

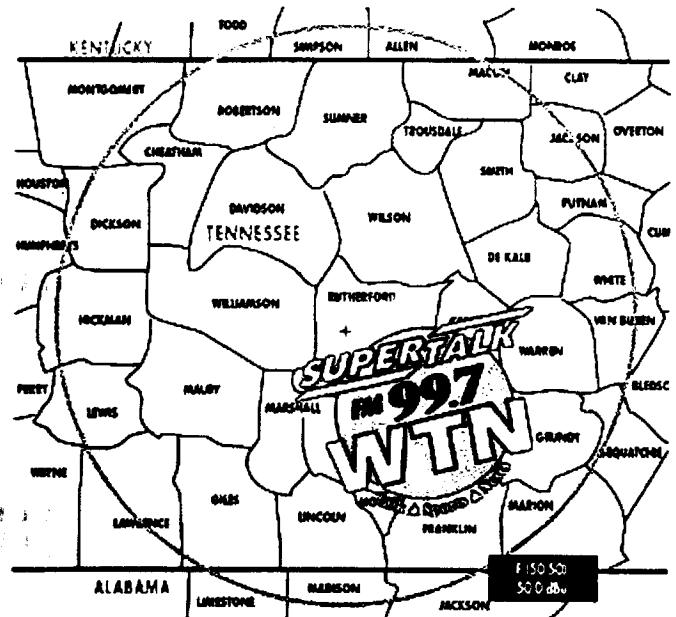
# Vhf-Uhf DIGEST

The Official Publication of the Worldwide TV-FM DX Association

MAY 2000

## TIME FOR E-SKIP!

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WORLDWIDE TV-FM DX ASSOCIATION  
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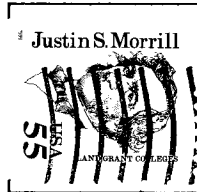
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# WORLDWIDE TV-FM DX ASSOCIATION

*Serving the VHF-UHF 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 BILL THOMPSON.

Editor/Publisher: Bill Thompson

Circulation: Mike Bugaj Comptroller: Dave Janowiak

Editorial Staff: Tom Bryant, Greg Coniglio, Victor Frank, George W. Jensen, Jeff Kruszka, Fred Nordquist, Matt Sittel, Doug Smith, Thomas J. Yingling, Jr., John Zondlo

ANARC Representative: Jim Thomas Back Issues: Dave Nieman

Original Cover Design: Harry Hayes

## FROM THE STAFF:

**NFMDX TEMPORARILY DISCONTINUED:** As a result of no one volunteering to replace Greg Coniglio as editor of "Northern FM DX" the column has been temporarily suspended. NFMDX is one of the more widely read VUD columns and it is regrettable that even with adequate notice, it continues to be minus an editor. Your help is needed NOW. Contact Greg or any other member of the Board of Directors to get this important column back in print.

**NEW LIMITED "ASSOCIATE MEMBERSHIPS" AVAILABLE:** Your Board of Directors has chosen to act in several areas which will create changes in the club's membership structure. Right off the top, it's important for you to realize that if you are currently a WTFDA member, this change will not change your status in any manner. You are already getting the VUD and enjoying the other privileges of WTFDA membership which will be mentioned later. The new "Associate Membership" category is a less costly way to utilize *one* WTFDA resource at a reduced cost.

To make this possible, we have officially endorsed the WTFDA Topica e-mail/web forum initially set up by Mike Bugaj. Until now, the mail 'reflector' had been an *unofficial* club adjunct.

With an eye to the future (which, in case you hadn't noticed, is already here) the Board has acted to include FREE access to the Topica service as a part of every full membership. Full WTFDA membership also entitles our members to receive the monthly "VHF-UHF Digest", to edit features and columns, to vote on club matters when necessary, and now free enrollment in the Topica forum.

One of the greatest benefits of Topica is an almost instant method for posting notices of skip openings. Of course it's also an appropriate venue for technical discussion and commenting on other TV and FM related topics. It is informally monitored, and content may be controlled. Offensive conduct is not allowed. Even full club members may lose their access if they don't behave. That hasn't happened yet and we hope it never does...after all, we are adults.

While there are nearly 100 people already using the Topica WTFDA Forum, not all of them are club members. As of May 1, all Topica users who are not WTFDA members were given 31 days to make one of three choices.

1. Join and get all WTFDA benefits for the regular membership fee.
2. Continue to participate in the Topica forum...but only after becoming an "Associate Member" and paying \$10 per year for access.
3. Fail to join as either a full member or an associate member, and be denied access to the Topica forum.

Associate members will not be allowed to hold office, vote on club matters, or edit features or columns.

All visitors to the Topica forum will urged to join WTFDA. They will receive a sample VUD, an explanation of the membership options, and 60 days of 'guest' access to the Topica service. Hopefully they will chose to remain with us.

The vast majority of the content of the VUD will remain confined to the print version and will not be published in Topica or elsewhere on the web.

The bottom line is that nothing changes for current full members. The door is open for newcomers at a less expensive rate but without the benefits of full membership.

(NOTE: The \$15 per year full membership rate remains an option for full time students who provide proof of eligibility.)

Why did we choose this course? Quite simply because the Topica forum is a valuable asset.

We did not believe that it was fair for non-members to derive the benefits of participation without making some kind of contribution to the WTFDA.

While we are aware that the creation of the associate membership category opens a loophole that some who are currently full members may find attractive, it was generally agreed that we would probably have suffered defections sooner or later, and far better that they remain associated with WTFDA even if in a restricted manner as an associate member. On the other hand, we are hopeful that those who discover WTFDA via Topica will enjoy our company, like the sample VUD, and chose to join us as full fledged members.

As quickly as things are changing not only in our hobby, but in the entire field of communication and technology, your Board of Directors believes that this move places us in a better position to keep pace with current services of use to our members, and to move forward with changes as they occur. We hope that you, as members, concur.

**CONVENTIONS:** WTFDA's annual meet August 11-13 will be hosted by Peter George at The Whiteface Chalet near Lake Placid, NY. Get details: <<http://welcome.to/lakeplacid2000>>. Prices listed are a **package rate** for the weekend. We urge you to make room reservations early. *The NRC (National Radio Club) will meet Labor Day weekend in Lima, OH; Fred Vobbe is hosting. The IRCA (International Radio Club of America) Convention will be held August 25-27 in Billings, Montana; a repeat co-hosting engagement for John and Nancy Johnson. Both of the radio clubs welcome WTFDA members at their gatherings.* For more information about the radio gtgs, or if you aren't able to access Peter's web-based WTFDA information, write or e-mail Tom Bryant, 849 Todd Preis Drive, Nashville, TN 37221 <[tjbdx@home.com](mailto:tjbdx@home.com)> for printed material.



# WTFDA MAILBOX

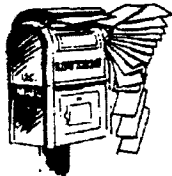
P.O. Box 501  
Somerville, CT 06072

Mike Bugaj

lkon@netcom.com

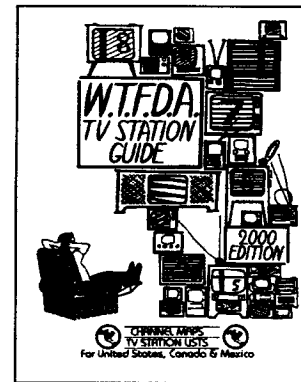
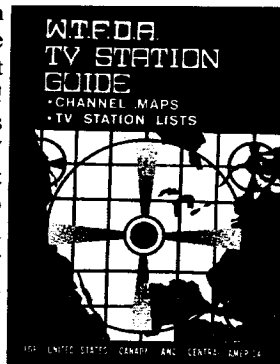
## AURORA!

There was not very much to talk about in the way of DX for April except for a few lucky people who stumbled upon some exceptionally strong Aurora conditions on April 6<sup>th</sup>. TV channels 2-6 were mostly a garbled mess, but some FM IDs were made by digging through the very poor audio. Some of our ham friends made some good contacts via aurora that afternoon and evening.



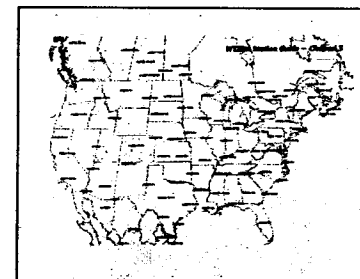
Let's pull some mail out of the mailbox and see what's in there. Well, would you believe, we have some new WTFDA members. Welcome to **Paul Crego** in Lockport, NY (Paul is also on the WTFDA email list), **Wolfgang Schneider** from Canoga Park, Calif (I think I spelled his last name correctly this time, I hope), **H.E Sparks** from Odessa, Texas (H.E...are you the Ed Sparks from Odessa, TX mentioned in Bob Cooper's 1956 P.E Article on DXing as one of the AIPA's top TV DXers??), **Luis Franceschi** from Ponce, PR (who is our first WTFDA member from Puerto Rico as far as I know), **Joe Kureth** in Uniontown, MD (who was a member years ago and tries to DX FM down there) and **Ben Cox** from Osceola, IA ( otherwise known as K1A0CZ). Thank you all for joining North America's only TV and FM DX club and I hope you enjoy it here! And in the mailbox we find a stack of renewals from **Carlton Howington**(FL), **Scott Steenhusen**(KS), **Allan Dunn**(MA), **Joseph Smith**(NY), **Pete Taylor**(WA), **Bill Dvorak**(WI), **Frank Drobny**(CA), **Pat Dyer**(TX), **Rich Wertman**(NY), **Dan Oetting**(MD), **Bill Draeb**(WI), **Rich Steinberger**(MA), **Gerard Hart**(NY), **Thomas Leu**(OH) and **Bill Higgs**(CA). Also, **Mike Condon** is back after a few month's absence, and so is **Dennis Elya**. We missed you guys!

Email from **Robert Ross**: "I received my WTFDA TV Station Guide yesterday...it looks great! Will be a helpful aid in the upcoming DX season!! My thanks to those who helped make it possible!! Just like the Old Days back in the 70s when I started!! Sure missed that old Guide!" I know how you feel Bob. Many of us missed it. From a letter from Joe Kureth: "...the WTFDA TV Logbook is professionally done and very comprehensive. And it confirmed a few unidentifieds logged last summer." I'll drink to that. From David Cox: "Please put me down for 2 TV Station Guides. I'm getting old, I guess...I want one for upstairs and one for downstairs." Since I'm getting old, too, why didn't I think of that myself? And on a post-it note from Dan Oetting: "Hey guys, Just wanted to say that I've been in the club for 19 years and you are doing a great job. Really enjoy the VUD. Also like the new [WTFDA@topica.com](mailto:WTFDA@topica.com) (list)." So do I, but then I'm more biased toward it than most people. And this leads me to something I should mention. Since the list was started back in September, a handful of people had to un-subscribe because they were just flooded with email. Well, I found a solution for them. If you want to subscribe to the list but want to keep a lid on your email, here is what you do. Send a blank email to [WTFDA-subscribe-digest@topica.com](mailto:WTFDA-subscribe-digest@topica.com) and you will receive one email a day from the list with all the postings on them. Just one puny email. And if you should decide that you want almost real-time messages during the summer months, just re-subscribe to individual messages with: [WTFDA-subscribe-messages@topica.com](mailto:WTFDA-subscribe-messages@topica.com). You can switch back and forth at will whenever you want. Cool or what?



Front Page of the Station Guide

guide has an extraordinary amount of info included, some of which I am still trying to decipher. Full power stations are in bolder print and LPTV are in lighter print. Not only does it list the stations' power, antenna height, etc., but the listing also tells you what time the chief engineer takes his morning coffee break and what fast food joints they like to eat at. Just kidding, but it's almost that detailed. There is more information at your



Here is the Channel 3 channel map.

I hope you enjoyed your little tour through the WTFDA TV Station Guide. Almost everyone who ordered one, ordered it sight unseen, except for a few folks who might have seen the channel ten map over at my website. I think that everybody should have a chance to see what the club has put together, even if you don't do any TV DXing at all. Jim Thomas did a great job publicizing the book and getting it printed at a good price. John Ebeling took care of the mailing of the guide. And I just played a minor part in all this. I just took your money!

**LAST BUT NOT YEAST...**Bruce Elving writing an article for Radio World about that TV station up in Alaska that wants to be a radio station by running audio and no video on 87.75...the only person in North America receiving any decent tropo is Fernando down in Monterrey...F2 takes a dive in late March and April...if the past is any indication, get your receivers/tv/antennas in good shape because E Skip should arrive sometime in May, first in the Southern states and then working northward. I hope you have enjoyed this month's Mailbox. It's a little bit different this time and the print is one point larger and my toner cartridge is brand new. See you all next month. Write! -Mike

Well, since everyone just saw the front cover of the old, red TV Station Guide from times gone by, this would be a fitting time to give you all a glimpse of the cover of the *new*, 2000 edition of the WTFDA Guide. This cover page was done for us by Harry Hayes, and the thought never occurred to us to actually print it in the VUD! What WERE we thinking? In the picture to your right, you will see how the listings are set up. Running off the database was probably one of the hardest parts of this project, and the credit for this goes to Doug Smith, because without this info the Guide would not be possible. This

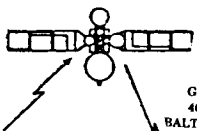
What would you like to know today?

fingertips than you will ever need to have in this or any other lifetime.

Look to your left and you will see one of the TV Guide's channel maps. Now that I think about it, the maps were hardest things to put together. Doug was able to get the United States map from a government site on the internet, but the Canadian map and the portion of the Mexican map we show were difficult. With the help of Greg Coniglio, Greg and Doug managed to lay the Canadian and Mexican portions over the US map. The fit was perfect.

IRC Chat...IRCNET, channel #wtfdxa Tuesdays and Fridays starting at 10pm Eastern Time  
Subscribe to Topica with a blank email to [WTFDA-subscribe@topica.com](mailto:WTFDA-subscribe@topica.com)  
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# SATELLITE NEWS



GEORGE W JENSEN  
4604 ANNTANA AVE  
BALTIMORE MD 21206-4220

A lot to report this month. The article in the March 2000 VUD was interesting and informative in describing digital television in the UK. There are many similarities in the US with the rapid growth of compressed video transmissions on domestic US C and Ku band satellites. The MPEG coding system is alive and well and growing and services in this format will be mentioned more and more in future columns. Obviously, the Digicipher 2 system is something like the limousine service of MPEG here in the US and Canada, but there are other systems - Digicipher 1, Webber, Magvision, PowerVu and many others. All of these are encryption systems like the Video-Cypher 2, we have been most familiar with on US analogue transmissions - also Video-cypher 1, Leitch, Oak-Orion, etc. Receivers are available that receive only those signals that are "free-to-all" and others may have a slot for a "smart card" to receive certain encrypted signals - even if sent out for no subscription fee - as some are. If this sounds complicated - it is. But it IS a much cheaper means of transmission and is being used by many foreign countries to beam their transmissions to other parts of the world. Try to imagine shortwave radio, but television instead. No static, fading, etc. Many foreign countries are doing this NOW. More later. NOW to this months changes.

