

Vhf-Uhf DIGEST

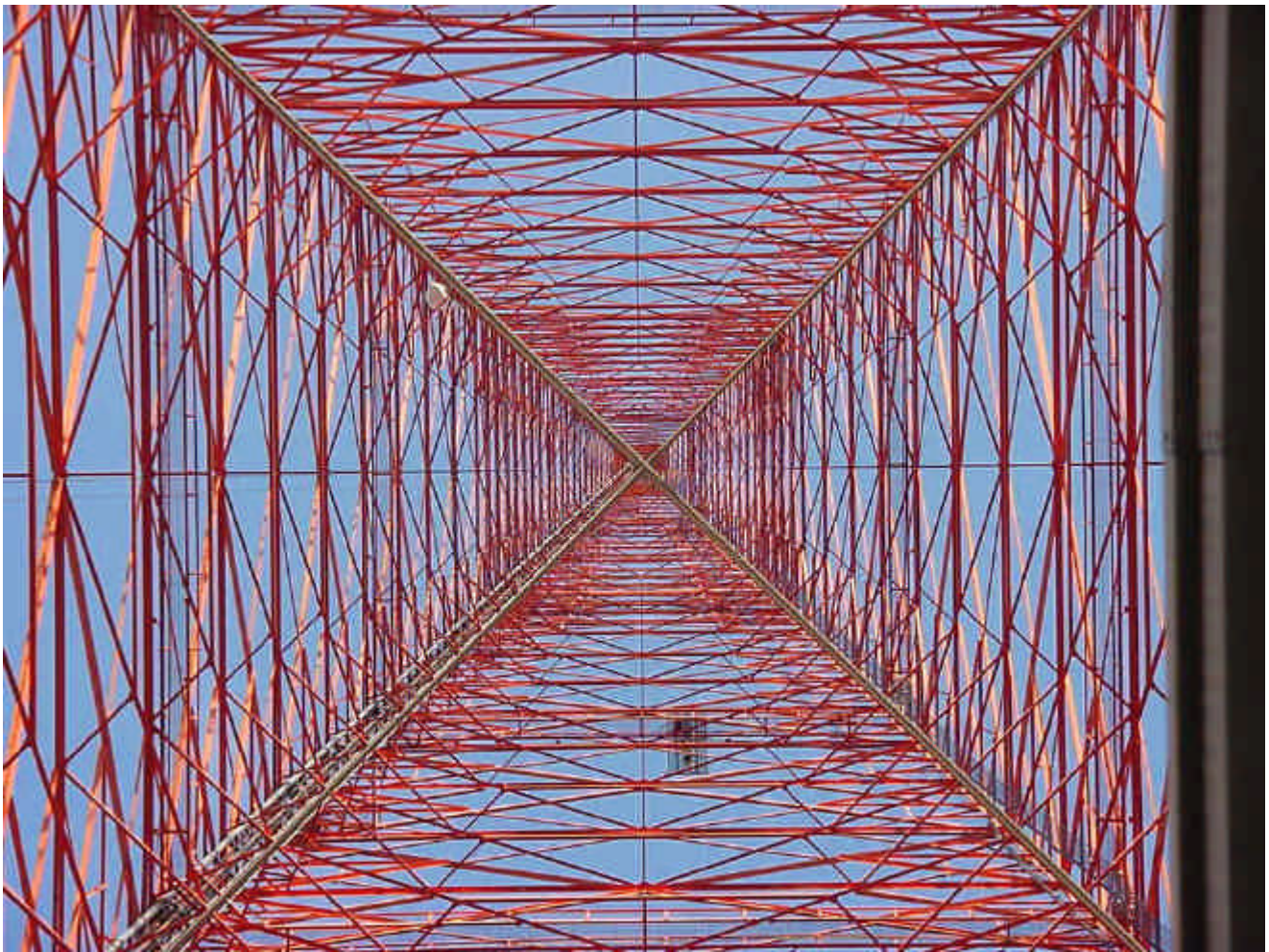
The Official Publication of the Worldwide TV-FM DX Association

MAY 2004

The Magazine for TV, FM and Weatherband DXers

What is This??

You may be surprised!



IT'S ALMOST TIME FOR SKIP!

- Tune up your tuner with narrow filters!
- Inspect your antenna, cable & connectors
- Upgrade your equipment where needed
- Try DTV DXing with a card or set top box



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, DAVE JANOWIAK AND MIKE BUGAJ.



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MAY 2004



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

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

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

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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 Dave Janowiak.



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And away we go for May! Everyone is on board for the May issue except Matt, who emailed that he has very little for ETV DX this time around. Considering the tropo that's been around the past few weeks, he just might have something for June. And if Es starts to kick in like it's supposed to, he *will* have something.

So, sit back and enjoy this issue of the VUD.

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The Mailbox

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

MAY 2004 DX WATCH

As we count down toward the 2004 DX season we've scanned the WTFDA reflector to find any traces of DX, whether Es or Tropo, and this is what we've been able to come up with thus far: March 30 saw some nice evening coastal tropo from New England to New Brunswick and Nova Scotia on FM at least. We haven't seen any TV DX reports from New England TV DXers yet. Rick Shaftan reported Es on channel 2 on April 6 (WPBT at 1000 and KJRH at 1230) and April 14 (KPRC at 0100). Jeff Kruszka had tropo to Florida on April 10 snagging some nice analog and DTV signals and on April 16 he noticed tropo deep into Texas. Check your favorite DX column for more info on these catches. Well, this isn't much, but it's a start. DX will come flooding in any day now. I just know it.

MEMBERS AND MORE

I don't know what happened but suddenly the membership department is busy! This month let's say hi to these new members: **James Dale** in Rosemount, MN, **Chris Cervantez** in Kewanee, IL, **Todd Sprinkman** from Adell, WI, **Leslie Prus** in Alexandria, VA and **Jason Hustedt** in New Brunswick, NJ. As I see it, these are a group of very intelligent folk joining the club at the start of the DX season to maximize their enjoyment of the hobby.

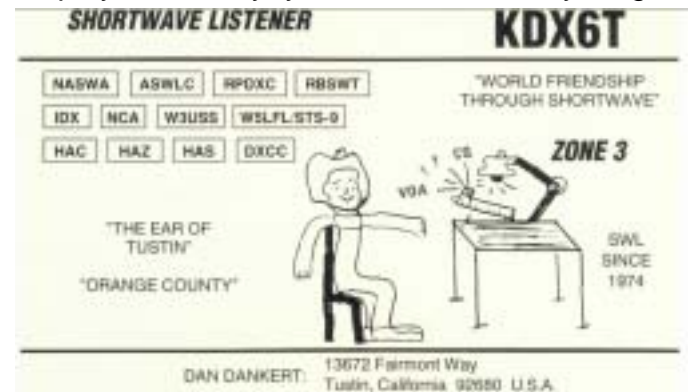
Now, the second group of very intelligent people who decided to stay another year and take advantage of all the club has to offer: **Bill Dvorak**(WI), **Frank Merrill**(IL), **Larry Weisberg**(NH), **Gus Mancuso**(MD), **Jason Koralja**(NJ), **Ben Cox**(IA), **Mike Roth**(CT), **Dan Dankert**(CA), **Luis Franceschi**(PR), **Pat Dyer**(TX), **Tim Katlic**(NY), **Andrew Mackenzie**(NY), **Joe Perge**(OH) and **Neil Griffin**(GA). Thanks to all of you for your support of the WTFDA!

I recently received a postcard from **Jesus Perez** down in Havana who writes: "Thank you very much for all your VUDs. I received your March issue the other day. I hope this coming season will be as good as 2003 was for DX. Have a nice day and all the best for all the club's members."

Bill Dvorak(WI) writes: "I cannot wait for the tropo to start picking up and the Es to start coming in. Let the season begin!" I second that.

Frank Merrill(IL) says "I'm gonna be a Dixer until they pry that remote from my dead, cold fingers. Hi – actually they won't pry the remote out of my cold, dead fingers...my DX equipment doesn't use remotes." Spoken like a true analog TV DXer.

Bruce Elving(MN) writes: "I just wanted to say that the VUD—it's print quality and everything else—looks excellent! I think you are dealing with a local printing firm that really knows how to turn out a good-looking publication. And your editors must be doing things right!" I agree, Bruce. These guys are the best! The printer has been great and just signed a lease on new Ricoh equipment which is used to print the VUD. Unfortunately he didn't lease the equipment from my employer, but hey, you can't have everything.



Dan Dankert (CA) sent in a couple of cards with his renewal. From now on Dan is officially recognized as "The ear of Tustin". And the next time we're out in OC we'll go out for Mexican food.

Here's part of an email received from **Chris Cervantez**. Chris is the creator of a new RDS website listing North American RDS stations (www.rdslist.com). He writes: "I'm 21 now, and I work at the group of small market radio stations in Kewanee, IL. I have DXed FM before with just the radio in my car and last year I had some pretty decent openings. Last June I was flipping through the radio and I was getting a very unusual amount of Spanish stations. I flipped around some more and landed on some unfamiliar English stations, which I could understand. I ended up receiving 92.5 KSJL from San Antonio, TX coming in almost perfectly. I also received

99.5 KISS and others from that area later in the day. I even told a friend that I was getting 99.5 KISS, and he turned his radio there and he was even getting it that day up near Chicago. He is in the local coverage area for 99.5 WUSN and could still get 99.5 from San Antonio. I thought that was pretty rad!

Living in a small town with not much to do, DXing is fun and exciting to me! Some of my co-workers think I'm crazy at times with my interest in this and RDS, but that's okay!!"

My only comment is that people, in particular relatives, tend to think we DXers are crazy anyway. It comes with the territory, I guess but as you say, that's okay. We'll put up with them.

And then we come to **Les Prus**(VA). I wasn't sure if I should count him as a new member or as a re-joiner after 20 years. Oh, what the heck, he's a new member. Les writes: "I feel like Rip Van Winkle, after an absence of 20 years from the hobby...I started TV-FM DXing back in late '69 in Manhattan, KS after BCBing and SWLing for years, when early one morning I chanced into something completely different - E-skip reception into New England, with WCBS-2, WTIC-3, etc. I joined WTFDA, became an active TV-FM DXer (central geographic location, no locals -- Omaha, Kansas City, and Wichita all about 100 miles distant -- even had a CM 7-ft parabolic UHF antenna), and as a student living at home, I had time to DX, and even edit TV-CCI in the VUD for a little while.

But then I got a real job with the US government in '77, moved to Warren, MI outside Detroit, then to Alexandria, VA near Washington DC in '79 (lost all my DX logs and VUDs in that move, but still have DX photos), but DXing out of apartments was unfulfilling, and my hobby went to the back burner, and eventually the deep freeze. It thawed out in the last year after I got an HDTV, put a temporary UHF antenna out in my back yard, and then browsed the WTFDA website and links to some excellent member sites, and finally saw some tropo (analog and digital) TV DX to Norfolk and Raleigh in February. And E-skip season is about to start... "



PLAYA SANTA LUCIA, CAMAGUEY, CUBA Courtesy of Jesus Perez

MILWAUKEE GTG 2004

The 11th annual Madison-Milwaukee Get-together for DXers and Radio Enthusiasts will be held on Saturday, August 21, 2004 beginning at 1 PM CDT. The event will take place at Sheridan Park, Cudahy WI, on the Lake Michigan shore at Layton Avenue in south suburban Milwaukee. This year's host is Tim Noonan. This all-band event is being held in the Milwaukee area for the first time following Tim and his family's move there last year. For more information, e-mail Tim at <<DXing2@aol.com>> or phone 414 762-2702.

The WTFDA TV STATION GUIDE

It's the most comprehensive listing of North American Television stations in print! Just \$23 US will get you one. Mail your check or money order today. Make it payable to Dave Janowiak and mail it to John Ebeling, 9209 Vincent Avenue S., Bloomington, MN 55431-2157. Get your WTFDA TV Station Guide **now** before it goes out of print!



****ONLY SIX LEFT!****

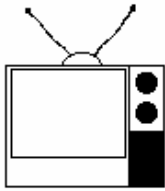
Speaking of TV Station Guides, it has been a while since the issue above was published. Maybe, if all goes well, we might have a new edition available for you by the end of 2004. This, of course, will be the 2005 TV Station Guide. But for now, the 2004 DX season, the edition above should be a great help to anyone without a guide.



LAST BUT NOT...

Well, there's a little space left so here's the set up on **Guy Falsetti's** house in NY.

Membership is running at 275 members as of the first of April. We've had 12 orders for the VUDs on CD. The grass is green. The days are warm. Life is good. CU next month!



TV News

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 37146-8098
w9wi@w9wi.com
<http://www.w9wi.com>

May 2004

Abbreviations:

| | | | |
|-----|--|-----|---|
| AF | Applied For (a new station) | PG | Power change granted |
| Aux | Auxiliary (backup) transmitter | PR | Power change requested |
| CC | Callsign change | QC | Channel ("frequency") change on the air |
| CL | City-of-license change | QG | Channel change granted |
| DE | License/permit deleted | QR | Channel change requested |
| FC | Programming ("format") change | RE | Reinstated (previously-dismissed app.) |
| FTP | Failure to Prosecute | ROA | Request of Applicant |
| GA | Granted amendment (to table of channel allotments) | SI | Off the air ("silent") |
| LC | License to Cover | 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 |
| PC | Power (and/or tower height) change on the air | | |

News:

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

Alabama:

Birmingham 10 **WBIQ** **PC>426m, 33-29-04/86-48-25**

Dozier 2 **WDIQ** **PC>226m**

Louisville 43 **WGIQ** **PC<4180kw/262m**

Opelika 66 **WSWS-TV** **PR>2050kw/556m, 32-19-16/84-47-28**

Alaska:

Seward 42 K42GP NS 150kw, 60-07-16/149-25-25

Arizona:

Bullhead 49 **K49HZ** NS 300w, 35-02-06/114-22-09 (Daystar)

Casa Grande 28 K27HF QR from ch. 27, 12.32kw

Phoenix 10 **KSAZ-TV** **AF 105kw/500, 33-20-01/112-03-32 (aux)**

Phoenix 43 K43GV PR<9kw, 33-20-01/112-03-44

Phoenix 45 **KUTP** **AF 934kw/502, 33-20-03/112-03-46 (aux)**

Tusayan 28 K28IM NS 1kw, 35-59-30/112-07-36

California:

Avalon 54 **KAZA-TV** **NW 2323kw/934m (aux)**

Bakersfield 19 KAZB-LP FC to KBFX-58 (Fox)

Bakersfield 27 K27HY NS 10kw, 35-18-23/118-47-58 but rescinded

Bakersfield 34 KJOI-LP PR>150kw, 35-25-47/118-44-56; FC to KVPT-18 (PBS)

Banning 45 K45IC NS 300w, 34-03-46/116-53-34

Banning 55 K55JW NS 300w, 34-03-46/116-53-04; PR>8.5kw

Caliente 43 NEW-LP AF 22kw, 35-15-21/118-37-39 reinstated

Chico 2 K02OA PG>3kw, 39-57-29/121-42-49

Chico 59 K59IG NS 500w, 39-45-18/121-44-13; PR>150kw, 39-12-20/121-49-10

El Centro 48 **KECY-DT** **PR<950kw**

Fresno 3 K03HK PR>1.9kw

Fresno 12 K12OZ PR>1.13kw

Fresno 38 KHSC-LP QC from ch. 66, 40kw

Glen Arbor 26 K26HN NS 1w, 37-04-03/122-04-21; PR>20kw, 37-06-40/

| | | | | | | | |
|-------------------|-----------|-----------------|---|---------------------|-----------|-----------------|---|
| Joshua Tree | 17 | K57EV | 121-50-29 QC from ch | Thomasville | 14 | K14LQ | NW 90w, 39-21-12/ 106-41-00 |
| Needles | 31 | K19BR | QR from ch. 19, 1.06kw | Vallecito | 24 | K24GI | NS 206w, 37-22-00/ 107-31-30 (KASA-2) |
| Oakland | 56 | KTVU-DT | PG>1000kw/ 433m | Woody Creek | 39, 44 | K39HE, K44GQ | PR<60w, 39-17-37/ 106-56-53 |
| Palm Springs | 29 | K29GA | NS 60w, 33-49-00/ 116-43-10 | Connecticut: | | | |
| Redding | 42 | K42GQ | NS 200w, 40-39-15/ 122-44-20 | Darien | 35 | WNYZ-LP | QR from ch. 33, 25kw, 40-44-50/ 73-56-38 in New York City; then QR to ch 49 |
| Redding | 46 | K46HI | NW 3kw, 40-39-16/ 122-31-13 | Florida: | | | |
| Redlands | 45 | KLAU-LP | FC | Destin | 48 | 960405XK | AF 1000kw/318 30-59-52/ 86-43-13 (DTV) |
| Ridgecrest | 45 | K69AS | QC from ch. 69, 2.38kw | Fort Myers | 14 | WTPH-LP | PR>127kw |
| Sacramento | 21 | KMAX-DT | PG>850kw | Gainesville | 8 | WNFT-LP | PR>3kw, 29-38-08/ 82-19-35 |
| Sacramento | 47 | KSTV-LP | QR from ch. 60, 50kw | Key West | 49 | WKIZ-LP | PG>2.2kw, 24-34-04/ 81-44-55 |
| Salinas | 3 | KMMD-CA | PR>540w | Lake City | 15 | WJXE-LP | XR 30-16-32/ 82-04-46 |
| San Francisco | 28 | KFTL-CA | PR>90kw, 37-41-15/ 122-26-01 | Lake City | 33 | W39BZ | XR 30-15-28/ 82-10-48 |
| Santa Barbara | 8 | K08MP | FC | Miami | 21 | WDLP-CA | PG>126.5kw, 25-58-15/ 80-12-32; CL from Pompano Beach |
| Santa Barbara | 28 | K28GY | Almavision QG from K55AP, 12.9kw | Miami | 56 | WEYS-LP | PC>76kw, 25-58-15/ 80-12-32; CL from Rock Hbr. |
| Susanville | 36 | K65CC | QR from ch. 65, 1.17kw | Orlando | 38 | WTWD-LP | QR from ch. 16, 87kw, 28-25-22/ 81-27-35 |
| Susanville | 42 | K67BY | QR from ch. 67, 1.12kw | Panama City | 8 | NEW-LP | AF 3kw, 30-12-13/ 85-36-57 reinstated |
| Ukiah | 44 | K44HI | NS 1.19kw, 39-07-03/ 123-05-35 | Pensacola | 3 | WEAR-TV | PC>575m, 30-36-45/ 87-38-43 |
| Ukiah | 19 | KDSL-CA | CC from K19FN | Georgia: | | | |
| Colorado: | | | | Atlanta | 26 | WANX-LP | PR>51.8kw |
| Basalt | 36 | K36GX | PR<80w | Atlanta | 17 | WTBS | NS 105kw/332, 33-48-26/ 84-20-22 (aux) |
| Crested Butte | 14 | K14LY | NS 10kw, 38-54-08/ 106-58-24 | Monroe | 44 | WHSG-DT | NW 700kw/303, 33-44-41/ 84-21-36 |
| Estes Park | 61 | K61AA | PR>150kw, 40-15-56/ 105-33-37 | Savannah | 32 | WHDS-LP | FC; sold to WGGS-16 (rel) |
| Estes Park | 69 | K35DS | QR from ch. 35, 150kw, 40-15-56/ 105-33-37 | Hawaii: | | | |
| Glen Haven | 58 | K08IS | QR from ch. 8, 150kw, 40-15-56/ 105-33-37 | | | | |
| Glen Haven | 64 | K10JY | QR from ch. 10, 150kw, 40-15-56/ 105-33-37 | | | | |
| Holyoke | 29 | K29GI | NS 3.714kw, 40-30-37/ 102-21-33 | | | | |
| Pagosa Springs | 48 | K68BI | QC from ch. 68; CL from Sunetha | | | | |
| Redstone | 9, 11 | K09XN, K11VC | XR 39-14-20/ 107-13-02 | | | | |
| Steamboat Springs | 16 | K16FX | NS 150kw, 40-27-43/ | | | | |

