WI
	2300	WTJR-16	Quincy, IL
10	0230	KPWB-20	Ames, IA
	0600	K30AC-30*	Marshall, MN
KSTP-5			
	0630	KWSM-20	Worthington, MN
		KTCA-DT 34	KARE-DT 35 WCCO-
DT 32 KPXM-DT 40 Twin Cities			
In my last report I listed KPXM-DT as channel 41. They are analog 41 and digital 40. The Samsung HDTV is confusing as to channel number as it maps to the analog channel.			
	0900	WHO-DT 19	Des Moines, IA
		WMSN-47	Madison, WI
		WBUW-57	Janesville, WI
		KWKB-20	Iowa City, IA
	0940	WEAU-DT 39	Eau Claire, WI
11	0500	K40CO-40	Storm Lake, IA
KMEG-14			
		KCCI-DT 31	Des Moines, IA
	2300	DTVs 19, 21, 26, 35 and 45	very strong from Wichita, KS
12	0730	KWSM20	Worthington, MN
		KMEG-14	Sioux City, IA
	0900	K40CO-40	Storm Lake, IA
KMEG-14			
		KTIN-21	Ft. Dodge, IA
13	0630	WICS-20	Springfield, IL
17	0710	KARE-DT 35	KTCA-DT 34
		WCCO-DT 32	Twin Cities
		WHO-DT 19	KDSM-DT 16
		(past KTAJ-16)	KDIN-DT 50
			Des Moines, IA
	0715	KHBS-40	KHBS-DT 21 Ft. Smith, AR
	0730	KDLT-46	KELO-DT 32 Sioux City, IA
		KESD-DT 34	Vermillion, SD
	0745	KTIV-DT 41*	KMEG-14 Sioux City, IA
	0800	UNID-53 with KOLN/KGIN	Nebraska ETV on DTV channels 16,
	17 and 40		
		KUFS-LP 54*	Ft. Smith, AR
	1000	KTFO-DT 42	Tulsa, OK
	1245	WHO-DT 19	KDIN-DT 50
		KCCI-DT 31	Des Moines, IA
	1250	KRIN-DT 35	Waterloo, IA
19	0700	WICS-20	Springfield, IL

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John Zondlo  
 4009 Driftwood Circle  
 Yukon, OK 73099  
 sfm@fmdxweb.com  
 Deadline: 15th

For DXers in AL, AZ, AR, CA, CO, DE, DC, FL, GA, HI, KS, KY, LA, MD, MS, MO, NV, NM, NC, OK, SC, TN, TX, UT, VA, WV, Cuba & Mexico

November 2004

**Fred Laun** – 5801 Huntland –  
 Temple Hills, MD – [K3ZO@verizon.net](mailto:K3ZO@verizon.net)  
 EDT

Denon TU-800 tuner, Winegard antenna @ 35'

8/26 Tr

0028 WRCH 100.5 CT Farmington, ID 295  
 0037 WCIB 101.9 MA Hyannis, "Cool 102,"  
 through Baltimore's WLIF  
 385  
 0046 WKCI 101.3 CT New Haven, "KC-101,  
 Connecticut's #1 Hit Music  
 Station" 278  
 0101 WJKS 101.7 NJ Canton, ID 96  
 0535 WBBB 96.1 NC Raleigh, "The Triangle's  
 96-Rock" 237  
 0616 WNNL 103.9 NC Fuquay-Varina, ad for Don  
 Jacobs Carolina Ford 244  
 0623 WHAJ 104.5 WV Bluefield, "J-104.5...the  
 Mountains" 255  
 0638 WFMZ 104.9 NC Wanchese, "Classic Hits  
 104.9," phone 473-4588  
 189  
 0704 WBNN 105.3 VA Dillwyn, "Big Country 105.3"  
 125  
 0705 WFRB 105.3 MD Frostburg, "Playing Today's  
 Hot Favorites" 124

8/27 Tr

0018 WZBB 99.9 VA Stanleytown, ID, through  
 Frederick's WFRE 210

8/28 Tr

0016 WXGM 99.1 VA Gloucester, "Extra 99.1,"  
 through Annapolis' WHFS  
 99

9/21 Tr

0800 WKBC 97.3 NC North Wilkesboro, ID 298  
 0808 WIKZ 95.1 PA Chambersburg, "Mix 95.1,"  
 through WRBS 34 miles  
 away 87  
 0921 WRDU 106.1 NC Raleigh, "1061 RDU" 222  
 0928 WQSD 107.1 SC Myrtle Beach, "The sound of  
 107.1," ads for Hilton Myrtle  
 Beach 355  
 0950 WSFM 107.5 NC Southport, ads for Toyota of  
 Wilmington 334  
 1008 WFMZ 104.9 NC Wanchese, "Classic Hits  
 104.9" 189  
 1026 WSUH 102.3 VA Crozet, ads for Kit Gannon  
 Ford in Louisa, through  
 WMMJ 12 miles away 110  
 1030 WJMH 102.1 NC Greensboro, "102 Jamz"  
 240

1037 WFMI 100.9 NC Southern Shores, "Rejoice  
 100.9" 189  
 1053 WFXQ 99.9 VA Chase City, "Stardust 99.9"  
 161  
 1057 WSPA 98.9 SC Spartanburg, ID, "Magic  
 98.9, the upstate's #1 rock  
 station" 388  
 1113 WQOK 97.5 NC Raleigh, "K-97.5" 237  
 1124 WBBB 96.1 NC Raleigh, ads for World Beer  
 Fest and 96rockonline.com  
 237  
 1137 WQDR 94.7 NC Raleigh, "94.7 QDR,"  
 through WARW 15 miles  
 away 234  
 1141 WWOC 94.5 NC Kill Devil Hills, "94.5 Water  
 Country" 235  
 1148 WTHZ 94.1 NC Lexington, "Hitz 94 – Your  
 Home for the hits and the  
 Heels" 302



1201 WFBC 93.7 SC Greenville, ID, "B-93.7" 404  
 1213 WERO 93.3 NC Washington, "Bob 93-3,"  
 through WFLS 44 miles  
 away 238  
 1220 WEGX 92.9 SC Florence, "Eagle 92.9" 334  
 1238 WMQX 93.1 NC Greensboro, "Oldies 93,"  
 through WPOC 35 miles  
 away 240  
 1246 WNKS 95.1 NC Charlotte, "Kiss 95.1,"  
 through WRBS 34 miles  
 away 333  
 1253 WFLB 96.5 NC Fayetteville, "Oldies 96.5"  
 302  
 1300 WKRX 96.7 NC Roxboro, Roxboro ads 203  
 1323 WLYT 102.9 NC Charlotte, ID, "Lite 92.9"  
 331  
 1330 WUNC 91.5 NC Chapel Hill, ID 237  
 2255 WNDJ 104.9 VA Urbanna, "Windy 105" 83  
 2302 WFXK 104.3 NC Raleigh, ID 201  
9/22 Tr  
 0626 WKXU 102.5 NC Lewisburg, "Country 102"  
 241  
 0832 WKGO 106.1 MD Cumberland, "Go 106" 119  
9/24 Tr  
 0747 WRDU 106.1 NC Raleigh, ads for Cary NC  
 222  
 0759 WNNL 103.9 NC Fuquay-Varina, Fuquay  
 ads 244  
 0803 WMGV 103.3 NC New Bern, "V-103" 254  
 0827 WLQM 101.7 VA Franklin, ID 147



0829 WERX 102.5 NC Nags Head, "102.5 The Shark" 202  
 0834 WFMI 100.9 NC Southern Shores, "Rejoice 100.9" 189  
 0836 WTRG 100.7 NC Raleigh, ID 216  
 0842 WFXQ 99.9 VA Chase City, "Stardust 99.9" 161  
 0847 WIAM 98.9 NC Windsor, simulcasting "97.9 The Bear" 201  
 0855 WDWG 98.5 NC Rocky Mount, "98.5 The Dog, Pinetops' Best Friend" 206  
 0901 WICE 98.3 VA Clarksville, ID 183  
 0906 WOBX 98.1 NC Manteo, ID 216

0003 WTEB 89.3 NC New Bern, multi ID  
 0120 WKST 96.1 PA Pittsburgh, s, "Kiss FM," ads  
 0145 WPRR 100.1 PA Altoona, "Power 100 WPRR"  
 0200 CBBLt 100.5 ON London, low volume progressive jazz  
 0208 WROV 96.3 VA Martinsville, op, "ROV"  
 0700 WFLB 96.5 NC Laurinburg, o, "Oldies 96," local ref  
 0703 WNCT 107.9 NC Greenville, o  
 9/22 Tr  
 0830 WUZY 97.7 PA Somerset, wx, ads, "Wuz"  
 0834 WORD 101.5 PA Pittsburgh  
 0900 WMRF 95.7 PA Lewistown, ID  
 9/23 Tr  
 0830 WNCT 107.9 NC Greenville, o  
 0850 WERO 93.3 NC Washington, "Bob"  
 9/25 Tr  
 0141 WFLB 96.5 NC Laurinburg, o, "Oldies 96.5"  
 0150 WQZLt 101.1 NC Bellhaven, Top 40, faded out in middle of spot break  
 0219 WPRR 100.1 PA Altoona, r, "Power 100, WPRR"  
 0225 WCHX 105.5 PA Lewistown, ro, "Chix"  
 0237 WYFL 92.5 NC Henderson, g  
 0240 WKML 95.7 NC Lumberton, k, ads  
 0248 WQSM 98.1 NC Fayetteville, r, ads, "Q-98"  
 0926 WRSN 93.9 NC Burlington, rm, Casey Kasem, ads, strong!  
 0932 WQOK 97.5 VA South Boston, s, ads  
 0954 WLQM 101.7 VA Franklin, ads, calls  
 1900 Northeastern NC 88.3, 91.7, 100.1, 100.9, 104.9 in  
 9/26 Tr  
 1404 CBCK 107.5 ON Kingston, CBC, wx w/temps in Celcius  
 1440 CHYM 96.7 ON Kitchener, AC, "96-7 Chime FM"

## Dan Oetting - Elkton, MD

Harman Kardon Citation-23 tuner, 2 FM yagis in the attic 10' apart, Andy Bolin phase box

My location is on a large hill facing WNW

### 9/12 Tr

0003 WXLV 90.3 PA Schnecksville, dance mx, ID  
 0142 WVOD 99.1 NC Manteo, rp, "The Sound"  
 0146 WBXB 100.1 NC Edenton, black Gospel  
 0206 WRNS 95.1 NC Kinston, k, calls, jingle  
 0224 WNCT 107.9 NC Greenville, o  
 0243 WRDU 106.1 NC Wilson, rp, promos  
 1300 WJUN 92.5 PA Mexico, k, ID, "Country 92.5 FM"

### 9/13 Tr

0110 WCHX 105.5 PA Lewistown, r, calls  
 0122 WUBZ 105.9 PA Phillipsburg, rp, "The Buzz"  
 0815 WLTJ 92.9 PA Pittsburgh, rm, "Lite rock 92.9," Pittsburgh traffic

### 9/14 Tr

0823 WRRN 92.3 PA Warren, with Warren County PA nx, o  
 2053 WXPB 88.1 PA Harrisburg, ID, strong!

### 9/15 Tr

0600 WDNB 102.1 NY Jeffersonville, nx, ID  
 0605 WLZS 106.1 PA Beaver Springs, o, "Wheels 106"

### 9/16 Tr

2033 WDDH 97.5 PA St. Mary's, k

### 9/20 Super Tr

0859 CBCK 107.5 PA Kingston, CBC  
 0919 CILQ 107.1 ON Toronto, "Q-107," Toronto ads  
 2216 WENZ 107.9 OH Cleveland, s, "Z-107.9 wx for the north coast  
 2225 WGLU 99.1 PA Ebensburg, "Power 99.1 Johnstown Halloween Contest w/WJAC-TV  
 2229 WFGY 98.1 PA Altoona, k, "Froggy 98," ads  
 2231 WLTJ 92.9 PA Pittsburgh, ID, strong!  
 2254 WYFM 102.9 PA Sharon, ro, "Y-103," Youngstown ads, overpowering WMGK!  
 2308 WDVE 102.5 PA Pittsburgh, op, "DVE Rocks"  
 2312 WQXK 105.1 OH Salem, k, "K-105," request from Struthers OH  
 2324 WSHH 99.7 PA Pittsburgh, ads  
 2333 WYYD 107.9 VA Amherst, k, calls  
 2341 WAYC 100.9 PA Bedford, r, calls

### 9/21 Tr



### 9/27 Tr

0025 WCHX 105.5 PA Lewistown, ro, "Chix"  
 0043 CILQ 107.1 ON Toronto, ads, "Q-107"  
 0112 WUZY 97.7 PA Somerset, end of Pittsburgh Steelers game show, local Somerset ads

### 9/28 Tr

2325 WEGW 107.5 WV Wheeling, op, "Eagle 107.5"

### 10/8 Tr

Some E NC tropo, with 88.3, 88.7, 91.7, 92.3, 95.3, 100.1, 100.9, 104.1, and 104.9 in all from time to time but not at the intensity received by other DXers further north. Also had NYC and CT in decent.

