The VHF-UHF Digest

THE OFFICIAL PUBLICATION OF THE WORLDWIDE TV-FM DX ASSOCIATION

P.O. Box 501, Somersville, CT 06072 Https://www.wtfda.org

THE WORLDWIDE TV-FM DX ASSOCIATION IS DEDICATED TO THE OBSERVATION AND STUDY OF LONG DISTANCE VHF AND UHF PROPAGATION AS IT APPLIES TO SIGNALS FROM 30MHZ THROUGH 600MHZ WITH EMPHASIS ON BROADCAST TELEVISION AND FM RADIO

JANUARY- FEBRUARY 2023

The Mailbox

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JAN-FEB 2023

I hope everyone had a good Christmas and New Years holiday. I hope nobody got stuck at airports or came down with one of the nasty bugs floating around like I did. It has been a rough winter so far.

We have more changes with the VUD starting this month. From now on, ALL FM DX reports will go to John Zondlo in OK. Northern FM DX and Southern FM DX are being combined into one column. John will be creating a name for the new column. He also has a new email address which is dxreports@wtfda.org. Also, we are combining the FM formats/slogans with the FM facilities column. The new column will be called FM changes.

If you did not read the December VUD, go back and read page three, especially the part about the new dues structure. Please…do not send us any renewal checks. I know it's a hard habit to break, but don't. The only dues we want are from new people joining the club. Once someone joins WTFDA they become permanent members. Everyone who was in the WTFDA as of October 1st is considered a permanent member. We've already had a few people return because of the dues change. Just remember *DON'T SEND MONEY*.

FROM OUR MEMBERS

Chris Lucas reports on the the reception of WNYP-LD in New York City on channel 28 along with its sub-channels. WNYP-LD previously operated on channel 25.

Jim Thomas tells us about our cover picture…Here's the ground based FM antenna I've been trying out for meteor scatter dxing - a Stellar Labs omni directional mounted at the focal point of a 6' solid metal satellite dish. In the picture the dish was tilted, but I have recently aimed it up directly overhead, as close to 90 degrees as I could visually place it. This morning the Geminids were really rocking on that set up.

A couple radio broadcast engineers suggested that I give it a try, after they each tested the idea in their own radio markets and both were very pleased with the results that transpired. I think it's a keeper.

Mike Bugaj just purchased a new 55" LG UHD DTV from Target and it does have manual tuning. It has a bar for signal strength and signal quality percentages and reports that the signal quality percentage is more important than the signal strength, since a signal will not decode even if the strength is 100% but the quality is down around 30%. The manual tuning mode is a bit to find, though, being buried under three or four other menus. And although the TV sets up with wi-fi, there does not seem to be a way to view ATSC 3.0 on this DTV.

And that is it for January. Remember, the next full issue is in March.

MERCHANDISE STORE NOW OPEN

It's here! Now you can show off your club pride by ordering a WTFDA logo shirt from the brand new WTFDA Merchandise Store. We're proud to launch the store with a variety of 125 different shirt styles, notebooks for your logs, and unique wall clocks for your DX shack!

Even more products will be arriving soon, so make sure to check back often to see what's new. You will also be helping support the club as a portion of sales goes to the WTFDA.

The store can be found at https://www.redbubble.com/people/wtfda/shop?artistUserName=wtfda

Any questions, comments, or feedback can be directed to store@wtfda.org

Best Practices for RDS Subcarrier Injection

BY ALAN JURISON

RADIOWORLD | PUBLISHED: AUGUST 14, 2020 • UPDATED: AUGUST 21, 2020

With dashboards using so much data, it's important to maintain proper injection levels

It's been a few years since we've discussed RDS best practices, but the items we have covered in this series of articles over the last decade are more relevant than ever. At this point, just about every new automobile manufacturer supports some form of RDS when a receiver is tuned to an analog FM station. The big shift is that visibility and support for the Program Service (PS) field and PS scrolling are fading in favor of RadioText (RT) and RadioText Plus Tagging (RT+ Tagging).

Larger 6- to 12-inch LCD displays are in almost every vehicle you see on the lots now. These have multiple lines for text messages, and the eight-character PS scrolling really does catch the eye. The full station name, title and artist with RadioText and RT+ Tagging really helps stations look better in the dash. Also, with National Highway Traffic Safety Administration guidance and regulations related to driver distraction in the United States, many automotive manufacturers have dampened or defeated PS scrolling from working in their vehicles.