| | | | | | |
|-----------------------------|----------------------------|--|------------------------------|-------------------|--|
| Hilo | 49 K49IA | NS 5kw, 19-35-00/ 155-07-10 (Daystar) | Dodge City | 21 KDCK-DT | (by KOOD-9) NW 8.42kw/99 (replaces analog st.) PG>8.8kw |
| Honolulu | 2 KHON-TV | PC<50kw | Wichita | 59 K59DA | |
| Honolulu | 9 KGMB | PC<105kw/- 12 | <u>Kentucky:</u> | | |
| Honolulu | 46 KHLU-LP | QC from ch. 60, 11.93kw | Jamestown | 2 NEW-LP | AF 350w, 37-09-29/ 85-09-50 reinstated |
| Lihue | 34 NEW-LP | AF dismissed (TBN) | Madisonville | 20 WAZE-DT | PR>258m, 37-59-01/ 87-16-13 |
| <u>Idaho:</u> | | | <u>Louisiana:</u> | | |
| Bonniers Ferry | 33 K67DI | QR from ch. 67, 1.1kw, 48-36-37/ 116-15-24 | De Ridder | 39 NEW-LP | AF 80kw, 30-52-43/ 93-17-25 reinstated |
| Rupert Sun Valley | 50 NEW-LP 5 KIDA | AF dismissed PR>100kw/57 2 43-26-47/ 114-12-52 | Monroe | 22 KMNO-LP | PR>150kw |
| Twin Falls | 50 NEW-LP | AF dismissed | New Orleans | 26 WGNO | PR>3140kw |
| <u>Illinois:</u> | | | New Orleans | 29 WVUE-DT | NW 33.7kw/275 |
| Chicago | 19 WGN-DT | NW 645kw/453, 41-52-44/ 87-38-10 | New Orleans | 49 WPXL | PC>288m |
| Freeport | 41 WIFR-DT | PG 100kw/176 | New Orleans | 50 WPXL-DT | NW 1000kw/ 272m |
| Rochelle | 33 W33CH | NS 1kw, 41-55-11/ 89-07-04; PR>150kw, 41-52-33/ 88-45-16 | <u>Maryland:</u> | | |
| Rochelle | 40 W40BW | PG<25kw, 42-17-24/ 89-09-49 | Frederick | 62 WFPT | PR<2500kw/ 164m, 39-15-37/ 77-18-38 |
| Rochelle | 48 W48DH | NS 150w, 41-55-11/ 89-07-04; PR>150kw, 42-04-28/ 88-49-24 | Frederick | 28 WFPT-DT | PR 30kw/164m, 39-15-37/ 77-18-38 |
| Rochelle | 61 W61DT | PG>150kw, 41-52-33/ 88-45-16; PR<22kw, 41-48-27/ 88-16-06 | Salisbury | 24 W24CW | NS 4kw, 38-24-26/ 75-35-57; PR>150kw, 38-40-00/ 75-35-00 |
| <u>Indiana:</u> | | | Salisbury | 51 W51DR | NS 4kw, 38-24-26/ 75-35-57; PR>150kw, 38-17-05/ 75-39-55 |
| Bloomington | 27 WIPX-DT | NW 165kw/310 | Salisbury | 69 W69EH | PR>150kw, 38-37-28/ 75-53-20 |
| Fort Wayne | 31 WANE-DT | QR from ch. 4, 1000kw/242m | <u>Massachusetts:</u> | | |
| Indianapolis | 46 WTHR-DT | PC>1000kw/ 265m | Vineyard | 40 WDPX-DT | NW 300kw/153 |
| South Bend | 69 WAAT-LP | CC from WRDY-LP | <u>Michigan:</u> | | |
| Terre Haute | 38 WBAK-TV | XC 39-13-55/ 87-23-41 | Lansing | 53 WLAJ | PC<1410kw |
| Terre Haute | 36 WTWO-DT | PR>1000kw/ 290m | Marquette | 33 WNMU-DT | NW 50kw/171, 46-30-52/ 87-29-07 |
| <u>Iowa:</u> | | | Pinconning | 69 WTCF-LP | CC fm W69DW |
| Cedar Rapids | 52 KCRG-DT | NW 350kw/582 | Traverse City | 15 W15BM | PR>68.5kw, 44-45-37/ 85-40-58 |
| Storm Lake | 18 K40CO | QR from ch. 40, 15kw | <u>Minnesota:</u> | | |
| <u>Kansas:</u> | | | Hibbing | 15 K31HE | QR from ch. 31, 16.1kw |
| Colby | 19 NEW-DT | GA, non- commercial | Little Falls | 18 K18GF | PR>1.5kw, 45-56-58/ 94-17-45 |
| | | | Rochester | 12 K12PW | NS 500w, 43-55-03/ |

| | | | | | | | |
|---------------------|-----------|----------------|--|--------------------------------|-----------|----------------|--|
| St. James | 32 | K32GX | 92-24-17 (Daystar) NS 100w, 44-06-28/ 94-35-55 | Mina-Luning | 45 | K45HV | NS 378w, 38-23-40/ 118-03-00; already on |
| Worthington | 22 | K15EB | QR from ch. 15, 12.3kw | Pahrump | 67 | NEW-LP | AF 4.8kw, 35-58-04/ 115-30-06 reinstated |
| Mississippi: | | | | New Hampshire: | | | |
| Booneville | 34 | W34DM | QG from W53AF, 23.9kw | Waterville Valley | 28 | W55CZ | QR from ch. 55, 6kw, 43- 23-52/ 71-33- 03 |
| Greenwood | 48 | W48DI | NS 8kw, 33-31-29/ 90-09-52 (TBN) | New Jersey: | | | |
| Meridian | 46 | W46CL | PG>138.5kw | Cranford | 22 | WMBQ-CA | CC from WLBX-LP |
| Missouri: | | | | New Mexico: | | | |
| Kansas City | 62 | KSMO-TV | PC<1795kw/ 341m, 39-05-26/ 94-28-18 | Arrey & Derry | 34 | K67BG | QC from ch. 67, 650w; CL from Caballo |
| Kansas City | 51 | KPXE-DT | NW 1000kw/ 339m | Carrizozo | 46 | K46HU | NS 702w, 33-25-46/ 105-59-17 (KASA-2) |
| Kirkville | 40 | NEW-LP | AF dismissed ROA | Carrizozo | 48 | K57CF | QC from ch. 57, 4.21kw |
| Macon | 35 | K35HF | NS 2kw, 39-44-52/ 92-28-08 | Farmington | 32 | K32GN | NS 10kw, 36-43-25/ 108-13-01 (TBN) |
| Rolla | 7 | K07SD | PC>3kw | Lordsburg | 31 | K31HQ | NS 616w, 32-34-57/ 108-25-26 (KASA-2) |
| St. Joseph | 53 | KQTV-DT | PR>1000kw/ 247m | Montoya Newkirk Portales | & 17 | K55CV | QC from ch. 55, 1.2kw |
| St. Louis | 40 | KUMO-LP | CC from K40FF | Portales | 14 | K58FW | QC from ch. 58, 4.4kw, 34-15-08/ 103-14-21 |
| Montana: | | | | Red River | 15 | K03CZ | QR from ch. 3, 40w |
| Big Arm | 14 | K05EE | QC from ch. 5, 250w, 47-40-39/ 114-08-30 | Roswell | 27 | KRPV | PG<397kw/28 , 33-21-44/ 104-31-25; PR>472kw/82, 33-23-50/ 104-22-34 |
| Deer Lodge | 47 | K47IY | NS 50kw, 46-22-57/ 112-48-04 | Santa Fe | 9 | KNMD-DT | AF 6.5kw/ 1247m, 35-12-45/ 106-26-58 (DTV); PR<3.42kw/ 1240m |
| Kalispell | 47 | NEW-LP | AF dismissed | Santa Rosa | 38 | K62CU | QC from ch. 62, 630w |
| Wolf Point | 29 | K29FS | NW 840w, 48-02-06/ 105-31-12 | Socorro | 44 | K44HJ | NS 288w, 34-04-18/ 106-57-45 (KASA-2) |
| Wolf Point | 61 | K61CP | PR<1.07kw, 48-02-06/ 105-31-12 | Truth or Consequence s | 25 | K54CC | QC from ch. 54 |
| Nebraska: | | | | New York: | | | |
| Norfolk | 19 | KXNE-TV | PG<1683kw/ 347m; already on | Corning | 30 | WSKA-DT | AF 50kw/242m |
| Norfolk | 62 | K62FZ | NS 10kw, 42-01-52/ 97-21-28 | Ellenburg | 49 | W49BI | PR>11kw |
| North Platte | 9 | KPNE-TV | PC>334m, 41-01-22/ 101-09-14 | Elmira | 30 | W30AA | FC to WXXA (Fox) |
| North Platte | 47 | K47IX | NS 5kw, 41-03-37/ 100-45-53 | | | | |
| Omaha | 7 | KETV | PR>419m | | | | |
| Omaha | 20 | KETV-DT | PR>396m | | | | |
| Scottsbluff | 4 | KDUH-TV | PC<446m, 41-50-28/ 103-04-27 | | | | |
| Nevada: | | | | | | | |
| Duckwater | 15 | K55CR | QR from ch. 55 | | | | |
| Duckwater | 29 | K66BU | QR from ch. 66 | | | | |

| | | | |
|-------------------------|-------------------|---|------------------|
| New York | 11 WPIX | AF | 630w/219m |
| | | 25.2kw/300 | |
| | | (aux) | |
| Saranac Lake | 40 NEW | GA from ch. 61 | |
| Schenectady | 45 WEWB-TV | PC>413m, 42-37-31/74-00-38 | |
| Watertown | 34 WBQZ-LP | PG>900w, 43-58-54/75-56-42 | |
| North Carolina: | | | |
| Cherokee | 33 WUNF-1 | AF 2.7kw, 38-28-24/83-19-22 | |
| Goldsboro | 43 WHFL-LP | QR from ch. 56; PR>100kw | |
| Wilmington Ohio: | 3 WWAY | PC<565m | |
| Dayton | 40 WRCX-LP | XR 39-43-28/84-15-18 | |
| Portsmouth | 43 WPBO-DT | NW | |
| | | 50kw/382m | |
| Springfield | 20 W47BC | QR from ch. 47, 8.7kw, 39-57-44/83-51-49 | |
| Oklahoma: | | | |
| Clinton | 19 K19FS | NS 17kw, 35-31-25/98-58-55 (Daystar) | |
| Oregon: | | | |
| Glide | 24 K68BG | QC from ch. 68, 790w, 43-22-18/123-03-48 | |
| Hood River | 16 K16GA | NS 2.5kw, 45-44-45/121-34-51 (KWBP-32) | |
| Lincoln City | 50 K59HY | NS 23.3kw, 44-45-23/124-02-49 (KWBP-32) | |
| Nehalem & Rockaway | 21 K21GY | NS 2.5kw, 45-44-27/123-56-10 (KWBP-32) | |
| Portland | 8 KGW | NW | |
| | | 180kw/406 | |
| | | (aux); PC<524 | |
| | | (main) | |
| Sunriver | 23 K62AJ | QC from ch. 62 | |
| The Dalles | 35 K35HE | NS 24.5kw, 45-42-43/121-06-58 (KWBP-32) | |
| Pennsylvania: | | | |
| Philadelphia | 38 WPHA-LP | QG from ch. 63, 40kw, 40-02-19/75-14-14 | |
| Philadelphia | 34 WYBE-DT | NW | |
| | | 500kw/343, 40-02-30/75-14-11 | |
| Reading | 25 WTVE-DT | NW | |
| South Carolina: | | | |
| N. Charleston | 42 WJNI-LP | PG>150kw | |
| South Dakota: | | | |
| Watertown | 45 K45ID | NS 11kw, 44-52-16/97-06-34 (KDLT-46) | |
| Tennessee: | | | |
| Acton | 69 W69DB | XR 34-54-36/88-31-17 | |
| Carthage | 25 W25DG | NS 10kw, 36-15-40/85-57-01 | |
| Cookeville | 36 WNPX-DT | PC<429m, 36-16-05/86-47-45 | |
| Jackson | 42 W42CV | NS 80kw, 35-39-50/88-47-23 (Daystar) | |
| Knoxville | 17 WKOP-DT | NW | |
| | | 100kw/551, 35-59-44/83-57-23 | |
| Knoxville | 32 WEEE-LP | PG>150kw, 36-00-13/83-56-34 | |
| Lawrencebur | 10 WLLP-CA | CC fm W10BVG | |
| Nashville | 30 WUXP-TV | PR>432m | |
| Texas: | | | |
| Abilene | 18 KJTN-LP | CC fm K18GP | |
| Amarillo | 8 KACV-DT | NW | |
| | | 5kw/519m, 35-22-30/101-52-56 | |
| Amarillo | 13 K13YS | NS 100w, 35-06-00/101-48-55 | |
| Amarillo | 41 KEYU-LP | PR<123kw, 35-20-33/101-49-20 | |
| Amarillo | 47 KAMT-LP | QG from ch. 31, 50kw, 35-18-55/101-50-03 CX; QR from ch.31, 150kw, 35-18-53/101-50-47 dismissed | |
| Amarillo | 69 K69IH | PR>150kw, 35-18-53/101-50-47 dismissed | |
| Amherst | 48 NEW-LP | AF 10kw, 33-58-18/102-19-59 reinstated | |
| Beaumont | 13 NEW-LP | AF 500w, 30-06-51/94-01-20 reinstated | |
| Big Spring | 33 KWAB-DT | PR<174kw/83 m32-16-55/101-29-34; already granted | |

| | | | | | | |
|--------------------|-------------------|---|----------------------|-----------|----------------|---|
| Borger | 31 KEYU-DT | CL fm Elk City | San Antonio | 44 | KGMM-CA | QC from ch. 58, 51kw, 29-17-39/98-15-30 |
| Conroe | 5 KPXB-DT | NW 9.5kw/555, 29-34-15/95-30-37 | Smith Hill | 13 | NEW-LP | AF 150w, 33-30-24/94-12-26 |
| Corpus Christi | 19 | K19FT | Somerville | 7 | K35DI | reinstated QR from ch. 35, 3kw, 29-54-30/ 95-53-30 |
| Crockett | 45 | NEW-LP | Texarkana | 5 | NEW-LP | AF 500w, 33-35-06/94-02-28 |
| De Leon | 38 | NEW-LP | Texarkana | 66 | NEW-LP | reinstated AF 150kw, 33-35-06/94-02-28 |
| Denison | 7 | NEW-LP | Tulia | 36 | K36CC | reinstated PC<930w, 34-32-12/101-44-25; CL from Kress/Plainview |
| El Paso | 14 KFOX-TV | PR>420kw/602 | Tulia | 55, | K55JV, | NW 890w, 34-32-12/101-44-25 |
| Galveston | 47 KTMD | QC from ch 48, 5000kw/597m, 29-34-15/95-30-37 | | 57 | K57JK | 34-32-12/101-44-25 |
| Galveston | 48 KTMD-DT | NW 230kw/597, 29-34-15/95-30-37 | Uvalde | 42 | K59EY | QR from ch. 59, 9.99kw, 29-22-08/99-20-58 |
| Greenville | 31 | KNOK-LP | Victoria | 38 | K38IG | NS 250w, 28-46-04/96-59-12 |
| | | PR>130kw, 33-16-31/96-22-02 dismissed; QR to ch. 22, 140kw, 32-55-38/96-24-01 | Wichita Falls | 28 | KFDX-DT | PR>1000kw/305m |
| Houston | 33 | KBPX-LP | Wolfforth | 22 | KUPT | PR>142kw/256 |
| | | PR>150kw, 30-32-06/95-01-04 | Utah: | | | |
| Kress | 25 | K25CP | Alton | 38 | K36FN | QR from ch. 36 |
| | | PC<960w, 34-32-12/101-44-25 | Duchesne | 34 | K06MT | QC from ch. 6, 220w |
| Louise | 50 | K50HN | Duchesne | 40 | K40HS | NS 70w, 40-09-17/110-23-29 (KUWB-16) |
| | | PR>150kw, 29-12-07/96-14-57 | Enterprise | 34 | K55CH | QC from ch. 55, 380w |
| McCamey-Rankin | 50 | K50ED | Fremont | 10 | K10OW | NS 10w, 38-25-58/111-37-57; already on |
| Mullin | 31 | K31HP | Fruitland | 29 | K59EL | QC from ch. 59, 560w |
| | | XR 31-12-42/102-16-14 | Helper | 33, | K33HS, | NS 1.73kw, 39-41-06/110-50-29 |
| Paris | 13 | NEW-LP | | 36 | K36HE | 110-50-29 |
| | | AF 1kw, 33-38-46/95-31-35 | Henefer | & 31, | K31HR, | NS 260w, 40-58-40/111-26-08 |
| | | reinstated | Echo | 38 | K38HW | 111-26-08 |
| Plainview | 18 | K18HC | Huntsville | 41 | K41IL | NS 10kw, 41-20-25/111-48-50 |
| | | NS 1kw, 34-12-42/101-42-44 (TBN) | Logan | 10 | K10OX | NS 3kw, 41-53-50/111-57-39 |
| Port Arthur | 40 KBTB-DT | PR>1000kw/360m | Myton | 14 | K14LW | NS 6.56kw, |
| Port Arthur | 28 | K51HL | | | | |
| | | QR from ch. 51, 120kw, 30-10-17/94-12-57 | | | | |
| San Antonio | 15 | KEVI-LP | | | | |
| | | PR>150kw, 29-41-06/98-26-59 | | | | |