### 10/9 Tr

0900 WTEB 89.3 NC New Bern, ID, strong  
 1430 WWRT 104.9 VA Strasburg, strong

### 10/11 Tr

2246 WDDH 97.5 PA St. Mary's, k  
 2313 WTSS 102.5 NY Buffalo, "Star 102.5"  
 2333 WWRT 104.9 VA Strasburg  
 2359 WKXZ 93.9 NY Norwich, r, ID

### 10/12 Super Tr

Fell asleep with the radio still on...tuned to 95.9...awoke at 0124 to hear...  
 0124 CFPL 95.9 ON London, p, "FM-96," London ads

0134 WJNG 100.5 PA Johnsonburg, "Mega Rock"  
 0200 CBLA3 100.9 ON Wingham, CBC  
 0213 WBRR 100.1 PA Bradford, ro, "Hero Radio,"  
 jingle, ads  
 0219 WRKT 100.9 PA North East, rp, "Rocket  
 101, rock station," Erie  
 mention  
 0230 WLEW 102.1 MI Bad Axe, ro, "Cruise 102,"  
 local nx, wx for "the thumb,"  
 in stereo for nearly 2 hours!  
 Amazing! 465 miles away  
 0244 CIDR 93.9 ON Windsor, rm, "Lite Rock  
 93.9," "A Chum station,"  
 Detroit ads  
 0300 WOUR 91.7 MI Ann Arbor, multiple ID's,  
 445 miles away  
 0302 WPRR 100.1 PA Altoona  
 0305 WHSt 106.1 MI Tawas City, g, "Through  
 Grace" ½ hour broadcast  
 0314 WCRZ 107.9 MI Flint, ro, Flint ad and  
 "Cars 108," 465 miles away  
 0316 CILQ 107.1 ON Toronto, "Q-107"  
 0320 CFCA 105.3 ON Kitchener, r, ad  
 0332 WFGY 98.1 PA Altoona  
 0400 WHSBt 107.7 MI Alpena, rocker w/"107.7  
 The Bay"  
 0418 WUUZ 107.7 PA Cooperstown, rp, "Wuz 94  
 & 107," NW PA mention  
 0440 Went to bed  
 0800 WJHT 107.9 PA Port Matilda, ID  
 0802 WOWQ 102.1 PA DuBois  
 0830 WAER 88.3 NY Syracuse, calls  
 10/13 Tr  
 0856 WKGB 92.5 NY Conklin, rp, "KGB"  
 0901 WJUN 92.5 PA Mexico, ID  
 0901 WDKC 101.5 PA Covington, k, "KC-101"

**John Zondlo** – 4009 Driftwood Circle  
 – Yukon, OK 73099 – CST – All new

Akai AT-VO4 tuner (modified w/2 110 filters),  
 APS-9B antenna w/Channel Master 9521A rotor  
 at 16', Conrad RDS Manager

7/9 Es  
 0954 WBQB 101.5 VA Fredericksburg, help

wanted ad



7/14 Es  
 1136 XHSC 93.9 JA Zapopan, RDS "Imagen"  
7/21 Tr  
 0009 KUNQ 99.3 MO Houston, obits sponsored  
 by Houston Florist, k  
8/3 Tr  
 0354 KJML 105.3 KS Columbus, r, "Joplin's  
 place to rock"  
 0406 KHST 101.7 MO Lamar, ID, r  
 2207 KHOM 100.9 AR Salem, Real Country  
 2232 KOMT 107.5 AR Mountain Home, Music  
 of Your Life  
 2241 KOZO 89.7 MO Branson, Oasis Network



## From the Editor

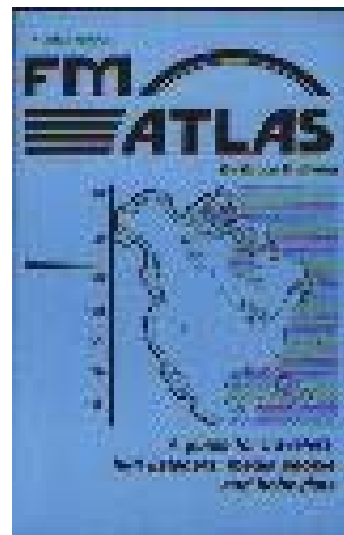
Looks like the season is winding down. Here in the heartland the band has been pretty dead. Great to see some of the folks on the east coast getting some DX. Remember to check out the great meteor scatter opportunities coming up during the winter. See y'all next month!



**Fmdxweb.com**

## FM ATLAS #19

Bruce Elving's newest listing of FM Stations is just \$23.00. Send your check or money order to FM Atlas, PO Box 336, Esko, MN 55733-9413 and keep it next to your radio or in the glove box of your car!



# TRANSLATOR and LPFM NEWS

Dr. Bruce Elving

## Translators and Low Power FM Stations Granted

*Translators have less than 100 watts unless shown otherwise; technical parameters for most LPFM stations are not announced, but can be up to 100 watts at 30 meters above average terrain (horizontal, vertical or both h & v)*

AL Blue Mountain (transmitter on S.E. side of Anniston) W241AQ 96.1 (WCKS 102.7 Fruithurst AL translator), h,v (less than 100 watts h & v).  
AL Bridgeport W285EC \*104.9 (WJCR-LP 94.9 Jasper TN), 120 h,v  
AL Capshaw W239BD 95.7 (WEUP-FM 103.1 Moulton), h,v  
AL Decatur \*98.1 D. Educational Assn., LPFM  
AL Fort Payne W242BI \*96.3 (WJCK 88.3 Piedmont), h,v. W216BP 91.1 there is another WJCK relay.  
AL Greenville W249BV \*97.7 (WAXU 91.1 Troy), h,v  
AL Huntsville \*97.9 Huntsville Chinese Ministry Assn., LPFM in the SW part of town. Granted despite W249BB \*97.7's being in the N.E. part of Huntsville.  
AL Moores Mill (on the S.E. side of Meridianville) W234BB \*94.7 (WAWI 88.7 Lawrenceburg TN), h,v  
AL Munford (33-29-06; 85-48-32 on Mount Cheaha, very close to the WCIO [TV-7] tower and not far from the location of W297AP \*107.3 Golden Springs, which is at 33-38-15; 85-48-07) W293AY \*106.5 (WJIA 88.5 Guntersville), h,v.  
AL Muscle Shoals W222AV 92.3 (WXXV 103.5 Russellville AL), 230h,v  
AL Odenville W237CG \*95.3 (WGIB 91.9 Birmingham), h,v  
AL Scottsboro W238BE \*95.5 (WAYM 88.7 Columbia TN), h,v  
AL Sylacauga W231BN \*94.1 (WAQU 91.1 Selma), h,v  
W237CH \*95.3 (WGIB), h,v  
AL West Blocton W267AU \*101.3 (WGIB), h,v  
AL Westover (east of Chelsea) W250AW 97.9 (WODL 97.3 Gardendale AL), h,v  
AL Windham Springs W276BU \*103.1 (WGIB), h,v  
AK Aniak K241BC \*96.1 (KNOM-FM 96.1 Nome), v  
AK Bettles K226AY \*93.1 (KUAC 89.9 Fairbanks, as received via satellite), h  
AK Coffman Cove W242BI \*96.3 (KSTK 101.7 Wrangell), 150 h  
AK Eagle Point K246AV 97.1 (KEAG 97.3 Anchorage), 250 v  
AK Egegik K280FL 103.9 (KAKN 100.9 Naknek), 100 watts (h)  
AK Holy Cross K241BB \*96.1 (KNOM-FM), v  
AK Kaltag K241BD \*96.1 (KNOM-FM), v  
AK Little Diomed [Island] K241BA \*96.1 (KNOM-FM), v  
AK Manokotak K275AW 102.9 (KAKN), 100 h  
AK Newtok K241AZ \*96.1 (KNOM-FM), v  
AK Nulato K241BF \*96.1 (KNOM-FM), v  
AK Ruby K246AU \*97.1 (KNOM-FM), v  
AK Saint Marys K241BE \*96.1 (KNOM-FM), v  
AK Shishmaref K241AY \*96.1 (KNOM-FM), v  
AK Toksook Bay K238AU \*95.5 (KNOM-FM), v  
AK Tununak K244EB \*96.7 (KNOM-FM), v  
AZ Goodyear K248BH \*97.5 (KLVA 105.5 Casa Grande), h,v  
AZ Prescott \*94.3 Coyote Radio, LPFM \*94.3 Prescott Community Access Channel, LPFM. These two apparently to share time.  
AZ Wickenburg K270BA \*101.9 (KGCB 90.9 Prescott), h,v  
AZ Yuma K217DD \*91.3 (KNLB 91.1 Lake Havasu City), 170 h,v. Also on there with KNLB is K274AV \*102.7 (h,v). But K274AV is hard to get in Yuma because of XHLS 102.9 San Luis Rio Colorado SO.  
AR Bentonville K256BG \*99.1 (KLRC 101.1 Siloam Springs), 210 h,v  
AR De Witt K277BE 103.3 (KWAK-FM 105.5 Stuttgart), 250 h,v  
AR Fayetteville K287AN \*105.3 (KAPG 88.1 Bentonville), h,v  
AR Marked Tree K276FD \*103.1 (KBMJ 89.5 Heber Springs), h,v  
AR McGehee K227BC \*93.3 (KANX 91.1 Sheridan), h,v  
AR Sheridan K264AU \*100.7 (KANX), h,v  
K288FP \*105.5 (KBPW 88.1 Hampton), h,v  
AR Stuttgart K224DI \*92.7 (KBMJ), h,v  
K237EF \*95.3 (KANX), h,v  
AR Waldron K266AS \*101.1 (KARG 91.7 Poteau OK), h,v  
CA Big Sur K221EU \*92.1 (KAWZ 89.9 Twin Falls ID, as received from K252CK 98.3 Salinas), h,v  
CA Bishop K295BB \*106.9 (KWTM 90.9 June Lake), h,v  
CA Bonny Doon KPFA-2 \*94.1 4 watt v, d-a, with 100% power 0°. Booster of Berkeley station.  
CA East Quincy (transmitter S. side of Quincy) K245AU \*96.9 (KNIS 91.3 Carson City NV), h,v  
CA Ferndale K293BC \*106.5 (KNDL 89.9 Angwin), h  
CA Huron K265EE 100.9 (KOKO-FM 94.3 Kerman), 250 h,v  
CA Indian Lakes Estates (E. Yosemite, SSW Oakhurst at 37-12-06; 119-42-56) K278AZ 103.5 (KAAT 103.1 Oakhurst), h  
CA Kirkwood (near South Lake Tahoe; not the Kirkwood near Corning) K297AR \*107.3 (KYCC 90.1 Stockton), h,v  
CA Lone Pine K267AV \*101.3 (KFRJ 91.1 China Lake), 170 h,v  
CA Modesto \*106.9 Calvary Temple Assembly of God, Modesto, LPFM \*106.9 Calvary Chapel of Modesto, Inc. Apparently these two will share time.  
CA Redding K232DQ \*94.3 (KKRO 91.5 Redding), h,v  
CA Ridgecrest K259BH 99.7 (KDAY 92.5 Independence CA), v  
CA Three Points (W. of Lancaster, N. San Fernando) K280DV 103.9 (KCAQ 104.7 Oxnard), h,v  
CA Wrightwood K240DK \*95.9 (KWTH 91.3 Barstow), h,v  
CO Alamosa K225AZ \*92.9 (KLFV 90.3 Grand Junction), h,v  
CO Creede K282AQ 104.3 (KKCS 101.9 Colorado Springs), h,v  
CO Sterling K279BA \*103.7 (KWYC 90.3 Orchard Valley WY), 250 h,v  
CO Trinidad K262BK 100.3 (KCRT-FM 92.5 Trinidad), 170 v  
CO Victor K222BC \*92.3 (KVOD 90.1 Denver), h  
CO Wray K243BB \*96.5 (KGCR 107.7 Goodland KS), h,v  
CT Derby W293AU \*106.5 (WSHU 91.1 Fairfield CT), h,v  
CT Southport W287AZ \*105.3 (WGRS 91.5 Guilford), h,v  
DE Marshallton W297AT \*107.3 (WRTI 90.1 Philadelphia PA), h,v  
DE Middletown W246BI 97.1 (WRBS 95.1 Baltimore), h,v  
DE New Cstle W277BL \*103.3 (WVVB 90.5 Medford Lakes NJ), h,v  
FL Biggar (N.W. San Carlos Park) W263BI \*100.5 (WAYJ 88.7 Fort Myers), h,v  
FL Boxham (S. of Quincy) W222AW \*92.3 (WVFS 89.7 Tallahassee), 250 h,v  
FL Everglades City W248AU \*97.5 (WKWR 90.1 Key West), h,v  
W260BI \*99.9 (WAVQ 88.3 Key West), h,v  
FL Florida City W237CI \*95.3 (WAVQ), h,v  
FL Fort Walton Beach W233BH \*94.5 (WKGC-FM 90.7 Panama City), 170 h,v  
FL Greenacres [City] (N.W. Boynton Beach) W280-DU \*103.9 (WAYF 88.1 West Palm Beach), h,v  
FL Groveland W274AX \*102.7 (WPOZ 88.3 Unionn Park), 170 h,v  
FL Hiland (just E. of downtown Panama City, south of Hiland Park FL) W238BG \*95.5 (WAYT 88.1 Thomasville GA), h,v  
FL Islamorada W238BF \*95.5 (WAVQ), h,v  
W225AU \*92.9 (WKWR 90.1 Key West), h,v  
W287BA \*105.3 (WKWR), h,v  
W297AS \*107.3 (WAVQ), h,v. There are now three WAVQ translators authorized in that town.  
FL Key West W240BT \*95.9 (WKWR), 250 h,v  
W291BP \*106.1 (KAWZ 89.9 Twin Falls ID, as received via W220DF 91.9 there), 170 h,v  
FL Lady Lake W259AS \*99.7 (WPOZ), h,v  
FL Leesburg W245AZ \*96.9 (WPOZ), h,v. There's another WPOZ relay there: W212BF 90.3.  
FL Macclenny W281AM \*104.1 (WXVS 90.1 Waycross), h,v  
FL Madison W223BD \*92.5 (WBJY 89.3 Americus GA), h,v  
FL Marianna W271BB \*102.1 (WFSQ 91.5 Tallahassee), h,v  
W295AX \*106.9 (WKGC-FM 90.7 Panama City), h,v  
FL Melbourne W252BV \*98.3 (WPOZ), 170 h,v  
FL Monticello W257BY \*99.3 (WAYT), h,v  
W279BL \*103.7 (WAEF 90.3 Cordele GA), h,v  
FL Palm Springs (just W. Lake Worth) W245AY \*96.9 (WAYF 88.1 West Palm Beach), h,v  
FL Perkins (N.E. side of Tallahassee) W258BC \*99.5 (WAYT), h,v  
FL Perry W223BC \*92.5 (WXVS 90.1 Waycross GA), h,v  
W237CN \*95.3 (WKVH 91.9 Monticello), h,v  
FL Pierson W292DE \*106.3 (WKTO 88.7 Edgewater), h,v  
FL Ramrod Key W243BU \*96.5 (WAVQ), h,v  
W290BF \*105.9 (KAWZ, as received via W220DF), h,v  
FL Springfield W242BF \*96.3 (WAYT), h,v  
FL Wauchula W229AV \*93.7 (WSMR 89.1 Sarasota), h,v