## Satcom 1

delete - 3 - KRMA - PBS Denver - has been seen on XPDR 9 in the clear.

also delete NBC feeds from XPDR 8 - now compressed video - elsewhere Satcom 4

5 - add History Channel - West

## Satcom 3

760 - delete Knowledge TV - ADD Discovery health

GALAXY 9 - has now been positioned at 127 West -

XPDR 2 - Gospel Music Television - VC2

3 - NHK New York feeds to Tokyo

Telstar 7 -

M P E G -

Lifetime Movies Network

A & E Biography

History Channel International

Independent Film Channel

Much Music

Z D T V

Do-It-Yourself

CNBC 2

## Galaxy 5

21 - delete Knowledge TV and add Discovery health

## Galaxy 10

16 - M 2

23 - A & E - West

24 - Outdoor Channel

849 - delete DMX Hit Sweep - Add - Holiday and Happiness

rest of G10 - remains as it was with G9

## Satmex 5

16 - digital

18 - digital

ADD 794 - 819 - Digicipher 2 channels - most subscription only.

798 - Cinema Platino

804 - Movie World

test patterns/Color bars on many others

SBS 5 - delete entire satellite - replaced by Galaxy 10

from this - delete WMNB - Russian American television

now in MPEG on what was Galaxy 6

Continued new listings on ANIK E2 Ku-Band services

385, 386 - 387 - NBC, CBS, ABC - Buffalo, New York stations  
393 - unknown:/// 700 - SRC French East, 701 - CNFT Montreal  
710 - TVA Quebec, 711 - TVA Montreal, 712 - CFTM, Montreal,  
713 - TVA, Hull, 720 - Canal Savoir. 721 - CFJP Montreal,  
722 - TeleQuebec, 730 - Reseau de L'Informacion  
740 - Meteo Media, 750 - Reseau de Sports, 751 - Tele St.  
Pierre and Miquelon (RFO), 752 - Canal Z, 753 Canal Evasion,  
760 - Le Canal Nouvelles TVA, 761 - TV 5 Paris, 762 - MusiMax  
764 - Canal Fiction, 765 - Canal Historie, 770 - Canal Famile  
771 - Teletoon Quebec, 772 - Canal Vie, 773 - Canal D, 774 O  
TV Francois Ontario, 775 - Musique Plus, 780-782 - Super  
Ecran 1, 2 and 3, 800 - Teletatino, 801 - Chinese, 802 -  
Asian TV Network, 803 - Odyssey Canada, 830 - Korean radio,  
831 - Apna Sangeet radio, 832 - Sur Sagar, 833 - Sur Sagar radio  
West, 850, 851 - Voice Print, 852 - CIUT, 853 - CHIN, 854 -  
CKUA, 855 - KDRK, 856 - KEZE, 857 - kisc, 858 - KMBI, 859 -  
KPBX/KFSC, 860 - KXLY, 861 - KZZU - Basically 830 through  
861 are radio stations.  
DMX Music Channels are from 901 through 930 --- Galaxie Music  
Channels are from 941 through 970, 979 - 984 planned,,  
985 - 990 - planned west, 991 - The Peoples network, 993 -  
TVO Virtual Classroom, 996 - Star Choice Dealer network,  
997 and 998 - planned.

## GE Americom 4

add - XPDR 17 - WSVN - Ch 7 - Miami Florida Fox - VC2  
N E W S A T E L L I T E ----Galaxy 11 - C and Ku-Band  
Galaxy 6 services have (for the most part) transferred to  
this satellite. On the Ku-Band - TCI Cable's headEnd in The Sky  
currently on Galaxy 1 - Ku-Band is now also found here.

## Galaxy 3

TVN Theaters 3, 4, 5 and 6 are now infomercials for the most part  
9 - Spice - will terminate shortly - if not by the time you  
read this.

## Galaxy 7 -

delete all The Box feeds - 755 is now VHi Uno and 756 -  
MTV En Espanol

757 - Canal 9 Internacional is now ID'd as TV Rio de la Plata  
which is a commercial station in Buenos Aires

## Panamsat 5

711 - La Superstation and many M P E G feeds which will be  
listed next time - I hope,....

That's all for this month - see you in 30....'73's

*George*



# FM NEWS

MAY 2000

EDITOR: GREG CONIGLIO  
90 SLATE CREEK DRIVE APT. #3  
CHEEKTOWAGA, NEW YORK 14227  
E-MAIL: coniglio@localnet.com  
WEB: <http://www.geocities.com/~wgrc>

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M STREET JOURNAL - 54 MUSIC SQUARE EAST SUITE 201 - NASHVILLE, TENN. 37203  
PHONE: (609) 883-3321, FAX: (609) 883-5696, E-MAIL: [MstreetTom@aol.com](mailto:MstreetTom@aol.com)

**KEY TO ABBREVIATIONS:**  
S: satellite programming  
AF: New frequency allocation accepted for filing for a new FM license  
AFA: American Family Association  
CC: call letter change  
CL: city of license change  
CX: a construction permit has been canceled  
C1, C2, etc.: a change in status to that FM license class  
DA: directional antenna  
DE: station has been deleted  
FC: format change  
GA: granted amendment to the table of FM allocations  
GE: granted extension of construction permit

GX: granted replacement of expired permit  
LC: license to cover filed (means station is ready to come on air)  
MC: multiple-city legal ID  
NC: no change yet on a reported change/permit  
ND: non-directional antenna  
NO: not on the air  
NS: new station granted  
NW: new station signs on  
OSA: one-step application granted for change  
PA: proposed amendment to change FM table of allocation  
PC: power change on the air (> for increase, < for decrease, when known)

PG: power change granted (> for increase, < for decrease, when known)  
QC: frequency change occurred  
QA: frequency change granted  
RA: silent station returns to air  
RE: station requests extension on permit  
RX: station requests replacement of expired permit  
SG: slogan change or update  
SI: station is silent  
XA: dismissed amendment to FM allocations  
XC: transmitter site change occurred  
XG: transmitter site change granted



## UNITED STATES

### ALABAMA:

Brundidge: WTBF 94.7 FC to 45+ soft AC (&)  
Holly Pond: WFMH 95.5 PC> 6 kW  
Monroeville: WMFC 99.3 FC to oldies (&)  
Moulton: WEUP 103.1 CC (ex WXKI)  
Muscle Shoals: WVNA 105.5 CC (ex WLAY)  
Oneonta: WKLD 97.7 PG< 3.7 kW, 367', XG: 33-56-48 / 86-29-06  
Repton: WFNU 101.1 CC (ex WYNI)  
Tusculum: WLAY 100.3 CC (ex WVNA)

### ALASKA:

Kasilof: KWJG 91.5 PC> 1 kW  
Ketchikan: KGTW 106.7 adds JRN country (&)

### ARIZONA:

Benson: KAVV 97.7 PC> 6 kW, 148 ft, XC: 31-59-29 / 110-10-21  
Wickenburg: KSSL 105.3 FC to Spanish CHR "Que Buena" (Phoenix), CC (ex KMYL), adds Humberto Luna from KLYY Los Angeles



### ARKANSAS:

Cherokee Village: KFCC 98.3 QC from 100.9, FC to oldies, PC> 25 kW, 305 ft  
Dermott: KRKD 105.7 NW, classic rock  
El Dorado: KXZX 96.1 CC (ex KBYB), FC to hot AC "96-X"  
El Dorado: K209DT 89.7 38w, WJFM-OH  
Lakeview: KKTZ 93.5 FC to JRN AC (&)  
Mountain Home: KPFM 105.5 adds JRN country (&)  
Moutain Home: KOMT 107.5 PC< 90 kW, 1017 ft, XG: 36-29-13 / 92-29-39  
Salem: KHOM 100.9 QC from 95.9, FC to ABC Real Country (&), PC> 5 kW, 492 ft, XC: 36-35-38 / 91-40-03  
W.Helena: KJWV 94.5 PC< 14 kW, 413', XC: 34-31-28 / 90-35-47

### CALIFORNIA:

Baker: \*NS 94.9 1 kW, 1309 ft, DA  
Chowchilla: KSKD 93.3 FC to Spanish (Merced)  
Columbia: KTDZ 98.9 CC (ex KTD0) "Z Spanish"  
Dorris: K212FF 90.3 NS-10w(DA): KVIP 98.1  
E.Porterville: KMQA 100.5 PC< 2.1 kW, 1109 ft, XC: 35-56-45 / 118-53-10  
Goleta: KKSBB 106.3 FC to CHR "Kiss 106.3"  
Huron: \*NS 98.3 4 kW, 328 ft  
Indio: KCRI 89.3 CC (ex KCRY)  
Kernville: K216EW 91.1 NS-10w: KAWZ-ID  
Kings Bch: KSRN 107.7 CC (ex KHVG), FC to adult standards (Reno)  
Lake Elsinore: K204DY 88.7 NS-10w(v): KAWZ-ID  
Lenwood: \*NS 96.9 1 kW, 797 ft  
Lenwood: KIXW 107.3 PC< 1 kW, 781 ft, XC: 34-58-15 / 117-02-22  
Lenwood: KBTW 104.5 NW, re. Mexican // KXLM

## FM NEWS PAGE 2

### California:

Los Angeles: KMZT 105.1 CC (ex KKGO) "K-Mozart"  
Mojave: KCRY 88.1 CC (ex KCRI)  
Orcutt: KPAT 95.7 FC to rhythmic oldies "Mega" (Santa Maria)  
Oroville: KHHZ 97.7 CC (ex KZCO) "Z-Spanish"  
Palm Springs: KYOR-1 106.9 NS-500w(v)  
Pasadena: KPCC 89.3 FC to news and information (operating with Minnesota Public Radio)  
Salinas: KHMZ 97.9 CC (ex KLXM)  
San Jose: KUFJ 98.5 PG< 10 kW  
San Mateo: KSAN 107.7 SG "107-7 The Bone, classic rock that really rocks"  
San Rafael: KJQI 100.7 FC to MGS cont. Christian (&) (San Francisco)  
Soledad: KLUE 106.3 FC to Spanish CHR // KLXM  
South Lake Tahoe: KRLT 93.9 PC< 3 kW, -105 ft.  
Summit City: \*\*\* 92.1 XA to add class A  
Taft: KBDS 103.9 FC to romantica (Bakers.)  
Tipton: KCRZ 104.9 adds WW1 oldies (&)

### COLORADO:

Colorado Sps: KRDO 95.1 PG< 65 kW, 2211 ft, XG: 38-44-45 / 104-51-38  
Kremmling: KRKM 106.3 PC> 2350w, 1033 ft, class C3, XC: 40-00-18 / 106-26-57  
Longmont: KCKK 104.3 PC> 91 kW, 676 ft, ND  
Montrose: KSTR 96.1 FC to CHR (Grand Jct)

### CONNECTICUT:

New London: WKNL 100.9 CC (ex WTYD), FC to oldies "Kool" (&)

### FLORIDA:

Apalachicola: WOYS 100.5 PG> 12 kW, 476', DA  
Ebro: \*\*\* 95.1 PA: add class A  
Edgewater: WKRO 93.1 FC to country "93 Country" (Daytona Beach)  
Gifford: WAVV 94.7 PC< 22.5 kW, 354 ft  
Goulds: WRTO 98.3 FC to all salsa format  
Gulf Breeze: WRRX 106.1 CC (ex WZRO), NW, rock "Rock 106" (Pensacola)  
Holmes Bch: WLLD 98.7 XC: 27-50-32 / 82-48-52  
Key West: WRLA 107.9 CC (ex WVMQ)  
Panama City: WQJM 100.1 CC (ex WPCF), FC to rhythmic oldies  
Punta Rassa: WCCL 97.7 drops DA  
Sarasota: WKZM 104.3 FC to relig. // WKES  
St. Augustine: WFSJ 97.9 FC to talk // WTKS Orlando  
St. Petersburg: WFJO 101.5 inc. to 1502', XG: 27-49-10 / 82-15-39  
Tampa: WWRM 94.9 inc. to 1502', XG: 27-49-10 / 82-15-39

### GEORGIA:

Athens: WBTS 95.5 PC< 99 kW, 968', DA, XC: 33-55-51 / 83-47-00  
Athens: WMSL 88.9 PG> 20 kW  
Atlanta: WPCB 94.9 dec. to 888', class C1  
Blue Ridge: WPPL 103.9 PC< 5.5 kW, 341', DA  
Bostwick: WMOQ 92.3 adds Real Country (&)  
Canton: WGST 105.7 PG< 16.5 kW, 827 ft, XG: 34-03-55 / 84-27-14  
Cartersville: WCCV 91.7 PG> 7.3 kW, 935 ft, C2, XG: 34-09-34 / 85-02-13

### Georgia:

Dublin: WAWH 88.3 LC  
Forsyth: WQMJ 100.1 FC to R&B oldies (&)  
Gainsville: W204BN 88.7 NS10w(v), KAWZ-ID  
Jasper: WNEE 88.3 PC> 200w, 46', DA  
Macon: WPKS 92.3 FC to rock  
Pearson: WPNG 101.9 PG> 12.9 kW, 459 ft, C3, DA, XG: 31-19-36 / 82-51-54

### IDAHO:

Boise: KARO 103.3 FC to CHR "Kiss"  
Bruneau: \*\*\* 102.5 XA to add class C1  
Melba: \*\*\* 99.9 XA to add class C2  
Twin Falls: KEFX 88.9 PG>100 kW (v), 991 ft, DA, class C, XC: 42-43-47 / 114-24-52

### ILLINOIS:

Arlington Hts: WKIE 92.7 PC< 1.8 kW, 387 ft, XC: 42-08-14 / 87-58-57  
Freeport: WFPS 92.1 PG> 3.6 kW, 423 ft.  
Hillsboro: WXAJ 99.7 LC  
Peru: WLRZ 100.9 PG> 3 kW, 328 ft, XC: 41-18-09 / 89-14-11  
Spring Valley: WAIW 103.3 FC to CHR // WSTQ, "Q 103.3", PC> 4.9 kW, 361', XC: 41-18-09 / 89-14-11  
Winnebago: WYHY 95.3 CC (ex WKMQ) classic hits "Y95"



### INDIANA:

Fort Branch: WBGW 101.5 PC> 2.1 kW  
Franklin: WPZJ 95.9 PG< 1.4 kW, 482  
Goshen: WZOW 97.7 FC to WW1 adult rock (&)  
Huntingburg: WBDC 100.9 adds JRN cntry (&)  
Indianapolis: WNOU 93.1 FC to CHR "Radio Now" CC (ex WNAP)  
Marengo: WKLO 89.9 LC  
Rushville: WKWH 94.3 CC (ex WRCR), FC to WW1 country (&)  
Tell City: WTCJ 105.7 NW, CHR "The Party"  
W.Terre Haute: WWRV 105.5 DA, XG: 39-27-13 / 87-28-15

### IOWA:

Clinton: KZEG 94.7 adds WW1 country (&)  
Des Moines: KIOA 93.3 PC< 82 kW, 1066', C1, XC: 41-37-55 / 93-27-26  
DeWitt: KBOB 104.9 CC (ex KQLI)  
Keokuk: KOKX 95.3 inc. to 804 ft.  
Muscatine: KBEA 99.7 CC (ex KBOB) FC to CHR "B100" (Quad Cities)  
Postville: \*NS 89.1 100w, 216 ft.  
Spencer: K220HY 91.9 NS-210w: WNCC

### KANSAS:

Arkansas City: K201FZ 88.1 NS-50w: WJFM-OH  
Belleville: KREP 92.1 adds JRN country (&)  
Belle Plaine: KWSJ 92.7 CC (ex KANR) FC to smooth jazz  
Clay Ctr: KCLY 100.9 PG> 25 kW, 276', C3, XG: 39-29-14 / 97-07-35  
Concordia: KCKS 94.9 QC from 95.3, now C1, PC> 100 kW, 521', XC: 39-21-19 / 97-42-16

**Kansas:**

Haysville: KWCY 105.3 CC (ex KWSJ) "Wichita Country"  
 Manhattan: KMKF 101.5 adds Bob & Tom

**KENTUCKY:**

Ashland: WDDG 93.7 adds CD Country overnights (&) (Huntington)  
 Eminence: WXLM 105.7 FC to classic country // WTHQ  
 Frankfort: WKYW 104.9 FC to AP - news (&)  
 Harlan: WTUK 105.1 adds John Boy & Billy  
 Leesville: KJAE 93.5 QC from 92.7, PC> 7.5 kW, now C3  
 Lexington: WLKT 104.5 dec. to 466', ND, XC: 38-04-09 / 84-18-44  
 Lexington: WMXL 94.5 dec. to 476', XC: 38-07-24 / 84-26-37  
 Monticello: WMKZ 93.1 PC> 1450w, 676 ft.

