

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
FM Translator W235CN)	
Channel 235, Providence, RI)	FCC File no. BLFT-20171124AAA
)	FCC Letter 1800B3-PPD
Informal Objection of Red Wolf Broadcasting)	
Corporation)	
On behalf of WJFF, Montauk, NY.)	

**Engineering Assessment in Support of Opposition to
Informal Objection filed by Red Wolf Broadcasting Corporation.**

I. INTRODUCTION

Red Wolf Broadcasting Corporation, has filed an informal objection against the license grant of FM translator W235CN (FID# 41191), owned by Radio Sharon Foundation (Radio Sharon) in Providence, Rhode Island. To support their objection, Red Wolf Broadcasting Corporation (Red Wolf or WJFF), has submitted a complaint against interference allegedly caused by the operation of W235CN to listeners of WJFF (FID# 189488) in various areas of CT and RI. Red Wolf has asked the FCC to order W235CN to cease operations.

II. DISCUSSION

W235CN is currently licensed to operate from a tower site, in the middle of Providence, RI. The licensed antenna system fully protects the WJFF 60dB μ contour. WJFF is licensed to Montauk, NY, however, WJFF attempts to serve areas of coastal RI and CT,

although the closest areas of these states is more than 30+ km from the WJJF transmitter site. Several alleged WJJF listeners noted that WJJF's signal was already subject to problems prior to W235CN coming online. The WJJF tower is approximately 102km from W235CN's authorized location. Note that the 73.207 spacing between two class A stations is only 13km greater at 115km vs 102km actual spacing. Further, the spacing between 3kW class A stations is 105km, so this 250W translator is nearly as fully spaced as a 3kW class A facility. The 73.215 min spacing between class A stations is 92km. It's beyond all credulity that a class A station more than 60 miles and two states away would attempt to claim interference at this distance.

Red Wolf objects to the use of channel 235 by translator W235CN in Providence, R.I. and has submitted listener complaints of alleged interference to support its claim. Among these interference claims, many are demonstrably false. Radio Sharon believes that WJJF has trolled for complaints because the FCC will not allow a licensee, its principals or employees to complain about interference beyond its protected contour.

The WJJF objections are flawed and the listener complaints are highly dubious with some, if not nearly all, being either fraudulent or grossly mistaken as demonstrated by the following:

1. Nearly every complaint states that the interfering station identifies itself as "W300AC." Since Station W235CN identifies itself verbally on the air each and every hour as "W235CN", coinciding with the frequency it operates on and the call sign

attached to its License Application, not to mention the call letters which the FCC refers to the station in CDBS Public Access, there is no way any listeners could possibly have heard the call sign which they all claim to have heard, “W300AC”, when listening to Station W235CN.

Since multiple purported WJFF listeners claim to have actually heard this non-existent ID, those individuals' statements must be viewed as being absolutely false. Clearly, none of these listeners would have any reason to cite the previous call sign used by W235CN when it operated on 107.9 MHz when licensed to Chatsworth, New Jersey, hundreds of miles away unless provided that information by a broadcaster, like Red Wolf, that had knowledge about the translator, since its owner had very recently made an effort to acquire it.