W276BS \*103.1 (WREH 90.5 Cypress Quarters FL), h,v  
FL Weirsdale (S.E. Ocala) \*104.5 W. Women in Broadcasting Association, LPFM  
GA Adairsville W266AY \*101.1 (WLOJ-LP 102.9 Calhoun GA), h,v  
GA Buena Vista W248AV \*97.5 (WFRP 88.5 Americus), h,v  
GA Cordele W239AY \*95.7 (WFRP), h,v  
GA Homerville W246BK \*97.1 (WAYT), h,v  
GA LaGrange W245AW 96.9 (WELR-FM 102.3 Roanoke AL), h,v  
GA Lumpkin W271BC \*102.1 (WFRP), h,v  
GA Montezuma W290BD \*105.9 (WJSP-FM 88.1 Warm Springs GA), h,v  
GA Morrow W261BG \*100.1 (WCCV 91.7 Cartersville GA), h,v  
GA Newnan W270BF 101.9 (WVFX 93.3 Manchester GA), h,v  
W294AY 106.7 (WMGP 98.1 Hogansville), 150 h,v  
GA North Statesboro (north side of Statesboro) W264BO \*100.7 (WLFS 91.9 Port Wentworth), h,v  
GA Reynolds W286BJ \*105.1 (WFRP), h,v  
GA Social Circle W233BF \*94.5 (WJSP-FM 88.1 Warm Springs), h,v  
HI Waimea K264AV \*100.7 (KAWZ, as received via K211EU 90.1 Kailua-Kona), h,v. See "Facilities," below.  
ID Hailey K266AV \*101.1 (KWRV 91.9 Sun Valley), h,v [Valley], h,v  
ID Ketchum K300BW 107.9 (KYZK 107.5 Sun Valley), h,v  
ID Orofino K226AZ \*93.1 (KMEI-LP 97.3 Kamiah), v  
ID Salmon K266AW 101.1 (KLCE 97.3 Blackfoot), h,v  
ID Weston K277BD 103.3 (KGNT 103.9 Smithfield UT), 250 h,v  
IL Almora (just N.W. of Elgin) W228BU \*93.5 (WWBM 89.7 Yates GA, as received from W207BJ 89.3 Mount Prospect IL [see "Facilities," below]), h,v  
IL Arthur W269BW \*101.7 (WOLG 95.9 Carlinville), 250 h,v  
IL Beardstown W299BF \*107.7 (WOLG), 250 h,v  
IL Casey W243BV \*96.5 (WBGL 91.7 Champaign), h,v  
W284BJ \*104.7 (WCRT 88.5 Terre Haute IN), h,v  
IL Chapin W272BU \*102.3 (WOLG), h,v  
IL De Kalb W255BN \*98.9 (WSOG 88.1 Spring Valley IL), 250 h,v  
IL Fairfield W229AU \*93.7 (WAPO 90.5 Mount Vernon IL), h,v  
IL Flora W233BI \*94.5 (WAPO), h,v  
IL Galena W227BL \*93.3 (WJTY 88.1 Lancaster WI), h,v  
IL Joliet W232BL \*94.3 (WSRI 88.7 Sugar Grove), h,v  
IL Lake Summerset (N.E. Freeport, near WI border) W258BB \*99.5 (WJTY), h,v  
IL Le Roy W279BN \*103.7 (WCIC 91.5 Pekin), h,v  
IL Marshall W258BA \*99.5 (WBGL), h,v  
IL Mattoon W291BO 106.1 (WZNX 106.7 Sullivan), 250 h,v  
IL Mendota W286BI \*105.1 (WCIC), h,v  
IL Meredosia W243CB \*96.5 (WOLG), h,v  
IL Mount Carmel W256AZ \*99.1 (WBMV 89.7 Mount Vernon), h,v  
IL Petersburg W261BF \*100.1 (WTSG 91.1 Carlinville), h,v  
IL Pittsfield W221BX \*92.1 (WOLG), h,v  
IL Robinson W262BI \*100.3 (WATI 89.9 Vincennes IN), h,v  
IL Rushville W256BB \*99.1 (WOLG), h,v  
IL Sullivan W258BE \*99.5 (WOLG), h,v  
IL West Chicago W273BG \*102.5 (WSRI), h,v  
IL Windsor W298BC \*107.5 (WOLG), h,v  
IN Bloomington W270BH \*101.9 (WCRT 88.5 Terre Haute), h,v  
IN Bremen W255BH \*98.9 (WQKO 91.9 Howe), h,v  
IN Elizabeth W227BO 93.3 (WJZL 93.1 Clarksville IN), h,v  
IN Elkhart W270BL \*101.9 (KRUC 88.9 Las Cruces NM, received via W207BF 89.3 Goshen), h,v  
W293AZ \*106.5 (WSBL-LP 98.1 South Bend), 250 h,v  
IN Ellettsville W292DD \*106.3 (WFHB 91.3 Bloomington), h,v  
IN Fort Branch W295AW \*106.9 (WRFM 90.1 Wadesville), h,v  
IN Kokomo W241AT 96.1 (WFBQ 94.7 Indianapolis), 250 h,v  
IN Ligonier W258BD \*99.5 (KRUC via W207BF), h,v  
IN Michigan City W236BD 95.1 (WFRN-FM 104.7 Elkhart), h,v  
IN Nashville W264BP \*100.7 (WFHB 91.3 Bloomington IN), h,v  
IN Orland W238BH \*95.5 (WOFR 89.5 Schoolcraft MI), h,v  
IN Plymouth W291BQ \*106.1 (KRUC, via W207BF), h,v  
IN Warsaw W254BG \*98.7 (WQKO), h,v  
IN Zionsville W298BB 107.5 (WSHW 99.7 Frankfort IN), 250 h,v  
IA Council Bluffs K245AV \*96.9 (KLCV 88.5 Lincoln NE), h,v  
IA Harlan K234BB \*94.7 (KILV 107.5 Castana), 150 h,v  
IA Ida Grove K285FO \*104.9 (KAYA 91.3 Hubbard NE), 120 h,v  
IA Storm Lake K256BD \*99.1 (KNWC-FM 96.5 Sioux Falls SD), h,v  
IA Urbana Garage Tower (N.W. Urbana, S. Independence) \*99.9 Iowa Department of Transportation, LPFM  
KS Great Bend K248BI \*97.5 (KCVW 94.3 Kingman), 250 h,v  
KS Kinsley K240DJ \*95.9 (KCVW), 250 h,v  
KS Liberal K263AQ 100.5 (KKBS 92.7 Guymon OK), 250 h,v  
KS Russell K236AT \*95.1 (KCVW), 250 h,v  
KY Bowling Green W276BT 103.1 (WPQT 103.7 Cave City), 190 h,v  
KY Glasgow W261BD 100.1 (WKLX 100.7 Brownsville KY), 250 v  
KY Harlan W237CK 95.3 (WMIT 106.9 Black Mountain NC), h,v  
KY Kennebec (just N.W. Frankfort) W265BP 100.9 (WKQQ 100.1 Winchester), 250 h,v  
KY Louisville W253AW \*98.5 (WJLR 91.5 Seymour IN), h,v  
KY Owensboro W263BG 100.5 (WBIO 94.7 Philpot), 250 h,v  
LA Baton Rouge \*96.9 The Baton Rouge Progressive Network, LPFM  
LA Bunkie K289BC \*105.7 (KSJY 90.9 Lafayette), 250 h,v  
LA Delta K246AT \*97.1 (KAYT 88.1 Jena), 250 h,v  
LA Lafayette K296FL \*107.1 (KAYT), h,v  
LA Monroe K256BF \*99.1 (KAYT), 180 h,v  
LA Opelousas K249EA \*97.7 (KAYT), 200 h,v  
LA Sulphur K272EI \*102.3 (KSJY), 210 h,v  
LA Vidalia K253AR \*98.5 (KAYT), 250 h,v  
ME Bangor W264BO \*100.7 (WWWA 95.3 Winslow), h,v  
ME Calais W270BD \*101.9 (WHCF 88.5 Bangor), h,v  
ME Freeport W252BT \*98.3 (WWWA), h,v  
ME Hodgdon (S. of Houlton) W229AT \*93.7 (WHCF), h,v  
ME Lincoln W255BI \*98.9 (WWWA), h,v  
ME Richmond Center (E. Lewiston, SW Gardner) W233BE \*94.5 (WWWA), h,v  
ME Yarmouth W272BV \*102.3 (WWWA), h,v  
MD Frederick W270BE 101.9 (WAVA 105.1 Arlington VA), h  
MI Albion W260BH \*99.9 (WFPM-LP 99.5 Battle Creek), h,v  
MI Bessemer W225AV \*92.9 (KDNW 97.3 Duluth MN), h,v  
MI Big Rapids W299BE 107.7 (WYBR 102.3 Big Rapids), 100 h,v  
MI Camden W239AX \*95.7 (WOFR), h,v  
MI Detroit W256AY \*99.1 (WAKL 88.9 Flint), h,v  
MI Grand Ledge W272BS \*102.3 (WAKL), h,v  
MI Harrison W248AQ \*97.5 (WEMU 89.1 Ypsilanti), h,v  
MI Jackson W279BP \*103.7 (WFPM-LP 99.5 Battle Creek), h,v  
MI Mackinaw City W237CF \*95.3 (WVXA 96.7 Rogers City), h,v  
MI Marshall W242BH 96.3 (WFRN-FM), h,v  
MI Three Oaks \*106.7 Downtown Development Center, LPFM  
\*106.7 Harbor Arts, LPFM  
\*106.7 River Valley Ministerial Assn., LPFM  
\*106.7 Three Oaks Business Assn., LPFM. These four will apparently share time.  
MI White Lake (W. Pontiac, NNE Walled Lake) W284BM \*104.7 (WAKL), h,v  
MN Coon Rapids (transmitter just west of Golden Valley) K260BA \*99.9 (KLOV 89.3 Winchester OR, via K214DF 90.7 Golden Valley), 170 h,v  
MN Falcon Heights W264BR \*100.7 (KUOM-FM 106.5 St. Louis Park MN), h,v  
MN Hibbing K237ED \*95.3 (KDNW), h,v  
K300BV \*107.9 (KDNI 90.5 Duluth), h,v  
MN Hinckley W226AY \*93.1 (KDNW), h,v  
W248AS \*97.5 (WSCN 100.5 Cloquet), h,v  
W293AV \*106.5 (KNOW 91.1 Minneapolis), h,v  
MN St. James K295BD \*106.9 (KNWC-FM), 250 h,v  
MN Silver Bay K292FP \*106.3 (KDNW), h,v  
MS Charleston W273BJ \*102.5 (WDFX 98.3 Cleveland MS), h,v  
MS Columbus W247BH 97.3 (WTXT 98.1 Fayette AL), 140 h,v  
MS Renova W274AW 102.7 (KZYQ 103.5 Lake Village AR), 250 h,v  
MS Tupelo W260BJ 99.9 (WESE 92.5 Baldwin), 250 h,v  
W266BC 101.1 (WWKZ 105.3 Aberdeen MS), 250 h,v  
MO Elsberry K275AX \*102.9 (WOLG), 210 h,v  
MO Kahoka K261DI \*100.1 (WCIC), h,v  
MO Lebanon K222BD \*92.3 (KSCV 90.1 Springfield), 250 h,v  
MO Macon K262BJ \*100.3 (KAYP 89.9 Burlington IA), 210 h,v  
MO Mount Vernon K277BF \*103.3 (KSCV), 250 h,v  
MO Richmond K273BE \*102.5 (KBJQ 88.3 Bronson KS), h,v  
MO St. Joseph K273BF \*102.5 (KBUZ 90.3 Topeka KS), h,v  
MO Sikeston K300BU \*107.9 (WAWJ 90.1 Marion IL), 250 h,v  
MO Unionville K259BF \*99.7 (KAYP), 120 h,v  
MO Washington K286BG 105.1 (KFAV 99.9 Warrenton), h,v  
MT Big Sky K295BE 106.9 (KEZQ 92.9 West Yellowstone), h,v  
MT East Helena K228EN 93.5 (KQRV 96.9 Deer Lodge), h,v  
MT Hamilton K225AY \*92.9 (KGFC 88.9 Great Falls), h,v  
K233BP \*94.5 (KVCM 103.1 Helena), h,v  
MT West Yellowstone K266AU 101.1 (KCHQ 102.1 Driggs ID), 250 h,v  
MT Whitehall K280FD 103.9 (KZMY 103.5 Bozeman), 250 h,v  
NE Alliance K300BT \*107.9 (KCSP-FM 90.3 Casper WY), 210 h,v  
NE Chadron K233BS \*94.5 (KCSP-FM), h,v  
NE Douglas K286BD \*105.1 (KVSS 88.9 Omaha), 250 h,v