**LOUISIANA:**

Bastrop: K202DD 88.3 NS-80w: WJFM-OH  
 Boyce: KBCE 102.3 adds Tom Joyner  
 DeRidder: K208DW 89.5 NS-20w: WJFM-OH  
 Jackson: WBJJ 104.5 XG: 30-41-50 / 91-16-03  
 Lafayette: K206CM 89.1 NS-74w(h), WJFM-OH  
 LaPlace: WCKW 92.3 drops Bob & Tom  
 Maurice: KFZ 106.3 adds ABC Black Gospel (&)  
 Minden: K216EX 91.1 NS-38w: WJFM-OH  
 Natchitoches: K211DY 90.1 NS-10w: WJFM-OH  
 Natchitoches: KZBL 100.7 FC to oldies "The Beat" (&)

New Iberia: KOOJ 93.7 PC< 80 kW, 620', DA  
 New Iberia: K213DG 90.5 NS-10w: WJFM-OH  
 Shreveport: KBED 102.9 LC  
 Winnfield: K209DR 89.7 NS-27w: WJFM-OH

**MAINE:**

Calais: WMED 89.7 45-01-45 / 67-19-26  
 Kittery: WSHK 105.3 CC (ex WXBB) "The Shark"  
 Presque Isle: WBPW 96.9 dec. 430', DA  
 Winter Harbor: WNSX 97.7 CC (ex WAKN) "Ninety Seven"

**MARYLAND:**

Salisbury: WICO 97.5 PC> 4.5 kW

**MASSACHUSETTS:**

Brookline: WBOS 92.9 PG> 18.5 kW, 734 ft, XG: 42-20-50 / 70-04-59  
 Framingham: WROR 105.7 PC> 23 kW (Cir)  
 Nantucket: WNAV 91.1 NW, news and information "Nan 91.1" (Cape Cod)  
 Tisbury: WMVY 92.7 inc. to 315', XG: 41-26-16 / 70-36-51  
 Worcester: WAAF 107.3 PG< 9.6 kW, 1099 ft, DA, XG: 42-20-09 / 71-42-57

**MICHIGAN:**

Gaylord: WMJZ 101.5 PC> 6 kW, DA

**MINNESOTA:**

Aitkin: KIKIN 94.3 FC to JRN classic country (&) in August  
 Alexandria: KXRZ 99.3 CC (ex KSTQ), FC to JRC AC (&)  
 Glencoe: KARP 96.3 PC> 100 kW, 577', C1, XC: 44-56-25 / 83-55-43  
 Moose Lake: KBFH 107.1 PA: to 97.7 - A

**MINNESOTA:**

Pillager: KBKK 95.9 dec. to 239', DA  
 St. Paul: WMCN 91.7 SI (needs new tower)  
 Sauk Rapids: WHMH 101.7 PG> 50 kW, 476 ft, XG: 45-30-02 / 94-14-31  
 Waite Park: PC> 9 kW, 413 ft, class C3  
 Windom: \*NS 89.9 250w, 171 ft.  
 Worthington: \*NS 90.1 250w, 125 ft.

**MISSISSIPPI:**

Booneville: WMAE 89.5 dec. to 653 ft.  
 Charleston: WTDG 95.7 PC> 6 kW  
 Columbia: \*NS 89.5 250w, 177 ft.  
 McComb: WAKH 105.7 adds CD Country (&)  
 McLain: WXAB 96.9 PC< 4 kW, 400 ft.  
 Meridian: WMMZ 102.1 PC> 920w, 505 ft.  
 Pt. Gibson: WRTM 100.5 drops DA  
 Tupelo: W205BS 88.9 NS-35w: WAFR-MS  
 Water Valley: WLPX 105.5 inc. 328', DA

**WPKQ 103.7**

**MISSOURI:**

Canton: KRRY 100.9 PC> 28 kW, 656 ft.  
 Columbia: KBXR 102.3 PC> 3.5 kW, 856', C3  
 Deerfield: KBZI 100.7 CC (NS)  
 Jefferson City: KBQF 104.1 PG< 5.3 kW, 348 ft, XG: 38-33-50 / 92-11-21  
 St. Louis: KSD 93.7 adds disco 5pm - 3am (but should be back to all hot AC by now)  
 Springfield: K218DC 91.5 NS-250w(h), WJFM-OH  
 Thayer: KSAR 92.3 NW, country

**MONTANA:**

Billings: K215DL 90.9 NS-50w(v), KEFX-ID, DA  
 Great Falls: KGPR 89.9 PC> 9.5 kW, 295 ft.  
 Hamilton: KBAZ 95.9 CC (ex KBMG)  
 Huntley: K210CV 89.9 NS-50w(v), KEFX-ID, DA  
 Plains: KPLG 91.5 PC> 1.8 kW, DA  
 Ronan: KQRK 92.3 FC to ABC hot AC (&)

**NEBRASKA:**

Lexington: KRVN 93.1 adds JRN soft AC (&)  
 Wilber: KFLV 89.9 PG> 8.8 kW, 351 ft.

**NEVADA:**

Henderson: KMXX 94.1 dec. to 1161', XG: 36-00-30 / 115-00-20  
 Jackpot: KBSJ 91.3 CC (NS)  
 Pioche: KBZB 98.9 LC  
 Sparks: KSRN 92.1 FC to smooth jazz (Reno)

**NEW HAMPSHIRE:**

Berlin: WPKQ 103.7 CL: North Conway, NH  
 Conway: WBNC 104.5 FC to oldies "The Valley" (&)  
 Exeter: WERZ 107.1 dec. to 348 ft, add DA, XG: 43-01-38 / 70-52-51  
 Hampton: WSAK 102.1 CC (ex WXBP) "The Shark"  
 Peterborough: WFEF 92.1 CC (ex WNHQ)

**NEW JERSEY:**

Atlantic City: WMGM 103.7 FC to classic rock "The Shark"  
 Beach Haven West: \*NS 88.3 100w(v), 426', DA  
 Berlin: WNJS 88.1 inc 571', XG: 46-10-56 / 00-48-09 (?)

**New Jersey:**

Cape May: WGBZ 102.3 CC (ex WJSX)  
 Pleasantville: WZBZ 99.3 CC (ex WSAX)  
 Port Republic: \*NS 88.7 520w(v), 161', DA

**NEW MEXICO:**

Kirtland: KAZX 102.9 drops DA  
 Las Vegas: KTRL 102.9 PG 26 kW, -16 ft.  
 Las Vegas: KMDZ 96.7 CC (NS)  
 Tucuman: K206CN 89.1 NS-28w: KLYT 88.3

**NEW YORK:**

Buffalo: WTSS 102.5 CC (ex WMJQ), FC to hot AC "Star 102.5"  
 Canton: WRCD 101.5 adds Don Imus, PC 5.5 kW, 341 ft, XC: 44-32-10 / 75-05-46  
 Clyde: WCOV 93.7 CC (ex WLLW), FC to religion // WCIC 103.1  
 Cobleskill: WQBJ 103.5 PA: to class B, St. Johnsonville, NY  
 Fenner: WXXE 90.5 drops DA  
 Fredonia: WCQA 96.5 PA: to class A, Falconer, NY  
 Monticello: WSUL 98.3 PC> 2.2 kW, DA  
 Olean: WMXO 101.5 XC: 42-06-18 / 78-23-25  
 Seneca Falls: WLLW 99.3 CC (ex WSWF), FC to ABC classic rock (&)  
 Waterloo: WNYR 98.5 FC to JRN soft AC (&)  
 Willsboro: WXPX 96.7 FC to smooth jazz (&)

**Q102.5**  
**WMJQ-FM**

Playing Superstars of the '70s, '80s, and '90s!

**NORTH CAROLINA:**

Buxton: WBUX 90.5 PC 5.9 kW, 154 ft.  
 Leland: WKXS 94.1 CC (ex WAAV) "Kiss 94.1"  
 Southern Pines: WKQB 106.9 XG: 35-01-06 / 79-14-26  
 Waxhaw: WNMX 106.1 PC> 32 kW, class C2  
 Wilmington: WHQR 91.3 PC> 60 kW, DA

**OHIO:**

Lebanon: WAQZ 87.3 CC (ex WYLX), FC to modern rock "Z 97.3" (Cincinnati), PC> 5 kW, 358 ft, XC: 39-16-53 / 84-21-11  
 Steubenville: WOGH 103.5 CC (ex WRKY)  
 Youngstown: WMMY 98.9 CC (ex WKBN) "Mix 98.9"  
 Zanesville: WHIZ 102.5 PC> 50 kW (h), 48 kW (v), DA

**OKLAHOMA:**

Claremore: KTFR 100.7 PG> 6 kW, CL: Chelsea, OK, XG: 36-30-12 / 95-26-29  
 Coalgate: KCNR 105.5 CC (NS)  
 Muskogee: KMMY 97.1 dec. to 1246 ft, XC: 35-15-35 / 95-25-52  
 Oklahoma City: KXXY 96.1 PC< 98 kW, 1171 ft.  
 Sulphur: \*NS 89.3 800w, 171', AFA  
 Weatherford: KAYM 90.5 LC

**OREGON:**

Ashland: KIFS 107.5 CC (ex KKJJ) "Kiss 107"  
 Baker: KCMB 104.7 adds JRN country (&)  
 Beaverton: KKCV 103.3 dec. to 1541', XG: 45-31-21 / 122-44-45  
 Florence: KWVZ 91.7 PC 150w, 554', ND  
 Lakeview: \*NS 88.7 170w, -590 ft.  
 Newport: K210CW 89.9 NS-62: KLOV-FM  
 Portland: KKRZ 100.3 dec. to 1541', XG: 45-31-21 / 122-44-45  
 Reedsport: KAUB 89.1 PC< 688w  
 Reedsport: KSYD 92.1 PG< 300w(h), 358 ft, XG: 43-39-26 / 124-11-10  
 Seaside: KCYS 98.1 inc. to 328', XC: 45-57-08 / 123-56-14

**PENNSYLVANIA:**

Charleroi: WOGI 98.3 PA: to class A, Duquesne, PA  
 Nanticoke: WQFM 92.1 PC> 660w, 994 ft.  
 New Kensington: WZPT 100.7 PC< 14.5 kW, 918', DA  
 Williamsport: WSFT 107.9 PC> 360w, 1289 ft.

**RHODE ISLAND:**

Block Is: WADK 99.3 PC 4.6 kW, 177', DA

**SOUTH CAROLINA:**

Andrews: WGTN 100.7 reported SI  
 Murrel's Inlet: WMGB 88.3 PC< 250w(v), 161 ft, XC: 33-32-07 / 79-03-50

**SOUTH DAKOTA:**

Milbank: K213DI 90.5 NS-219w: WNCB  
 Mitchell: K204DW 88.7 NS-99w: WJFM-OH  
 Spearfish: KDDX 101.1 dec. to 1788', DA  
 Watertown: KJBB 89.1 100 kW, 1571 ft. CC (NS)  
 Yankton: K216EY 91.1 NS-92w: WJFM-OH

**TENNESSEE:**

Crossville: WXVL 99.3 adds JRN a/c (&)  
 Gatlinburg: WDLY 105.5 FC to a/c "Mix"  
 Memphis: WYPL 89.3 PG> 100 kW, 1269 ft, DA, XG: 35-28-03 / 90-11-27  
 Memphis: WEGR 102.7 PC< 87 kW, 945 ft, XC: 34-16-33 / 89-46-38  
 Minor Hill: WEUZ 92.1 CC (ex WEUP)  
 Nashville: WNAZ 89.1 PC< 2.5 kW, 197', DA  
 Shelbyville: \*NS 91.3 250w, 46 ft.

**TEXAS:**

Amarillo: KAEZ 105.7 PG> 43 kW, 525 ft, C2, DA, XG: 35-17-33 / 101-50-48  
 Amarillo: KXLV 89.1 PG> 13.6 kW, 476', C3  
 Amarillo: KXRI 91.9 CC (ex KYFA)  
 Bastrop: KYCM 88.5 SI  
 Beaumont: KXTJ 107.9 SG "La Z"  
 Center: KDET 100.5 drops DA  
 Centerville: KUZN 105.9 NW, "Texas 106" Country  
 College Station: KEOS 89.1 PC> 1 kW (v), 253', DA  
 Copperas Cove: KSSM 103.1 FC to urban AC "Kiss" CC (ex KOOV)  
 Corsicana: KDXH 107.9 CC (ex KLNO) FC to romantica "Amor" (Dallas)  
 Dallas: KYNG 105.3 FC to hot talk (may include Leykis, Stern)  
 Dumas: KDDD 95.3 CC (ex KMRE) "Ding Dong Daddy"

**Texas:**

El Paso: KATH 94.7 adds Nashville Nights  
 Fairfield: KNES 99.1 PG> 17 kW, 400', XG: 31-40-55 / 96-01-22  
 Gainesville: KDOS 107.9 FM to romantica // KDXX "Amor" (Dallas)  
 Giddings: KANJ 91.5 FC to religion // KHCB  
 Granbury: KDXT 106.7 FC to romantica // KDXX "Amor" (Dallas)  
 Harker Hts: KUSJ 105.5 CC (ex KYUL), FC to country, "US 105"  
 Hempstead: KEZB 105.3 noted on the air testing



Henderson: KDVE 100.3 PG< 2,350w, 535 ft, XG: 32-22-37 / 94-34-18, CL: Tatum, TX  
 Houston: KIKK 95.7 SG "Kick 95" dropping "Young Country"  
 Lindale: \*\*\* 95.7 XA to add class A  
 Lubbock: KQRI 90.9 CC (ex KYFT)  
 Lytle: KZLV 91.3 PC> 3.8 kW  
 McCook: KCAS 91.5 PG< 2.5 kW< 358 ft.  
 Markham: \*NS 91.3 5 kW, 256 ft.  
 Mt. Pleasant: \*\*\* 100.5 PA: add class A  
 Nacogdoches: KJCS 103.3 adds JRN country overnight (&)  
 Palestine: KLIS 96.7 inc. to 492', C2, XG: 32-02-16 / 94-24-41, CL: Frankston, TX  
 Refugio: KTKY106.1 GA: to 106.5 - C2, CL: Taft, TX  
 S. Padre Is: KZSP 95.3 PC> 6 kW  
 Temple: KYUL 101.7 CC (ex KLTD), FC to oldies  
 Tulia: KLGD 104.9 RA with 45+ soft AC (&)  
 Waco: KCKR 95.7 FC to oldies "Oldies 95"  
 Winters: KORQ 96.1 CC (ex KATX)