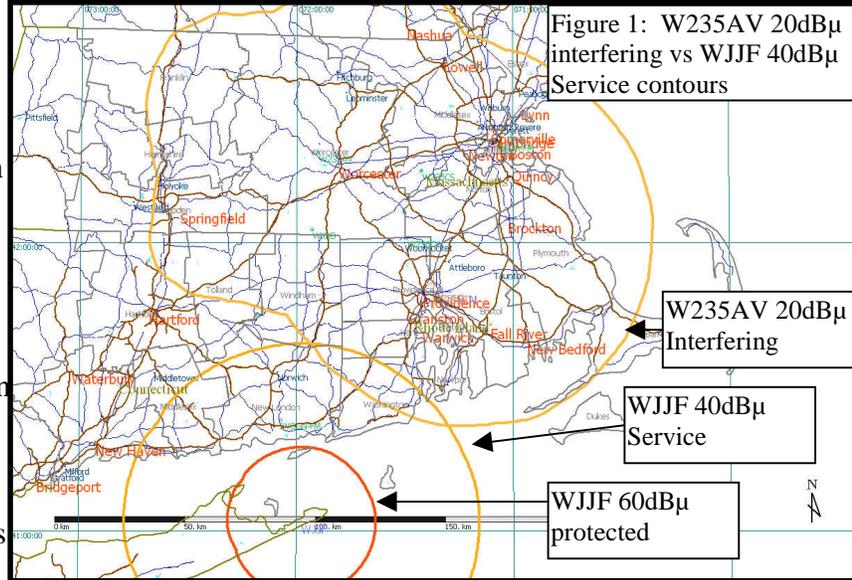
The fact that so many so-called listeners could allege interference by a station, W235CN, which they could not even properly identify, is not only revealing but shows that this entire proceeding is, basically, a sham. These complaints are from loyal Red Wolf listeners, though not necessarily those that actually listen to WJFF over the air. Some may even be listeners of other area Red Wolf stations and in an effort to ingratiate themselves with Red Wolf, have allowed themselves to be used and to sign anything placed in front of them. Not surprisingly, when offered the opportunity, most of these individuals refused to contact Radio Sharon, despite an offer of assistance in resolving their so-called interference problem.

2. Virtually all listeners reported routinely listening to WJFF at home, and while mobile. Because none of the complainants agreed to meet with Radio Sharon representatives, Radio Sharon could not ascertain the cause of the complainants' difficulties. Therefore, Radio Sharon took it upon itself to investigate the reported interference. We would have expected Red Wolf to have already vetted the complainants' claims, but extensive, and well documented, drive testing of the WJFF and W235CN signals reveals that there does not appear to be any interference to WJFF caused by the operation of W235CN. Further, it is very obvious that WJFF's mobile receiver coverage is, generally, limited to somewhere around the 45dB μ contour. Beyond that, the WJFF signal is below the noise floor for appreciably long periods of time in many regions. Claims of interference seem to simply be the result of a weak signal dropping to the noise floor. If W235CN is weakly audible in some places where WJFF has no useful signal adds to the illusion, created by Red Wolf in the minds of the listeners, that W235CN is the cause of the interference, but it is not.

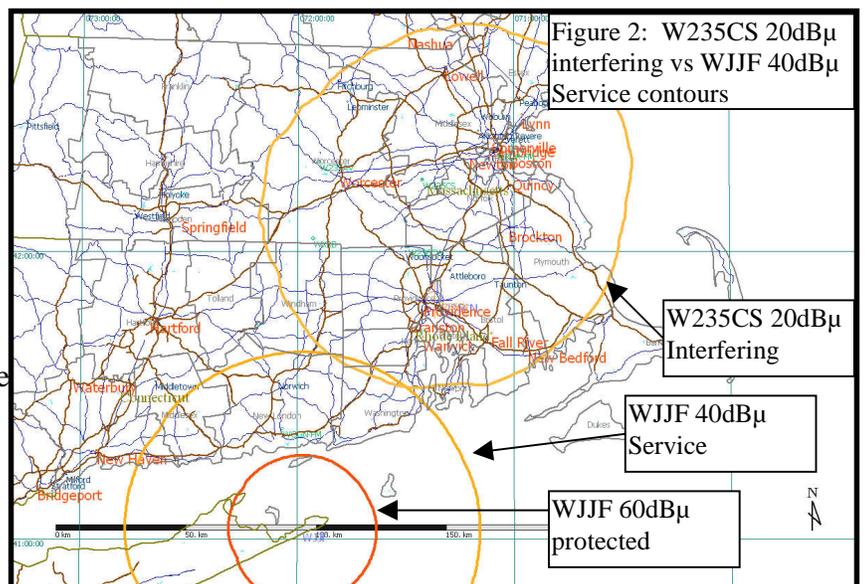
3. In certain locations described in the above section 2, not only could WJFF not be heard when W235CN was turned off, but other translator signals could be heard over the WJFF signal. Video of all drive test investigations were dutifully recorded by W235CN staff and are presented at the end of this report as Exhibit A.