40-21-40/
110-47-20
(KUWB-16)
QC from chs.
63, 69, 67, 65,
& 61

Myton 19, K63CB,
21, K69DE,
25, K67CK,
27, K65CL,
41 K61CF

Roosevelt 47 K23DR QC from ch.
23

Roosevelt 48, K53BB,
50 K55DG QC from chs.
53/55, 1.12kw

Salt Lake City 66 K66FN PC>38kw,
40-39-35/
112-12-02

Samak 38 K38HV NW 140w,
40-37-56/
111-15-30

Santa Clara 36 K57BG QC from ch.
57, 740w

St. George 33 K59AG QC from ch.
59, 740w; CL
from
Bloomington

Vermont:

Newport 36 W36CP PR>24.9kw,
44-21-18/
72-01-17

St. Albans 41 W52CD QR from ch. 52,
30kw

Windsor 21 W22CS QR from ch. 22,
6.65kw

Virginia:

Charlottesville 9 W09CP NS 3kw,
38-16-30/
78-27-37

Charlottesville 13 NEW-LP AF 1.5kw,
38-16-30/
78-27-37
reinstated

Charlottesville 16 WVAW-LP QR from ch.
64, 150kw

**Charlottesville 19 860410KP PR<1000kw/
326m; CBS //
WHSV-3**

Mt. Olive 6 NEW-LP AF dismissed

Washington:

Yakima 45 KDHW-LP XR 46-31-57/
120-29-45

West Virginia:

Charleston 11 WVAH-TV PR
42.4kw/524,
38-24-28/
81-54-13

Clarksburg 21 W12CH NS 10kw,
39-16-32/
80-17-43
(WKBS-47)

Wisconsin:

**Fond du Lac 44 WMMF-DT PR>700kw/19
5, 43-26-20/
88-31-29**

**Fond du Lac 68 WMMF-TV PR>4986kw/
195m,
43-26-20/
88-31-29**

Madison 19 WMTV-DT PG>56kw/387

Wausau 6 W06CA NS 50w,
44-55-19/
89-42-10

(WFXS-55)

Wyoming:

Rock Springs 45 K45IA NS 1kw,
41-26-05/
109-07-00
(KUWB-16)

Sheridan 26 K26BE PG<2.97kw

U.S.

Possessions

:



Guam:

Agana 5 KGTF-DT PR>8.26kw/75

Agana 12 KGTF PR>90m



Puerto Rico:

**Aguadilla 34 WELU-DT PG<605m,
18-09-06/
66-59-23**

Bayamon-San Juan 44 W21AR QR from ch.
21

**Ponce 19 WKPV-DT PR<700kw/26
9**



U.S. Virgin Islands:

**Charlotte 43 960718KQ PR<1.4kw/28
Amalie m 18-20-43/
64-55-45**

**Charlotte 43 960718KQ- AF
Amalie DT 1.4kw/28m,
18-20-43/
64-55-45**

Thanks to Jeff Kruszka, and Dennis Smith for information appearing elsewhere in this month's column.

Almavision is a Hispanic religious network. Dennis says their ID also includes several Midwestern stations but he hasn't been able to write down which ones. With KHSC-LP's move from channel 66 to 38, they've also corrected their ID. They had been signing "KHST".

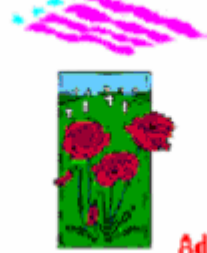
WSKA-30 and "960718KQ"-43 already have analog permits for the same channels.

THIS MONTH'S COVER

This month's cover features a photo supplied from WTFDA member Mike DeRoo. Mike works as a studio and transmitter engineer at KCTV (5) in Kansas City. The photo is that of the KCTV 1000 foot, self supporting tower, taken from directly under the tower. It's a view that most of us never get to see. Thanks for the photo, Mike, and here's an invitation to all of you to submit anything you see that you find interesting!



Remembering those that
have served their country



FM News

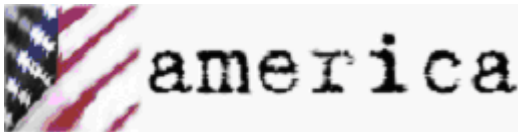
MAY 04

email : Redsoxtxer417@hotmail.com
Adam Rivers - 37 Carlton Ave. - Chicopee, MA 01020

ABBREVIATIONS:

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

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



ALABAMA:

Birmingham: WBPT 106.9, req CL change to Homewood
Brewton: WELJ 90.9, PC>100kw
Dothan: WAGF 101.3, FC to black gospel
Fayette: WTXT 98.1, AF 600m/71m, 33-10-30/87-33-18 (aux)
Fort Rucker: WJRL-FM 103.9, PA from Ozark, class C3
Gurley: WXQW 94.1, PR 510w/337m, 34-40-49/86-30-55, CL from Meridianville
Headland: WZND 105.3, CC to WDBT; SC to "The Beat"
Lanett: WRNK-LP 96.3, PG>4m, 32-52-26/85-11-32
Littleville: WMXV 103.5, GA from Russellville
Marion: WNPT-FM 102.9, GA from Linden
Meridianville: WLAY-FM 100.3, PR<8.5kw/299m, 34-47-36/86-37-51; CL from Tuscumbia
Montgomery: WBAM 98.9, FC to country "Bama Country"
Slocomb: WXUS 100.5, PA from class A, Fort Rucker
Stevenson: WMXN-FM 101.7, PG 2.3kw/165m, 34-41-02/85-48-04
Trussville: WOEN 103.7, PR<100kw/285m, 33-26-38/86-52-47; CL from Gadsden
Tuscaloosa: WUAL-FM 91.5, AF 10kw/137m (aux)
Winfield: WKXM-FM 97.7, PG>3.9kw/123m

ALASKA:

Anchorage: KEAG 97.3, PG 55kw/4m, 61-07-12/149-53-43
Anchorage: KAKL 88.5, signs on with K-Love contemporary Christian
Fairbanks: KYSC 96.9, PR>5.8kw

ARIZONA:

Bagdad: New 101.7, GA from 97.1, Class C3
Bagdad: KRCL 103.1, RA with standards "Legends 103.1"
Chino Valley: KFPB 103.9, GA to 94.3
Dewey-Humboldt: KVNA 97.5, GA from Flagstaff, SC to "Sunny 97"
Dolan Springs: KOAS 105.7, PR 100kw-H/537m, 35-50-11/114-19-08
Globe: KRXS-FM 94.1, GA from 97.3/class C2



Lake Havasu City: KNLB 91.1, PG>8kw
Marana: KOHT 98.3, PG>58m, 23-26-31/111-05-28
Safford: KXKQ 94.3, GA from 94.1/class C2



ARKANSAS:

Arkadelphia: KDEL-FM 100.9, PG 25kw/100m, 34-01-58/92-54-44
Dardanelle: KCJC 102.3, PG>100kw/271m, 35-40-02/93-19-06
Horseshoe Bend: KKIK 106.5, calls for new station
Hot Springs Village: KVRE 92.9, NS 6kw/91m (aux)
Jonesboro: KFLO-LP 102.9, new 10w/32m, 35-49-04/90-42-36
Rogers: KHEL-LP 97.1, calls for new station

CALIFORNIA:

Alameda: KPTI 92.7, FC to R&B "Power 92" (San Francisco)
Arcata: KXGO 93.1, PR>508m
Bakersfield: KKBB 99.3, PC 10kw/119m, 35-27-33/119-01-33
Chowchilla: KNTQ 93.3, PG>4.6kw/114m, 36-59-14/120-12-21
Dos Palos: KSKD-FM 95.9, PR 6kw/97m; CL from Livingston
Eureka: KKDS-LP 97.9, calls for new station
Guerneville: KGGV-LP 95.1, calls for new station
Lodi: KSTG-LP 101.5, PG<13m, 38-07-08/121-15-39
Lompoc: KBOX 104.1, PR 3.85kw/267m, 34-43-50/120-26-01
Lompoc: KRQK 100.3, PR>267m



Los Angeles: KIIS-FM 102.7, NW 1kw/897m (aux)
Ludlow: KWHZ 100.1, now simulcasting KHDR 96.9
Merced: KHPO 106.3, PR 4kw/123m, 37-25-35/120-26-25
Orcutt: KPAT 95.7, PR 3kw/258m
Placerville: KZSA 92.1, call change to KRLL
Planada: KHTN 104.7, PC 1.95kw/634m, 37-32-01/120-01-46
San Diego: KMYI 94.1, NW 22kw/147m, 32-43-48/117-05-03 (aux)
San Diego: KLOV 102.9, SC to "Viva 102.9"
San Jacinto: KWWRP 96.1, call change to KWIE
Santa Maria: KGDP-FM 90.7, PR<252m

Thousand Oaks: KMLT 92.7, PG 3.1kw/141m, 34-12-21/118-49-04
 Visalia: KVLP-LP 101.5, PG 26m, 36-20-32/119-17-01
 Weaverville: KHRD 103.1, PR 700w/452m, 40-39-06/122-31-31
 Westwood: KTOR 99.7, FC to classic rock "99-7 The Torch"
 Yuba City: KXCL 103.9, SC to "Flash 103.9"

COLORADO:

Carbondale: KCJX 88.9, PG>4kw/775m, 39-25-08/107-22-10
 Carbondale: KDNK 90.5, PG 450w/775m, 39-25-08/107-22-10
 Colorado Springs: KKCS-FM 101.9, PR<50kw/150m, 39-08-11/104-55-34



Colorado Springs: KEPC 89.7, XR 38-45-41/104-47-04
 Glenwood Springs: KVOV 88.1, PG>1.2kw/775m, 39-25-08/107-22-10
 Hayden: KIDN-FM 95.9, PC 6kw/198m, 40-31-16/107-17-46
 Longmont: KCDC 90.7, call change to KGUD
 Strasburg: KAGM 102.3, XR 39-36-28/104-19-42
 Timnath: KKHI 105.5, PG>58kw/371m, 40-37-03/105-19-40; CL from Laramie, WY; FC to classic hits/Hot AC hybrid "105.5 Jack FM"; CC to KJAC
 Yuma: KNEC 100.9, PR>23kw

CONNECTICUT:

Pawcatuck: WHJM 107.7, PC 1.4kw/150m

FLORIDA:

De Funiak Springs: WWEO-LP 103.9, new
 De Funiak Springs: WAKJ 91.3, PR>1.8kw/52m, 30-41-30/86-08-34
 Jupiter: WJTW-LP 100.3, PG<23m
 Key Colony Beach: WKYZ 101.7, PR>100kw; QR from 101.3
 Key Largo: WZMQ 106.3, PR>150m, 25-19-31/80-24-16
 Lake City: WDSE-LP 107.7, new
 Maitland: WPYO 95.3, PC>12kw; CL from Apopka



Panama City: WPFM 107.9; SC to "107.9 PFM"
 Sebastian: WSJZ 95.9; FC to rock "The Pirate"
 Spring Hill: WGUL-FM 106.3, PC 25kw/96m, 28-31-41/82-32-45
 Springfield: WYOO 101.1, PC>12kw/123m, 30-10-44/85-46-55
 Trenton: WDVH-FM 101.7, PG>3.8kw/127m, 29-36-29/82-51-01
 Woodville: WJZT 97.9, NW 6kw/95m, 30-22-09/84-06-00

GEORGIA:

Albany: WJIZ-FM 96.3, XG 31-39-16/84-10-36, 142m
 Boynton: WBFC-LP 103.7, calls for new station
 Brunswick: WWRR 100.7, PG>62kw
 Buford: WLKQ 102.3, FC to regional Mexican "La Raza 102.3"
 Dublin: WQZY 95.9, PC>100kw
 Folkston: WFJO 92.5, PG>3.2kw/140m, 30-43-38/81-56-14



Gainesville: WFOX 97.1, NS 50kw/231m (aux)
 Glennville: WOA 106.3, PC 4kw/1221m, 31-58-23/81-57-28
 Guyton: WSGV-LP 94.7, calls

for new station
 Macon: WMKS 92.3, FC to R&B "Blazin' 92.3"

Meigs: WQLI 92.3, NW 6kw/100m, 31-05-12, 84-12-10
 Milan: WMCG 104.9, PG 50kw/150m, 32-12-00/83-17-41
 Omega: WTIF-FM 107.5, PG>4kw



Pavo: WNKL 90.7, call change from WWSG
 Rincon: WMCD 100.1, PR>84kw/299m, 32-10-17/81-44-04; CL from Statesboro
 Savannah: WZAT 102.1, PG>456m, 32-03-37/81-20-40
 Sycamore: WBLY-LP 101.5, PG ?w/44m
 Thomasville: WAYT 88.1, PR 35kw/392m
 Valdosta: WWRQ-FM 107.9, PC>50kw/82m, 31-03-21/83-13-54
 Valdosta: WAAC 92.9, NW 5kw/98m (aux)

HAWAII:

Hanamalou: KCSK-LP 104.7, calls for new station
 Keeau: KBGX 105.1, NW 25kw/28m, 19-43-18/155-27-23, signs on with oldies as "Lava 105.1"

IDAHO:

Kuna: KARJ 88.3, PR<3.2kw-V/275m, 43-24-09/116-54-09
 Pocatello: KISU-FM 91.1, PR>4.5kw-V/318m
 Wallace: KSIL 100.7, call change to KIBG

ILLINOIS:

Arlington Heights: WCLR 88.3, NW 1kw-V/18m, 42-06-45/87-58-58
 Chicago: WBBM-FM 96.3, AF 45kw/148m, 41-56-18/87-45-05 (aux)
 Chicago: WJMK 104.3, AF 48kw/148m, 41-56-17/87-45-05 (aux)
 Chicago: WUSN 99.5, AF 50kw/148m, 41-56-18/87-45-05 (aux)
 Elmwood Park: WCKG 105.9, AF 50kw/148m, 41-56-18/87-45-05 (aux)
 Loves Park: WKMQ-FM 96.7, FC to classic rock "Eagle 96-7"
 Moline: WXL 96.9, FC to rock "97 Rock", CC to KORB
 Park Forest: NS 3.5kw/134m, 41-27-15/87-43-22 (aux)

INDIANA:

Attica: WSHP 95.7, FC to country "The Wolf"; CC to WLFF
 Brookston: WLFF 95.3, FC to classic rock "The Rocket"; CC to WSHP
 Churbusco: WNHT 96.3, FC to rhythmic CHR "Wild 96-3"
 Evansville: WCFY-LP 102.7, calls for new station
 Evansville: WNIN-FM 88.3, NW 21.5kw/225m, 37-59-01/87-16-13 (aux)



Fort Wayne: WYLT 103.9, FC to top 40, keeps "My 103.9" slogan
 Indianapolis: WNOU 93.1, PC 13.5kw/302m
 Mitchell: WWEG 102.5, FC to country "Fun Country"; CC to WNUF
 Speedway: WYJZ 100.9, PR 6kw/100m, 39-48-01/86-04-39; PR 3.4kw/135m, CL from Lincoln

IOWA:

Adel: KIHS 88.5, signs on with contemporary Christian "The Cross" // KRSS 93.5
 Bettendorf: KORB 93.5, FC to AC "Star 93.5", CC to KOCS
 Estherville: KILR-FM 95.9, PG>20kw
 Le Mars: KKMA 99.5, FC to classic rock "Rock's Coolest Hits"
 Sageville: KIYX 106.1, FC to AC "Super Hits 106"
 Wapello: KLDI 88.9, call change to KLRX

KANSAS:

Bronson: KBJQ 88.3, PR<36kw
Great Bend: KWBI 91.9, PR>7.4kw
Haysville: KFBZ 105.3, PG 100kw/307m, 37-48-01/97-31-29
Oberlin: KFNF 101.1, PC>135m, 39-49-38/100-38-48

KENTUCKY:

Georgetown: WRVG-FM 89.9; FC to K-Love; CC to WKVO
Glasgow: WOVO 105.3, PR 14kw/133m, 36-58-50/86-06-10
Ledbetter: WHMR 90.1, NW 1kw-V/100m, 37-06-10/88-24-15
Lexington: WBUL-FM 98.1, PR>186m, 38-11-19/84-22-13
Midway: WBTF 107.9, PR>6kw/86m, 38-02-44/84-39-29
Nicholasville: WLTO 102.5, FC to top 40 "Hot 102"
Oak Grove: WEGI 94.3, PG>6kw/78m, 36-38-28/87-26-01; CL from Springfield, TN
Richwood: WRHX-LP 107.9, NW ?w/36m, 38-52-42/84-35-08
Somerset: WKII 102.3, CC to WHMJ, FC to oldies "Majic 102.3"

LOUISIANA:

Baker: WJNH 107.3; CC to WTGE
Jonesville: KTGTV 105.1, PR 900w/249m, 31-40-08/91-41-30
Mamou: KBON 101.1, XG 30-29-50/92-15-59
St. Martinsville: KAQE 89.9, PR<30kw/142m, 30-08-04/91-51-46

MAINE:

Auburn: WMEK 99.9, FC to country "The Wolf"
Kennebunk: WQEZ 104.7, FC to classic rock, Howard Stern "106.7 & 104.7 The Bone", CC to WHXQ
Lewiston: WTHT 107.5, FC to classic hits, "107.5 Frank FM", CC to WFNK
North Windham: WMTW-FM 106.7, FC to classic rock, Howard Stern, "106.7 & 104.7 The Bone", CC to WHXR
Winslow: WWA 95.3, PG>205m, 44-44-48/69-43-48