**UTAH:**

Brian Head: KREC 98.1 adds Delilah  
 Richfield: KACE 97.5 CC (ex KRFD)  
 St. George: K217DT 91.3 NS-10w: KLOV-FM

**VERMONT:**

Springfield: WCFR 93.5 FC to country // WMXR  
 Woodstock: WMXR93.9 FC to country "Bob Country"

**VIRGINIA:**

Christiansburg: WFNR 100.7 CC (ex WBZV) FC to all sports/news/talk, will be // WFNR 710 about 12 hours a day  
 Farmville: WFLO 95.7 FC to soft AC (&)  
 Yorktown: WXEZ 94.1 FC to soft AC (Tidewater)

**WASHINGTON:**

Cheney: KEYF 101.1 PC< 940w (v), 1473', DA  
 E. Wenatchee: KYSN 97.7 PG> 9.3 kW, -98 ft, C3, XG: 47-22-51 / 120-17-15  
 Kennewick: KTCV 88.1 PG> 1.1 kW, -82 ft, XG: 46-13-09 / 119-12-01  
 Naches: KREW 99.3 PC> 790w, 899'  
 Walla Walla: KUJ 99.1 PC> 31 kW, 623', C2, XG: 45-57-22 / 118-41-11  
 Wenatchee: KPQ 102.1 FC to classic hits "The Quake"

**WEST VIRGINIA:**

Charleston: WVAF 99.9 FC to a/c  
 Charleston: WKWS 96.1 adds John Boy & Billy  
 Pocatalico: WRVZ 98.7 FC to dance-CHR

**WISCONSIN:**

Berlin: WBJZ 104.7 FC to smooth jazz  
 Crockett: \*NS 88.5 3 kW, 328 ft.  
 DePere: W209BM 89.7 NS-10w: KEFX-ID  
 Hallie: WWIB 103.7 XC: 45-06-07 / 91-09-33  
 Lancaster: WGLR 97.7 PC> 11.5 kW, 482 ft, class C3, XC: 42-51-48 / 90-42-11  
 Marshall: \*NS 90.3 3.9 kW, 331 ft, DA  
 Milwaukee: WKTI 94.5 dec. to 754 ft, DA  
 New Richmond: WIXK 107.1 PA: from class C2 to C3, CL: Coon Rapids, MN  
 Port Washington: WGLB 100.1 reported SI  
 Rice Lake: WJMC 96.1 QC from 96.3, PC< 50 kW, 482', XC: 45-37-14 / 91-44-44  
 Seymour: WECB 104.3 XG: 44-31-26 / 88-19-54  
 Three Lakes: WLSL 93.7 FC to oldies "B93"

**WYOMING:**

Casper: KHOC 102.5 inc. to 1860', XG: 42-44-37 / 106-18-31  
 Douglas: KDUW 91.7 LC

**AMERICAN SAMOA:**

Leone: KNWJ 93.9 PC< 320w, 1269', DA

**PUERTO RICO:**

Aguada: WFDT 105.5 CC (ex WNNV)  
 Pastillo: \*NS 90.1 200w, -121 ft, DA  
 Ponce: WPUC 88.9 CC (ex WEUC)  
 San German: WNNV 91.7 CC (ex WZGX)



CANADA

**ALBERTA:**

Banff: \*NS 93.3 92w // CKRY wanted  
 Lloydminster: \*NS 106.1 new 100 kW pop rock station granted  
 Valleyview: \*NS 105.7 75 kW, wanted // CKYL  
 Valleyview: \*NS 106.9 75 kW, wanted // CKKX

**BRITISH COLUMBIA:**

Chilliwack: CHWK 1270 wants 98.3, 2.34 kW, oldies  
 Prince George: CFPG 90.3 wants PG> 151w  
 Sooke: \*NS 94.7 38w, to be // CKKQ  
 Victoria: CJVI 900 wants 103.1, 9.4 kW, gold based adult standards

**MANITOBA:**

Bloodvies: \*NS 96.9 23.1w, // CINC  
 Easterville: \*NS 93.5 23.1w, // CINC  
 Griswold: \*NS 93.5 23.1w, // CINC  
 Thicket Portage: \*NS 96.9 23.4w, // CINC

**NEW BRUNSWICK:**

Campbellton: \*NS 88.9 10 kW, wanted // CBAL-FM  
 Grand Falls: CKMV AM wants 95.1, 975w // CJEM  
 Moncton: \*NS 99.9 45 kW CHR application has been withdrawn

**NEWFOUNDLAND:**

Clareville: \*NS 93.7 11 kW wanted // CBN-AM

**ONTARIO:**

Bracebridge: CFBG 100.9 wants 99.5, 100 kW  
 Christian Island: \*NS 101.3 900w, native station  
 Iroquois Falls: CJWL 104.9 QG to 101.1  
 Kingston: \*NS 105.7 various apps: 5 kW classic rock, 20 kW soft AC (Chum Ltd), 24 kW rock, 4 kW soft AC, 15740w new rock  
 New Liskeard: \*NS 103.5 37w country stn wanted  
 North Bay: \*NS 98.3 50w country stn wanted  
 Smiths Falls: CJET 630 QG to 92.9 - 9.3 kW, to remain "traditional country"  
 Smooth Rock Falls: \*NS 94.7 250w stn wanted // CKGN  
 Sudbury: \*NS 90.1 50 kW CBC2 wanted  
 Sudbury: \*NS 90.9 50 kW wanted // CBFX and La Chaine culterelle  
 Timmins: \*NS 94.3 50 w all hits station wanted

**QUÉBEC:**

Donnacoona: CKNU 100.9 wants PG< 2.2 kW, XG  
 Fermont: \*NS 100.5 255w wanted // CBSI  
 Gaspe: \*NS 90.1 2.16 kW, wanted // CBFX  
 Lac-Simon: CHUT ?? wants PG> 102 w  
 Matagami: \*NS 99.1 50w, FF community stn  
 Montreal: CBF 100.7 wants PG> 100 kW  
 Rouyn: \*NS 89.9 17.2 kW wanted // CBFX  
 Scotstown: \*NS 103.7 0.8w FF station religion wanted  
 Sherbrooke: CBF 101.1 wants to originate 6.25 hours a week of programming This station is relayed on CBF6 Lac Megantic, CBF11 Abestos, and CBF12 Victoriaville  
 Trois-Rivieres: CBF 88.1 wants to originate 5 hours per week of prog.

**SASKATCHEWAN:**

Saskatoon: \*NS 106.7 new classic rock station granted, but 106.7/100 kW was rejected, a new freq. must be chosen  
 Yorkton: \*NS 94.1 new country stn 100 kW wanted (NOT replacing CJGX 940)



MÉXICO

**BAJA CALIFORNIA:**

Tijuana: XHGLX 91.7 FC to Spanish (drops EE a/c)  
 Tijuana: XHLNC 90.7 FC to classical "Top 400 hits of the last 400 years"

**PIRATE WATCH:**

**ROCHESTER, NY:** A 92.1 playing oldies has been heard in the suburb of Perinton, at a range of about 10 miles. However, he has shut the station off. Information can be found at <http://www.msnbc.com/local/WHEC/5150.asp>

• John Ebeling sends us an FM bandscan from his vacation spot in Barbados. He does not know Spanish, so information on stations in that language is incomplete....

- 90.7 Caribbean Broadcasting Co. (CBC) - Barbados (English)
- 92.9 Barbados (E)
- 95.3 Barbados (E)
- 96.1 ?? (Spanish)
- 96.3 ?? (S)
- 97.1 Trinidad? (E) (station is on 97.9 in Tobago)
- 98.1 Barbados (E)
- 98.9 Port of Spain, Trinidad (E)
- 100.1 "100 FM" Trinidad & Tobago? (E)
- 102.1 Gospel (E), strong but not local
- 103.1 "103 FM", (E) no idea where
- 104.1 Barbados (E) "Yes FM"
- 105.1 Port of Spain, Trinidad, (E)
- 106.1 ???, CBC (E)

• Mike Cooper sends word about 100.7 Christiansburg, VA changing to talk (see Virginia above) and about a recent change at WRTO in Goulds, Fla. (98.3). The station recently interrupted its program (*Miami Herald*, 2/15/00), with 48 hours of just a laugh track! When this was over, the station announced that it would run exclusively salsa music. Program Director Pio Ferro said "... our research shows that the most popular type of music is salsa". Ferro is no stranger to laugh-tracks: he was PD at KSCA 101.9 Glendale-Los Angeles when it switched from alternative rock to Spanish. They also used a laugh track, which was widely criticized by listeners of KSCA. This time in Miami, however, there were no known complaints!

**W.T.F.D.A. - THE CLUB FOR FM & TV DX'ERS!!!**



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

<http://personal.bellsouth.net/~w9wi>

## Applications for new stations

These are applications for new DTV stations, showing their analog and digital channels:

<b>AK</b> Ketchikan KUBD 4->13	<b>NE</b> Roanoke Rap. WUNP 36->39
<b>DE</b> Seaford WDPB 64->44	<b>NE</b> Albion KLKE 24->23
<b>FL</b> Fort Myers WGCU 30->31	Hastings KHAS 5->21
Ft. Walton Bch WPAN 53->40	<b>NM</b> Albuquerque KNME 5->25
WAWD 58->49	<b>NV</b> Las Vegas KLAS 8->7
Panama C Bch WPCT 46->47	Reno KNPB 5->15
Tallahassee WFSU 11->32	<b>NY</b> Binghamton WSKG 46->42
W. Palm Bch WXEL 42->27	Syracuse WCNV 24->25
<b>GA</b> Atlanta WATA 57->41	Bowling Green WBGU 57->56
Columbus WLTV 38->35	Columbus WOSU 34->38
<b>HI</b> Hilo KHBC 2->22	Dayton WPTD 16->58
Honolulu KGMB 9->8	Portsmouth WPBO 42->43
KHNL 13->35	Toledo WGTE 30->29
Wailuku KAIT 7->36	<b>OK</b> Tulsa KOTV 6->55
KWHM 21->20	<b>PA</b> Bethlehem WBPB 60->59
<b>IA</b> Red Oak KHIN 36->35	Erie WQLN 54->50
Waterloo KRIN 32->35	WJET 24->58
<b>IL</b> Jacksonville WSEC 14->15	Pittsburgh WQEX 16->26
<b>IN</b> South Bend WNIH 34->35	Wilkes-Barre WBRE 28->11
<b>KY</b> Pikeville WKPI 22->24	<b>PR</b> Humacao WWSN 68->49
Somerset WKSO 29->14	Ponce WQTO 26->25
<b>LA</b> Columbia KAQY 11->57	<b>TN</b> Knoxville WATE 6->26
L. Charles KPLC 7->8	Nashville WNPT 8->46
KLTL 18->20	<b>TX</b> Conroe KTBU 55->42
<b>MD</b> Salisbury WBOC 16->21	El Paso KCOS 13->30
<b>ME</b> Presque Isle WMEM 10->20	Katy KNWS 51->52
<b>MI</b> Alpena WCML 6->57	Port Arthur KBTU 4->40
Cadillac WCMW 27->58	Staunton WVPT 51->11
Manistee WCMW 21->17	<b>WI</b> Milwaukee WITI 6->33
Mt. Pleasant WCMU 14->56	<b>WV</b> Grandview WSWP 9->53
<b>MN</b> St. Paul KTCA 2->34	Huntington WPBY 33->34
<b>MS</b> Miss. State WMAB 2->38	Morgantown WNPB 24->33
<b>NC</b> Chapel Hill WUNC-DT 4->59	
Lumberton WUNU 31->25	

In Canada, an application has been filed for an 8-channel wireless-cable system at Fort St. James, BC, 5.45km NE of the existing facility at 54-25-06N/124-17-49W. All eight channels will operate at 20 watts. Knowledge Network will be carried on channel 46; Discovery on 50; CBC North on 52; TSN on 54; CKVU [10] on 60; CHAN [8] on 62; KIRO [7] on 66; and KING [5] on 68. If the coverage of the new facility proves adequate, the existing system on channels 3/4/5/6/9/10/11/13 will be deleted.

## Construction permits granted for new stations

St	Ch	ERP	Call/HAAT	City/applicant	Latitude	Longitude
BC	8n	0.01	CHCW-TV-3?	Clearwater; Knowledge Net	51-36-55	120-02-23
BC	12n	0.01	CKVC-TV?	Vavenby; Knowledge Net	51-34-37	119-47-28
FL	24z	5000	206	Tallahassee; Ch. 24 Corp.	30-21-29	84-36-39
ID	5-	3.98	256	Sun Valley; Turner Ent.	43-39-59	114-16-37
MI	19z	5000	197	Marquette; Winstar Bcstg.	46-30-52	87-28-37
MT	24z	3020	587	Butte; Winstar Bcstg.	46-00-27	122-26-30
MT	26z	5000	175	Great Falls; Winstar Bc.	47-32-23	111-17-06
MT	17-	1860	515	Missoula; Winstar Bcstg.	46-48-30	113-58-38

<b>NM</b>	21-	5000	151	Roswell; NM-Roswell 21 LLC	33-21-47	104-38-11
<b>NM</b>	6z	1.7	477	Silver City; KOB [4]	32-51-49	108-14-27
<b>SC</b>	33-	62	W33CA	Johnston; Dove Bcstg.	33-41-10	81-55-43
<b>SD</b>	21	1500	134	Rapid City; Rapid Bcstg.	44-01-19	103-15-33
<b>UT</b>	3+	88.7	654	Price; Channel 3 LLC	39-45-22	110-59-22

New-station applications dismissed:

<b>FL</b> Tallahassee ch. 24 - 6 apps	<b>NM</b> Roswell ch. 21 - 3 apps
<b>ID</b> Sun Valley ch. 5 - 6 apps	Silver City ch. 6 - 3 apps
<b>MI</b> Marquette ch. 19 - 4 apps	<b>SD</b> Rapid City ch. 21 - 5 apps
<b>MT</b> Butte ch. 24 - 2 apps	<b>UT</b> Price ch. 3 - 3 apps
Great Falls ch. 26 - 2 apps	
Missoula ch. 17 - 3 apps	

These full-power grants are the first to win channels in spectrum auctions. It's still possible for these grants to be rescinded if the winners can't pay their bids, but I think that's unlikely to happen. The call signs of the Canadian stations are assumed - they appeared in a notice of change of ownership, but don't appear in the Industry Canada database.