NE Falls City K237EG \*95.3 (KBUZ), h,v  
NE Geneva K295BC \*106.9 (KFLV 89.9 Wilber), 120 h,v  
NE Ogallala K237EI \*95.3 (KWYC 90.3 Orchard Valley WY), h,v  
NE O'Neill K237EH \*95.3 (KNWC-FM), h,v  
K253AS \*98.5 (KGRD 105.3 Orchard NE), h,v  
K257EL \*99.3 (KPNO 90.9 Norfolk), h,v  
NE Seward K256BE \*99.1 (KFLV), 170 h,v  
NE Sidney K237EJ \*95.3 (KWYC), 120 h,v  
NE Utica K234BF \*94.7 (KLCV 88.5 Lincoln), 250 h,v  
NV Denio K236AU \*95.1 (KUNR 88.7 Reno), h  
NV Gardnerville \*94.7 Calvary Chapel of Carson Valley, LPFM  
NV Hunter (SW Elko, E. Carlin) K256BC 99.1 KRJC 95.3 Elko, 250 v  
NV Jackstone Canyon (N.E. Elko, N. Spring Creek) K252EM 98.3 (KRJC 95.3 Elko), 250 h  
NV Mesquite K268BH \*101.5 (KZBS 90.7 St. George UT), 250 h,v  
NV Reno K269FC 101.7 (KYMIX 96.1 Sacramento CA), h,v  
NV Searchlight K236AS \*95.1 (KGCB 90.9 Prescott AZ), h,v  
NH Gilford WMEX-1 106.5 16 watts h,v; d-a, with 100% power 0°. Booster of Farmington station.  
NJ Cape May W270BG \*101.9 (WRTQ 91.3 Ocean City), h,v  
NM Eagle Nest K221EV 92.1 (KRST 92.3 Albuquerque), h,v  
K226AX 93.1 (KKOB-FM 93.3 Albuquerque), h,v  
NM Eunice K233BO \*94.5 (KBMM 89.5 Odessa TX), h,v  
NM Ruidoso K290AY 105.9 (KROL 99.5 Las Cruces), h,v  
NM Santa Fe KWRP-1 101.5 200 h,v; d-a, with 100% power at 20°, booster of Pecos station.  
NM Shiprock \*107.9 NM State Highway and Transportation Dept., LPFM

NM Truth or Consequences K291BC \*106.1 (new 89.9 station in Alamogordo), h,v  
NY Akron W243BW \*96.5 (WZXV 99.7 Palmyra), h,v  
NY Arcade W279BO \*103.7 (WZXV), h,v  
NY Batavia W279BM \*103.7 (WZXV), h,v—the second WZXV translator there.  
NY Corfu W248AT \*97.5 (WZXV), h,v  
NY Dansville W294AW 106.7 (WKPQ 105.3 Hornell), h,v  
NY East Hampton W289AX \*105.7 (WGRS 91.5 Guilford CT), 250 h,v. Granted despite W262AS 100.3 there, another WGRS translator.  
NY Ellenville W243BZ \*96.5 (WXHD 90.1 Mount Hope NY), h,v  
W281AN \*104.1 (WLJP 89.3 Monroe NY), h,v  
NY Houghton W283AU \*104.5 (WZXV), h,v  
NY Hudson W246BJ \*97.1 (WAMC-FM 90.3 Albany), h,v  
W290BE 105.9 (WPYX 106.5 Albany), h,v  
NY Jamestown W286BF 105.1 (WQFX-FM 103.1 Russell PA), h,v  
NY Lockport W239BA \*95.7 (WZXV), h,v  
NY Lounsberry (transmitter SE Owego) W228BT \*93.5 (WPGP 88.3 Tafton PA), h,v  
NY Medina W287AX \*105.3 (WZXV), h,v  
NY Salamanca W256BA \*99.1 (WZXV), h,v  
NY Syracuse W294AU 106.7 (WPHR 106.9 Auburn), h,v—this in addition to booster WPHR-1 106.9 in Syracuse.  
NY Watkins Glen W227BQ \*93.3 (WZXV), h,v  
W273BI \*102.5 (WCIH 90.3 Elmira), h,v  
NY Wayland W285EB \*104.9 (WZXV), h,v  
NY Wellsville W294AV 106.7 (WKPQ 105.3 Hornell), h,v  
NY Woodgate W277BK \*103.3 (WRVN 91.9 Utica), h,v  
NC Arapahoe W239BC \*95.7 (WAGO 88.7 Snow Hill), h,v  
NC Charlotte W243BY \*96.5 (WLFJ-FM 89.3 Greenville SC), h,v  
NC Coats W270BM \*101.9 (WZRI 89.3 Spring Lake NC), h,v  
NC Dallas W252BU \*98.3 (WLFJ-FM), h,v  
NC Delco W241AR \*96.1 (WHQR 91.3 Wilmington), h,v. See WHQR's job ad, p. 8.  
NC Fayetteville W237CM \*95.3 (WCPE 89.7 Raleigh), h,v  
NC Frog Level (just SSE Greenville NC) W247BG \*97.3 (WCPE), h,v  
NC Hickory W224BN \*92.7 (WFDD 88.5 Winston-Salem), h,v  
\*99.3 Lenoir-Rhyne College, LPFM  
NC High Point W260BG \*99.9 (WKVE 106.7 Semora), h,v  
NC Kinston W253AX \*98.5 (WAGO), h,v  
W272BW 102.3 (WCLN-FM 107.3 Clinton), h,v  
NC Laurinburg W291BM \*106.1 (WHQR), h,v  
NC Marshville \*100.5 Christ Bible Teaching Center, LPFM  
NC Morrisville W256AX \*99.1 (WRTP-FM 90.1 Roanoke Rapids), h,v  
NC Mount Zion (NE edge of Greensboro) \*106.1 M & M Community Development, Inc.—Greensboro NC Branch, LPFM.  
NC New Bern W255BJ 98.9 (WCLN-FM), h,v  
NC Rocky Mount W257BZ \*99.3 (WKVE), h,v

NC Saint Pauls W261BE \*100.1 (WHQR), h,v  
NC Siler City W260BF \*99.9 (WKVE), h,v  
NC Southern Pines W227BP \*93.3 (WHQR), h,v  
W249BX \*97.7 (WZRI 89.3 Spring Lake NC), h,v  
NC Trenton W247BE \*97.3 (WAGO 88.7 Snow Hill), h,v  
NC Valdese W243BX \*96.5 (WLFJ-FM), h,v  
NC Wilson W288BP \*105.5 (WKVE), h,v  
ND Bismarck \*93.7 Bismarck Educational Prayer Association, LPFM  
ND Fargo KNDS-LP \*105.9, Alliance for the Arts and Humanities, LPFM  
ND Valley City K274BH \*102.7 (KFNW-FM 97.9 Fargo), h,v  
ND West Fargo \*96.3 Eagle Rose Fellowship, LPFM  
OH Akron W239AV 95.7 (WFHM-FM 95.5 Cleveland), 250 h,v  
OH Auburn (transmitter N.W. side of Hamilton) W238BJ \*95.5 (WJYC 90.1 Delhi Hills OH), h,v  
OH Dover \*105.9 Dover Alliance Church, LPFM  
OH Ashland W239AZ \*95.7 (WKSU 89.7 Kent), h,v  
OH New Middletown W298BA \*107.5 (WKSU), h,v  
OH Oxford W294AX 106.7 (WEBN 102.7 Cincinnati), 250 h,v  
OH Perrysburg W236BH \*95.1 (KLOV 89.3 Winchester OR, via new translator), h,v  
OH Port Union W233BG \*94.5 (WNKU 89.7 Highland Heights KY), 120 h,v  
OH Salem W241AS \*96.1 (WKSU), h,v  
OH Springfield W296BO \*107.1 (WOKL 96.9 Troy), h,v  
OH Steubenville W251AZ 98.1 (WOVK 98.7 Wheeling WV), 110 h,v  
OK Ada K251AS \*98.1 (KGOU 106.3 Norman), 250 h,v  
OK Bixby K297AQ \*107.3 (KBQC 88.5 Independence KS), 250 h,v  
OK Grove K253AQ \*98.5 (KWRI 89.1 Bartlesville), 140 h,v  
OK Lawton K234BD 94.7 (KTUZ 106.7 Okarche), 240 h,v  
K247BA 97.3 (KWCO 105.5 Chickasha), 150 h,v. Picking up KWCO is going to be hard because of the next station.  
K288FQ 105.5 (KJCM 100.3 Snyder OK), 250 h,v  
OK Oklahoma City K231BH \*94.1 (KQCV-FM 95.1 Shawnee), 250 h,v  
OK Shawnee K251AR \*98.1 (KGOU), 170 h,v  
OK The Village K238AT \*95.5 (KQCV-FM), 250 h,v  
OR Coos Bay K271AR \*102.1 (KVIP-FM 98.1 Redding CA, received via K205DR 88.9 McKinley OR), h,v [103.3 Beaverton), 250 h,v  
OR Four Corners (Salem) K274BI 102.7 (KKCW/  
OR Hood River K281AX 104.1 (KMCO 104.5 The Dalles), 250 h,v  
OR Lincoln City K270BB 101.9 (KKNV 93.1 Springfield), 250 h,v  
OR Union K288FO \*105.5 (KGTS 91.3 College Place WA), h,v  
PA Athens W296BL 107.1 (WPHD 96.1 South Waverly PA), 250 h,v  
PA Biglerville W287AW \*105.3 (WJAZ 91.7 Summerdale PA), h,v  
PA Bloomsburg W255BL \*98.9 (WGRG 91.3 Lewisburg), h,v  
PA Canton WDKC-1 101.5 6 watts v. Booster of Covington PA station.  
PA Clairton W231BM \*94.1 (WDKL 95.9 Grafton WV), h,v  
PA Gettysburg W229AW \*93.7 (WJAZ), h,v  
PA Kutztown W247BF \*97.3 (WITF-FM 89.5 Harrisburg), h,v  
PA Lancaster W263BH \*100.5 (WRTL 90.7 Ephrata), 170 h,v  
PA Mansfield W239AW \*95.7 (WPGP), h,v  
PA Millersville W296BM \*107.1 (WRTL), h,v  
PA Monroeville W248AR \*97.5 (WDKL), h,v  
PA Mount Pocono W287AY 105.3 (WPZX 105.9 Pocono Pines), h,v  
PA New Cumberland W291BL \*106.1 (WXPB 88.1 Harrisburg), h,v  
PA New Tripoli W257BW \*99.3 (WJCS 89.3 Allentown), h,v  
PA Orrstown W271BA \*102.1 (WJAZ), h,v  
PA Oxford W236BF \*95.1 (WRTI), h,v  
PA Pittsburgh W288BO \*105.5 (WDKL 95.9 Grafton WV, received via a new application), h,v  
PA Scranton W255BO \*98.9 (WCII 88.5 Spencer NY), v  
PA Tunkhannock W287BB \*105.3 (WPGP), h,v  
PA Wellsboro W225AT 92.9 (WNBQ 92.3 Mansfield), h  
PA Wilkes-Barre W297AR 107.3 (WEZX 106.9 Scranton), h  
PA Williamsport W235BA 94.9 (WBYL 95.5 Salladasburg), 230 h,v  
PA Wyalusing W278AZ \*103.5 (WPGP), h,v  
SC Georgetown W238BI \*95.5 (WMBJ 88.3 Murrells Inlet), h,v  
SC Little River W283AV \*104.5 (WMBJ), h,v  
SC Surfside Beach W227BK \*93.3 (WMBJ), h,v  
SD Aberdeen K237EK \*95.3 (KNWC-FM 96.5 Sioux Falls), 120 h,v  
SD Brookings K233BR \*94.5 (KNWC-FM), 170 h,v  
SD Chamberlain K257EM \*99.3 (KNWC-FM), 120 h,v  
SD Hot Springs K272EH \*102.3 (KCSP-FM), h,v  
SD Huron K237EL \*95.3 (KNWC-FM), 250 h,v  
SD Mobridge K296FK 107.1 (KNDR 104.7 Mandan ND), 170 h,v  
SD Rapid City K242BK 96.3 (KZZI 95.9 Belle Fourche), 250 h,v. There

is also a booster there on 95.9, KZZI-1.

SD Redfield K261DJ \*100.1 (KNWC-FM), h,v

SD Sisseton K261DK \*100.1 (KNWC-FM), h,v

SD Sturgis K244EA 96.7 (KGWY 100.7 Gillette WY), h,v

SD Yankton K260AZ \*99.9 (KAYA 91.3 Hubbard NE), h,v. Its transmitter is considerably west of Yankton, with no 60 dBu signal to Yankton.

TN Anderson (just E. of Tullahoma) W286BG \*105.1 (WAYM 88.7 Columbia TN), h,v

TN Bluhmtown (between Smithville and Woodbury) W223BE \*92.5 (WMOT 89.5 Murfreesboro), h,v

TN Buckner (N.E. Smithville; not the Buckner on the AL border) W236BE \*95.1 (WAYM), h,v

TN Chattanooga W282AY \*104.3 (WCCV), h,v

TN Clarksville W270BK 101.9 (WQZQ 102.5 Pegram TN), 250 h,v

TN Cookeville W206AJ \*89.1 (WAYM), h,v

TN Douglas (N.E. Spring Hill) W257BX 99.3 (WAYM), h,v

TN East Union (S.E. side of Jackson) W285EA \*104.9 (WAYM), h,v

TN Findlay (just E. Sparta) W292DC \*106.3 (WAYM), h,v

TN Kingsport W231BO 94.1 (WRZK 95.9 Colonial Heights TN), 250 h,v

TN Lantana (with transmitter north of Crossville) W270BI \*101.9 (WAYM, via W206AJ 89.1 Cookeville (see above), h,v

TN Lexington W261BC \*100.1 (WAYM), h,v

TN Loudon W293AW \*106.5 (WYLF 89.1 Alcoa), h,v

TN Morristown W255BK \*98.9 (WYLV), h,v

TN Murfreesboro W296BN 107.1 (WRVW 107.5 Lebanon), 250 h,v

TN Paris W247BD \*97.3 (WAYM), h,v

TN Piney Grove (N.W. of Johnson City) W226AW \*93.1 (WAYM), h,v

TN Red Bank WAWL-1 \*91.5 10 watts h & v. Booster of Red Bank station.