MARYLAND:

Baltimore: WWMX 106.5, PC 8.3kw/347m
Snow Hill: WQMR 101.1, NW 1.2kw/149m, 38-12-57/75-19-21

MASSACHUSETTS:

Boston: WBUR-FM 90.9, PG>12kw
Boston: WJMN 94.5, NW 10kw/203m (aux)
Fairhaven: WFHN 107.1, PC 5.4kw/105m, 41-38-25/70-55-03
Northampton: WLZX 99.3, NS 4.3kw/80m, 42-22-25/72-40-26 (aux)
West Tisbury: NEW 104.3, PA, NCE, Class A

MICHIGAN:

Bay City: WTRK 89.1, FC to K-Love, PR>14.8kw/255m, 43-36-15/83-49-59
Benton Harbor: WVBH-LP 105.3, XR 42-06-33/86-26-30
Berrien Springs: WSFT-LP 96.3, XR 41-55-25/86-16-56
Charlevoix: WTCK 90.9, call change from WWCZ
Gaylord: WBLW 88.1, PG>226m, 45-10-12/84-45-04
Kalamazoo: WCAC-LP 92.7, calls for new station
Marlette: WMSQ 89.3, NW 100w/30m, 43-22-06/83-07-00
Onsted: WAAQ 88.3, PC>540w-V/337m, 42-03-22/84-09-23
Pickford: WADW 105.5, RA with Starboard Catholic format
West Branch: WAWB-LP 107.3, PG>21m

MINNESOTA:

Albert Lea: KOPR 96.1, PC>25kw/94m
Brainerd: KFGI 103.5; CC to KUAL; FC to oldies "Kool 103.5"
Crosby: KUAL 101.5; CC to KFGI; FC to country "Froggy"



Hermantown: WWAX 92.1, SC to "The Beat"
Sebeka: KOPJ 89.3, calls for new station

MISSISSIPPI:

Friar's Point: WWUN 101.5, PR 14kw/120m; CL from Clarksdale
Indianola: WYTF 88.7, PG>100kw/194m, 33-35-03/90-36-13
Lumberton: WZNF 95.3, PR>70kw/360m
Natchez: WQNZ 95.1, PR>100kw/219m, 31-30-33/91-24-19
Pascagoula: WPAS 89.1, NW 60kw/175m, 30-33-03/88-27-06
Richton: WXHB 96.5, PG>5.7kw/175m, 31-28-09/88-45-53
Sardis: KBUD 102.1, NW 4kw/123m, 34-22-33/89-45-52
Taylorsville: WBBN 95.9, PR>100kw/223m, 31-38-02/89-28-38

MISSOURI:

Clinton: KDKD-FM 95.3, PR>14.5kw/132m, 38-22-18/93-55-06



Kirkville: KHGN 90.7, PC>100kw/143m
Mansfield: KTRI-FM 95.9, PR>8.9kw/165m, 37-17-10/92-36-55
Mexico: KJAB-FM 88.3, PR>4.8kw-V/83m, 39-06-13/91-53-35
Otterville: KCVK 107.7, PR<2.5kw

MONTANA:

Bigfork: KIBG 100.7, PR 85kw/646m, 47-46-25/114-16-04; CL from Wallace, ID



Butte: KMSM-FM 107.1, QG from 106.9
Helena: KHLV 90.1, PG>6.9kw-V/142m
Miles City: KKRY 92.3, QR from 92.5
Park City: KLRV 89.7, PG 630w/303m, 45-32-20/108-38-07

NEBRASKA:

Aurora: KRGY 97.3, FC to Hot AC "Star 97.3"
Cozad: KCVN 104.5, RA with religion
Crete: KSLI 104.1, FC to rock "The Blaze", CC to KIBZ
Lincoln: KIBZ 106.3, FC to AC "My 106.3"; CC to KLMY

NEVADA:

Boulder City: KSTJ 102.7, PR<1.5kw/553m (aux)
Las Vegas: KNPR 88.9, NW 24.5kw/1122m, 35-58-02/115-30-06
Reno: KURK 92.9, PR<48kw/153m, 39-35-03/119-48-06
Sparks: KLRH 88.3, NW 1.8kw/880m, 39-45-38/119-27-59 and signs on with K-Love
Sparks: KJZS 92.1, PR>8.9kw/153m, 39-35-03/119-48-06

NEW HAMPSHIRE:

Concord: WEVO 89.1, AF 15kw/89m (aux)



NEW JERSEY:
Atlantic City: WMGM 103.7, NW 8kw/81m (aux)
Bridgeton: WZFI-LP 98.5, calls for new station
Cape May Court House: WJPG 88.1, calls for new station
Ocean City: WTKU 98.3, NW 2.7kw/41m (aux)

NEW MEXICO:

Alamogordo: KUPR 91.7, PG>1.4kw
Albuquerque: KFLO 91.5, PG 20kw/1232m, 35-12-51/106-27-02
Gallup: KGLP 91.7, PR>880w/350m
Portales: KENW-FM 89.5, PR>180m, 34-15-08/103-14-21
Roswell: KRLU 90.1, NW 2kw-V/120m, 33-21-47/104-38-11, signs on with K-Love contemporary Christian

NEW YORK:

Binghamton: WHWK 98.1, PC 6.7kw/395m, 42-03-40/75-56-45
Briarcliff Manor: WXPB 107.1, FC to AAA "The Peak"
Endicott: WMRV 105.7, FC to hot AC, still as "Star 105.7"
Lake Luzerne: WBAR-FM 94.7, PR>940w/253m, 43-16-22/73-44-35
New York: WCBS-FM 101.1, PR 6.7kw/408m
Norwood: WVLF 96.1, NW 25kw/100m, 44-54-11/74-53-02
Ridge: WLIX-LP 94.7, calls for new station
Rochester: WCMF-FM 96.5, NS 1kw/120m, 43-09-17/77-36-10 (aux)
Seneca Falls: WLLW 99.3, PG>5kw/109m, 42-59-38/76-51-59
Southampton: WEHM 92.9, PR<76m, 40-52-10/72-34-37
Southold: WBEA 101.7, PR>6kw/82m, 40-52-10/72-34-37
Westhampton: WBON 98.5, PC 950w/160m, 40-51-18/72-46-12
Westport: WCLX 102.9, PC 6kw/92m, 44-13-14/73-24-35

NORTH CAROLINA:

Aurora: WFPF 104.7, CC to WSTK
Beaufort: WXBE 88.3, PG 1kw-V/55m, 34-43-26/76-41-18
Elizabethtown: WDJL-LP 93.7, XR 34-38-40/78-38-21
Fletcher: WQNO 104.3, PR>470w/349m, 35-31-39/82-28-49; CL from Old Fort
Kill Devil Hills: WCXL 104.1, PC 100kw/296m, 36-08-08/75-49-28
Washington: WERO 93.3, CC to WBOB-FM



NORTH DAKOTA:

Bismarck: KKCT 97.5, FC to top 40 "Hot 97-5"

OHIO:

Athens: WYWH-LP 104.5, calls for new station
Canton: WRQK-FM 106.9, PG 27.5kw/103m, 40-49-22/81-25-40
Crestline: WYXZ 98.7, CC to WYKL; FC to K-Love contemporary Christian
Huber Heights: WSWO-LP 97.7, XR 39-51-40/84-08-14
Miamisburg: WFCJ 93.7, NW 50kw/72m (aux)
Racine: WLWF 93.1, PR 2.5kw/157m, 38-56-56/82-03-02; CL from Ravenswood, WV

OKLAHOMA:

Altus: KKVO 90.9, PG 4kw/250m, 34-58-39/99-24-35
Healdton: KICM 97.7, PG 10kw/156m, 34-20-57/97-27-24
Tahlequah: KEOK 101.7, PR<87m
Warner: KTFX-FM 102.1, PR>25kw/84m, 35-34-39/95-12-36
Woodward: KJOV 90.7, PG>25kw/121m



OREGON:

Astoria: KJAC 88.7; CC to KLOY
Bend: KTWS 98.3, PR>5.2kw/223m, 44-04-39/121-19-57
Bend: KMTK 99.7, PR>26kw/208m, 44-04-39/121-19-57
Days Creek: KUMP-LP 107.9, calls for new station
Garibaldi: KDEP 105.5, PC 320w/360m, 45-27-59/123-55-11
Glide: KLBG-LP 92.3, PG<-65m, 43-18-05/123-09-34
Gold Beach: KTJN-LP 101.1, calls for new station
Pendleton: KUMA-FM 107.7, PG>340m, 45-34-27/118-34-47
Redmond: KLRR 101.7, PR 23kw/223m
Selma: KJKL 88.7, PR>50kw-V
Sisters: KZSO-LP 106.5, calls for new station
Veneta: KEUG 105.5, PC>2.8kw/303m, 44-00-11/123-06-48; CL from Cottage Grove

PENNSYLVANIA:

Avoca: WAMT 103.1, PG 6kw/22m, 41-18-20/75-45-38, CC to WFEZ, FC to soft AC "EZ 103"
Dallas: WCWQ 93.7, CC to WSJR, FC to country "JR 93.7"
Erie: WXNM-LP 95.9, calls for new station
Freeland: WKRZ 98.5; COL changed from Wilkes-Barre



Greensburg: WSSZ 107.1, CC to WJJJ
Indiana: WMUG-LP 105.1, PG<58m
McConnellsburg: WWCF 88.7, calls for new station
New Wilmington: WWNW 88.9, PG>200w/23m, 41-06-42/80-20-02
Philadelphia: WJJZ 106.1, NW 4.6kw/218m (aux)
Pittston: WDMT 102.3, PR>5.8kw
Shawnee-on-Delaware: WCSD-LP 104.9, NW ?w/26m, 41-01-03/75-06-51
Starview: WSJW 92.7, PC 700w/291m
Tuckhannock: WBZR 107.7, PR>490m/347m, 41-30-45/76-04-16, FC to country "Buzzard Country"

RHODE ISLAND:

Westerly: WWRX 103.7, FC to sports //WEEI-850 Boston



SOUTH CAROLINA:

Bowman: WSPX 94.5, PG 3.5kw/132m
Branchville: WGFG 105.1, PR 2.75kw/150m, 33-26-35/80-48-16
Columbia: WXRY-LP 99.3, PG 88m, 34-00-12/81-02-04
Dillon: WEGX 92.9, PC<493m, 34-22-04/79-19-21
Hanahan: WAVF 96.1, PC>237m
Hilton Head Island: WIAR-LP 100.5, PG 32m, 32-09-14/80-45-36
Lamar: WSIM 93.7, PC 2.8kw/148m, 34-12-12/79-51-52; CL from Bishopville
Mount Pleasant: WRFO 104.5, PC>100kw/201m, 32-49-04/79-50-09
North Charleston: WXLV 102.5, PC<201m, 32-49-04/79-50-09
Ravenel: WMGL 101.7, PC 5.3kw/131m, 32-46-46/80-09-42
Ridgeville: WPAL-FM 100.9, PR<87m, 33-04-16/80-21-31
Socastee: WRNN 99.5, PC 21.5kw/108m, 33-43-16/78-53-45



SOUTH DAKOTA:

Flandreau: KKHG 107.9, CC to KWSF; SC to "The Wolf"

TENNESSEE:

Atwood: WTKB-FM 93.7, PR>15kw/99m, 35-57-25/88-41-44
Lexington: WIGH 88.7, PC<7kw/164m, 35-43-19/88-36-07
Memphis: KJMS 101.1, requests CL to Olive Branch, MS
Pegram: WQZO-FM 102.5, CL from Dickson
Springfield: WJOI-FM 94.3, CC to WEGI
St. Joseph: WJOR-FM 101.5, PR>4kw/123m, 34-56-01/87-32-59
Trenton: WTNE-FM 97.7, PC>49kw/92m

TEXAS:

Belton: KOOC 106.3, SC to "B106.3", adds rhythmic to playlist
Cuero: KTLZ 89.9, PG>4kw
Denton: KHCK-FM 99.1, FC to Spanish tropical, "El Cumbiaso 99.1"
Farmersville: KXEZ 92.1, PR 1.95kw/178m
Fredericksburg: KNAF-FM 105.7, PR<9.1kw/164m, 30-21-51/98-54-49; CL from Mason
Georgetown: KINV 107.7, PC 10.5kw/155m, 30-37-22/97-38-33



Hondo: KRIO-FM 105.9, FC to classic rock "Mighty Fine Rock", CC to KMFR
 Jacksboro: KJKB 95.5, PR>6kw/100m, 33-19-43/98-16-46
 Jasper: KJAS 107.3, PC>8kw
 Krum: KNOR 93.7, now simulcasting KICM 97.7
 La Porte: KVST 103.7, PR>100kw/590m, 29-56-09/94-30-38; CL from Willis
 Mount Pleasant: KJUK-LP 92.3, PG 44m
 Odessa: KBMM 89.5, PG>25kw
 Paris: KBUS 101.9, XC 33-44-54/95-24-52
 Paris: KPLT-FM 107.7, PC>50kw/150m, 33-44-55/95-24-52
 Pearsall: KMFR 104.1, CC to KRIO
 Pittsburg: KDVE 103.1, FC to classic country "The Ranch" //KKUS 104.1
 Pittsburg: KXVI-LP 100.5, PG 44m
 Plainview: KBAH 90.5, PC>75kw/130m, 34-03-58/101-42-16
 Plainview: KJTV-FM 97.3, CC to KSTQ, FC to regional Mexican
 Post: KOFR 107.3, FC to K-Love contemporary Christian
 Seabrook: KRTS 92.1, PC>100kw
 Stephenville: KEQX 89.7, PR>6kw-V/150m, 32-07-24/98-58-48
 Stephenville: KQXS 89.1, PR<1.2kw-V/129m, 32-16-09/98-18-51
 Victoria: KAYK 88.5, PC>50kw-V/86m
 Victoria: KETI-LP 99.5, NW 10w/34m, 28-48-46/96-59-45
 Victoria: KEPG 100.9, PR 4.3kw/118m, 28-46-55/97-56-20
 Waco: KVLW 88.1, PR>16.6kw-V/334m, 31-18-53/97-19-36

UTAH:

Cedar City: KXFF 92.1, PR>100kw, 37-38-43/113-22-22
 Coalville: KPEB 103.1, NW 89kw-H/647m, 40-52-16/110-59-43; CL from Huntsville
 Naples: KCUA 92.5, PR>840w/506m, 40-32-16/109-41-57; CL from Coalville
 Roosevelt: KRXQ 94.7, PR 50kw/93m, 40-19-55/109-42-28
 S. Jordan: KUUU 92.5, applies for PR 500w/1198m, 40-39-35/112-12-05; CL from Tooele
 St. George: KZBS 90.7, calls for new station

VERMONT:

Barre: WJPL-LP 92.1; calls for new station
 Bellows Falls: WOOL-LP 100.1, calls for new station

VIRGINIA:

Charlottesville: WUMX 107.5, CC to WCJZ
 Culpeper: WCUL 103.1, CC to WJMA-FM
 Midlothian: WCUL 98.9, PR>7.3kw/183m, 37-36-52/77-30-56; CL from Orange, CC from WJMA-FM
 Mount Jackson: WSIG 96.9, PG>4.3kw/221m, 38-36-29/78-54-11
 Narrows: WZFM 101.3, CX, deleted
 Norfolk: WSVY-FM 105.3, CC to WKUS; FC to R&B "105.3 Kiss FM"



Susan: WSUV-LP 102.3, calls for new station

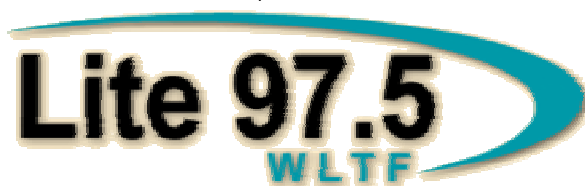
WASHINGTON:

Kelso: KTJC 91.1, NW 20w-H/8kw-V/189m, 46-19-46/122-57-50
 Nile: KLRO 88.1; RA with K-Love contemporary Christian
 Olympia: KWGV 90.1; calls for new station
 Pullman: KHTR 104.3; FC to modern rock "Border 104"
 Tacoma: KBTC 91.7; CC to KXOT

WEST VIRGINIA:

Charleston: WVPN 88.5, PC 32kw/134m
 Clarksburg: WPDX 104.9, PR 7.4kw/182m, 39-15-22/80-06-46

Martinsville: WLTF 97.5, PR 11.6kw/317m



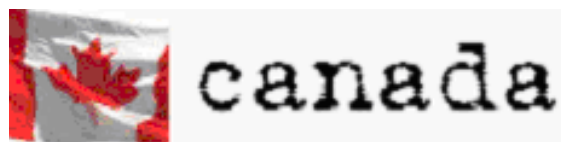
Moundsville: WRKP 96.9, PR>1.9kw

WISCONSIN:

Goodman: WMVM 90.7, PR 7kw/87m, 45-46-23/88-24-38
 Rhinelander: WXPR 91.7, PR 38.5kw/230m
 Sturtevant: WEXT 104.7, PC>4.2kw/103m, 42-51-20/87-50-41
 Wausau: WYCO 107.9; CC to WLRK

WYOMING:

Chugwater: KLWV 90.9, PR>361m
 Evanston: KOTB 106.1, PC>89kw-H/647m, 40-52-16/110-59-43
 Kemmerer: KAOX 107.3, PC>100kw/289m



ALBERTA:

Edmonton: NEW 91.7, NS 100kw, urban
 Edmonton: NEW 89.3, NS 100kw, aboriginal
 Edmonton: NEW 102.9, NS 64kw, modern rock
 Edmonton: CBX-FM 90.9, PG<193m

BRITISH COLUMBIA:

Abbotsford: CBU-x-FM 101.7, AF 316w/150m, to relay 690 Vancouver
 Chilliwack: CBU-FM-x 99.9, AF 790w/218m, to relay 105.7 Vancouver
 Hornby Island: NEW 91.5, AF 5w/92m
 Tofino: NEW 90.1, AF 170w/60m pop

NOVA SCOTIA:

Inverness: CJFX-FM-1 102.5, NS 2.33kw

ONTARIO:

Barrie: CKMB-FM 107.7, QR from 107.5, 70kw/296m
 Brantford: CFWC-FM 93.9, QR from 99.5; 250w
 Dryden: NEW 104.5, NS 1.8kw to relay 103.3 Vermilion Bay
 Goderich: NEW 99.7, AF 1.67kw/54m, to relay Kincardine
 Kawartha Lakes: NEW 106.7, AF 50kw/150m, religious
 Kenora: CJRL-FM 89.5; QG from 1220AM; 40kw
 Kenora: NEW 104.5, NS 1.8kw, to relay 103.3 Vermilion Bay
 Kincardine: NEW 95.5, AF 5.66kw/39m, classic hits
 Oshawa: CKDO-1-FM; AF 250w/70m, to relay 1250 AM
 Port Elgin: CFPS-FM 97.9; QR from 1490 AM, 7.6kw/138m
 Renfrew: NEW 98.7; AF 27kw/106m, trad. Country & easy
 Renfrew: NEW 96.1, NS 1.66kw (soft AC)
 Thunder Bay: NEW 102.7, AF 134w/-21m, Lakehead Univ
 Toronto: NEW 89.9, AF 1w/36m, Glendon College
 Toronto: NEW 96.9, AF 5w/28m, Humber College
 Vermilion Bay: NEW 103.3, NS 1.6kw, hot AC
 Wingham: NEW 94.5, AF 38.2kw/226m, rock

QUEBEC:

Acton Vale: NEW 103.7, NS 1.65kw, French community
 Les Escoumins: CHME-FM 94.9, PR>4656w/183m
 Magog: CFGF-FM-1, PG<364w/578m
 Trois-Rivieres: CJEB-FM 100.1; PG<34.033kw/345m

YUKON TERRITORY:

Dawson: CBDN-FM 104.9; returns to 560 AM
 (Continued on page 26)

ATSC PRIMER VIII

DOUG SMITH

DXing the Digitals

Of course, the WTFDA is a DX organization. We're not really all that interested in receiving crisp, clear signals from stations 10 miles away – we're into snowy, noisy signals from stations halfway across the continent! Can DTV signals be DXed? The answer is yes, though it'll certainly be different from DXing analog.

