# Vhi-UhiDIGEST

The Official Publication of the Worldwide TV-FM DX Association

**JANUARY 2005** 

The Magazine for TV and FM Dxers

# Think DX!





# 2005 Begins with Sadness and Changes in the WTFDA

(see Mailbox for details)

TV and FM DXing was 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, KEITH McGINNIS AND MIKE BUGAJ.

Editor and publisher: Mike Bugaj
Treasurer: Keith McGinnis Webmaster: Tim McVey
Editorial Staff:, Victor Frank, George W. Jensen, Jeff Kruszka
Keith McGinnis, Fred Nordquist, Matt Sittel, Doug Smith,
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Our website: www.anarc.org/wtfda

ANARC Rep: Jim Thomas, Back Issues: Dave Nieman,

**JANUARY 2005** 



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!

## **VUDS ON A CD!**

Every VUD from Jan 1980 to December 1989 is on this disk. You'll need Adobe Reader to read them. Why have a



box of old VUDs taking up space when you can have this. It's yours for just \$8.00 per disk. Send your check or money order for \$8.00 to WTFDA, P.O. 501, Somersville, CT 06072. Make it payable to Mike Bugaj.

## **CONTENTS**

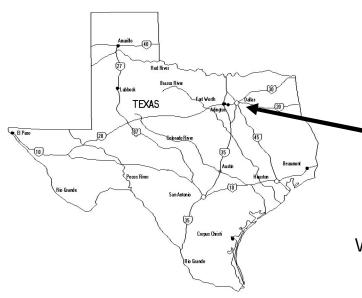
Page Two	2
Mailbox	3
TV NewsDoug Smith	5
Satellite News George Jensen	10
Photo NewsJeff Kruszka	11
Western TV DXVictor Frank	13
Southern FM DXJohn Zondlo	16
Color TV HistoryBob Cooper	18
WTFDA Membership List (as of 12/20)	22
Stacked antennas	26
Editors/Submissions	27

Happy New Year! Please check out the Mailbox this month because there is information there that you *need* to know.

This month we have a smaller VUD. Bruce Elving says that FM translator approvals have dwindled down to nothing (finally!) so he has nothing to send (which is bad but also good).

Also there is a column or two yet to be received here. So if you don't see your favorite column, just be aware that there are valid reasons why it didn't make it.

But we have an updated membership list this time, and Bob Cooper presents another installment on color television. Happy reading!



WTFDA Convention 2005

# DALLAS, TEXAS

Hosted by

John Callarman

ARE YOU READY!

Watch this space for more details!



# The Mailbox

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



David Janowiak 1939-2004

### **JANUARY 2004**

This month we change our format just a little to pay tribute to WTFDA Treasurer David Janowiak, who died on December 11, 2004 at the age of 65.

Dave was a friendly, pleasant type of person who could keep you on the phone all afternoon if it was up to him. He loved to talk. He loved to talk about the club, about DX and especially about tennis! Dave was pretty good at tennis, playing in senior leagues in Milwaukee and doing pretty well at it. In fact, you could say that TV Dxing was his number two love, right after tennis!

Dave was married early on in life but regrettably spent much of it single, and he remained single to the end of it. He always spoke about getting back into TV DXing after retiring, but never quite did it.

Dave and TV DXing go back many years. **Bruce Elving** recalls: "I knew him, along with Ferdie Dombrowski, when I lived in Milwaukee in the early 1970s. *He and Ferdie were among the club's founders*. I came somewhat later, but was honored to be included among the group that "ran" the club.

It was with Ferdie's and Dave's encouragement that I started the "FM Atlas," which was to be a club project, but proved to be too time-consuming to be done on a volunteer basis. That the publication continues to this day is testimony to the publishing environment of Milwaukee in those early years.

Dave was active up to the end, buying

the current "FM Atlas" edition, and I'm glad to hear he made it to the convention in Omaha.

However, I am sorry I did not get there to see him one last time.

If his passing tells us anything it is about the uncertainty of life. I think Dave was within a few years of me, perhaps a bit younger, as is Ferdie, who is no longer a WTFDA member, but who writes to me regularly."

Those of us who remain should do what we can to pass on our expertise and interest in DXing to younger people, and do what we can to recruit new blood into the hobby.

Bob Cooper also adds: "There was a period between the original AIPA (American Ionospheric Propagation Association) and VUD when David, Morrie Goldman (Chicago) Ferdinand Dombrowski (Milwaukee) carried on after I bowed out of the AIPA monthly bulletin. David was an active DXer with all of the latest "toys" and a keen enthusiasm, but hamstrung by a location where there were few open channels. He did best anvone could under circumstances. By 1970, well after AIPA, he and Morrie were the engine that kept the hobby alive under some trying contentious) times. Like many, even with a 40+ year association, we never met one another face to face although early DXing Horizons (1960-1961) photos of he with the "Chicago TV DX Gang" are clear in my mind. I never knew (until a recent posting) that he was a tennis "nut" but it fits - he was

meticulous to a possible fault which when the going got tough made him the perfect arbitrator and negotiator. Where he now rests TV and FM DX should be fantastic!"

Dave was treasurer for more years than I can remember. One if his most recent and best ideas was to create a joint account with the treasurer and publisher. This change allowed the publisher to carry a debit card attached to the club account and to pay publishing and postage bills immediately. We really owe Dave one for this because without this capability you wouldn't be reading this month's VUD. We wouldn't have had the funds to publish it! Thank you Dave, for everything!

### AND NOW, CHANGES

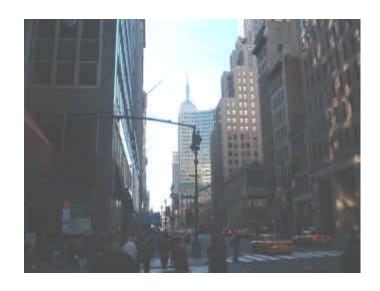
Following in Dave's footsteps could be a tough act to follow, except that we found somebody who can do it. The board of directors has voted and approved **Keith McGinnis** as our newest board member and WTFDA treasurer. Keith has been in the club for six years now. He's very active in FM DXing, TV DXing, AM Dxing and, of course, longwave and beacon DXing. During the daytime hours Keith is an accountant for a large telecom firm in Boston. When work ends he's a husband and the father of two young girls. And to top that, he also is your Northern FM editor. How *does* he do it?

#### **AND MORE CHANGES**

It goes without saying that membership checks and renewal checks should NOT be made payable to Dave, as they were. At the present time our financial situation is still in flux. Keith will have to set up a new checking account for us. The funds in Dave's two checking accounts will, at some point, be sent to PO Box 501. Once we have them, we can transfer them to Keith and the new club account.

For the short term then, until further notice, please make all your checks and money orders payable to me, Mike Bugaj. I will then cash them and add your dues to the funds I receive from Paypal. When we have a new account up and running, I'll send all the incoming checks and money orders to Keith for deposit. Nothing has changed except for the name of the person you write on your check.

In the meantime, though, any check or money order we get here at PO Box 501 made payable to Dave will be mailed back to you unless you tell us to destroy it. We've already mailed some checks back.



### WHAT IS IT?

Well, it's not the best photo in the world. You'd know what it is *if* we could just get that high rise out from in front of it.

Actually you are in New York City on 5<sup>th</sup> Avenue looking south at about 45<sup>th</sup> Street. Down the street a way about ten blocks, on your right, is the Empire State Bldg. What you see is the top of the ESB where the antennas are. This photo was taken around 10:30am on a cool December Saturday. Next time, we go to the top.

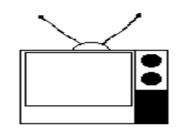
### **MEMBERS AND MORE**

A big welcome this month to **Steve Duroche**, living out in the mountains of British Columbia and reading the eVUD. He's been on the WTFDA list for a while now and was prodded (or hounded) by **Les Prus** to join. Also welcome back to **Carl Hattan** down in Melbourne, FL.

Also returning for another year are James Gould (IN), Steven Wiseblood (TX), Steve Solomon on Cape Cod, James Roggentine (CA), Bill Nollman (CT), Charles Gauthier (QC) and Girard Westerberg (KY). Everyone I just mentioned used Paypal to join or renew.

Also I have received renewal checks payable to me from Tom Bryant (TN), Les Prus (VA) and Rod Thompson (CA). Also I'm holding on to a check and a money order made payable to WTFDA from Chester Jaffee and Eldon Geiman just in case we end up with a checking account that allows us to cash checks made out to WTFDA. If we don't then those will also be returned to their senders.

Last month the Mailbox ended with the words: "And now let's go take on 2005." Little did we know that 2005 would begin like this, but it did and that's exactly what we're going to do. See you all next month! -Mike



# TV News

Douglas E. Smith 1389 Old Clarksville Pike Pleasant View, TN 37146-8098 w9wi@w9wi.com

http://www.w9wi.com

## January 2005

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

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

*	full-power digital	stations in <i>bold italics</i> )	Winslow	20 K20IH	NS 2.1kw, 34-58-16/ 110-39-05 (KAZT-7)
<u>Canada:</u> <u>British Columbia</u> Braeloch Canoe	<u>ı:</u> 15 CBUT-x 11 CBUT-x	XR from Myra AF withdrawn	<u>Arkansas:</u> Eureka Spring	s 34 KWFT	PR>1200kw/224, 36-24-41/ 93-57-14
V I			<i>Fayetteville</i> Fayetteville	<b>9 KAFT-DT</b> 48 KEGW-LP	<b>NW 19kw/501m</b> XR 36-24-41/ 93-57-14
U.S. Virgin Islan Christiansted	nds: 52 W52DG	FC; sold by TBN to independent religious organization	Fort Smith Fort Smith <i>Little Rock</i>	34 KWFT-LP 43 KXUN-LP 5 KETS-DT	CC from K34EN PC>5.8kw NW 2.1kw/548m, 34-26-31/ 92-13-03
Alabama: Homewood Huntsville Mobile	<b>28 WTTO-DT 25 WHIQ</b> 15 WPMI-TV	<b>PG&lt;765kw/427m</b> <b>PR&lt;338m</b> PR>563m,	Texarkana  California:	19 KTEV-LP	PR<1kw, 33-26-04/ 94-02-39; CL from Prescott
Tuscaloosa	23 WUOA	30-36-40/ 87-36-27 FC?, sold to	Bakersfield	24 K24GS	QG from K25FT, 35- 21-42/ 119-03-34
ruscaloosu	25 WOOA	University of Alabama, CC from WLDM	Bakersfield	31 KBTF-CA	QC from ch. 39, 60kw; CC from KABE-CA
Alaska: Anchorage	45 K45HQ	QC from K22FV,	Bakersfield	39 KABE-LP	CC from KBTF; PR>60kw
Juneau	15 KMOM-LP	35.5kw CC from K15FZ	Banning	45 K45IC	PR>10kw, 33-58-09/ 117-17-08
Arizona: Globe	16 K16FB	PC<9.95kw, 33-17-21/	Ceres	15 KBSV-DT	dismissed PR 18.7kw/151m; PG
Kingman	6 KMOH-TV	110-49-45 FC to Spanish (// KBEH-63 CA)	Daggett <b>EI Centro</b> Eureka	48 K61AE <b>9 KECY-TV</b> 31 KEUV-LP	QC from ch. 61 <b>PG&lt;484m</b> CC from K31EW;
Littlefield	30 K30IP	NS 150kw, 36-53-00/ 113-55-29	Eureka	33 KUVU-LP	PG<21.9kw CC from K33FN; PG<21.9kw

