

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: TOM BRYANT, GREG CONIGLIO, BRUCE HALL, DAVE JANOWIAK AND MIKE BUGAJ.

VHF-UHF DIGEST ELECTRONIC EDITION NOV 2001

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CHECK THIS LIST!

In order to keep your VUD arriving at your home without interruption, look for your name on this list. Your membership ends on the last day of the month shown. Renew *early!*

November

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Eastern FM DX – Keith McGinnis
Time Tunnel – Tom Bryant
Technical Topics – Mike Hawk
Renewal form and editors' addresses

This month we finally have the time and space to wind up Doug's column on PI codes that began in the September VUD. We find Tom Bryant's final installment on United States Television History done by Jeff Miller. What will next month bring? Mike Hawk offers a reprint of the *Nature of DX* originally written by Tim McVey in 1987. The first three of five pages are found here and we will finish up with them as the winter months go by.

We hope you enjoy these 36 pages. **Although we try, we cannot guarantee every column in the printed VUD will appear here.**



Find out about autumn F2 and E skip Fast!
Subscribe to the WTFDA list on Topica.com
Send that email now to: WTFDA-subscribe@topica.com

www.delphi.com/wtfda Delphi was once the home of WTFDA Chat. Now the WTFDA Forum on Delphi is a huge archive of posts from the Topica list sorted by topic and maintained by WTFDA member Jim Brown. Need to get info on a certain subject? Check out the WTFDA Forum and you'll find the information you need!





The Mailbox

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

NOVEMBER 2001

It's November, and here we are with another calorie-filled Mailbox column. This month our header has had a slight makeover as I banish the Times New Roman font from this page altogether and replace it with something called "Word Art". Just note that if there had been some DX the past few weeks and if I hadn't been bored out of my mind, I would not have done this. But it really was time for a facelift, the first in well over three years.

We start out the month with about 278 club members. We are, at this point, on a kind of plateau. It would be great to get us up to 300 club members. It can happen; it's just going to take more work, like word-of-mouth, arm twisting, nagging, free sample VUDs, etc. Ask everyone you know if they want a sample VUD. I have so many here that I'd love to get rid....I mean distribute them...to anybody who would be interested in the club. How about stocking stuffers for your AM radio DX buddies? Or your amateur radio friends? Get me addresses and I'll send them.

A few months ago the club was contacted by Scott Millick of the IL Amateur Television Club and asked if we could donate anything for their meeting in early October. At first we thought they would like a set of hardly used T-Fal cookware, but we settled for a free year membership in the WTFDA, including the WTFDA list. As of this time we don't yet know who took our offer, but we hope whoever did enjoys their stay in the WTFDA for the year.

MEMBERS AND MORE

This month we say hello to **Michael Friedel** who joins us from Pasadena, TX. We're glad to have you with us, Mike! Also, **Todd Emslie** in Perth, Australia rejoins the club as an Associate (list only) Member. Welcome Todd!

Over on the renewal side we have checks that won't bounce from **John Ridge** (NY), **Jeff Kadet** (IL) for 3 years, **Wayne Benkinney** (MI), **Fred**

MacCormack (MN), **Cliff Rames** (FL), **Marvin Shults**(IL), **George Hamer**(NY), **Jeff Kitsko**(PA), **Steve Branch**(IL) and **Steve French** (MN).

Thanks for staying for one more year!

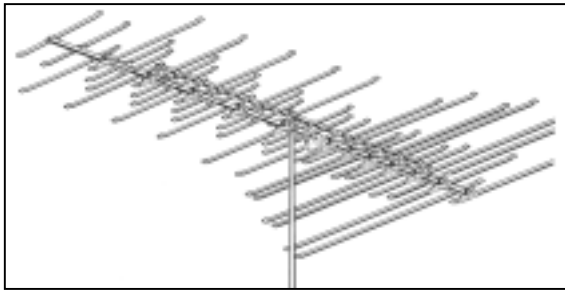
Mail has slowed down a bit this month. In the mail recently was a letter from **John Vervoort**(NY) with a rundown of the TV situation in the New York City area. Needless to say, NYC off-air VHF reception is still limited. Since the information John provided was time-sensitive, I posted the info on the WTFDA email list instead of waiting to post it here, where it might be old news by the time we read it.

I also have a letter here from **George Hamer**, another Brooklynite (or is it Brooklynite) regarding offsets and how they work and what equipment one needs to make use of them. As far as I know, the Icoms are used by TV Dxeers to tune in the offset frequencies. The R-7000, R-7100 and the R-8500 are supposed to be hot for this (I think). And why offsets? Offsets are there to help keep TV stations from interfering with each other during times of tropo. Offsets, for example, would help a NYC TV station (Ch4, for instance) minimize interference from Ch4 in Boston and/or Ch 4 in D.C. The system of offset frequencies was covered well on the WTFDA list and if I can find the posts I will try to print them here and mail them to George.

If you have never been to a WTFDA convention before, or if you did go to Boise and just couldn't get enough of it, do we have a deal for you! Your host **Frank Aden** has four hours of it on two VHS tapes and is offering both of them to you for the ridiculously low price of \$18.00 postpaid. Find out what Dxeers *really* do at DX conventions, uncensored and uncut! To order your copy email Frank at n7sok@aol.com or write Frank at 4096 Marcia Place, Boise, ID 83704.

Also our sympathies go out to **George Jensen**(MD) who has bought himself a new PC and is in the process of trying to make it behave. Remember this, George. Sometimes a good kick will work wonders.

NEW ANTENNA NEWS!



This month we have some breaking news from **Rich Wertman** regarding Winegard and their series of TV and FM antennas. In posts to the WTFDA list, Rich reported that Winegard has dropped their Chromstar line of TV antennas and has replaced it with their new HD (High Definition) line of antennas. Since all of their antennas received HDTV just fine, Rich believes it is just a marketing move on the part of Winegard. Rich reports, "A couple of weeks back I reported about Winegard's dropping of the Chromstar line in favor of a new line named High Definition Series. I just received my spec sheets from Winegard today and here is what I found.

First, the Prostar line remains intact with the exception of a few VHF-FM antennas being dropped. Remaining are the PR-5030 and PR-5000, now going to the HD series. All of the VHF and VHF/UHF combos still have 75 ohm inputs but they all now use a cross phasing design similar to Prostars. These use a truss type phasing that ran below and above the boom. I think that accounted for some gained directivity. It also looks like the positive lexan locks have been replaced with a Prostar type lock. They have eliminated all the wedge styles from the line.

The HD-8200/CA-8200 is finally UPSable. The Chromstar UHF yagis HD-9065, 9085 and 9095 don't appear to be much different. They still utilize the tri-linear feed design as does the V/U combos and they look identical to the CA line.

My summary would not be complete without looking at the new line, which will happen soon. However, it appears to me that Winegard did things similar to what Channel Master did to their line (however not as bad) by making the antenna cheaper but not lowering the price."

Rich says that Winegard is trying to sell antennas and stay competitive with companies like Radio Shack, whose line of antennas is being used by more installers each day.

At least we should be thankful that Winegard is still manufacturing television antennas. Channel Master discontinued their parascope series of antennas in the spring.

HOW I STARTED DXING

I bet you thought I ran out of these but yes, there are more. First we hear from **Fernando Garcia**. Fernando is known for tropo DX, not E skip, but he writes "I used to watch Es TV DX since I was a child from my location in south of state of Sonora, but never tried to get ID's. Later when I was in my teens I was seriously DXing shortwave and AM bands.

Then I tried to get some ID's on TV-DX, first ID's were from KBOI-2 (now KBCI) Boise and KRNV-4 Reno. This opened my eyes to TV DX as I thought my DX was coming from border Arizona (about 400 miles)." And the rest is history.

And **Jim Thomas** "I started fm dxing when I was 15...a friend showed me he could get 90.1 KCSC Edmond OK on an old Phillips tube radio (a true German model). I lived in central KS then. I thought something was wrong with his radio. (I was living) just northwest of Wichita, near Hutchinson."

And next **Jim Renfrew** "My first e-skip came around 1967 during a family vacation to northern Vermont. I brought a small b&w TV as I was already into TV DX'ing, but knew nothing about e-skip. I didn't even know about tropo, only noticing at home (in CT) that sometimes I got Philadelphia and Providence, and sometimes not. So one day I tuned into WDAF in Kansas City. I thought it was just a lucky reception.

The final chapter is that when I eventually ran across WTFDA and got the first newsletter I finally learned about e-skip. I thought I'd give it a try, and hauled an old TV up to the attic with cheap rabbit ears. I

immediately tuned into 2 and 3 from Louisiana. "This is easy", I thought at the time, not realizing that my current ratio of attempting DX and actually getting it on FM and TV is probably around 1% or worse!"

LAST BUT NOT LEASED

If you haven't noticed, we're heading into our slow season again, which is a great time to find your pen and paper and **write!** Have a great Thanksgiving and we will see you all next month -Mike

TV News

November 2001

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

<http://www.w9wi.com>

Abbreviations:

AF	Applied for (a new station)	PA	Proposed amendment to the table of allocations
CA	Class A status request/grant	PC	Power (or tower height) change on the air
CC	Call change	PG	Power (or tower height) change granted
CL	City-of-license change	PR	Power (or tower height) change requested
DE	Station deleted	QC	Channel change on the air
FC	Programming (format) change	QG	Channel change granted
GA	Granted amendment to the table of allocations	QR	Channel change requested
LC	License to cover (for changes or new station)	SI	Off the air ("silent")
NO	Not on the air	XC	Transmitter site change on the air
NS	New station granted permit	XG	Transmitter site change granted
NW	New station on the air	XR	Transmitter

Morongo Vly. 5 K05CU NS 0.35kw,

34-03-54/116-32-43

News:

Alaska:

Kodiak 11 K11UQ NS, facilities unknown.
(KDMD-33)

Alabama:

Athens 11 WTZT-LP XG 34-49-06/86-44-16
Dothan 25 W25CX NS 3kw, 31-16-07/85-23-13
Gulf Shores 55 WBPB NW 3750kw/308m,
30-36-37/87-36-26, WB.
Selma 29 WBIH NW 3900kw/408m,
32-32-27/86-50-33, religious.

Arkansas:

Batesville 23 K59FB QR, PR>150kw, XR
34-55-34/90-43-24 near
Marianna, AR
Batesville 26 K69GTQR, PR>130.6kw, XR
35-12-28/91-46-19 near
Searcy, AR
Batesville 33 K46EM QR, PR>130.6kw, XR
35-57-14/90-41-41 near
Jonesboro, AR
Fayetteville 36 KFFS-CA CC from K36EA
Fort Smith 46 KFDF-CA QR to ch. 10, 3kw; CC from
KPBI-LP
Fort Smith 32 KPBI-LP CC from KFDF-LP
Pine Bluff 18 KIPB-LP QG from ch. 65

Arizona:

Chloride 49 K49EULC for QG from ch. 64
Douglas 3 KBGF FC to Univision
Flagstaff 13 KDUO FC to Univision
Many Farms 49 K69AFQC from ch. 69, PC<4.07kw
Phoenix 29 KAET-DT PG>1000kw
Phoenix 35 KOND-LP PG>50kw
Phoenix 39 KDTP-DT NS 50kw/491m
Phoenix 43 K31DI LC for QG from ch. 31
Prescott 43 K43HA NS 18kw,
34-33-03/112-27-45 (TBN)
Tucson 32 KOLD-DT PR>750kw/1123m,
32-24-56/110-42-50
Tucson 48 K40AC PR>9.9kw

California:

29 Palms 23 KVMD-DT PG>225kw
Eureka 35 K35GM NS 10kw,
40-48-08/124-08-24 (Pappas -
Azteca?)
Modesto 27 KEXT-CACC from K27EX
Mojave 24 KTAV-LP LC for NS, 9.5kw,
34-32-45/118-12-48; CC from K24FG

California:

National C. 23 K61GH QR from ch. 61, 14.9kw,
32-42-57/117-09-44
Palm Springs 66 K66BM NW 10kw,
33-52-02/116-26-13
Paso Robles 21 K21EXFC to Univision
Redding 50 K65DJ QC from ch. 65, 45.7kw
Reedley 13 KCWB-LPLC for PG>3kw,
36-44-45/119-16-57
S. Barbara 17 KSBB-LP LC for QG from ch. 24,
1.07kw
S. Barbara 43 KTSB-LP FC to Univision
Sacramento 8 KBTB-LP PC> 3kw
Sacramento 23 KEZT-CA CC from K23ES
Sacramento 49 KSAO-LP LC for PG<0.7kw,
38-38-53/121-05-51
Salinas 33 KDJT-CA CC from K33DJ
Santa Clara 22 KAXT-CACC from K22DD
Santa Maria 35 K35ERFC to Univision
Simi Valley 33 KSMV-LP QG from ch. 44, 12.5kw,
34-13-32/118-03-52
Stockton 23 KMMW-L QR from ch. 47, 15.7kw,
37-57-24/121-17-15

Colorado:

Anton 45 K45FDLC from ch. 24, 0.48kw,
39-51-17/103-20-38
Anton 47 K47FT LC from ch. 26, 0.48kw
Anton 49 K49EXLC from ch. 28, 0.48kw
Anton 55 K55IB LC from ch. 30, 0.48kw
Broomfield 12 KBDI-TV PR<226kw/742m
Durango 20 new NS 8.43kw/94m,
37-15-45/107-54-07
(KIQX-101.3 tower, Smelter Mtn.),
//KRMA-6, PBS.
One competing application dismissed.
Durango 55 K55IX NS 0.5kw,
37-15-46/107-53-45 (TBN)
Grand Valley 28 K28HA QC from ch. 4, 0.36kw,
39-26-33/107-58-01
Idalia 16 K16EKQC from ch. 46, 0.54kw,
39-43-50/102-28-56
Idalia 18 K18FOQC from ch. 48, 0.54kw

Peetz 32 K32EXQC from ch. 60, 0.68kw,
40-53-31/103-13-45

Windcliff 28 K51AB QR from ch. 51, 38.4kw,
39-54-48/105-17-33
(northwest suburbs of Denver)

Windcliff 55 K69ATQR from ch. 69, 13kw

Wray 46 K46FF LC from ch. 58, 0.56kw

Wray 48 K48GA LC from ch. 60, 0.56kw

Colorado:

Wray 50 K50FJ LC from ch. 62, 0.56kw

Connecticut:

Hartford 46 WUVN-DT PG>130kw/457m

Delaware:

Dagsboro 9 W09CM NS 0.2kw,
38-33-08/75-13-23 (religious)

Laurel 8 W08DR NS 0.4kw,
38-32-58/75-33-59

Florida:

Jupiter 53 W53BS LC from ch. 9, 16.1kw,
26-47-59/80-04-33

Key West 10 W10CQ NS 3kw, 24-33-18/81-48-07

Marathon 21 W21CC NS 41.3kw,
24-45-35/80-57-22 (WEYS-22)

Marianna 51 WBIF NW, 1970kw/254m,
30-30-42/85-29-17 (Pax)

Panama City 8 WJHG-DT QR from ch. 42,
52kw/253m

Panama City 9 WPGX-DT QR from ch. 29,
130kw/264m, 30-13-45/85-23-20

Pensacola 45 WJTC-DT PR<457m,
30-35-18/87-33-16

Tallahassee 56 WBXT-LPCC from W56DV

Tampa 51 WRMD-LP QG from ch. 57, 14.9kw

Georgia:

Ambrose 36 W36CS NS 150kw,
31-34-00/82-58-15

Augusta 16 WBK-LPPR>150kw

Vidalia 14 W14CQ NS 2.5kw,
32-12-29/82-29-48 (TBN)

Vidalia 59 W59DS NS 2kw, 32-12-29/82-29-48
(TBN)

Guam:

Agana 34 K34FYNS 25kw,
13-29-20/144-49-39(TBN)

Hawaii:

Hanamaulu 6 K06NC NS 3kw, 21-56-10/159-26-43

Honolulu 27 KAAH-DT NS 262kw/580m

Lahaina 55 K55IWNS 20kw,
20-39-36/156-21-50(TBN)

Lihue 7 K07XE NS 3kw, 21-55-59/159-26-33

Lihue 21 K21FZ NS 10kw,
21-55-59/159-26-33 (TBN)

Lihue 42 K42FGNS 10kw,
21-55-59/159-26-33 (TBN)

Wailuku 51 KAUI-LP FC to religion

Iowa:

Mason City 18 KYIN-DT PG<200kw/649m,
43-22-35/92-50-03

Spencer (TBN) 63 K63GR NS 10kw, 43-10-37/95-08-01

Idaho:

Boise 20 K20GSQG from K10MY, 23.4kw,
43-44-23/116-08-14

Boise 21 KAID-DT NW 54.8kw/858m,
43-45-21/116-05-53

Boise 28 KBCI-DT NW 100kw/777m

Boise 31 K31FDLC from ch. 25

Nampa 24 KIVI-DT NW 51.8kw/858m

Twin Falls 5 K05IX PG>0.5kw,

Illinois:

Champaign 46 WBXC-CA PR>15kw, 40-06-40/88-14-35

Quincy 27 WQEC PG>2000kw/344m,
but request dismissed (??)

Rockford 8 WQFL-CA CC from W08CM

Salem 29 W29CILC from ch. 28

Sterling 48 W48CK LC from ch. 61, 15.8kw

Urbana 27 WCCUXG 40-18-46/87-55-00

Indiana:

Bloomington 53 WTTV-DT NS 1000kw/357m

Evansville 12 WNIN-DT NS 15kw/175m

Fort Wayne 36 WFFT-DT NS 1000kw/241m

Indianapolis 34 WIPX-LP QG from ch. 51, PG>10kw

Muncie 26 WMUN-LP LC from ch. 32

South Bend 48 WHME-DT NS 300kw/295m

Kansas:

Chanute 27 K27GSNS 5kw, 37-41-15/95-24-49 (TBN)

Emporia 17 KETM-CA CC from K17CK

Garden City 39 K39FW NS 14kw,
37-59-42/100-52-44 (TBN)

Hays 49 K48GH NS 150kw,
38-51-16/99-22-55 (yes, K48)

Lawrence 38 KMCI PG>5000kw/341m,
39-01-18/94-30-49

Manhattan 56 K56GSNS 20kw, 39-13-34/96-37-00 (TBN)

Ogden 15 KMJT-CA CC from K15DQ

Wichita 51 KSMI-LP LC from no offset to minus,
24.7kw, 37-46-40/97-30-37

Wichita 55 KCTU-LP LC 24.7kw,
37-46-40/97-30-37

Kentucky:

Danville 4 WDKY-DT PG>36.4kw/338m,
37-47-24/84-15-34

Danville 56 WDKY-TV PG>5000kw/355m,
37-47-24/84-15-34
some 20 miles east of old site.

Glasgow 64 W64CR NS 20kw, 36-58-37/85-53-48
(TBN)

Lexington 9 WBLU-LP QR dismissed from ch. 62

Murray 24 WQTV-LPPC>19.94kw

Talbert 58 W16BIQR from ch. 16, 111.7kw,
35-59-20/83-57-45 in Knoxville, TN.