4. Proper identification is especially important in this case due to unique other signals present in the area. Two other translators produce signals that interfere with or completely mask WJJF's extremely weak signal in these areas when W235CN's carrier is turned off. W235AV airs

a news/talk format easily confused with WJJF. In areas north and west of Providence and at many listeners' reported listening locations, W235AV captures receivers and prevents regularly useable reception of WJJF. Because the formats of WJJF and W235AV are very similar, combined with the fact that W235AV is the dominant signal in many azimuths, casts doubt whether the listeners even know if they are, or are not, listening to WJJF.

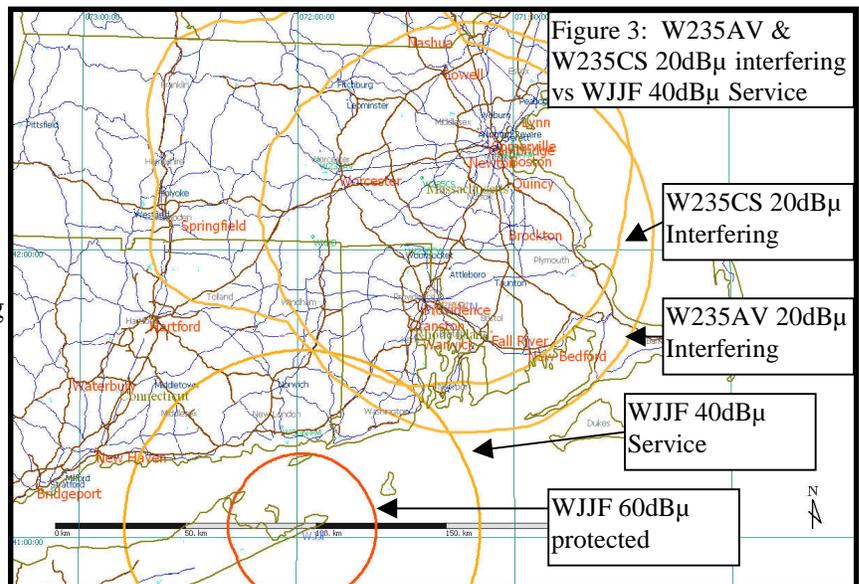


5. In addition to W235AV, FM translator W235CS airs a Spanish language format similar to W235CN. With W235CN turned off, W235CS interferes with WJJF in the Providence area. In a strange coincidence, W235CS identifies



itself with the same moniker as W235CN, “La Mega 94.9”, with only the actual translator and primary stations’ call signs being different from W235CN. Even the translator’s call sign is similar, W235CS vs W235CN. Since the listeners have not positively identified W235CN as the interfering signal and none have indicated a willingness to meet with Radio Sharon representatives, we could not help them determine if there was interference or identify any suspected interference causes.

When predicting co-channel interference, a desired to undesired ratio of 20dB μ was used, consistent with the FCC’s method of determining the threshold of interference for co-channel signals. A receive threshold of 40dB μ was assumed to be the lower



maximum limit of reasonable mobile reception of the WJFF signal because the interfering signals from other sources already cause significant reception problems, even at 40dB μ . In most cases, a 40dB μ signal will already be subject to significant reception problems even without co-channel interference. Empirical testing later confirmed that 40dB μ was a generous limit because the actual WJFF signal was generally unlistenable at the 40dB μ threshold. We also note that, as a listener travels north away from the WJFF antenna, the interfering translator signals grow progressively stronger as WJFF grows weaker. South

of Providence, the interfering 30dB μ contours from W235AV and W235CS are equal to WJFF's 30dB μ service contour. As a result, not only is WJFF not a regularly received signal in these locations, the interfering signals become progressively more dominant, capturing the receivers at more than 10% of the locations and rendering WJFF far less than a regularly received signal, even with W235CN turned off. In areas of Providence and north, these other signals are completely dominant thus rendering WJFF as the interfering signal and making it impossible for any of the complainants from these quadrants to be regular listeners of WJFF's over-the-air signal, despite their claims otherwise. The engineering models of these areas are confirmed by actual empirical tests by Radio Sharon at the listeners' location that clearly demonstrate that the predictions are correct that WJFF is not a listen-able signal in these areas.