Eureka	35 KEAZ-LI	·	Fort Collins	54 K54IK	NW 76.4kw,
		36/123-58-18 (TV			40-32-46/
Erocno	3 K03HK	Azteca) PR>1.9kw returned			105-11-51 (KCEC- 50)
Fresno Fresno	3 KUSHK 12 K12OZ	PR>1.9kw returned	Grand Junction	45 K63EI	QC from ch. 63
Fresno	22 KZMM-(		Grand Junction	47 K65CE	QC from ch. 65,
1103110	ZZ INZIVIIVI-	119-25-49	Grand Junction	47 NOJCL	980w
Hodge	58 K58IG	NS 150kw,	Grand Junction	49 K67CJ	QC from ch. 67,
		34-45-36/			980w
		117-07-06	Haxtun	35 K35GO	QC from K51AI,
Inyokern	6 K61AJ	QR from ch. 61,			890w
•		3kw, 35-28-41/	Haxtun	41 K41IT	QC from K55CD,
		117-41-58			890w
Inyokern	47 K47AE	PR<4.38kw	Holyoke	29 K29GI	NW 3.71kw,
Los Angeles	27 KNLA-LI				40-30-37/
Los Angeles	41 KLCS	AF 90kw/879m		47 1/47 11 1	102-21-33
Mananath	22 1/22110	(aux)	Julesburg	47 K47JH	QC from K31AB,
Mammoth Lakes	5 22 K22HB	NS 100w,	led a alseen	E4	670w
		37-38-55/	Julesburg	51, K51IL, K53IY	
Mariana	10 1/101111	118-58-10		53	K39AC/K43BY,
Morongo Valley	18 K I 8 H N	NW (x-K05CU)	1.1.1	FF 1/FF 10	670w
		1.78kw, 33-55-28/	Julesburg	55 K55JC	QC from K41AB,
		116-36-53;	<b>.</b>		670w
		PG>7.5kw,	Connecticut:		
		33-51-56/	New Britain	35 WVIT-DT	NW 250kw/434m
		116-25-58	<u>Delaware:</u>		
Needles	31 K19BR	QC from ch. 19,	Wilmington	14 WTSD-CA	PC>146kw,
		1.06kw			40-02-30/
Oakland	56 KTVU-E				75-14-11
Porterville	54 KVVG-L	The state of the s	<u>Florida:</u>		
		20kw	Cocoa	52 WTGL-TV	PR>3000kw/472,
Redding	29 K29FZ	PG<10w,			28-35-12/
		40-33-51/			81-04-58
		122-26-00	Daytona Beach	11 WESH-DT	NW 54.9kw/511, 28-
Redding	42 KQSX-L	•			36-35/
		40-53-12/			81-03-35
		100 01 10	Fort Muarc	18 WTLE-LP	CC from MDDV
		122-31-19	Fort Myers		CC from WDPX-
Ridgecrest		See text	Gainesville	22 W22DB	NS 1kw,
Ridgecrest San Diego	43 KBOP-0	See text CA PG<4.1kw,			NS 1kw, 29-28-23/
	43 KBOP-0	See text CA PG<4.1kw, 32-41-48/	Gainesville	22 W22DB	NS 1kw, 29-28-23/ 82-35-20
San Diego		See text CA PG<4.1kw, 32-41-48/ 116-56-10			NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b>
	43 KBOP-C	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision	Gainesville	22 W22DB	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b>
San Diego Santa Barbara	46 K46GC	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion	Gainesville  Gainesville	22 W22DB  29 NEW	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB
San Diego		See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61,	Gainesville	22 W22DB	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43,
San Diego Santa Barbara Susanville	46 K46GC 17 K61EN	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw	Gainesville  Gainesville	22 W22DB  29 NEW	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/
San Diego  Santa Barbara  Susanville  Susanville-	46 K46GC	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59,	Gainesville  Gainesville  Gainesville	<ul><li>22 W22DB</li><li>29 NEW</li><li>45 WYPN-CA</li></ul>	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18
San Diego  Santa Barbara  Susanville  Susanville- Herlong	46 K46GC 17 K61EN 19 K59ET	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw	Gainesville  Gainesville  Gainesville  Key West	<ul><li>22 W22DB</li><li>29 NEW</li><li>45 WYPN-CA</li><li>5 W05CJ</li></ul>	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville	46 K46GC 17 K61EN 19 K59ET 29 K63CM	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw	Gainesville  Gainesville  Gainesville  Key West Key West	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w
San Diego  Santa Barbara  Susanville  Susanville- Herlong	46 K46GC 17 K61EN 19 K59ET	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69,	Gainesville  Gainesville  Gainesville  Key West	<ul><li>22 W22DB</li><li>29 NEW</li><li>45 WYPN-CA</li><li>5 W05CJ</li></ul>	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI,
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w	Gainesville  Gainesville  Gainesville  Key West Key West	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/
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San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58	Gainesville  Gainesville  Gainesville  Key West Key West Lealman	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <i>PR 660kw/514m</i> ,
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b>
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65,
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville  Yreka	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/ 80-57-22
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado:	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-L</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/ 80-57-22 <b>FC to UPN</b>
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-D</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w PT NW 1000kw/937, 34-13-35/ 118-03-58 PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/ 80-57-22
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado:	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-L</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/ 80-57-22 <b>FC to UPN</b> <b>PR&lt;308kw</b>
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-D</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach Orlando	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw FC to Daystar
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield Crystal	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-L</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61</b> <b>over objection of</b> <b>W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 <b>PR 3700kw/514m</b> <b>PR 660kw/514m</b> , <b>PG</b> QR from ch. 65, 150kw, 24-45-35/ 80-57-22 <b>FC to UPN</b> <b>PR&lt;308kw</b>
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-D</b> 49 K49IG	See text CA PG<4.1kw,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia:	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA	NS 1kw, 29-28-23/ 82-35-20 <b>GA from ch. 61 over objection of W29AB</b> QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG 12 KBDI-T 35 K35HK	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w OT NW 1000kw/937, 34-13-35/ 118-03-58 OT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg	22 W22DB  29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw FC to Daystar PC>28kw NS 5kw,
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield Crystal	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS <b>49 KJLA-D</b> <b>58 KCAH-L</b> 49 K49IG	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia:	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw  NS 5kw, 32-21-16/
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG 12 KBDI-T 35 K35HK	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia: Columbus	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA  33 W33CK	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw FC to Daystar PC>28kw NS 5kw, 32-21-16/ 84-49-12 (Daystar)
San Diego  Santa Barbara  Susanville Susanville-Herlong Susanville Susanville Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG  12 KBDI-T 35 K35HK 33 KMAS-D 43 KPXC-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/ 105-13-03	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia:	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw  NS 5kw, 32-21-16/ 84-49-12 (Daystar) PR>100kw/186m,
San Diego  Santa Barbara  Susanville  Susanville- Herlong Susanville Susanville  Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG 12 KBDI-T 35 K35HK	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/ 105-13-03 NS 300w,	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia: Columbus	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA  33 W33CK	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw  NS 5kw, 32-21-16/ 84-49-12 (Daystar) PR>100kw/186m, 32-45-04/
San Diego  Santa Barbara  Susanville Susanville-Herlong Susanville Susanville Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG  12 KBDI-T 35 K35HK 33 KMAS-D 43 KPXC-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w T NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  V PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/ 105-13-03 NS 300w, 37-45-37/	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia: Columbus	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA  33 W33CK	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw  NS 5kw, 32-21-16/ 84-49-12 (Daystar) PR>100kw/186m,
San Diego  Santa Barbara  Susanville Susanville-Herlong Susanville Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver  Denver  Dove Creek	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG  12 KBDI-T 35 K35HK 33 KMAS-L 43 KPXC-D 15 K15GU	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w PT NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/ 105-13-03 NS 300w, 37-45-37/ 108-54-39	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia: Columbus  Perry  Hawaii:	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA  33 W33CK  32 WPGA-DT	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw FC to Daystar PC>28kw NS 5kw, 32-21-16/ 84-49-12 (Daystar) PR>100kw/186m, 32-45-04/ 83-33-27; PG
San Diego  Santa Barbara  Susanville Susanville-Herlong Susanville Susanville Ventura  Watsonville Yreka  Colorado: Broomfield Crystal  Denver  Denver	46 K46GC 17 K61EN 19 K59ET 29 K63CM 38 K69FS 49 KJLA-D 58 KCAH-D 49 K49IG  12 KBDI-T 35 K35HK 33 KMAS-D 43 KPXC-D	See text CA PG<4.1kw, 32-41-48/ 116-56-10 FC to Almavision Hispanic religion QR from ch. 61, 1.01kw QR from ch. 59, 1.01kw QR from ch. 63, 1kw QR from ch. 69, 990w PT NW 1000kw/937, 34-13-35/ 118-03-58 DT PG<151kw/699m NS 20.9kw, 41-35-35/ 122-38-17 (3Abn)  PC 226kw/742m QC from K60AH, 1.7kw, 39-25-24/ 107-22-32 P QR from ch. 63, 69kw DT NS 1000kw/356m, 39-40-24/ 105-13-03 NS 300w, 37-45-37/ 108-54-39	Gainesville  Gainesville  Gainesville  Key West Key West Lealman  Leesburg Leesburg  Marathon  Marianna New Smyrna Beach Orlando St. Petersburg Georgia: Columbus	29 NEW  45 WYPN-CA  5 W05CJ 10 W10CQ 43 W43CE  45 WLCB-TV 46 WLCB-DT  21 W65AP  51 WBIF 33 WCEU-DT  22 WTOF-LP 35 WSPF-CA  33 W33CK	NS 1kw, 29-28-23/ 82-35-20 GA from ch. 61 over objection of W29AB QC from ch. 43, 30kw, 29-32-09/ 82-19-18 PR<240w PR<470w QC from W61AI, 45kw, 28-02-21/ 82-39-20 PR 3700kw/514m PR 660kw/514m, PG QR from ch. 65, 150kw, 24-45-35/ 80-57-22 FC to UPN PR<308kw  FC to Daystar PC>28kw  NS 5kw, 32-21-16/ 84-49-12 (Daystar) PR>100kw/186m, 32-45-04/

Honolulu	38 KALO	PC>206kw/579m, 21-23-33/	Detroit	23 WUDT-CA	539w CC from WBXD-
<u>ldaho:</u>		158-05-43	Escanaba	11 W11CZ	NS 100w, 45-45-48/
Boise	39 KKJB	NW 1295kw/534, 43-44-23/ 116-08-15, testing	Kalamazoo Minnesota:	5 WGVK-DT	87-05-45 <b>PG&lt;169m</b>
Boise	41 K41IV	with bars NW 150kw, 43-44-23/ 116-08-14 w/Jewelry	Jackson Lake Crystal	16 K59FN 43 K43JE	QR from ch. 59, 3kw NS 15.81kw, 44-06-40/ 94-13-50 (3Abn)
Boise	49 K49GX	Channel QC from K56FQ, 150kw, 43-44- 23/116-08-15	Minneapolis St. Cloud	13 WUMN-CA 30 K30IN	CC from WBWX- PR>50kw, 45-35-48/ 94-09-25; CL from
Lewiston Pocatello	51 K55HZ 47 K47JK	QR from ch. 55 NS 49.5kw, 43-06-45/ 112-29-37 (3Abn)	St. Cloud	47 K47IT	Royalton PR>7kw, 45-35-48/ 94-09-25; CL from
<u>Illinois:</u> Chicago	47 WTTW-DT	NW 150kw/474m (aux)	St. James	41 K41IZ	Royalton QC from K54AC, 1.32kw
Quincy	13 W13DE	NS 50w, 39-58-19/	Stewartville	56 K56IR	NS 10w, 43-52-14/
Quincy	25 W25DK	91-19-39 NS 800w, 39-58-19/ 91-19-39	Mississippi: Greenville Greenwood	15 WXVT 32 WABG-DT	92-30-27 PR<1200kw/269 GA from ch. 54
Quincy	68 W68DV	NS 500w, 39-58-19/ 91-19-39	Hattiesburg	10 W10CV	NS 3kw, 31-20-30/ 85-37-20
Sugar Grove Indiana:	40 W54BE	PR<12.3kw	Hattiesburg	30 W30CB	PR>8.8kw, 31-18-26/
<b>Indianapolis</b> Kokomo	<b>69 WTBU-TV</b> 50 WKGK-LP	PR>165.7kw PC>10.8kw, 40-25-55/ 86-06-37	Laurel	53 W53CE	89-24-47; PG QC from ch. 48, 5w, 31-46-05/ 89-10-12
Muncie	52 WIPB-DT	PG>140kw/246m, 40-05-37/	Pascagoula	7 WKFK-LP	XC 30-29-10/ 88-42-53
lowe.		85-23-32	Missouri:	אר אחבו הד	NW 435kw/543m
<u>lowa:</u> Cedar Rapids	51 KGAN-DT	NW 500kw/585m, 42-18-59/ 91-51-30	Cape Girardeau Columbia	27 K27IF	NS 2kw, 38-53-17/ 92-15-48
Des Moines	16 KDSM-DT	NW 500kw/612m, 41-49-47/ 93-36-56	Jefferson City	5 K05LU	NS 110w, 38-34-13/ 92-03-24
Kansas: Pittsburg	49 K49GR	PR>24kw, 37-11-30/	Lewiston	9 K09XZ	NS 3kw, 40-05-55/ 91-50-36
Kentucky: Jamestown	9 W09CQ	94-41-18 NS 500w, 37-04-36/	St. Louis St. Louis  Montana:	43 KTVI-DT 51 KUMO-LP	PC>1000kw  OFF (temporarily, we think)
Louisiana: Baton Rouge	41 KBTR-CA	85-08-12 PC<18.9kw,	Billings	20 K20HB	NW 51.2kw, 45-46-00/ 108-27-27 (KUSM-
Lake Charles	14 KFAM-LP	30-26-59/ 91-07-55 PG>150kw,	Columbus	24 K24FL	9) NW 610w, 45-37-36/ 109-15-36 (KULR-8)
New Orleans	38 WNOL-TV	30-13-24/ 93-18-36 AF 1440kw/132, 29- 58-57/ 89-56-58 (aux)	Great Falls Great Falls Kalispell Miles City	<b>16 KTGF</b> <b>45 KTGF-DT</b> <b>46 NEW-DT</b> 16 K16DH	PR<308m PR 175kw/289m GA, non-commer. PC>15.06kw,
Massachusetts	:	ον σο-σο (ααλ)	S.N.J		46-26-08/
Marlborough Marlborough Michigan:	23 WUTF-DT 66 WUTF-TV	<i>NW 100kw/334m</i> PC 3311kw/356m	Wolf Point	25 K25HO	105-50-53 NW 840w, 48-02-06/
Bay City Crystal	<b>22 WNEM-DT</b> 32 W32CD	<b>PG&gt;1000kw</b> QG from ch. 39,	Nebraska:		105-31-12