Louisiana:

Baton Rouge 19 KBTR-LP PG>150kw

Baton Rouge 21 KANC-LP PG>140kw,
30-27-06/91-11-14

Houma 30 KFOL-CA CC from K30EM

Morgan City 7 KJUN-CA CC from K07UT

New Orleans 43 WDSU-DT PG<230m

Shreveport 40 KADO-LP PG>75kw

Massachusetts:

Boston 2 WGBH-TV LC fo PG<72.4kw/335m

Springfield 11 WWLP-DT PR>6kw

Maine:

Portland 38 WGME-DT NS 1000kw/491m

Michigan:

East Lansing 55 WKAR-DT PG>600kw/298m

Escanaba 20 W20BZ NS 10kw, 45-46-56/87-06(TBN)

Escanaba 32 W32CL NS 5kw, 45-46-56/87-06-04
(TBN)

Grand Rapids	7 WOOD-DT	PG>30kw/273m	34-19-16/78-13-43
Lansing	6 WLNS-TV	granted permission to drop directional antenna.	Winston-Salem 31 WXII-DT NW 815kw/572m
Lansing	38 WSYM-DT	NS 1000kw/281m	<u>North Dakota:</u>
Lansing	59 WLNS-DTPG	>1000kw/288m	Dickinson 38 K38HA NS 8.76kw,
Marquette	19 WMQF	CC (new station)	46-55-08/102-43-47 (KNDX-24, Fox)
Mt. Pleasant	29 W29CR	PR<40kw, 42-57-14/85-41-52	Fargo 15 KVRR XC 46-40-29/96-13-40
Mt. Pleasant	61 W61DK	PC>9.73kw,	(correction only)
		43-34-33/84-46-29	Fargo 19 KVRR-DTNS 1000kw/379m
Saginaw	46 W46CR	NW, 66.4kw,	Minot 45 KXMC-DT PG>1000kw/360m,
		43-30-56/84-32-49 (3Abn)	48-03-00/101-20-32
<u>Minnesota:</u>			Pembina 12 KNRR XC 48-59-44/97-24-28
Albert Lea (TBN)	63 K63GQ	NS 10kw, 43-37-40/93-21-49	(correction only)
Minneapolis	35 KARE-DT	NW 1000kw/435m	Sentinel Butte 59 K59GZNS 1kw, 46-52-41/103-50-24
St. Cloud		13 WCMN-LP FC to All News Channel.	<u>Nebraska:</u>
<u>Minnesota:</u>			Scottsbluff 7 KDUH-DT NS 32.4kw/592m
Vesta	51 K51GLNS	45kw, 44-29-03/95-29-26	Whitman 56 K56GV NS 1kw, 42-01-54/101-30-55
<u>Missouri:</u>			<u>New Hampshire:</u>
Branson	17 K17DLPR	>20.5kw,	Manchester 28 W29AT QR from ch. 29; 1.04kw,
		36-44-52/93-16-37	42-43-23/71-27-39
Kansas City	47 KSMO-DT	PG>356m; NW	<u>New Jersey:</u>
Kirkville	17 K17FONS	4kw, 40-10-28/92-30-53 (TBN)	Hackettstown 23 W23AZ PR>4.43kw,
Moberly	59 K59GX	NS 3kw, 39-25-42/92-26-33 (TBN)	40-50-54/74-50-02
Neosho	32 KJPX-LP	PG>5kw, 36-56-38/94-24-24	Morristown 54 W54CZ PR>8kw
St. Louis	26 KPLR-DT	PR<288m,	<u>New Mexico:</u>
		38-34-24/90-19-30	Alamogordo 28 K28HB LC from K21DI, 1.89kw
St. Louis	43 KTVI-DT	PR>1000kw	Alamogordo 32 K32FCLC for new st., 0.68kw,
			32-49-44/105-53-11 (KOB-4, NBC)
<u>Northern Mariana Islands:</u>			Albuquerque 50 KASY-TV PG<1399kw/1287m,
Saipan	32 W32CJNS	11kw,	35-12-48/106-27-00
		15-11-00/145-44-06	Capitan 30 K53BN QC from ch. 53, 4.1kw
<u>Mississippi:</u>			Carlsbad 36 K36GD NS 10kw,
Cleveland (TBN)	34 W34CT	NS 2kw, 33-44-00/90-42-50	32-24-16/104-11-13 (TBN)
Cleveland (TBN)	40 W40BQ	NS 2kw, 33-44-00/90-42-50	Clovis 55 K55AM FC to KOB-4
Columbus	29 W29CT	NS 20kw, 33-32-32/88-23-38	Eagle Nest 20 K53ET QC from ch. 53, 1.38kw,
Jackson	40 WDBDPG	>5000kw/598m,	36-37-39/105-13-41
		32-12-49/90-22-56	Grants 46 K20FBLC from ch. 20, 1kw
Jackson	49 WJXF-LP	CC from W49BX	Las Cruces 48 KTYO CC from KMAZ
Jackson	53 WJMF-LP	CC from W53BO	Roswell 52 K52HC NS 12kw,
Jackson	64 WJKO-LP	FC to religion	33-21-47/104-38-11 (TBN)
Tupelo	30 W45BD	QR from ch. 45, 0.25kw	Santa Fe 11 KCHF LC 316kw/608m,
Tupelo	61 K61HLNS	20kw, 34-28-28/88-43-41 (TBN) (yes, K61)	35-46-49/106-31-34
<u>Montana:</u>			Santa Rosa 30 K30FP FC to KNME-5, PBS
Bozeman	11 K11UJ	LC from ch. 2	Shiprock 32 K32FKLC from K61GB, 1.78kw
Columbus	24 K24FL	NS 0.68kw,	Silver City 12 KOVT-DTNS 62kw/485m
		45-38-34/109-18-00	Taos 47 K06LE QR dismissed
		(KULR-8, NBC)	Vermejo Park 7 K07XF NS <10w,
Columbus	26 K26GLNS	0.68kw,	36-53-34/104-58-24
		45-38-34/109-18-00	Vermejo Park 13 K13XN NS <10w,
		(KTVQ-2, CBS)	<u>Nevada:</u>
Great Falls	45 KTGF-DT	NS 157kw/300m	Ely 3 KBJN sold to KVBC-3, NBC
Hardin	22 KHMT-DT	NS 1000kw/288m,	Mina-Luning 40 K40GA LC from K57FU, 0.47kw
		45-44-24/108-08-18	Mina-Luning 43 K43GSLC from K59EH, 0.47kw
Missoula	36 KTMF-DTNS	122kw/618m	Tonapah 47 K47HJ NS 49kw,
Van Norman	53 K53GV	NS 1kw, 47-20-11/106-15-25	38-04-30/117-13-14 (s/b Tonopah)
<u>North Carolina:</u>			Walker Lake 28 K28GX LC from K55BF, 1.7kw
Apex	34 WACN-LP	LC from ch. 57, 13.3kw	<u>New York:</u>
Asheville	48 WAEN-LPQR	from ch. 64, 0.04kw	Binghamton 20 WBGH-CALC from ch. 8, 0.16kw
Beaver Dam	8 W08BPLC	100w, 35-31-39/82-29-44	Buffalo 33 WGRZ-DT PR< 534kw/278m or
Buxton	41 W41CM	NS 100kw,	996.1kw/290m
		35-15-49/75-31-41	
Greensboro	48 WUPN-TV	PR>1700kw/579m,	
		35-52-03/79-49-26, granted	
Lumberton	7 WLPS-LP	PG>3kw	
Raleigh	13 WBXU-LP	CC from W13CI	
Wanchese	6 W06BW	NS 0.6kw,	
		35-50-48/75-37-19	
Wilmington	29 WUNJ-DTPR	>700kw/297m,	

Garden City 21 WLIW sold to WNET-13
New York 2 WCBS-TV PR>45kw/389m,
40-44-54/73-59-10; granted
New York 26 W26CE LC 3.1kw,
40-53-50/72-54-56
New York 32 WXNY-LP QR from ch. 39, 6kw,
40-44-54/73-59-10
New York 35 WNYX-LP PG>50kw
Olean 30 W30BW QG from ch. 22, 5.9kw
Syracuse 19 WSYT-DTNS 621kw/445m

Ohio:

Cambridge 29 W29CU NS 8.5kw,
40-02-52/81-32-57
Chillicothe 59 W59DL LC from W40AE, 37.6kw
Cincinnati 35 WLWT-DTPG>1000kw/327m
Cincinnati 39 WOTH-LP CC from W39CG
Columbus 13 WSYX-DT PG>60kw
Columbus 36 WTTE-DTPR<271m,
39-56-14/83-01-16
Lima 8 WLIO-DT QG from ch. 20,
30kw/165m. Request for
power increase on ch. 20
dismissed.

Ohio:

Sandusky 42 WGGN-DT PR>1000kw
Toledo 17 WTOL-DT PG>279m or 305m

Oklahoma:

Altus 17 K17FP NS 27kw, 34-38-51/99-20-46
(KSWO-7, ABC)
Beaver 34 K56AY QR from ch. 56, 0.83kw,
36-48-45/100-32-10
Boise City 20 K55BV QR from ch. 55, 0.11kw
Buffalo 48 K58AX QR from ch. 58, 5.18kw,
36-43-46/99-42-59
Enid 48 K48HD NS 30kw, 36-25-00/97-49-43
Frederick 34 K56BQ QR from ch. 56, 0.83kw
Idabel 23 K63BA QR from ch. 63
McAlester 59 K59GY NS 8kw, 34-58-07/95-46-22
(TBN)
McAlester 61 K61HM NS 10kw, 34-58-07/95-46-22
(TBN)
Oklahoma City 7 KOCO-DT NS 34kw/430m

Oregon:

Canyonville 32 K32ETLC from ch. 38
Eugene 21 K68BFLC from ch. 68
Eugene 41 KORY-CA PR>112kw
Grants Pass 30 KBLN PG<9.77kw/654m,
42-22-56/123-16-29
John Day 2 K02PK LC <10w,
44-26-02/118-57-27 (3Abn)
La Grande 2 K07WDL C from ch. 7
Mapleton 19 K19ECLC for change from no offset to zero
Medford 28 K28GG LC from ch. 68
Milton-Freewater 50 K50FXLC from K61BT
Pendleton 21 K21EKPR>11.8kw,
45-59-20/118-10-29
Portland 40 KOIN-DT NW 839 or 1000kw/523m
Roseburg 49 K14HA QR from ch. 14, 1.5kw

Pennsylvania:

Brookville 45 W51AO QC from ch. 51
Johnstown 34 WJAC-DT PG>250kw/351m,
40-22-17/78-58-56
Lancaster 23 WLYH-DT PR>500kw/381m or
600kw/386m
Philadelphia 32 WPSG-DTPR>250kw/400m,
40-02-30/75-14-11
Pittsburgh 25 KDKA-DT PG>1000kw
Scranton 13 WYOU-DT PG<2.8kw
Wilkes-Barre 11 WBRE-DT PG>30kw

South Carolina:

Myrtle Beach 34 W66BJLC from ch. 66, 11.8kw

South Dakota:

Buffalo 52 K52HD NS 1kw, 45-30-47/103-38-38
Rapid City 3 KOTA-TV PC<186m,
44-04-08/103-15-05
Sioux Falls 46 KDLT-TV PG<3980kw
Watertown 42 K42FI NS 10kw, 44-52-16/97-06-34 (TBN)

Tennessee:

Acton 34 W69DB QR from ch. 69, 150kw,
35-07-07/87-02-35 nr Pulaski
Acton 35 W56DA QR from ch. 56, 150kw,
34-36-21/86-58-25 near Decatur, AL
Acton 51 W32BG QR from ch. 32, 100kw,
34-00-05/85-58-30 in Gadsden, AL
Clarksville 49 WCKV-LP LC 15.9kw,
36-26-01/87-25-24 (FamilyNet)
Cleveland 38 WPDP-LP PG>2.1kw
Jackson 16 WJKT CC from WMTU
Jackson 55 W52CZ QR from ch. 52, 100kw,
36-06-06/86-52-17 west of Nashville

Texas:

Alvin 67 KSHS-TV PG>598m,
29-34-15/95-30-27
Amarillo 41 K41GY NS 2kw, 35-18-53/101-59-47
Beesville 36 K36GC NS 1.5kw,
28-25-41/97-45-37 (TBN)
Brady 5 K05EF PG<0.02kw,
31-09-15/99-25-37
Brownsville 24 KVEO-DTPG<200kw
El Paso 16 KTSM-DTPG<650kw
Fort Worth 65 KVFW-LPPC>50kw, 32-35-21/96-58-12
Garland 23 KUVN PG>544m,
32-35-19/96-58-05
Hereford 33 K33GH NS 4kw, 34-51-02/102-23-40
(TBN)
Hillsboro 57 K57IG PC>100kw,
32-35-19/96-58-06 Dallas
tower farm; in FCC DB as
K31FA.
Laredo 39 KNEZ-LP PG>150kw
Midland 40 K40FJ LC from ch. 31, 21.7kw
Paris 27 K27GR NS 2kw, 33-37-15/95-32-51
(religious)
San Antonio 7 KJLF-LP PR>3kw, 29-27-34/98-24-24
San Antonio 10 K02MX QR from ch. 2, 3kw
Snyder 44 K44FGQR from ch. 67, 0.08kw,
granted
Texarkana 41 K41EQLC from ch. 52
Uvalde 17 K61FM QR from ch. 61, 50kw
Uvalde 20 K59EYQR from ch. 59, 100kw
Uvalde 45 K6EQ QR from ch. 65, 30kw
Uvalde 47 K69FC QR from ch. 69, 30kw
Uvalde 49 K72BN QR from ch. 72, 30kw

Utah:

Oljeto 4 K04OZ NS <10w,
37-02-28/110-19-48
Richfield 19 KUES LC 1.2kw/441m,
38-38-04/112-03-33 (PBS //
KUED-7)
Salt Lake City 28 KSTU-DT PR<1209m, granted

Virginia:

Bristol 5 WCYB-TV PG<71.7kw/741m,
36-26-58/82-06-29

Charlottesville	50 W50CM	LC from W19BB	Wausau	40 WSAW-DT	NS 110kw/396m
Chesapeake	5 W05CH	QC from ch. 40, 3kw, 36-51-39/76-21-13	<u>Wyoming:</u>		
<u>Virgin Islands:</u>			Casper	33 K33GI NS 20kw, 42-44-26/106-21-36 (religious)	
C. Amalie	14 W14CP	NS 0.7kw, 18-21-26/64-58-17 (TBN)	Cody	23 K23FXNS 0.35kw, 42-29-46/109-09-16 (KTVQ-2, CBS)	
Frederiksted	18 W18CV	NS 1.5kw, 17-41-41/64-52-59 (TBN)	Mtn. View	31 K31FW NS 1.38kw, 41-06-19/110-12-13 (Acme TV of SLC)	
<u>Vermont:</u>			<u>CANADA:</u>		
Windsor	22 W22CS	NS 0.13kw, 43-26-38/72-27-17 (3Abn)	<u>Alberta:</u>		
<u>Washington:</u>			Calgary	4 CFCN-TV PG>100kw, drop directional antenna	
Clarkston	49 K49EVQC	from ch. 18, 1.05kw	<u>Manitoba:</u>		
Soap Lake	41 K41FI	LC from ch. 66	Grand Rapids	15 CBWHT-1DE	
Soap Lake	46 K46FALC	from ch. 60	Winnipeg	35 new AF withdrawn	
Tacoma	11 KSTW	PR>363m	<u>Ontario:</u>		
Walla Walla	9 KBKI	NW 1.86kw/388m, 45-59-23/118-10-31, testing	ON Hamilton	16 new AF 3.2kw (suspect typo, should probably be ch. 46)	
<u>West Virginia:</u>			ON Hamilton	45 new AF 10kw	
Lewisburg	59 WVSXFC	to CBS.	ON Hamilton	46 new AF - two applicants: 3.4kw, 1.43kw	
<u>Wisconsin:</u>			ON Kitchener	39 new AF - two applicants: 369kw, 77kw	
Antigo	46 WTPX-DTPG	>286m, 45-03-22/89-27-54	ON London	39 new AF - two applicants: 51.4kw, 59kw	
Bloomington	22 W22CILC	from ch. 49, 0.64kw	ON Toronto	52 new AF - six applicants: 414kw, 427kw, 59kw, 30kw, 100kw, 14.7kw	
Chippewa Fls	45 W45CF	NS 1kw, 44-53-05/91-23-27			
Eagle River	34 WYOW	LC 2240kw/247m			
Grantsburg	24 W24CL	LC from ch. 39, 0.68kw			
Green Bay	30 W30BU	LC from ch. 57			
Green Bay	38 WPNE	PR>391m, granted.			
Milwaukee	25 WCGV-DT	PR<625kw/340m or >1000kw			
Superior	19 KBJR-DT	NS 1000kw/315m			
<u>Wisconsin:</u>					
Suring	21 WIWB-DT	PR>450kw/332m, 44-20-01/87-58-56			
Wausau	9 WAOW-TV	PG<368m			

Forum & Other Stuff

Thanks to David Mohs, Frank Aden (and Bill Frahm), John Zeis, Tom Yingling, Bill Draeb, Dave Pomeroy, Bill Hepburn, Danny Oglethorpe, Rob Zerwekh, and Rick Lucas for information in this month's column.

The WCBS changes in New York City are the first official changes to result from the World Trade Center disaster. They've relicensed their old backup site as their main site. There's also a small increase in power (from 41kw to 45). The WCBS backup transmitter was a few miles north of the main; reduction in power was necessary to keep the coverage of the backup from extending further north than that of the main. FCC regulations do not permit a backup transmitter to extend the coverage in any direction. Since the backup is no longer the backup, the reduction is no longer necessary. WCBS has also installed a new transmitter at this site.

No other NYC station has yet applied for permanent new facilities. Stations are still considering their options. Last month, I wrote that the Empire State Building has enough room for all the stations to return - but apparently this is not true. There may (or may not) be space for the antennas, but there isn't for the transmitters. Nor is there enough AC power up there to operate them. I would imagine we'll see firm plans shortly, nobody seems pleased with their coverage from New Jersey.

Speaking of New Jersey, the Armstrong FM tower in Alpine is the temporary site of several NYC stations. WNBC-4, WNYW-5, WABC-7, WPIX-11, WNET-13, and WNJU-47 are transmitting from there. WWOR-9 is probably there too, though the news item John Zeis sent said channel 9 is on the Empire State Building. WNBC is believed to be running about 20kw ERP - I don't know about the others. There was already a FM station on that tower (WFDU 89.1) so I have coordinates (40-57-39N/73-55-23W) and an approximate HAAT (152m) for these temporary operations. WPXN-31 is still off the air at this time, but its programming is on co-owned LPTVs in East Orange, NJ (W23BA) and Amityville, Long Island. (WPXU-LP 38) Channel 31 does plan to join the others on the Alpine

tower - and may have already done so by the time you read this. WPIX-11 has also re-established the channel 64 LPTV on the Empire State Building; this station had been bumped by WPVI-DT in Philadelphia.

DTV is of course an afterthought in New York these days. The two DTV stations I mentioned last month (WCBS-DT 56 and WNYW-DT 44) are still operating. There had been suggestions that WNYW-DT would be dismantled to provide space for analog operation, but that does not seem to have happened. WNYW is now co-owned with WWOR, and WNYW-DT is carrying WWOR programs on a second virtual channel.

Some people have asked why WCBS was the only New York station to have a backup transmitter site. In practice, while many TV stations do have backup transmitters, it's quite rare for those backups to be at a different site. Speaking specifically to New York, WABC-TV assignment editor Howard Price posted some comments on the rec.radio.broadcasting newsgroup.

On the Empire State Building, when the TV stations moved out in the 1970s, the space they left was leased to others - paging, cellular phone, etc.. Many of the other taller buildings' roofs aren't "...currently configured for TV transmission." I suppose that means there's no simple way to install a mast to support antennas. The Conde Nast building is a possibility - it's used as a backup site by Clear Channel's FM stations - but surrounding taller buildings would create severe ghosting problems. (I'll bet RF exposure would be a problem too) Expanding the Alpine tower, or building a taller tower on that site, has been suggested. Todt Hill on Staten Island is another possibility. Finally, a few years back someone started a plan to build a 600m tower on Governor's Island, off the south tip of Manhattan. This might resurface.

The new second Univision network now has a name: Telefutura. Univision polled its employees for suggestions, and this one was picked. Best I can tell, it will be another general-interest Spanish-language network.

You will also note a lot of new LPTVs authorized this month. They seem to be the result of settlements among competing applicants for the same channels. As you could probably guess, a lot of them are TBNs! You'll also note that in some cases, two new TBNs have been granted for the same site. There are a number of reasons this might have happened. I suppose the most likely is that TBN had figured they wouldn't get every station they applied for, so they asked for several in the same city, figuring at least one would be granted and they could then dispose of the extras. Another possibility is DTV. One of the new TBNs may operate in analog mode, and the other as a DTV station.

The Ontario new-station applications are a bit misleading. In the U.S., if someone wishes to build a station with satellite stations in other cities, they must apply for each transmitter separately. In Canada, such systems may be requested as a package. The government will consider them as a group. In this case, there are six different "packages" being considered:

Toronto ch. 52/414kw, Hamilton ch. 46/3.4kw, London ch. 39/51.4kw
Toronto ch. 52/427kw, no relays. Operated by CFMT-47, it would be an Asian/African ethnic channel.
Toronto ch. 52/59kw, Hamilton ch. 45/10kw. Belongs to the same firm which runs the "A-Channel" stations.
Toronto ch. 52/30kw, Kitchener ch. 39/369kw. Belongs to CTV, owners of CKCO-13 and CFTO-9.
Toronto ch. 52/100kw, Hamilton ch. 46/1.43kw, Kitchener ch. 39/57kw; belongs to Global, owners of CIII-41.
Toronto ch. 52/14.7kw, Hamilton ch. 46/3.2kw, London ch. 39/59kw

The latter group actually specifies channel 16 in Hamilton. I'm pretty sure that's a typo. (It's far too close to WNED-17) Note that several of these applications would create "duopolies" - the applicants already own stations in the Toronto/Hamilton/Kitchener area.