New DTVs granted:

<b>AL</b> Huntsville WAFF 48->49	<b>MT</b> Missoula KECI 13->40
<b>CA</b> Arcata KAEF 23->22	<b>NE</b> Scottsbluff KSTF 10->29
Ontario KHSC 46->47	<b>NM</b> Albuquerque KRQE 13->16
<b>CO</b> Grandwood Sp. KREG 3->23	Carlsbad KOCT 6->19
Grand Jctn. KREX 5->2	Roswell KOBR 8->38
<b>FL</b> Key West WEYS 22->3	<b>NV</b> Winnemucca KWNV 7->12
<b>GA</b> Macon WMTG 41->40	<b>OH</b> Toledo WTVG 13->19
<b>HI</b> Wailuku KGMV 3->24	<b>SC</b> Charleston WCSC 5->52
<b>IN</b> Terre Haute WTWO 2->36	<b>TN</b> Jackson WMTU 16->39
<b>KY</b> Louisville WAVE 3->47	<b>TX</b> Amarillo KVII 7->23
<b>LA</b> Lafayette KATC 3->28	Corpus Christi KZTV 10->18
<b>MI</b> Jackson WHTV 18->34	El Paso KDBC 4->18
Mt. Clemens WADL 38->39	Harlingen KGBT 4->31
<b>MN</b> Mankato KEYC 12->38	KMBH 60->38
Minneapolis KVMB 45->44	Lufkin KTRE 9->43
<b>MO</b> Joplin KSNF 16->46	San Angelo KIDY 6->19
<b>MS</b> Columbus WCBT 4->35	Wichita Falls KFDX 3->28
Meridian WTOK 11->49	<b>VA</b> Bristol WCYB 5->28
<b>MT</b> Billings KULR 8->11	<b>WV</b> Clarksburg WBOY 12->52
Butte KTVM 6->2	<b>WY</b> Casper KGWC 14->15
KXLF 4->15	Jackson KJWY 2->14

## Applications to change existing stations

St	Ch	ERP	HAAT	City	Call	Latitude	Longitude
OK	14-		358	Oklahoma City	KTBO-TV	35-34-35	97-29-09
PR	18z		275	San Juan	WTCV	18-16-30	66-05-36

## Changes granted to existing stations

St	Ch	ERP	HAAT	City	Call	Latitude	Longitude
AL	34-	700	240	Ozark	WDFX-TV		
WI	34z	2250	247	Eagle River	WYOW		

WOHS-TV [61, Cleveland OH]'s application to increase power to 5000KW has been dismissed. So has KCQPQ [13, Tacoma WA]'s to move to West Tiger Mountain near Issaquah, increasing tower height & decreasing power.

## Changes granted to construction permits

St	Ch	ERP	HAAT	City	Call	Latitude	Longitude
AL	67z	2822	325	Troy	WRJM-TV	32-03-37	85-57-02
OR	46^	1000		Portland	KGW-DT	45-31-21	122-44-45



### LPTV Displacements Granted

<b>AL</b>	Birmingham	W46CY 51 =>46
<b>AZ</b>	Chinle	K32FK 61=>32
	Flagstaff	K54GI 60=>54
	Kingman	K41FT 66=>41
	Mesa	K57HX 17 => 57
	Parks	K47GM 64=>47
	Phoenix	K53GF 67=>53
	Tucson	K54FW 56=>54
		K50FV 23=>50
<b>CA</b>	Modesto	K49EO 57 =>49
	Redding	K47GK 4 => 47
	Santa Rosa	KDTV-LP 25=>28
<b>CO</b>	Fleming	K56GL 27=>56
	Sterling	K58GH 29=>58
	Towaoc	K29EK 64=>29
<b>CT</b>	Hartford	W38CP 32 => 38
<b>DE</b>	Dagsboro	WBLP-LP 22 =>14
	Talleyville	W53BZ 55=>53
<b>FL</b>	Fort Myers	WDPX-LP 57=>18
<b>FL</b>	St. Petersburg	W36CO 60=>36
<b>IL</b>	Champaign	W07DD 21=>7
<b>IN</b>	Evansville	W23BV 36 =>23
<b>MD</b>	Towson	WMJF-LP 61=>16
<b>MN</b>	Granite Falls	K53GE 65 =>53
		K55IP 69 =>55
	Redwood Falls	K54GH 34=>54
	Willmar	K36FL 62 => 36
		K52GK 66 => 52
<b>MS</b>	Natchez	W24CR 20=>24

### LPTV Displacements On Air

<b>CA</b>	Modesto	K49EO	57=>49
<b>MI</b>	Detroit	WDWO-LP	44=>18
	Grand Rapids	W48CL	61=>48
<b>MN</b>	Minneapolis	K67HG	35=>67
<b>MS</b>	Meridian	W47CG	63=>47
	Pascagoula	W51CU	46=>51

### LPTV Displacements Dismissed/Denied/etc.

<b>AL</b>	Birmingham	W28BR	28=>27
<b>AZ</b>	Bullhead City	K65FI	65=>45
	Jaynes	K34DD	34=>38
<b>CA</b>	Crescent City	K39EO	39=>46
	Hanford	KHMM-LP	16=>57
	San Martin	K52BY	52=>38
	Santa Rosa	K30DO	30=>28
	Stockton	K52CK	52=>41
<b>FL</b>	Fort Myers	WLZE-LP	65=>18
	Kissimmee	WTMO-LP	40=>15
	Lakeland	WLWA-LP	14=>46
	Melbourne	WMVJ-LP	22=>54
	Orlando	W22CE	22=>16
		W22CE	22=>21
		W22CE	22=>46
	Panama City	W50BP	50=>32
	Sarasota	W24AT	24=>48
	Tampa	WRMD-LP	57=>36
		WVEA-LP	61=>36
<b>GA</b>	Dalton	WDGA-LP	66=>49
<b>KY</b>	Lexington	W62CL	62=>23
<b>LA</b>	Baton Rouge	K65FP	65=>38
	Shreveport	K57FQ	57=>40
<b>MO</b>	Branton	KBNS-LP	31=>63
	Kansas City	K26CR	26=>55
<b>NC</b>	Asheville	WJIV-LP	25=>43
	Brevard	W59AR	59=>68
	Rocky Mount	WHIG-LP	57=>45

<b>NC</b>	Durham	W24CP 56 =>24
	Goldsboro	W63CW 59=>63
	Raleigh	W68BK 68 =>24
<b>NE</b>	Omaha	K24FC 18=>24
<b>NH</b>	Littleton	W29CM 16=>29
<b>NV</b>	Goldfield	K44FS 7=>44
<b>NY</b>	New York	WKOB-LP 53=>48
<b>OH</b>	Youngstown	WYFX-LP62=>36
<b>OR</b>	Grants Pass	K50FW 38=>50
<b>OR</b>	Milton	K29EG 69 =>29
		K40FM 67 =>40
<b>PA</b>	Philadelphia	WXTV-LP 35 =>28
	Reading	W24CS 59=>24
<b>SC</b>	Myrtle Beach	W34CQ 66=>34
<b>TN</b>	Collegedale	W21BZ 30=>21
<b>TX</b>	Austin	K34FM 26=>34
	Corpus Christi	K32FL 47=>32
	New Braunfels	K18FS 27=>18
	San Angelo	KTXE-LP 55=>38
<b>TX</b>	San Antonio	K52EA 52 => 50
		K14KI 57=>14
<b>UT</b>	Manti	K25GS 24=>25
		K33FT 34=>33
<b>WA</b>	Clarkston	K42EW 66=>42
<b>WI</b>	Madison	W38CT 33 =>38
		W23BW 54=>23
	Milwaukee	WMKE-LP 8 => 7

<b>NE</b>	Culbertson	K44FN	12=>44
<b>NM</b>	Corrizzo	K22FN	62=>22
<b>NV</b>	Walker Lake	K14JY	61=>14
<b>OR</b>	Salem	K27ER	41=>27
<b>SC</b>	Beaufort	W19CH	40=>19

	Weaverville	W23BQ	23=>66
	Lincoln	K31DU	31=>53
	Omaha	K67FM	67=>24
<b>NJ</b>	Cherry Hill	K61GA	61=>24
		W24CN	24=>68
	Cranford	WLBX-LP	22=>48
<b>NY</b>	Nyack	WRNN-LP	57=>35
	Troy	WNGN-LP	26=>51
<b>OH</b>	Akron	W11CB	11=>58
	Cleveland	W65DL	65=>57
	Columbus	W58CQ	58=>23
<b>OH</b>	Dayton	WUCT-LP	51=>59
	Toledo	W09CG	9=>60
		W68CD	68=>22
<b>OK</b>	Bartlesville	K66EK	66=>52
	Lawton	K15DJ	15=>38
	Sulphur	KOKT-LP	20=>36
	Tulsa	K69GO	69=>20
<b>OR</b>	Newberg	K66EJ	66=>51
<b>PA</b>	Altoona	W32AX	32=>39
	Kittanning	W25AX	25=>44
	Pittsburgh	WBPA-LP	29=>67
	Washington	W20AN	20=>58
<b>PR</b>	Isabel Seg.	W28BA	28=>19
	Mayaguez	WTPM-LP	67=>18
	Quebradillas	W27BT	27=>48
		W66BM	66=>46
<b>SC</b>	Columbia	W43BS	43=>21

<b>TN</b>	Knoxville	W51BR	51=>39
	Memphis	W04CY	4=>45
	Austin	W57CG	57=>32
<b>TX</b>	Clear Lake	KGBS-LP	65=>34
		K69FW	69=>59
		KJIB-LP	5=>34
	Floresville	K45DX	45=>14
	Fort Worth	KUVN-LP	31=>47
	Giddings	KHPG-LP	21=>34
	Lufkin	KLUF-LP	5=>27
	McAllen	K69HZ	69=>25

	San Antonio	K48DS	48=>46
		KOBS-LP	63=>14
		KOBS-LP	63=>43
	Tyler	KTPN-LP	48=>31
<b>UT</b>	Park City	K25DL	25=>36
	Salt Lake City	K38CN	38=>69
<b>VA</b>	Virginia Beach	W67CZ	67=>52
<b>VT</b>	Rutland	W61CE	61=>35
<b>WA</b>	Pasco	KBWU-LP	66=>40
<b>WV</b>	Huntington	W19BK	19=>36

### Technical changes on the air

St	Ch	Call	City	What happened
CA	63+	KADY-TV	Oxnard	increase power 1780=>5000KW & tower height 549=>551m.
FL	22z	WCLF	Clearwater	decrease tower height 433=>409m, move about 70km southeast.
MN	21+	KQDS-TV	Duluth	increase power 44.7=>550KW, tower height 180=>284m, correct coordinates
NC	61z	WLXI-TV	Greensboro	increase power 501=>1050KW.
PA	56z	WOLF-TV	Hazleton	increase power 1000=>1580KW, tower height 329=>503m, move about 30km northeast.
PA	8+	WGAL	Lancaster	decrease power 112=>110KW and increase tower height 415=>419m.
PA	53-	WILF	Williamsport	increase power 12.3=>1320KW & tower height 222=>244m.
RI	69-	WPXQ	Block Island	increase power 17.8=>3470KW, tower height 38=>205m, move about 40km northwest.
TN	54-	WPXK	Jellico	increase power 21.9=>4900KW, tower height 395=>618m, move about 25km south-southwest
TX	11-	KTVT	Ft. Worth	increase tower height 509=>518m.
WA	33+	KWPX	Bellevue	increase power 14.8=>3720KW, tower height 286=>717m, move about 40km east-southeast.
WI	25z	WLAX	La Crosse	increase power 562=>2000KW, decrease tower height 306=>299m.

### New stations on the air or requesting operating license

St	Ch	ERP	HAAT	Call	City	Latitude	Longitude
ID	33n	2		K33DT	Boise	43-44-23	116-08-14
KS	33z	41.7	96	KWCV	Wichita	37-41-13	97-20-24
NC	67-	14.1		W67DU	Lumberton	34-40-27	79-02-29
PR	52z	275	585	WZDE	Carolina	18-16-44	65-51-12
VZ	27z	26.9	121	WCVI-TV	Christiansted	17-44-53	64-43-40

### New DTVs on the air:

<b>CA</b>	San Diego	KFMB-DT	55	<b>OR</b>	Portland	KGW-DT	46
<b>DC</b>	Washington	WRC-DT	48	<b>TX</b>	Houston	KTRK-DT	32
<b>GA</b>	Atlanta	WAGA-DT	27	<b>WA</b>	Seattle	KOMO-DT	38
<b>MA</b>	Springfield	WGBY-DT	58		Vancouver	KPDJ-DT	48
<b>NC</b>	Charlotte	WSOC-DT	34	<b>WI</b>	Milwaukee	WMVS-DT	8
<b>NH</b>	Manchester	WMUR-DT	59				

### Call changes

CA Arroyo Gde.; K08MD=>KAGP-LP  
CA Santa Maria; K62EZ=>KWSM-LP

CO Steamboat Sprs.; KSBS=>KMAS-TV (24)  
FL W. Palm Beach; W57CX=>WBWP-LP

MA Marlborough; WSHH=>WHUB [66]  
 MI Ishpeming; new=>WBUP (10)  
 NC Boone; W24CI=>WLNN-LP  
 NM Carlsbad; KUPC=>KTEL-TV (25)  
 OH Youngstown; W62BT=>WYFX-LP

OR Reedville; KENY-LP=>KWBP-LP (4)  
 PR San Juan; WRWR-TV=>WSJU-TV (30)  
 SC N. Charleston; WFAY-LP=>WTBD-LP (22)  
 WA Richland; K49CN=>KRLB-LP  
 WA Walla Walla; K47EV=>KWWO-LP

# PHOTO-NEWS

Jeff Kruszka, Editor  
 5024 S. Braxton Ave.  
 Baton Rouge, LA 70817  
 JTKruszka@worldnet.att.net

May 2000

## Programming changes

Call	Location	Programming
CH3034 [3]; CH3037 [6]; CH3038 [9]; & CH3039 [10]	Fort St. James, BC	from WJBK [2], WGN [9], WDIV [4], and MuchMusic to KIRO [7], Discovery, KING [5], and independent community bulletin board.
WPPB-TV [63]	Boca Raton, FL	sold to Broward Co. School Board.
WBSG [21]	Brunswick, GA	from ABC to Pax.
K33DT	Boise, ID	new, HSN.
WHUB [66]	Marlborough, MA	to switch from home shopping to independent with call change.
K36DI	Santa Rosa, NM	sold to KOB [4], NBC.
K32DZ	Enid, OK	on, with auctions and America 1.
W46BL	Allentown, PA	sold from WPSG [57] to WFMZ [69].
K55CH; K57BG; K59AG; K60BI; K64BE; and K66BP	Enterprise; Sta. Clara; Bloomington; Rockvl; Virgin; & Toquerville, UT	all sold to KBYU [11], PBS.
K44FA	Evanston, WY	sold to KUED [7], PBS.

## Forum & Other Stuff

Thanks to Fernando Garcia, Fred McCormack, Keith Smith, Jeff Kruszka, Glenn Hauser, Bill Frahm, John Ebeling, Jim Ayers, Dennis Smith, and Bob Stephens for material appearing elsewhere in this column.

Unfortunately, Fernando Garcia has acquired some more all-night semi-locals. XHVTV [54] Matamoros & Reynosa, and XHNAT [45] Nuevo Laredo had been going off the air overnight, but are now relaying XHSAW [64] Monterrey. XHSAW itself had been airing a test pattern for 2-3 hours overnight, but is now filling the time with music videos.

A new station has appeared on channel 14 from the direction of Reynosa carrying Azteca 7. This is not the same station as XHOR [14] Matamoros - the new station was 3 seconds delayed from XHOR. And, the new station continued to carry national Azteca programming from Mexico City while XHOR ran regional "TV Azteca Noreste" material.

Fernando Garcia is noting two new TV Nuevo Leon transmitters, on channels 27 and 28 with test patterns overnight. One had also operated for awhile on channel 29 but has since disappeared. Also noted new are stations to his southeast - channel 4 with Azteca 13 and channel 8 with Azteca 7.

North of the border, during a Gulf Tropo opening, Fernando has noted an unID-60 with ACN shopping parallel WPAN [53]. Our best guess is WRBM-LP Prichard, Alabama. Also noted new is a channel 23 with Shop-At-Home on a Baton Rouge heading; Fernando suspects WSTY-LP Hammond, LA. (Last noted with All News Channel)

New KBEJ [2] has not yet made it on the air, due to weather delays in completing the tower. (When's the last time a new station - with the possible exception of KFPX [39] - has completed its tower on schedule?!) Bob Stephens says he's been told the transmitter has been successfully tested into a dummy load though.