Even with RadioText, modern receivers want more information, and RT+ Tagging is supported in more vehicles. Radio World has covered a variety of topics on how to optimize RDS for these fields, and other tips and tricks.

RDS Subcarrier Injection

Let's dig into detail about the importance of proper RDS sub-carrier injection. This is still a common problem I work with, both in my professional capacity at iHeartMedia and personally as I travel and see various RDS implementations across the country. While it's difficult to come up with hard facts, a lot of stations are not following the NRSC-G300-C guidelines in Section 4 to ensure there is proper synchronization with the 19 kHz pilot and maintaining 6% (4.5 kHz) to 7% (5.25 kHz) injection of the 57 kHz RDS sub-carrier.

First, let's understand how the RDS sub-carrier injection is described numerically.

Often in North American broadcast products, documents and discussion, you will see the RDS sub-carrier injection referenced in terms of percentage, such as 6%. This is referenced as 6% out of 100% modulation referenced to 75 kHz deviation. So, 75 kHz x 0.06 (6%) = 4.5 kHz deviation. And 75 kHz x 0.07 (7%) = 5.25 kHz deviation. You will often see these methods used (percentage and referenced as deviation) when discussing injection, sometimes interchangeably.

Suppose you have a measurement made in kHz deviation and want to translate that into percentage. For example, a modulation analyzer may say the RDS injection is 4.875 kHz but not tell you the percentage:

4.875 kHz / 75 kHz = 0.065 x 100 = 6.5%

The international markets are more focused on kHz deviation levels. You may encounter product measurements, manuals, documentation or other articles referencing kHz deviation, and now you know the basic math converting between these two. We're really discussing the same thing, just a different reference level.

Regulatory Guidance

In the United States, no Federal Communication Commission authorization, notice, application or license is required by a broadcast station licensee wishing to transmit a sub-carrier. Sub-carriers are also known as Subsidiary Communications Authority or SCA. A sub-carrier or SCA is a separate audio or data channel transmitted along with the main audio signal over a broadcast station. RDS is considered an SCA, and stations can start or stop transmission at any time as per 47 CFR Section 73.293. The FCC allows total FM carrier deviation above 100% modulation referenced at 75 kHz under 47 CFR Section 73.1570(b)(2)(i) and (ii). The total peak modulation may be increased 0.5 percent for each 1.0 percent sub-carrier injection modulation, but in no event may the modulation of the carrier exceed 110 percent (82.5 kHz peak deviation).

What does this mean in practical terms? If your 57 kHz RDS sub-carrier is the only sub-carrier on the station, and you desire 6% injection, half of that injection (3%) can be added to your overall total modulation envelope. Thus, the maximum permitted FM modulation envelope on the station is 103%, or 75 kHz x 1.03 = 78.25 kHz deviation.

Field Observations

My general advice and guidance for most full-power stations is to use 6% (4.5 kHz) injection as optimal for most applications. You may want to consider up to 7% (5.25 kHz) injection if you are on a noisy channel with nearby co-channel interference, have extreme terrain challenges in your service area or are trying to provide the best experience in the far field (i.e. the desired, or largest portion of your audience is at or beyond your protected service contours).

Another area where higher injection helps is on lower-powered stations such as translators. Many FM translators are used well beyond their official “protected” 60 dBu service contour, so having a high injection level on these stations is encouraged. Raising the injection of the sub-carrier increases the signal-to-noise ratio of the digital sub-carrier and makes it easier for receivers to decode it error-free, especially in the far field and in challenging FM environments (multipath, interference, low signal, etc.).

While this evidence is anecdotal, I have never seen a situation where going above 7% (4.5 kHz deviation) has been helpful. And I have found stations unintentionally injecting over 10%, actually causing some RDS receivers to stop working. In a sense, if the signal is too high, it can degrade decoding performance in select receivers. *Similarly, I find a lot of stations out there that are injecting below 4% (3 kHz deviation), where RDS decoding is very difficult.* Both situations (sub-carrier injection too high or too low) can cause spotty RDS displays. Information may never populate or may not update quickly upon change. Focusing on your RDS injection and knowing it is in the 6% to 7% range is very important.

Measuring Injection

Knowing how to set up your RDS encoder injection properly is important. It’s a key performance item for RDS displays to work. With the growing receiver base, and with more broadcasting offered enhanced metadata with station branding, title, artist and even advertiser messages, you want to make sure every station you maintain has the RDS injection set properly.