Receiver choices:

Probably the most popular DTV receiver among North American DXers is the Hauppauge WinTV-D¹. Comparative reports suggest it's neither the most sensitive nor the most selective choice available, and its first-generation decoder circuitry doesn't decode signals some newer receivers will. However, the WinTV-D is:

- ⑩ *Cheap.* Some have found them for as little as under \$100 on eBay.
- ⑩ *Flexible.* You can send the card directly to a channel – you don't have to rescan the channels every time a new station comes on the air or the band opens.
- ⑩ *Dual-mode.* The same card will receive analog stations too. Many other DTV reception solutions receive digital only.
- ⑩ *Tolerant.* It will display PSIP (“text ID”) information on stations that are too weak or interference-ridden to show audio/video. It will also display less-than-perfect audio and video signals that won't display at all on other receivers.

DXers are using a variety of other receivers to tune the digitals. One tuner that's received good press is the Samsung TIR-151.

The WinTV-D is a plug-in card for a PC computer. (sorry Mac users, you're out of luck) There are competing DTV tuner cards available. Besides the tuner card (and a compatible computer), all you need is an antenna. More on that later.

Displays:

Most standalone DTV receivers have either a HD15 connector or a collection of RCA jacks for the video output. For the intended high-definition audience, the HD15 will connect to a widescreen high-definition monitor. However, a standard VGA computer monitor will work fine – and probably still look better than any TV in your house! RCA jacks may or may not be compatible with a display you already have. The Samsung TIR-151 has a standard video out which you can connect to your analog TV.² If you don't want to buy an (expensive!) high-definition display, be sure the DTV receiver you're buying provides an analog output compatible with your existing TV. A separate audio amplifier and speakers will be necessary to hear the sound.³

¹[Http://www.hauppauge.com](http://www.hauppauge.com)

²Provided it has a video (not antenna) input. The “Resolution Select” must be set to “480i”. It also has a “S-VHS” output which may work with some analog TVs.

³Patch it into your stereo system. In many cases the DTV transmitter is wired on the “wrong” side of the station's analog processing equipment. In these cases the DTV audio will be far, far better than the analog.

Antennas:

Marketing suggests you need a special antenna to receive digital signals. I have a “Stereo compatible color antenna” box in my basement. “Antenna” is the only word that's meaningful!

Stereo, color, and now digital TV signals are all broadcast in the same frequency range. What makes an antenna good for analog reception is the same thing that makes it good for digital. Accessories – preamps, splitters, coaxial cable, rotors, switches, etc. - are all the same for digital as they are for analog. If you have a good DX antenna system in place for analog, you can simply connect it to your DTV receiver and have a good DTV DX system. If you don't already have a good analog antenna system, just remember that the same rules that apply to analog apply to DTV.

There is one important difference. Digital TV is very intolerant of multipath - “ghosts”. You may be able to tolerate watching an analog signal with a single stationary ghost, but your DTV receiver may not decode such a digital signal at all. Any poor cable connections, cheap cable, leaky splitters, or sources of signal reflections will need to be fixed or replaced before you'll get reliable digital reception.

Propagation modes:

To date, virtually all DTV DX has been via tropospheric propagation. The current tropospheric distance record is 835 miles.⁴ Tropospheric propagation affects all channels including UHF, and tends to be stable in signal strength over moderate periods. This allows the DTV receiver enough time to “lock in” on a signal. UHF channels have fewer stations⁵, so there's less interference to prevent DTV “lock”.

One DTV signal has been identified via sporadic-E.⁶ Sporadic-E tends to involve deep and rapid fading; often, an Es DTV signal doesn't stay in long enough to decode. Es also only affects VHF channels, where there are many more analog stations. The chances of interference from other stations are much greater. Finally, there are very few digital stations currently operating on VHF channels 2-6.⁷

Luckily, the latter issue will eventually change. 35 stations have digital assignments “outside core”, in channels 52-69, while having analog assignments in channels 2-6. These stations (at least in theory!) will be required to move their digital operations to their low-band channels at the end of transition. Many of the most-frequently-seen analog Es stations are among this list – WMAR-2, WCAX-3, KGFE-2, WOAI-4, KTVU-2, KQTV-2, WEDU-3, KJRH-2.

⁴For reception of WNCN-DT channel 55 Goldsboro, North Carolina by DXer Jeff Kruszka in Baton Rouge, Louisiana.

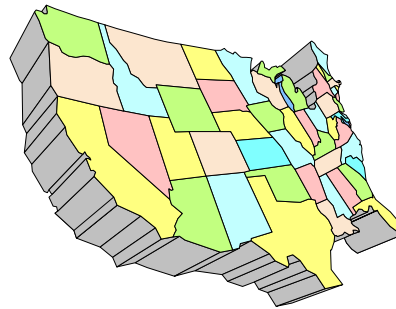
⁵There are 62 full-power analog stations in the USA on channel 7; there are only 15 such stations on channel 47.

⁶Gerard Westerberg in Lexington, Kentucky received KOTA-DT channel 2 Rapid City, South Dakota. Only PSIP data was decoded – no usable audio or video.

⁷As of August 2003 I'm only aware of eight low-band VHF DTV stations.

WESTERN TV DX

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



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

This report is for March 2004. Southern California tropo on TV-FM to San Diego/Tijuana (200mi/320km) was somewhat better than February, though only because the weather was stable with no stormy conditions—not at all as it usually is at this time of the year. It is getting warm and dry much sooner than most years—good for tropo but bad for water storage and the prospect of a long dry summer.

| | |
|-------------------|---------------------------|
| Mar 1 –8: | None (Rain&unsettled 1-5) |
| Mar 9-10: | Poor (Stable; warming) |
| Mar 11 am: | Fair |
| Mar 11 eve: | Good |
| Mar 12-15 am: | Variably poor |
| Mar 15 eve-16 am: | Fair |
| Mar 16 eve-17: | Good |
| Mar 18-24: | Variably poor |
| Mar 25-26: | None (windy) |
| Mar 27-29: | Variably poor |
| Mar 30: | Fair |
| Mar 31: | Poor |

Updating our Feb-26 burglary in Wasco, we went over on March 4-6 to inspect it. Renters occupy most of the street level of the house. Whenever we are there, we use a back room and the basement. From the outside, the thieves broke into our quarters but apparently only to gain access to the renters' space by forcing an inner door, as if they knew what valuables the renters had which were stolen. Our 'accumulated junk' was left untouched, including my unseen Doug Allen-modified FM tuner (which I am not leaving there unattended anymore but have brought back to Santa Barbara). There are broken windows and damaged doors to be replaced.

And while in Wasco on Mar 4-6, there were no DX conditions. One new station was seen, with regular KHSC-LP 66 (HSN) O'Neals/Fresno (aprox 85 mi) having changed to channel 38.

Best of DX to All. Dennis

Dave Pomeroy, 2321 SE Libra Ct., Topeka, KS 66605-3505

March 19, 2004 tropo

| | |
|--------------|---------------------------|
| 0800 WCCO-DT | 32 MN Minneapolis/St.Paul |
| KARE-DT | 35 MN Minneapolis/St.Paul |
| KMTV-DT | 45 NE Omaha |
| 0820 KTIN | 21 IA Ft. Dodge |
| 0830 WOWT-DT | 22 NE Omaha |
| KMEG | 14 IA Sioux City |
| 0850 KGAN-DT | 51* IA Cedar Rapids |

The spring tropo has been slow to arrive, but March 19 did offer some hope. Not too much distance, but I was at least able to log KGAN-DT on channel 51 prior to the activation of KPXE-DT which is the only Kansas City DTV station not yet on the air. I tried the LP

3100A digital receiver, but didn't care for it and sent it back. I was able to tune KCWE-DT 31 with the tuner card, but not the LP 3100A. I also found tuning slow and awkward and, of course, hate that it reverts back to a virtual channel number when you tune the RF frequency.

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

January 2004 CT

| | | | | |
|-------|------------------|-------|----------|------|
| 5 tr | 2222 WCES | 20 GA | "GPB" | 545 |
| | 2300 WABW | 14 GA | "GPB" | 420 |
| 25 Es | 1918 unid 3,5 SS | | | |
| tr | 2158 WTJP | 60 AL | | 390 |
| | 2214 XHAB | 7 TA | | 505 |
| | 2337 WVTM-DT | 52 AL | | 335 |
| 27 Es | 1719 KLBY | 4 KS | | 845 |
| | 1730 KSWK | 3 KS | | 760 |
| | 1737 KCNC | 4 CO | | 1010 |
| | 1740 KWGN | 2 CO | floating | 1010 |
| | 1751 KOAA | 5 CO | | 940 |

February 2004

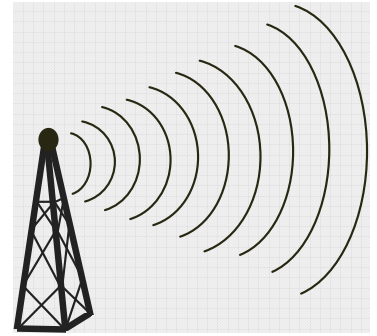
| | | | | |
|-------|-----------|--------|--|------|
| 1 Es | 1715 KUAT | 6 AZ | | 1175 |
| | 1733 KVOA | 4 AZ | | 1175 |
| 2 Es | 1856 XELN | 4 COAH | | 825 |
| 7 Es | 1754 WSKY | 4 NC | | 970 |
| 19 tr | 0647 XHAB | 7 TA | | 505 |
| | 0650 KEDT | 16 TX | | 425 |
| Es | 1959 XHBS | 4 SIN | | 1130 |
| tr | 2317 KVEO | 23 TX | | 500 |
| | 2325 KXAN | 36 TX | | 395 |

March 2004

| | | | | |
|-------|------------------------|-------|--------|-----|
| 9 tr | 0646 KEYE | 42 TX | | 395 |
| | 0657 <u>KEYE-DT</u> | 43 TX | | 395 |
| | 0658 KNVA | 54 TX | | 395 |
| 17 tr | 1948 XHAB | 7 TA | | 505 |
| 18 tr | 0642 KEYE | 42 TX | | 395 |
| | KXAN | 36 TX | | 395 |
| | 0645 KNCT | 46 TX | | 375 |
| | 0650 KEYE-DT | 43 TX | | 395 |
| | 0653 KNVA-DT | 49 TX | | 395 |
| | 0702 KWTX-DT | 53 TX | | 365 |
| | 0706 KXAM | 14 TX | | 445 |
| | 2334 KTAB | 32 TX | | 525 |
| 19 tr | 2258 XHAB | 7 TA | | 505 |
| 20 tr | 0853 Austin 36, 42, 54 | | | 395 |
| | 0858 <u>KLRU-DT</u> | 22 TX | 5 pgms | 395 |
| | 0920 <u>KEYE-DT</u> | 43 TX | | 395 |
| | KWTX-DT | 53 TX | | 365 |
| | 0936 <u>WHNO-DT</u> | 21 LA | | 75 |
| | 1002 <u>KNOE-DT</u> | 7 LA | | 150 |
| | 1014 <u>KLPA-DT</u> | 26 LA | | 95 |
| | 2319 XHAB | 7 TA | | 505 |
| 21 tr | 0218 KORO | 28 TX | | 425 |
| | 0232 <u>KETH-DT</u> | 24 TX | | 255 |

Saw quite a bit of off-season skip this period and added a few new DTV's. Tropo has not been up to par with previous years.

Northern FM DX



Keith McGinnis
6 Ritter Road, Hingham, MA 02043
longwave@comcast.net 781-875-1944

For Dxers in the following states: CT IA ID IL IN MA ME MI MN MT ND NE NH NJ NY OH OR PA RI SD VT WA WI WY and all of Canada. Please submit by the 10th of each month. If possible please submit in the formats shown Below.

EDITORS NOTE: PLEASE NOTE THAT ANY TYPEWRITTEN OR HANDWRITTEN REPORTS MIGHT BE DELAYED TILL A LATER ISSUE AS TIME PERMITS. ALSO PLEASE KEEP REPORTS AS RECENT AS POSSIBLE (THE LAST 3 MONTHS SHOULD WORK FINE). THANK YOU.

Jason Koralja Surf City NJ

Equipment: Sony ICFSW7600GR w/ built in whip and a Pioneer DEH-P400MP

March 21 2004 TR (from Mays Landing NJ)

| | | | | |
|------|-------|-----------|----|--|
| WWMX | 106.5 | Baltimore | MD | 103 miles |
| WBYN | 107.5 | Boyertown | PA | 82 miles |
| WKHI | 107.5 | Fruitland | MD | 101 miles |
| WTOP | 107.7 | Warrenton | VA | 174 miles (the clearest out of all 4!) |

March 28, 2004 TR (from Surf City NJ using the Sony)

| | | | | |
|------|-------|----------------|----|-----------|
| WSCL | 89.5 | Salisbury | MD | 104 miles |
| WSOU | 89.5 | South Orange | NJ | 75 miles |
| WLBW | 92.1 | Fenwick Island | DE | 100 miles |
| WZBH | 93.5 | Georgetown | DE | 99 miles |
| WAFL | 97.7 | Milford | DE | 87 miles |
| WIYY | 97.9 | Baltimore | MD | 134 miles |
| WJKS | 101.7 | Canton | NJ | 64 miles |
| WSMJ | 104.3 | Baltimore | MD | 123 miles |

John Ebeling Bloomington MN

Equipment: Pioneer TX 9500 IF Modified Tuner with a Stereo Probe 9 at 25 ft AGL.

The following is a report from the south coast of Barbados. I did not notice any TES (Trans-Equatorial Skip) this year on the FM band, which is unusual. I did not have access to a TV that was not connected to a satellite dish, so I was unable to see if any TES affected the low TV band.

Receiver used was my Sangean 818, and I was on a second floor balcony facing SW.

The Barbados local stations are indicated with an *, which, of course, were received every day. The reception was generally about 10 pm Bds time, which is 1 hr. ahead of EST.

Feb. 4: 90.7*; 92.9*; 95.3*; 96.9*; 98.1*; 100.7*; 102.1*; 104.1*
Feb. 5: 87.75; 89.3; 90.1; 92.0; 94.4; 96.3; 101.3; 101.5; 103.1; 105.3; 105.7; 107.5
Feb. 6: 87.75; 92.0; 96.3; 99.9; 105.7; 106.1; 107.5
Feb. 7: 87.75; 92.0; 99.9
Feb. 8: Same as Feb. 4 (local only)
Feb. 9: " " " " " "
Feb. 10: 90.1; 94.1; 96.1; 99.3; 99.9; 105.7; 107.5
Feb. 11: 87.75; 91.5; 96.3; 97.5; 98.9; 99.9; 103.7; 107.5; 107.7; 107.9
Feb. 12: 97.5; 99.9; 103.7; 105.1; 105.7; 107.5

That's it. Most were in Spanish. The 99.9 station was from Kingstown, St.

Vincent & the Grenadines, a distance of 116 miles. I wish I had more definitive locations of the stations, but I'm not familiar with Spanish (or French).

FWIW, if we have any 'lowfers' in the club, Barbados has a beacon on 345 kHz (+ or - 2 kHz) with Morse Code in a pattern of 4/3/2 then a dash. The signal was so strong I was unable to determine the exact frequency.

We had a good time for our 2 weeks in Barbados and put away a lot of rum & coke, as rum is made on the island.

Reception from my home in Bloomington

Feb 24 TR

1800 KKLW 90.9 Willmar MN new 'k-love station 87 miles

March 4 TR

1200 WCLQ 89.5 Wausau WI gospel (pwr increase) 180 miles

Rick Shaftan Sparta NJ

Equipment: Realistic STA-2280, Conrad RDS Manager, Two APS 14s stagger stacked with two FM 13s. @ is new. # is new prop mode. First number at end is bearing, second is mileage.