Jeff is seeing a TBN on channel 35 from the east during tropo openings; he believes W35BM Biloxi, formerly W29BH, is operating on its new channel. He's also noting W51CU Pascagoula listed on the TBN website; this is a LPTV displacement from channel 46.

Real live tropo this week... KOLR [10] made it through, about 320 miles for the first signal more than 300 miles away seen this year. Here's hoping it's the start of a great season!

We're back this month with more photos from Danny Oglethorpe, Shreveport, LA. Thanks, Danny!

Equipment: VHF: Winegard CA-5254, Antennacraft Y10-2-6 low band yagi at 11 ft.  
 UHF: Antennacraft P-5 dish w/ Winegard AP-4700 preamp



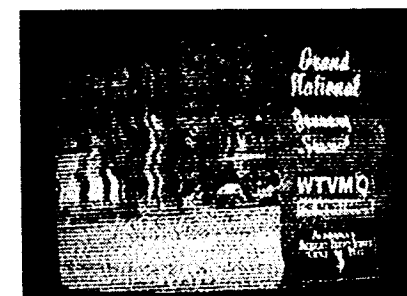
XHSMZ-4 Sombrette, ZAC  
 853 mi Es seen 7/26/99  
 @1159 CT



KSAT-12 San Antonio, TX  
 347 mi Tr seen 8/99  
 "local off"



WNPX-28 Cookeville, TN  
 538 mi Tr seen 8/4/99  
 @0915 CT



WTVM-9 Columbus, GA  
 512 mi Tr seen 1/12/00  
 @0945 CT

# Trap that Pest!

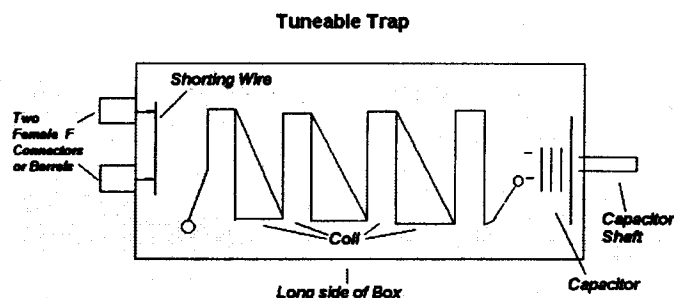
Steve Harrison Ko0U, Shrewsbury, MA

Can you easily make a tuneable trap for FM or TV? Yes, that's quite possible and doesn't require anything special other than some sort of tuning capacitor, a length of solid copper house wire or small copper tubing (can't use aluminum as you can't solder it easily enough without really-nasty acidic paste) to wind into a coil, some sort of small box for the trap, and a connector on the box to connect it to the antenna cable. Here's how I've done it. Note that the instructions on how to tune the trap at the end can also be used to tune the coaxial trap I described before.

You need a small tuning capacitor of roughly 5 to 50 picofarads (pF). That's not at all critical, but it should have a capacitance range of no less than several picofarads and no more than 50. A cap with 5-20 pF range will work. One that's 1.5-10 pF will also work but it may take you some time to find the required length of wire-coil to make it resonate. I haven't looked lately, but perhaps Radio Shack will have something. If you go to Radio Shack, also get these parts:

1. An aluminum "Project Box", about 2" x 3" x 3" or so. Can be larger, shouldn't be much smaller.
2. Two female F chassis-mount F connectors. If they don't have those (they'll have tabs on the other side to solder parts to), then a pair of F female barrels will work; you will have to stick a piece of wire inside to make connection but no big deal.
3. The capacitor. You MUST be able to tune the capacitor from the outside of the box. One side of this capacitor is going to be grounded to the box, so if you find a tuning capacitor like those in older FM tuners with a shaft that can be mounted to the box, that's fine. Otherwise, if they only have trimmer capacitors that need adjustment tools, you will have to install a solder lug inside the box opposite the end with the two connectors, then solder one lug of the capacitor to the solder lug to ground one side of the capacitor.
4. A package of F connectors, and maybe the crimp tool if you don't already have both.

What you are going to do is build the trap inside the box. You will cut your antenna cable about 6 inches from the tuner (can be further away but you should keep it as short as possible) and then install new F connectors on the cut ends. These will plug into the two F female connectors on your trap box. You will wire the center conductors of the two connectors together INSIDE the box which will cause the two cables to make contact again. SO: Begin by installing your two F female connectors on one small side of the box. You will then wind a coil of wire from the house wire and that will connect the two connectors to the capacitor which is at the far end of the box see below:



The two female F conns are sticking out the left side of the box. Inside the box, there's a shorting wire between the center pins of the two connectors which connects them together again. Then there is this coil of wire (which I'll describe shortly) soldered to the shorting wire; the coil of wire extends through the box toward the right side where the tuning capacitor is mounted. Remember: if you must use a trimmer capacitor, you have to install a grounding lug on the right side of the box, then solder one of the capacitor lugs to the solder lug so that one side of the trimmer capacitor is grounded to the box. Then the coil of wire connects to the free end of the capacitor, whether it's a trimmer or one with a shaft on it. If it's a trimmer capacitor, you need to mount it so that you can drill a hole through the box through which you will have to insert a tuning tool so you can tune the capacitor when the box is put back together again.

20

**The Coil:** the coil diameter should be about half the size of the box side's shortest dimension. That is, if, when you look at the end of the box and it's 2" by 3", then make your coil diameter about 1-1/2" (roughly 35 to 40 mm diameter). The wire itself should be no smaller than 16 gauge solid copper house wire, although this isn't critical. It can be 10 gauge if that's all you have, but it will be harder to work with. If it's too small, it will be flimsy and can detune if you drop the box on the table. 12 or 14 gauge is ideal.

**NOW:** find something to use as a coil form, like a pill bottle or a large socket wrench... something just a bit smaller in diameter than the desired coil diameter. Then start winding a coil around the form. Wind about 10 turns or so. When you take it off the coil former, the wire will spring out in diameter a bit; that's OK and not critical.

Now, make straight ends on each end of your 10-turn coil, about 1 inch to 1/2 inch long (roughly 2cm to 1cm). One end will be soldered to the shorting wire between the two connectors, the other end will be soldered to your tuning capacitor. Install the coil.

**TESTING AND TUNING:** For now, you can leave the box top off until you find out that everything works. The easiest way for you to test the tuning range of your new trap is to connect it between your outside antenna and your TV set. Set your TV set to some convenient channel such as 4, 5 or 6. Then tune the capacitor. You should find at least one, and hopefully two, tuning spots on the capacitor where the picture or sound will drop way down. Let's assume you find TWO such tuning spots, and your capacitor has plates in it that mesh so you can see the capacitor at work. As the plates mesh, the capacitance INCREASES, and the trap is tuned to a LOWER frequency. So, if you have the TV on channel 5 let's say, and you tune the capacitor for a weak picture or sound, look at the capacitor plates. Now, set the TV for the next higher channel, and tune the capacitor slowly so the plates become further UNMESHED; you should find a tuning spot where the higher channel drops out. Notice that you can tune the capacitor in two places where the plates are unmeshed the same amount and where the trap kills the picture, either of these two spots is good, there's no difference between them. Try channel 6 now, which is just below the FM band. Let's say that the capacitor does not tune the trap high enough in frequency; it will only kill, let's say, up to channel 4. What you need to do is to reduce the size of the coil. Start off by taking off one turn at a time and try retuning again.

**BE CAREFUL:** if you make the coil TOO small, then your trap could resonate up ABOVE the FM band, and BELOW TV channel 7, and you would not be able to tell unless you have some sort of broadband receiver that covers 108 to 172 MHz. Even then, you wouldn't be able to tell unless you have somebody transmitting, so you can trap them out.

When you have the trap working well, then you should find that it will kill the picture of one channel, and the picture of the adjacent two channels should hardly be affected if any at all. If the trap is really-well built and very narrow, you will even be able to trap out the picture of a channel and still hear its audio, which is 4.5 MHz higher in frequency. Unfortunately, however, the audio of the next LOWER channel is just 1.5 MHz LOWER in frequency than the picture of the next-higher channel and this trap probably will not be narrow enough to avoid trapping out that lower-channel audio. But you may be able to tune the trap so it reduces the picture or audio of one channel enough and not the audio or picture of another channel.

Translated to the FM broadcast band, all the above means that while this trap will kill several MHz wherever it is tuned, it should be narrow enough not to affect the rest of the band. For 88.3 MHz, you may be able to offset-tune the trap slightly below the band (the capacitor plates are meshed more) which will reduce its attenuation in the higher part of the band.

If you want to play around, you can try increasing or reducing the number of turns or even the diameter of the coil while retuning the capacitor. It turns out that the smaller the capacitor is (in capacitance, not necessarily physical size) and the larger the coil is (in inductance and, to a limited extent, physical size until the coil wire comes close to the sides of the box), then the sharper the trap will be. You can try fine-tuning the trap by stretching or compressing the turns of the coil while retuning the capacitor. The absolute sharpest trap will be obtained when there is NO capacitor at all inside the box, just the coil itself. Unfortunately, however, this could turn out to be TOO sharp and you will have trouble tuning the coil exactly where you want it, or it will be unstable and change tuning when the box is moved around.

The last step is to put the box cover on, bolt it together, then fine-tune the capacitor again.

Reprinted with permission from a WTFDA List post by Ko0U Steve Harrison  
A blank email sent to [WTFDA-subscribe@topica.com](mailto:WTFDA-subscribe@topica.com) gets you there!

# Eastern TV-DX

May 2000

Matthew C. Sittel  
15013 Eureux Circle  
Bellevue, NE 68123  
76255.2171@Compuserve.com  
Deadline: last day of month

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. Caribbean and foreign reporters also welcome!

Another short column this month, but hopefully the recent Aurora noted here in Nebraska was seen by others, and will be reported. Don't forget to check often for E-skip! Let's hope for a great year, as I think we all could use a little more DX!

Roy Barstow, P.O. Box 2488, East Falmouth, MA 02536

Equipment: B/T, L/B, antenna end fired on shed, cut ch. 5-6 10-element antenna, cut ch. 2-3 10-element antenna on doghouse, B/T L/B ant. on tripod. Last 3 antennas in garden 4-7' high for M.S. work. (Roy, does B/T mean Blonder/Tongue? L/B is Lo-Band? -mcs)

<u>1/6/2000 MS</u>			
0435	CFCL2-2	ON Kearns	628
0455	WGBH-2	MA Boston	59
(3/4 CB: WGBH/X TV BOSTON)			
<u>1/7 MS</u>			
0234	WJBK-2	MI Detroit	649
<u>1/16 MS</u>			
0114	WBAY-2	WI Green Bay	898
<u>1/24 MS</u>			
0459	WUND-2	NC Columbia	500
0459	WCBD-2	SC Charleston	777
(above two logged in same burst)			
<u>2/1 MS</u>			
0610	WYFF-4	SC Greenville	787
0610	WSB-2	GA Atlanta	923
(above two logged in same burst)			
2323	WKRN-2	TN Nashville	951
<u>2/2 MS</u>			
0550	WRC-4	DC Washington	387
0657	WTAE-4	PA Pittsburgh	488
1815	WTWO-2	IN Terre Haute	895
<u>2/4 MS</u>			
2330	WDTN-2	OH Dayton	726
<u>2/7 MS</u>			
0137	WUNC-4	NC Chapel Hill	607
0505	WTMJ-4	WI Milwaukee	635
<u>2/8 MS</u>			
0245	CFCL2-2	ON Kearns	628
0620	WAGA-5	GA Atlanta	921
<u>2/9 MS</u>			
0315	WUND-2	NC Columbia	500
0547	WSJK-2	TN Sneedville	763
(their logo is a 2 over a 15)			
<u>2/14 MS</u>			
0540	WFMY-2	NC Greensboro	635
0547	WSJK-2	TN Sneedville	763
<u>2/18 MS</u>			
0528	WSB-2	GA Atlanta	923

0620	WESH-2	FL Daytona Beach	1059
<u>2/19 MS</u>			
0402	CFAP-2	PQ Quebec	361
(TQS in upper left with schedule)			
0518	CIII2-2	ON Bancroft	408
(3/4 CB with 'Global')			
<u>3/1 MS</u>			
0250	CKCW-2	NB Moncton	412
(3/4 CB w/ATV backscatter)			
0445	unID-2	ON CKCO2 or CHBX	
(3/4 CB, CTV in lower right)			
<u>3/6 MS</u>			
0240	CFAP-2	PQ Quebec	361
0330	CIII2-2	ON Bancroft	408
<u>3/7 TR</u>			
1920	WLG-LP-54	NY Mineola	130
1930	W45??-45	VA WAVY-10 xltr.	460
1955	WJHJ-LP-19	VA Williamsburg	465
2000	WEWE-LP-24	DE Sussex County	300
(also on card WBLP-14 and WLWP-4)			
2000 to 2130 many Eastern VA LPs			
<u>3/11 MS</u>			
0544	WGRZ-2	NY Buffalo	417
(large logo/calls)			
<u>3/13 MS</u>			
2302	WSB-2	GA Atlanta	923
2305	WDTN-2	OH Dayton	726
<u>3/14 MS</u>			
0510	CFAP-2	PQ Quebec	361
0637	WSJK-2	TN Sneedville	763
0637	WMAR-2	MD Baltimore	354
(above two mixing, same burst)			
<u>3/15 TR</u>			
0130 Eastern VA stations			
0130	WYDO-14	NC Greenville	562
0130	WNCN-17	NC Goldsboro	592
0130	WUNM-19	NC Jacksonville	577
0130	WRAY-30	NC Wilson	585
0330	WLFL-22	NC Raleigh	600

....continued on page 25

# WESTERN TV-DX

May 2000

Victor Frank  
12450 Skyline Blvd.  
Woodside, CA 94062-4554  
e-mail frank@horizon.sri.com  
(650)851-7031

John Ebeling, 9209 Vincent Ave S, Bloomington, MN

It is again time for my annual Barbados report. It seems to be TES mode again, and is like aurora but always a mess with no real possibility of ID. Besides, I don't speak Spanish. Reception, as always, from the south coast of Barbados near Oistins. Times are Barbados (1 Hr ahead of EST).

1/29/00	22:45	Ch 2-4	Spanish audio	Fading out @ 23:55
1/30/00	00:05	Nothing-		
1/31/00	16:35	Nothing	17:35 -00:30	Ch 2&4
2/1/00	21:00	Ch 2&4,	fading by	22:30
2/2/00	18:15	Nil	22:00	Ch 2&4
2/3/00	20:38	Weak 2,	better 4	until 22:55 fade out
2/4/00	22:45	Ch 2-4,	gone at	00:10
2/5/00	Nothing	@ 15:50	or 23:12	
2/6/00	19:10	nil,	19:17	Ch 4 active, 2 nil.
22:55 Ch 2&4				
23:00 FM active to 107.7 & still active @ 23:40				
2/7/00	20:00 & 23:30	Nil		
2/8/00	22:00 & 23:20	Nil		
2/9/00	19:00	Nil	@23:10	Ch2&4 weak
2/10/00	18:00	Nil	@ 20:40	Ch 2 & 4 weak:
FM to 101.7 Faded out @ 22:30				
2/11/00	Left the Island. End of report.			

This year seemed to be down as far as skip is concerned. It was not as intense as I recall from previous years. Same old Samsung set with rabbit ears used for DX.