Omaha	43 KPTM-DT	PR>600kw dismissed	Syracuse North Carolina:	47	WTVH-DT	PR<500kw
Valentine	33 KAZD-LP	NW 10.0kw,	Raleigh	64 '	W64CN	PR>27kw; PG
		42-53-22/	Sanford		WBFT-CA	CC from W46BF
		100-33-15	Wanchese	6	WMTO-LP	NW 600w,
Nevada:	1/ V1/FD	NIM 140 40 27				35-50-48/
Battle Mountain	16, K16FD, 22 K22GM	NW 160w, 40-37- 05/116-41-19	Ohio:			75-37-19
Carrara	30 K30IG	NS 150kw,	Findlay	22 '	WFND-LP	PR>55kw,
		36-48-15/				40-56-26/
		116-42-29				83-52-43
Duckwater	15 K15GS	QC from K55CR	Newcomers-	29	WIVN-LP	NW 74kw,
Duckwater Hawthorne	29 K29GM 22 K22FH	QC from K66BU NS 2.06kw,	town			40-21-32/ 81-30-02
Hawthorne	22 1(22) 11	38-27-27/	Oklahoma:			01 30 02
		118-45-49	Altus	17	K17FP	NW 210w,
		(KRXI-11)				34-38-34/
Las Vegas	2 KVBC-DT 3 KVBC	<i>NW 27.7kw/384m</i> PC<386m				99-20-01 (KSWO-7)
Las Vegas <i>Las Vegas</i>	7 KLAS-DT	PC<16.5kw; then	Norman	11	KUOK-CA	CC from KDSA-
Lus Vogus	, KENODI	PC>30.1kw/609m	Oklahoma City			NW 1000kw/
Pahrump	41 K41CQ	PC>6.74kw	•			476m
Panaca	43 K43DS	PC>6kw	Shawnee		KTUZ-TV	CC from KQOK
Parumph	62 KHMP-LP	NW 5kw, 36-12-15/	Tulsa <u>Oregon:</u>	26	NEW-DT	GA from ch. 63
		115-57-13	Ashland	39	K39EF	PR<24.5kw; PG
Silver Springs	33 K33IB	NS 636w,	Ashland		KFBI-LP	PR<250w,
		39-29-05/				42-17-54/
		119-18-07 (KRXI-11)	Bend	11	K41HA	122-44-53; PG PR>8.9kw
Winnemucca	17 K17HB	NS 838W,	Medford		K52EE	PR<18kw,
		41-00-38/				42-03-53/
		117-45-40				122-28-41
Vorington	16 K16GM	(KRXI-11) NS 744w,	Medford	28	K28GG	PR>24.5kw;
Yerington	10 KTOGIVI	38-59-12/				42-17-43/ 122-45-00
		30 37 12/				122 13 00
		119-14-36	Portland	6	KOIN	PC<491m
		119-14-36 (KRXI-11)	Pennsylvania:			
New Jersey:	7 MMCM I D	(KRXI-11)	<u>Pennsylvania:</u> <i>Allentown</i>	46	WFMZ-DT	PG<400kw/331m
Atlantic City	7 WMGM-LP		<u>Pennsylvania:</u> Allentown Erie	46 58	WFMZ-DT WJET-DT	PG<400kw/331m PG>1000kw/310
Atlantic City New Mexico:	7 WMGM-LP 33 K33GC	(KRXI-11)	<u>Pennsylvania:</u> <i>Allentown</i>	46 58	WFMZ-DT	PG<400kw/331m
Atlantic City New Mexico: Capulin Capulin & Des	33 K33GC	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62,	<u>Pennsylvania:</u> Allentown Erie	<b>46</b> <b>58</b> 44	WFMZ-DT WJET-DT	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's
Atlantic City New Mexico: Capulin Capulin & Des Moines	33 K33GC s 48 K62AR	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w	Pennsylvania: Allentown Erie Meadville Pittsburgh	<b>46 58</b> 44 1	<b>WFMZ-DT</b> <b>WJET-DT</b> W52BO WQEX	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup &	33 K33GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville	46 58 44 16	WFMZ-DT WJET-DT W52BO WQEX W61AG	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG
Atlantic City New Mexico: Capulin Capulin & Des Moines	33 K33GC s 48 K62AR	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w	Pennsylvania: Allentown Erie Meadville Pittsburgh	46 58 44 16	<b>WFMZ-DT</b> <b>WJET-DT</b> W52BO WQEX	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi	33 K33GC 5 48 K62AR 20 K20GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW (religious)	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina:	46 58 44 16 61 24	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi Ruidoso	33 K33GC 5 48 K62AR 20 K20GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW  (religious) PC>6.23kw	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre	46 58 44 16 61 24	WFMZ-DT WJET-DT W52BO WQEX W61AG	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34-
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi	33 K33GC 5 48 K62AR 20 K20GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw  NW 200w/1241m,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina:	46 58 44 16 61 24	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi Ruidoso	33 K33GC 5 48 K62AR 20 K20GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW  (religious) PC>6.23kw	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina:	46 58 44 16 61 24	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34-
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe	33 K33GC 5 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina: Columbia Greenville Rock Hill	46 58 44 16 16 24 47	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe	33 K33GC 5 48 K62AR 20 K20GC	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw  NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota:	46 58 44 16 61 24 47	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe	33 K33GC 5 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW  (religious) PC>6.23kw  NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina: Columbia Greenville Rock Hill	46 58 44 16 61 24 47	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK,
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe	33 K33GC 5 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW  (religious) PC>6.23kw  NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota:	46 58 44 16 61 24 47	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe	33 K33GC 5 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina: Columbia Greenville Rock Hill South Dakota: Rapid City Tennessee:	46 58 44 16 61 24 47 47 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City	46 58 44 16 61 24 47 47 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw,
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam	33 K33GC 548 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina: Columbia Greenville Rock Hill South Dakota: Rapid City Tennessee:	46 58 44 16 61 24 47 47 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Hudson	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre South Carolina: Columbia Greenville Rock Hill South Dakota: Rapid City Tennessee:	46 58 44 16 61 24 47 47 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw,
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw NW 950kw/378m, 41-29-18/	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton	46 58 44 16 61 24 47 47 40 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw,
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam  Hudson Kingston	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU 48 WRNN-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw NW 950kw/378m, 41-29-18/ 73-56-56	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton  Jackson	46 58 44 16 61 24 47 47 40 40	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw, 35-25-42/
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Hudson	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw NW 950kw/378m, 41-29-18/ 73-56-56 QC from ch. 12,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton  Jackson Lewisburg	46 58 44 16 61 24 47 47 40 40 28 39 34	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw, 35-25-42/ 86-46-22
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam  Hudson Kingston	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU 48 WRNN-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw NW 950kw/378m, 41-29-18/ 73-56-56	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton  Jackson	46 58 44 16 61 24 47 47 40 40 28 39 34	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw, 35-25-42/
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam  Hudson Kingston  New York Plattsburgh	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU 48 WRNN-DT 33 WPIX-DT 44 WNYW-DT 57 WCFE-TV	(KRXI-11)  CC from W07CE  PG>970w; PC  QR from ch. 62, 940w  NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw  NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton  NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw  NW 950kw/378m, 41-29-18/ 73-56-56  QC from ch. 12, 160kw/397m PG>990kw PG<462kw/737m	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton  Jackson Lewisburg  Nashville	46 58 44 1 16 1 16 1 17 17 17 17 17 17 17 17 17 17 17 17 1	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS W28BO WJKT-DT W34DB	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw, 35-25-42/ 86-46-22 PG>106kw, 36-08-27/ 86-51-56
Atlantic City New Mexico: Capulin Capulin & Des Moines Gallup & Tohatchi  Ruidoso Santa Fe  New York: Albany  Amsterdam  Hudson Kingston  New York  New York	33 K33GC 48 K62AR 20 K20GC 16 K16BZ 9 KNMD-DT 15 WNYA-CA 50 WYPX-DT 21 W21BU 48 WRNN-DT 33 WPIX-DT 44 WNYW-DT	(KRXI-11)  CC from W07CE  PG>970w; PC QR from ch. 62, 940w NS 1.65kw, 35-36-18/ 108-41-11; NW (religious) PC>6.23kw NW 200w/1241m, 35-12-45/ 106-26-58  PC<28kw, 42-38-12/ 73-59-45; CL from Easton NW 450kw/207m, 42-59-04/ 74-10-56 PR>6kw NW 950kw/378m, 41-29-18/ 73-56-56 QC from ch. 12, 160kw/397m PG>990kw PG<462kw/737m NS 100w,	Pennsylvania: Allentown Erie Meadville Pittsburgh Pottsville Sayre  South Carolina: Columbia  Greenville Rock Hill South Dakota: Rapid City  Tennessee: Acton  Jackson Lewisburg  Nashville	46 58 44 1 16 1 16 1 17 17 17 17 17 17 17 17 17 17 17 17 1	WFMZ-DT WJET-DT W52BO WQEX W61AG W52CE WZRB WNTV-DT WNSC-TV K40GS	PG<400kw/331m PG>1000kw/310 QR RE from ch. 52, 21.6kw FC to America's Store PR>2.11kw; PG QC from ch. 52, 17.5kw NW 750kw/192, 34- 02-38/ 80-59-51; UPN NW 65kw/378m PG>2674kw/212 QC from K31DK, 21.6kw, 44-19-42/ 103-50-05 PC<10kw, 34-58-18/ 88-30-59 PG<392kw NW 11kw, 35-25-42/ 86-46-22 PG>106kw, 36-08-27/
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		35-15-40/
Beaumont	60 K60GP	101-52-52; PG NS 10kw, 30-06-51/
Crockett	65 K65HK	94-01-20 XR 30-48-42/ 95-42-14
Denton	2 KDTN	PR>541m, 32-35-02/
El Paso	40 K40FW	<b>96-57-48</b> XR 31-48-19/ 106-28-59
Garfield	17 K63AY	dismissed QC from ch. 63, 60kw, 30-19-24/ 97-47-58
Houston	21 KVQT-LP	XG 29-34-15/ 95-30-37
Livingston	15 K15GR	PR<2.5kw, 30-41-38/ 94-56-12
Lubbock	6, K06OC, 20, K20II, 24, K24GP, 26, K26HW, 36, K36HK, 49, K49IH, 60 K60GQ	NS 33-31-33/ 101-52-07; 500w/4w/10kw/3k 10kw/5w/10kw
Nacogdoches San Antonio	<b>19 KYTX</b> 15 KEVI-LP	FC to CBS QR from ch.25,
Snyder	42 K42ET	150kw, 29-41-06/ 98-26-59 returned PR>9.31kw, 32-45-34/
Snyder	47 K07TZ	100-54-47 QR from ch. 7,
Snyder	49 K26DW	9.31kw QR from ch. 26, 9.31kw
Victoria Victoria Waxahachie <u>Utah:</u>	28 KXTS-LP 45 KVTX-LP 22 KNAV-LP	PR>23.04kw PR>23.04kw XR 32-35-21/ 96-58-12; CL from Corsicana
Manti/ Ephraim	43 K43JF	NS 460w, 39-19-23/ 111-46-25 (KUWB- 30)
Mexican Hat	13 K13XO	NW 5w, 37-09-00/ 109-51-34
Oljeto	4, K04OZ, 11, K11US, 13 K13XP	NW 5w, 37-02-28/ 110-19-48
Price	46, K46IC, 48 K48JE	NS 150kw, 39-32-42/ 110-48-56
Springlen	51 K51IC	NS 1.42kw, 39-45-22/ 110-59-21 (KUWB)
<u>Virginia:</u> Craddockville	20, W52AB, 22, W58AK, 42, W63AM, 48 W68BH	QR from chs. 52/58/63/68, 24.8/25.1/31.1/ 32.8kw
Harrisonburg	8 W08DY	NS 3kw, 38-31- 07/79-06-12
Onancock Onancock	25 W25AA 30, W41AC, 39, W44AD,	PR<31.2kw; PG QR from chs. 41/44/60,

34 W60AL	32.4/34/33kw, 37-50-32/
26 WRLH-DT	75-34-17 NW 800kw/328m, 37-30-45/
54 WWRT-DT	77-36-05 PC>1000kw
ישואי די	7 0> 1000KW
38 K69BF	QR from ch. 69, 14.3kw
11 WMSN-DT	
	PC 223kw/339m
35 VVIVIVI-DI	NW 500kw/355m
13 KCW/V	PG 10.9kw/488m,
13 KOWI	42-44-45/
	106-21-14
33 K33GI	NW 20kw,
	42-44-26/
	106-21-36 (religious)
	FC; sold to KCWC-4
8 KWYP-IV	NW 37kw/318m, 41- 17-17/
	17-17/ 105-26-42 (KCWC-
	4)
19 K19FX	QC from K08IQ,
	2.31kw
	26 WRLH-DT  54 WWBT-DT  38 K69BF  11 WMSN-DT  10 WMVS  35 WMVT-DT  13 KCWY  33 K33GI  23 K23DS  8 KWYP-TV

Thanks to Peter Baskind, David Austin, Saul Chernos, Ronald Purdue, Karl Zuk, Frank Aden, and Eric Bueneman for information appearing elsewhere in this month's column...

Half of Ridgecrest, California's 18 translators have requested new channels or power increases. The applications:

Translator	New	New	Translates
	Channel	Power	
K59AO	3	3kw	KNBC-4
K65AM	8	3kw	KCAL-9
K67AO	12	3kw	KTTV-11
K53AB	33	11.2kw	KTBN-40
K55AB	35	6.76kw	KCET-28
K57AK	39	6.76kw	KCBS-2
K41GO	41	4.76kw	KABC-7
K45GQ	45	4.76kw	?
K49AA	49	4.38kw	KWHY-22

I list K45GQ as carrying KTSC-8, but KTSC's in Colorado so I strongly suspect a typo! The first three translators also request a site change to 35-28-41N/117-41-48W, roughly a mile west of their current site.

Karl is seeing WPIX-DT now on their permanent channel 33. After the 9/11 attack destroyed their original DTV facility, they established a temporary low-power digital station on channel 12. (presumably using spare equipment from co-owned WTXX-DT in Connecticut, also on channel 12?) (or simply because they knew a co-owned station wouldn't complain about potential interference?)

The 160kw facility on channel 33 is still operating under special temporary authority; (Continues on next page)



# SATELLITE NEWS

GEORGE W. JENSEN 4604 ANTANNA AVE, Baltimore, MD 21206-4220 SCISATMAN@AOL.COM

Greetings and Happy New Year 2005. There are a number of changes this month to note.

On **Satcom 4/AMC10** - XPDR 1 - delete American Movie Classics which has moved to XPDR 1 on Galaxy 1 also delete XPDR 7 Bravo which will be noted elsewhere. Other than the move of American Movie Classics to XPRD 1 here, there are no other changes.

On **Satcom 3** the Showtime East feeds on channels 118 through 127 remain missing. Intelsat America / Telstar 7 failed in operation in late November. Most analogue and non MPEG2 digital channels have moved to the new Intelsat America 13 at 121 West. WGN on Galaxy 5 XPDR 7 also running parallel on XPDR 13.

On **Galaxy 10** XPDR 19 - Spike now here and a streamer on the Outdoors Channel indicates they will leave XPDR 24 and switch

to a digital format immediately - "see our web site for details" The TVN Porn channels on channels 323 - 335 are no longer here - where?? - also Guthy/Renker Infomercial channels 780 - 782 are also gone.
On **AMC4** - XPDR 22 - add Bravo here in VC2

On **AMC3** - XPDR 16 - delete CNN Financial and International Channel. On PanAmSat at 58 W - the Argentinian Tango DMX channel is now at channel 815. Lastly -all Fox Sports Channels will leave their current transmission status by January 1st 2005.

That's all for this month - see you in 30 and hope for great DX in 2005. "73's



### TV NEWS CONTINUES FROM PREVIOUS PAGE

the permanent channel 33 facility will probably be more powerful. They were authorized for 265kw from the World Trade Center, with a higher antenna.

Eric notes KUMO-LP dark. He believes (and I've heard the same reports) the silent period is temporary, with the station planning to return shortly with one of the Spanishlanguage networks, probably Univision.