(Note: This article has been edited from the original article. Originally written for engineers, some technical sections have been removed to make the article suitable for Dxers.)

The TEF6686 Chip Radio

The following information was posted by WTFDA Member Ivan Cholakov on the TV & FM DX Facebook group. Ivan's presentation also included a YouTube video. I have watched the video and have have added his written remarks to this article.

This project started by enthusiasts has created many DIY and consumer grade projects. This is one of several receivers that take advantage of the great NXP TEF6686 radio chip. AM (Medium Wave), FM, SW (Shortwave) and Longwave receiver with some unusual features not commonly found on other radios. The DX tests will come after this introduction.

Basic Operation

Automatic Bandwidth. Having turned on the radio, you see this display. The radio has variable bandwidth. The bandwidth is shown at the very top of the display (to the left of the RDS logo). It can be changed from 53khz to over 300khz by turning the yellow (looks white) dial on the top right side of the radio. The radio can also be put into audo-bandwidth mode.

RDS. The radio shows full RDS: PI, PS, Pty and Radiotext on the bottom of the display. The radio uses the European standard, not the RBDS standard of the United States, so the Pty codes are the European version. Go online, download a chart comparing RDS and RBDS Pty codes and use it.

Manual/Auto Tuning. The middle white button (between the display and the dials) changes between manual and auto-tuning by pressing it. Auto-tuning only works for FM. In the settings, the radio can be made to tune down into the OIRT frequencies. Pressing the top tuning button changes the tuning steps from 100khz to 1mhz and up. You can also to 1khz tuning steps on FM for tuning in Franken Fmas.

Default tunng on AM is 9khz which can be changed to 10 for use in the United States by pushing in the tuning knob.

Band Changing. The radio can be switched into Shortwave by pressing the bottom blue button. Clicking the white middle button changes shortwave bands (commercial bands, not ham bands.) The top yellow button now changes the bandwidth, which on LW, AM and shortwave ranges from 3 to 8 khz!

I would like to thank Ivan for making this video which can be found at
https://www.youtube.com/watch?v=hLwA2poOzhU

I've searched the internet for this item. I found Ivan's radio at https://www.aliexpress.com/w/wholesale-tef6686.html for around $120USD. Walmart also had another version for about $150USD.

San Diego TV Station Broadcasting Hybrid FM-ATSC 3.0 Signal on TV Channel 6

TV Tech November 2022By Gary Stigall

Tests show signal is compatible both with current NextGen demodulation devices and analog FM tuner

SAN DIEGO—A local San Diego low-power TV station is testing the broadcast of FM signals over ATSC 3.0 (aka "NextGen TV").

KRPE-LD San Diego, low power TV channel 6, atop Mt. San Miguel, is the first station in its market to broadcast ATSC 3.0. The FCC granted a Special Temporary Authorization (STA) for a signal on TV Channel 6, 82–88 MHz, that includes an innovative analog FM carrier at 87.75 MHz. According to Director of Engineering Daniel Bissett, licensee Venture Technologies Group, LLC completed construction of the new signal on Oct. 7, 2021.

Analog broadcaster KRPE-LP and channel 6 low power TV stations nationwide had for years been marketing to audiences as an FM station, broadcasting aural subcarriers with high injection levels and 75 kHz FM modulation in order to attract listeners using conventional FM tuners.

Many industry engineers had derisively called these “Franken FM” signals on 87.75, the traditional channel 6 visual carrier frequency. For their accompanying analog TV visual signals, they carried a static graphic, slide show, or limited video.

Venture filed an application with the FCC on Oct. 25 to license KRPE-LD as a NextGen station, confidently citing FCC rules regarding the adoption of NextGen without explaining the two-part signal.

“This is done because the License to Cover must be granted before the STA for the FM carrier can be requested," Bissett said.

Venture filed like applications for their other stations earlier this year: KBKF-LD San Jose, KEFM-LD Sacramento, WRME-LD Chicago, and KZNO-LD Big Bear Lake (Los Angeles), and the FCC granted each.

Bissett says Venture broadcasts a signal at each of its channel 6 stations fully compliant with the ATSC 3.0 standard, ingenious with its flexibility. He says the scheme should be adopted by the FCC without having to ask for temporary authority. And he adds that tests have shown the signal to be compatible both with current NextGen demodulation devices and analog FM tuners.