Danny has some information from Mexico. First, Fernando Garcia advises him XEFB-2 has changed logos; the new one is described as a "2-in-a-circle". Secondly, in an Es opening on October 3 (!) Danny noted XHFM-2 is carrying Galavision. (He'd suspected as much for some time) It's also running IDs for XHAI-9. Speculation is that XHFM is now a relay of XHAI.

Frank forwarded an item from the Idaho *Statesman* reporting the unusual simultaneous premiere of DTV in Boise. KAID-DT 21, KBCI-DT 28, and KIVI-DT 24 all signed on with regular programming on September 24. Bill Frahm did note KAID-DT testing a week earlier, and the other stations probably did as well. This move certainly got publicity for DTV in the Boise area!

If you log stations by transmitter site, and WFFF-44 is your only Vermont station, you'd better try again... Rick visited Mt. Mansfield, transmitter site of WCAX-3 and WVNY-22. It's also where the FCC database thinks WFFF's transmitter is. However, Rick had a TV field strength meter with him - and it indicated a much lower signal strength for channel 44 than it should have. Talking with WCAX and WVNY engineers, he was told WFFF's transmitter is actually on Lyon Mountain in New York State, the same site as WCFE-57. You might pencil in WCFE's coordinates (44-41-43N/73-53-00W) for WFFF. The HAAT is likely about 100m less than the listed 840m as well.

Rick also reports LPTVs W30BL and W51CB were not seen. W16AL, however, is operating with TBN.

Rob reports WBWX-CA 13 Minneapolis hasn't yet changed its ID slide to reflect its new callsign. If you see a "K13UT", that's what you're watching.

Bill Draeb noted W30BU on the air in Green Bay, replacing W57BJ. The station is significantly weaker on channel 30 than it was on 57 - interesting, as both channels have exactly the same power. However, they're also both directional, and it's reasonable to believe that channel 30 doesn't favor the south, due to WVCY-30 Milwaukee. Bill also ran into someone who was working on the WBIJ-4 transmission site near Crandon, Wis. This station may well be on the air by now. It'll be a tough catch, with only 4kw or so of power it isn't that much stronger than a LPTV.

It may be worthwhile to reiterate what's permitted under a construction permit. It is legal for a station with a CP to go on the air, and even to carry routine programming and commercials. A construction permit is a kind of guarantee that, if built according to the details in the application, the station will be licensed. A regular operating license requires that the station submit measurements which show the transmitter and antenna operating according to specifications - of course, it is not possible to make these measurements without putting the station on the air! After the measurements are made, it takes the FCC some time to process the license application. "Program test authority" may be granted, allowing the station to begin regular programming while it awaits final FCC action. This authority is not noted in the Engineering Database, so I have no way of knowing when it's been granted.

There is also a delay in reporting license grants. My website is only updated monthly; if KXXX-3 received an operating license on, say, September 15, that information would not appear on my site until mid-October. Even on the FCC site, it can take a few days for license grants to reach the database. Bottom line: you should not be surprised to see a station which holds only a construction permit operating on the air.

Apparently the FCC has snuck in a huge stack of new TV channels:

W32BG-3251- 100.00kw @ d0.00m 34 0 5.00N - 85 58 30.00W APP-TX ACTON, TN 70874

Yes, that says channel 3,251. It appeared that way in the Public Notice too. Oh, and it has negative offset which means there must be another station on channel 3,251 which W32BG needs to protect. Actually, the station wants to move from channel 32 to channel 51; somehow, they managed to get both channels into the channel field...

Winter Es season approaches, with plenty of new stations to target. (Even on low-band!) Good DX!

METEOR SHOWER GUIDE FOR NOVEMBER & EARLY DECEMBER

SHOWER	RUNNING DATES	PEAK
Leonids(MAJOR)	November 14-20	November 18
Alpha Monocerotids	November 13 - Dec 2	November 21
Alpha Puppids	November 17 - Dec 9	December 2-5
Phoenicids	November 29 - Dec 9	December 5-6
Northern Chi Orionids	November 16 - Dec 16	December 10-11
December Monocerotids	November 9 - Dec 18	December 11-12

R(B)DS PI Codes - Decoding them

Part two Doug's article on decoding PI codes.

Continued from the September VUD.

Doug Smith - 19 July 2001

Finally, our neighbors on the continent cannot be left out. Codes beginning with C are reserved for Canada, and those beginning with F for Mexico.

Let's get back to identifying our DX. Let's say you logged a station carrying a satellite-fed CHR format. You didn't catch any locally-identifying information, but you did get PI code 7107. First, you need to convert that hexadecimal code to decimal. Going through Windows Calculator, you find that 7107 hex = 28935 decimal. Is this code less than 4096 or greater than 39247? (if so, it's not within the alphabetical assignment table & you won't find the callsign this way. Don't bother continuing...)

Is the code greater than 21671? If so, write down a "W" as the first letter of the callsign, and then subtract 21671 from the decimal code. In this case, you get 7264. If the code had been less than or equal to 21671, you would have written down a "K" as the first letter and then subtracted 4096.

Now, find the greatest integer that's less than the remainder divided by 676. In this case, we divide 7264/676 and get 10.7455-something. The greatest integer less than this is 10. Add one to this integer, and find that position in the alphabet. In this case, the second letter of the callsign is the 11th letter of the alphabet - K. Before going on to the third letter, take this "greatest integer" - in this case 10 - multiply by 676 (getting 6760), and subtract the result from the number you finished with in the first step. (getting 7264-6760=504).

Repeat the process with 26 instead of 676. 504/26=19.384-something. 19 is the greatest integer less than 19.384. Add one - so the third letter of the callsign is the 20th letter of the alphabet - T. Multiply 19*26=494, subtract it from 504, and get 10. This remainder is the position of the last letter of the callsign. In this case, the last letter of the callsign is the 10th letter of the alphabet - J. So the PI code 7107 belongs to W-K-T-J in Farmington, Maine.

Of course, computers are good at this. (shameless plug department: You can make your computer do the work by going to <http://www.w9wi.com/articles/rds.htm> .) Feel free to steal my JavaScript code and write your own RBDS PI decoder program. A PI decoder should be pretty easy to write in just about any computer language.

A word about Canadian stations is in order. As I said earlier, PI codes beginning with C are reserved for Canada. Most CBC stations do seem to be using these codes. There does not appear to be any order to their assignment, except that nearby codes seem to be used by nearby stations in most cases. Many private stations in the Toronto area seem to be "hijacking" U.S. codes. CILQ-107.1 is using the code assigned to *W*ILQ; CJXY-95.3 is using WJXY's; CFNY has WFNY's. Three CBC stations have been logged apparently using PI codes belonging to KGA, KGO, and KFI - and CBLA-99.1 appears to be using the code for KSFV. (?!)

PI codes are not regulated by the FCC. It is not at all impossible for a station to transmit the *wrong* PI code, and there are no legal sanctions (that I know of) for doing so. New England DXers report the Radiotext field on WHOM-94.9 reads "WLNH 98.3", and there have been other nonsense data reported. However, I would regard the logging of a PI code that matches a callsign assigned on the frequency you're tuned to as pretty good - nearly conclusive - evidence of a logging. Good luck!



Eastern TV DX

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November 2001

December, 2001 column deadline: Nov. 12

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

Quite a few reports this month... thanks to all of you who took time to report! Early September featured some fine tropes in the northeast... the legendary Bob Seybold said of Sept. 5th: "Only big Thanksgiving opening years ago beat this one." Now THAT'S saying something! Roy Barstow cashed in on this event too, with some fine loggings into the Carolinas, and his always interesting Maritimes loggings are featured as well. Let's start this time with some great tropo loggings from Rick Shaftan, who cashed in on this big opening too! Read on...

Rick Shaftan, Sparta, NJ
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Equipment: JVC 21" TV, ICOM R-7000 w/video adapter. VHF lo: Winegard 1026 at 25' AGL, VHF High: 2 Winegard 1713s horizontally stacked with phase box at 30' AGL, UHF: 7' Channel Master dish screened with stainless steel chicken wire at 40' AGL.

8/23 Es			0151 unID-40	Oral Roberts, z offset	
2045 KDLO-3	SD Florence, CBS	1186	0155 WLFI-18	IN Lafayette	628
9/5 tr			0157 <u>WGTE-30</u>	OH Toledo, PBS	458
0920 WBGU-27	OH Bowling Green	482	0215 <u>WCMH-4</u>	OH Columbus	446
0924 <u>WANE-15</u>	IN Fort Wayne, CBS	548	0217 <u>WEWS-5</u>	OH Cleveland	369
0928 <u>WKJG-33</u>	IN Fort Wayne	548	0218 <u>WKYC-3</u>	OH Cleveland	369
0930 <u>WLIO-35</u>	OH Lima	496	0223 <u>WTOL-11</u>	OH Toledo, CBS	455
0935 <u>WKOI-43</u>	IN Richmond, TBN	537	0226 unID-30	PBS sounding, - offset	
0940 unID-51	- offset		0228 <u>WCLJ-42</u>	IN Bloomington, TBN	616
1045 <u>WWHO-53</u>	OH Chillicothe	457	0243 <u>WXIN-59</u>	IN Indianapolis	612
1140 unID-18	French? - offset		0302 <u>CICO32-32</u>	ON Kingston, TVO	436
9/6 tr			0348 unID-34	z offset against WIVT	
0122 <u>WJW-8</u>	OH Cleveland	368	2300 <u>WITV-7</u>	SC Charleston, PBS	625
0125 <u>WVPX-23</u>	OH Akron, Pax	361	9/8 tr		
0132 <u>WNYB-26</u>	NY Jamestown, TBN	255	0813 <u>WLFB-40</u>	WV Bluefield	441
0141 unID-29	UPN? To west, - offset		0825 <u>WGPX-16</u>	NC Burlington, Pax	436
0142 <u>W32AR-32</u>	OH Lexington, TBN	412	9/9 tr		
0148 <u>WLMB-40</u>	OH Toledo, rel.	488	1227 <u>WNPB-24</u>	WV Morgantown	285
0148 <u>WUAB-43</u>	OH Lorain	348			

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Equipment: Archer VU-110 at 20' w/Archerotor, Magnavox 20" television, WinTV-HD tuner card.

6/27 Es			1715 <u>KXAS-5</u>	TX Fort Worth	1094
1217 KSNW-3	KS Wichita	982	1715 <u>WSIL-3</u>	IL Harrisburg	550
1700 KPRC-2	TX Houston	1007	1725 <u>KYTV-3</u>	MO Springfield	780
8/14 Es			1725 unID-4	"Oprah"	
2200 unID-5	CBS to NNE		1730 unID-3	"Jeopardy!"	
2200 unID-5	NBC to NNE		1835 unID-3	NBC	
8/14 tr			1900 <u>KSWK-3</u>	KS Lakin	1184
2200 unID-9	NBC to ESE		1910 KSNW-3	KS Wichita	982
8/22 Es			1910 <u>KFDX-3</u>	TX Wichita Falls	1143
1705 <u>KDFW-4</u>	TX Dallas	1094			

Just received my WinTV-HD card and I must say it does a great job cleaning up the DX. On the other TVs I could barely see what was airing, but the card brought it through clear enough to get a confirmation on what I was watching. The only local DTV I have been able to get has been KDKA-DT-25, which compared to the analog version, is like night and day.

Doug Smith, Pleasant View, TN
w9wi@w9wi.com

8/24 Es		0830 WBUY-40	MSHolly Springs	175
1200 unID-2 Mexico, unID-4, MUF 94.9		9/10 tr		
1227 KENW-3 NMPortales	955	0500 WCLJ-42	INBloomington, --	213
8/26 tr		0500 WXIN-59	INIndianapolis	245
0105 W22BS-22 MSTupelo, // WTVA-9	169	0500 WIPX-63	INBloomington	213
0106 W32BH-32 MSTupelo	169	0500 WKRC-12	OHCincinnati	234
0106 WCKV-LP-?? TNClarksville	18	9/11 tr		
(ouch, a new local...)		0130 WIPX-63	INBloomington	213
0106 WCFT-33 ALTuscaloosa	223	0130 KWBF-42	ARLittle Rock	322
0106 W46CF-46 ALTuscumbia	131	0130 WPXK-54	TNJellico	159
0106 W53AF-53 MSBooneville	145	0130 unID-67	Pax, //28&54. WAOM-KY?	
8/28 tr		0130 WKDH-45	MSHouston	212
0830 3/10/13/24 TNMemphis		0132 KARD-14	LAWest Monroe	415
50 off, 30 even w/local WUXP on		0132 KLRT-16	ARLittle Rock	322
reduced power for DTV tower work		0730 WCFT-33	ALTuscaloosa	223
0830 WKDH-45 MSHouston	212	0740 KOLR-10	MOSpringfield	330
0830 W57CG-57 TNMemphis	173	0900 W17AZ-17 ILJohnson City		142
0830 W42BY-42t TNMemphis	187	0900 KHOG-29	ARFayetteville	390

Unfortunate events of 9/11 seen live on WLKY-32.

Tom Yingling, 221 Pinewood Rd., Baltimore, MD 21222-2345
KA3TCC@erols.com

Equipment: Sony 8" color TV, CM 6-foot dish, Blonder-Tongue CMA-UB UHF preamp, Gateway 800 MHz PC with Hauppauge Win-TV-D.

7/16 tr		WPIX-DT-33	NYNew York	
2300 WGAL-DT-58 PALancaster		KYW-DT-26	PAPhiladelphia	
WPVI-DT-64	PAPhiladelphia	WSAH-43	CTBridgeport	
KYW-DT-26	PAPhiladelphia	8/17 tr		
7/17 tr		2000 WBOC-DT-21	MDSalisbury	
1900 WIAV-LP-58	DCWashington	9/6-7 tr		
WRLH-35	VARichmond	2130 WAVY-DT-31	VAPortsmouth	
8/8 tr		to WHRO-15	VAHampton	
2230 WBOC-DT-21	MDSalisbury	0230 WTVZ-33	VANorfolk	
2300 WPVI-DT-64	PAPhiladelphia	WRDC-28	NCDurham	
8/9 tr		WKFT-40	NCFayetteville	
0000 WNYW-DT-44	NYNew York	WCVW-57	VARichmond	
to W63CO-63	PAPhiladelphia	WGNT-27	VAPortsmouth	
0230 WFMZ-69	PAAllentown	WPIX-DT-33	NYNew York	
WPSG-57	PAPhiladelphia	WVBN-LP-19	VAVirginia Beach	
WNJM-50	NJMontclair	WUNM-19	NCJacksonville	
WPVI-DT-64	PAPhiladelphia	WPVI-DT-64	PAPhiladelphia	
KYW-DT-26	PAPhiladelphia	KYW-DT-26	PAPhiladelphia	
WNJB-58	NYNew Brunswick	WHYY-DT-55	DEWilmington	
WLNY-55	NYRiverhead	WNBC-DT-28	NYNew York	
WCBS-DT-56	NYNew York	WNJS-23	NJCamden	
WCAU-DT-67	PAPhiladelphia	W40AZ-40	DEWilmington	
WPIX-DT-33	NYNew York	WSAH-43	CTBridgeport	
WUVN-18	CTHartford	WNJU-47	NJLinden	
8/16-17 tr		WEDW-49	CTBrdigeport	
2100 WEDW-49	CTBridgeport	WNJM-50	NJMontclair	
to WABU-68	MABoston	WNJB-58	NJNew Brunswick	
0230 WXTV-41	NJPaterson	WLNY-55	NYRiverhead	
WBZ-DT-30t	MABoston	WHUB-66	MAMarlborough	
WFMZ-69	PAAllentown			

This may be my last report for a good while with loggings of the New York City DTVs with the World Trade Center tower gone, and I have not yet sent them my QSL request. Maybe I will wait awhile to do that.

William McGuire, 2412 59th Place, Cheverly, MD 20785-2918

Equipment: Admiral 13" color TV.

9/6 tr
 2330 WGAL-8 PALancaster, ID
 9/7 tr
 0005 WWBT-12 VARichmond, NBC

0012 WHSP-65 NJVineland
 0015 WPSG-57 PAPHiladelphia
 0017 WTXF-29 PAPHiladelphia

John Vervoort, 217-79 Street, Brooklyn, NY 11209-3607

Equipment (used 10/1 at my brother's apartment also in Brooklyn, NY): 19" Sharp TV and standard-sized Channel Master outdoor antenna atop a 6-story building.

9/23 tr (late at night)				unID-18	
KYW-3	PAPHiladelphia			WTXX-20	CTWaterbury, WB20 99
WTNH-8	CTNew Haven			unID-22	
WCAU-10	PAPHiladelphia			WNJS-23	NJCamden, NJN 83
WHYY-12	DEWilmington			WBRE-28	PAWilkes-Barre 144
WTXX-20	CTWaterbury			WTXF-29	PAPHiladelphia 83
WYOU-22	PAScranton			WVIT-30	CTNew Britain 116
WNJS-23	NJCamden			unIDs-35, 36	
WBRE-28	PAWilkes-Barre			WSWB-38	PAScranton, WB 137
WTXF-29	PAPHiladelphia			WLVT-39	PAAllentown 82
WVIT-30	CTNew Britain			WMGM-40	NJWildwood, NBC 145
unID-35				WGTW-48	NJBurlington 65
WLVT-39	PAAllentown			WEDW-49	CTBridgeport 69
WSAH-43	CTBridgeport			WNJT-52	NJTrenton, NJN 51
WNJT-52	NJTrenton			WEDN-53	CTNorwich, CPT 138
WPPX-61	DEWilmington			unID-54	
WACI-62	NJAtlantic City			WPSG-57	PAPHiladelphia 83
WMBC-63	NJNewton			WCTX-59	CTNew Haven 85
WHSI-67	NYSmithtown			WPPX-61	DEWilmington, Pax 110
10/1 tr				WTIC-61	CTHartford, Fox 122
1748	KYW-3	PAPHiladelphia	83	WACI-62	NJAtlantic City 114
to	WFSB-3	CTHartford	129	WRNN-62	NYKingston 104
1908	WPVI-6	PAPHiladelph	83	WMBC-63	NJNewton 67
	WTNH-8	CTNew Haven	85	WHSP-65	NJVineland, HSN 117
	WCAU-10	PAPHiladelphia	83	WFME-66	NJWest Milford 66
	WHYY-12	DEWilmington	110	WHSI-67	NYSmithtown, HSN 35
	WPHL-17	PAPHiladelphia, WB1	83	WFMZ-69	PAAllentown 82

Roy Barstow, P.O. Box 2488, Teaticket, MA 02536

9/4 tr
 0635 CBHFT5-46 NSMiddleton
 CBHT6-8 NSMiddleton, CBC Kids
 CKLT-9 NBSaint John
 CBHFT-13 NSHalifax
 0710 CBHT-3 NS Halifax
 CHSJ-4 NBSaint John
 CJCH-5 NSHalifax
 CBHT7-52 NSDigby
 CBHT8-55 NSTruro
 W57AQ-57 MECalais
 CIHF4-??t NSTruro
 0740 CIHF3-??t NBMoncton
 0800 CBHFT7-?? NSNew Glasgow 482
 9/7 tr
 0645 WNYX-35t NYNew York, HSN
 WPXN-34 t NYNew York, - offset
 Wind shift from SW...
 coastal DX coming in
 0900 WPXU-35 NCJacksonville
 WEPX-38 NCGreenville 562
 WRPX-47 NCRocky Mount
 0945 WKFT-40 NCFayetteville 616
 1100 WNCT-9 NCGreenville
 1830 WJZ-13 MDBaltimore
 WBAL-11 MDBaltimore
 WNCN-17 NCGoldsboro
 WHUT-32 DCWashington
 WRLH-35 VARichmond