January 6 Ms

1200 ???? 97.7 ". man convicted of killing an Eastburg woman and her unborn child"

January 20 Ms

1240 #KSD 93.7 St. Louis MO RDS PI 9994 264 848

January 22 Ms/TrS

0755 KSD 93.7 St. Louis MO RDS PI 9994 264 848
 0851 WOMP 100.5 Bellaire OH WOMP-FM ID on top. 259 329
 0905 #WYOY 101.7 Gluckstadt MS Y-101 on burst 239 1044
 0945 WCMT 101.7 Martin TN RDS PI 5B3B, THE BEST SONGS ON THE RADIO 252 829

February 7 Ms

1135 WANZ 100.5 Northport AL RDS PI 5613 237 898

February 10 Tr

1034 WZYZ 100.5 Goochland VA Calls 218 289

February 12 Es

1107 WMAW 88.1 Meridian again @ 1403 MS Mississippi Public Radio RDS PI 75EB. Back 237 1007

March 2 Ms

1050 WCMT 101.7 Martin TN RDS PI 5B3B 252 829
 2158 @WPRJ 101.7 Coleman MI ".in Mount Pleasant" 294 536
 2200 @WLOF 101.7 Attica NY ".Christian Music.WLOF, 101.7 FM, WLOF.NET" 304 228

March 3 Ms

1810 ???? 101.7 ".news radio 101.7" then into rock.

March 7 Ms

0652 KAYL 101.7 Storm Lake IA RDS PI 127B 283 1059

March 13 Ms

0958 WHRM 90.9 Wausau WI RDS PI 68EA 295 805

March 19 TrS

1755 @CHMS 97.7 Bancroft ON Tell your friends about the variety station in Halliburton-Bancroft 97.7 Moose FM 330

Mike Bugaj – 69 Sherman Road – Enfield, CT 06082
Equipment: Onkyo T450 RDS tuner, APS-13 @ 30 feet.

| | |
|---|--|
| 3/30 Tr | 4/19 |
| 1900 CBZ 101.5 Fredricton NB, classical | 0612 WQFM 100.1 Forest City PA oldies 92 and 100 |
| 1905 CBAF 102.3 Fredricton NB, French | 0618 WARM 103.3 York PA, Warm 103 |
| 1913 WQCB 106.5 Brewer, ME with Leah | 0620 WIOV 105.1 Ephrata PA I-105 |
| 1916 CBH 102.7 Halifax NS, classical //CBZ | 0622 WCPP 106.7 Hershey PA Cool Pop 106.7 |
| 1920 CHSJ 94.1 St. Johns NB Country 94 | 0631 WSOX 96.1 Red Lion PA Oldies 96.1 |
| 1932 WVOM 103.9 Howland Me, the Voice of ME | 0730 WWMX 106.5 Baltimore, Mix 106-5 |
| 2003 CBAF5 Halifax NS, French | 0820 WRQX 107.3 Washington DC Mix 107.3 |
| 2135 WWBX 97.1 Bangor ME B97 | Nice to see any tropo this time of year, even if it all is relogs! |

Charles Gauthier, St-Lambert, QC tvfmdx@yahoo.com
Equipment: Kenwood KT-6500 analog tuner modified (2X150khz filters - 1x110Khz), Antennacraft
32 element VHF-UHF-FM antenna at 30' AG, CM9510A rotor, RG6 coax.

FM Bandscan for St-Lambert, QC (45 30' 45"N - 73 30' 22"W). Compiled February-March 2004.

* Semi regulars (most likely to be semi-local in season).

| | | | | | |
|------|-----------|----------------|----|-----------------------------|---------|
| 88.1 | LPFM | Montreal | QC | CN Rail Intermodal Terminal | 8 miles |
| 88.3 | WXLU | Peru | NY | North Country Public Radio | 65 |
| 88.5 | CBME | Montreal | QC | CBC Radio One | 4.2 |
| 88.9 | CIMF-FM-1 | Hawkesbury | ON | "Rock Detente" | 57 |
| 88.9 | LPFM | Rougemont | QC | "CPOM" Tourist info | 23 |
| 89.1 | W206AQ | Plattsburgh | NY | "Air 1" | 55 |
| 89.3 | CISM | Montreal | QC | Universite de Montreal | 4.2 |
| 89.7 | CHDO* | Dorval | QC | P.E. Trudeau Int'l Airport | 12 |
| 89.7 | CBM-FM-1 | Sherbrooke | QC | CBC "Radio Two" | 82 |
| 89.9 | CIHT* | Ottawa | ON | "Hot 899" | 114 |
| 90.1 | WMHQ | Malone | NY | Mars Hill Network | 64 |
| 90.3 | CKUT | Montreal | QC | "Radio McGill" | 4.2 |
| 90.7 | CBFX-FM-2 | Sherbrooke | QC | SRC "La chaine culturelle" | 82 |
| 90.7 | CBOF* | Ottawa | ON | SRC "La premiere chaine" | 114 |
| 90.9 | WSLO | Malone | NY | North Country Public Radio | 63 |
| 91.3 | CIRA | Montreal | QC | "Radio Ville-Marie" | 4.2 |
| 91.5 | CBO* | Ottawa | ON | CBC Radio One | 114 |
| 91.7 | CBMB | Sherbrooke | QC | CBC Radio One | 82 |
| 91.9 | WCEL | Plattsburgh | NY | Northeast Public Radio | 51 |
| 92.1 | CJDM | Drummondville | QC | "Le son de Drummondville" | 55 |
| 92.5 | CFQR | Montreal | QC | Light Rock Q-92 | 4.2 |
| 92.9 | WEZF | Burlington | VT | "Star 92.9" | 76 |
| 93.5 | CBM-FM | Montreal | QC | "CBC Radio Two" | 4.2 |
| 93.7 | WXAL* | Addison | VT | "Alice" | 104 |
| 93.9 | WLVB | Middlebury | VT | "Vermont Country" | 77 |
| 93.9 | CBMZ | Trois-Rivieres | QC | CBC "Radio One" | 80 |
| 93.9 | CKKL* | Ottawa | ON | 114 | |
| 94.3 | CKMF | Montreal | QC | "Radio-energie" | 4.2 |
| 94.7 | CHEY | Trois-Rivières | QC | "Rock-Detente" | 80 |
| 94.7 | WYUL | Chateaugay | NY | "Hits FM" | 61 |
| 94.9 | WHOM | Mt.Washington | NH | 138 | |
| 94.9 | CIMF* | Ottawa-Hull | QC | "Rock Detente" | 114 |
| 95.1 | CBF-FM | Montreal | QC | SRC "La premiere chaine" | 4.2 |
| 95.5 | WXXX-FM | S. Burlington | VT | "95-TripleX" | 71 |
| 95.5 | CBOC* | Cornwall | ON | CBC Radio One | 71 |
| 95.9 | CJFM | Montreal | QC | "Mix-96" | 4.2 |
| 96.1 | WDEV* | Warren | VT | 100 | |
| 96.5 | WVNV | Malone | NY | "Wild Country 96-5" | 61 |
| 96.5 | CBF-FM-8 | Trois-Rivieres | QC | SRC "La premiere chaine" | 80 |
| 96.9 | CKOI | Verdun | QC | "C'est quoi" | 3.0 |
| 97.3 | CFJO | Thetford Mines | QC | "O 97-3" | 98 |
| 97.3 | CKON* | Akwesasne | ON | 70 | |
| 97.7 | CHOM | Montreal | QC | Chom-FM | 4.2 |
| 98.1 | CBOF6* | Cornwall | ON | SRC "La premiere chaine" | 71 |

| | | | | | |
|-------|-----------|----------------|----|------------------------------|-----|
| 98.5 | CKOO | Montreal | QC | "Le nouveau FM parle de Mtl" | 4.2 |
| 98.9 | WOKO | Burlington | VT | "The big station" 75 | |
| 99.1 | CFNJ | St-Gabriel | QC | "La Radio d'ici" | 58 |
| 99.5 | CJPX | Montreal | QC | "Radio classique Montreal" | 4.2 |
| 99.9 | WBTZ | Plattsburgh | NY | "The Buzz" | 52 |
| 100.3 | CJMJ* | Ottawa | ON | 114 | |
| 100.7 | CBFX | Montreal | QC | SRC "La Chaine Culturelle" | 4.2 |
| 101.1 | CKBY* | Smith's Falls | ON | "Y101" | 130 |
| 101.1 | CBF-FM10 | Sherbrooke | QC | SRC "La Premiere Chaine" | 82 |
| 101.3 | CIME | Mt Tremblant | QC | "La radio des Laurentides" | 70 |
| 101.3 | WCPV | Essex | NY | "Champ" 77 | |
| 101.5 | CIBL | Montreal | QC | "La radio libre de Mtl" | 3.6 |
| 101.7 | CJSO | Sorel | QC | "L'essentiel" | 41 |
| 101.7 | WCVT | Stowe | VT | Classic Vermont 82 | |
| 101.9 | CBMG | Cowansville | QC | CBC Radio One 50 | |
| 101.9 | CHAI | Chateauguay | QC | "La radio du sud-ouest" | 15 |
| 102.3 | CINQ | Montreal | QC | Radio Centre-Ville | 4.8 |
| 102.5 | CBOX* | Ottawa | ON | SRC "La chaine culturelle" | 114 |
| 102.7 | CITE-FM-1 | Sherbrooke | QC | "Rock-Detente" 63 | |
| 102.9 | WNCQ* | Morrisville | NY | "Q Country 102.9" | 118 |
| 103.1 | CKOD | Valleyfield | QC | "FM 103" 33 | |
| 103.3 | CHAA | Longueuil | QC | "La griffe sud" | 3.6 |
| 103.5 | CJLM | Joliette | QC | "M-103.5" | 33 |
| 103.7 | CKRK | Kahnawake | QC | "K-103" 12 | |
| 103.9 | CIME | Saint-Jerome | QC | "La radio des Laurentides" | 35 |
| 104.1 | CFZZ | St-Jean | QC | Z-104 | 20 |
| 104.3 | CBFX-FM-1 | Trois-Rivieres | QC | SRC "La chaine culturelle" | 80 |
| 104.5 | CFLG | Cornwall | ON | "Variety-104" | 68 |
| 104.7 | WNCS | Burlington | VT | "The Point" | 82 |
| 104.9 | CFXM | Granby | QC | "M-105" 44 | |
| 104.9 | CJLA | Lachute | QC | "Couleur FM" | 43 |
| 105.1 | WKOL | Plattsburgh | NY | "Kool-105" | 68 |
| 105.3 | CISS* | Ottawa | ON | "Kiss" | 114 |
| 105.7 | CFGL | Laval | QC | "Rythme-FM" | 4.2 |
| 106.1 | CIMO | Magog | QC | "Radio-energie" 63 | |
| 106.1 | CHEZ* | Ottawa | ON | 114 | |
| 106.3 | WYZY | Saranac Lake | NY | "Y-106" 86 | |
| 106.5 | CFEI | Ste-Hyacinthe | QC | "Boom FM" | 30 |
| 106.7 | WIZN | Vergennes | VT | "The Wizard" | 81 |
| 106.9 | CKQB* | Ottawa | ON | "The Bear" | 114 |
| 107.3 | CITE | Montreal | QC | "Rock Detente" | 4.2 |
| 107.9 | WVPS | Burlington | VT | "Vermont Public Radio" 76 | |

Editor's note: Thanks to Charly for this great bandscan. I welcome bandscans from anyone in the Northern FM DX area. I will try to include them when dxng is slow. I'll have to compare this bandscan to what I receive on Isle la Motte Vermont (about 50 miles or south of Montreal).

Also just to let everyone know I have now moved into a new location about 16 miles south of Boston and also my former location in Winthrop. Still haven't got the APS9 up on the roof yet but hopefully someday soon. Please note my new phone # too!

That's all for this month.

The WTFDA Marketplace

FM ATLAS #19

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

Sportsradio!

Jim Thomas tells you who's on what station and when...basketball, football, baseball, hockey, racing...just about everything! Send your check for \$12.00 to WTFDA, PO Box 501, Somersville, CT 06072 (checks payable to Dave Janowiak).



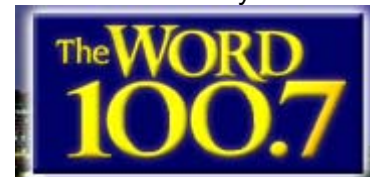
| | | | |
|------------------|-------|----|---|
| 1731 unID | 106.1 | ?? | ??, NE, IA, SD, MN, ND, k |
| 1732 <u>KRRO</u> | 103.7 | SD | Sioux Falls, "The Crow," r, "Mid Continent Radio" |
| 1734 <u>KVHT</u> | 106.3 | SD | Vermillion, ad for Tri-State Water |
| 1736 <u>KXPT</u> | 104.1 | MN | St. Louis Park, "Kix 104.1," ads |
| 1739 <u>KKQQ</u> | 102.3 | SD | Volga, "Country 102," ads |
| 1740 <u>KJAM</u> | 103.1 | SD | Madison, ad for Heritage Senior Living |
| 1749 <u>KIKV</u> | 100.7 | MN | Sauk, "Kick Country," ads wx |
| 1750 <u>KKRQ</u> | 100.7 | IA | Iowa City, "The Fox" |
| 1755 <u>WGVY</u> | 105.3 | MN | Cambridge, "Drive 105" |
| 1800 <u>KULO</u> | 94.3 | MN | Alexandria, calls, x-KMSR |
| 1806 <u>KKSI</u> | 101.5 | IA | Eddyville, "Kiss FM" |
| 1809 <u>KBOE</u> | 104.9 | IA | Oskaloosa, calls, k |
| 1814 <u>KCRR</u> | 97.7 | IA | Grundy Center, calls |
| 1816 <u>WMT</u> | 96.5 | IA | Cedar Rapids, "Mix 96.5" |
| 1820 <u>KSKB</u> | 99.1 | IA | Brooklyn, g |
| 1822 <u>WCOY</u> | 99.5 | IL | Quincy, k, calls |
| 1839 unID | 93.5 | ?? | ??, g |
| 1850 <u>KUNI</u> | 90.9 | IA | Cedar Falls, calls |
| 1859 <u>KESD</u> | 88.3 | SD | Brookings, SD Public Broadcasting |
| 1900 <u>KNCM</u> | 88.5 | MN | Appleton, MN Public Radio |
| 1900 <u>KNSR</u> | 88.9 | MN | Collegetown, calls |
| 1909 <u>WWJO</u> | 98.1 | MN | St. Cloud, "98 Country," "St. Cloud's country music station" |
| 1913 <u>KEGK</u> | 106.9 | ND | Wahpeton, "Eagle 106.9.com" |
| 1915 <u>KGOR</u> | 99.9 | NE | Omaha, spot for Jim's Dodge in Omaha |
| 1917 unID | 103.7 | ?? | ??, MN, NE, SD, ND, k |
| 1921 unID | 103.9 | ?? | ??, translator? MN, IA, ND, SD, ID'ed as "100.7 Smooth Jazz" and "The Valley's Smooth Jazz" |
| 1924 unID | 103.9 | ?? | ??, g |
| 1931 <u>KNLV</u> | 103.9 | NE | Ord, calls |
| 1936 <u>KSSS</u> | 101.5 | ND | Bismarck, "The Rock & Roll Station," spot for Bismarck Heat and Air |
| 1937 <u>KACL</u> | 98.7 | ND | Bismarck, o, "Cool 98.7" |
| 1938 <u>KZZS</u> | 98.3 | WY | Story, "The Peak," r |
| 1940 <u>KJJK</u> | 96.5 | MN | Fergus Falls, calls |
| 1946 <u>KQAA</u> | 94.9 | SD | Aberdeen, "94.9 FM," "Cool 95," o |
| 1954 <u>KELO</u> | 92.5 | SD | Sioux Falls, "92.5 KELO" |
| 1956 <u>KIZZ</u> | 93.7 | ND | Minot, "Z-94" |
| 1958 <u>KYYZ</u> | 96.1 | ND | Williston, "Z-96," "Country Thunder" |
| 1959 <u>KDPR</u> | 89.9 | ND | Dickinson, calls |
| 2028 <u>KDBL</u> | 92.9 | WA | Toppenish, "The Bull" |
| 2101 <u>KBTC</u> | 91.7 | WA | Tacoma, calls |
| 2108 <u>KAST</u> | 92.9 | OR | Astoria, "KAST 92.9" |

Got lucky and caught some excellent Es. 7/12 on 103.9 I'm sure it was a translator, but who? Could have been a station from out west here being translated via Es! Hope 2004 has a few days of hectic Es!



Doug Smith - W9WI - 1385 Old Clarksville Pike - Pleasant View, TN
37146-8098 - w9wi@w9wi.com - www.w9wi.com

| | | | |
|------------------|-------|----|---|
| 0617 <u>KZLE</u> | 93.1 | AR | Batesville, local ad 261 |
| 0628 <u>KSSN</u> | 95.7 | AR | Little Rock, "Kissin' 96" 322 |
| 0715 <u>KLOZ</u> | 92.7 | MO | Eldon, Camdenton ad 330 |
| 0725 <u>KMSX</u> | 94.9 | AR | Maumelle, Riverside Acura ad 318 |
| 0802 <u>KWCK</u> | 99.9 | AR | Searcy, spot for Crane Kia in Benton 279 |
| 0850 <u>KXMO</u> | 95.3 | MO | Owensville, "95-3 KXMO" 265 |
| 0852 <u>KBZR</u> | 95.9 | AR | Harrisburg, "Jonesboro's new source for rock" 208 |
| 0901 <u>KWRD</u> | 100.7 | TX | Highland Village, legal ID, "Christian talk radio" 585 |
| 0913 <u>KRAV</u> | 96.5 | OK | Tulsa, legal ID, ment of 81 st & Riverside in Tulsa 501 |
| 0934 <u>WJDQ</u> | 101.3 | MS | Meridian, AT40, promos for "Q Morning Zoo" and "Hollywood Dirt" 296 |



John Tudenham – Joplin, MO

Onkyo T4087 tuner with a 6 element Radio Shack antenna at 22'

Didn't have much time to DX as had a breakfast meeting with the local ham club, but made one good catch at 0855 CDT 4/17. Identified as a new station on 105.1 was KMMW Maljamar NM with ads for Ruidoso area. Station has several translators in the mountains of southern New Mexico. Estimated distance was about 600 miles, one of my best tropo catches and the first NM on tropo.