Dennis Park Smith, 3703 Dixon Street, Santa Barbara, CA 93105-2419 (805)687-7803

This report is for March 2000. This month continued the steadily unsettled weather from Feb 16 to Mar 8, with no tropo Feb 16 to Mar 10. Even then, the fair-weather stable-air tropo which followed from Mar 10 on was not up to summer levels.

Southern CA coastal tr, Santa Barbara to San Diego/Tijuana TV/FM 200 mi/315 km  
Mar 1-10am: None (Rainy Mar 1-8, continuing from Feb 16 & 20-29)

Mar 12 eve:	Poor
Mar 13 am:	Very poor
Mar 13 nite:	Fair (including slight ch-3 CCI)
Mar 14 am:	Poor
Mar 14 nite:	Fair
Mar 15-19:	Variably poor/very poor (Then, windy

Mar 19-20	nights)
Mar 20-21:	None
Mar 22-27:	Steadily very poor
Mar 28-29:	None
Mar 30-:	Very poor
Mar 31:	Fair/poor (am ch-49 CCI), deteriorating to none eve:

Best of DX to all. Dennis

Fernando Garcia, San Salvador 415, Rincon de la Sierra Cd Guadalupe, NL, 67181 MEXICO  
ac001984@acnet.net,  
FTD is furthest tropo of the day.  
TSLD Total of stations logged of the day.

Equipment: Sony KV-27EXR15, Screened CM 7'dish 85', RG11, UA900 amp. Sony KV-13TR27, CM 1110 30', CM 8 bay UHF array 60', 1800' ASL,  
No re-logs in the same month, only tropo 500+ miles.

## March 1

0530	KADN	15 LA	Lafayette	586
0600	WVLA	33 LA	Baton Rouge	633
	KVHP	29 LA	Lake Charles	530
0630	KLPB	24 LA	Lafayette	567

TSLD:LA(4)  
FTD: LA Baton Rouge 633

## March 2

2030	WLAE	32 LA	New Orleans	694
2100	WNOL	38 LA	New Orleans	694
	WGNO	26 LA	New Orleans	694

TSLD:LA(4)  
FTD: LA New Orleans 694

## March 6

0400	KXTX	39 TX	Dallas	518
------	------	-------	--------	-----

TSLD:TX(1)  
FTD: TX Dallas 518

## March 7

2200	WPXL	49 LA	New Orleans	688
------	------	-------	-------------	-----

TSLD:LA(6)  
FTD: LA New Orleans 694

## March 8

TSLD:LA(1)				
FTD:	LA	Lafayette		586

## March 9

2330	WMAH	19 MS	Biloxi	770
------	------	-------	--------	-----

TSLD:LA(5),MS(1),TX(1)  
FTD: MS Biloxi 770

## March 10

0000	WUPL	54 LA	Slidell	705
------	------	-------	---------	-----

TSLD:LA(7),MS(1)  
FTD: MS Biloxi 770

## March 12

0900	WBHS	50 FL	Tampa	1116
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**Western TV DX** *F. Garcia's report continues*

WTTA	38	FL	St. Petersburg	1116
WMOR	32	FL	Lakeland	1135
0915 WOPX	56	FL	Melbourne	1189
2100 WTVK	46	FL	Naples	1153
WZVN	26	FL	Naples	1153
2115 WSCV	51	FL	Fort Lauderdale	1242
TSLD:FL(7)				
FTD:		FL	Fort Lauderdale	1242
TSLD:TX(1)				
FTD:		TX	Dallas	518
March 16				
TSLD:LA(8)				
FTD:		LA	New Orleans	694
March 17				
0600 XHMNL	28	NL	Southeast	??
TSLD:LA(2)				
FTD:		LA	New Orleans	694
March 21				
1800 WFTX	36	FL	Cape Coral	1142
1830 WBZL	39	FL	Miami	1243
1900 WGCU	30	FL	Fort Myers	1144
WBBH	20	FL	Fort Myers	1144
WRXY	49	FL	Tice	1142
1930 WLPB	27	LA	Baton Rouge	638
2030 WPMI	15	AL	Mobile	838
WMPV	21	AL	Mobile	842
2130 WPAN	53	FL	F. Walton Beach	869
WEIQ	42	AL	Mobile	825
WFSG	56	FL	Panama City	929
TSLD:AL(2),FL(12),LA(8)				
FTD:		FL	Miami	1243
March 22				
0100 WHNO	20	LA	New Orleans	688
0130 WTGL	52	FL	Cocoa	1200
0300 WHBR	33	FL	Pensacola	838
K59DG	59	LA	New Orleans	688
0330 WFLX	29	FL	West Palm Beach	1238
WXEL	42	FL	West Palm Beach	1238
0600 WUSF	16	FL	Tampa	1116
2030 WBSV	62	FL	Venice	1107
2100 WXPX	66	FL	Bradenton	1115
2130 WAWD	58	FL	F. Walton Beach	897
2200 K49DE	49	LA	New Iberia	596
WTXL	27	FL	Tallahassee	1031
K30EM	30	LA	Houma	644
KWBJ-LP	39	LA	Morgan City	618
WPCT	46	FL	Panama City	934
WSRE	23	FL	Pensacola	857
WFGX	35	FL	F. Walton Beach	892
2230 WMBB	13	FL	Panama City	959
W68CM	68	FL	Panama City	943
TSLD:AL(3),FL(26),LA(11),MS(1)				
FTD:		FL	West Palm Beach	1238
March 23				
0530 KLTL	18	LA	Lake Charles	548
XHMNL	28	NL	Northwest	
0630 WMAU	17	MS	Bude	697
K66FI	66	LA	Opelousas	599
0700 K51EC	51	LA	Lake Charles	532

WAPT	16	MS	Jackson	754
KLAF-LP	62	LA	Opelousas	600
K61GO	61	LA	Hicks	581
K47DW	47	LA	Alexandria	611
K67GL	67	LA	Bunkie	614
K58FI	58	LA	Lake Charles	530
K56DR	56	LA	Baton Rouge	633
WGMB	44	LA	Baton Rouge	633
WGBC	30	MS	Meridian	834
KLPA	25	LA	Alexandria	619
K69HD	69	LA	Church Point	586
0730 K46CR	46	LA	Baton Rouge	645
TSLD:AL(1),FL(4),LA(28),MS(3)				
FTD:		FL	Tallahassee	1031
March 24				
TSLD:AL(2),FL(2),LA(9),MS(1),TX(1)				
FTD:		FL	Tampa	1116
March 25				
0030 WAFB	9	LA	Baton Rouge	638
WLOX	13	MS	Biloxi	762
0100 K55HA	55	LA	New Iberia	596
WXXV	25	MS	Gulfport	764
0500 KDFI	27	TX	Dallas	518
KDAF	33	TX	Dallas	518
KSTR	49	TX	Irving	518
KFWD	52	TX	Fort Worth	522
KLDT	55	TX	Lake Dallas	544
KDTX	58	TX	Dallas	518
KPXD	68	TX	Arlington	518
KTXA	21	TX	Fort Worth	518
0600 KMPX	29	TX	Decatur	537
TSLD:AL(3),FL(3),LA(21),MS(4),TX(10)				
FTD:		FL	Panama City	929
March 26				
TSLD:LA(1)				
FTD:		LA	Lafayette	586
March 27				
TSLD:LA(7),TX(3)				
FTD:		LA	New Orleans	694
March 28				
0530 KFXX	51	TX	Longview	557
KETK	56	TX	Jacksonville	532
0630 K46DG	46	LA	Lafayette	587
2000 WFXL	31	GA	Albany	1066
WAWS	30	FL	Jacksonville	1179
WTEV	47	FL	Jacksonville	1179
WJEB	59	FL	Jacksonville	1180
2130 WBSF	43	FL	Melbourne	1200
2330 WACX	55	FL	Leesburg	1180
WGFL	53	FL	High Springs	1112
W52BF	52	AL	Mobile	818
W50CF	50	AL	Mobile	817
WGIQ	43	AL	Louisville	987
TSLD:AL(6),FL(16),GA(1),LA(16),MS(3),TX(9)				
FTD:		FL	Melbourne	1200
March 29				
0000 WRBW	65	FL	Orlando	1192
WKCF	18	FL	Clermont	1192
WFTS-DT29		FL	Tampa	
WJWB	17	FL	Jacksonville	1180
0030 WABW	14	GA	Pelham	1048
WFTS	28	FL	Tampa	1116

**Western TV DX** *F. Garcia's report concludes*

WOGX	51	FL	Ocala	1123
WJXX	25	FL	Orange Park	1163
WPGX	28	FL	Panama City	952
WYES	12	LA	New Orleans	693
0100 W31BB	31	FL	Pensacola	855
W36AC	36	MS	Mccomb	710
WDHN	18	AL	Dothan	982
0130 WWSB	40	FL	Sarasota	1108
WOFL	35	FL	Orlando	1191
0230 W69AY	69	FL	Alachua	1128
WTBC-LP	65	FL	Tallahassee	1025
WSST	55	GA	Cordele	1081
WSTY-LP	23	LA	Hammond	682
Shop at Home, Thanks to Jeff Kruszka for confirming programming				
WTGS	28	SC	Hardeeville	1222
WJTC	44	FL	Pensacola	842
0300 K57HD	57	LA	New Orleans	687
W36AJ	36	FL	Jacksonville	1175
WVEA-LP	61	FL	Tampa	1104
W60BK	60	FL	St. Petersburg	1093
WVEN-LP	23	FL	Orlando	1171
W51CU	51	MS	Pascagoula TBN	783
WRBM-LP160		AL	Prichard ACN -Shop	

0430 WBCC	68	FL	Cocoa	1200
0530 WMFE	24	FL	Orlando	1191
30% RH TEMP 88 DEG AT 6 AM				
TSLD:AL(8),FL(46),GA(3),LA(22),MS(6),SC(1)				
FTD:		FL	West Palm Beach	1238
March 30				
2130 XHMNL	29	NL	Southeast	??
TSLD:LA(11)				
FTD:		LA	New Orleans	694
March 31				
0430 KPLC	7	LA	Lake Charles	548
KATC	3	LA	Lafayette	566
2030 XHMNL	27	NL	Southeast	??
TSLD:AL(3),FL(4),LA(27),MS(4),TX(3)				
FTD:		FL	Tampa	1116

Best month of March with 8 days to 1,000 miles tropo.

Local State government TV station XHMNL-28 is putting translators in several locations statewide. I'll try to get a complete list of them. Project is to use chs 27, 28, and 29.

73's  
Fernando

**Eastern TV-DX, May 2000 ...continued from page 22**

page 2

0330 WRAX-50	NC	Raleigh	585
0500 WRPX-47	NC	Rocky Mount	580
3/17 MS			
0245 CIII4-4	ON	Owen Sound	511
(3/4CB, Global crescent moon logo)			
0325 CJCB-4	NS	Sydney	605
(3/4 CB ATV-CTV in lower right)			

3/23 TR				
2030 WEWE-LP-24	DE	Sussex County	300	
2030 WYDO-14	NC	Greenville	562	
2030 WFXZ-35	NC	Jacksonville	570	
2030 WUNM-19	NC	Jacksonville	577	
2330 WUNJ-39	NC	Wilmington	660	

At times running 3 or 4 tapes per night for MS. VCR clocks can vary up to 6 or so minutes at the end of a 6 hour tape. Also 600 feet of VCR tape will stretch. With 3 Sharp VCRs and Radio Shack best tapes, time at the end of a 6 hour tape off, plus or minus 5-10 seconds. I can deal with that. This way I can compare a channel 2 burst with same burst on channel 4. If the channel 2 station ID known, then most likely channel 4 from same area.

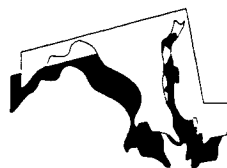
All things being equal, the cut channel 2-3 10-element antenna (is) better than the B/T channel 2-6 8-element antenna. The cut channel 2-3 antenna gave me consistently stronger and longer hits. With the cut channel 2-3 aimed southwest I can cancel WGBH-2 Boston completely at 59 miles to black snow. This black snow or screen due to mixing of WCBS-2 New York and WGBH-2, pure conjecture, hi. With this channel 2-3 cut antenna at 20 degrees raised in the front (cement block under doghouse) on 9 out of 10 consecutive nights taped, CFAP-2 PQ (was) on tapes. When I took out cement block and antenna level, CFAP-2 PQ only on 1 tape out of 10 consecutive nights' tapes. MS total 72.

That's it for this month... seeing any good TV DX? Why not share it with everyone... send a report! 73s, Matt.

# SOUTHERN FM DX

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

May 2000



Dan Oetting  
107 S. Tartan Dr.  
Elkton, MD 21921  
EST

Harmon Kardon Citation-23, Yamaha T-70, Archer 10 element FM yagi @ 14' AGL, 20 db FM amp

12/8 Tr	2125 WBPP	104.9 VA	Strasburg, k, "Apple Country"
12/9 Tr	0110 WRAL	101.5 NC	Raleigh, rm, "Mix 101.5"
0124 WVAO	102.3 VA	Crozet, o, "Oldies 102.3"	
12/13 Tr	2050 unID	93.5 ??	??, w/Deiliah, rm
12/14 Tr	0800 WCHA	94.3 PA	Greencastle, k, "Kiss Country," WFRB off
12/19 Tr	0500 WTLR	89.9 PA	State College, g, s/on
2000 unID	96.7 ??	??, really old k, thru WCEI	
1/18 Tr	2202 WAVA	98.3 WV	Charles Town, k
1/30 Tr	1300 W219BZ	91.7 DE	Lewes, g, WYFG ID (WRTX and WMPH off)
2/8 Tr	2206 WVOB	100.5 NY	Rochester, rm
2/12 Tr	2325 WJSAT	96.3 PA	Jersey Shore, g (WHUR off)
2/23 Tr	1000 WQSR	91.7 NY	Middletown, c, WAMC calls, (WMPH off)

John Zondlo  
4009 Driftwood Circle  
Yukon, OK 73099  
Jpzondlo@aol.com  
Deadline: 10th

2/25 Gw (WMPH off)	1800 WCLUR	91.7 PA	West Chester, p
1802 WKDU	91.7 PA	Philadelphia, reggae	
3/9 Tr	0945	CT	Relogs
3/11 Tr	1950 WAGO	88.7 NC	Snow Hill, g
3/22 Tr (w/new AB phase box)	2150 WWWW	97.5 VA	Charlottesville, r
2210 WFRB	105.3 MD	Frostburg, k	
2312 WVAO	102.3 VA	Crozet, o	



## From the Editor

'Tis the season.....for FM DXing, that is! Hopefully you've all had at least one good opening by now. Be sure to send along a report with your catches ASAP!

And remember to check out FM DX Web. You'll find lots of great resources to help you identify stations plus alerts for when conditions are good for FM DXing.

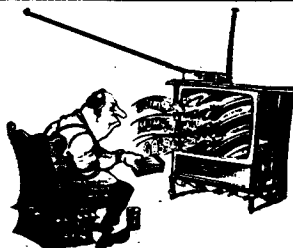
See y'all next month!



Your resource for FM DXing

<http://members.aol.com/fmdxweb>

Frustrated by the interference that plagued his TV viewing every Spring, Elbert turned the confounded thing off and decided to listen to some relaxing music on his expensive new FM radio tuner. Shortly after that, he suffered a mysterious nervous breakdown...