TN Reubensville (S. Franklin) W292DB \*106.3 (WAYM), h,v

TX Beaumont K287AM \*105.3 (KHCB-FM 105.7 Houston), 250 h,v

TX Beeville K226AV 93.1 (KTNR 92.1 Kenedy), h,v

TX Brownfield K291BD \*106.1 (KLVW 88.7 West Odessa), 170 h,v

TX Canyon K284BH \*104.7 (KAVW 90.7 Amarillo), 250 h,v

TX Childress K233BQ \*94.5 (KAMY 90.1 Lubbock), h,v

    K237EE \*95.3 (KBAH 90.5 Plainview), h,v

    K255BI \*98.9 (KWKL 89.9 Grandfield OK), h,v

    K273BG \*102.5 (KAXH 90.9 Pampa), h,v

TX Cuero K271AQ 102.1 (KTNR), h,v

TX Dalhart K252EK \*98.3 (KGRN 102.9 Amarillo), 120 h,v

TX Freeport K227BD \*93.3 (KFTG 88.1 Pasadena TX), 200 h,v

TX Huntsville K254BC \*98.7 (KHCB-FM), 210 h,v

TX Sherman K255BJ \*98.9 (KERA-FM 90.1 Dallas), 170 h,v

TX Victoria K282AR \*104.3 (KAYK 88.5 Victoria), h,v

TX Vidor K296FJ \*107.1 (KHCB-FM), h,v

UT Beaver K298AW \*107.5 (KZBS 90.7 St. George), h,v

UT Laketown K228EP 93.5 (KBLQ 92.9 Logan), h,v

    K246AW 97.1 (KLZX 95.9 Weston ID), h,v

    K299AW 107.7 (KKEX 96.7 Preston ID), h,v

UT North Ogden K256BB 99.1 (KKEX), h,v

UT San Juan County (SSW Blanding, W. Montezuma Creek) K272EG \*102.3 (KUER 90.1 Salt Lake City), v

UT Tremonton K252EL 98.3 (KVFX 94.5 Logan), 180 h,v

    K297AP 107.3 (KGNT 103.9 Smithfield), 240 v

UT Vernal K234BC \*94.7 (KUWZ 90.5 Rock Springs WY), h,v

UT Wellsville K267AU 101.3 (KKEX), 250 v

    K275AV 102.9 (KBLQ 92.9 Logan), 130 v

VT Brattleboro W284BK 104.7 (WYRY 104.9 Hinsdale NH), h,v

VT Burlington \*105.9 Peace & Justice Center, LPFM

VT Middlebury W273BH 102.5 (WCLX 102.9 Westport NY), h,v

VT Newbury W258AZ \*99.5 (WVPR 89.5 Windsor), h,v

VT Randolph W231BL 94.1 (WWFY 100.9 Berlin VT), h,v

VT Waitsford W289AW \*105.7 (WVPS 107.9 Burlington), h,v

VA Ashland W274AV \*102.7 (WAUQ 89.7 Charles City), h,v

VA Bassett Forks W292DF \*106.3 (WCPE 89.7 Raleigh NC), h,v

VA Danville W275AW \*102.9 (WCPE), 120 h,v

VA Harrisonburg W236BG \*95.1 (WPER 89.9 Culpeper), h,v

    W268BD \*101.5 (WPER), h,v

VA Lexington W240BR \*95.9 (WNRN 91.9 Charlottesville), h,v

    W270BJ \*101.9 (WVTF 89.1 Roanoke), h,v

VA Lovingston W230BD \*93.9 (WVTF), h,v

    W234BA \*94.7 (WNRN), h,v

VA Lynchburg W237CL \*95.3 (WKVE), h,v

VA Martinsville W286BH \*105.1 (WCPE), h,v

VA Midlothian W275AU \*102.9 (WNRN), h,v

VA Moneta W281AO 104.1 (WMGR-FM 104.9 Roanoke), h,v

VA Orange W291BN \*106.1 (WVTU 89.3 Charlottesville), h,v

VA Roanoke W293AX \*106.5 (WKVE), h,v

VA South Hill W226AX \*93.1 (WKVE), h,v

VA Winchester W227BM \*93.3 (WPER), 120 h,v

    W242BG \*96.3 (WPER), h,v

WA Arlington Heights (considerably N.E. of Arlington WA) K249DZ \*97.7 (KNHC 89.5 Seattle), h,v

WA Chehalis K259BG 99.7 (KAYO-FM 99.3 Elma), 200 h,v

WA Connell K291BE \*106.1 (KEEH 104.9 Spokane), 190 h,v

WA Deer Park K257EN \*99.3 (KRKL 93.3 Walla Walla), h,v

WA Everett K258BJ \*99.5 (KUOW 94.9 Seattle), h,v

WA Leavenworth K226AW \*93.1 (KPLW 89.9 Wenatchee), h,v

WA McCleary K286BF \*105.1 (KHRI 90.7 Hollister CA, via K207DB 89.3 Aberdeen WA), h,v. See also "Facilities," below.

WA Moclips K279BB \*103.7 (KYAO-LP 100.1 Ocean Shores), 250 h,v

WA Spokane KMJY-1 104.5 4000 v, d-a, with 100% power at 0°; booster of Newport WA station.

    KAZZ-1 107.1 400 h,v; d-a, 100% power at 0°. Booster of Deer Park WA station.

WA Walla Walla K266AT \*101.1 (KYPL 91.1 Yakima), h,v

WA Yakima K241BG 96.1 (KDBL 92.9 Toppenish), 250 h,v

WV Beckley W266AZ 101.1 (WRLB 95.3 Rainelle), h,v

WV Birch River (NNE Summersville, E. of Clay, SSW Sutton) W251AY 98.1 (WDBS 97.1 Sutton), 250 h,v

WV Huntington W284BL \*104.7 (WKVW 93.3 Montgomery), h,v

WV Matewan \*96.1 Coalfields Society Foundation, LPFM

WV Summersville W255BM 98.9 (WDBS), 100 h,v

WV Sutton W243CA 96.5 (WDBS), 250 h,v

WV Winona (ENE of Oak Hill) W257AV 102.9 (WDBS), h,v

WI Beloit W222AU 92.3 (WBKY 95.9 Portage), 250 h,v (replacing deleted W222AJ 92.3). W263BJ \*100.5 (WNWC-FM 102.5 Madison), h,v

WI Black River Falls W262BH \*100.3 (KNWS-FM 101.9 Waterloo IA), h,v

WI Bloomer W277BN \*103.3 (KDNW), h,v

WI Dane \*97.1 Wisconsin Polka Appreciation Society, Inc., LPFM. It will be on 7 a.m. to 10 p.m. initially, with a combination of local and satellite programming. It'll be difficult to receive in Madison, "but will likely be sought out by polka fans."

WI Elkhorn W269BV \*101.7 (WGTD 91.1 Kenosha), h,v

WI Fort Atkinson W240BS 95.9 (WBKY), 250 h,v

WI Howards Grove (N.W. Sheboygan) W237CE \*95.3 (WNWC-FM), h,v

WI Ladysmith W224BL \*92.7 (KTIS-FM 98.5 Minneapolis MN), h,v

WI Lake Geneva W277BM \*103.3 (WGTD), h,v

WI Madison \*99.1 LPFM—seven of them sharing the frequency in successive operation. Each group will be on for about 14 months. They are: Center for Prevention and Intervention; Common Ground Church; Cornerstone Church; Healthwriters, Inc.; St. Matthews Evangelical Lutheran Church, Sun Prairie Community Church; Youth With a Mission

    W300BM \*107.9 (WSUM 91.7 Madison), h,v. Its antenna will be on the WHA \*970 AM tower.

WI Mauston W224BM \*92.7 (WNWC-FM), h,v

WI Medford W273BK \*102.5 (WCLQ 89.5 Wausau), h,v

WI Merrill W259AR \*99.7 (WYNW 92.9 Birnamwood), 250 h,v

WI Nekoosa W266BA \*101.1 (WNWC-FM), h,v

WI Omro W268BC \*101.5 (WNWC-FM), h,v

WI Park Falls W250AV \*97.9 (KTIS-FM), h,v

WI Reedsburg W237CJ \*95.3 (WNWC-FM), h,v

WI Watertown W245AX 96.9 (WBKY), 250 h,v

WI Wisconsin Dells W287AV \*105.3 (WNWC-FM), h,v

WY Alpine K284BI 104.7 (KCHQ), h,v

WY Cheyenne K277BC \*103.3 (KCSP-FM), h,v

WY Gillette K294BD \*106.7 (KQFR 89.9 Rapid City SD), 140 h,v

WY Lander K246AS \*97.1 (KUWZ 90.5 Rock Springs), h,v

WY Mammoth (east of Mammoth Hot Springs) K292BQ 106.3 (KMMS-FM 95.1 Bozeman), h,v.

WY Riverton K228EO \*93.5 (KCSP-FM), h,v

    K278BA \*103.5 (KUWZ 90.5 Rock Springs), h,v

WY Worland K227BB \*93.3 (KUWT 91.3 Thermopolis), h,v

VI Cruz Bay W221BW 92.1 (WVJZ 105.3 Charlotte Amalie), v

ON Thunder Bay \*102.7 130 h,v, Lakehead University

# TELEVISION: THE TECHNOLOGY THAT CHANGED OUR LIVES

BOB COOPER  
PART TWO

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*The following material is from an in process book by Robert B Cooper who retains the copyright to this material. None of this may be reproduced in any form without the permission of the author; special permission for VUD to publish this 'draft version' is on record."*

Between his initial June 1940 laboratory demonstration for CBS brass and August 1940, Goldmark had gone to RCA and ordered a special version of the new Image Orthicon camera tube. Goldmark wanted a tube for his concept of a color camera, and his "custom" product order included, "thicker mica on the surface" (of the pickup plate). Goldmark was discovering what RCA and a small number of others already knew - the sensitivity or ability of the camera tube's plate surface to turn light energy into electrons was the key to successful imaging. He believed that if he had a camera of sufficient sensitivity, his field sequential color system could be made operable with live studio presentations.

Some elementary understanding of how field sequential color worked now becomes important for what follows. To turn a camera scene into color requires that the electronics within the camera sees not one but as a minimum three separate images, more or less simultaneously. One of these will be the red tones, another will be the blues and a third will be the greens. Artists consider the "three primary colors" to be red, blue and yellow and various combinations of two or all three will produce essentially any color one finds in nature. TV cameras do not "paint" - rather they use the spectra of light as a source and take this spectra apart for transmission. Red, blue and green are the "primary colors" in light spectra - thus explaining the difference with our school child understanding of red, blue and yellow. The Goldmark camera had to "take the scene apart" and create three separate "electron streams," each one representing a color range. Goldmark used the original Baird and Ives "color filter wheel" to separate the image into three parts. The initial color wheel typically had three equal (1/3rd) filters fitted; one for each of the colors of interest (others would have equal numbers of each color but more "filter sections").

The color wheel was a mechanical device positioned in front of the TV camera's pickup tube. A motor with precision rotational speed control circuits caused the wheel to spin on its center and by adjusting the motor's speed you could select how many times per second each of the color wheel filter segments (such as the red 1/3rd surface area transparent

filter) passed in front of the camera pickup tube.

When the red filter was between the camera imaging tube and the object being televised, only portions of the image with red tints were identified. Thus for that brief portion of a second, the electron flow originating in the camera would paint a partial image on a receiving tube screen representing nothing but red toned subjects. Then as the motor driven wheel rotated, only blue and subsequently only green objects would be "photographed" and create a flow of signal-electrons to the receiver.

If you spin the tri-colored disc fast enough, individual colors are no longer visible to the eye; the result of a peculiar eye-mind effect known as "persistence of vision." If the disc spins too slowly, the image "flickers" because the human eye is able to ever so briefly discern the separate color segments and as they change in succession there is a "flickering effect" the eye+mind sees. At operating speed, standing before the camera and staring at the rotating disc results in a "white" object - all three electronic-primary colors mixing at a rate where the eye's persistence of vision melds them into what you get when painters mix red, blue and yellow (white).

Goldmark wrote, "December 2, 1940 was a big day" and he went on to describe his first "live camera results." Meanwhile, "upstairs," CBS was indeed using the "color issue" to slow down (if they could not stop) the rush to commercial television. But there was another side to what CBS was doing; Goldmark the inventor. He had upper management support for his color development activities, and he wrote in, "Maverick Inventor: my turbulent years at CBS," that his color project was pretty much left alone by top management scrutiny. In effect, as long as he could report (and publicly demonstrate) "progress," which in turn CBS top management could use as a tool against RCA and the commercialization of black and white, all was well.

In Maverick Inventor, Goldmark suggests that CBS used their W2XAX Chrysler Building 50-56 Mc/s transmitter for experimental color telecasts with FCC approval during 1940.



Where all of this goes awry is when Goldmark's claims for advanced color work are compared with his own statements at that time and those of CBS management as late as June 1941. Our conclusion is that if we are going to accept and believe quoted material from past publications, we are perhaps safest by erring to the monthly trade press which was reporting events as they happened rather than a Goldmark autobiography assembled 33 years after the event.

Radio News for September 1941 reported, "CBS expects to turn in a formal report to the FCC on January 1, 1942 on their technical testing of color, for consideration relative to the standardization and commercialization of color TV." As this date would be after the Japanese bombing of Pearl Harbor, it is not surprising that no such report appears in FCC archives. Goldmark in his autobiography wrote, "It (bombing of Pearl Harbor) marked the end of our color work for the duration."