William McGuire – Cheverly, MD

DX-398

| | | | |
|------------------|-------|----|---|
| <u>3/2 Tr</u> | | | |
| 1905 <u>WSMJ</u> | 104.3 | MD | Baltimore, "Smooth jazz on the new 104.3," ID |
| 1930 <u>WARX</u> | 106.9 | MD | Hagerstown, "Oldies 106.9" |
| 1937 <u>WCEM</u> | 106.3 | MD | Cambridge, station promo, "The Heat" |
| 2220 <u>WLSA</u> | 105.5 | VA | Louisa, k, ID, ad |
| 2235 <u>WAFX</u> | 106.9 | VA | Suffolk, local ads, |

2243 WKJS 104.7 VA "Classic Hits 106.9, the Fox"
 Crewe, promo for concert in Richmond
 2250 WNVZ 104.5 VA Norfolk, "Z-104"
 2302 WRXL 102.1 VA Richmond, Loveline, "The X," RDS

3/3 Tr

2010 WAYZ 104.7 MD Hagerstown, "Today's hottest country," ID

3/25 Tr

2120 WLWW 105.5 MD Salisbury, "The Wave"
 2126 WQHQ 104.7 MD Ocean City, Delilah

3/29 Tr

1924 WRAR 105.5 VA Tappahannock, promo for local event, ID



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

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

3/19 Tr

2241 KRRQ 95.5 LA Lafayette, "Q95-5," spot for local Toyota dealer

2303 KBON 101.1 LA Mamou, calls, Cajun mx

2309 KRRV 100.3 LA Alexandria, promo

4/16 Tr

0655 KAGT 90.5 TX Abilene, "Gospel 90.5"

0704 KDCD 92.9 TX San Angelo, local ment
 0718 KBST 95.7 TX Big Spring, wx for west TX
 0726 KYZZ 100.1 TX San Angelo, "Tejano 100.1"
 0733 KSJT 107.5 TX San Angelo, calls
 0746 KOXE 101.3 TX Brownwood, local nx
 0747 KHXS 102.7 TX Merkel, local KJYO nulled enuf to finally get something else on this frequency!

4/17 Tr

0028 WBHY 88.5 AL Mobile, "Power 88," CCM
 0115 WZNF 95.3 MS Lumberton, spot for Treasure Bay casino, "Z-93"

0716 WTKX 101.5 FL Pensacola, "TK-101"

0720 WABB 97.5 AL Mobile, calls, spots

0752 WYCT 98.7 FL Pensacola, promo for remote in Milton

0754 WMXI 98.1 MS Laurel, Sporting News Radio

0757 WDFX 98.3 MS Cleveland, AFR

0757 WSRR 98.1 TN Millington, "The Cat"

0827 WBLX 92.9 AL Mobile, "BLX"

Finally, I'm down to 2 frequencies with only one station logged.....94.7 and 100.5. I was able to get a decent null on local KJYO 102.7 4/16 and found that by tuning to 102.75 I could get enough of KHXS to identify it.



From the Editor

Looks like the season is off to a fine start, at least in this part of the world. Bill Hepburn's tropo maps keep looking better and better. Now with a little Es we'll really be off and running. Send those reports in and let everyone know what you've been hearing! See you next month.....

FM News Continues from Page 16

Some news and notes:

- The "Jack FM" format makes it to the United States for the first time on Denver market move-in KKHI 105.5. They are playing music from the 70s up to now and have launched a TV campaign. Nassau acquired WMTW Broadcast group's stations in Maine and quickly made format changes to them. WTHT-107.5 flipped to "Frank FM" as a classic hits station, WMTW-FM and WQEZ are simulcasting as classic rock, and WTHT's country format moves to WMEK-99.9.
- 105.3 in Norfolk shifts to R&B as "KissFM", but not as a Clear Channel hybrid.

Otherwise, a relatively quiet month. Most format changes are usually out of the way before the spring book. I was surprised there wasn't as many as in years past, but it's all good.

Anyone that can assist in getting me news of Canada format changes; it would be very much appreciated.

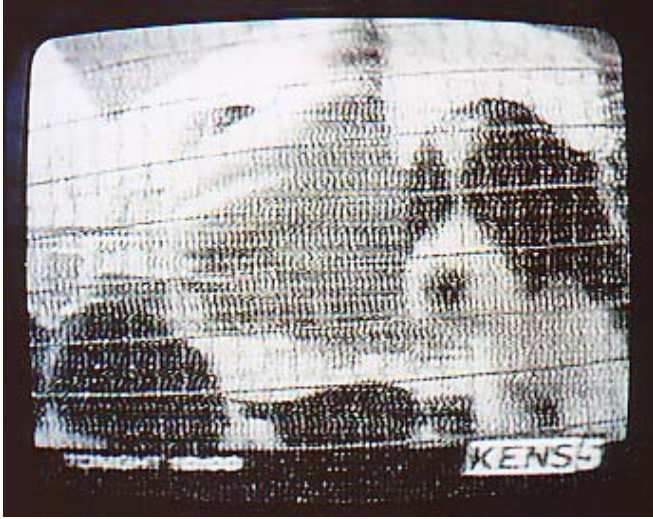
Thanks for the comments and all of the positive feedback on last month's edition of FM news. They are much appreciated and indicative of why I took this position. As always if you ever have any feedback, feel free to IM/email or snail mail me.

Happy Memorial Day and thanks to all of our nation's veterans. See you next month. - Adam

May 2004

Maybe it's a coincidence, but here it is May again, and we're featuring photos from Aaron Mitterling of Warsaw, IN.

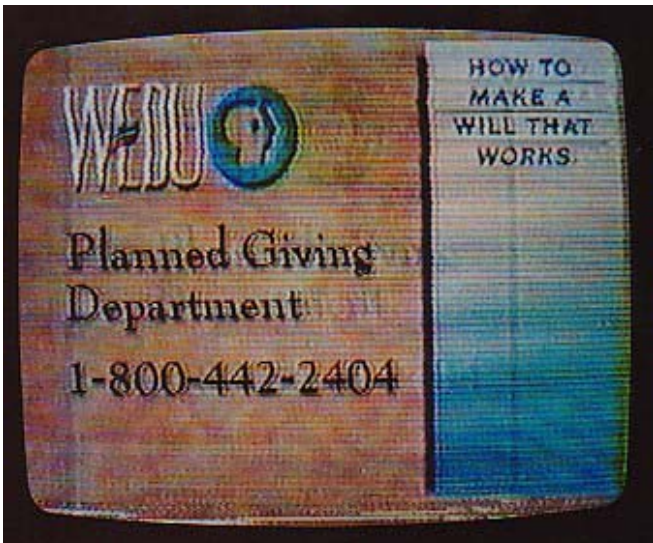
Equipment: 1997 Orion Color TV, Radio Shack VU-190XR VHF/UHF/FM Outdoor Antenna, RS rotor, and RS 20 dB preamp.



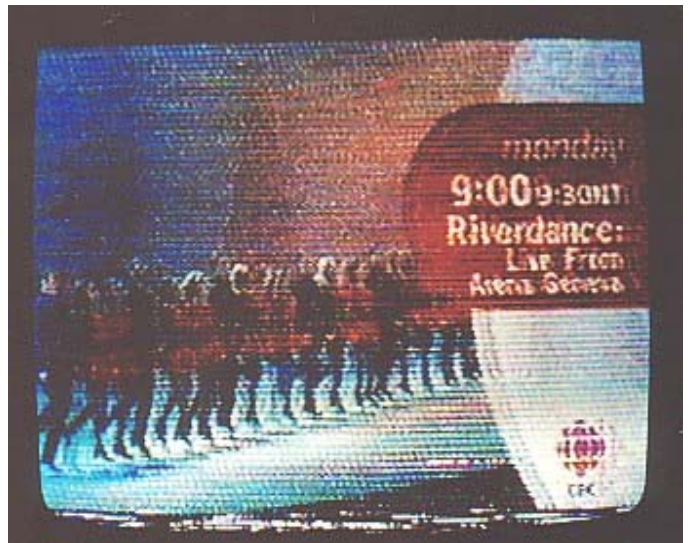
KENS-5 San Antonio, TX
1100 mi Es seen 5/13/03



WEDU-3 Tampa, FL
930 mi Es seen 5/21/03



WEDU-3 Tampa, FL
930 mi Es seen 5/25/03



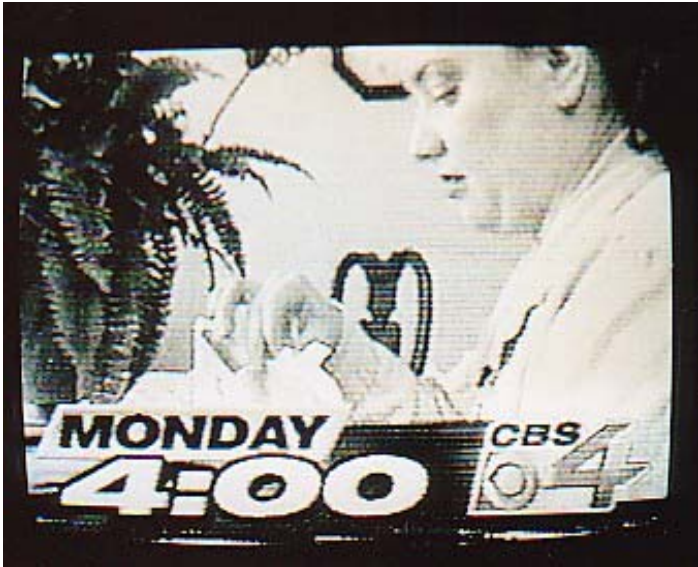
CBHT-3 Halifax, NS
1110 mi Es seen 5/25/03



WPTV-5 W. Palm Beach, FL
1080 mi Es seen 5/25/03



KCNC-4 Denver, CO
1000 mi Es seen 5/30/03



WFOR-4 Miami, FL
1130 mi Es seen 6/14/03

Aaron's comments: "2003's Es season was definitely a strange one, not necessarily a bad one but from what I observed a somewhat better season than 2002. Es activity in Northern Indiana was above average from mid May to early/mid July. After that...it just vanished. Even the minor winter peak didn't bring much."

Here's a couple more from Jeff Kadet of Macomb, IL:



WHAS-DT-55 Louisville, KY
296 mi Tr seen 8/26/03
@ 0345 CT



WITI-DT-33 Milwaukee, WI
228 mi Tr seen 8/19/03
@ 2300 CT

And here's a screenshot of a new logo of YSR-2 San Salvador, El Salvador, provided by Humberto Molina of San Salvador. Those of you in the southern states, be on the lookout for it!



73's,
JEFF



SATELLITE NEWS

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

This month a highlight of the satellites viewable at this location and a few changes in services. I will move from west to east in my listing as seen in Baltimore.

- 139 West - AMC 8 - also called in the past Aurora - basically beamed to Alaska
- 137 - AMC 7,
- 135 - Satcom C4,
- 133 - Galaxy 1R ,
- 131 - Satcom C3 (soon to be replaced),
- 129 - Intelsat Americas 7 IA7 (was Telstar 7 is just very recent name change and will apply to most all Telstar birds),
- 127 - Galaxy 13 C band with Horizons 1 on KuBand,
- 125 - Galaxy 5,
- 123 - Galaxy 10R,
- 121 - Intelsat Americas 13 IA13 and EchoStar 9,
- 119 - EchoStar 7 and DirecTV5,
- 118.7 - Anik E2 (inclined orbit),
- 116.8 - Satmex 5,
- 115 - XM Rock (DOES ANYBODY RECEIVE THIS OTHER THAN THROUGH THEIR UNIQUE AUTOMOBILE EQUIPMENT),
- 113 - Solidaridad 2 (does anybody receive this one in the southwest),
- 111.1 - Anik E2R (NEW and carries the French Star Choice Programming),
- 110 - DirecTV 6, EchoStar 6, and EchoStar 8,
- 107.3 - Anik F1 - Star Choice on the KuBand side of this bird,
- 105 - AMC2 (NEW),
- 103 - AMC 1,
- 101 - AMC 4 and DirecTV1R,2 and 4S,
- 99 - Galaxy 4R,
- 97 - Intelsat Americas 5 IA5,
- 95 - Galaxy 3,
- 93 - Intelsat Americas 6 IA6,
- 91 - Galaxy 11 and Nimiq 1 (Ku),
- 87 - AMC3, 85 - AMC9 and XM Roll,
- 82 - Nimiq 2 (New), 79 - AMC 5,
- 77 - Intelsat Americas 8 IA8,

- 72 - AMC6,
- 63 - Estrela do Sul testing and will have a few good footprints into the East at least,
- 61.5 - EchoStar 3 and Rainbow 1,
- 58 - PanAmSat 9,
- 55.5 - Intelsat 805C,
- 53 - Intelsat 706,
- 50 - Intelsat 705, 45 - PanAmSat 1R,
- 43 - PanAmSat 6, 6B, 3R, 40.5 NSS 806,
- 37.5 - Telstar 11 and Satcom C1,
- 34.5 - Intelsat 903,
- 31.5 - Intelsat 801,
- 30 - Hispasat 1C and 1D,
- 27.5 - Intelsat 907,
- 24.5 - Intelsat 905,
- 22 - NSS 7, 18 - Intelsat 901,
- 15 - Telstar 12,
- 12.5 - Atlantic Bird 1,
- 11 - Express 3A,
- 8 - Atlantic Bird 2 and French Telecom 2C

That's the current list and now for a few brief changes -

- Galaxy 13** - 126 - Starz Encore HDTV East, 128 - Starz Encore West HDTV.
- Galaxy 5** - Spike will move to Galaxy 1 - 18 in late May or June.
- Galaxy 10** - delete the following Pay-Per-View 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 325, 326, 330, 334 and 336. 335 - Hot Bodies 2 is now just Hot Bodies.
- Anik E2R** - does anybody know the web site where a channel listing can be found.
- Galaxy 11** - 6 - delete Game Show Network - now on Galaxy 4 Ku at 643.

That's all for this month = see you in 30.
Good DX and 73's

WTFDA EMAIL REFLECTORS

Enhance your DXing experience! Entertaining and informational.

For WTFDA members

- | | |
|--|---------|
| The WTFDA list... send an email to WTFDA-subscribe@topica.com | 166subs |
| The WTFDA DXalert list... send an email to WTFDA2-subscribe@topica.com | 34subs |
| The WTFDA AM DX list... send to WTFDA-AM-subscribe @topica.com | 61subs |

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



Beyond FM
 Beyond TV
 USA – CANADA
 Weather Radio Monitoring

Submit weather band loggings and weather radio news to
 Jason Koralja at: jkbi01@hotmail.com (Subject: WXDX)

May 2004

Weather Radio Frequencies

| | | | |
|-----|-------------|------|-------------|
| WX1 | 162.550 MHz | WX6 | 162.500 MHz |
| WX2 | 162.400 MHz | WX7 | 162.525 MHz |
| WX3 | 162.475 MHz | WX8* | 161.650 MHz |
| WX4 | 162.425 MHz | WX9* | 161.775 MHz |
| WX5 | 162.450 MHz | * = | Canada Only |

NEWS: March 5 to April 22

FREQUENCY CHANGE – station WNG58 in Avalon, CA has moved to 162.550
 CITY CHANGE – station WXL58 is now listed as Chapel Hill, NC

DX LOGGINGS (March 5 to April 22)

Jason Koralja
 Surf City, NJ
 Uniden Bearcat BC890XLT
 Radio Shack Discone Antenna

March 28, 2004 162.500 – WXX97 – Sudlersville, MD – 96 miles

Loggings for February should be submitted before April 15th.

COLUMN NEWS

I want to feature YOUR TOWN as the listening site of the month! Please send me YOUR **non-dx** loggings before April 15 using the format below.

LOCATION OF THE MONTH

A monthly feature highlighting weather radio reception around the country during normal reception conditions.

Hazelwood, MO:

| Frequency | Station | City | Quality |
|-----------|---------|------------------|--------------|
| 162.400 | WXJ75 | Springfield, IL | Poor |
| 162.400 | WXL45 | Columbia, MO | Poor |
| 162.425 | KXI79 | Hillsboro, IL | Good |
| 162.450 | KXI70 | Jerseyville, IL | Very Good |
| 162.475 | KXI49 | Salem, IL | Good to Fair |
| 162.475 | WXJ71 | Peoria, IL | Fair to Poor |
| 162.475 | WXX82 | Hannibal, MO | Fair to Poor |
| 162.500 | KXI46 | Shelbyville, IL | Fair |
| 162.525 | WXM90 | Jacksonville, IL | Fair to Poor |
| 162.525 | WWF75 | Bourbon, MO | Fair to Poor |
| 162.550 | KDO89 | St. Louis, MO | Excellent |

(Submitted By: Eric Bueneman (N0UIH), Hazelwood, MO)

WEATHER RADIO LINKS

www.weatherradio.info

www.nws.noaa.gov/nwr/

WEAK SIGNAL TECHNIQUES PART III

BOB COOPER

THE MATH OF LARGE ANTENNA ARRAYS

Antennas are measured for several characteristics and these numbers are published as specifications. Before you can paper-design a deep fringe array for maximized forward gain, there are things you need to know about the individual antennas going into the array. It would be helpful to know:

- 1) Antenna forward gain
- 2) Antenna impedance
- 3) Antenna front-to-back ratio
- 4) Antenna front to side nulls: how deep and where located

Forward Gain is typically stated as a number; "9.5 dB" is an example. If this is the entire data sheet statement, it falls short of being adequate. "9.5 dB gain when compared to what reference antenna?" It is common practice to refer forward gain to a resonant dipole or half wavelength antenna cut for the same frequency/channel. If this is the actual reference, then the antennas published gain would be more properly stated as "9.5 dBd" with the last "d" standing for dipole.

Some manufacturers compare their antenna gain to a mathematical reference known as an isotropic source. If this is their choice, the published spec should read "9.5 dBi" where "i" stands for isotropic source antenna. In no case should the gain be simply listed as "so-many dB" since gain is a relationship between one known reference antenna (dipole or isotropic) and the stated antenna.

Isotropic gain and gain compared to a dipole are not the same. The same antenna properly compared to isotropic and dipole will have 2.14 dB more gain when referenced to an isotropic source. When you are considering two antennas, and do not know what their stated gain compares to, there is no way to evaluate the performance of the two antennas on paper.

Antenna impedance is often calculated rather than measured and not very carefully at that. In some circumstances the impedance (ie., the type of match provided to a transmission line) quoted is best case in a log or multi-channel yagi antenna; ie., the most favourable match at the optimum point within the antenna's design bandwidth.