Eric also notes the Charter cable system in north St. Louis County is carrying WBIF-51 on KUMO's former channel. Which is bizarre, as WBIF is in northwest Florida! Indeed, that's how I got news of the WBIF format change – from Eric observing the station on a cable system in Missouri...

Regarding the new channel 14 in Memphis, Peter writes: "Actually, the tower is in Mississippi Co., Arkansas. The coordinates are the same as the Frenchman's Bayou tower that has been there for years. It was home to 98.1 (WSRR-FM) when it was licensed to Arkansas. It was/is home to 98.9, (WMPW) licensed to Munford (I am not sure if they have moved yet), and is the home of the WYPL(89.3)/Memphis CP.

I guess Citadel owns the site now since they bought Barnstable out here in Memphis."

Ronald has acquired a DTV receiver, and is noticing two of his locals – KTTC-DT 36 and WFTC-DT 21 – intermittently "cut out". Five other Minneapolis stations have reliable signals. Is anyone else noticing this on some of their locals?

(normally, I would expect intermittent "cutouts" on DTV to be the result of multipath. However, Ronald is at a considerable distance from Minneapolis, and I wouldn't expect multipath to be an issue.)

A quick scan of the Web suggests digital TV receivers use the same 41-47MHz intermediate frequency used by analog sets. (I suppose that makes sense, as it would allow using the same RF "front end" tuner modules used for analog) This also means DTV sets should have the same image responses as analog sets.

I'm sure some of you have seen "image" responses on your analog sets. This is where you see a station 15 channels lower than the channel it's actually operating on: for example, you see WMSN-47 on channel 32.

I would speculate Ronald's problem with WFTC-21 is image interference from KTTC-36, 15 channels higher. That's only a guess. And it doesn't explain why KTTC also has problems – image interference doesn't work the other way around.



Jeff Kruszka, Editor 5024 S. Braxton Ave. Baton Rouge, LA 70817 jkruszka@bellsouth.net

January 2005

This month we welcome new contributor Eric Bueneman of Hazelwood, MO! <a href="Equipment">Equipment</a>: Alaron 12" B&W TV, Zenith SpeakEZ mono VCR, Radio Shack VU-210XR at 30 ft. AGL.

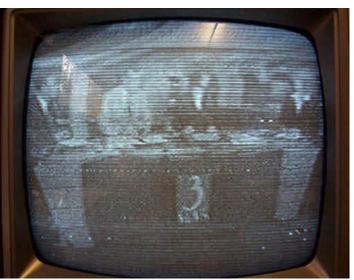




K38II-38 Jefferson City, MO 100 mi Tr seen 5/18/04 @2358 CT "still showing old calls, K11TB"

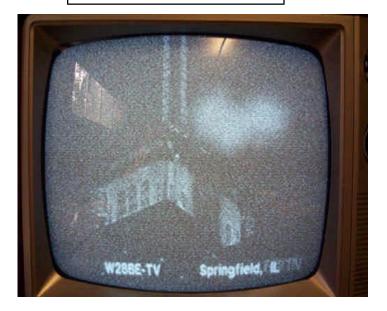
KTVK-3 Phoenix, AZ 1255 mi Es seen 5/22/04 @1324 CT





WDKA-49 Paducah, KY 155 mi Tr seen 6/13/04

WCAX-3 Burlington, VT 970 mi Es seen 8/4/04 @1749 CT



W28BE-28 Springfield, IL 80 mi Tr seen 8/24/04 "local K28IK nulled"





WILL-12 Urbana, IL 155 mi Tr seen 8/24/04

KHGI-13 Kearney, NE 485 mi Tr seen 7/20/03



KWCV-33 Wichita, KS 400 mi Tr seen 7/19/03 @2230 CT



KOLN-10 Lincoln, NE 360 mi Tr seen 7/19/03 @1032 CT



KYW-3 Philadelphia, PA 820 mi Es seen 5/25/03



WKEF-22 Dayton, OH 340 mi Tr seen 8/25/03

The rest of Eric's photos next month. 73's, Jeff

# WESTERN TV DX

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



Mike Cherry, VE7SKA, Salt Spring Is., BC CANADA	26 tr 0628 Little Rock 7, 16, 26 305 29 tr 0659 WJSU 40 AL 385
December 7 Es 2134 KCBS 2 CA	November 2004
	5 tr 1839 KLRT 16 AR 305
William Draeb, 1304 Ellis St., Kewaunee, WI	6 tr 0909 WTJP 60 AL 390
54216-1802	1952 XHAB 7 TA 505 2018 KEYE 42 TX 395
Equipment: 1994 Sylvania 25" TV; Rohn 25G 40'	2024 KEDT 16 TX 425
tower; ch 2026, Y713, KU420(screened) antennas.	2027 KVEO 23 TX 500
CMA-Ub, CMA-HB; preamps; TR44 rotor; etc.	28 tr 1742 WRJM 67 AL "UPN 67" 320
	1745 WJSP 28 GA 390
November 2004	1749 WHDF 15 AL 360
9 Es 1815 unID 2+ NE, probably due to	1754 WHNT-DTt59 AL
auroral activity 2 nights before	1804 WAFF 48 AL 400 1806 WZDX 54 AL 400
14tr 2000 WWAZ 68 <u>new cal</u> l for WMMF 26Es 1630 WEAR 3	1806 WZDX 54 AL 400 1828 WHNT 19 AL 400
WKRG 5	2112 WRBW 65 FL 600
WTVYt 4	2113 WUSF 16 FL 550
1637 unID 2, 6	2116 WFTS 28 FL 550
1639 WDIQt 2	2125 WVEA 62 FL 555
1647 WBRCt 6	2126 WBIF 51 FL 355
1658 WRBLt 3	WOPX 56 FL 655
1709 KFDXt 3	2136 WXPX 66 FL 560
KBTX 3	2254 WTOG-DT 59 FL 550
KPRCt 2	2257 WFTT 50 FL 550
1714 KDFW 4 Live parade in Ft. Worth	2305 WFTX-DT 35 FL 620 2307 <u>WZVN-DT</u> 41 FL <u>645</u>
1717 KXAS 5	2309 WXPX-DT 42 FL 560
1731 KAUZt 6	2312 WEDU-DT 54 FL 550
1742 unID 6 NBC	2314 <u>WTTA-DT</u> 57 FL <u>540</u>
1805 KCWC 4	2315 WKMG-DT58 FL 605
1819 KTVXt 4	2320 <u>WFTS-DT</u> 29 FL <u>550</u>
1830 KIDKt 3	2323 WMOR-LP63 FL 550
1859 KTBS 3 Audio ID	WMOR 32 FL 550
28Es 0445 unID 2 NE, French	2328 <u>WFTT-DT</u> 47 FL <u>550</u>
0458 unIDs 3, 4 NE	29 tr 0000 WFLI 53 TN 485
	0017 WLTZ 38 GA 390

Some Es activity late in the month made it a little more interesting—other than that, not much. It was difficult getting motivated to do some Dxing during the Leonids meteor shower, so I didn't see much.

**Jeff Kruszka**, 5024 S. Braxton Ave., Baton Rouge, LA 70817

Septer	nber 2	<u>004</u>				CT
17 tr	2358	KEDT	16	TX	signoff	425
18 tr	0001	KORO	28	TX	Uni	425
	0012	WMAV	18	MS		285
	0020	WCBI-DT	35	MS		265
<u>Octobe</u>	er 2004	<u>1</u>				
19 tr	2230	KXAM	14	TX		445
		KXAN	36	TX		395
	2318	KEYE	42	TX		395
	2319	<b>KWTX-DT</b>	53	TX		365
	2328	KTBC	7	TX		395
	2335	KLRU	18	TX		395

A nice opening to FL in November! Lots of new DTV's back-to-back. Look for photos in a coming VUD.

Steven Wiseblood, Boca Chica Beach, Texas

Equipment: SANYO 20" Colour TV, stacked UHF antennas at 25'

<u>11-27 tropo</u>

2225 33 WVLA LA Baton Rouge, "NBC-33"
promo "Y-100.7 New Country", ID 500
2241 20 WHNO LA New Orleans, religion 540
preaching the gospel
2242 32 WLAE LA New Orleans, ID on screen
PBS, documentary on the Navajo Nation 540
2242 26 WGNO LA New Orleans, ABC-26
11-28 tropo

0849 33 KMSS LA Shreveport, FOX-BOX cartoons 500

0909 27 WRDQ FL Orlando, gardening \$1005	0858 24 KLPB LA Lafayette, "LPB" 445
"Home Talk Television", mention of Central Florida,	dragon cartoon
and "The University of Florida", "VOOM" TV	0901 18 KLTL LA Lake Charles, "LPB" 395
promo, ID @ 1100, "Action-27 News" promo; 2100 back in, "Action News-27" at 2103, mention	//24 w/dragon cartoon 0910 33 WVLA LA Baton Rouge, NBC 500
of extra Security at Orlando airport.	0930 local weather, "NBC-33", mention of
0924 25 WXXV MS Gulfport, "FOX-25" ads600	Baton Rouge.
0930 ID, "Woman to Woman";back again @ 1625	0955 40 WTWC FL Tallahassee, 865
w/"Saints" football promo 1106 28 WFTS FL Tampa, ABC 935	"Tony Danza", ads, "NBC-40",
ABC Golf @ 1536; 1934 ads, //5	"40" superimposed lower right corner PSA "Tallahasee Habitat for Humanity",
Weslaco "Extreme Make-over Home Edition"	"Community Callender" @ 0958
1142 27 WTXL FL Tallahassee, ABC 865	1010 27 WTXL FL Tallahassee, ABC 865
1458 16 WAPT MS Jackson, ABC golf 620	"The View"
"ABC-16 WAPT", ID 1539 20 WBBH FL Ft. Meyers, "NBC-20" 970	1042 15 KADN LA Lafayette, "FOX-15" 445 mention of Louisiana, "Tony Danza" show
NBC Ice Skating, //23 Brownsville	1625 25 WXXV MS Gulfport, "FOX-25" 600
1622 32 WNCF AL Montgomery, ABC-32 805	mention of Ocean Springs, ads
ABC golf, Tiger Woods	<u>12/7 tropo</u>
1626 38 WNOL LA New Orleans, WB-38 540	1737 15 KADN LA Lafayette, "FOX-15" 445
"WB's BIG Sunday" promo 1631 18 KLTL LA Lake Charles, "LPB" 395	ID @ 1843 "KADN FOX-15" 1750 33 WVLA LA Baton Rouge, NBC-33 500
1638 26 WGNO LA New Orleans, ABC-26 540	NBC Nightly news
ABC golf w/Tiger Woods	1757 18 KLTL LA Lake Charles, "LPB" 395
1640 24 KLPB LA Lafayette, "LPB" 445	promo "Baton Rouge Blues" @ 1800
cooking show //27 1640 20 WHNO LA New Orleans, religion 540	1800 16 WAPT MS Jackson, "WAPT-16" 620 ID superimposed lower-right screen. weather report
1642 15 KADN LA Lafayette, "FOX-15" 445	with talk of storm damage
FOX football	1806 26 WGNO LA New Orleans, ABC-26 540
1659 32 WMOR FL Lakeland, "Cheers" 970	"ABC-26 news at 6", weather and sports
1703 40 WTWC FL Tallahassee, NBC 865	1808 38 WNOL LA New Orleans, "WB-38" 540
superimposed ID lower-right corner, 1716 20 WCJB FL Gainesville, news 960	ads, The Simpsons 2104 40 WDBD MS Jackson, "WB-40" 620
Florida weather forecast, sports, ID	ID lower right corner of screen
1731 46 WPCT FL Panama City, religion 780	2108 25 WXXV MS Gulfport, "FOX-25" 600
program preaching about Jesus	ID upper right corner of screen
1839 21 WMPV AL Mobile, TBN 660 1925 18 WKCF FL Clermont, WB 985	12/9 tropo
"Charmed" very good at times, "WB's BIGSunday"	0858 16 WAPT MS Jackson, WAPT-16 620
"WB-18" ID @ 2032, car ads; promo "High School	local news and weather
Reunion-3"; 2100 promo morning show live	0859 18 KLTL LA Lake Charles, "LPB" 395
from Orlando.  1939 35 WOFL FL Orlando, FOX  1005	"LPB kids club" Happy Birthday 0912 15 KADN LA Lafayette, "FOX-15" 445
ads @ 1945, Xmas cartoon	"Divorce Court" @ 1100, ID, mention of Lafayette
	0918 35 WUFX MS Jackson, "FOX-35" 620
11/29 tropo	0919 43 KEJB AR El Dorado, "UPN-43" 580
0459 42 WIAT AL Birmingham, CBS-42 830	Beverly Hillbillies to 0930
Theme song from Cheers, begin "Russ and Dee" show" simulcast on FM 101.1 from the heart of	0922 24 KLPB LA Lafayette, "LPB" //18 445 0929 39 KMCT LA West Monroe 555
Dixie"	"Victory TV" preacher, "There is Victory in Jesus"
0513 41 WIIQ AL Demopolis, "APT" 735	0931 48 WNTZ MS Natchez "FOX-48" 535
Color Bars with "APT" in middle	"Judge Mathis"
0515 40 WJSU AL Anniston, ABC news, 880 "ABC-40", "Good Morning Alabama" weather @	0940 29 WMPN MS Jackson, PBS 620 0943 31 KLAX LA Alexandria 480
0547	"ABC-31" ads, "Montel"
0517 40 WTWC FL Tallahassee, NBC news	0944 15 WXVT MS Greenville, CBS 645
"NBC First Business", local announcements. 865	"WXVT-15" ID @ 0944
0527 33. WCFT AL Tuscaloosa, 33-ABC 780  Golf course promo	0952 50 K50FI LA Opelousa, TBN 455 0953 66 KCTL-LP TX Port Arthur 345
0530 32 WNCF AL Montgomery ABC-32 805	ads, promo "KD morning show 101.7"
"Good Morning Montgomery"; 0800 still in with	0957 33 WVLA LA Baton Rouge, NBC-33 500
"Good Morning America"	into "Tony Danza" at 1000
0534 28 WJSP GA Columbus, "GPB" 885 cartoons, "Georgia Public Broadcasting" 0600	1253 49 K49DE LA New Iberia, TBN 1304 40 KAJN-LP LA Lafayette, "FV" 445
0541 26 WAIQ AL Montgomery, "APT" 805	"Family Vision" network, program "At Home-Live",
Color Bars w/"APT" in middle	preacher from First baptist church of Lafayette,
0542 27 WTXL FL Tallahassee, news, 865	Louisiana
local weather	1412 44 WGMB LA Baton Rouge, "FOX-44 500
0555 unIDs on 21 & 29 with paid programming ads	"The Peoples Court" 1626 25 WXXV MS Gulfport, "FOX-25" 600
<u>12/1 tropo</u>	1918 54 WUPL LA New Orleans, UPN 540
	14