(Also read: Sinclair Readies ATSC 3.0 Simulcast of Seattle Radio Stations)

Venture first implemented NextGen TV at its station in San Jose, KBKF-LD. Bissett says that the station first tried to use 87.70 as its FM frequency for compatibility with synthesized FM tuners but found many car tuners output unacceptable levels of distortion in their demodulated audio. When they moved to 87.75, the distortion cleared, so they adopted the old frequency in their FCC filings for their channel 6 properties.

Bissett says the cause of this distortion so far remains a mystery unsolved by tuning their output filters. *(On the other hand, my disciplined Sony XDR-F1HD tuner cannot demodulate an 87.75 MHz FM signal without this same distortion)*. Their ATSC 3.0 signal occupies 5.5 MHz of the TV channel.

They're using transmitters assembled by Italian manufacturer Syes and by American Amplifier Technologies of Sacramento. Com-tech of Italy makes their output filters, and Bissett says the ATSC mask filters use eight cavities.

It hasn’t been lost on Bissett that there is great potential in multicasting digital audio signals on channel 6 ATSC. Ignoring for a moment the enormous political hurdles to doing this, he says mobile reception tests of NextGen on channel 6 have been disappointing. You can see on the spectrum diagram *(Fig. 1)* that the average visual signal is at least 24 dB below the level of the FM carrier, so the signal tends to drop out behind terrain.

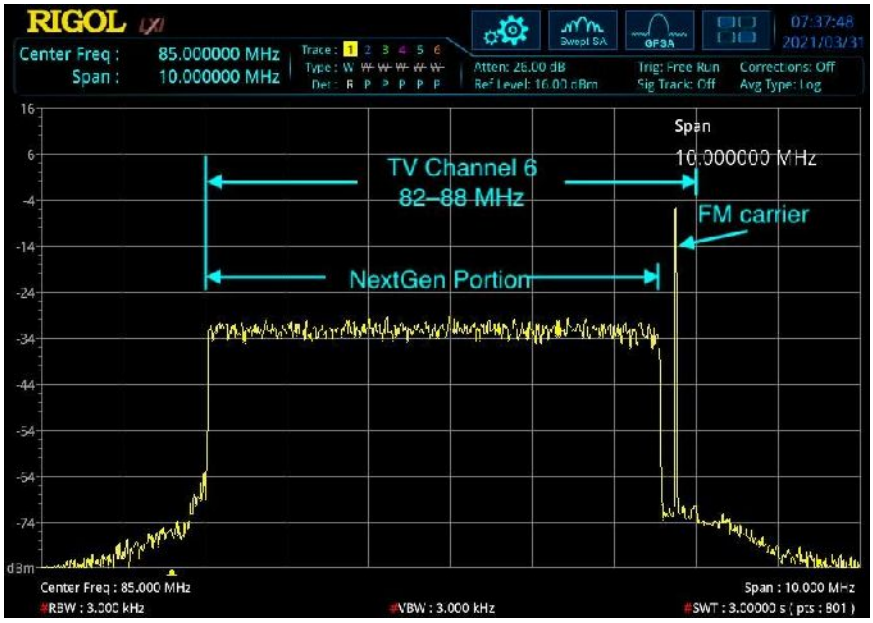

Fig. 1 (Image credit: KBKF)

Bissett doesn't see much future in mobile broadcasting with the present broadcast model of few, prominent transmitters. However, Qualcomm's implementation of Forward-Link-Only TV ("FLO TV") digital broadcasting in the late 2000s took this into account with its synchronized, multiple-transmission-point system for each of its metro markets.

For now, Venture provides only a direct response shopping channel on their visual NextGen TV signals. They are looking for additional revenue opportunities.

FM Changes for January 2023

Data supplied by the FCC although some data obtained from internet sources and individuals.
This table contains facilities data plus format and/or slogan changes.