WCVE-23 VARichmond
 WBFF-45 MDBaltimore
 WNUV-54 MDBaltimore
 WCVW-57 VARichmond
 WRAZ-50 NCRaleigh
 WXOB-LP-14 VARichmond, MTV 2
 WMPT-22 MDAnnapolis
 WUNM-19 NCJacksonville
 WUNJ-39 NCWilmington
 WRAY-30 NCWilson
 1900 WVEC-13 VAHampton
 WTMW-14 VAARlington
 WLYH-15 PALancaster
 WNEP-16 PAScranton
 WLVT-39 PAAllentown
 W14CL-14 MEHartswell
 CBHFT5-46 NSMiddleton
 WOLF-56 PAHazleton
 CBHT7-52 NSDigby
 2230 CBHT6-8 NSMiddleton
 CBHT3-11 NSYarmouth
 2300 WMED-13 MECalais
 9/8 tr
 0010 WHTM-27 PAHarrisburg
 WITF-33 PAHarrisburg
 WTVE-51 PAReading
 WFMZ-69 PAAllentown
 CBHFT-13 NSHalifax
 CJCH-5 NSHalifax

CJCH6-6	NSWest Caledonia		W15BK-15	NHHanover	
W36CK-36	MEBangor		2325 WJZY-46	NCBelmont	713
WGCB-49	PARed Lion		WENY-36	NYElmira	
WUNP-36	NCRoanoke Rapids		<u>9/9 tr</u>		
WUNM-19	NCJacksonville		0025 WWWB-55	SCRock Hill	731
WUNJ-39	NCWilmington		W36AX-36	VTManchester	
0300 WUNF-33	NCAsheville	781	<u>W29CM-29</u>	NHLittleton, from 16	
WUNU-31	NCLumberton		0150 WLED-49	NHLittleton	
WFPX-62	NCFayetteville		WWPB-31	MDHagerstown	
WMMP-36	SCCharleston	780	WGPT-36	MDOakland	
WTAT-24	SCCharleston	779	<u>WWPX-60</u>	WVMartinsburg	
0430 WJZY-46	NCBelmont	713	Trying for this last 10 years		
WYDO-14	NCGreenville		WQPX-64	PAScranton	
0500 WCTI-12	NCNew Bern		0310 WYOU-22	PAScranton	
0920 WBRE-28	PAWilkes-Barre		0900 CBHFT5-46	NSMiddleton	
WWPB-31	MDHagerstown		2130 WPBS-16	NYWatertown	
0950 WFME-66	NJWest Milford		WNYS-43	NYSyracuse	
1030 CKLT-9	NBSaint John		2200 CBLFT13-15	ONBelleville	
1900 W18AY-18	MEPortland		CBLFT14-32	ONKingston	
W14CL-14	MEHartswell		2245 CIII-41	ONToronto	
Local quality-all over rotor dial			2300 <u>WPXJ-51</u>	NYBatavia	
2000 WBRA-15	VARoanoke		CIVS-24	PQSherbrooke	
WFXR-27	VARoanoke	592	<u>C???-34</u>	ONOttawa	
WVPT-51	VASTaunton		+ offset, TQS, new station		
W33BD-33	MEBangor, Pax TV		<u>9/13 tr</u>		
2200 CBHT8-55	NSTruro		1800 WNCT-9	NCGreenville	
CBHT7-52	NSDigby		WFXI-8	NCMorehead City	

The 7th through the 9th had DX from all directions, giving the rotor a good workout. Now with the antennas above the trees to my north and northeast I get much more in this direction. One morning with 55 Nova Scotia coming in good on the 51-foot high yagi, I went upstairs to show my wife on the house antenna (UHF bandsaw which has picked up UHF from FL), there was just a blank screen. I was surprised to say the least.

On the evening of Sept. 9, this TQS ch. 34 station in good for 20 minutes then gone; I have it on tape. They showed 49 Hull and 34 Ottawa each on a square on TV screen. Also showed a picture of the river with Hull and Ottawa on either side. Like we got you covered on both sides of the river. Oops, just noted in August TV News that 34 CFGS-TV changed from ch. 49.

Bob Seybold, 1865 W. Main Rd., Silver Creek, NY 14163

Here is another report. Huge amount of tropo since September 1-7 days in a row with tops starting morning of Sept. 5th running non-stop into morning of Sept. 6th reaching huge peaks after midnight. After short lapse opened again evening of 7th continuing into morning of 8th. Over 200 U's seen this span. VHF too crowded to DX. Before I detail reception I need to correct mistake in VUD. My new system is UHF not VHF. New system did great in massive opening which covered all directions. Only big Thanksgiving opening years ago beat this one. Some stations stayed in over 24 hours. Now to details.

Sept. 2 tropo: evening after 1900 EDT into morning of Sept. 3rd. TCT 18 (location unknown, but due west); Iowa 14, 21, 32, 40; Green Bay U's, Angola, IN 63, Ft. Wayne 15, 21, 33, 39, 55; many Canadians to north. Sept. 2nd morning-tropo very good to east: Scranton, Binghamton, Elmira, Utica, Syracuse, Watertown, Connecticut 20 and 30.

Sept. 3 tropo: WNDU-16; Wingham, ON 45; Detroit, Mt. Clemens, MI very strong; Lansing, Battle Creek, Pittsburgh, Scranton, Binghamton, Elmira strong; unID 42 to ESE.

Sept. 4 0500-1000: Scranton, York, Washington, DC 20; Binghamton, Canadian 16; Toledo strong; Detroit weak.

Sept. 5: massive opening lasting all day into night into morning of 6th; all night session – Columbus, OH 6 and 10, band too loaded to DX, went to UHF only (channel numbers underlined):

14: WCMU-Mt. Pleasant, MI, WB-14 (to west, location unknown) (Bob, this sounds like WIWB, Suring-Green Bay, WI, as that is their slogan – mcs), WTMW-Arlington, VA (new), WYDO-Greenville, NC, W14C-Clarks Summit, PA. 15: WLYH-Lancaster, PA, WANE-Fort Wayne, IN, WMTV-Madison, WI, WKPC-Louisville, KY, CBLFT13-Belleville, ON. 16: WNDU-South Bend, IN, Canadian 16, WPBS-Watertown, NY, WNEP-

Scranton, PA. 17: WDLI-Canton, OH, WPHL-Philadelphia, PA, WXMI-Grand Rapids, MI. 18: WLFI-Lafayette, IN, WHIZ-Zanesville, OH, WLEX-Lexington, KY, WETM-Elmira, NY, WNPI-Norwood, NY, 2 Canadians, WVTM-Milwaukee, WI. 19: WDCD-Adams, MA, WDCQ-University Center, MI, WOIO-Shaker Heights, OH, WNPA-Jeannette, PA, WXIX-Newport, KY.

20: WXON-Detroit, MI, Canada, WUTR-Utica, NY, WFYI-Indianapolis, IN, WTXS-Waterbury, CT, unID TBN, WDCA-Washington, DC. 21: WPTA-Fort Wayne, IN, WHP-Harrisburg, PA, Canada, KTIN-Fort Dodge, IA (WOW!-mcs). 22: WYOU-Scranton, PA, WMPT-Annapolis, MD, WKEF-Dayton, OH, Canada-Global network. 23: WVPX-Akron, OH, WNDY-Marion, IN, WNJS-Camden, NJ. 24: WCNY-Syracuse, NY, WNWO-Toledo, OH, WUTB-Baltimore, MD, W24OI-Virginia Beach, VA (TBN). 25: WEYI-Saginaw, MI, WVIZ-Cleveland, OH, WHAG-Hagerstown, MD. 27: WBGU-Bowling Green, OH, WHTM-Harrisburg, PA, WGNT-Portsmouth, VA, CIII27-Peterborough, ON. 28: WBRE-Wilkes-Barre, PA, WTTE-Columbus, OH, WFUM-Flint, MI. 29: CIII29-Sarnia, ON, WTXF-Philadelphia, PA.

30: WGTE-Toledo, OH, WVIT-New Britain, CT, CIVO-Hull, PQ. 31: Ohio, WPXD-Ann Arbor, MI, WWPB-Hagerstown, MD, WAAY-Huntsville, AL, W31BG-Yorktown, VA. 32: Iowa (Waterloo or...Council Bluffs even? Why do I ALWAYS go out of town when DX is great? And I was in Central New York at this time too...-mcs), WLKY-Louisville, KY, 2 Canadians, Ohio. 33: WKJG-Fort Wayne, IN, WGKI-Cadillac, MI, WETK-Burlington, VT, WITF-Hershey, PA, Virginia. 34: WNIT-South Bend, IN, WOSU-Columbus, OH, WIVT-Binghamton, NY, 2 from Canada (one west, one north). 35: WGVU-Grand Rapids, MI, WLIO-Lima, OH, WRLH-Richmond, VA. 36: WENY-Elmira, NY, WUPW-Toledo, OH, WTVQ-Lexington, KY. 38: WADL-Mount Clemens, MI, WSWB-Scranton, PA, WKMR-Morehead, KY. WPNE-Green Bay, WI. 39: WEMT-Greeneville, TN, WLVT-Allentown, PA, WFWA-Fort Wayne, IN.

40: WICZ-Binghamton, NY, KFXB-Dubuque, IA, 2 from Canada, WLMB-Toledo, OH. 41: WOTV-Battle Creek, MI, WDRB-Louisville, KY, WXTV-Paterson, NJ. 42: WPBO-Portsmouth, OH, WBLJ-Bloomington, IN, unID to east. 43: WPMT-York, PA, WNYS-Syracuse, NY, WZPX-Battle Creek, MI, WKOI-Richmond, IN, WVBT-Virginia Beach, VA. 44: WTLW-Lima, OH, WVIA-Scranton, PA, WOUC-Cambridge, OH, 2 from Canada. 45: WNEO-Alliance, OH, WRGT-Dayton, OH, WBFF-Baltimore, MD, WTCI-Chattanooga, TN, CBLN4-Wingham, ON, W45BG-Virginia Beach, VA. 46: WHME-South Bend, IN, Ohio, WSKG-Binghamton, NY, WKLE-Richmond, KY, WVFX-Clarksburg, WV. 47: WSYM-Lansing, MI, WKBS-Altoona, PA, WNJU-Linden, NJ, W47AB-Mansfield, OH. 48: WCET-Cincinnati, OH, WNGT-LP-Toledo, OH, WAFF-Huntsville, AL. 49: WAQP-Saginaw, MI, WEAO-Akron, OH.

50: WKBD-Detroit, MI, WWTI-Watertown, NY, WOHZ-LP-Mansfield, OH, WPWR-Gary, IN, unID to east, not Watertown, unID to south. 51: W51BH-Gloucester, VA, WSFJ-Newark, OH, Canada, WTEV-Reading, PA, unID to east. 52: WKON-Owenton, KY, WNJT-Trenton, NJ, unID to SSE, WGVK-Kalamazoo, MI, Ohio? 53: WNVT-Goldvein, VA, WWHO-Chillicothe, OH, WLAJ-Lansing, MI, WPGH-Pittsburgh, PA, WWAC-Atlantic City, NJ, W53AX-Cleveland, OH, WFLI-Cleveland, TN, CICO53-Belleville, ON. 54: WNUV-Baltimore, MD, unID to east-Poughkeepsie? 55: WFFT-Fort Wayne, IN, WBNX-Akron, OH, unIDs to east and south. 56: WTVS-Detroit, MI, WDKY-Danville, KY, WOLF-Hazleton, PA, Canada. 57: WPSG-Philadelphia, PA, W57AG-Parkersburg, WV, unID to east. 58: WDJT-Milwaukee, WI, Indiana, unID to east-NJ or VA, maybe MA. 59: WXIN-Indianapolis, IN, 2 Canadians, unID to ESE.

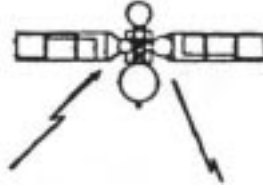
60: W60AL-Onancock, VA, WEHS-Aurora, IL, unIDs to east and south. 61: WPPX-Wilmington, DE, WDSI-Chattanooga, TN. 62: W62CN-Hampton, VA, WWJ-Detroit, MI, WJYS-Hammond, IN, unID to east. 63: WMBC-Newton, NJ, WINM-Angola, IN, WIPX-Bloomington, IN, several unIDs to ESE, no IDs, good signals, W67AL-Eastlake, OH (WVIZ xltr). 64: WDPB-Seaford, DE, WQPX-Scranton, PA (good, and new), W64AK-Conneaut, OH, W64BM-Toledo, OH, WLLA-Kalamazoo, MI, Canada, WSTR-Cincinnati, OH (good). 65: WUPV-Ashland, VA, Akron 23 xltr. 66: WSMH-Flint, MI, W66BD-Fort Wayne, IN, unID to ESE. 67: WMPB-Baltimore, MD, WHSI-Smithtown, NY, WOAC-Canton, OH, WMPB-Baltimore, MD. 68: WHSE-Newark, NJ, WSYT-Syracuse, NY, W68CD-Toledo, OH, CBLFT17-Sarnia, ON, WMFD-Mansfield, OH. 69: WFMZ-Allentown, PA.

Sept. 6 early AM (0430): WLYH-15, Lancaster, PA, Arlington, VA 14, Hershey 33, York 43, Baltimore 45 and 54, Washington, DC 20, Philadelphia 57, Baltimore 67, Scranton, WOLF-56 Hazleton, PA, Binghamton all in, Canadians to north strong. Opening seemed to end by 1100. Evening: Dayton 45 in good, Richmond, IN 43 in good. Ft. Wayne U's, South Bend 46, Canadians on 16, 18, 20, 22, 28 and 34 very strong, stopping South Bend on 16, 22, 34, stations on 18 and 20 (except Detroit) not able to get through but causing heavy CCI; Toledo very strong, Cincinnati trying to get in, also Columbus but already covered heavily. I have a lot of unIDs to solve-consulting other DXers.

That's it for now.

Thank you to everyone who reported; keep sending in those reports!..... 73s Matt.

Satellite News



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This month a run down of several more satellites and a few deletions from last month's listings.

GE7

Xpdr 1 - delete BBC America

SATCOM 4

Xpdr 2 - Infomercia is here and on Xpdr 5 are the Starz/Encore digital package as well as the CA Channel not Xpdr 8.

GALAXY 1 at 133 West was launched in Feb 1994 with a 12 year + life with 16 watt transponders – 12 odd horiz polarity and 12 even vertical polarity. 1 - Comedy Central West 2 - Univision digital 3 - Starz/Encore digital 4 – Food Network and Do-It-Yourself digital feed. 5 – Classic Arts Showcase 6 – The National Network West VC2-7 – Disney West VC2 8 – The Cartoon Network VC2 9 – ESPN Alternative and Shop at Home VC2 10 – MSNBC VC2 11 – EWTN 12 – Shop NBC 13 – Starz/Encore digital feeds 14 – ESPN Alternative feeds 15 – Turner Plex digital 16 – Turner Plex in MPEG2 Powerview 4020V/29270 17 – Inspiration Network East and MPEG2 – 4025H/4000 for west feed 18 – HBO Suite digital feeds 19 – Cinemax East VC2 20 – Home and Garden Television VC2-21 – USA Network West VC2 22 – Goodlife Television Network VC2 23 – HBO Digital suite 24- Misc digital digicipher feeds 100/102 – HBO East/West 103/105 – HBO Plus East/West 106/108 – HBO Signature East/West 109/111 – HBO Family East/West 112/114 – HBO Comedy East/West 115/117 – HBO Zone East/West 124 – Cinemax East 126/129 – More Max East/West 130/132 – Action Max East/West 133/135 – Thriller Max East/West 137 – Women's Max 139 - @Max 141 – 5 Star Max 143 – O Max 150/151 – Starz East/West 152/ – Starz Theatre East 154 – Black Starz East 156 – Starz Family East 158/159 – Starz Cinema East/West 165/166 – Encore East/West 167/168 – Westerns East/West 169/170 – Love Stories East/West 171/172 – Mysteries East/West 173/174 – Action East/West 175/176 – True Stories East/West 177 – WAM East 600 – The Food Network 601 – Do-It-Yourself 751/753 – HBO Latino East/West **Audio Subcarriers** 11 - WEWN Birmingham 5.4/WEWN Spanish 5.58/5.8 misc WEWN Feeds 7.2/7.4 17 - Amerinet –WGTG McCaysville, GA 5.58/WNMX-FM 106.1Waxham(Charlotte)NC 7.9.

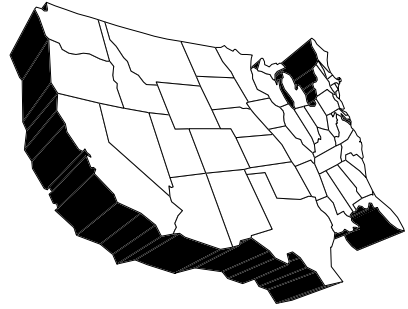
SATCOM C3 at 131 West launched in 1992 for a 10 year life with 24 17 watt transponders – odds vertical polarity and 12 even horizontal polarity transponders. 1 – Fox MPEG 2 clump – 3720 V 30000 – mostly power view encrypted 2 – The Learning Channel VC2 3 – In-demand-Pay-per-view channel 4 – Lifetime West VC2 5 – Hallmark East/Hallmark West is MPEG2 3784V /3000 6 – digital – Court TV NW Cable News and others 7 – C Span 1 8 – misc digital 9 – Music Choice digital 10 – America's Store/MPEG2 – Home Shopping En Espanol 3916H/4000 11 – Fox Sports – MPEG2 3920V/30000 12 – History Channel East VC2 13 – Weather Channel VC2 14 – NESN and BCTV digital feeds 15 – The Movie Channel digital feeds 16 – Showtime digital feeds 17 – The Movie Channel East 18 – TV Land digital feeds 19 – Showtime/ The Movie Channel digital feeds 20 – PIN and Great American Country and others digital feeds 21 – Comedy Central East VC2 22 – Discovery Suite digital feeds 23 – E- Entertainment Television East and MPEG2 for west feeds 4176/4000 24 – Oxygen VC2 101 – Showtime East 102 – Showtime 2 East 103 – Showtime 3 East 104 – Showtime Extreme East 105 – Showtime Beyond East 110 – Flix 111 – Movie Channel East 112 – Movie Channel 2 East 117 – The Sundance Channel 118 – Showtime HDTV East 125 – Showtime Next East 126 – Showtime Family East 127 – Showtime Women 580 – Court TV East 581 – Northwest Cable News 582 – Court TV West 610 – Discovery Kids 611 – Discovery Wings 612 – Discovery Science and Technology 613 – Discovery Health 614 – Discovery Civilizations 615 – Discovery Home and Leisure 620 – Noggin 621 – Nick Gas (Games and Sports) 622 – Nick Too East 623 – Nick Too West 680 – BCTV – Boston Catholic Television 700 – BBC America 701 – Discovery en Espanol 780 – PIN Product Information Network 781 – Atlantic Satellite Color Bars 800 – M2 801 – MTVX Rock 802 – MTV S – Hispanic Rock 803 – VH1 Classic Rock 804 – VH1 Classic Soul 805 – VH1 Country 810 – Great American Country **Audio subcarriers** 7 – Various C-Span services World Radio Network 5.20 World Service 5.4 24 – WOKIE 7.5.

Next month we'll start with Telstar 7, currently 2 new services are noted: xpdr 1 in MPEG2 – Triangle (Gay oriented) 15 – Playboy located here in addition to G5 xpdr location. That's all for now. See you in 30.

George

WESTERN TV DX

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



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

This report is for September 2001. While I regularly monitored coastal southern-CA TV-FM tropo conditions (to San Diego/Tijuana up to 200 mi/320 km), I did not keep up very much this time with corresponding weather conditions.

Aug 30-31: Very poor Aug 29, cooler
Sep 1-5: Very poor (Sep 2 almost none)
Sep 6-9: Poor
Sep 10-12: Very poor
Sep 12 am: Poor
Sep 13 eve-16: Fair Some heating
Sep 17-25: Poor Perhaps high layer
Sep 26-30: Fair

In addition, FM seemed to be fair on Sep 21:

On Sep 20: a new logging: Santa Barbara's translator for KJLA-57 Ventura returned to the air, this time on ch. 51. The translator had to vacate its former ch. 38 in March 2001 when new KPMR 38 S.B. (Univision) came on the air.

Best of DX to all. Dennis

John Ebeling From my cabin at 6843 Hwy 47, Alborn MN 55702.
Equipment used is the same as noted in the July 2001 VUD. Times are CDT. Most are Es; a few tropo.