Smackdown 1924 42 WEIQ AL Mobile, "APTV"	1515 32 WLAE LA New Orleans, discussion program	540
promo "APTV", show with Mexican mariachi	2008 21 WMPV AL Mobile, TBN	660
vocalists	2013 15 WPMI AL Mobile, NBC	660
1939 20 WHNO LA New Orleans, religion 540	ID @ 2015, NBC-15" news promo	000
1940 26 WGNO LA New Orleans, ABC-26 540	2019 55 WBPG AL Gulf Shores, "WB-55"	665
promo "Desperate Housewives	promo "WB-55"	
	2030 27 WRDQ FL Orlando, movie	1005
<u>12/11 tropo</u>	ID lower right corner, promo "WRDQ Action	News
1800 33 XHVCA MEXICO Veracruz, Cerro Azul	at 10",	
350	begin "Action News" at 2100	
documentary program on Merida, Yucatan,	2033 27 WLPB LA Baton Rouge, "LPB"	500
RTV slogan superimposed lower right corner,	membership drive	
looks like this:	2037 18 WDHN AL Dothan, ABC	815
http://www.comsocialver.gob.mx/gobierno/images/	ABC promos, "Desperate Hoousewives"	0.0
RaTeVe.gif	2046 22 WHLT MS Hattiesburg, CBS	620
ID "Radio Television Veracruz" @ 1830	"Survivor"	020
1851 33 KBPX-LP TX Houston "PAX" 300	2057 27 WTXL FL Tallahassee, ABC	865
		003
religious group to 1900, lots of promos for PAX-49	excellent @ 2153	T 40
40/40 (1727)	2134 20 WHNO LA New Orleans, religion	540
12/12 tropo	preaching	005
0540 15 KAMU TX College Station, PBS 335	2145 28 WFTS FL Tampa, "ABC"	935
1134 15 KADN LA Lafayette, FOX-15", ID 445	promo "ACTION NEWS"	
1137 16 WAPT MS Jackson, "WAPT-16" 620	2156 30 WAWS FL Jacksonville, "FOX-30"	1010
religious preaching	"FOX-30" news, sports	
1140 18 KLTL LA Lake Charles, "LPB" 395	2207 18 WKCF FL Clermont, "WB-18"	985
1144 25 WXXV MS Gulfport, "FOX-25" 600	18 in a circle lower right corner	
preaching religion; in again 2043, ID lower right	2213 45 WLCB FL Leesburg	975
corner	"727" area code, christian preacher	
1152 33 WVLA LA Baton Rouge, "NBC-33" 500	2225 25 WJXX FL Orange Park, news	1000
1438 38 WNOL LA New Orleans, "WB-38" 540	"WJXX-25 First Coast News". sports; excelle	
slogan lower right corner	2238 56 WFSG FL Panama City, PBS	775
ologan lonor right corrier	pledge drive	
	ploage alive	

73's de Steve ABGP

## HD Radio Transmission Via Satellite Tested

WUMB(FM) at the University of Massachusetts in Boston has hosted what participants say are the first tests of satellite transport of HD Radio encoded audio with program-associated data. Ibiquity, Broadcast Electronics, and the Public Radio Satellite Services teamed up to demonstrate that point-to-multipoint Studio-to-Transmitter-Links are ready for digital radio.

The WUMB-FM public radio network operates five transmitter sites in Eastern Massachusetts, and applications for more are pending at the FCC. The cost of terrestrial point-to-point leased data circuits for WUMB's STLs has reached break-even with the space-segment costs of a satellite distribution system, and funding has been acquired to purchase and install an uplink at the studio, and five downlinks at the transmitter sites, said participants. But there was a problem.

"Using today's standard satellite technology, we'd have to encode our STL audio using MPEG 2 at 128 kilobits per second to get through the satellite, and then re-code using the HD encoder at each transmitter," says Grady Moates, chief engineer for WUMB. "While that might be acceptable if all of our source material is linear, close to 40% of our programming comes to us through the Public Radio Satellite, which adds a third coding. I am convinced that a single HD encoder at our studio, with satellite distribution of the HD signal, is the answer."

Mike Kirk with PRSS research the issue and suggested a live test of the concept spanning half the continent using an off-the-shelf "satellite Ethernet modem" technology. Moates and Kirk designed the test to emulate a fully-digital broadcast of a live classical music NPR program, from the network all the way to the listener.

Kirk came to Boston for final assembly of the downlink equipment on Dec. 16. Moates said, "At first, it didn't work. After about an hour of head-scratching, as well as a break to attend the WUMB staff holiday party, we called BE's Dave Kroeger to get help with configuration of the IP addresses of the various components in the system. This worked.

The engineers said the tests show that HD + PAD can fit inside a standard 200 kHz digital SCPC channel on a satellite transponder, reducing distribution costs while improving audio quality through reduction of transcoding errors. In the 20 hours that the test was conducted, the modem counted zero data errors in the satellite link, they said.

Thanks to CPB funding, WUMB says it was the first public station in New England to broadcast with HD Radio. The Department of Commerce/PTFP is funding WUMB's plans to build the upand down-link sites in spring of 2005. WUMB expects to be on-the-air with HD Radio at its other four transmitters by summer.



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

## January 2005

Joe Kuret Uniontown 2000 Saturn		1051 WDJR 1055 WMMK 1058 WQNZ 1059 WAOY 1100 WRGM 1105 WOAB	95.1 91.7 93.7	FL MS MS AL	Enterprise, "Country 96.9" Destin, "K-92.1," k Natchez, k Gulfport Geneva		
7/4 Es 1340 KXOR 1351 WJNF	106.3 88.3		Thibodaux, "Eagle 106.3," Cajun Potato Chips ad Marianna, "WJNF, the Rock?"	1106 WYOK 1110 WKCN		AL	Ozark, calls, swap shop program Atmore, "Hot 104" Lumpkin, "Kissin' 99.3," Governor Dan Lee political ad
<u>7/5 Es</u> 1605 CHSJ	94.1	NB	St. John, calls	1118 WBAM	98.9	AL	Montgomery, calls, again at 1814
1613 WEZQ 1616 CBHY	92.9 92.1	ME	Bangor, calls, 1 <sup>st</sup> ME Yarmouth, wx, "can.com" mention	1125 WZBQ 1127 WKWX 1130 WSYE	94.1 93.5 93.3	TN	Carrollton Savannah, TN #1 Houston, relog
1620 WCXU 1623 CJXL 1628 CBHA	97.7 96.9 90.5	NB NS	Caribou, k Moncton, calls, k Halifax, RDS "CBC R 1"	1132 WQST 1137 KBKH 1145 WGFXt	92.5 92.9 104.5	TX	Forest, rel, AFR.net Shamrock, local rel talk pgm Gallatin, Nashville ads, "The
1630 CJBR1 1631 CJSE 1637 CJFX	89.5 89.5 98.9	NB NS	Riviere du Loop, FF nx Shediac, EE nx Antigonish, calls, r	1148 WRVR 1153 KABZ	103.7	AR	Zone," sports talk Memphis, "The River" Little Rock, "The Buzz"
1639 CKBW 1641 CKEN 1651 CKPE 7/6 Es	98.1 97.7 94.9	NS	Bridgewater, calls, NS nx Kentville Sydney, "K-94," wx	1156 KDEZ 1159 KJSM 1200 WCVK 1202 unID	97.7 90.7	AR KY	Jonesboro Augusta Bowling Green, 1 <sup>st</sup> KY ??, SS, "Super ex-ee-toh,"
1014 WJPT 1014 WBTT 1015 WDUV	105.5	FL	Fort Myers Villas Naples Park, "The Beat" New Port Richey, "The	1205 KIBZ 1213 KBBX		NE	nx Lincoln Nebraska, SS, "La Zeta"
1016 WHQT			Dove"	1216 KSRZ 1228 WJCT		NE	Omaha Jacksonville, "Turning Point" pgm, calls
1020 WQOL	103.7	FL	row) Vero Beach, "Treasure Coast" ads	1300 WCNO 1320 WAYJ	89.9 88.7		Palm City, calls, very weak Fort Myers, "Way FM"
1022 WJGO 102.9 FL Tice 1024 WMBX 102.3 FL Jensen Beach 1027 WCZR 101.7 FL Vero Beach, "Real Radio			Tice Jensen Beach	During the 4 hours of no skip activity I went to get the mailand there was the July VUD lamenting the lack of Es on the front cover!			
1033 WGNX	99.7	FL	101.7" Vero Beach, "GNX"	1719 WNSP			Bay Minette, calls
1034 WPOI 1036 WALC	101.5		St. Petersburg, "The Point" Charleston, "Alice," Hilton	1721 unID 1724 WXRG			??, sounded like WAYW Pascagoula, Bay St. Louis
1040 WCNK	98.7	FL	Head ads, 500 miles! Key West, "The Conch"	1725 WNRQ	105.9	TN	ad Nashville, "The Grav 105.com"
1043 WCGO 1046 WRTO			Midway, Savannah ads, o Goulds, SS, Miami ads, RDS "SALSA"	1733 WRBO 1743 WLLEt	103.5 94.7		Como, calls, Memphis wx Mayfield, "Western KY's double Q" calls?
1048 WKGC		FL	Panama City, RDS "WKGC FM," relog	1746 WBVR 1748 KHPQ	96.7 92.1		Auburn, "BVR" Clinton, "Q-92"
1049 WWWK	97.7	FL	Marathon, "The Wave" //105.5	1750 WKYQ 1755 unID	93.3	ΚY	Paducah ??, k, "The Hope"

1756 WEBQ	102.3	IL	Eldorado, IL Lottery ad, only 2 <sup>nd</sup> IL
1758 KBRQ 1758 KSMU	102.5 91.1		Hillsboro Springfield, calls
1800 KSUI	91.7	IA	Iowa City, calls
1800 KASU 1801 KIOA	91.9 93.3	AR IA	Jonesboro, calls Des Moines
1802 KGGO	94.9	IΑ	Des Moines
1802 KRNA	94.1	ΙA	Iowa City
1804 WMT	96.5	IA	Cedar Rapids, "Mix 96.5"
1805 WKSR 1808 KGMY	98.3 100.5		Pulaski Aurora, "My Country," k
1810 KHCA	95.3		Wamego
1812 KNDY	95.5	KS	
1817 WXSR	101.5		Quincy
1821 WMOC 1824 KXKU	88.7 106.1		Lumber City Lyons, "Kix 106"
1828 WBTG			Sheffield
1837 KDEX			Dexter, "K-Dex"
1839 KZMP	101.7	TX	Azle, SS, Dallas metroplex ad
1842 WSRR	98.1	TN	Millington, Memphis ads
1844 KFCM	98.3		Cherokee Village
1845 KQUS 1846 KDEW	97.5 97.3		Hot Springs DeWitt, "Country 97.3"
1850 KTHS	107.1		
1901 KOMS			Poteau, "Big Country"
1902 KEZA	107.9		•
1905 unID 1906 KJEL	103.5 103.7		??, "Cool 103.5" Lebanon, "K-Jel"
1909 unID	97.3	??	??, Sean Hannity pgm
1912 WBKR			Owensboro, wx warning
1919 KKIX 1920 KRZK			Fayetteville, "Kix 104" Branson, Gospel
1921 WHOP	98.7	KY	Hopkinsville
1923 KFUO	99.1		Clayton
1929 KGND			Ketchum
1933 WXGL 1934 KBMV	107.3	MO	St. Petersburg, "The Eagle" Birch Tree, "The Point,"
			Ozarks' Junior Fair ad
1937 WAOA 1939 KFIN	107.1 107.9	FL AR	Melbourne, "A One A" Jonesboro, "K-Fine"
1949 KQSM	98.3		Columbia, "Sam 98"
1953 KCLR	99.3	MO	Boonville
2005 KFXJ 2026 KMEM	104.5 100.5		Augusta Memphis, ID, St. Louis
2026 KIVIEIVI	100.5	IVIO	Cardinals baseball
2034 KKPR	98.9	NE	Kearney, "Power 99"
2036 unID	98.3	??	??, "Wow FM," Michael
2038 KHAK	98.1	IA	Savage program Cedar Rapids, calls
2050 KYIS	98.9		Oklahoma City, "Kiss FM,"
	a	011	TV 9 weather
2059 KOSU 2102 KBTN	91.7 99.7		Stillwater Neosho
2104 unID	99.3		??, "X-FM"
<u>7/9 Es</u>			
1159 KRVS 1205 KLSA	88.7		Lafayette, relog Alexandria
1205 KLSA 1216 WITT			State College
1216 KLAA	103.5		_
1218 KMJJ	99.7	LA	Shreveport, calls
1223 KAPB 1225 KPCH	97.7 97.7	LA LA	Marksville Dubach
1228 KVKI	96.5	LA	
1232 KXOR	106.3	LA	Thibodaux, relog
1234 KUSJ	105.5		Harker Heights
1239 KNUE 1256	101.5 87.7	TX	Tyler Temple, KCEN TV audio
1305 KUHF	88.7	TX	Houston, relog

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1312 KTPB
             88.7 TX Kilgore
1322 KHKS
             106.1 TX Denton
             105.3 TX Dallas, "Live 105.3"
107.5 TX Fort Worth, "Smooth Jazz"
1327 KLLI
1332 KOAI
             107.1 TX Benbrook, SS, "La Amor"
1333 KDXX
1402 KYNZ
             107.1 OK Lone Grove
2031 KKCK
             99.7
                   MN Marshall, calls
2044 KNBZ
             97.7
                    SD Redfield, calls
<u>7/11 Es</u>
1316 KAXF
             88.3
                   TX Conroe, calls, rel
1327 WWOZ 90.7
                   LA New Orleans, jazz, 504 area
                        code
                        ??, "Super Hits 97.7"
             97.7
1345 unID
                   TX Rusk
1347 KWRW 9.7
1348 unID
             98.1
                   ??
                        ??, "Eagle 98.1," r
1513 KVRN
             90.7
                   AR Marvell, calls
8/4 Es
1905 KBPN
             88.3
                   MN Brainerd, relog
1920 KDAL
             95.7
                   MN Duluth, Super L Foods ad,
                        "Magic 95.7"
                   MN Duluth, "KQ-95"
1926 KQDS
             94.9
1927 KNOX
             94.7
                   ND Grand Forks, k, "The
                        Rooster," 1st ND
                        Marquette 1st MI
1928 KUPK
             94.1
1931 WIZM
             93.3
                   WI LaCrosse, "Z-93, Tri-
                        State's Country Leader,"
                        1<sup>st</sup> WI
                   MN Duluth, lake warning wx
1931 WSCD 92.9
                    MN Crookston, "The Fox"
1938 KQHT
             96.1
1942 KXXR
             93.7
                   MN Minneapolis, Excel Energy
1944 WHSA 89.9
                   WI Brule, WI Public Radio
             92.9
                   ND Grand Forks, "XL-93"
2002 KKXL
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Conditions on 7/6 were extraordinary, to say the least. Haven't seen such intense skip since May and June 1972. Most interesting is the skip was coming from all over the map with many unusual (for me) short hops. Now my shortest Es and longest tropo are from the same state and same frequency; WSSL and WALC, 100.5 in SC. Season was exceptional for me with 140+ new logs being tropo....poor season at this QTH for inversions. Added 6 new states: ME, TN, KY, ND, MI and WI. Total 586.