AL	WBPT	106.9	Homewood	From Birmingham's 106.9 the Eagle to Classic Rock 106.9
AB	CFGQ-FM	107.3	Calgary	new format on 1/9/23
AK	NEW	89.9	Soldotna	5kw, 48m, same location as 90.7
AK	NEW	90.7	Soldotna	4kw, 39m, same location as 89.9
AK	KAMC-FM	90.7	Soldotna	callsign for new station
AL	NEW	91.5	Hurtsboro	9.5kw, 127m
AR	NEW	89.9	Cabot	1.7kw, 128m
AR	NEW	89.7	Emmet	3kw, 50m
AR	KRMG	89.9	Cabot	callsign for new station
AZ	KMIY	97.1	Green Valley	From Hot AC to Spanish CHR as Mega 97.1
AZ	KOOL	94.5	Phoenix	From KOOL-FM to Big 94.5
AZ	NEW	91.5	Burnside	6kw, 6m same location as Ganado 88.3
AZ	NEW	88.3	Ganado	1kw, 6m same location as Burnside 91.5
AZ	KRPJ	91.9	Wickenburg	callsign for new station
AZ	KCNN	97.7	Benson	change calls from KAVV

AZ	KOWL	101.3	Oakman	change calls from KXMK
AZ	KLTQ	90.9	Thatcher	change calls from KSFQ
AZ	KXFF	106.1	Colorado City	From Variety Hits to Sports as Fox Sports Utah (with K256CD 99.1 & K270BV 101.9)
AZ	KCNN	97.7	Benson	From Cave 97.7 to Canyon Country 97.7
AZ	KXAZ	93.3	Page	Silent 12/31/22 (and K261BX 100.1) owner retired
CA	NEW	89.7	Salton City	200watts, -3m
CA	NEW	89.5	Twain Harte	100watts, 489m
CA	KSAK	92.1	Walnut	Silent 5/27/22 transmission problems
CA	K207CN	89.3	Santa Cruz	Silent 3/16/22 xltr displaced by new full power station
CA	KQAV	93.5	Rosamond	6kw/27m, 34-49-39/118-11-08
CA	K253CC	98.5	Red Bluff	change primary to KEFX 88.9
CA	KVNW	92.9	Napavine	New station, 4kw/256m, 46-32-36/123-01-10
CA	KREV	92.7	Alameda	From silent to Dance, Pirate Radio 92.7
CA	KSBX	89.5	Santa Barbara	to go off by 12/31 due to increased QRM from tropospheric ducting due to global warming, according to station.
CO	K298CG	107.5	Pueblo	From Spanish to country as Kix Country 107.5
CO	K300AE	107.9	Breckenridge	Silent 10/12/22, xltr is for sale
CT	NEW	90.7	Moosup	1.25kw, 3m
CT	W288DL	105.5	Stamford	Silent 11/19/22 lost their programming source
CT	W279EK	103.7	Middletown	change from 105.3, 4 watts, 41-30-50/72-44-45
FL	WKEY	93.7	Key West	From smooth jazz to soft rock as Key 93.7
FL	NEW	90.3	Key Colony Beach	10kw, 61m
FL	NEW	90.5	Okeechobee	11kw, 81m
FL	W285FN	104.9	Port St. Lucie	Silent 10/8/22 lost their programming source
FL	W230DL	102.3	Cocoa Beach	.075kw
FL	W285CS	104.7	Miami	change primary to WMIA-HD3
FL	W230AL	93.9	Union Park	.25kwH, COL to Union Park
FL	WYND-FM	91.7	Silver Springs	reduce power to 2.55kw/166m, 29-16-06/82-04-50
FL	W272DS	102.3	Miami	Silent 11/15/22 lost antenna site
FL	WQCO	90.5	Okeechobee	callsign for new station
FL	W208BZ	91.5	Okeechobee	55watts, 27-13-13/80-52-21
FL	WGSX	104.3	Lynn Haven	ESPN Northwest Florida
FL	WVLQ	101.9	Port St. Joe	ESPN Northwest Florida
GA	NEW	90.3	Lincolnton	200watts-h, 12kw-v, 165m
GA	NEW	91.9	Cuthbert	3.7kw/128m
GA	WTTY	97.7	Ty Ty	From classic hits to R&B, 97.7 the Beat
GA	WGSW	106.9	Americus	Gospel, Praise 105.5 (WZBN 105.5)
GA	WNNX	100.5	College Park	alternative, 99X
GA	WBQO	93.7	Darien	raise power to 8.6kw
HI	KKCR	90.9	Hanalei	raise power to 6kw, -103m
IA	KDIC	88.5	Grinnell	Silent for tower repairs
IA	K206BW	89.1	Adel	change primary to KEFX 88.9
IA	K264CD	100.7	Des Moines	change primary to KNWI-HD2 107.1
IA	KRQN	107.1	Vinton	From talk to Regional Mexican as El Gallo 107.1
ID	K224CV	92.7	Cascade	change primary to KAWZ 89.9
ID	KXCD	93.5	Fairfield	change freq from 99.9
ID	KXCD	93.5	Fairfield	Regional Mexican, La Perrona 99.1 (KXTA 99.1)
IL	NEW	90.5	Macomb	30kw, 61m
IL	W240DE	95.9	Evanston	raise power to 250watts; move site