Unless the antenna is a true log-periodic design, the impedance of the antenna will fluctuate over a wide range through the design band (or group of channels); there's no other way for a yagi design to function no matter how cleverly it is designed. And even log-periodics if overly ambitious (ie.. attempting to cover more than a single frequency-octave) have 'match' problems.

Bottom line on match? A well designed single channel yagi can provide an acceptable match (transfer of energy to the feedline over as much as one channel in band I; several (as many as four) channels in band ifi. And, a well designed log-periodic covering no more than a frequency octave (ie., 45-90 MHz, 115 to 230 MHz but not 45 to 230 MHz) can be well matched. Claims to the contrary are suspect.

Antenna front-to-back ratio. Rejection of co-channel or adjacent channel signals coming from the rear of the antenna depends totally on the F to B (f/b) ratio. The ability to reject rear-side signals is a function of spacing between the driven (dipole) element and reflector, the length of the reflector, and (surprise) the spacing between the dipole and the first director. In a multi-channel antenna, the f/b ratio can only be best on one of those channels (the one channel where the spacings and length are optimized). On all other channels, the f/b is degraded. When you are counting on the published number for an installation to work, check out the performance yourself by measuring the signal gain from the front (read signal level on a signal level field strength meter), rotating it to the rear and reading it again. The on-scale difference in dB is your measured front to back (f/b).

Antenna front to side (nulls). Possible to measure if you have an antenna test range; not possible on your roof. Nulls are modified by the presence of guy wires on the mast, and the mast itself; a metal roof under the antenna or next door, a heavily leafed tree on one side or a car

parked in the driveway. In other words, breathe the wrong way, wear the wrong coloured tie or eat the wrong cereal for breakfast and you can move the nulls around. Getting rid of nulls is what co-channel elimination is all about. Doing it repeatedly, under pressure, separates the amateurs from the professionals. A published polar plot pattern of the antenna's 360 degree gain, showing peaks and nulls, is a starting point for analysis: if such a plot exists. But in the real world on top of a customer's roof, those tiny little nulls and peaks off-antenna-centre will most assuredly not be where they appear on paper. Sorting it out is what you get paid to do. See Tech Bulletin 9301. Which brings us to a starting point for the assembly and fine-tuning of multiple stack antenna arrays.

FIRST A TEST

Fringe-area TV reception antenna arrays in Europe and North America are an order-of-magnitude larger than anything seen in New Zealand. The most massive arrays are found at cable television companies where one master antenna is 'shared' (for a monthly fee) by hundreds or thousands of viewing homes. In North America today, according to the National Cable Television Association (NCTA), there are more than 8,000 cable television systems functional. Indeed, more than 60% of all American homes are now connected to cable TV systems. This is far more practical for the viewer than you might first suspect.

1) The average U.S. cable system brings just over 35 TV channels into the home. Of these 35, on average 16 are received 'off-air' through the antennas of the cable firm from TV transmitters typically within 200 km of the cable community. The balance are delivered to the cable system via C and Ku band satellite, or created locally at the cable company's headend site (signal processing centre).

2) Cities such as Seattle and San Francisco are text-book cable communities: laced with hills, valleys and tall buildings which block direct line of sight transmission from the local VHF and UHF television transmitters even though they may be less than 10 km distant. The rough terrain and man-made obstacles simultaneously cause high signal attenuation between the transmitter and home rooftops, and, create badly ghosted pictures with severe reflections from these same buildings and hills. Add to this from the community itself millions of decibels of man-made interference, and you have the 'textbook' cable community. It may strike you that Wellington has nearly identical problems. Viewers unable to see the primary transmitters without obstruction suffered poor reception until cable began in the 1960s.

3) In rural areas where the terrain also blocks direct reception, or distance from the transmitter(s) reduces signal levels to low levels, cable entrepreneurs have created cable systems by either developing sizeable off-air-antenna receiving systems on hill/mountain tops near to the community they will serve, or by building towers as tall as 250 metres above ground to provide an elevated platform from which large antenna arrays can be mounted for reception no individual home owner could afford to duplicate from his rooftop.

The shared nature of cable TV in Europe and North America is an economy of scale; where one or two or even a dozen families probably could not afford the necessary towers, antennas and signal processing equipment to pick up and amplify six or sixteen transmitters perhaps 200 km distant, by selecting communities where the cost of the installation can be amortized over hundreds or thousands of homes in a reasonable period of time (such as 5 to 7 years), a cable business can be launched.

What we learn from this is that the technology and the equipment required to bring first or new channels of television to rural or underserved Kiwis is commonly available. Some of this technology finds its way into the following material.

And the test.

With nearly 1,100 TV transmitters at just under 500 'sites' in New Zealand, it is inescapable that some signals find their way to virtually every nook and cranny of the country. Granted the signal(s) you expect to find may not be present at the rooftop level of your customer's home. Granted it may take more than a \$100 antenna stuck on a 2 metre mast to bring an acceptable signal into the home. Granted the customer by him or herself may not be able to find the signal and bring it to the TV set without some professional help. But we are here to assure you that if you are willing to deviate from normal rooftop practices and spend some time developing your own skills, there is considerable new business out there for the installing stockist who is willing to capitalize on the un or underserved homes strong desire to have quality, multiple-channel television reception.

The first step is for the installer to test for signals. Not merely at the convenient rooftop level of the would-be viewer, but in the vicinity of the viewer.

1) That hill, which logic tells you is blocking direct reception, is the first place to test. Carry a test antenna, a short length of coaxial cable, a small battery operated TV and suitable field strength meter to the top of the hill. And search for signals; not just the transmitters you believe to be nearest to you in the appropriate direction, but in all directions on all channels. In the extreme rough (ie., hilly and mountainous) terrain of New Zealand, VHF (and UHF as we will discover) signals often appear in very surprising places up to 300km from their points of origin.

An example. TV3 ran out of funds before it was fully extended to all of the main or primary transmitter sites operated by BCL for TVNZ. On North Island, TV3 is carried north from Auckland (Waiatarua site) to Horokaka. TV3 ends (going north) at Horokaka; other than low power (under 100 watt) local transmitters serving Whangarei from the Parahaki site. TV 1 and 2 continue north via first Hikurangi, and then Maungataniwha with the latter sitting astride a 567 meter ridge overlooking all of the Far North and up Cape Reinga. Viewers served by Hikurangi (26,250 people) and Maungataniwha (17,250 people), as well as the 18 translator/repeater sites fed by Hikurangi and Maungataniwha (7,400 people), are outside of TV3 coverage..

The airline distance from Horokaka to Kaitaia is 118 kilometres. In addition to this distance to this distance (nearly 2 times the normal reach of Horokaka) there are multiple mountainous ridges spaced along the direct path between the two points as much as 62 metres higher than the Horokaka transmission site. Even if the terrain between Horokaka and Kaitaia was dead flat, for Kaitaia to receive TV3 on channel 9 (vertical) would require a Kaitaia reception tower 281 metres above ground to reach the TV3 signal; such are the 'rules' of VHF line of sight transmission.

Yet in some portions of Kaitaia an estimated 5% of the town's residents have TV3 reception; day in and day out, without regard to changing weather nor 'skip' conditions. The signal is solid to within a couple of dB of fading at all times; on 5 element yagi antennas 5-10m above ground.

The answer to this 'mystery' is something known as knife-edge refraction; a VHF(UHF) propagation phenomenon first studied in detail at an Alaskan location where it was found 100 MHz region signals intercepted near the path mid-point by 6,204 metre high Mt. McKinley were 'rock solid' at a location near Tanana, Alaska some 420 kilometres from their origin point in Anchorage. Subsequent studies of knife-edge refraction conducted by several universities in North America provided an explanation for the observations.

1) When a mountain peak or ridge of elevated terrain occurs along the VHF (UHF) path between two points which normally cannot and could not communicate with each other (even if the terrain were flat between the two locations), the peak or ridge acts like a passive repeater refracting the signal(s) over its ridgeline much in the same way a quartz prism can seem to bend lightwaves.

2) The terrain conditions for this to happen are now well understood and they include: a) both the transmitting site and the receiving site must be able to see (being line of sight to...) the intervening peak or ridge, b) Ideally the peak or ridge will have a sharp (well defined) edge (like a knife; hence, the name knife-edge) which is perpendicular to the path of the signals.

Ie., the signal will travel through free space (without being stopped by any terrain) to the well-defined (knife) edge where the physical shape and on-path placement of the ridge/mountaintop will change the direction of travel of the wavefront: bending it downward towards the horizon in the direction opposite (ie., approximately 180 degrees from) the direction of arrival to the ridge. Now the refracted signal continues on its bent journey to come back to earth after going through more free (non-interrupted) space. Because the path is line of sight between the transmitter and the knife-edge point and it continues line of sight to the ultimate receiving location, there is virtually no fading nor signal variation from changing weather conditions.

A mathematical analysis of VHF and UHF knife-edge refraction paths also reveals the level of signal present at the ultimate receiving location approaches the level of signal you would expect to find at the same location if one constructed a tower (or flew in an airplane) up to the elevation required to directly intercept (ie.. line of sight) the same signal above the ultimate reception point. In other words, the efficiency of knife-edge approaches 100% as a (re) transmission 'system'. It is a totally 'passive' repeater ... with gain!

Returning to Kaitaia and TV3: it should not surprise you to learn those viewers who happen to live within the well defined reception enjoy TV3 reception with nothing more complicated than their normal channel 6 and 8 antenna installed for TVs 1 and 2. This in spite of the fact that TV 1 and 2 arrive over a path less than 25 kilometres long while TV3 arrives over a path averaging 118 kilometres in length.

Reception zone. The placement of the intervening peak(s), the shape of the peaks (whether blunt-edged, or irregular in shape) and the location of the intervening knife-edge peak along the path (ie., whether precisely halfway along the path, or closer to one end than the other) all profoundly effect the size of the reception zone. Some zones are less than a few metres square while others may be several miles across. Your challenge, as an installer, is to first suspect such a knife-edge zone might exist, calculate where it might be (first done in the comfort of your office using Survey & Land Maps), and then finally going into the field with an antenna and field strength meter to devine the signal. Illustrations of good and bad ridge-crossing 'angles' appear on page 21 using Kaitaia as an example.

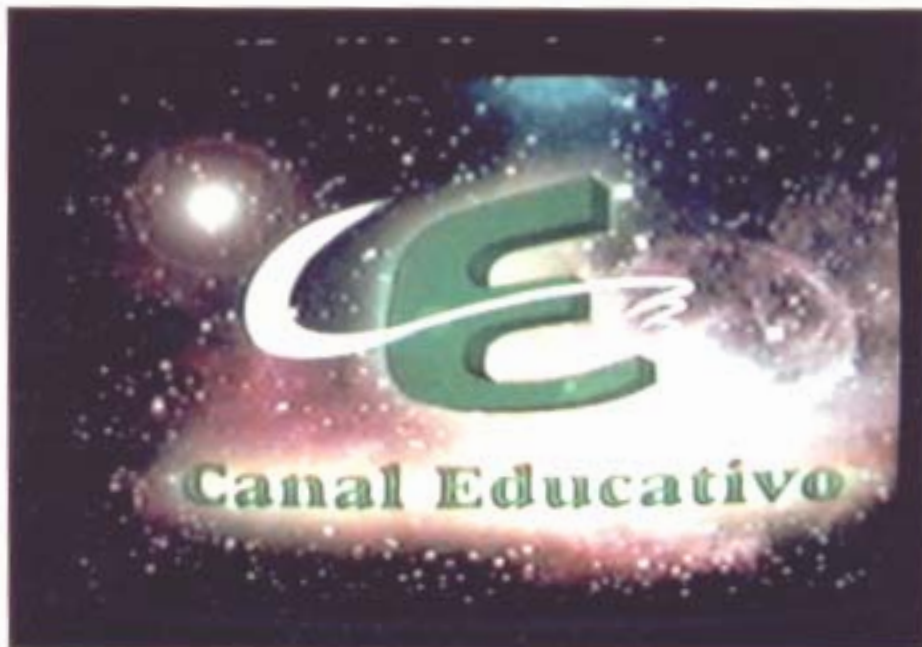
(To Be Continued)

MORE CUBAN TELEVISION

MORE OFF-AIR PHOTOS SENT IN BY JESUS PEREZ IN HAVANA, CUBA



TELEREBELDE (National Network) Havana City Chs-2 & 10



Canal Educativo (national network) Chs 4-12 in Havana

WANT TO SEE EUROPEAN TV THIS SUMMER?

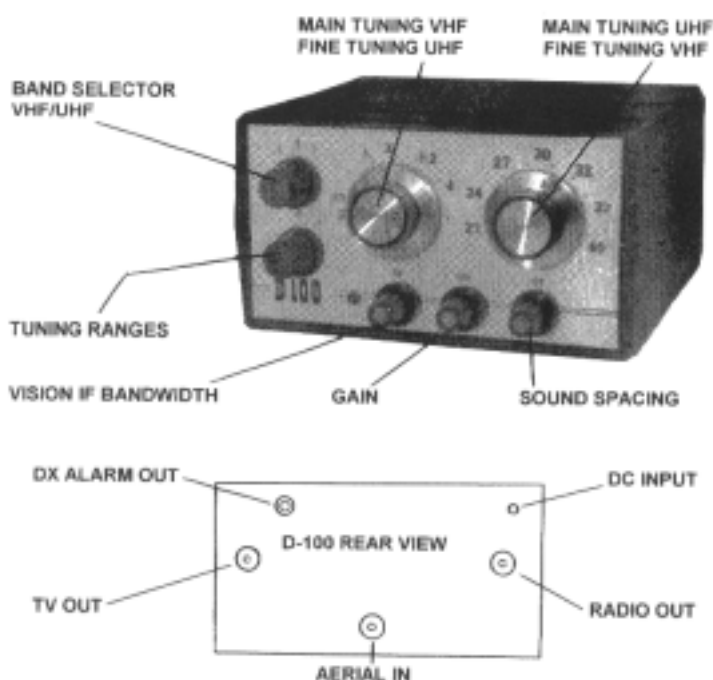
If so, be prepared. The best way to actually see channel E2 is with this unit.

The D-100 is a super sensitive, super selective converter box that covers channels A2 through UHF *PLUS* systems used in Europe.

Last year gave us plenty of multi-hop Es from the UK to North America on TV and FM. The problem is that to see European channel E2 on your television you must have something to tune down to the E2 frequency and the D-100 does just that.

Multi-system televisions just don't cut it. Those sets are lacking in both sensitivity and selectivity. The D-100 has both. As a matter of fact it's great for DXing our very own channels A2-A13 plus our UHF channels.

OPERATING INSTRUCTIONS FOR D-100 <DE-LUXE> DX-TV CONVERTER



In order to make it easier for North American DXers to order their D100 from Garry Smith in the UK without converting currencies, Garry has agreed to take payment by Western Union. No matter where you live, the chances are excellent that there's a Western Union agent near you whether it's in a supermarket, a pharmacy or some other outlet.

Here is how to order by Western Union. 1. Go to your nearest Western Union agent and tell them you want to send \$300 to Derby, England. You must specify Derby. 2. The money **MUST** be sent to Garry Smith, **NOT** HS Publications as shown in a previous VUD. 3. If the agent requests an address, the address should be 17 Collingham Gardens, DERBY DE22 4FS. Remember, Western Union charges you a fee to send money.

You will have to send/email Garry your full address with zip code and any security number Western Union gives you. Garry

cannot draw the money or mail the unit without this info. If you want you can mail the info to P.O. Box 501 and we'll email it to Garry when we receive it.

Garry will recalibrate the dials and modify the instructions in his users manual for use in North America.

Garry's email address is garrysmith@dx-tv.fsnet.co.uk

We hope these changes will make it easier for the people who want one to get one. Who knows what we'll be watching on channel E2 or R1 in the upcoming months!

Note: the D100 will tune channels E2, R1 and all US Channels from A2 through A65. Reception of weak signals on all VHF channels will easily beat that of most televisions and UHF reception will equal or surpass that of most televisions. The unit is extremely selective and sensitive. Tuning is extremely smooth. All channels can be fine-tuned. Gain and bandwidth are adjustable to suit your own reception conditions. Unit requires an external AC adapter available from Radio Shack (P/N 273-1662A) and two F to PAL adapters also available at Radio Shack.



WORLDWIDE TV-FM DX ASSOCIATION

2004 Annual Convention

Omaha, NE, July 30-August 1, 2004

Make plans now to attend the annual WTFDA convention, hosted this year by Matthew Sittel and Michael Hawk.

Our host location for the event is the Park Plaza Regency Lodge, located at 909 South 107th Avenue in Omaha, conveniently located one block east of the I-680 exit at Pacific Street. The hotel room rate for the convention is \$79/night for two doubles or one queen bed. This rate includes a complimentary hot breakfast with waffles made to order. All rooms feature a microwave, refrigerator, coffee maker, iron, in-room safe and radio with CD player. There is also a small business center with internet access. To make your reservations and receive the special rate, the hotel has asked that you call them directly at (402) 397-8000. *Be sure to mention WTFDA to get the \$79 rate; we have a block of rooms set aside for us at this rate!*

We have received permission from Park Plaza to set up antennas. Feel free to bring along your favorite DX equipment and try it out-hopefully we'll have some DX! Bring along video or audio tapes and photos of your DX to share; we'll have equipment set up to share your catches.

The registration fee for the convention is \$28, which includes the Saturday night banquet on-site at the Park Plaza. You can purchase additional banquet tickets for spouses or other guests at the rate of \$24 per additional meal.

If you plan on attending, please take a moment to fill out the form below and mail it along with check or money order for fees to **Matthew Sittel, 15013 Eureux Cir., Bellevue, NE 68123**. Registration deadline is June 30, 2004. If you have questions e-mail Matt at mcsittel@cox.net or Mike at thisisatest22@yahoo.com.

We hope to see YOU at WTFDA 2004 Omaha!

CONVENTION 2004 REGISTRATION FORM



Name : _____

Address: _____

E-mail: _____

| | Fee | Number | Total |
|----------------|------|---------|---------|
| Registration : | \$28 | x _____ | = _____ |

| | | | |
|-----------------------------|------|---------|---------|
| Additional banquet tickets: | \$24 | x _____ | = _____ |
|-----------------------------|------|---------|---------|

Total amount enclosed (check/money order, payable to Matthew Sittel): _____