Prepared by Tom Bryant  
849 Todd Pels Drive  
Westville, TN 37221-2607  
tjbdx@home.com

## DUMONT --- THE MAN AND THE NETWORK

(Thanks to Frank Aden of Boise, ID for the test pattern scan and the WABD ad from a 1953 TV Guide)

Allen B. DuMont (1901-1965) was a brilliant inventor, television manufacturer and broadcaster. Early in his long and productive career he was Chief Engineer of the DeForest Radio Company.

After leaving DeForest in 1931, he started his own company which, among other electronic accomplishments, developed better cathode-ray tubes, improving the picture size, reliability and operating life of what became the television picture tube.

In 1938, Paramount Pictures invested in DuMont's firm, allowing him to expand its television research and begin manufacturing receivers and broadcasting TV programs.

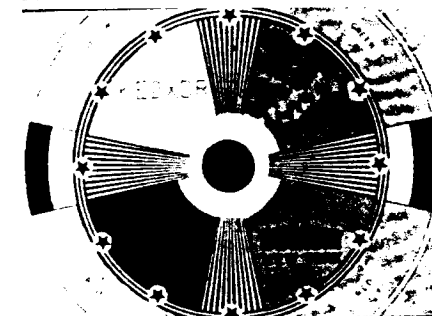
Allen B. DuMont Laboratories became a major source of competition for RCA, offering a set with a 14" screen in 1938, while RCA was only able to release a 12" set a few months later.

DuMont appeared frequently before the FCC. He opposed the CBS field-sequential color system and later, he campaigned to prevent the mixing of VHF and UHF channels in the same broadcast areas.

Immediately after World War II, DuMont took the lead in developing larger and larger direct-view tubes (up to 30" in size).

Many of the favorite shows of the late forties and early fifties, such as Jackie Gleason, Ted Mack's Amateur Hour, Captian Video, and Bishop Sheen appeared on DuMont's television network.

Long before Fox had been conceived, the original "fourth network" went off the air in 1955. It was inaugurated in 1946.



Careful inspection of this early DuMont color test pattern reveals the color which appeared in each quadrant. Those call letters are a mystery. Can anyone help?

FOR A BETTER TIME...ALL THE TIME



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as guest panelists discuss  
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**WABD, channel 5**

DUMONT TELEVISION NETWORK

# Transatlantic VHF Propagation

## Introduction

*Special Report From The VHF Committee,  
Radio Society of Great Britain (RSGB)*

The recent announcement of the Brendan trophies for successful two-way transatlantic communication on 144 MHz coupled with the proposal of beacons to support investigation of the relevant propagation modes has prompted an interest transatlantic VHF communication. These notes are intended to underline some of the problems and possibilities. The interested reader will find further information and references in an article by G3NAQ in the June 1995 issue of Radio Communication (ISSN 0033-7803). This article, however, has little to say about likely signal levels.

## Geometry

The basic geometry of the least distance transatlantic paths from the north west corner of Ireland to Newfoundland requires that a distance of about 3100 km be covered. Assuming an Earth radius of 6400 km, the path subtends an angle of 27.7 deg at the centre of the Earth and, more importantly, the intersection of two tangential rays is at a height of 192 km. The slant range from the ground stations to the mid-path point is 1578 km. Using the station assumptions below, free-space path loss would give a received signal level of -80 dBw (about 100 dB above noise level) for two stations 3100 km apart.

Readers may object that we should use a 4/3 Earth radius figure in the above calculation. The 4/3 Earth radius is widely used in VHF Propagation calculations to reflect the normal bending of radio waves by refractive index gradients in the lower parts of the atmosphere (up to a height of some 20 km), it is clearly not applicable to distances such as those being considered here.

## Basic Mechanisms

There are three basic ways a radio wave can be "bent" so providing communication between two stations that are not "line-of-sight". These are:

1. Diffraction
2. Reflection/Scattering
3. Refraction

Diffraction is only significant for obstacles whose size is of the order of a few wavelengths at most and need not be considered further. Reflection or scattering modes include mechanisms such as meteor scatter, aurora and, probably, sporadic-E. Refraction includes tropospheric ducting, F-layer propagation and, perhaps surprisingly, tropospheric scatter.

## Scattering

The basic properties of scattering are described by the radar equation

$$P_R = \frac{P_T G_T S A}{(4\pi)^2 R^4}$$

Where

## Transatlantic Propagation

$P_R$  Is the received power in W

$P_T$  Is the transmitted power in W

$G_T$  Is the transmitter aerial gain (isotropic)

$A$  Is the receiver capture area in  $m^2$

$S$  Is the scattering area in  $m^2$

$R$  Is the distance to the scattering region in metres.

We'll use this formula to deduce the required scattering area for the path described earlier. This requires re-arranging the formula thus.

$$S = \frac{P_R R^4 16\pi^2}{P_T G_T A}$$

For a typical high performance VHF station the following figures will be used

$P_R$  -185 dBW (= 3.2  $\times 10^{-19}$  Watts) This corresponds to the noise power at 230 deg K in a bandwidth of 100 Hz.

$P_T$  1000 Watts. RF at the aerial !

$G_T$  40 (=16dBi). This is gain over isotropic.

$A$  30 (=20dBi)

Plugging the above numbers into the re-arranged radar equation indicates a required scattering area of 261  $m^2$ . It is important to realise what this means. If an object of this size were positioned 192 km above the mid-path point and if that object reflected all the incident radiation (i.e. had an albedo of 1) isotropically then communication at a S+N/N of 3dB would be possible by reflection off the object in question. A sphere of radius about 9m would suffice. It is difficult to conceive of an object with the described properties, it is even harder to imagine what it would be doing 192 km above the Atlantic Ocean.

Another possibility to be considered is specular (mirror-like) reflection of signals from suitable objects which have to have large flat surfaces suitably aligned. The solar power panels of an artificial satellite might be suitable. The main difficulty here is that the orientation of the flat surfaces have to be correct. It is possible to get some idea of the probability of such a "glint". Imagining the reflector positioned at the centre of sphere with diameter equal to the path length, it is necessary to determine the probability that the image of the source shall fall on a particular part of the interior surface of the sphere, or equivalently that the target point lie within the image area. If the reflector area is 100  $m^2$  then the image area is 400  $m^2$ , however the sphere centred on the reflector has a radius of 1578 km giving a surface area of 3.129  $\times 10^{13}$   $m^2$ , assuming all parts of the sphere are equally likely to be illuminated this gives a probability of 1.28  $\times 10^{-11}$  that any particular

point is illuminated. This translates to about  $1.1 \times 10^{-6}$  seconds a day. So assuming that the reflecting object is tumbling randomly in space the possibility of such a glint, for which free space path loss would apply, is extremely low and most unlikely to provide a useful communication mechanism.

Natural reflecting/scattering objects occurring high in the atmosphere include meteor trails (100 km), sporadic-E clouds (90-120 km) and auroral curtains (120 km). All these are too low to support single hop transatlantic propagation. There's really nothing but empty space (and a few satellites) at 192 km. Our thoughts must turn to multi-hop propagation modes.

## Multi-Hop Scattering

The geometry of the minimal double hop scattering path gives two scattering regions at a height of 47 km with a slant range of 777 km from the ground stations to each object. The height of 47 km is actually too low for most of the scattering objects mentioned earlier, so there is a certain amount "in-hand". This is in accordance with the normal maximum ranges associated with modes such as meteor-scatter and sporadic-E. A scattering object at a height of 100 km gives a maximum single-hop scattering range of about 2200 km.

The application of the radar equation to double hop scattering is slightly complicated. Assuming R is the distance from the transmitter to the first scattering point (or from the receiver to the second scattering point), the power intercepted by the first scattering object (of area S) is given by

$$\frac{P_T G_T S}{4\pi R^2}$$

This power is re-radiated by the first scattering object with a gain of 1 (i.e. isotropically), free space path loss can be used to calculate the power intercepted by the second scattering object. It is, remembering that the distance between the two scattering objects is 2R.

$$\left[ \frac{P_T G_T S}{4\pi R^2} \right] \times \frac{S}{16\pi R^2}$$

Making similar assumptions to the first scattering the power at the receiver is

$$\frac{P_T G_T S^2 A}{256\pi^3 R^6}$$

Plugging in the same numbers as previously gives, for a scattering area of 261 m<sup>2</sup> a received power of  $4.7 \times 10^{-29}$  watts which is likely to be a long way beneath the noise floor.

It is, of course, not difficult to calculate the required scattering area to give a usable signal via double hop scattering. The answer turns out to be  $22 \times 10^6$  m<sup>2</sup>. This might seem a lot but in fact corresponds to a sphere of radius of about 2.6 km which is probably reasonable for a sporadic-E cloud although there are suggestions that sporadic-E clouds are rather smaller. Double hop sporadic-E is, of course, a known, but rare, propagation mode on 144 MHz, the record breaking QSO between G3VYF and 4X4IX on June 11th, 1981 was supported by this mode. The distance involved in this QSO was 3540 km, significantly greater than the distances currently

30; considered.

There are some practical problems. Since sporadic-E seems only to be predictable in a statistical fashion, the only way to make such a contact is to keep on trying. The importance of monitoring suitably configured beacons is obvious. Although a double hop sporadic-E "opening" is, of course, two single hop sporadic-E openings back-to-back, neither opening is likely to be obvious to operators as they will be to a totally unpopulated mid-ocean area. It might be worthwhile investigating what types of VHF transmissions are made by aircraft and ships in mid-Atlantic to see whether they could be advantageously monitored.

Double hop meteor scatter seems much less plausible, calculations suggest a really good meteor trail may represent a scattering area of  $10^4$  m<sup>2</sup>. Even if two trails occurred simultaneously with the correct geometry the signal levels would be too low by at least two orders of magnitude.

It remains to consider auroral reflection (or auroral-E as it now seems to be called). There seems little information about the size or efficiency of the reflecting region, however most authors suggest that long-distance signals are weak which suggests that double hop would result in signals well beneath the receiver noise floor. The results of two applications of the multiple Doppler shifts that cause the strange sound of auroral signals would probably be to spread the signals outside any sensible weak signal bandwidth.

## Refraction

This includes several interesting modes of propagation. Tropospheric and ionospheric scattering are really refraction from slight irregularities in the refractive index of the troposphere or ionosphere. The statistical properties of such scattering are well known. It is equally well known that there is a maximum range reached when the mutually visible scattering region is a region so high as not to support the required variations in refractive index. 3100 km is well outside this range.

Tropospheric "ducting" is another matter altogether. The various reported QSOs from the UK to stations in the Canary Islands are almost certainly supported by this mode and distances over 3000 km have been reported e.g. the July 15th 1988 QSO between G14KIS and EA8BEX reported in the October 1988 issue of Radio Communication. This clearly suggests that a suitably positioned weather system could support a transatlantic QSO on 144 MHz, and, intriguingly, perhaps a 432 MHz QSO as well. The characteristics of the required anti-cyclonic systems don't seem to be well understood in amateur circles, it is also the case that such ducts often favour quite restricted geographical areas.

## Conclusion

It would seem that the only two likely propagation modes to support transatlantic VHF communication are double hop sporadic-E and tropospheric "ducting". Neither seems likely to be readily predictable so the importance of establishing reliable high-performance beacons on both sides of the Atlantic is underlined. In both cases the analysis is in line with operator experience which shows that these two modes can deliver remarkably high signal levels at great distances unlike some of the other well known VHF DX modes such as meteor scatter and aurora. The possibility of, as yet unknown propagation modes, cannot be dismissed as little effort has been put into long term monitoring looking for possible transatlantic VHF signals, again the importance of reliable high-performance beacon stations is underlined.

## References

- Evans D.S. & Jessop, G.R., VHF/UHF Manual (3rd Edition), Radio Society of Great Britain, 1976,
- Matthews, P.A., Radio Wave Propagation - VHF and Above, Chapman & Hall, 1965
- White, I. (Editor), The VHF/UHF DX book, DIR Publishing, 1992, ISBN 0-9520468-0-6

**Editor's Note:** We've now heard about several fascinating long distance VHF TV and FM loggings made over transAtlantic paths during the past two years, the latest being Larry Curcio's tentative catch of what may be an Irish FM station in coastal New England. Who will be the first DXer to verify such a catch? Let's hear from you!





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*I wish skip season would begin... I wish, I wish, I wish*

In The Event That No One Picks The Actual Date Of The First Major E-Skip Opening, The Person Closest To That Date Will Be Awarded Status Of "Winner". Here Are The Three Simple Rules and How To Enter:

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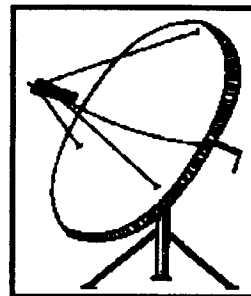
1. The MUF will reach at least 100 mHz;
2. At least 6 people will report from various locations;
3. The E-Skip Opening will last at least one hour.

### HOW TO ENTER:

1. E-Mail Jim Thomas at [oldwest@oneimage.com](mailto:oldwest@oneimage.com);
2. E-Mail Mike Bugaj at [ikon@netcom.com](mailto:ikon@netcom.com);
3. Post Your Entry On The WTFDA E-Mail Reflector ([WTFDA@topica.com](mailto:WTFDA@topica.com));
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As a result of a lot of hard work by your committee, we will be having an excellent full program this year. An effort was made to improve our conference by carefully evaluating the critiques we received last year. This years' program is a result of that input:

This year, we have speakers from New England to as far south as Maryland and as far west as Ohio. Many people missed having the Bandsessions, so we brought them back this year! We'll have a Technical Laboratory and Demos area which will be in operation Saturday afternoon, managed by Don Twombly WB1FKF. We encourage you to bring a project to de-bug or tune with some newer type test equipment.

We'll also have Gerry Rodski, K3MKZ of SSB Electronic & N1DPM to manage the preamp noise figure measurement workshop (50MHz-10GHz); and Joe Reisert, W1JR to manage the antenna gain measurement range (222 & up, entrants receive a hardcopy plot of their antenna). A great opportunity to check out your preamps and antennas! This years' VHF-SHF Trivia Quiz will be hosted by Dale Clement AF1T.

A ARRL published Proceedings book with the event schedule and many interesting articles is included with your registration and will be presented to you when you arrive. -Hope to see you soon!

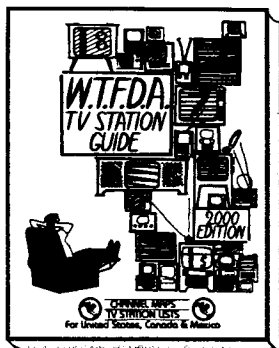
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**The 2000 WTFDA  
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# The Ink Is Finally Dry!!


The 2000 WTFDA TV Station Guide finally arrived from the printers at the end of March and began shipping to those that took advantage of the special 'pre-press' pricing, which ran from Jan. 3 through Feb. 28. To all those that ordered, the club would like to extend a hearty, "Thank You!!"

If you missed out on ordering your personal copy, it's still not too late to get yours...the TV Station Guide will be available as long as orders continue to come in during the year.

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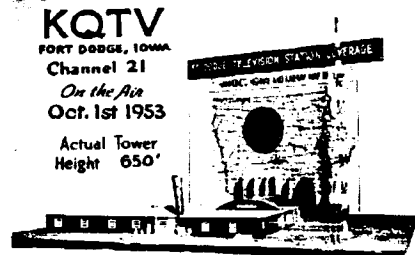
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April 1998	47
May 1998	25
June 1998	45
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