IN	WSFR	107.7	Corydon	From 107.7 the Eagle to Classic Rock 107.7
IN	NEW	91.1	Battle Ground	8kw, 88m
IN	WFZZ	104.3	Seymour	change calls from WKZG
IN	WAXI	104.9	Rockville	Classic Hits, Superhits 104.9 FM
KS	K300DE	107.9	Pittsburg	From sports to country as My Country
KS	KFXJ	104.5	Augusta	From The Fox to Classic Rock 104.5
KS	K217EN	91.3	Great Bend	34 watts
KS	K295CN	106.9	Kansas City	COL change from Harrisonburg, MO 39-00-56/94-30-25
KS	k214AU	90.7	Sharon Springs	change primary to KZCK 88.1
KY	WKSG	98.3	Garrison	From Hot AC to Southern Gospel as 98.3 the Rock
LA	WTUL	91.5	New Orleans	Silent 10/6/22 moving xmtr and antenna
LA	K277DQ	103.3	Lafayette	From ESPN Radio to The Goat
MI	WGER	106.3	Saginaw	From Hot AC to Rock as 106.3 the Core (Sept 2022)
MI	WMLZ-LP	107.9	Temperance	100watts, 20m, Silent; antenna damaged; relocating
MI	WKMF	89.5	Carleton	callsign for new station
MI	WMPA	93.1	Ferrysburg	Silent 11/1/21, tower dispute
MI	WGHN-FM	92.1	Grand Haven	Silent 11/21/22, tower dispute
MI	WSLI-FM	90.9	Belding	change calls from WSLI
MI	WGHN-FM	92.1	Grand Haven	Silent, evicted from tower site
MI	WMPA	93.1	Ferrysburg	Silent, evicted from tower site
MI	WZTK	105.7	Alpena	From talk to Oldies as 105.7 the Bird
MN	NEW	88.3	Medford	400watts, 58m
MN	K277AI	103.3	Russell	change primary to KMHL 1400
MN	WELY	94.5	Ely	Silent, financial problems
MO	K224FT	92.7	St. Louis	raise power to 100 watts
MO	K225CS	92.9	Joplin	Soft AC, Magic Mix 92.9 (KQYX 1450)
MS	W284DT	104.7	Raymond	changed primary to WYAB 103.9
MS	W240EJ	95.9	Jackson	raise power to 99watts
MS	WXWX	96.3	Marietta	From Country to CHR as Wild 96.3
MS	W259CP	99.7	Booneville	95.3 the Bee (WADI 95.3)
MS	WWMR	102.9	Saltillo	unknown
MT	K236AB	95.5	Billings	From unknown to AC as 95.5 Lite FM
MT	K257AF	99.3	Butte	250watts
MT	KEZQ	93.1	West Yellowstone	Silent 10/30/22 xmtr install halted by bad weather
MT	K220JX	91.9	Missoula	change primary to KEFX 88.9
NC	WMGV	103.3	Newport	From V103.3 to Magic 103.3/95.5 (W238CF 95.5)
NC	WMJV	99.5	Grifton	From CHR to Hot AC as 99.5/97.5 The Wave (W248BS 97.5)
NC	W213BX	90.5	Brevard	change primary to WCQS-HD2
NC	W255CR	98.9	Franklin	change primary to WHLC 104.5
NC	WKIX-FM	102.5	Raleigh	changes to Kix 102 along with WKJO 102.3 and WPLW-FM 102.5
NC	W223DJ	92.5	Eden	Religious teaching, The Truth
NC	W248DG	97.5	Mayodan	Religious teaching, The Truth
ND	KTPT	97.9	Rapid City	Silent 4/12/22 extended thru April ‘23
NE	KRLK	90.1	Norfolk	New station, 4kw/77m, 41-55-59/97-40-50
NE	KHUY	89.9	Schuyler	New station, 7kw/132m, 41-30-35/97-03-29
NE	K255CJ	98.9	Briggs	Silent 3/8/22 lost antenna site, needs more time
NH	NEW	88.5	Hillsboro	135watts, 26m
NJ	WUPC-LP	102.3	Arrowhead Village	Silent 11/29/22 pending move
NJ	W230AA	93.9	Atlantic City	Silent 11/30/22 lost their lease
NJ	WHCY	106.3	Blairstown	From Hot AC to Country as 106.3 the Bear