June 16

0920 WSB-2 GA
0950 WESH-2 FL

June 17

1230 KACV-2 TX
2120 KDFW-4 TX (Fox 4)
2125 KBEJ-2 TX (with KENS-5 calls
2226 unid-2 UPN-2 (cable 4)

June 18

1705 WCBBD-2 SC

June 21

1300-2000 Es on 2-6

1410 KDFW-4 TX
1730 KACV-2 TX
1820 KMID-2 TX
" CKAL TV1 AB
1855 WRAL-5

June 22

0900 WCBBD-2 SC (weak Es)
1145 KASA-2 NM
1156 KJRH-2 OK
1213 KDFW-4 TX
2340 unid-2 (Fox or UPN BB game: Texas vs. Oakland)

June 24

1400 WAOW-9 WI (Perfect pix)
" WSAU-7 WI "

June 25

0855 WCBBD-2 SC
1100 WCBBD-2 SC (a mix on Ch 2 all morning)
1334 WESH-2 FL
1530 WDIQ-2 AL

June 30

1230 KBCI-2 ID

July 1

2133 KASA-2 NM weak

July 2

2200 unid-2 PBS
2230 KBEJ-2 TX (again KENS-5 call seen)

July 3

0930 WSJK-2 TN
0935 WSMV-4 TN

July 5 thru 10 (in Thunder Bay)

July 11

2100 Weak Es on Ch 2 from the South

July 12

0900 WDIQ-2 AL
0958 KASA-2 NM
1000 KACV-2 TX
1015 Ch2 pix a mess w/Spanish audio
1100 unid-2 Spanish "S Mart" ad Game show

July 13

0845 Ch 2 wild
0845 WJXT-4 FL
0900 WCBBD-2 FL
" WDIQ-2 AL

0930 WUFT-5 FL

1845 unid-2 AB Calgary News

July 14

1145 WDIQ-2 AL
 2200 KBEJ-2 TX
July 15
 1800 KUTV-2 UT
July 16 day long Es on 2-4
 1100 KBEJ-2 TX
 1500 WRC-4 DC
July 27
 1700 unid Es on 2-4
July 31
 2030 WDIQ-2 AL
Aug 7
 2306 WLUK-11 WI
Aug 8
 0900 WEAU-13 WI
 2335 WFRV-5 WI
 2340 WBAY-2 WI
Aug 9
 1845 WCBI-4 MS
 1856 WKRG-5 AL (on map only in TV Guide)
Aug 17
 1800-2100 Es on 2-6
Aug 18
 2000 unid-2 French
 2210 WKRN-2 TN
Aug 21
 1920 WESH-2 FL (weak)
Aug 22
 1740 WDIQ-2 AL
Aug 23
 1400-1500 unid-2 "The 700 Club"
Aug 24
 1730 Es 2-6 (on FM, as usual)
 2135 WWL-4 LA
Sept 30
 2335 KXJB-4 ND

That's it! I have locals on 3 & 6, so very few loggings on those channels.

John Ebeling

Marvin Shults, RR #1, Toulon, IL 61483

May 2001

16 Es 1000 WPBT 2 FL
 17 Es 1545 XEFB 2 NL
 18 Es 0615 KTVQ 2 MT
 0625 KBCI 2 ID
 0636 KAID 4+ ID?
 1819 WBRZ 2 LA
 1821 KPRC 2 TX
 22 Es 1022 WPBT 2 FL
 23 ms0558 CKCK 2 SK
 Es 0958 XEFB 2 NL
 24 Es 2025 XEPM 2 CI
 2032 KMID 2 TX
 2058 XEFB 2 NL
 25 Es 1009 XEFB 2 NL
 1413 WPBT 2 FL

1441 WESH 2 FL
 1454 WSAV 3 GA
 28 Es 0840 XEFB 2 NL
 0900 XHY 2 YU
 1015 XHHUPN 2 TM
 1101 XHBQ 3 ZA
 1118 X___ 4
 1134 XEFB 2 NL
 1145 WBRZ 2 LA
 1203 KATC 3 LA
 1212 WWL: 4 LA
 1233 KNAZ 2 AZ
 1234 XHHUPN 2 TM
 1328 KVBC 3 NV
 1330 KPRC 2 TX
 1523 WPBT 2 FL
 1523 WESH 2 FL
 1527 WEDU 3 FL
 1527 WFORt 4 FL
 1527 WPTV 5 FL
 1534 WOOCK-LP t 5 FL
 1715 XHQRO 2 QT
 1716 XHTAUt 2 TM Azteca 7
 1725 XHAE 5 CL?
 1817 XHY 2 YU
 1959 XEFB 2 NL
 2005 XHBQ 3 ZA
 29 ms0629 CKCK 2 SK
 Es 0638 KTVQ 2 MT
 0658 KLEWt 3 ID
 0800 CFQC 3 SK
 0803 CKCK 2 SK
 0917 CKAL 2 AB
 0946 CICT 2 AB
 0947 CKAL 2 AB
 1708 KRGV 5 TX
 1713 KGBT 4 TX
 1714 KIIL 3 TX
 1714 KRIS 6 TX
 1721 XHHUPN 2 TM
 1729 XEFB 2 NL
 1743 KBEJ 2 TX
 1746 XHPN 3 CL
 1817 XEPM 2 CI
 1836 KUTV 2 UT
 2134 KENW 3 NM
 30 Es 1400 WPBT 2 FL
 1410 WESH 2 FL
 31 Es 0734 WESH 2 FL
 1020 XEFB 2 NL
 1039 KACV 2 TX
 1300 XHQRO 2 QT
 1340 X___ 2
 1347 KBEQ 2 TX
 1359 KDTN 2 TX
 1403 X___ 3
 1430 WDIQ 2 AL
 1440 WEAR 3 FL
 1441 WKRG 5 AL
 1506 WEDU 3 FL
 1522 WWL 4 LA

1526	WDSU	6	LA
1700	WBRZ	2	LA
1701	WLBT	3	MS
1703	KPRC	2	TX
1704	KATC	3	LA
1724	KBEQ	2	TX
1730	KXAS	5	TX
1730	KENS	5	TX
1805	KMID	2	TX
1807	KOAA	5	CO
1814	KNAZ	2	AZ
1814	KENW	3	NM
1830	KREX	5	CO
1831	KWGN	2	CO
1838	KCNCt	4	CO
1840	KTVK	3	AZ
1845	KPHO	5	AZ
1857	XEPM	2	CI
1910	WPBT	2	FL
1910	WEDU	3	FL
1937	KUATt	6	AZ
2000	KNAZ	2	AZ
2044	WPTV	5	FL
2059	WESH	2	FL
2158	KNME	5	NM
2201	KASA	2	NM
<u>June 2001</u>			
01 Es	0914	WPBT	2 FL
	0917	WESH	2 FL
	0919	WEDU	3 FL
	0919	Cuba	2
	0927	WFOR	4 FL?
	0956	KRGV	5 TX
	0959	KIII	3 TX
	1000	XEFB	2 NL
	1002	XHWX	4 NL
	1010	XHAE	5 CL
	1018	<u>XELN</u>	4 CL
	1038	XETt	6 NL
	1305	KPRC	2 TX
	1413	XEFE	2 TM
	1502	WPBT	2 FL
	1504	ICR	2 Cuba TP
	1518	ICR	3 Cuba TP
	1532	WESH	2 FL
	1537	WEDU	3 FL
	1858	WFOR	4 FL
	1911	Cuba	4 Cuba WHBF-4 off
	1920	WWAY	3 NC
	1939	WPTV	5 FL
	1950	ICR	5 Cuba
	2058	KIII	3 TX
	2105	XEFB	2 NL
	2118	KBEQ	2 TX
	2127	X___	3
	2157	XEPM	2 CI
	2202	XHFI	5 CI
	2223	KMID	2 TX
	2230	KASA	2 NM
	2240	XEFB	2 NL
	2255	KTVK	3 AZ

	2302	KDBC	4 TX
02 Es	0843	XHCH	2 CI
	0850	XHFA	2 SO?
	1030	XEFB	2 NL
	1224	KREG	3 CO
	1230	KUTV	2 UT
	1520	XEPM	2 CI
	2200	WBRZ	2 LA
	2204	KPRC	2 TX
	2210	KIII	3 TX
03 Es	1643	XEPM	2 CI
	1657	KASA	2 NM
04 Es	1526	XHY	2 YU?
	1746	XEPM	2 CI
	1821	WWAY	3 NC
	1854	WPBT	2 FL
	2000	WESH	2 FL
05 Es	1007	WEDU	3 FL
	1008	WPBT	2 FL
	1011	WFOR	4 FL?
	1011	WPTV	5 FL?
	1447	XHHUPN	2 TM
	1504	XEFB	2 NL
	1642	WPBT	2 FL
	1647	KBEQ	2 TX
	1714	WESH	2 FL
06 Es	1000	XEFB	2 NL
07 Es	1900	XHHUPN	2 TM
	1914	KNAZ	2 AZ
	1915	KPRC	2 TX
	1922	KMID	2 TX
	2013	<u>KCSG</u>	4 UT Cedar City
	2057	KUTV	2 UT
	2107	XEFB	2 NL
	2118	KASA	2 NM
	2130	KVBC	3 NV
08 Es	1714	KWGN	2 CO
	1728	KREG	3 CO
	1758	KTVQ	2 MT
	1759	KMID	2 TX
	1821	KIII	3 TX
	1830	KIDK	3 ID
	1831	XHFI	5 CI
	1846	KUTV	2 UT
	1946	XEFE	2 TM
	1955	XEFB	2 NL
09 Es	1511	KTWO	2 WY
	1530	KTVQ	2 MT
10 Es	0553	WGBH	2 MA
	0605	WFSB	3 CT
	0803	KPRC	2 TX
	0854	KBEQ	2 TX
	1458	XHQROt	2 QT
11 Es	1600	XHHUPN	2 TM
	1600	KIII	3 TX
	1608	XHTAU	2 TM?
	1614	XEFB	2 NL
	1621	XHWX	4 NL
	1638	XEFE	2 TM

	1650	XHAE	5	CL	
	1800	KUTV	2	UT	
	1825	KIDK	3	ID	
	1828	KUTV	2	UT	
	1846	KTWO	2	WY	
	1922	KTVQ	2	MT	
12 Es	1010	WESH	2	FL	
	1419	ICR	2	Cuba TP	
13 Es	1720	XEFB	2	NL	
	1721	XHTV	5	ZA?	
	1723	XHAE	5	CL?	
	1725	XHBQ	3	ZA?	
	1734	KIII	3	TX	
	1852	KMID	2	TX	
	2100	KPRC	2	TX	
14 Es	0959	X___	2	?	
17 Es	2213	KUTV	2	UT	
	2241	KASA	2	NM	
	2242	XEPM	2	CI	
18 tr	0537	KQTV	2	MO	
Es	1520	ICR	3	Cuba TP	
	1522	WPBT	2	FL	
	1525	ICR	2	Cuba TP	
	1529	WEDU	3	FL	
	1557	WPTV	5	FL	
	1601	WTVJ	6	FL	
	1602	WESH	2	FL	
	1611	WFOR	4	FL	
	1710	ICR	2	Cuba baseball	
19 Es	1413	XEPM	2	CI	
	1415	KMID	2	TX	
	1824	WKRG	5	AL	
	1827	WWL	4	LA	
	1845	WESH	2	FL	
	1856	WPBT	2	FL	
	2100	KPRC	2	TX	
	2141	WLBZ	2	ME	
	2157	C___	2	FR	
	2200	CXBFT	2	QU	
	2219	WPBT	2	FL	
21 Es	0929	WPBT	2	FL	
	0946	WEDU	3	FL	
	0949	ICR	3	Cuba TP	
	1010	WFOR	4	FL?	
	1010	WTVJ	6	FL?	
	1032	WESH	2	FL	
	1050	WKMG	6	FL	
	1055	ICRt	5	Cuba	
	1100	WPTV	5	FL	
	1104	KRGV	5	TX	
	1112	XEFB	2	NL	
	1128	KENS	5	TX	
	1130	KIII	3	TX	
	1130	XET	6	NL	
	1139	XELN	4	CL	
	1145	X___	5		
	1149	XHAE	5	CL	
	1158	KBEQ	2	TX	
	1210	XHPN	3	CL	
	1218	XHFI	5	CI	
	1222	XHCH	2	CI	

	1320	KDBC	4	TX	
	1321	XHHUPN	2	TM	
	1330	KMID	2	TX	
	1349	KNAZ	2	AZ	
	1358	KACV	2	TX	
	1420	KASA	2	NM	
	1439	WEDU	3	FL	
	1454	WWL	4	LA	
	1459	WDIQ	2	AL	
	1508	C___	5	FR	
	1510	C___	3		CBC
	1545	X___	2		
	1615	KPRC	2	TX	
	1654	XEFB	2	NL	
	1734	CICT	2	AB	
	1742	KTVQ	2	MT	
	1755	CFRN	3	AB	
	1758	CKSA	2	AB	
	1916	KHMT	4	MT	
	2116	WPBT	2	FL	
	2117	ICR	2	Cuba	
	2134	WESH	2	FL	
22 Es	1106	KTVQ	2	MT	
	1143	KBCI	2	ID	
	1224	KTWO	2	WY	
	1225	X___	2		
	1240	XHBQ	3	ZA?	
	1243	XHCVT	3	TM?	
	1250	XEFB	2	NL	
	1314	XEFE	2	TM	
	1328	KBEQ	2	TX	
	1511	ICR	2	Cuba	
	2059	KDFW	4	TX	
	2107	KRGV	5	TX	
	2107	KIII	3	TX	
	2110	KENS	5	TX	
	2125	KRIS	6	TX	
	2204	KPRC	2	TX	
23 Es	0910	XHBQ	3	ZA?	
	1500	XHHUPN	2	TM	
24 Es	0940	XEFE	2	TM	
	1630	WPBT	2	FL	
	1700	WCBS	2	NY	
	1849	KUTV	2	UT	
	1852	WPBT	2	FL	
	1900	KTVXt	4	UT	
	1901	KSL	5	UT	
	1924	XEFB	2	NL	
	1946	KTWO	2	WY	
	2015	KWGN	2	CO	
	2020	KTVQ	2	MT	
	2023	KHMTt	4	MT	
	2031	KUTV	2	UT	
25 tr	0542	KEFN	62	MO	
Es	1530	KIII	3	TX	
	1550	XEFB	2	NL	
	1555	KPRC	2	TX	
	1730	KBEQ	2	TX	
	1855	WPBT	2	FL	

	1857	WEDU	3	FL
	1900	WFORt	4	FL
	1928	KMID	2	TX?
	1935	X___	4	
	1938	XET	6	NL
	2025	WESH	2	FL
	2030	ICR	2	Cuba
	2100	WEDU	3	FL
26 Es	1616	KYW	3	PA
	1617	WMAR	2	MD
	1624	WCBS	2	NY
	1626	WPSX	3	PA
	1628	WNYW	5	NY
	1634	WLBZ	2	ME
27 Es	1428	XEPM	2	CI
	1433	KMID	2	TX
	1450	KRGV	5	TX
	1451	KIII	3	TX
	1530	WEDU	3	FL
	1530	WPBT	2	FL
	1530	WPTV	5	TX
	1818	KTVK	3	AZ
	1820	XEJ	5	CI
	1830	KUAT	6	AZ
	1831	KPHO	5	AZ
	1837	XHFI	5	CI
	1910	C___	2	FRCBC
	2000	XEFB	2	NL
	2013	WEDU	3	FL
	2013	KVBC	3	NV
	2045	KTVK	3	AZ
28 Es	0619	KBEQ	2	TX
	1500	KACV	2	TX
	1621	KMID	2	TX
	1828	WNYW	5	NY
	1828	WEDU	3	FL
	1830	WFSB	3	CT
	1841	KYW	3	PA
	1851	WUND	2	NC
	1857	WCBS	2	NY
	1900	WPBT	2	FL
	1958	WESH	2	FL
	2029	C___	2	CTV
29 Es	1413	CKAL	2	AB
	1415	KLEW	3	ID
	1429	CICT	2	AB
	1713	KTVQ	2	MT
	1735	XHCH	2	CI
	1740	KMID	2	TX
	1924	WUND	2	NC
	1926	WPBT	2	FL
30 Es	0736	WESH	2	FL
	0930	KIII	3	TX
	0950	XHHUPN	2	TM
	1156	XEFB	2	NL
	1230	XHPN	3	CL
	1416	XEPMt	2	CI
	1502	KASA	2	NM
	1854	WEDU	3	FL
	1858	WPBT	2	FL
	1900	WESH	2	FL

	1927	ICR	2	Cuba
<u>July 2001</u>				
01 Es	2100	KUTV	2	UT
02 Es	2114	KTVQ	2	MT
	2120	KTWO	2	WY
04 tr	1000	<u>WOCK</u>	13	IL
	1000	WBKB	11	MI
05 Es	1000	XEPM	2	CI
06 Es	2029	X___	2	
07 tr	0730	KFAA	51	AR
	0730	3,10,27,33		MO Springfield
	0730	KHOG	29	AR
	0800	<u>KTPX</u>	44	OK
	0800	KBCA	31	OK?
	0830	<u>KWPX</u>	34	AR
Es	1920	WPBT	2	FL
	1920	WEDU	3	FL
	1920	WPTV	5	FL
	1931	ICR	2	Cuba
	2015	ICR	5	Cuba
	2100	WESH	2	FL
08 Es	0959	XEPM	2	CI
	1000	KMID	2	TX
	1010	XHY	2	YU
	1136	WBRZ	2	LA
	1258	WDIQ	2	AL
	1259	WWL	4	LA
	1330	KIII	3	TX
	1351	KBEQ	2	TX
	1358	KENS	5	TX
tr	1444	KPWB	23	IA
Es	1500	KPRC	2	TX
	1557	KACV	2	TX
09 Es	1927	WMAR	2	MD
	2036	WEDU	3	FL
	2054	KASA	2	NM
	2057	WDIQ	2	AL
	2125	WLBZ	2	LA
10 Es	1009	KENS	5	TX
	1854	XHIT	4	CI
	1912	KENS	5	TX
	1932	KTVK	3	AZ
11 Es	1400	WBRZ	2	LA
	1426	KATC	3	LA
	1756	XEPM	2	CI
	1758	KENW	3	NM
	1802	XEJ	5	CI
	1811	ICR	2	Cuba
	1830	KDBC	4	TX
	1930	KMID	2	TX
	1944	XHCH	2	CI
	2048	XEFB	2	NL
	2050	KBEJ	2	TX
	2055	XHAE	5	CL
	2100	KENS	5	TX
	2112	XEFE	2	TM
	2116	XHWX	4	NL
	2124	XET	6	NL?
12 Es	1100	X___	6	

	1350	XEFB	2	NL	
	1352	XEFE	2	TM	
	2004	KASA	2	NM	
	2014	KIII	3	TX	
	2014	KTVQ	2	MT	
	2020	KREM	2	WA	
	2100	KNAZ,KTVQ+KREM			
	2105	KIDK	3	ID	
	2122	KUTV	2	UT	
13 Es	0627	CKCW	2	NB	
	0631	C___	2	QU	FR
	1430	WDIQ	2	AL	
	1858	WGBH	2	MA	
	1957	WPBT	2	FL	
	1957	WEDU	3	FL	
	2000	WESH	2	FL	
	2026	XEPM	2	CI	
	2110	KTVK	3	AZ	
14 Es	1405	WESH	2	FL	
	1410	KIII	3	TX	
	1421	KBEQ	2	TX	
	1445	K___	4	TX	
16 Es	1513	XEFE	2	TM	
	1516	KMID	2	TX	
	1522	WEAR	3	FL	
	1527	C___	3	QU	FR
	1529	WABI	5	ME	
	1533	WPTZ	5	NY	
	1536	WLBZ	2	ME	
	1542	C___	2		
	1543	WCZX	3	VT	
	1544	C___	4		FR
	1554	WCBS	2	NY	
	1558	CB FT	2	QU	
	1600	WNYW	5	NY	
	1604	W___	6		
	1859	KOAA	5	CO	
	1900	KNAZ	2	AZ	
	1909	KREZt	6	CO	
	1916	KVOA		AZ?	
	1952	WPBT	2	FL	
	1956	WUND	2	NC	
17 Es	1420	WLBZ	2	ME	
	1954	KTVQ	2	MT	
23 Es	1831	KBEQ	2	TX	
24 Es	1800	WPBT	2	FL	
	1900	WESH	2	FL	
25 Es	1020	WESH	2	FL	
	1449	WEDU	3	FL	
	1450	WPBT	2	FL	
	1459	ICR	2	Cuba	
	1500	WPTV	5	FL	
	1528	WFOR	4	FL	