RCA's most influential color man was George H. Brown. If Goldmark was a "maverick," Brown was the perfect embodiment of a "company man" who did what he was told with a lifetime of achievement: 80 patents in his name, on the RCA Board of Directors for several terms, recipient of the prestigious Edison Medal and the de Forest Audion Award(s). Brown's most impressive creation, perhaps, was an electronic system employing 2,000 watts of RF (radio frequency) energy to dehydrate bulk amounts of Penicillin 48 times faster than previous methods which in one giant leap for technology solved a national need for several times as much of the drug as the USA had previously been able to produce (1944). His personal and highly detailed "and a part of which I was" (1982, revised) techno-biography is a treasure trove of intimate and often very human reflections covering the period 1932 (when he joined RCA) through 1982. Andy Inglis ("Behind The Tube") characterizes Brown as self promoting but the fact remains Brown, perhaps more than any single individual employed at RCA, persisted with color technology development until the final NTSC format was accepted in the 1950s.

Brown's reflections on Goldmark's color system provide far more insight into what it was and where it had limitations than anything Goldmark himself or CBS has ever made available for scholar study. Brown answers some of the questions which we have raised to this point; and, raises questions which challenge the accuracy of Goldmark's self-puffery memory.

Brown writes, "...both NBC and CBS carried out over-the-air broadcasts of color during

most of 1941." For this to be a true statement, such tests logically had to be conducted using frequencies other than those assigned to NBC (44 - 50 Mc/s) and CBS (50 - 56 Mc/s). Why? Simply because the color designs in 1941 (whether RCA or CBS) required a 16 Mc/s bandwidth and neither CBS nor NBC had that available with their experimental (later commercial) VHF TV channels. There remains another possibility; either or both could have "tested" much reduced resolution color TV using the standard 6 Mc/s channel width available to each and this appears to have been the case. Brown points at some of the technical problems in this early era:

"Except for flattering the corporate egos of both organizations, the broadcasts were of little consequence since it was obvious that no color receivers were in the hands of the public and those few black and white receivers which had found their way into homes would not be able to receive the color signals in black and white because the circuitry in the receivers would not respond to the disparate line and field rates."

Which identifies one of the major design flaws in Goldmark's "idealistic" system. Yes, it required (in 1940-1941) a bandwidth so great as to make it impossible for use in the already pioneered VHF band. But there were more serious challenges.

Brown: "In the 1940 broadcasts, CBS used a scanning of 343 lines in each frame with 60 complete frames or 120 fields per second. While the field rate for black and white television was 60 per second, it was necessary to go to a higher field rate for color to avoid flicker. Even at a total of 120 fields per second, each primary color was thus transmitted at 40 fields per second."

And the key. "This rate was low enough to cause flicker for the average viewer at any brightness high enough for acceptable viewing."

Persistence of vision varies slightly from person to person but virtually 100% of those with sight see no flicker with a field rate of 50 or more per second. Americans brought up on 60 fields per second, when first exposed to British television (50 fields per second), will and do notice "flicker" for the first few hours of viewing - until their mind adjusts to the slightly lower frame rate. It is a peculiarity of the human mind that staring at a TV screen for extended periods of time will implant a 'flicker memory'."

Peter Goldmark in *Maverick Inventor* wrote: "I seldom go to the movies because I've never felt my eyes were strong enough. Looking for

faults in television pictures put them under a strain."

And as George Brown so correctly noted, when the brightness control on a TV receiver of that era was advanced, the flicker rate became far more evident. Whether Goldmark's eyes were so permanently damaged by his "staring at TV screens" that he simply did not see the flicker is unknown. However, those who witnessed CBS color in that era were shown a small TV screen (never exceeding 7" in diameter) in a darkened room with the TV screen's contrast and brightness carefully set at what one suspects was "just below the flicker level" for the most sensitive of eyes.

By reducing the field rate to 40 per color (120 total per second with three separate fields - one for each color), CBS was battling not only persistence of vision limitations but resolution as well. TV images transmitted prior to the adoption of the NTSC-FCC compromise (June 1941) were more or less uniformly 343 or 441 lines per frame; post July 1, 1941 and the sanctioning of commercial telecasting, 525 lines per frame. CBS color produced an image of significantly reduced horizontal (side to side) and vertical (number of lines per image) resolution. CBS was caught in a maze of their own making. Goldmark was receiving top echelon support because his proposed color system had RCA in a defensive posture. This encouraged him to push harder to work out the defects of which there were many. In a sense, Goldmark was being "encouraged" by CBS brass to keep RCA's feet to the coals and there is little evidence to suggest that at any point in this "color period" (which would extend through 1951 in one form or another) that CBS Chairman Paley or President Stanton ever expected the CBS system to actually work. In their minds, if it kept RCA on the defensive and bought CBS additional time to work out their own TV networking plans, "it was doing exactly what they hoped."

The maize was this. If Goldmark increased the number of lines so as to improve vertical resolution, this would automatically increase the scanning rate and - the bad news - further reduce the horizontal resolution. It is a balancing act from which there is no rescue - changing any one element causes immediate repercussions in others. And this is how color TV would stagnate following the Japanese attack on Pearl Harbor.

A limited amount of television broadcasting went on during the war. Of interest to us here is the following. General Electric's WRGB in Schenectady was granted a commercial license on March 01, 1942 (although Televiser Magazine for January-February

1947 reported, "WRGB does not have an advertising rate card in effect - the station waiting until there are more receivers in the Albany-Troy-Schenectady coverage area." Televiser for May-June reported 550 TV sets in the service area.); New York City's Allen B. DuMont station (WABD) was certified for commercial operation July 28, 1944 and Chicago's WBKB was approved in October 1943. If new TV stations were scarce, interest in TV programming production was a major driver during the war. Two firms in NYC established TV production studios where the various skills (lighting, audio, make-up, camera operation, sound, program production et al) were taught on a commercial basis. Within this framework, a number of institutional grade programs were turned out (live, or, on film - as tape was not yet invented!) in support of the war effort. DuMont's WABD in particular was very active in creating live studio shows to train air wardens, airplane spotters and other "homeland security" groups in the finer nuances of their adopted volunteer activity, as was Los Angeles pioneer W6XAO. TV activity was muted but hardly abandoned from December 1941 through the surrender of the Japanese.

Radio News reported on a survey conducted by Don Lee Broadcasting (operator of pioneer Los Angeles television station W6XAO, later KTSL/KCBS) which claimed as of early 1943 the following statistics:

"Approximately 7,200 television receivers are in the hands of the public in the USA, centered around NYC, Philadelphia, Schenectady, Chicago and Los Angeles. As of 1 January 1943, the number of hours of scheduled programming per week in each area was:

New York City - 9 hours per week (split amongst 3 stations)

Schenectady - 10 hours per week (1 station)

Philadelphia - 4 hours per week (1 station)

Chicago - 4 hours per week (1 station)

Los Angeles - 6 hours per week (1 station)."

The last "new production line" TV sets to roll off of assembly lines occurred in January 1942 and even the build-it-yourself kit (3 and 5") sets offered by Andrea and others so widely advertised in the trade magazines during 1940/1941 disappeared from promotional view. Under the War Production Board dictum, it was no longer legal to build TV (or consumer radio) sets after April 22, 1942 and this ultimately extended to offering

such equipment for sale as "new" even if the item had been manufactured prior to the WPB ruling going into effect.

Of interest in our trail leading to the creation of color TV was a patent application (April 26, 1941) by Allen B DuMont Laboratories (granted December 23, 1943). In it DuMont described a trio of cathode ray (picture) tubes equipped with filters, or, embedded with colored phosphors and focused onto a common screen with three lens. DuMont would post-patent-grant call this system Trichroscope and RCA would become cross licensed for use of the patent. Post war, late in 1946, DuMont had a variation of this with three separate cathode ray tubes enclosed in the same vacuum envelope which was demonstrated to RCA at Princeton (NJ) in November of that year. Whether RCA made use of this patent in their own development of a projection screen color receiver (in the 1947-1951 period) is unknown.

Nothing further of significance occurred in the development of colour until 1946 when CBS renewed its efforts to use color as an excuse for slowing down the commercialization of black and white TV.

In April 1946 Radio News reported:

"CBS and Zenith have both announced they will build color TV transmitters in Chicago in the near future. Zenith further reports it will only build color TV receivers when it enters the TV set market."

Zenith, a primary manufacturer of home radio sets prior to the war, through company founder and President Eugene McDonald, shared the CBS philosophy that any activity which slowed down the development of black and white television was good for the industry. But like CBS, Zenith was talking out of both sides of its mouth. First of all, Zenith had the most unusual experimental TV license in the country; for channel 1 Chicago (44 - 50 Mc/s). Zenith records ("Trail Blazers to Radionics" by Engineering Correlator E. Kelsey, 1943) suggest the TV transmitter operated from their plant located in XXXXXXXX with a maximum radiated power of 1,000 watts. Clearly this was an experimental station, not unlike Don Lee's W6XAO or NBC's W2XBS but for reasons untraceable the FCC had assigned it call letters of WTZR as if it were a commercial TV station (normally the station's experimental call letters would have been W9X//). The FCC apparent rationale for the mixed-call-letters was Zenith's proposed use of the channel for testing of over the air pay television; a first in

the world. Ultimately the WTZR transmitter would be donated with associated parts to an Indiana educational facility (1952). What is of interest here is that Zenith was in a position to have assumed the license for Chicago's TV channel 2 (commercial) frequency because of this experimental license (as Don Lee did in Los Angeles) but apparently because of the obstinate attitude of Zenith-boss Commander McDonald the firm made no attempt to do so. Oh yes - neither Zenith nor CBS would in fact follow through on their "promises" to build color TV stations in Chicago. Zenith was adamant about creating "Phonevision" which involved viewers being authorized for the scrambled broadcasts through a phone line connection to a Zenith authorization center and maintained the license for WTZR for that purpose. However, when the FCC finally agreed to allow Zenith to conduct 90 days of tests (February 1950), RFO General, 20th Century Fox and other movie suppliers refused to license Zenith for the movies it needed to test the service. If television scared the movie producers, the concept of selling recent release movies through television delivery was a heart stopper, a subject investigated in greater detail elsewhere here.

The next significant event was a series of hearings held in Washington December 9-13, 1946 and then repeated for a new audience in New York City January 27 (1947). The hearings were given a name of "UHF/Color Hearings" and they were a FCC response to CBS's continued urging that TV standards, if frozen for the 13 VHF channels established in 1941 through the guidance of NTSC, should not be repeated for the new (under consideration) UHF channels. The FCC, keen to create a television channel allocation scheme which would guarantee every home in America access to between 1 and 3 (as a minimum) off-air TV channels, recognized that VHF channels 1 through 13 were simply not "wide enough" to allow a national TV channel system to operate. Post-war, the UHF region, from 500 to 900 Mc/s, would be first-time assigned to specific services - the direct result of significant new technology developed during World War II. If TV was going to have some or all of this spectrum reserved for its use, careful planning was required. Alternately, dozens of other potential users (including two-way public safety radio, air to ground communications, telemetering, radar) were desirous of having some of this spectrum set aside for their use. The "UHF/Colour Hearings" were designed to create a written record that would allow the Commission to move ahead with allocations in the 500 - 900 Mc/s region. (Con' next time)

# Ducts, Elevation and Tropo

From recent discussions on the WTFDA List on Topica.com

I can tell you from living at 8 different locations in the last 20 years, that height means everything. Tropo scatter happens in dead conditions at higher altitudes. It makes an enormous difference. I can hear Buffalo's WBFO 88.7 almost daily by tropo scatter. I also think tropo (especially inland tropo) is enhanced by living on a hill as well. I use to live on a hill in Broomall, PA (on the highest point in Delaware County) and had similar conditions. I had a DXer friend who lived 2 miles from me down from the hill and had major difficulties in hearing what I was getting with a strong signal using the same equipment. I can't believe some of the stuff I am hearing either, but it sure makes DXing exciting as heck again. – Dan Oetting

I have to agree with Dan about elevation making a difference in your DX conditions. I have been at a number of different locations that I could DX from. Those that were higher in elevation were definitely better than those that were lower. I am now located at the crest of a hill at 1,700 ft with a fairly clear view to the North. To the South there are about 3 blocks of houses at about the same elevation. As soon as trop conditions are up, I can usually get Rochester or Syracuse NY. I wouldn't have thought that I could get the Binghamton, NY UHF's on a regular basis since they are fairly low power except for CH 34, but because of the elevation they come in stronger than the Philadelphia UHF's which have much higher ERP (but they are blocked somewhat by the houses & trees). Elevation is definitely the key to any type of trop conditions. I don't think that elevation plays as much of a role when it comes to E-skip reception however. Dan might be getting some coastal trop enhancement since he is closer to Chesapeake Bay. - Bob Seaman

It is all about height above average terrain. Ask Bob Seybold to tell you about the "early days" when he used to camp out in the hills south of his western NY location - when WBEN-4 went off for the night (yes children, that did happen in the past!) from 1,700 to 2,000 feet - open to the south and SE he routinely saw Nashville - around 600 miles or so. The leading TV DXer in the 50s was a guy named Louis Matillo who lived at 2900 feet just east of Pittsburgh. His "circle" was routinely 300 miles even under dead band conditions. Bedford Brown, the legendary late 50s/60s TV DXer while living near Hot Springs, Arkansas at an elevation that was

the highest point in his county watched channel 4 stations from Dallas, OKC, Tennessee and New Orleans as if they were locals - to a schedule simply by rotating his channel 4 yagi antenna (this before Little Rock came on or after they started but past their sign off time). And then there is Fernando in Mexico. Height IS the name of the game - once you breach 1,500/1,700 feet MSL in most eastern sections of the country (except of course where the surrounding terrain is higher) you are into the temperature inversion ducts that form virtually daily as long as the weather is under the influence of a high barometric pressure area. – Bob Cooper

Here is my experience: Many, many times Fernando had tropo DX on his TVs from hundreds of miles north of me, while I had nothing. The tropo just passed over my **\*low\*** antennas.