NM	K229CL	93.7	Albuquerque	From Reg Mex to 80s Music as the Eighties Channel
NM	NEW	88.3	Black Rock	20watts, 108m, same location as Zuni Pueblo 91.9
NM	NEW	91.9	Zuni Pueblo	100watts, 108m, same location as Black Rock 88.3
NM	K216EA	91.1	Alamagordo	change primary to KEFX 88.9
NM	KCNM	91.3	Cimmaron	new station, 6kw/40m, 36-29-20/104-52-09
NV	KGHD-LD	87.7	Las Vegas	from silent to a mix of Hip Hop, Dance and Alt as Area 87.7
NV	NEW	90.9	Pahrump	1.5kw, -135m
NV	KOIF-LP	97.9	Las Vegas	Silent 9/4/22 for move to new location
NV	KXTE	107.5	Pahrump	From Rock to Talk as X107.5
NY	WDHI	100.3	Delhi	From Classic Hits to Classic Rock as 100.3 & 94.7 The Eagle
NY	WOYN	94.7	Deposit	From Classic Hits to Classic Rock as 100.3 & 94.7 The Eagle
NY	NEW	89.1	East Moriches L.I.	400watts, 31m
NY	WOBI	89.7	Oak Beach	Callsign for new station, 140watts, 34m, 40-38-44/73-15-37
NY	WCGN	91.7	Troupsburg	2.8kw, 118m
NY	W235AW	94.9	Monticello	move location
NY	W300DG	107.9	Greece	COL change from Milton NY
NY	W270BX	101.9	Rochester	COL change from Greece, reduce power to 13 watts
NY	W209CJ	89.7	Mount Kisco	change primary to WMNR 88.1
NY	W233AH	94.5	Monticello	Silent 11/21/22 lost site
NY	W248CG	97.5	New York	COL from Jersey City, reduce power to .099kw
NY	WINO	89.7	Odessa	change calls from WRFI. (WRFI changes to WINO)
NY	W264DG	100.7	Islip	Silent 11/28/22 xmtr issues
NY	W204CJ	88.7	Lake Placid	Silent 12/10/22; xmtr issues
NY	WFAS-FM	103.9	Bronxville	bought by VCY America
OH	NEW	88.1	Nevada	2kw, 83m
OH	NEW	89.7	Van Wert	1.7kw, 42m
OH	W265DJ	100.9	Mount Vernono	change primary to WQIO-HD2
OH	W277BI	103.3	Toledo	change primary to WTOD-HD2
OH	W270CI	101.9	Uhrichsville	The Tusk (WBTC 1540)
OK	NEW	89.7	Chickasha	100watts, 38m
OK	KZBS	104.3	Granite	Silent 11/25/22 antenna damaged
OK	K261CR	100.1	Chickasha	change primary to KNAH-HD4 99.7
OK	K206CI	89.1	Moorland	change primary to KEFX
OK	KQOB	96.9	Enid	From the Eagle 96.9 to Freedom 96.9
OK	K204EQ	88.7	Woodward	change primary to KAWZ 89.9
OR	NEW	90.1	Seaside	1KW, 125M
OR	KPRP-LP	99.1	Portland	change calls from KSFL-LP
OR	K219BH	91.7	Burns, etc	Silent 11/16/22 for antenna replacement
OR	K203FP	91.7	Burns, etc.	23watts, 43-34-23/119-07-52
OR	K210DP	89.9	Coos Bay	Silent 12/13/22, antenna damage
OR	KDLZ	101.5	The Dalles	change calls from KJYV
OR	K213CF	90.5	Grants Pass	change primary to KAWZ 89.9
OR	K203DY	88.5	Baker City	change primary to KAWZ 89.9
PA	W234BH	94.7	Berwick	COL change from Hazelton, drop power to 230 watts
PA	WLWG	91.7	Mount Pleasant	callsign for new station
PA	WPMN	89.3	Saxton	callsign for new station
PA	W298DJ	107.5	Muncy	move from 106.1, .25kw, 41-12-32/76-57-30
PA	WPPY	92.7	Starview	change calls from WNNU
PA	WRSC-FM	95.3	Bellefonte	change calls from WZWW
PA	WWJL	98.7	Pleasant Gap	change calls from WLEJ