August 2001

01 tr	0550	WWTV	9	MI	
	0552	WPBN	7	MI	
	0600	WGKI	33	MI	
03 tr	0600	KARE	11	MN	
	0600	KSTP	5	MN	
	0600	WEAU	13	WI	
	0600	WXOW	19	WI	

05 tr	1830	KSMO	62	MO	
	1830	KMBC	9	MO	
	1830	KCTV	5	MO	
09 Es	1406	XHCH	2	CI	
	1549	XEPM	2	CI	
	1721	KBEQ	2	TX	
	1811	KPRC	2		TX
	1829	KIII	3	TX	
	1830	KBTX	3	TX	
13 Es	1912	WLBZ	2	ME	
	1925	C___	2	CBC	FR
17 Es	1914	C___	2		FR
	1922	WEDU	3	FL	
	1938	WUFT	5	FL	
	2029	WPBT	2	FL	
	2041	WESH	2	FL	
	2043	WTVJ	6	FL	
	2100	WPTV	5	FL	
18 Es	2113	CHAU-TV-1	3	QU	TVA FR
	2115	CBFT	2	QU	
19 Es	2120	WESH	2	FL	
21 Es	2057	WCBS	2	NY	
	2117	WMAR	2	MD	
	2125	KYW	3	PA	
22 Es	1425	WPBT	2	FL	
	1725	WKRG	5	AL	
	1730	KDTN	2	TX	
	1730	KBEQ	2	TX	
	1735	X___	3		
	2014	XEFB	2	NL	
	2015	XHAE	5	CL	
	2030	XHWX	4	NL	
	2131	CKCWt	2	NB	
	2142	C___	2		FR
	2147	CKLT	3	NB	ATV
23 Es	1849	KIDK	3	ID	
	1851	KNAZ	2	AZ	
	1854	C___	2		
	1858	KTWO	2	WY	
	1900	KGWN	5	WY	
	1901	KNAZ	2	AZ	
	1917	KUTV	2	UT	
	1942	KSL	5	UT	
	2000	KTVK	3	AZ	
	2001	XEPM	2	CI	
	2025	K___	6		
	2154	KWGN	2	CO	





John Zondlo
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 Yukon, OK 73099
 Jpzondlo@aol.com
 Deadline: 10th

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

November 2001

Mike Hawk
 Boulder, CO
 MDT

Kenwood KT-815 IF modified, 6 element indoor yagi, Conrad RDS unit

8/11 Ms

0635 KUNI 90.9 IA Cedar Falls, local t, ment a Cedar Falls man, 8 sec burst
 0655 WHRM 90.9 WI Wausau, RDS ID "WHRM" PI=68EA, 4 sec burst

8/17 ES (MUF 107.7+)

1859 WEDU 88.9 KY Richmond, ID
 1900 WNKU 89.7 KY Highland Heights, ID
 1904 WKWF 93.1 WV Ravenswood, "The Wolf," k, last heard as "Golden V-93" with o on 7.16
 1905 WKJZ 88.1 WV Clarksburg, "He's Alive" slogan, hesalive.net website
 1910 WVPWt 88.9 WV Buckhannon, WV Public Radio, presumed to be Buckhannon (a relog)
 1920 WKEE 100.5 WV Huntington, RDS ID "100 KEEFM," PI=6F7C
 1922 WSEK 97.1 KY Somerset, Pulaski County vs Graham HS fb
 1923 WQUT 101.5 TN Johnson City, RDS ID, classic r, local ads
 1925 WBON 104.5 TN Knoxville, classic r, "The Bone"
 1928 WVXU 91.7 OH Cincinnati, RDS ID
 1929 WGUC 90.9 OH Cincinnati, RDS ID
 1929 WDAV 89.9 NC Davidson, ID, RDS PI=5CA9
 1933 WUCZ 104.1 TN Carthage, local ads & ad for Visionland in Birmingham AL
 1934 WKXD 106.9 TN Monterey, Titans fb, RDS PI=7169 (no PS rcvd)
 1935 WKDZ 106.3 KY Cadiz, ment of "KDZ Country Club" during a high school fb game
 1936 WGFxt 104.5 TN Gallatin, Titans fb
 1936 WPTQt 103.7 KY Cave City, Titans fb
 1940 WTUE 104.7 OH Dayton, r, ID
 1942 WLIV 104.7 TN Monterey, Livingston vs

1944 WIVK 107.7 TN Cumberland Co. HS fb Knoxville, ad for Rusty Wallace Pontiac and Oakridge (mall?)
 1949 WZHT 105.7 AL Troy, phone #'s 262-1057 and 877-468-1057 given
 1950 WBJZ 104.9 TN Woodbury, "Solid Gospel 105"
 1956 WHRZt 97.7 KY Providence, Titans fb
 1958 WGKS 96.9 KY Paris, soft r, ID
 1959 WXKY 96.3 KY Stanford, Lincoln County fb (in the "Death Valley Bowl")
 2000 WJSP 88.1 GA Warm Springs, faded up w/ID in jumble of 3 or 4 stations
 2005 KMJM 104.9 IL Columbia, "Magic 105," caught "KM" in call letters before lost to other Es stations
 2006 WQLT 107.3 AL Florence, RDS ID "Q-107," PI=A819
 2009 WQRLt 106.3 IL Benton, o, "Q-106"
 2015 WBLE 100.5 MS Batesville, "Country 101"
 2017 WEGR 102.7 TN Memphis, RDS PS "Rock 103," PI=5FE5
 2020 WRAX 107.7 AL Birmingham, r, "107-7 The X"
 2021 WYVYt 104.9 TN Union City, "Today's best country, 104.9," promo for trip to Cancun
 2022 WZZK 104.7 AL Birmingham, ID, promo for American Heart Assn walk
 2030 WYAM 105.7 AL Addison, ID
 2032 WSTH 106.1 AL Alexandria, local ads, "Rooster Country 106"
 2035 WUSJ 96.3 MS Jackson, "US-96.3," wx
 2035 WVAS 90.7 AL Montgomery, RDS ID
 2037 KRVV 100.1 LA Bastrop, RDS ID "KRVV," PI=3F1B
 2038 KMYV 106.1 LA Monroe, RDS ID, PI=3238, "Y-106," k
 2041 WXBM 102.7 FL Milton, ID
 2042 WJDQ 101.3 MS Meridian, "Q-101," pop/top 40
 2043 WJNA 102.7 LA Jena, "J-102.7," ad for Trading Post weekdays at 7:20
 2045 WBBE 103.3 LA Hammond, "The New B-103," soft r
 2046 KQXL 106.5 LA New Roads, "Q-106, r&b ,mx

2050	<u>KLEC</u>	106.3	AR	Lonoke, "Modern rock for Little Rock," ment of lick1063.com	1636	<u>KYYSt</u>	99.7	MO	Kansas City, tuned in to hear "from the KY Library" before being overtaken by an unID, about 530 miles
2053	<u>KABK</u>	97.7	AR	Augusta, "K-97.7," ment of Harding U back to school	1638	<u>WCIL</u>	101.5	IL	Carbondale, "CIL-FM" ID
2056	<u>WMXU</u>	106.1	MS	Starkville, mentions of Starkville, Dekalb & Columbus in ads	1640	<u>WWBL</u>	106.5	IN	Washington, ID, Weather Channel wx forecast
2058	<u>WWMS</u>	97.5	MS	Oxford, k, "The Miss 98"	1642	<u>WDJX</u>	99.7	KY	Louisville, RDS ID
2059	<u>KBDO</u>	91.7	AR	Des Arc, AFR nx, ID	1644	<u>WFGE</u>	103.7	KY	Murray, "Froggyland Wx," mentions of area towns
2100	<u>KVRN</u>	90.7	AR	Marvell, ID (see notes)	1650	<u>WIL</u>	92.3	MO	St. Louis, ID, ad for Shop 'N Save
2100	<u>KLRE</u>	90.5	AR	Little Rock, ID (see notes)	1656	<u>WJCP</u>	92.7	IN	Austin, "Real Country WJCP"
2100	<u>WMAE</u>	89.5	MS	Booneville, caught "Booneville" in mess of 3+ stations (see notes)	1658	<u>WUSI</u>	90.3	IL	Olney, ID w/WSIU
2101	<u>WTUG</u>	92.9	AL	Tuscaloosa, ID	1700	<u>WBHW</u>	88.7	IN	Loogootee, ID w/WBGW, WBJW, and one other, ment of keylife.org URL
2105	<u>KZMZ</u>	96.9	LA	Alexandria, classic r, ID	1707	<u>KUHF</u>	88.7	TX	Houston, ID
2108	<u>WKZN</u>	105.3	LA	Slidell, "The Zone," ads for Northshore Square	1720	<u>WHRM</u>	90.9	WI	Wausau, RDS ID, first time
2112	<u>WYCL</u>	107.3	FL	Pensacola, "Cool Oldies," RDS PI=9447	1721	<u>WXPR</u>	91.7	WI	Rhineland, RDS PI=92FB
2116	<u>KKIX</u>	103.9	AR	Fayetteville, k, "Kicks 104"	1724	<u>WIMK</u>	93.1	MI	Iron Mountain, RDS "WIMK," PI=680A
2121	<u>KQQK</u>	106.5	TX	Galveston, SS ads, ment of Rosenberg	1724	<u>WGLQ</u>	97.1	MI	Escanaba, extremely strong, RDS "WGLQ-FM," PI=65AE
2123	<u>WXRR</u>	104.5	MS	Hattiesburg, ad for Hoopers in Hattiesburg, "Rock 104"	1725	<u>WCMZ</u>	98.3	MI	Sault Ste. Marie, RDS PI=5B41
2125	<u>KWLT</u>	102.7	AR	North Crossett, o, "T-102.7"	1726	<u>WSUE</u>	101.3	MI	Sault Ste. Marie, "101 FM, the best new and classic rock and roll"
2127	<u>KBGR</u>	101.5	AR	Beebe, "Arkansas' Big Country 101.5"	1727	<u>WKEB</u>	99.3	WI	Medford, "K-99," ment of Medford (thought I had OR)
2131	<u>KYFL</u>	89.5	LA	Monroe, ID	1729	<u>KCLC</u>	89.1	MO	St. Charles, heard earlier w/St. Louis area nx, KMOV
2136	<u>WYKK</u>	98.9	MS	Quitman, ID, k, "Quitman's country powerhouse"	1730	<u>WVSt</u>	88.9	IL	Mt. Vernon, presumed w/WSIU ID, this stn is apparently brand new on the air
2136	<u>WMCP</u>	99.7	TN	Memphis, "FM-100"	1730	<u>KEDT</u>	90.3	TX	Corpus Christi, RDS ID
2139	<u>KIPR</u>	92.3	AR	Pine Bluff, Little Rock ads, "Power 92 Jams," RDS "Power 92," PI=26B7	1731	<u>WYKX</u>	104.7	MI	Escanaba, RDS "WYKX," PI=9523
2144	<u>KARG</u>	91.7	OK	Poteau, RDS ID	1732	<u>WVEZ</u>	106.9	KY	Louisville, RDS "WVEZ," PI=8C9D
2150	<u>KOOJ</u>	93.7	LA	New Iberia, mention of Citadel Bcstg in ID	1737	<u>WULF</u>	94.3	KY	Hardinsburg, United Sports
2158	<u>KETR</u>	88.9	TX	Commerce, promo for "Wake Up Commerce Breakfast"	1740	<u>KATI</u>	94.3	MO	Jefferson City, RDS PI=11F6, no PS received, "Wild Cat Country"
2226	<u>KROM</u>	92.9	TX	San Antonio, "Estereo Latino," SS, ment of San Antonio	1742	<u>WJNR</u>	101.5	MI	Iron Mountain, ads ment town of Kingsford and Riverside Auto Group
2230	<u>KVMV</u>	96.9	TX	McAllen, RDS "FM97," PI=48C1	1744	<u>WRLO</u>	105.3	WI	Antigo, "Solid Rock 105.3"
2234	<u>XHAAA</u>	93.1	TX	Reynosa, ID	1747	<u>WAXX</u>	104.5	WI	Eau Claire, "Wax 104"
<u>8/21 Es (MUF 99.7)</u>					1750	<u>WAVJ</u>	104.9	KY	Princeton, ment of Princeton
2007	<u>WYSO</u>	91.3	OH	Yellow Springs, ID	1750	<u>WHOP</u>	98.3	KY	Hopkinsville, RDS PI=689F
2017	<u>WCOL</u>	92.3	OH	Columbus, "Buckeye Country"	1751	<u>KRMS</u>	93.5	MO	Osage Beach, ment of a Lake of the Ozarks event
2028	<u>WJYW</u>	88.9	IN	Union City, "Joy FM," ID, address	1754	<u>WDKS</u>	106.1	IN	Newburgh, ad for Casino Aztar
2031	<u>WQIO</u>	93.7	OH	Mt. Vernon, "93-Q," Peter Gabriel song	1759	<u>KYRX</u>	104.7	MO	Chaffee, Cape Girardeau area ads
2033	<u>WKJL</u>	88.1	WV	Clarksburg, presumed w/wx or Grantsville MD (the "He's Alive" flagship is in Grantsville), "He's Alive adio" slogan, the other net tation on 88.1 is outside of he PTA and only a few hundred watts	1800	<u>WPLN</u>	90.3	TN	Nashville, ID
<u>8/22 Es (MUF 91.9 MHz)</u>									
1650				unIDs up to 91.9					
<u>8/23 Es (MUF 107.7+)</u>									
0718	<u>KVTI</u>	90.9	WA	Tacoma, rap mx, ID as "I-91"					
1617-1630				unIDs on 90.9, 89.5, 89.1, 88.9 in/out					
1630	<u>WISU</u>	89.7	IN	Terre Haute, ID, PSA					
1632	<u>WAFR</u>	89.3	MS	Tupelo, rel mx, RDS PI=553B					
1633	<u>KBIA</u>	91.3	MO	Columbia, RDS "KBIA-FM," PI=1374					
1635	<u>KWMU</u>	90.7	MO	St. Louis, ID					

1801-2100 had to leave
 2110-2145 Es in/out up to about 92 MHz

8/26 Ms

0630 KCGN 101.5 MN Ortonville, 1 sec burst
 "...ville, Millbank," was an RDS signal,
 but didn't have computer on and the
 Conrad box doesn't displayPI codes

A technique I highly recommend is, no matter what the MUF, when time approaches the top of the hour, drop down to the 88-92 MHz section to gather IDs. The stations in that portion of the band so infrequently ID that it's easy to give up on that when the MUF is high. However, most NPR, AFR, etc., stations DO ID on the hour. I always get many IDs at :00, along with some surprise catches given the lower frequency. I had about 200 Es IDs below 92 MHz this year by using that technique.

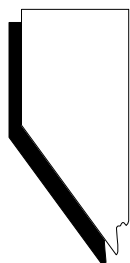
The late season openings were surprising, especially 8.23, where three distinct areas were being heard simultaneously – the UP of MI, MO/IL/KY and Houston, and two of those areas had MUFs to the top of the band.

What a phenomenal year! Almost 900 stations ID'ed since mid-May from 37 states, 4 provinces, and 9 Mexican states. Some amazingly short skip under 500 miles and a LOT of skip in the 500-650 mile range, too. I attribute a lot of this season's success for me to RDS, 100000watts.com, and a lot of time off. I was fortunate to have the last week of June and all of July off, so I was able to tailor my schedule around the Es. Even with that, I know I missed a few big ones while on vacation and when other obligations occurred. I doubt I'll ever experience another season like this.

Top Es states this year (number of loggings): TX 114, WA 42, TN 41, KY 41, IN 41, MI 35. Top Es states this year (number of days w/88 MHz openings): AL 17, TX 16, LA 14, MS 13, IN 11.



www.fmdxweb.com



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 North Las Vegas, NV 89031-1142
 jimpizzi@hotmail.com
 PDT

Akai AT-VO4 w/mod, Radio Shack VU-90 antenna. All new unless otherwise noted.

5/26 Es

0926	KHAK	98.1	IA	Cedar Rapids, calls, "K-Hawk,"
0929	KKCT	97.5	ND	Bismarck, "K-Country"
0931	CIZL	98.9	SK	Regina, promos, CBC
0934	unID	101.1??	??	??, CBC
0935	KMXD	100.3IA		Des Moines, "Mix 100.3" ads
0937	KXIA	101.1 IA		Marshalltown, "K-101," ads
0942	KSOM	96.5	IA	Audubon, calls
0942	WMT	96.5	IA	Cedar Rapids, ads
0954	KLSS	106.1 IA		Mason City, ads
0956	KYSY	106.3 IA		Ankeny, ads
1000	KICD	107.7 IA		Spencer, ID
1001	KKCD	105.9 NE		Omaha, ID
1005	KIOW	107.3 IA		Forest City, ID
1008	KMIT	105.9 SD		Mitchell, wx, calls
1009	KNLV	103.9 NE		Ord, wx, calls
1011	KTFC	103.3 IA		Sioux City, wx
1013	KJAM	103.1 SD		Madison, sports, rel, calls
1016	unID	102.9??	??	rel
1017	WXYV	102.7 MD		Baltimore, 2 Es, B102.com, about 2050 miles
1017	KYTL	102.7 MN		Northwood, "KY-102.7"
1020	KLQL	101.1 MN		Luverne, ads
1022	KFXS	100.3 SD		Rapid City, "The Fox," promo
1023	KOLY	99.5	SD	Mobridge, "Cool 99.5"
1027	KKCK	99.7	MN	Marshall, calls, "Hot 100"
1029	unID	100.1??	??	??, "Hot 100"
1031	KOWZ	100.9 MN		Blooming Prairie, ads, calls
1038	KEEZ	99.1	MN	Mankato, ads
1040	WAJK	99.3	IL	LaSalle, calls
1043	KDOG	96.7	MN	North Mankato, calls, ads
1044	KCVM	96.1	IA	Hudson, "Mix 96," 80's o
1050	KUUL	101.3 IL		East Moline, "Cool 101.3," promos
1058	KKRQ	100.7 IA		Iowa City, "The Fox"
1059	KSRN	100.7??	??	??, news, calls (KSRN is 107.7 Kings Beach CA-jz)
1103	CKUA-1	93.7	AB	Calgary, CBC nx, AB wx
1110	KMXG	96.1	IA	Clinton, "Mix 96," promos
1116	KGOR	99.9	NE	Omaha, promos
1119	KSRZ	104.5 NE		Omaha, ads
1127	KEFM	96.1	NE	Omaha, calls
1130	KGGO	94.9	IA	Des Moines, ads, promos
1135	KZKX	96.9	NE	Seward, calls
1139	KCOB	95.9	IA	Newton, ads
1142	KSTZ	102.5 IA		Des Moines, "Star 102.5"
1148	KUEL	92.1	IA	Fort Dodge, ads, "Cool 92"
1150	KJJY	9.5	IA	Ankeny, ads
1152	KIOA	93.3	IA	Des Moines, calls
1154	KKEZ	94.5	IA	Fort Dodge, ads
1156	KLRX	96.1	IA	Madrid, "Clear 96.1," ads
1158	KCVM	96.1	IA	Hudson, relog, ads, "Mix 96"
1200	KKMA	99.5	IA	LeMars, calls
1208	KWAY	99.3	IA	Waverly, "K-Way"
1217	KDAT	104.5 IA		Cedar Rapids, calls
1221	KCHA	95.9	IA	Charles City, calls
1225	KQCR	98.9	IA	Parkersburg, calls, soft r
1226	unID	98.9	??	??, "KG-98"
1517	KKPR	98.9	NE	Kearney, calls
1520	KEZG	107.3 NE		Lincoln, ads
1522	KFRX	102.7 NE		Lincoln, calls
1524	KRST	94.7	??	??, poss open key on
	KZZZ			

or area translator picking up NM on 92.3 by Es and rebroadcasting it here?