Leslie J. Prus, 8502 Camden St, Alexandria VA 22308-2101 LesPrus@cox.net

Denon TU-1500RD tuner & APS-13 FM antenna, finally on the roof (25 ft AGL), fixed south until I complete rotator connections. Over the rest of the winter I'll do a survey of non-DX stations received regularly from my location -- high atop Mount Vernon J. All loggings below are new, all groundwave, EST.

```
      12/17 Gw

      1458 WHOV
      88.1
      VA
      Hampton, ID
      125

      12/18 Gw

      1950 WESM
      91.3
      MD
      Princess Anne, ID
      83

      2014 WRVQ
      94.5
      VA
      Richmond, ID
      "Q-94"
      92

      2053 WMXB
      103.7
      VA
      Richmond, "New Mix"
      88

      2055 WGRX
      104.5
      VA
      Falmouth, w/RDS
      40

      2100 WRAR
      105.5
      VA
      Tappahannock, ID
      62

      FMDXWeb.com
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# TELEVISION: THE TECHNOLOGY THAT CHANGED OUR LIVES

BOB COOPER PART FOUR

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."

"RCA described (at the hearings) a color system which was not sequential but could be called simultaneous." Where CBS was breaking up the origination point's TV image into an repeating series of red-blue-green images and "time sharing" the transmitted wave giving each of the colors 1/3rd of the total transmission time, RCA had a different approach. Brown continued:

"This consisted of four separate radio transmitters, one for each primary color and one for the accompanying sound. The arrangement needed a 14 megacycle band but the RCA lawyers insisted that if CBS could crowd its (color) signal into twelve megacycles so could RCA.

"The lawyers won this round, convincing the engineers they had to find a way to be no wider than CBS in spectrum usage. The crowding into 12 megacycles was made possible by the 'Principle of Mixed Highs' which had been espoused by (RCA's) Alda Bedford. Bedford's studies showed that for very fine picture detail the human eye distinguishes changes in brightness but fails to sort out changes in color. As a result, the high-frequency components of red, green and blue signals could be mixed together and added to the green signal. Hence the green transmitter (one of the four total) would transmit at full bandwidth while the red and blue would be spectrum limited, thus saving spectrum precious space." In 'Basic Television' written by Grob of the RCA Institute (1948), the system is explained as follows:

"A separate carrier is employed for each of the color signals with the green signal used to provide a standard 6 Mc/s channel with the FM sound." A diagram illustrates the green carrier at 519.6 Mc/s, FM audio subcarrier at 524.1, blue subcarrier at 526.3 and red subcarrier at 528.2 Mc/s. At the transmit end, the system required three separate (filtered) pickup tubes, three parallel chains of amplifiers and very complex synchronization to insure each image was in sequence and properly timed. In the accompanying complex receiver, three cathode ray tubes each fed by

a separate chain of IF (intermediate frequency) amplifiers, video amplifiers and then fixed filters to a housing mounted mirror which somehow was expected to focus all three images properly as a converged display on a transparent frosted screen.

RCA's Brown had no fond memories of this approach.

"I doubted the three UHF transmitters bearing the information regarding the three primary colors could be made to function as described by RCA. My opinion was not solicited but I am sure my disapproval was in evidence."

RCA elected to demonstrate this kluged system on January 29, 1947 at the Princeton (NJ) laboratory. Brown:

"Small low-power transmitters fed into antennas on the roof. The demonstration scene, the 'Penn's Neck Community Club', about distant. was one mile demonstration was less than impressive. The receiver used three picture tubes and a lens to project the picture onto a frosted glass screen. The pictures were fuzzy with color fringes due to poor registration (registration: the challenge of making each of the three projection tubes be in exact overlay with the other two, a problem still not resolved with many consumer brand projection TVs).

"Part of the demonstration was designed to show compatibility, the ability to view the color signal in black and white on a black and white receiver. Of course a (UHF to VHF) frequency converter was the first requisite but RCA soft pedaled this point. The signal from the full 6 Mc/s bandwidth green transmitter was the one to be shown in black and white. The effect was not bad when a slide of a green parrot was used for then the black and white picture had a rather good grey scale. Before long, some enemy sneaked into camp with a slide of a brilliant red parrot, a parrot completely lacking a single green feather. The result on a black and white receiver was a coal-black parrot with no shades of grey and no trace of detail.

"Then came the demonstration of the mixed highs. The audience viewed the color pictures on the receiver while a switch was thrown at the studio on command by telephone from the meeting room. The reaction was mixed. Some viewers were impressed by the addition of fine detail while others did not feel the improvement to be astounding. Some days after the demonstration, we found a defective switch had failed to insert mixed highs at any time!"

This had two immediate effects. First of all, as the red, blue and green were being transmitted simultaneously (as opposed to sequentially), the TV transmitter and the TV receiver now required totally separate signal processing "chains" for each of the component color parts. Where a black and white receiver required only one video amplifier "string" the RCA "field simultaneous" receiver required 3 strings as a minimum. What had been a 26 tube receiver suddenly became a 40+ tube receiver. They were bigger, used far more electricity, and created new challenges for field servicing. But this was a prototype system and perhaps it would be improved.

Secondly, by combining all of the colors in the "wideband" green signal simultaneous stream RCA had laid the foundation for "compatible color." What was missing in the CBS system was that when CBS switched their color "on," every black and white TV set in the land went to squiggly lines on the screen; no picture at would be all. There а solution this, but it would add expense to new receivers and the increasingly larger universe of black and white sets would be required to spend money to receive the CBS color programs in black and white. RCA's "Mixed Highs" approach for the first time offered the possibility that color could be "compatible" with black and white - that color sets would have color, and, black and white would have black and white of the same telecasts. In 1946 - 1947 it was not quite to that point - yet - but it was coming closer, without requiring existing black and white sets to spend money for a "black and white translator."

Goldmark had designed a prototype dualpurpose receiver - black and white at low band (channels 1 through 6) and color at UHF. He said, "this will be slightly more expensive than color alone" but gave no indication of what "slightly more" might mean. He also produced but did not demonstrate a "converter" which he said would allow the existing universe of black and white sets to view CBS color in black and white. CBS came out of the demonstrations very buoyant; so enthused that Paley ordered CBS to return the four FCC granted construction permits which the corporation held for to-bebuilt VHF network stations in such major cities as Chicago and Los Angeles. Paley told the press, "We are so certain that full color using UHF is the right way to go that we are giving up all but our presently operating New York City channel and when the FCC will accept our applications, applying for UHF channels in the same markets." It would be a decision he would live to regret.

CBS's Stanton was considered a clairvoyant when it came to reading FCC actions in advance of their announcements. Immediately after the demonstrations for Chairman Denny and his staff Stanton, according to Goldmark, "thought we were in." But RCA had a few unused weapons in their arsenal. First, they told the press, "There are 250,000 sets in America at this time. These set owners who wanted to receive CBS color programs would have to buy an 'inefficient, ugly and expensive' converter to view color broadcasts on their black and white sets."

In fact there were not even 25,000 TV sets in America but nobody bothered to challenge RCA's pronouncement.

The FCC on January 30, 1947 met and then voted later in March on the CBS petition which if passed would have allowed UHF 12 Mc/s channel widths and color TV for the first time. CBS was shocked when the FCC said, "no - the CBS color system is premature" and then they reaffirmed the old black and white standards and VHF only.

Radio Craft for May 1947 reported it this way:

"Color television is not yet ready for commercial exploitation, the Federal Communications Commission has decided. The FCC decision came after several hearings in which Columbia Broadcasting System led the proponents of immediate color television and RCA spoke for those who believe color is not yet ready for the public. Both sides backed their arguments with showings of color television.

" 'The Commission cannot escape the conclusion,' " the FCC said in a fourteen page decision, " ' that many of the fundamentals of a color television system have not been adequately field tested, and that need exists for further experimentation.'

"Television broadcasters and manufacturers interpreted the ruling as giving a green light to black and white television and some predicted that greatly expanded production would result almost immediately."

Six months later, mid-1947, there was political fallout as well. Goldmark notes:

"We felt we had been dealt a foul blow. Everyone in the CBS camp noted cynically that six months later (FCC Chairman) Denny accepted a post as vice-president of NBC, which is wholly owned by RCA. A subsequent Congressional investigation of the affair resulted in a change of FCC rules and an amendment of the Communications Act, prohibiting a commissioner from representing a company before the commission for a year after resigning from the FCC."

Seemingly, this would be the end of the color TV story but in fact it is merely a seventh inning stretch. It was March 1947 when the FCC said, "go back into the field and perfect the system." At that very point in time, according to the RMA 29,890 TV sets were in public hands. And according to Televiser Magazine, 9 cities had 11 operating television stations (New York, Philadelphia, Chicago, Detroit, Los Angeles, Washington [D.C.], Schenectady, Cleveland and St Louis). If CBS had a "plan B" beyond their haughty promise to not pursue television unless it was UHF color, it was not evident.

Through 1947, an additional 7 commercial TV stations would begin operation and at year end, 150,000 TV sets would be in public hands with 18 TV stations. AT&T would begin the task of interconnecting stations and markets using a combination of coaxial cable and 4,000 Mc/s terrestrial microwave repeaters. ABC, which had begun modest TV production 1946, would in programming during 1947 to concentrate on getting TV stations on the air; they had none at the time! In terms of advertising revenue and program production, NBC would lead followed by DuMont but neither would be television profitable in their network operations (DuMont's 1947 financial statement showed \$775, 235 as cost to operate its TV broadcast and network operation, not well offset by \$71,184 in income; a loss of \$704, 051).

RCA made it clear it was not abandoning color research. Dr. C.B. Jolliffe, VP in charge of Princeton's RCA Labs, told the press in March 1947:

"We propose to carry on with our research and development work in monochrome and color with all of the resources at our command, regardless of the status of operations, manufacture or non adoption of standards." Prior to the FCC decision turning down CBS color, he had made an almost identical statement peppering it with, "If the FCC does approve the petition, we shall still carry on with our research to perfect a 'compatible' color system."

Goldmark of course believed the FCC had seriously erred, and responding to allegations the weakness of his system was the mechanical rotating color disc required for both the transmit and receive ends of the circuit, he said:

"The CBS sequential color method is a universal one which functions not only with the single tube pickup and single tube reproduction methods in operation today, but will also function interchangeably with three tube methods, either pickup or reproduction, in the event future development should prove them to be workable and economically desirable."

George Brown wrote about RCA's attempts to make the rotating plastic disc into a workable system, "The color disc mounted in front of the image orthicon camera tube was almost seven inches in diameter. At the receiver, a disc twenty-two inches in diameter carried six color filters (2 for each color) and rotated at 1200 revolutions per minute (20 times per second) in front of a 9 inch kinescope picture tube."

With some slight variance, the receiver picture tube disc was a device 2.444 times the diameter of the picture tube. Thus a 20 inch tube, available from DuMont, required a disc 48.9 inches in diameter - more than four feet. As the picture tube size grew, so did the disc size. At the same time the horsepower of electric motor required to rotate the disc grew proportionately and the noise of the rotating color disc plus the rapidly spinning armatures of the motor became quite objectionable. And none of this reduced the "flicker effect" which was inherent and basic to the flawed Goldmark design. That the FCC came close to approving this system in 1947 seems quite depressing; that they would in fact actually approve it for commercial use in 1950 is almost beyond belief. But we are getting ahead of our time line.

RCA apparently was more interested in the future that UHF held than some specialized

use of color TV there. This was driven by the FCC which by the fall of 1947 was increasingly concerned that the original channels 1 - 13 were inadequate to provide a true national service of even one TV channel for every home. This "squeezing of the megacycles" would be exacerbated early in 1948 when the commission eliminated TV channel 1 (44 - 50 Mc/s) from those available television in a trade that kicked non-TV users out of channels 7 - 13 reserving these upper channels (previously shared with other services) for TV only, coast-to-coast. The spectrum for TV channel 1 had always been controversial, subject as it was to long "skip" interference and distance corrupted in metropolitan areas by motor cars electrical systems. Late in NBC's WNBT and Don Lee's W6XAO had converted off of channel (WNBT to TV channel 4 - 66 - 72 Mc/s and Don Lee to channel 2 - 54 - 60 Mc/s) so the loss of channel 1 was no special hardship except to stations in markets such as Riverside (California) and Lancaster (Pennsylvania) where the FCC had assigned channel 1 as the only available TV channel.

At CBS, Chairman Paley was frying new fish. He with the help of tax advisers had worked out a clever scheme that allowed prominent radio personalities (Jack Benny, for example) to establish their own production companies. Then he changed the corporate policy at CBS allow these self-centered one-man corporations to create and produce their own radio shows without direct CBS involvement and to own the shows. Then on a one by one basis, if the one-man owners "sold" their new corporations to CBS, they would be taxed at the much lower capital gains rate than as ordinary income. What this meant was he was able to attract to CBS radio (and later to CBS-TV) many of the NBC radio stars of the day and for a brief period of time tip the radio audience scale in favor of CBS. For Jack Benny, it was as much as 50% more money in his pocket and at pay scales approaching \$50,000 a week for a single 30 minute radio show, 50% was a heap of cash. Paley was apparently so pleased with himself that he momentarily ignored the tremendous growth going on under his nose in the television world. NBC, at the same time, did not expect the CBS tax avoidance scheme to pass IRS muster (it did) and while silently chortling about the hot water CBS would -they believed - suddenly find themselves bathing in, was betting that it would only be a year or two before radio was a has-been medium. In a nutshell, CBS was betting on radio "today" and NBC had their money on television

"tomorrow."

Midyear 1947. The FCC may have passed on color at UHF but not on UHF itself. As new stations were signing on the air, a new type of unexpected problem was appearing; interference between stations on the same (such as channel 4) and adjacent (such as channel 3 to 4) channels. Same channel interference was called "co-channel" or CCI for short. When the FCC elected to assign 13 channels to television service in 1941, some assumptions had been made about the minimum mileage separate (distance) between stations operating on the same channel, or on adjacent channels. The assumptions were based upon knowledge gathered in the 1930s using television transmitters of relatively low power (5,000 watts was high power at the time) and often with TV transmitting antennas located only a few hundred feet above ground. Moreover, TV receivers were very insensitive because they lacked some of the refinements that would be discovered during World War Two. Now, in mid-1947, it was increasingly evident that some serious errors had been made with those assumptions. Stations as close as Detroit and Cleveland (105 miles apart and most of that across Lake Erie which readily propagated the TV stations in both directions) or Washington to Lancaster (only 90 miles apart) had been assigned the same VHF channels. If you lived in downtown Detroit or downtown Lancaster, everything worked fine. But if you lived in between two cities using the same channel, your TV screen was more often than not a blurry mess of horizontal lines as the two TV signals fought it out inside of the TV receiver to "dominate" the receiver's signal processing circuits.

The FCC decided to do what they did best at the time - schedule a hearing to take "expert testimony." One of the proposals FCC engineers were floating at the time was the concept of closing down VHF totally and moving all TV to UHF - where, they believed, this sort of interference would be far less troublesome.

Brown found the FCC's plan disturbing.

"...the (FCC) Commissioners still clung to their respective fantasies of making UHF 'equal' to VHF" and "as late as June 1956 the Commission stated it was convinced it should undertake an analysis of the possibility of improving and expanding the nation-wide television service through the exclusive use of the UHF band without the concomitant use of the VHF channels. They were still dreaming.

# WTFDA MEMBERSHIP LIST 12/20/04

First_Name	Last_Name	City	State	CNTRY	MoYear	EmailAddr
Mike	Cherry	Salt Spring Island	ВС	CAN	5/31/2005	mikecherry@telus.net
David A	Sinclair	Vancouver	ВС	CAN	5/31/2005	· · · · · · · · · · · · · · · · · · ·
Steven	Durocher		ВС	CAN	12/30/2005	•
Morris	Sorensen	Winnipeg	MB	CAN	2/28/2005	mosor2002@yahoo.ca.
William	Hepburn	Grimsby	ON	CAN	3/31/2005	vem3ont22@cogeco.ca
John	Griffiths	Burlington	ON	CAN	5/31/2005	-
Robert S	Ross	London	ON	CAN	5/31/2005	robross@sympatico.ca
Roger	Gravelle	St. Thomas	ON	CAN	5/31/2005	
Niel	Wolfish	Toronto	ON	CAN	6/30/2005	neil@ican.net
Walter	Patton	North York	ON	CAN	7/31/2005	wwpatton@email.com
Ken	Bedley	Mt. Hope	ON	CAN	7/31/2005	·
FJ	Issard	Brampton	ON	CAN	9/30/2005	
Michael	Reid	North York	ON	CAN	5/30/2006	
Saul	Chernos	Toronto	ON	CAN	7/31/2006	schernos@sympatico.ca
Charles	Gauthier	Saint Lambert	QC	CAN		tvfmdx@yahoo.ca
Octavio	Couso	Ciudad Habana		CUB		octaviocouso@yahoo.es
Jesus	Perez	Habana-5		CUB		jesperale@yahoo.es
Ulrich	Onken	Lorrach		GER		uli.onken@gmx.net
Fernando	Garcia			MEX		tropotvdx@yahoo.com.mx
Robert	Cooper	Mangonui Far North	NZ	NZ	1/31/2020	
Michael J.	Stonebridge	St. Isidore	AB	CAN		stonbrdg@telusplanet.net
Robert E.	Fischer	Fairbanks	AK	<u> </u>	4/30/2005	0 = ··· - F
David S.	Cox	Birmingham	AL		3/31/2005	dsc256@bellsouth.net
Kevin	Redding	Mesa	AZ	<u> </u>		amfmdx@fastq.com
Rick	Lewis	Phoenix	AZ	<u> </u>	6/30/2005	
Eric	Sundius	Sierra Vista	AZ		7/31/2007	esundius@theriver.com
Victor	Frank	Woodside	CA		1/31/2005	
Albert P.	Gordon	Del Mar	CA			al.gordon@adelphia.net
Dan	Dankert	Tustin	CA			n6peq@dxer.com
William J.	Higgs	Carmel Valley	CA		2/28/2005	• •
Frank E.	Drobny	Valencia	CA		3/31/2005	ggc C gap.eet
Steve	Naetzker	Rialto	CA		4/30/2005	loranimal@mail.com
Alphonse B	Tobia	Newark	CA		6/30/2005	· · · · · · · · · · · · · · · · · · ·
Dennis Park	Smith	Santa Barbara	CA		8/31/2005	
Roderick	Thompson	Sacramento	CA			rodthomp@ix.netcom.com
Chester	Jaffee	Berkeley	CA		12/31/2005	realiemp () x incleen incern
James	Roggentine	Modesto	CA			zardot25@netzero.com
Wolfgang	Schneiter	Canoga Park	CA		12/31/2005	24140129 (31012910.0011)
Howard	Krinsky	Pismo Beach	CA			howard51@NetZero.net
John	Kosinski	Stamford	CT			newsrx@macconnect.com
Mike	Roth	Morris	CT			mdroth@sbcglobal.net
Mike	Bugaj	Enfield	CT			mbugaj@snet.net
Bill	Nollman	Farmington	CT		11/30/2005	
Brian	May	Fairfield	CT		11/30/2005	•
Gary A.	Olson	Sarasota	FL		1/31/2005	
Carlon	Howington	St. Petersburg	FL		1/31/2005	govidcoman@doi.com
Juan	Gualda	Ft. Pierce	FL			gualdaj@bellsouth.net
Jim	Gill	Bradenton	FL			jgill002@tampabay.rr.com
Jeffrey D.	Lockwood	Tallahassee	FL	-		lockwoodjdl@cs.com
Clifford	Rames	Miami	FL			crames@att.net
Carlin	Hattan	Melbourne	FL			cfhattan@surfglobal.net
Dave	Bright	Tallahassee	FL	-		davebright5@hotmail.com
Lee	Freshwater	Ocala	FL	-		engwtrs@aol.com
John O.	Broomall	Canton	GA	-		johnbroomall@yahoo.com
George		Rising Fawn	GA	1	3/31/2005	jornioroomane yanoo.com
Neil	Rogers Griffin		GA	1		nariffin@tfn.not
Kermit D	Reid	Bainbridge Cumming	GA	1		ngriffin@tfn.net papaboy1@webtv.net
Nick		Atlanta	GA	1	7/31/2005	papaboy i webity.net
Howard	Lombardi		GA	1		howardf@mindonring com
Melvin G.	Fountain_Jr.	Cumming Kennesaw	GA	1		howardf@mindspring.com radioman30152@yahoo.com
	Dishong		GA	1	9/30/2005	radiomanou rozwyanoo.com
James	Snow	Darien		-		twictor 01@yohoo sam
Ben	Cox	Osceola	IA	-		twister_94@yahoo.com
Jerry	Rappel	Poice	IA	-		ww0e@juno.com
Frank	Aden_ Jr.	Boise	ID			n7sok@aol.com
Robert J.	Williams	Twin Falls	ID		7/31/2005	
Dave	Allen	Glendale Heights	IL			allenamy41@cs.com
Frank	Merrill	MaComb	IL		2/28/2005	
Richard	Porter	Wood dale	IL		2/28/2005	
Christopher	Cervantez	Kewanee	IL		3/31/2005	chris@attackhamster.com
Ken	Onyschuk	Joliett	IL		4/30/2005	

Andy	Bolin	Charleston	IL	5/31/2005	dxshack@1staccess.net
William	Eckberg	Dixon	IL	6/30/2005	
Curtis	Sadowski	Paxton	IL	7/31/2005	curtis_sadowski@hotmail.com
Kyle	Walker	Crest Hill	IL		kwalker@uscountryradio.com
Robert L.	Delaney	Mt. Vernon	IL	10/31/2005	-
Steven	Branch	Champaign	IL	10/31/2005	-
Marvin	Shults	Toulon	IL	11/30/2005	
Neil	Kazaross	Barrington	IL		neilkaz@interaccess.com
Timothy W.	Cronin	Worth	IL	6/30/2006	
Jeff	Kadet	Macomb	IL	9/30/108	
					jkadet@macomb.com
Peter	Oprisko	Whiting	IN	1/31/2005	
Aaron	Mitterling	Warsaw	IN		mitterling@email.com
Greg	Barker	Greensburg	IN	3/31/2005	
James H	Montgomery	Poseyville	IN	5/31/2005	jmmonty@evansville.net
Bob	Timmerman	Ft. Wayne	IN	7/30/2005	bob@timmerman.com
Ralph M.	Strobel	Muncie	IN	7/31/2005	rstrobel@bsu.edu
James	Gould	Kokomo	IN	10/30/2005	jhgould@netdirect.net
Quentin Randy	Davis	Jeffersonville	IN	12/30/2005	
Ed	Norris	Logansport	IN	12/31/2005	
Steve	Rich	Indianapolis	IN	7/31/2006	srich@indyradio.com
Mike	DeRoo	Roeland Park	KS	6/30/2005	
Paul		Topeka	KS	7/31/2005	
	Swearingen				pisucuuxei @aui.CUIII
Roosevelt	Crawford	Junction City	KS	8/31/2005	
Ron	Wing	Wichita	KS	8/31/2005	_
Dave	Pomeroy	Topeka	KS	12/30/2005	· ·
Hale	Glen	Georgetown	KY	2/28/2005	glen.hale@adelphia.net
Milton C.	Bay	Brooksville	KY	4/30/2005	cleon@ekns.net