RI	WNPO	88.9	Block Island	callsign for new station
RI	WNPH	90.7	Portsmouth	change calls from WNPK
RI	WNPK	91.9	Block Island	callsign for new station
SC	WQKI-FM	95.7	Orangeburg	From Classic R&B to Clasic Hip Hop as Jams 95.7
SD	k209FR	89.7	Aberdeen	change primary to KEFX
TN	WTSE	91.1	Benton	raise power to 8.5kw/142m
TX	KEGL	97.1	Fort Worth	From Rock to Talk as 97.1 The Freak
TX	NEW	88.1	Dalhart	1kw, 59m
TX	K274AX	102.7	Austin	raise power to 250watts
TX	K231BO	96.1	Belton	raise power to 172watts
TX	K274BL	102.7	Anthony	reduce power to 90watts; co-ord change
TX	KZLH-LP	95.7	Zapata	Silent 12/10/22; too many problems to mention
TX	KVWG	95.3	Dilley	Silent 12/7/22; storm damage
TX	K208DH	89.5	Amarillo	change primary to KEFX
TX	K287BQ	105.3	Houston	change primary to KKBQ-HD3 92.9
TX	NEW	90.7	Sunray	150watts/24m, 36-01-25/101-49-20
TX	K270CY	102.1	Austin	move from 94.1, .25kw, 30-19-24/97-47-59
TX	NEW	90.1	Rockdale	4/1kw/90m, 30-38-52/97-07-44
TX	KKHR	106.3	Abeline	From Star 106.3 to My106.3 (still Spanish CHR)
TX	KTWF	95.5	Scotland	From Classic Country to Classic Hits as K-Hits 95.5
TX	K280GN	103.9	Austin	Relevant Radio
TX	K286CX	105.1	Round Rock	Relevant Radio
TX	KLIF-FM	93.3	Haltom City	From CHR to AC as DFW's 90s and 2000s
TX	KFNC	97.5	Mont Boleau	ESPN 97.5 and 92.5 (K223CW 92.5)
UT	KIYK	107.3	St.George	From New Country 107.3/94.9 to Cat Country 107.3/94.9
UT	KCIN	94.9	Cedar City	From New Country 107.3/94.9 to Cat Country 107.3/94.9
UT	KPVO	99.9	Fountain Green	Silent 10/20/22 lost lease
Ut	K209FP	89.7	Ephraim	change primary to KAWZ 89.9
VA	W250BQ	97.9	Newport News	Silent 10/19/22 antenna failure
VA	W283BN	104.5	Danville	Silent 12/6/22 power problems
VA	WVMP	101.5	Vinton	Silent, goes online only
VI	WVIE	107.3	Charlotte Amalie	Silent 11/22/22 unsuitable tower location
WA	K277AE	103.3	Seattle	change primary to KNDD-HD2
WA	K203ER	88.5	Clarkston	change primary to KEFX
WA	K282AA	104.3	Kennewick	Silent 9/6/22 interference from another station
WI	W299CD	107.7	Richland Center	From Adult Standards to News as News From The Center
WI	W243ER	96.5	New Holstein	change freq from 93.9 (W230DA), 250 watts
WI	WGIF	90.1	Rice Lake	new station, 6kw/68m, 45-21-02/91-50-50
WI	WSBW	105.1	Ephraim	Silent 11/30/22 with technical issues
WI	W258CM	99.5	Madison	Silent 3/8/22 still pending move
WI	W245DQ	96.9	Waunakee	From Oldies to Rock as Wauna Rock
WI	W271DQ	102.1	Baraboo	From Oldies to Rock as Wauna Rock
WY	KLMI-FM1	106.1	Laramie	900 watts, move location

The **VHF-UHF Digest** is the Official Publication of the Worldwide TV-FM DX association, P.O. Box 501, Somersville, CT 06072. The WTFDA is decicated to the observation and study of the propagation of radio signals between 30mhz and 600mhz with emphasis on broadcast television and FM radio.

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