1530 KPNO 90.9 NE Norfolk, NE Public Radio
1532 KZSR 102.3IA Onawa, "Star 102.3,"
KCAU-9 promo

5/31 Es

1803 KCMO 94.9 MO Kansas City, Oldies
95.com
1811 KCSX 97.3 MO Moberly, "Kicks FM"
1813 KRRD 99.3 AR Atkins, "River Rock 99.3"
1820 KGGO 94.9 IA Des Moines, relog, calls
1822 KRXL 94.5 MO Kirksville, "94.5 The X,"
www.945theX
1827 KQUS 97.5 AR Hot Springs, wx, "US-97"
1828 KMAG 99.1 AR Fort Smith, calls
1832 KMCO 101.3OK McAlester, //1150 KNED
1834 unID 103.7?? ??, ment of Pulaski
1902 KUPL 98.7 OR Portland, calls

6/27 Es

1821 KHAK 98.1 IA Cedar Rapids, relog, ads,
"K-Hawk"
1823 KOWZ 100.9MN Blooming Prairie, relog,
calls, race promo
1826 KZSR 102.3IA Onawa, ads, relog
1829 KSTZ 102.5IA Des Moines, relog, ads
1842 KLTi 104.1IA Ames, ads, "Lite 104.1"
1843 KZIA 102.9IA Cedar Rapids, calls,
"Z-102.9"
1846 KFGQt 99.3 IA Boone, rel
1847 KDSt 99.3 IA Dyersville, k
1848 KWAY 99.3 IA Waverly, calls, relog
1850 KKBZ 99.3 IA Clarinda, relog, r
1851 KRKQ 98.3 IA Boone, promo,
1853 unID 98.3 ?? ??, "Soft rock
98.3 The River"
1855 KISD 98.7 MN Pipestone, calls
1913 KITN 93.5 MN Worthington, calls
1915 unID 94.9 ?? ??, "Oldies 95"
1922 KRCH 101.7MN Rochester, ads
1922 KNXR 97.5 MN Rochester, "Easy"
1924 KWWK 96.5 MN Rochester, k
1930 CJKR 97.5 MB Winnipeg, wx, "Power 97"
1932 CKXA 101.1MB Brandon, "Hot 101," MB
promos
1948 CKX 96.1 MB Brandon, wx, "KX-96"
2001 CKOM 102.1SK Saskatoon, ID
2005 CBWV 97.9 MB Brandon, end of CBC
nx, MB wx
2010 CBWSt 92.7 MB Brandon, light j
2011 CITI 92.1 MB Winnipeg, "92 City FM"
2013 KKRY 92.5 MT Miles City, calls
2023 CJMK 98.3 SK Saskatoon, "Magic 98.3,"
Saskatoon wx
2026 CFMC 95.1 SK Saskatoon, "C-95"

7/7 Es

0907 KUMRt 89.5 MO Rolla
1928 KWRD 100.7TX Highland Village, "100.7
The Word," g
1931 KOMA 92.5 OK Oklahoma City, calls

7/11 Es

1836 KUSO 92.7 NE Albion, ads, promo
1837 WRMS 94.3 IL Beardstown, calls
1851 WFMB 104.5IL Springfield, calls
1852 KSRZ 104.5NE Omaha, relog, calls,
"Star 104.5"
1857 KRRY 100.9MO Canton, "Y-101, Quincy's
#1"
1905 KRXL 94.5 MO Kirksville, relog, "The X"
1911 KSID 101.3IA Creston, k, mentioning
Creston and highway 34

7/18 Es

0814 XHXL 91.7 NL Monterrey, calls
0814 XHCER 100.7NL Cerralvo, SS, relog

0915 XHITE 94.9 NL Monterrey, salsa mx, relog
1903 KVET 98.1 TX Austin, ID
1904 unID 98.3 ?? ??, mention of
Chulenberg?
1907 KPEZ 102.3TX Austin, "Z-102," r
1908 KWBUt 107.1TX Waco, k
1911 XHCAO 101.7TM Ciudad Camargo, SS, ads
1931 unID 104.1?? ??, SS
1937 unID 88.3 TX ??, baseball game
1940 unID 91.7 ?? ??, SS
1941 KRTUt 91.7 TX San Antonio, j
1943 unID 88.3 ?? ??, c
1946 unID 88.5 ?? ??, SS
1947 KEDT 90.3 TX Corpus Christi, j, relog

8/1 Es

0745 KLTD 101.7TX Temple, ads, "Cool 101.7"
0750 KKKK 101.3TX Crane, g
0752 KONO 101.1TX Helotes, calls
0754 KASE 100.7TX Austin, "Case 101"
0754 KCYY 100.3TX San Antonio, relog, k, ads,
"Y-100"
0756 KHKX 99.1 TX Odessa, "Kicks 99"
0757 KHHL 98.9 TX Leander, "Austin's newest,
the Hill," new calls?
0758 KELI 98.7 TX San Angelo, "The Magic,"
ro
0801 KVET 98.1 TX Austin, relog, "K-Vet"
0804 KCRS 103.3TX Midland, ads
0812 unID 106.1?? ??, r w/Scott Morrison
0813 KSMG 105.3TX Seguin, "Magic 105.3
San Antonio"
0817 KRBE 104.1TX Houston, calls, ads
0818 KGSR 107.1TX Bastrop, calls, ads
0819 KMDX 106.1TX San Angelo, "Mix 106 San
Angelo"
0821 unID 103.9TX ??, "Aggieland"
0822 KPZA 103.7NM Jal, SS & EE, ment Lea
County fairgrounds
0825 KROX 101.5TX Giddings, ad for Alpha
Audio
in Austin
0829 KLOL 101.1TX Houston, calls, ads
0908 XHACH 90.9 CH Chihuahua, ranchera,
many
ads
0945 XHDI 88.5 CH Chihuahua, ads, EE o

8/17 Es

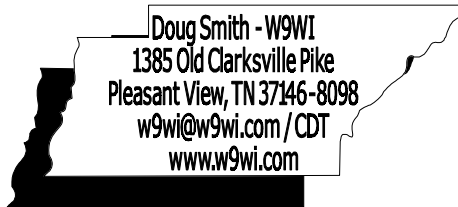
2028 KVOX 99.9 MN Morehead, ads, "Froggy"
2046 unID 98.3 ?? ??, "Today's hot country"
2048 KUOO 103.9IA Spirit Lake, "FM 104
KUOO"
2052 KWWK 96.5 MN Rochester, ads, relog
2059 KWIT 90.3 IA Sioux City, IA wx, stn list
2104 KNSR 88.9 MN Collegeville, MN Public
Radio ID
2105 KNCMt 88.5 MN Appleton, //KNSR

8/23 Es

1755 KLZA 101.3NE Falls City, "Falls City-
Hiawatha Sunny 101.3"

A very good Es season this year, with several days of intense activity on FM. Highlight was 5/26 with 2 Es into Baltimore MD. Thank goodness I heard the "B102.com." I was very surprised when I found out the location. 5/26 was amazing with the amount of stations heard. KSRN on 100.7 with unknown location – anyone know? Plus the odd reception on 94.7 of KRST Albuquerque NM (92.3). Most activity was into IA and surrounding states. All in all, I'm very happy

with the results this summer here in North Las Vegas.



Technics ST-G50 tuner, big Radio Shack VHF-TV antenna at 15'

8/24 Es

1046
unID Mexicans to 94.9. Swear one lded as "K-95" in English. Also unID AFR religious station in English on 91.1 may have been tropo.

8/24 Tr

1223 WTCD 96.9 MS Indianola, "Supertalk Mississippi" 269

8/29 Tr

0930 KHLS 96.3 AR Blytheville, local quality, local WRMX completely gone 158

8/29 Gw

1200 WKDZ 106.5 KY Cadiz, previously logged this
on 106.3 41

9/10 Tr

0129 unID 97.7 ?? ??, "97-7 Joy FM," north Louisiana in on TV

9/11 Tr

0715 KRPS 89.9 KS Pittsburg, "...KRPS members" 431
0741 KXUS 97.3 MO Springfield, "US-97" 347
0827 KTXR 101.3 MO Springfield, RDS "KTXR" 327

0835 KBCN 104.3 AR Marshall, call ID 312

10/7 Tr

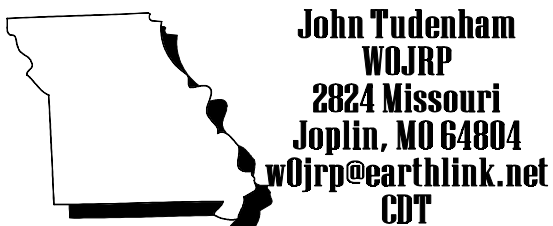
1830 KDXY 104.9 AR Lake City, Jonesboro ads 193
1929 WTCD 96.9 MS Indianola, "Supertalk Mississippi" 269
2133 WYMX 99.1 MS Greenwood, "...on Max 99" 269

10/9 Tr

0847 KTXR 101.3 MO Springfield, call ID briefly out of noise 327
0856 WTCK 100.7 TN Middleton, "WTCK 100.7" briefly o/KGMO 130

10/10 Tr

0547 KKEY 95.9 AR Harrisburg, "Oldies 95-9" & Jonesboro ads 208



Onkyo tuner T4087, 6 element yagi @25'

Was alerted about a tropo opening by Gil Morgan of Lebanon MO. First good tropo in a while, appears to be a narrow ducting, area

stations showing no change in signal but out to 667 miles.

9/29 Tr

1920 WRJO 94.5 WI Eagle River, YL DJ, "WJR," o and local ads, o/KRXL 667

2012 WAXX 104.5 WI Eau Claire, call ID 557
2100 KAUS 99.9 MN Austin, "99.9 KAUS" 461



DX-398

8/26 Tr

2347 WICO 97.7 MD Salisbury, ad mentioning Salisbury, k

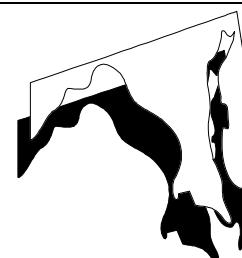
2355 WTVR 98.1 VA Richmond, weight loss ad, SID, "Lite 98"

8/27 Tr

0012 unID 89.1 ?? ??, classical mx

9/6 Tr

2325 WWVW 97.5 VA Charlottesville, local ads, "3WV," wx



Radio Shack DX-440 and plain rabbit ears

8/19-8/21 I had a chance to do a bandscan from the Quality Inn in Lightfoot (Williamsburg) VA. One night I DXed from the north side, and one night I DXed from the south side. From the north side only I had 44 loggings, and from the south side only I had 66. From both sides I had 60 loggings, and there were 6 made from the car, for a total of 176. Statewise, it breaks down as follows: VA 73, NC 45, MD 30, DC 13, DE 6, SC 4, NJ 3, MA 2. Longest was WMJX 106.7 Boston. Best frequencies: several with 3 stations, worst: 91.7 (none). Thought I was well on the way to getting 200, but cloudy weather on the second morning killed almost all enhancement. Was able to null some Richmond and Tidewater stations, especially when using the building structure as an attenuator.



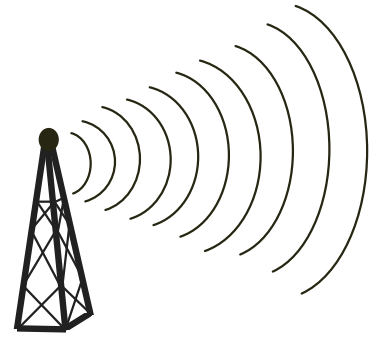
From the Editor

Thanks for the great support this month, gang! Now that we're in to November, remember to check out the great meteor showers that are coming up, especially the Lyrids this month. Lots of good stuff to hear!

See y'all next month!

Northern FM DX

Northern FM DX



Keith McGinnis
387 Shirley Street, Winthrop, MA 02152
longwave@mediaone.net

Morris Sorensen Winnipeg MB
DX-392 with whip

Sept 25 Tropo

2233 KXGT 95.5 Dickinson ND 333mi. N ND#24

Sept 27 Tropo

1855 CBQX 98.7 Kenora ON
2058 KZZY 103.5 Devil's Lake ND
2158 KSRQ 90.1 Thief Rvr Falls MN

Bob Smolarek - 31 Mark Drive - High Bridge NJ 08829
McIntosh MR 78 Channel Master Stereo Probe 9 Conrad RDS manager

JUNE 1 2001 Es

2020	92.1	<u>KLIL</u>	Moreauville LA	1515	97.9	WBAQ	Greenville MS
2023	94.9	KLTY	Arlington TX	1658	94.9	KOLL	Maumelle AR
				1701	92.9	KANS	Osage City KS
						"Kansas Radio"	

June 3 ES

1555 94.9 WKSJ Mobile AL

June 4 ES

1955 92.9 WIKX CharlotteHarbor FL
1957 96.9 WINK Fort Myers FL
2000 101.9 WWGR Fort Myers FL
2002 97.7 WYPT Punta Rassa FL "The Point"
2003 100.1 WKFF Port Charlotte FL
2015 94.9 WWRM Tampa FL running
Delilah show, "Magic" slogan
2017 95.3 WOLZ Fort Myers FL
2020 99.3 WJBX Fort Myers Beach FL
2037 92.9 WMFQ Ocala FL
2100 88.1 WUWF Pensacola FL
2102 91.1 WPSM Fort Walton Beach FL
2108 92.9 WBLX Mobile AL

June 26 ES

1448 92.7 WQCK Clintonr LA
1450 94.7 WTYX Jackson MS
1453 95.5 WDBT Jackson MS
"The Beat"
1455 96.3 WUSJ Jackson MS "US
96.3"
1500 97.3 WFMN Summrall MS
1511 93.5 KJAE Leesville LA "Kay
Jay"
1513 96.7 KWCL Oak Grove LA

JULY 1 Tropo

2030 97.5 WKMZ Martinsburg WV
WPST off due to storm
2200 97.5 WICO Salisbury MD
formerly on 94.3, WPST off

July 9 ES

2132 88.7 KLVV Ponca City OK
2135 92.1 KIZS Broken Arrow OK
"KISS-FM"

July 14 ES

1330 92.9 WTUGI Tuscaloosa AL
1418 92.9 KJEF Jennings LA
1446 92.1 KRTS SSeabrook TX
1524 93.1 KQID Alexandria LA "Q-93"
1525 93.1 KTYL Tyler TX
1528 92.1 KSYR Benton LA
1548 88.3 WAFR Tupelo MS first
logging using RDS manager!
1555 95.9 KUUZ Lake Village AR
"The Cuz"
1600 94.9 KSBH Coushatta LA
1645 93.9 KOYN Paris TX another
RDS log

July 16 ES

2038 92.1 KDOK Tyler TX

2040	95.3	KCXY	East Camden	AR		time heard since Atlantic City came on
		"Y-95" also RDS				2352 96.3 WRHT Morehead City NC
2044	88.3	WAFR	Tupelo	MS	first	2357 96.9 WBEY Crisfield MD
RDS relog!						
2046	93.5	KBHT	Crockett	TX	"The Mix"	
2050	99.3	KUEZ	Lufkin	TX		<u>August 17 ES</u>
2052	96.7	KHFI	Georgetown	TX		
2054	95.5	<u>KKMJ</u>	Austin	TX		KJOV 90.7 <u>KJOV</u> Woodward OK
2057	94.7	KAMX	Luling	TX		"Great Plains Christian Radio"
2059	88.9	<u>KLDN</u>	Lufkin	TX	"Red River Radio", strong mono signal	<u>SEPTEMBER 6 Tropo</u>
2103	88.3	<u>KAXF</u>	Conroe	TX	another RDS log	0652 106.9 <u>WKZA</u> Lakewood NY "KISS-FM"
<u>July 17 ES</u>						
2115	92.1	KHPQ	Clinton	AR	can you believe there is a station in Clinton AR	0704 92.3 <u>WRRN</u> Warren PA
2122	88.3	KABF	Little Rock	AR		0705 93.1 <u>WZAK</u> Cleveland OH
<u>July 22 ES & Tropo</u>						
1326	92.9	WSCD	Duluth	MN	RDS	0706 99.5 <u>WGAR</u> Cleveland OH
1328	91.9	<u>KDSU</u>	Fargo	ND	RDS, WNTI off	0710 100.5 <u>WJNG</u> Johnsonburg PA
1330	91.5	<u>KQMN</u>	Thief River Falls	MN	RDS	"Mega Rock"
2300	99.7	<u>WZRA</u>	Wakefield	RI	"Z-100"	0712 101.7 <u>WHZZ</u> Lansing MI "Z 101.7"
2310	102.5	<u>WBAZ</u>	Bridgehampton	NY		0715 100.5 WOMP Bellaire OH
<u>AUGUST 15 Tropo</u>						
2343	107.3	WTKF	Atlantic	NC	first	0725 103.7 <u>WRTS</u> Erie PA "Star 104"
0731 102.3 <u>WLKK</u> Erie PA						

The September 6 morning opening was fabulous, I got my first Michigan station via Trop, should have gotten up earlier. On the other hand it's good I checked, I could have easily missed it.

Bruce Elving, 241 Anderson Road, Esko MN 55733-9413.

Equipment: Fanfare FM tuner modified with 110 kHz Toko filters and with a tunable 57-92 kHz FM/SCS adapter, APS 14 antenna atop an 8 m tower with old Alliance manual rotator (1950s era, refurbished), Bolin phase box. Other antennas are an 8-element rotatable FM antenna on a shorter tower, an S-type nondirectional FM antenna mostly used for Part 15 relaying of DX to other radios, numerous FM boosters, a modulator set to 99.9 mhz, and an FM translator (Tepco 10 watt) with output on 103.9 mhz. View my tower (built by a local machinest) by clicking to the "FM DX Page" on my website: <users.aol.com/fmatlas>. The translator is licensed by the FCC as W280CT.

With some of that junk I have heard the following new stations recently: KRVY 97.3 Starbuck MN when local KDNW Duluth was off. Skip May 31 brought WGTF *89.5 Dothan AL, WBBK-FM 93.1 Blakely GA, WPGG 93.3 Evergreen AL, WRBA 95.9 Springfield FL, KAVX *91.9 Lufkin TX, KBHT 93.5 Crockett TX (all between noon to 6:05 p.m. CDT). WGVZ 105.7 Eden Prairie MN followed a tornado that devastated the town of Siren WI, knocking WXCX 105.7 off for about 2 days.

Then on Aug. 3 at 2100 it was WFRN-FM 104.7 Elkhart IN with perfect stereo, and "Focus on the Family," which I actually listened to, followed by a commercial for a restaurant with very reasonable pricing, Panorama Restaurant. Also that night I got the new WDRV call letters on 97.1 Chicago. Previously I heard it as WNIB, shortly after the Florians started the station in the 1950s. Not heard was its relayer on 96.9 in Zion IL, although I tried for it.

Later in the season (dates are not important for the nearby tropo scatter stations because most can be heard at will) I got WDRK 99.9 Cornell-Chippewa Falls-Eau Claire in stereo with legal ID, and then CJLB 105.3 Thunder Bay WI, despite having to aim at local KKCB 105.1 Duluth, and having no adjacent channel bleedover. Conditions were very good in that direction at the time of reception.

Rounding out the summer DX were KUSJ 105.5 Harker Heights, KYZZ 100.1 San Angelo and KLVW *88.7 West Odessa, all TX, and all heard 9 to 10 p.m. Aug. 17. All stations heard with call letters and/or city of license.

Upholding the highest standards for counting DX, Bruce Elving



A U. S. Television Chronology

(conclusion)

(Reprinted and edited, with permission, from data assembled by Jeff Miller. This and other historic broadcast-related items can be found at <http://members.aol.com/jeff560/jeff.html>).

(This timeline of U. S. television broadcasting history is a work in progress. If you can suggest any improvements in this list, please send them to: <JeffM@sanctum.com>.)

May 29, 1953 St. Petersburg Times reports WSUN-TV will go on the air with a half-hour dedication ceremony at 4:15 p.m. May 31 (test patterns are currently being transmitted) on channel 38.

Aug. 30, 1953 NBC's Kukla, Fran, and Ollie Show is broadcast in color, the first publicly announced experimental network broadcast in compatible color.

Sept. 28, 1953 *Broadcasting* (magazine) reports that, with the end of daylight saving time, CBS and NBC inaugurate "hot kinescope" systems to put programs on air on the West Coast at same clock hour as in the East.

Oct. 19, 1953 Popular CBS-tv variety show host Arthur Godfrey fires vocalist Julius La Rosa on the air.