John F.	Vervoort	Madisonville	KY	5/31/2005	
Girard	Westerberg	Lexington	KY	12/31/2005	gwesterberg@dxfm.com
Danny	Oglethorpe	Shreveport	LA	5/31/2005	doglethorpe@yahoo.com
Jeff	Kruszka	Baton Rouge	LA	6/30/2005	
Wallace H.	Dickson	Millis	MA		hawkwind@webtv.net
Kaimbridge	Dickson	N. Shore	MA		kaimbridge@programmer.net
Paul H.	Honoon				
	Hansen	Marlborough	MA	2/28/2005	1 -
Allan G.	Dunn	Holbrook	MA	3/31/2005	_
Bill	Grant	Worcester	MA	4/30/2005	
George	Mileon	Duxbury	MA	5/31/2005	georgemi@gis.net
Garrett	Wollman	Framingham	MA	6/30/2005	
Roy	Barstow	Teaticket	MA	7/31/2005	roybarstow@hotmail.com
Alan	Michalek	Springfield	MA	7/31/2005	
Robert	Rush	Holyoke	MA	7/31/2005	
Jeffrey	Lehmann	Hanson	MA	8/31/2005	jlehmann@mediaone.net
Stan	Morss	Boxford	MA	8/31/2005	,
Paul E.	Kinnaly_ Jr.	Dedham	MA	9/30/2005	
Bill	Smith	Douglas	MA	9/30/2005	smth752@hotmail.com
Steven	Solomon	Yarmouthport	MA	10/31/2005	
		'			
Adam	Rivers	Chicopee	MA	12/31/2005	1.
Peter Q	George	Whitman	MA	5/31/2006	
Keith	McGinnis	Hingham	MA	6/30/2006	longwave@comcast.net
Jeff	Wolf	Silver Spring	MD	2/28/2005	
Joseph	Kureth_ Jr.	Uniontown	MD	3/31/2005	
Gus	Mancuso	Cheverly	MD	4/30/2005	
Daniel	Oetting	Elkdon	MD	4/30/2005	d_oetting@hotmail.com
William W	Thompson	Cheverly	MD	4/30/2005	viverett@smart.net
Alfred A.	Laun III	Temple Hills	MD	6/30/2005	k3zo@arrl.net
Calvin A.	Glover_Jr.	Baltimore	MD	7/31/2005	
George W.	Jensen	Baltimore	MD	7/31/2005	
William G.	McGuire	Cheverly	MD	7/31/2005	
Charles	Tumosa	Timonium	MD	7/31/2005	ctumosa@scmre.si.edu
		Baltimore	MD		ka3tcc@verizon.net
Thomas	Yingling_ Jr. O'Connor			12/31/2005	RASIOC & VEHZUH.HEL
Roderick		Southwest Harbor	ME	5/31/2005	
Benjamin L.	Greenlaw	Portland	ME	7/31/2006	
James J.	Nahirniak	Warren	MI	2/28/2005	
Timothy J.	Clampit	Brooklyn	MI	4/30/2005	
Keith K.	Smith	Lansing	MI	5/31/2005	vgmc@webtv.net
Jim	Paige	Sterling Heights	MI	6/30/2005	
Joe	Veldhuis	Grand Haven	MI	6/30/2005	electrode@garandnet.net
		t_	MI	9/30/2005	
Wayne	Benkinney	Burton			1
Wayne James		Burton Rosemount	MN	3/31/2005	jadale@frontiernet.net
James	Benkinney Dale	Rosemount	MN	3/31/2005 3/31/2005	-
James Jacob	Benkinney Dale Norlund	Rosemount Hermantown	MN MN	3/31/2005	jadale@frontiernet.net tvdxer@yahoo.com
James Jacob Steven	Benkinney Dale Norlund French	Rosemount Hermantown Hopkins	MN MN MN	3/31/2005 6/30/2005	tvdxer@yahoo.com
James Jacob Steven Fred	Benkinney Dale Norlund French McCormack_ Jr.	Rosemount Hermantown Hopkins St. Paul	MN MN MN MN	3/31/2005 6/30/2005 7/31/2005	tvdxer@yahoo.com 71117.1047@compuserve.com
James Jacob Steven	Benkinney Dale Norlund French	Rosemount Hermantown Hopkins	MN MN MN	3/31/2005 6/30/2005	tvdxer@yahoo.com 71117.1047@compuserve.com ronaldpurdue@prodigy.net

Randall	Trapp	Dodge Center	MN	11/30/2005	
Paul	LaFreniere	Grand Marais	MN	11/30/2005	plafren@boreal.org
Melvyn E.	Larson	Rochester	MN	12/31/2005	
David F.	Legler	Rochester	MN	3/31/2006	
John	Ebeling	Bloomington	MN	7/31/2006	ijebeling@aol.com
Luke	Steele	Mountain Grove	MO	1/31/104	
John R	Tudenham	Joplin	MO		
Eric S.	Bueneman	Hazelwood	MO		n0uiheric@aol.com
John C.	Johnson	Billings	MT		
James	Brann	Chapel Hill	NC		jbrann@webtv.net
Donna	Coleman	Rural Hall	NC		~
Michael	Hawk	Omaha	NE		thisisatest22@yahoo.com
Matthew C.	Sittel	Bellevue	NE	11/30/2006	mcsittel@cox.net.
Daniel	Bartek_ Jr.	Wahoo	NE	8/31/2015	
Laurence	Weisberg	Manchester	NH	4/30/2005	
Larry	Weil	Salem	NH	10/31/2005	
Jason	Hustedt	Somerset	NJ	3/31/2005	jason.hustedt@verizon.net
Jason	Koralja	Surf City	NJ	4/30/2005	
Michael	Temme-Soifer	Mays Landing	NJ		mtsdx@earthlink.net
James	Alexander	Voorhees	NJ		jal965@aol.com
Joseph A.	Esser	Summit	NJ	7/31/2005	
Robert P.	Smolarek	High Bridge	NJ	8/31/2005	
Joseph	Fela_ Jr.	S. Plainfield	NJ	9/30/2005	•
Paul	Sojka_Jr	Middletown	NJ	9/30/2005	ultrafixedwing@juno.com
Ted S.	Liszewski	Paramus	NJ	11/30/2006	
Paul	Mitschler	Albuquerque	NM	1/31/2005	Di i col C
Jim	Pizzi	North Las Vegas	NV		Pizzi_001@msn.com
David	Nieman	Tonawanda	NY		nieman@localnet.com
Paul	Crego	Lockport	NY		pc54m@aol.com
Tim	Katlic	Penfield	NY		tkatlic@rochester.rr.com
Andrew	Mackenzie	Greenville	NY		
Eric	Fader	Briarcliff Manor	NY		fades@optonline.net
Charles	Burnham	Southold	NY		•
Gregory R Frederic J	Coniglio	Alden	NY		_
Richard	Nordquist	Clay	NY NY		
	Wertman	Lockport		5/31/2005	rwsvcinc@localnet.com
Owen P.	Wood	Fabius	NY NY	5/31/2005	ilband1@rachastar rr com
Jerry Charles	Bond Bernth_Jr.	Rochester	NY		jlbond1@rochester.rr.com niteowl4@optonline.net
Mike	Lazaro	Eastport Guilderland	NY		ranger@albany.net
Guy T.	Falsetti	Lockport	NY		•
Richard	Lucas	Rochester	NY		rlucas@dawnbreaker.com
Fred	Newlin	Lewiston	NY		
Peter	Giacopelli	Massapequa	NY		-
Scott	Fybush	Rochester	NY	8/31/2005	
James	Renfrew	Byron	NY		9
Robert	Seybold	Silver Creek	NY	10/31/2005	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
George	Hamer	Brooklyn	NY	10/31/2005	
Karl J.	Zuk	Katonah	NY		n2kz@arrl.net
Gerard	Hart	Niagara Falls	NY	3/31/2006	
Ryan	Grabow	Massapequa	NY		
Michael W	Lapinski	Lakewood	NY	6/30/2006	
Steven P	Sprachman	Hicksville	NY	8/31/2006	joystespr@webtv.net
Bill	Thompson	Buffalo	NY	1/31/2020	
Lawrence R.	Marecki	Cleveland	ОН	12/31/104	
Mark	Meece	Franklin	ОН	1/31/2005	radioscan@siscom.net
Larry Lee	Back	Middletown	ОН	1/31/2005	
Joe	Perge	Newark	ОН		jmperge@yahoo.com
Gary	Siegel	Toledo	OH	7/31/2005	
John	Hourigan	Waynesville	OH		jphourigan@msn.com
George C.	Greene	Akron	OH		-
William R.	Mitchell	Columbus	OH	10/31/2005	eastsyc272@aol.com
Keith R.	Short	Columbus	OH	10/31/2005	
Gary	Hickerson	Arkoma	OK	5/31/2005	
John	Zondlo	Yukon	OK OK		fmdxweb@cox.net
Glenn	Hauser	Enid	OK OK		3
David	Shapiro	Norman	OK		shapirodavid@earthlink.net
Dave	Williams	Redmond	OR	5/31/2005	
Randy	Miltier, K7GE	Phoenix	OR OR	7/31/2005	rmiltier@charter.net
John M.	Adams	Seaside	OR OR	11/30/2005	lonny@ode===te-!
Lenny	Goldberg	Ashland	OR	11/30/2005	1 -
		Wilkon Parra	DΛ	2/20/2005	hihdacian@aal.com
Harry J.	Hayes	Wilkes-Barre	PA DA		hjhdesign@aol.com
		Wilkes-Barre Exton Uniontown	PA PA PA	2/28/2005 2/28/2005 2/28/2005	,

Vincent	Perlingi	West Chester	PA	6/30/2005	vjpearl@yahoo.com
Gilbert	Erhart	Cranberry TWP	PA	7/31/2005	gil@zoominternet.net
Jeffrey	Kitsko	Latrobe	PA	10/31/2005	jjkitsko@home.com
Marcus	Barboni	Norristown	PA	10/31/2005	ebarboni@comcast.net
Eldon	Geiman	Greencastle	PA	12/31/2005	Eldonjoy@yahoo.com
Robert	Seaman	Hazelton	PA	9/30/2006	seaman_robert@hotmail.com
Steve	Chudoff	Philadelphia	PA	12/31/2006	
Luis	Franceschi	Ponce	PR	3/31/2005	
Franklin David	Austin	Columbia	SC	6/30/2005	DavidAustin@sc.rr.com
Peter	Baskind	Germantown	TN	3/31/2005	pbaskind@midsouth.rr.com
Douglas E	Smith	Pleasant View	TN	7/31/2005	w9wi@w9wi.com
Tom	Bryant	Nashville	TN	12/31/2005	tjbdx@comcast.net
Pat	Dyer	San Antonio	TX	3/31/2005	pjdyer@swbell.net
Harry	Helms	Wimberley	TX	5/31/2005	ak6c@earthlink.net
Stephen H.	Ponder	Houston	TX	6/30/2005	n5wbishp@blkbox.com
Chip	Kelley	Dallas	TX	7/31/2005	txchipk@yahoo.com
Steven_C.	Wiseblood	Brownsville	TX	11/30/2005	stevenwisebl@hotmail.com
John	Callarman	Krum	TX	7/31/2006	johncallarman@msn.com
Joseph R.	Gragg	Palestine	TX	9/30/2006	
Barry E.	Shinall	Cedar Bluff	VA	2/28/2005	
James A	Brown_ Jr	Arlington	VA	3/31/2005	w5drp@aol.com
Tim	McVey	Stafford	VA	6/30/2005	etheroberalle@adelphia.net
Leslie	Prus	Alexandria	VA	12/31/2005	lesprus@cox.net
Edward R.	Cotton	Chesapeake	VA	3/31/2006	
William	Hein	Topsham	VT	8/31/2005	
Peter V.	Taylor	Tacoma	WA	3/31/2005	taytac@worldnet.att.net
Stanley E	Weisbeck	Spokane	WA	6/30/2005	stanw@rocketmail.com
William H	Lindsay III	Lynwood	WA	7/31/2005	william.h.lindsay@boeing.com
John	Jefferson	Auburn	WA	11/30/2005	jjjj@connectexpress.com>
Nathaniel	Ely	Madison	WI	2/28/2005	
Paul	Froehlich	Lodi	WI	2/28/2005	froehlichpl@wibamail.com
Robert	Steadman	Milwaukee	WI	2/28/2005	steady12@earthlink.net
William J.	Draeb	Kewaunee	WI	3/31/2005	
Bill	Dvorak	Madison	WI	3/31/2005	dxerak@aol.com
Todd	Sprinkmann	Adell	WI	3/31/2005	sprinkies@excel.net
Sheryl	Paszkiewicz	Manitowoc	WI	5/31/2005	
Edward	Ritchie_ Jr.	Milwaukee	WI	6/30/2005	erjr@worldnet.att.net
John M	Lentz	Muskego	WI	8/31/2005	dxer@wi.rr.com
Roderick C.	Jorgenson	Madison	WI	9/30/2005	
John J.	Rieger	S. Milwaukee	WI	11/30/2005	johnjrieger@webtv.net
David M.	Wurl	Marshfield	WI	12/31/2005	
John C.	Marx	Madison	WI	6/30/2006	johnmarx@chorus.net
James A	Ivil	Colliers	WV	4/30/2005	
Donald F.	Niles	Clarksburg	WV	11/30/2005	dniles@ma.rr.com
	1				

Note: This list is accurate as of December 20, 2004. Any new memberships or renewals received after that date are not included in this list. Some fields may be left blank if information about an individual is unknown. This list shows all members, VUD and eVUD. Total membership on December 1, 2004 was 268 members, with 16 receiving only the eVUD. Every effort has been made to keep email addresses current, but accuracy is not guaranteed.



# OUR MAN IN MONTREAL

This smiling mug belongs to none other than Charles Gauthier (St. Lambert, QC), otherwise known on WTFDA chat as Charly-QC. Why is Charly smiling? It's because a) he just hit the lottery or b) TV Es is up to ch13 again. And that would make anybody smile. ©

### THIS MONTH'S COVER

This month's cover comes to us in two ways. Originally, Jim Thomas sent me photos of old DX gas stations. And since DX is what we deal with on a daily basis, what better way to keep DX in our minds in the winter than to look at a picture of DX on the VUD cover.

Jim also included a URL (www.gassigns.org) in his email, so I went there and checked it out. I found the photo I was looking for. If you have some time, I'd recommend a visit.

This visit led to an email to the webmaster, John Cirillo, asking for permission to use the photo. John emailed back and said

the following: "Please credit me as the photographer and note that it is copyrighted by me. There is no fee except that I request a copy of the issue bearing this photo. As I used to do a lot of FM Dxing, maybe reading through the magazine could inspire me to pick up this hobby again. I still have an 8-foot Winegard and rotor sitting in the garage that I keep meaning to put back up since several moves ago. Who knows."

All I need to add is that a January VUD will be in the mail to John. And isn't it a small world!

## AH, SUMMER!



Ahhh! Summer! Green grass and warm temperatures and stacked channel 2 yagis in your backyard just waiting for some E skip. Well, maybe not in your backyard, but that's the way it was in Guy Falsetti's backyard in Lockport, NY, last summer. Guy is probably looking at this photo right now and thinking "Yes, I DO have grass under all that snow. Thanks for reminding me." And for us poor old Northerners looking out our windows and seeing nothing but white, it's just a reminder that spring and summer are surely on the way and the pool covers eventually *DO* come off!

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Mike Bugaj, use the WTFDA Mailing address listed Doug Smith, 1385 Old Clarksville Pike, Pleasant V Greg Coniglio, 11825 Genesee St., Alden, NY 140 Bruce Hall, 5 Stirton Ave., Brantford, ON N3T 1E2 Keith McGinnis, 6 Ritter Road, Hingham, MA 0204	iew, TN 37146-8098 04 43		mbugaj@snet.net w9wi@w9wi.com wgrc@rochester.rr.com dbruceaa@hotmail.com longwave@comcast.net
THE MAILBOX and all general club co			
Mike Bugaj at WTFDA, PO Box 501, Some SATELLITE NEWS	-		mbugaj@snet.net
George Jensen, 4604 Antana Ave., Baltim TV NEWS	ore, MD 20206-4220		scisatman@aol.com
Doug Smith, 1389 Old Clarksville Pike, Ple FM NEWS	easant View, TN 37146	6-8098	w9wi@w9wi.com
Adam Rivers, 37 Carlton Ave., Chicopee, <b>PHOTO NEWS</b>	MA 01020	redsox	dxer417@hotmail.com
Jeff Kruszka, 5024 S. Braxton Ave., Baton <b>EASTERN TV DX</b>		jkr	uszka@bellsouth.net
Matt Sittel, 15013 Eureux Circle, Bellevue, WESTERN TV DX			mcsittel@cox.net
Victor Frank, 12450 Skyline Blvd., Woodsi SOUTHERN FM	ide, CA 94062-4554		victor.frank@sri.com
John Zondlo, 4009 Driftwood Cir., Yukon, NORTHERN FM	OK 73099		sfm@fmdxweb.com
Keith McGinnis, 6 Ritter Rd., Hingham, MATV and FM STATISTICS	A 02043	lo	ngwave@comcast.net
Fred Nordquist, 7945 Boxford Road, Clay,	NY 13041	n	ordquis@twcny.rr.com
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