Jeff Kadet has also received tropo that simply passed over my antennas. – Dan Oglethorpe

Ducts are very common. What is NOT common is for ducts to drop down to MSL 300-800 feet. Over my lifetime there have been many opportunities for "flying a duct" in a private plane. One memorable one took off from OKC and went to Kentucky. With the help of a cooperative (well - semi-cooperative because of fuel consumption at lower elevations!) I/we actually tracked the height of a duct over a 600 mile path for several hours at 180 mph. This was in October as I recall, and ground (msl) conditions when we took off appeared totally normal. But at around 2,000 feet ASL, from my fading memory, we dropped into a duct and while that was a lousy altitude to fly a private two engine plane at, my partner/pilot cooperated with my insane requests more or less all the way to middle Kentucky (well, he would drop down from cruising at 9,000 to duct sampling at around 2,000 to 3,000 every 30 minutes or so allowing me to check the continuation of the inversion/duct). The receiver was a GE color portable sitting on a seat next to me, with a UHF bow tie stuck on the plexiglass window. During the decade when I lived in the Turks & Caicos I had dozens of similar opportunities but a totally uncooperative pilot who measured his fuel remaining by the teaspoon and thus I was stuck with ascending from Fort Lauderdale, dropping into Nassau (Bahamas) for petrol, rising again through the duct and then chewing my fingernails until we

descended for landing at Provo, 600+ miles east of Fort Lauderdale. The magic height is 1,700-2,000 feet msl, the depth (internal height) of the duct is variable from a few hundred feet to a few thousand feet. Someone like Russ Edmunds in eastern PA at 350 feet MSL is stuck waiting for the duct "to drop" and short of climbing a local hill or mountain, there is nothing one can do to change where one is located. Way (way) back

in 1950, while my family had one of the first TV sets in Thomkins County (Ithaca, New York), I went to high school with a couple of guys who lived at 1500 feet plus south of the city. And they had TV and would badger me with stories of watching Philly, DC and so on "nightly" when of course at my 300 foot elevation I was lucky to even be seeing Rochester and Buffalo on my property-filling rhombic antennas. Location, location, location. That's what counts. – Bob Cooper

## METEOR SHOWER SCHEDULE

Shower	Dates	Peak
Alpha Pegasids	October 29 – Nov 17	November 1-12
Northern Taurids	October 12-December 12	November 4-7
Andromedids	Sept 25- December 6	November 14-15
<b>Leonids (MAJOR!)</b>	November 14-20	November 18th
Alpha Monocerotids	November 13-December 2	November 21

Remember, the leonids is a major meteor shower!

## THE FIRST Es

Questions:

When was the first FM E skip reported? (a) on the 40 MHz band (b) on the 88-108 MHz band???

By June 1943 FM Es at 43 MHz was quite commonly reported. A note in Radio-Craft for June 1943 said, "Reception from distances of more than 1,000 miles is occasionally reported. One of the more interesting ones was from a fan in Timmins, northern Ontario who verified reception from W49FW in Fort Wayne, Indiana. A set owner in the Pennsylvania mountains received so many distant stations that General Electric engineers are studying the district. One doctor in Florida even receives the baseball broadcasts from W43B in Boston regularly."

It was in 1938 however that the F layer cycle produced many days of 41.5 audio and 45 megacycle video reception from the BBC (and on occasion from the German and French TV in the same frequency region) at the RCA Riverhead, Long Island facility. QST and other amateur magazines reported trans continental FM reception in Arizona and California via F layer from the east coast during the 1940 period. In the same vein, this item from Radio-Craft for February 1948:

"Interference to British television programs from American FM broadcasts has become so severe that changes in American program schedules had been made. (Chicago's) WEFM, operated by Zenith on 45.1-mc, has received permission from the FCC to temporarily change the broadcasting hours to avoid interference with the London television station between the hours of 3 and 4PM Greenwich time. WEFM will begin broadcasting at 10AM Chicago time (4 PM Greenwich) so that its signal will no longer cause interference to London TV viewers."

The first 100-mc FM Es reports are more difficult to decipher but they apparently began in the summer of 1947 as the first FM stations previously using the 40-mc band converted to new assignments in the 100-mc region. The FM receivers available for several years at 100-mc were woefully insensitive and most people were using "twin lead dipoles" tacked on the wall until antenna manufacturers began offering outdoor FM antennas (1948 were the first such aerials).  
Bob Cooper in New Zealand

### WTFDA EMAIL REFLECTORS

Enhance your DXing experience! Entertaining and informational.

*For WTFDA members*

**The WTFDA list...**send an email to [WTFDA-subscribe@topica.com](mailto:WTFDA-subscribe@topica.com) 178subs  
**The WTFDA DXalert list...**send an email to [WTFDA2-subscribe@topica.com](mailto:WTFDA2-subscribe@topica.com) 34subs  
**The WTFDA AM DX list...**send to WTFDA-AM-subscribe @topica.com 65subs

DX Alerts contain real time, concise alerts of E skip and widespread tropo. No discussion is permitted





# FM News

AL Champs  
2004



November '04

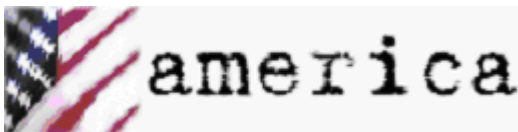
WHY NOT US?

Adam Rivers-37 Carlton Ave.-Chicopee, MA 01020-  
patriotsrule417@yahoo.com

### ABBREVIATIONS:

AF: applied for (a new station)  
 AFA: American Family Association  
 CC: call letter change  
 CL: city of license change  
 CX: a construction permit has been cancelled  
 C1, C2, etc.: a change in status to that FM license class  
 DA: directional antenna  
 DE: station has been deleted  
 FC: format change  
 GA: granted amendment to the table of FM allocations  
 GE: granted extension of construction permit  
 GX: granted replacement of expired permit  
 LC: license to cover filed (ready to come on the air)  
 MC: multiple-city ID  
 NC: no change yet on a reported change or permit  
 ND: non directional antenna  
 NO: not on the air  
 NS: new station granted

NW: new station signs on  
 OSA: one step application granted for change  
 PA: proposed amendment change to FM allocation table  
 PC: power change on the air (> = increase, < = decrease)  
 PG: power change granted (> = increase, < = decrease)  
 PR: power change requested  
 QC: frequency changed occurred  
 QG: frequency change granted  
 QR: channel change requested  
 RA: silent stations returns to the air  
 RE: station requests an extension on permit  
 RX: station requests replacement of expired permit  
 SC: slogan change or update  
 SI: station is silent  
 SOA: signed on air  
 XA: dismissed amendment to FM allocations  
 XC: transmitter site change occurred  
 XG: transmitter site change granted



### ALABAMA:

Atmore: WYDH 105.9, CC to WNSI-FM, FC to newstalk//WNSI 1000  
 Fort Rucker: WJRL 103.9, PA from Ozark  
 Gardendale: WODL 97.3, FC to country "New Country 97.3"  
 Lanett: WRNK-LP 96.3, XR 32-52-26/85-11-32  
 Marion: WNPT 102.9, PR 29kw/197m, 32-40-50/87-24-22; CL from Linden  
 Muscle Shoals: WQPR 88.7, PR>22.8kw/131m, 34-34-41/87-47-02  
 Phenix City: WURY-LP 97.1, XR 32-26-59/85-00-41  
 Piedmont: WJCK 88.3, PG 2.7kw-V/295m, 33-50-12/85-43-59  
 Scottsboro: WKEA 98.3, PR>12kw/146m, 34-31-57/85-55-07



Solcumb: WXUS 100.5, PA from class A to C3, from Fort Rucker  
 Union Springs: WQSI 93.9, PR>12.5kw/143m, 32-19-04/85-40-16

### ARIZONA:

Camp Verde: KAJM 104.3, requests CL from Payson  
 Chino Vly: KFPB 94.3, PC 4.1kw/247m, 34-49-32/112-34-09  
 Dewey-Humboldt: KVNA 97.5, PR 42kw/849m, 34-14-05/112-22-02; CL from Flagstaff  
 Gilbert: KEDJ 103.9, PC>99.6kw  
 Sierra Vista: KKYZ 101.3, PR>51kw/61m, 31-43-50/110-28-10

### ARKANSAS:

El Dorado: KAGL 93.3, PC>18kw/108m  
 Hope: KJMY 101.7, FC to hot AC/Classic Hits "Bob", CC to KBYB  
 Mtn Home: KOMT 107.5, PG>100kw

### CALIFORNIA:

Alameda: KBTB 92.7, CC to KNGY, FC to dance "Energy 92-7"  
 Bakersfield: KRHM-LP 103.5, PG<24m, 35-16-02/119-01-49  
 Big Pine: KRHV 93.3, PR>890w/885m, 37-24-48/118-11-08  
 Borrego Springs: KKJD-LP 99.3, XR 33-14-39/116-22-30  
 Encinitas: KPRI 102.1, PR 32kw/188m, 32-50-24/117-14-52



Garberville: KLVG 103.7, PC>11kw  
 Garden Grove: KEBN 94.3, PR>6kw/73m  
 Gilroy: KBAA 94.5, CC to KBAY  
 Greenville: KPJP 89.3, NW 4.5kw-V/716m, 40-13-59/121-01-08 (religious)  
 Joshua Tree: KQCM 92.1, FC to top 40 "KQ92"  
 Lancaster: KFXM-LP 96.3, NW 100w/23m, 34-49-39/118-10-13  
 Laytonville: KHKL 91.9, PR>100w/723m, 39-41-38/123-34-43  
 Lincoln: KXCL 103.9, PR<6kw, 38-52-33/1212-07-30; CL from Yuba City  
 Los Angeles: KLVE 107.5, PR>50.1kw/896m, 34-13-29/118-03-48  
 Los Angeles: KPWR 105.9, XR 34-13-29/118-03-48



Merced: KHPO 106.3, PR 4kw/123m  
 Merced: KGDM-LP 105.5, NW 100w/8m, 37-17-18/120-28-21  
 Mt. Shasta: KMJC 107.9, PG>20kw-H/249m, 41-13-37/122-14-23  
 Patterson: KOSO 93.1, PR 2.75kw/546m, 37-30-41/121-22-22  
 Rondo Beach: KZAB 93.5, FC to classic rhythmic CHR; "93-5 K-DAY"  
 San Clemente: KWVE 107.9, PR>105kw/905m, 33-30-10/117-36-06  
 San Diego: KPBS 89.5, PG 2.7kw/550m, 32-41-53/116-56-03  
 San Fernando: KBUA 94.3, PR>6kw/26m  
 San Francisco: KBAY 93.3, CC to KBAA  
 Shafter: KRFR 93.1, CC to KKXX  
 Sutter: KXJS 89.7, NW 550w/603m, 39-12-20/121-49-10//KXPR  
 Twentynine Palms: KXCM 96.3, FC to country "Kix 96"  
 Walnut Creek: KFJO 92.1, CC to KABL

**COLORADO:**

Breckenridge: KSMT 102.3, PC>6kw  
 Castle Rock: KJMN 92.1, PR 42kw/163m, 39-23-07/105-02-52  
 Denver: KFMD 95.7, PR<487m  
 Denver: KRFX 103.5, PR>487m, 39-43-59/105-14-10  
 Denver: KBPI 106.7, PR>96kw/524m  
 Ft. Collins: KPAW 107.9, PR>220m, 40-53-42/105-11-38  
 Fountain: KMOM 96.1, CC to KIBT, FC to rhythmic CHR "96-1 The Beat" (CO Springs)



Gunnison: KVLE 102.3, GA to 107.7  
 Pueblo: KDZA 107.9, PR 25kw/678m, 38-44-42/104-51-37

**DELAWARE:**

Bethany Beach: WOSC 95.9, PC 10.5kw/143m, 38-25-20/75-08-23

**FLORIDA:**

Key Largo: WZMQ 106.3, PR>150m, 25-19-31/80-24-16  
 Lehigh Acres: WDRR 107.1, CC to WZJZ  
 Miami: WLRN 91.3, PG 47kw/285m  
 Newberry: WHHZ 100.5, PC>44kw/143m, 29-36-29/82-51-01  
 Pennsuko: WIRP 88.3, PC>6kw, adds H (was V only)  
 Port Charlotte: WPCT 100.1, PR>299m, 26-47-07/81-47-47  
 West Palm: WRLX 92.1, FC to soft AC "Classy 92.1"

**GEORGIA:**

Americus: WFRP 88.7, PG>4.2kw/70m (adds V, was H only)  
 Atlanta: WABE 90.1, PC<250m, 33-45-32/84-20-07  
 Augusta: WZNY 105.7, CC to WIBL, FC to country "105-7 The Bull"  
 Blakely: WBBK 93.1, PC>45kw  
 Brunswick: WWRR 100.7, PC>62kw/449m  
 Doraville: WBTS 95.5, GA from Athens  
 Gainesville: WYAY 106.7, PR>83kw/482m, 33-52-02/83-49-44  
 Hampton: WHAT 107.9, PC 27kw/176m  
 Lexington: WMGZ 97.7, PA from Eatonton, class C3=>C2  
 Martinez: WGOR 93.9, SC to "The Bulldog", CC to WKDG  
 Springfield: WTYB 103.9, FC to oldies "Kool 103.9"



**HAWAII:**

Hilo: KCIF 90.3, PG>5kw-V/-40m, 19-38-14/155-03-19  
 Hilo: KHVI 92.7, FC to AC "Mix 92-7"  
 Kaneohe: KXME 104.3, FC to R&B "Power 104-3"

**IDAHO:**

Pocatello: KAWS 90.3, PG<910w-V/314m, 42-51-46/112-31-03  
 Sun Valley: KBSS 91.1, NW 700w/570m, 43-38-36/114-23-49  
 Twin Falls: KEZJ 95.7, PC>100kw, 42-43-42/114-24-48  
 Twin Falls: KTWI 98.3, CC to KSNO  
 Victor: NEW 103.7, CC to KKTN  
 Victor: NEW 92.3, CC to KMQS