Nov. 22, 1953 [or possibly Nov.23] RCA tests its compatible color TV system on the air for the first time with a telecast of the Colgate Comedy Hour.

Dec. 17, 1953 FCC reverses its 1951 decision and approves the RCA/NTSC color system. NBC broadcasts the NBC chimes image at 5:31:17 p.m. using NTSC standards. CBS broadcasts the first live color program at 6:15 p.m.; NBC followed with a live program at 6:30 p.m.

Jan. 1, 1954 NBC broadcasts the Rose Parade in color on 21 stations.

Mar. 9, 1954 CBS news commentator Edward R. Murrow denounces Sen. Joseph R. McCarthy (R-WI) on "See It Now".

Apr. 1, 1955 Dumont drastically cuts back its programming; very few Dumont shows stay on the air past this date. By September, 1955, Dumont programming has been reduced to NFL football on Sunday afternoons, boxing on Monday nights, and some college football on Saturday afternoons.

Oct. 17, 1954 Several NBC o&o stations change calls: [New York] WNBC to WRCA AM, FM, TV, [Hollywood] KNBH(TV) to KRCA(TV), [Washington, D.C.]WNBW(TV) to WRC-TV.

Dec. 13, 1954 *Broadcasting* reports WBRE-TV Wilkes-Barre PA is ready to become the first UHF station to use 1,000 KW, maximum ERP authorized by the FCC.

Apr. 18, 1955 *Broadcasting* reports that DuMont switches to a film network, using Electronicam; reserving live relays for special events and sports.

Sept. 28, 1955 First World Series game broadcast in color, by WRCA-TV.

Apr. 1956 WNBQ Chicago replaces all black-and-white equipment with color equipment, becoming first TV station to broadcast all its local programming in color.

Apr. 1956 Ampex demonstrates first practical videotape recorder at NAB Convention in Chicago. The three networks immediately place orders for Ampex VTR's, which begin to arrive later in the year.

July 2, 1956 *Broadcasting* reports FCC uncovers plan for long-range shift of TV to all UHF and, for present, proposes deintermixture in 13 markets.

Aug. 8, 1956 Final telecast of the Dumont network, a boxing card. CBS inherits the rest of the Dumont/NFL football deal, giving the NFL its first-ever true national TV exposure.

Oct. 29, 1956 First use of videotape in network television programming: CBS uses its first Ampex VTR to be installed at Television City, Los Angeles, to record the evening news (then anchored by Douglas Edwards) and in turn, feeds the tape to West Coast stations three hours later. Previously, West Coast rebroadcasts had been done by kinescope recordings.

Oct. 29, 1956 Chet Huntley and David Brinkley take over anchor duties of NBC's early evening newscast, which is renamed "The Huntley-Brinkley Report."

Nov. 1956 First use of videotape in production of a network television entertainment program: Jonathan Winters, doing a 15 minute show a couple of nights a week on NBC-TV, uses videotape and superimposing/montage techniques to be able to play two characters in the same skit.

Mar. 16, 1962 Walter Cronkite succeeds Douglas Edwards as anchorman of the CBS Evening News.

July 9, 1962 Telstar communications satellite is launched into orbit. The first test of this system between the U. S., France, and Britain occurred the next day.

July 23, 1962 A joint ABC/CBS/NBC production is telecast to Europe via Telstar. The program featured excerpts of a baseball game at Wrigley Field, a live news conference by President Kennedy, and a concert by the Mormon Tabernacle Choir. The host of the U. S.-to-Europe program was Chet Huntley of NBC.

May 15, 1963 First TV pictures transmitted from a manned U.S. space capsule, astronaut Gordon Cooper's "Faith 7." Because the picture quality is poor, only NBC carries the transmission, and on tape-delay, not live.

Sept. 2, 1963 CBS becomes first network to expand early-evening network news from 15 to 30 minutes.

Sept. 9, 1963 NBC expands early-evening network news to 30 minutes. (ABC did not follow until Jan. 2 1967, since their affiliates were strongly opposed to giving up the extra 15 minutes, especially as ABC's news was then a very-distant third place).

Apr. 30, 1964 Television sets manufactured as of this date are required to receive UHF channels.

Oct. 10, 1964 Live telecast on NBC-TV (via Syncom III) of the opening ceremonies of the 1964 Summer Olympics in Tokyo (airing on the U. S. East Coast from 1 to 3 A.M.); first live

color TV program ever transmitted to the U. S. by satellite.

Mar. 24, 1965 Live pictures from unmanned U.S. moon probe Ranger 9 transmitted prior to impact in the crater Alphonsus.

May 1967 Premiere of the Las Vegas Late Show with Bill Dana, which was supposed to be the cornerstone of the United Network, an attempt to launch a fourth commercial TV network. In less than a month, both the show and the fourth network idea get canceled.

Oct. 14, 1968 First live network transmission of TV pictures from inside a manned U.S. space capsule in orbit: Apollo 7 There were six such broadcasts during their eleven-day mission.

The following people have contributed to this effort: Donna Halper, Bob Carpenter, Joseph Gallant, Paul Lindemeyer, Wesley Orr, Dan Kallenberger, Mark Leff, Pat Dyer, Neil Nelkin, Dave Robertson, Al Robinson, Xen Scott, William V. Sutherland, John Ross, Teddy Dibble, Chuck Davis, Tom Hoehler, Bill Hepburn, and Rickey Stein. Last revision: Oct. 5, 2000.

Editor's Note: This is the final installment of the series of reprints of Jeff Miller's excellent history of television in the United States. Thanks again to the author for permission to reproduce his work. Of course TV history didn't end on October 14, 1968, but that's where Jeff's chronicle stopped, and also where we will conclude. I will, however, add one final historic date; perhaps one of the darkest days not only in the history of the United States, but broadcasting as well.

Sept. 11, 2001 Commercial passenger jet aircraft piloted by terrorist hijackers hit both 110 story towers of the World Trade Center in New York City. The result is catastrophic. Included in the nearly 6000 fatalities are many broadcast engineering personnel. Most of the city's TV and FM transmitters utilized antennas on the 360 foot mast atop the North Tower. It was that mast which technically made the WTC the tallest building in the world. Following the tragic collapse of the towers only one major New York City television station, WCBS-tv (2), is able to resume transmission on its assigned channel, having retained its former Empire State Building transmitter site as a standby facility.

Technical Topics

The following was originally written by Timothy K. McVey and published in a 1987 edition of the VUD. Mr. McVey wrote a series of articles loosely dubbed "The Nature of DX", covering in great depth many aspects of tropospheric propagation modes. The following was the first in the series, focusing on the science behind tropospheric refraction and ducting.

Forty years ago this year, Edwin Armstrong sent a crew to Alabama to listen to his FM signal transmitted from station W2XMN in Alpine, NJ. That crew heard Armstrong's broadcasts clearly, which got a lot of folks in the scientific community interested. When summer rolled around and signals from FM and TV stations began bouncing all over the country causing interference, lots of folks outside the scientific community got interested. Among that group of people was Congress, who asked the FCC to get interested, who in turn moved the FM band from its home of 42-50 MHz up to the present 88-108MHz. It made this move in order to avoid the frequent, long range interference (we prefer to call it DX) due to E-skip and during years of high sunspot activity. (Note: This is a great simplification of what actually happened; there's a lot of info out there if you want all the details.) I personally got interested in the whole thing when I heard Colorado Springs loud and clear (KRDO-95.1) on a portable radio in South Mississippi.

DX'ing seems contrary to nature, since we're trying to receive signals that shouldn't be heard at all. After all, "everybody knows" radio signals above 30 MHz or so do not regularly or reliably bend around the earth. But we buy big antennas and nice receivers as a bet that they will bend and bounce, and often that bet pays off with some fascinating entertainment.

Here then is a summary of the mechanisms of VHF and UHF propagation, which may be more attractively titled "The Nature of DX." It will run for the next several months and if you bear with me for the entire course, you should, hopefully, have a good sense of how, why, and when DX occurs, even if unable to do anything about it! But while DX is somewhat unpredictable, it is by no means unexplained. Over the years, great amounts of research have been carried out, perhaps not so much to explain the anomalies that come from time to time (e.g. watching KNAZ-2 from Flagstaff, AZ on my TV in Memphis every summer), but to more efficiently exploit our limited radio spectrum. You wouldn't believe, for example, all the tropo duct studies that have been done over the years, and the forests of paper used to record them. But back to the point, I will try to make this as useful and informative as possible. Bibliographies and references will be supplied for the interested reader who wishes to know more about the subject.

TROPOSPHERIC EFFECTS

This is a broad category, and the most common style of DX reception. All "tropo" literally bends radio waves back to earth, although there are several different mechanisms by which this happens. Later on we will see what these mechanisms are. "Tropo" can provide enhanced (stronger) signals just out of normal range; we call that "local enhancement" because it is usually associated with sunrise or sunset, and doesn't net too many new stations. Those who live along the coasts frequently enjoy the longer-distance enhancement created by conditions over the water. A lot of middle-range tropo DX is popularly associated with weather fronts, steady high-pressure areas, fog, and approaching storms. If you're lucky (and prepared), there are the rare tropo events that allow reception from 500 to 1,000 miles (or more); these are the amazing "ducts" that bring Wichita right into your backyard. If your backyard happens to be in Pittsburgh, this would be a big deal! No matter how tropo happens, something special must occur to extend the radio horizon.

The "radio horizon" is the line-of-sight range of a radio signal. For this concept, the earth is assumed to be a large, smooth, non-absorptive sphere and the radio wave is assumed to travel in a straight line. By simple geometric reasoning, one can calculate the radio horizon, d , when the antenna height, h , and the radius of the earth, $r=6367$ km or 3956 miles, are known. Thus,

$d = \sqrt{2rh}$ tells approximately how far away a signal ought to be received. But in practice, actual line-of-sight radio communications occur reliably over a little greater distance, as will be explained shortly.

The "communications horizon" is the sum of the d 's for both the receiving and transmitting antenna. Figure 1 is a nomograph used for finding radio horizon. If you know both the station and receiving antenna heights, it is very easy to find d for each and add to get the communications horizon, or range.

These ideas are useful for figuring the expected normal reception of stations in your area or for justifying raising the antenna out back, but you already know that the actual radio horizon will vary from day to day and even hour to hour. The radio horizon is dependent upon temperature, water vapor, gaseous chemical content, and air density...all of which are subject to continuous change.

As a rule of thumb, the troposphere is said to be that part of the atmosphere from the ground up to about 6 miles (10 km) altitude. In this region clouds form, convective disturbances occur, and pressure (and usually temperature) decreases with altitude. Changes in this unsettled blanket of air give rise to three conditions which can extend the radio horizon: reflection, refraction, and diffraction. Of course, the air itself--by absorption--always limits the ultimate distance a radio signal can travel.

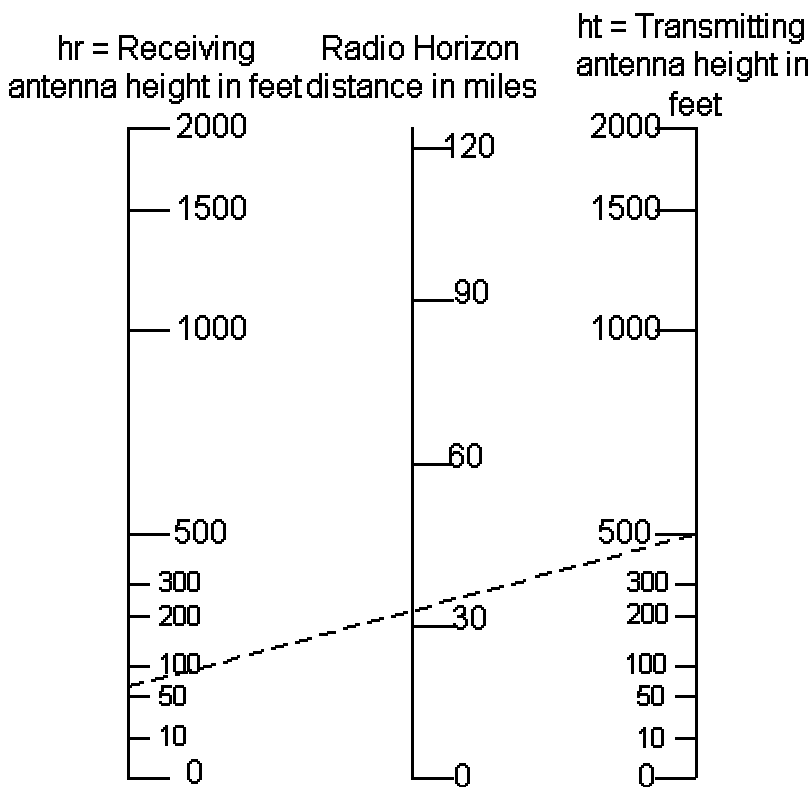


Figure 1 Nomogram¹ giving radio horizon distance in miles when hr and ht are known. Example shown: Height of receiving antenna 60 feet; height of transmitting antenna 500 feet; maximum radio path length = 41.5 miles. ($K=1.33$)

Reflection is just a bouncing of energy off an interface with little or no loss. This is how one can see oneself in a mirror. As far as radio is concerned, reflection can occur anywhere two media having difference dielectric constants meet (a so-called interface).

Refraction is the bending of a ray as it passes from one medium into another medium of different density. The illusion of a bent pencil in a glass of water is an example. This illusion results from the fact that the air and water have different densities.

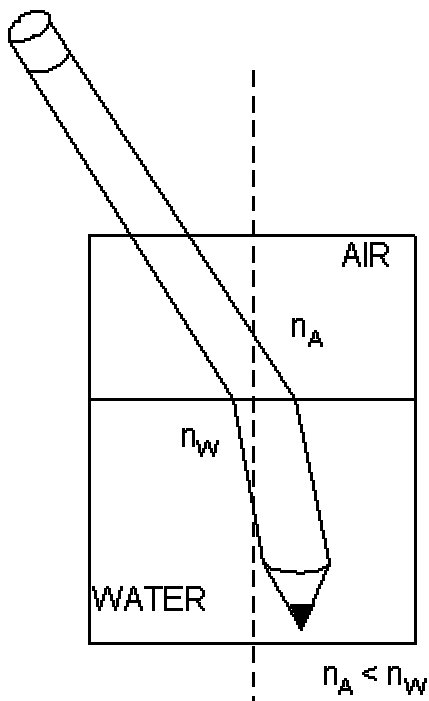


Figure 2 Refraction of a pencil in a glass of water

Diffraction is the breaking up (maybe it is easier to visualize a “fanning out”) of a wave at the edge of an opaque object. (“Opaque” describes a material through which something cannot pass.) This is illustrated by a radio down in a deep, narrow canyon that is still able to receive radio signals from the outside. A person living down on the west slope of a mountain in Colorado can still receive the Denver AM radio stations in the daytime, even though line-of-sight is impossible.

A radio wave which we think of as traveling through the atmosphere in an unimpeded straight line out to space seldom actually exists. What does exist is a complex variation of atmospheric refractive index along the path of the ray which causes it to become curved.

¹ Note: the nomogram was recreated based on the original copy used from the ITT Radio Engineer’s Handbook, pp 28-13. In the process of re-typing this document, this example nomogram was loosely recreated, and is not 100% accurate in measuring radio horizon. Please use it as an example in concept only.

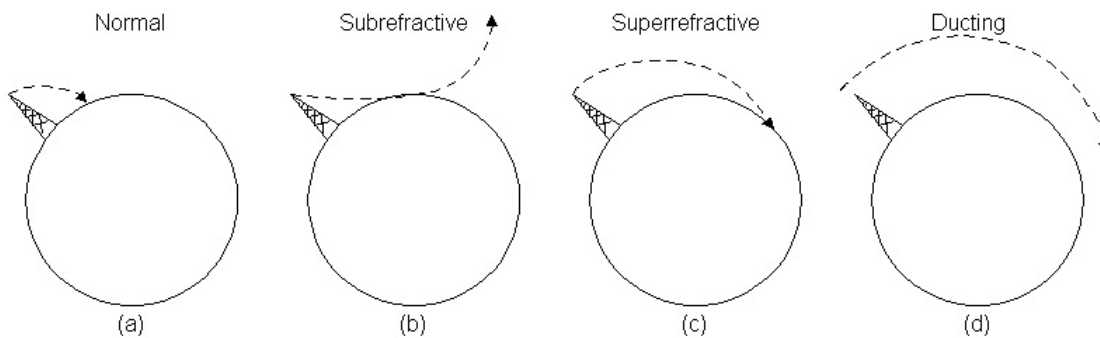
Consider the bending of the ray itself. Suppose we pretend, for convenience' sake, that the radio wave always stays straight anyway, and add the curvature of the ray to the curvature of the earth. This is a useful way of visualizing the earth's surface with respect to the radio wave—"equivalent earth". Now, by saying that $k = \frac{1}{1-ac}$

where $1/a$ = the real earth's curvature, and
 c = the real ray's curvature

we have a constant k , which expresses the curvature of the equivalent earth. This gives rise to four cases:

1. $k < 0$ Negative k results when c is greater than $1/a$, and the implication is that the effective earth is concave upward, like a bowl. (The normal case, Figure 3a.)
2. $0 < k < 1$ Effective earth is smaller than the real earth. For this condition, c is negative, implying that the wave is curved upward. (Sub-refraction, Fig. 3b)
3. $k > 1$ As k increases the ray is curved downward, and the effective earth has a LARGER radius than the real earth. The radio horizon, therefore, increases with k . (Superrefraction, Fig. 3c.)
4. $k \rightarrow \infty$ An infinite value of k occurs when the curvature of the ray exactly equals the curvature of the earth. Of course, this implies that effective earth is flat (Columbus take note!), and the radio wave can travel around the planet. (The Ducting case, Fig. 3d.)

Figure 3 Four Propagation Cases



The larger the radius of the effective earth, the larger k , and the longer a radio wave propagates. There are limitations to this model, but as long as it is applied within reason, it can be useful to gauge enhancement of the radio horizon if we now redefine same by the formula $d = \sqrt{2krh}$.

The point is that k is used as a value which modifies the earth's radius to take into account changes in the troposphere. For all times and places, k averages out to $4/3$, so that our globe has an effective radius of 5275 miles. The radio horizon equation then becomes $d = \sqrt{2h}$ (for d in miles and h in feet).

Again, this appears in the nomograph of Figure 1. If the transmitting antenna height and the receiving antenna height are specified, their effects add, as before.

To summarize: under normal conditions the atmosphere exerts a downward curvature, about $1/4$ that of the earth, upon a radio "ray". Under abnormal (DX) conditions the atmosphere may exert a greater curvature upon the ray so as to trap the signal within a thin layer near the earth's surface called a duct. This is why the radio horizon can extend farther than line-of-sight. On average, however, the radio horizon will be $4/3$ times line-of-sight.

Propagation studies and calculations make use of a quantity called the radio refractivity, N . Refractivity is a number which describes the ability of a medium to bend a ray passing through it. (Remember the pencil that appears to be bent by water.) For the earth's atmosphere, N falls out of a mathematical analysis involving the dielectric constant of moist air, radio frequency, and some algebra. The so-called "N-unit" is a function of temperature, barometric pressure, and the water vapor pressure. N serves to tie the physical constant n (the refractive index of a substance) to the properties which cause the refractivity to change. The quantity n is specified for a wide variety of materials, and for air, it is very nearly equal to 1. However, pressure and temperature changes cause n to vary ever so slightly from 1. By "slightly" I mean that variations are so small that we deliberately multiply n by one million so that it is convenient to use in calculations. What's important to note is that that slight variation is enough to wildly affect the propagation of radio waves through air. The N unit is given by $N=10^6(n-1)$.

Now assume that n is a function only of height h above the smooth, spherical earth. Then, the radio

$$c = -\left(\frac{1}{n}\right)\left(\frac{dn}{dh}\right)\cos\theta$$

ray will obey Snell's law and we can derive its curvature:

θ is the elevation angle of the ray approaching the antenna, usually close to zero, horizontal. The effective earth obeys this equation: $k = \frac{1}{1-ac}$

$$\text{Rewriting, } \frac{1}{ka} = \frac{1}{a} - c \quad \text{And plug in } c \text{ to get the result: } k = \left[1 + \frac{a}{n}\left(\frac{dn}{dh}\right)\cos\theta\right]^{-1}$$

(to be continued)

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