**ILLINOIS:**

Sugar Grove: WSRI 88.7, PG<250w/39m, 41-47-01/88-26-14

**INDIANA:**

Brownsburg: WKLU 101.9, FC to classic rock  
 Cicero: WJCY 91.5, PG<470w-V/59m  
 Huntington: WXKE 102.9, PR>4.7kw  
 LaGrange: WTHD 105.5, PC 2.4kw/159m, 41-37-24/85-20-49



Lanesville: WGZB 96.5, PA from Corydon  
 Oakland Cty: WOCU-LP 94.1, PR 66m, 38-20-03/87-21-26  
 Seymour: WJLR 91.5, FC to K-Love  
 Sullivan: WNDI 95.3, PC>6kw/100m, 39-09-36/87-32-32  
 Terre Haute: WHOJ 91.9, PR>1.2kw

**IOWA:**

Des Moines: KJMC 89.3, PC 7.1kw/61m, 41-39-21/93-35-51  
 Des Moines: KMXD 100.3, PR>547m, 41-49-48/93-36-54  
 New London: KKNL 97.3, PC 3.8kw/125m, 40-47-53/91-26-22

**KANSAS:**

Haven: KSKU 97.1, PA from Henderson  
 Haysville: KFBZ 105.3, PC 98kw/307m, 37-48-01/97-31-29  
 Hutchinson: KZSN 102.1, PR 100kw/313m, 37-46-40/97-30-37  
 Wichita: KRBB 97.9, PR>313m



**KENTUCKY:**

Hopkinsville: WHOP 98.7, >189m, 36-55-41/87-32-50  
Louisville: WPTI 103.9, FC to country "New Country 103.9"  
Pikeville: WDHR 93.1, PC 22kw/231m

**LOUISIANA:**

Franklin: KFMV 105.5, CC to KDDK  
Kenner: WKZN 105.3, PC>96kw/306m  
Monroe: KBMQ 88.7,  
PG 50kw/140m, 32-24-15/92-02-07  
Monroe: KOUS-LP  
96.3, NW 100w/31m,  
32-26-04/92-06-17



**MAINE:**

Winslow: WWWW 95.3,  
PC>205m, 44-42-48/69-43-39

**MARYLAND:**

Cambridge: WINX 94.3, PR>21.6kw/107m, 38-37-49/76-03-24

**MICHIGAN:**

Cass City: WIDL 92.1, PR>17.5kw/119m, 43-39-59/83-04-29; CL from Caro  
Grand Rapids: WFGR 98.7, FC to oldies  
Greenville: WODJ 107.3, FC to rock, CC to WKLQ, "107-3 WKLQ"  
Holland: WKLQ 94.5, FC to country "Thunder Country", CC to WTNR  
Southfield: WSHJ 88.3, PR>100w-H/110w-V/21m

**MINNESOTA:**

Anoka: KOQL 107.9, PC>338m  
Hermantown: WWAX 92.1, NW 990w/113m (aux)

**MISSISSIPPI:**

Coldwater: WVIM 95.3, PR 3.4kw/134m, 34-48-22/89-59-47  
Indianola: WYTF 88.7, NW 100kw-V/194m, 33-35-03/90-36-13 (AFA)  
Prentiss: WCJU 104.9, PC 2.8kw/133m  
Taylorsville: WBBN 95.9, PR>100kw/223m, 31-38-04/89-28-35



Tupelo: WZLQ 98.5, FC to classic rock "Z98.5", John Boy and Billy in the morning

**MISSOURI:**

Garden City: KFME 105.1, CC to KCJK, FC to hot AC/classic hits hybrid "Jack FM"  
Lamar: KHST 101.7, PC>22kw  
St. Joseph: KSRD 91.9, NW 10kw/150m, 39-42-35/95-02-33  
St. Louis: KLOU 103.3, PR 90kw/313m, 38-34-24/90-19-30

**MONTANA:**

Helena: KZMT 101.1, PG 91.2kw/607m  
Superior: KLTC 107.5, PR>59kw-H/12kw-V/749m, 47-01-57/113-59-30  
W. Yellowstone: KEZQ 92.9, RA with soft AC "The Big Easy 92-9"

**NEBRASKA:**

Omaha: KGOR 99.9, PC<370m, 41-18-29/96-01-36



Omaha: KVNO 90.7, PG>8.9kw/197m, 41-18-25/96-01-37

**NEW HAMPSHIRE:**

Concord: WCNH-LP 94.7, NW ?w/70m, 43-12-41/71-34-06  
Etna: WXND-LP 107.3, NW ?w/42m, 43-42-30/72-09-16

**NEW JERSEY:**

Long Branch: WWZY 107.1, PR 5kw/110m  
Pennsauken: WSNJ 107.9, PR 550w/252m, 39-57-09/75-10-05  
Port Republic: WXXY 88.7, PC>760w/40m (adds H, was V only)

**NEW MEXICO:**

Portales: KENW 89.5, PG>180m, 34-15-08/103-14-21  
Raton: KBKZ 96.5, PC>5.4kw  
Roswell: KWFL 99.5, PR>50kw/136m

**NEW YORK:**

Celoron: NEW 95.3, PA class A  
New York: WWPR 105.1, PC 13kw/281m (aux)



Schuyler Falls: WAVX 90.9, PG 2.7kw/327m

**NORTH CAROLINA:**

Bethel: WIAM 98.9, GA class C3 from A, CL from Windsor  
Charlotte: WFAE 90.7, PR>331m, 35-17-14/80-41-45  
Elizabeth Cty: WKJX 96.7, PC>50kw/124m, 36-12-10/75-52-23  
Hillsborough: WHLQ 102.5, PA from Louisburg  
Leland: WKXS 94.5, PR>3kw/145m, 34-10-52/77-55-50  
Mt. Airy: WPVR-LP 101.3, NW 100w/-18m, 36-33-20/80-39-44  
Roanoke Rapids: WRTP 90.1 and WZRU 88.5 switch frequencies  
Spring Lake: WZRI 89.3, PG 2kw-V/55m, 35-10-14/78-57-44  
Wallace: WZKB 94.3, PR>6kw/92m, 34-49-31/78-00-25

**OHIO:**

Gahanna: WCVO 104.9, PR 2.5kw/137m, 40-06-29/82-48-49  
Georgetown: WAXZ 97.7, PR>6kw/100m, 38-46-50/83-51-55  
Huber Hgts: WOXR-LP 97.7, NW 100w/29m, 39-53-19/84-08-17  
N. Canton: WJVR-LP 101.7, PA from Dover  
Oxford: WOXY 97.7, PR>5.4kw/100m, 39-30-44/84-38-09

**OKLAHOMA:**

Alva: KPAK 97.5, NW 50kw/150m, 37-01-27/98-41-22  
Okla City: KOMA 92.5, PA from class C to C0  
Ponca City: KJTH 89.7, NW 100kw/307m, 36-35-41/97-34-37, SA with contemporary Christian  
Ponca City: KLVV 88.7, FC to inspirational music  
Tulsa: KBEZ 92.9, PA from class C to C0



Tulsa: KWTU 88.7, NW 5kw/325m, 36-01-15/95-40-32

**OREGON:**

Banks: KVMX 107.5, PC>35kw/440m, 45-30-58/122-43-59  
Bend: KOAB 91.3, PR>207m  
Bend: KTWS 98.3, PR 5.2kw/223m  
Bend: KMTK 99.7, PR>26kw/208m, 44-04-39/121-19-57  
Gladstone: KAST 93.1, PR<470w/387m, 45-29-20/122-41-40; QR from 92.9

Hood River: KZAS-LP 95.1, NW 100w/-78m, 45-42-16/121-31-24  
Medford: KLDZ 103.5, PC>146m, 42-17-13/123-00-15  
Redmond: KLRR 101.7, PR 23kw/223m

#### PENNSYLVANIA:

Ellwood City: WKPL 92.1, PC 2.5kw/156m, 40-46-09/80-16-56  
Greensburg: WJJJ 107.1, now simulcasting urban AC  
WAMO 860 Pittsburgh  
Harrisburg: WRVV 97.3, PC 15kw/260m



Murrysville: WRWJ 88.1, PR>1kw-V/92m, 40-31-12/79-39-29  
Philadelphia: WSNi 104.5, PR 11.5kw/308m

#### SOUTH CAROLINA:

Forest Acres: WEHA 94.3, calls for new station  
Johnsonville: WPDT 105.1, PC 2.95kw/144m, 33-54-36/79-40-09  
New Ellenton: WAJY 102.7, CC to WGOR, FC to oldies

#### SOUTH DAKOTA:

Sturgis: KNCS 93.1, PR<97.8kw

#### TENNESSEE:

Murfreesboro: WJZN 98.9, FC to rhythmic top 40 "Power 99", CC to WMPW  
South Pittsburg: WMXF 97.3, CC to WMAX

#### TEXAS:

Abilene: KGNZ 88.1, PR>91kw/252m, 32-13-47/99-37-42  
Amarillo: KAEZ 105.7, CC to KJJP  
Anson: KFOX 98.1, FC to contemporary Christian "98.1 The Light"  
Austin: KPEZ 102.3, FC to AAA "Channel 102.3"



Bay City: KZBG 89.5, PG>35kw/146m, 29-08-58/95-59-14  
Big Lake: KWTR 104.1, PR>100kw/299m, 31-37-05/101-37-35, signs on with country as "West Texas Radio".  
Dallas: KLLI 105.3, PC>574m, 32-35-05/96-57-46  
Dallas: KDMX 102.9, PR>100kw/485m  
Dallas: KDGE 102.1, PR>100kw/485m  
Hutto: KQJZ 92.1, XC 30-32-04/97-34-52  
Laredo: KNBL 89.9, PC>184m, 27-39-27/99-35-10  
Levelland: KLVT 105.3, PR>50kw/150m, 33-29-30/102-18-10  
Mason: KNAF 105.7, PR<9.1kw/164m, 30-21-49/98-54-47  
Monahans: KGEE 99.9, FC to contemporary Christian "Joy 99.9"  
Orange: KIOC 106.1, PA from class C to C0  
Paris: KPLT 107.7, PC>50kw/150m, 33-44-55/95-24-53  
Pecos: KKLY 97.3, RA, simulcasting KNFM 92.3



San Antonio: KCYY 100.3, PA from class C to C0  
San Marcos: KBPA 103.5, PA from class C to C0

Seabrook: KRTS 92.1, FC to Spanish hits "La Mera Mera", CC to KROI  
Terrell Hills: KELZ 106.7, PA from class C to C0  
Tyler: KNUE 101.5, PA from class C to C0  
West Orange: KBXG 99.5, PA from Lake Charles LA

#### UTAH:

Moab: KZMU 90.1, QR from 89.7; 400w/390m; 38-31-37/109-18-21  
Roy: KUDD 107.9, PG>75kw



#### VERMONT:

Addison: WXAL 93.7, PR 21kw/108m, 44-13-15/73-24-37  
Norwich: WNCH 88.1, PG 100w-H/1.6kw-V/688m  
Springfield: WXXK 93.5, FC to newstalk//WTSL 1400, CC to WTSM  
Waterbury: WLKC 103.3, PR 1.05kw/806m, 44-31-32/72-48-54

#### VIRGINIA:

Chincoteague: WCTG 96.5, NW 5.3kw/105m, 37-55-14/75-23-07  
Christiansburg: WFNR 100.7, FC to top 40 "Hot 100.7"  
Ettrick: WJZV 93.1, FC to country "93-1 The Wolf"

#### WASHINGTON:

Centralia: KNMT 102.9, PR>70kw/668m, 46-58-31/123-08-16  
Covington: KMCQ 104.5, PR<25kw/97m, 47-11-13/121-54-11; CL from The Dalles, OR  
Deer Park: KMZZ 107.1, PC>100m, RA with smooth jazz  
Mt. Vernon: KMWS 89.7, PG>1.5kw/36m, 48-32-30/122-17-43  
Pullman: KFFR 97.7, NW 650w/301m, 46-40-52/116-58-16  
Walla Walla: KUJ 99.1, PR>100kw/225m, 45-57-22/118-41-11

#### WEST VIRGINIA:

Charleston: WVAF 99.9, PR 24.6kw/215m, 38-16-25/81-31-27



#### WISCONSIN:

Milwaukee: WLTO 97.3, FC to 80s rock "97-3 The Brew"

#### WYOMING:

Chugwater: KLWV 90.9, NW 100kw/361m, 41-18-39/105-

27-12

Evanston: KOTB 106.1, CC to KRMF  
Gillette: KXXL 103.9, NW 50kw/120m, 44-13-50/105-27-45  
Greybull: KZMQ 100.3, PG<53kw  
Laramie: KARS 102.9, PC<83kw/248m, 40-52-37/105-41-44  
Rock Springs: KUWZ 90.5, PG 35kw/512m, 41-25-39/109-07-17

#### Some news and notes:

Well, another short column this month. Not a lot going on at the FCC these days besides license renewals and translator applications. And as always, translators, in my opinion, are a waste of my time and yours, as well as paper, to put in my column.

- WKCK 93.7 Norfolk and WPYA 106.1 Poquoson VA swap formats and calls. Country Kick FM moves to 106.1, while the hot AC/classic hits hybrid "Bob FM" moves to 93.7
- An expected format change in South Jersey as WOJZ 104.9 will likely shift to Hot AC as "SoJo 104.9", targeting Southern New Jersey. No exact word on what WBSS-97.3 Millville (co-owned) will do, but some speculation is that it will change to "The Boss" 97.3, as a CHR competing with longtime market leader WAYV
- KBTB/San Francisco becomes yet another dance station in the rapidly expanding format, as Energy 92.7.

Anyone that works at a radio station, or just sees a bumper sticker hanging around at a local business, I am trying to get a bunch of radio bumper stickers/tshirts to cover one part of my wall. My address is above - I can cover postage, just drop me a line at [patriotsrule417@yahoo.com](mailto:patriotsrule417@yahoo.com). Thanks.

-Adam

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**I Need at least half a page of material to run the column.**