In addition to the listener mis-identifications and possible fraud on the FCC, W235CN has reduced its power by 2/3 in a good faith effort to mitigate any possible real interference. None of the complainants indicated that they were still receiving interference after the reduction and wanted help resolving it, thus a reasonable conclusion can be made that the listeners are either satisfied or never really cared in the first place.

The FCC letter (# 1800B3-PPD) of February 7, 2018 directed Radio Sharon that "...it is necessary for W235CN to submit a detailed report on each complaint even if the complainant might have been addressed in a previous proceeding. For each complaint, the report must include: (1) the name and address of the complainant; (2) specific devices receiving the interference (i.e. type of device, manufacturer's name, model number, and

serial number); and (3) any assistance provided by W235CN for each device allegedly receiving the interference and whether such interference persists.”.

The Radio Sharon listener survey was sent out to each complainant and included questions addressing requirements 1 and 2 above and offering assistance on requirement 3. To date, nearly two full months after the surveys were sent out, only one survey has been returned, even though a reasonable deadline for returning them was set. Several weeks after the original return deadline, a few listeners belatedly submitted a completely different survey. The substitute surveys are on identical forms and were apparently produced by WJFF, and designed to be as unhelpful as possible. In being unhelpful, WJFF succeeded magnificently. The result of WJFF’s meddling between the listeners and Radio Sharon was that, in most cases, the returned forms provide even less information than the original complaints and utterly failed to address either requirements 2 or 3 (see attachment). As a result, these listeners have been uncooperative and Radio Sharon could not help them.

Radio Sharon has received no correspondence with listeners that indicated that the power reduction was ineffective or that the listeners were still receiving interference, nor has actual interference from W235CN even been demonstrated. In many cases, listener complaints refer to static or unknown stations. None have actually identified W235CN as the interfering signal. One survey indicated continuing interference, but that listener, specifically declined assistance, so it was impossible to determine if W235CN was the

source. Radio Sharon's video-documented drive tests show that claims of interference from WJFF's listeners appear to be totally meritless.

The attached "Exhibit A" describes the Radio Sharon drive tests, which were undertaken in a good faith effort to establish if there was any merit to listener claims of interference. The videos document where each was taken and these videos are made while mobile in locations of reported interference. The videos are short enough to be tolerable but long enough to establish the general conditions that exist at every location tested. The W235CN transmitter is repeatedly turned on and off, on video, to show if it can be heard or if it has any impact on the WJFF signal. The routes or locations being traveled are clearly visible on the GPS map. Each video is at least several minutes long and gives the viewer an opportunity to experience the WJFF signal, or lack of signal, at each location and also in the vicinity nearby. Despite significant testing, no objectionable interference was detected from W235CN at any of the areas tested. All areas that were tested were places where interference was reported by complainants. Testing was done at enough locations to establish that there is an R.F. no-man's-land or buffer space between where the WJFF signal fades away and where the W235CN signal can finally be detected. I strongly suggest that any interested parties review all of the videos, in their entirety, because they are very enlightening.

III. CONCLUSION

WJFF's informal objection makes unsupported claims and draws conclusions that are not in keeping with the facts. Because of the technical problems with the WJFF informal objection and the empirical tests done around the alleged interference areas that demonstrate that WJFF is not a regularly receivable signal and combined with the fact that W235CN has no effect on the WJFF signal, regardless of how weak that signal is, make it obvious that complaints provided by WJFF are severely tainted by fraud or fallacy and are without merit. It appears that WJFF has gone beyond simply aggregating listener complaints or providing routine assistance to the listeners. WJFF trolled for listeners and seems to be manipulating them for their own desires to silence a competitor to their own Spanish language station in Providence. In some cases, "listeners" are obviously "gaming the system" in a misguided attempt to silence that "pesky" Spanish language station and help Red Wolf.

In other cases, some listeners could believe parts of what they have reported. These listeners have an expectation of interference and a heightened awareness of the WJFF signal after having been trolled by Red Wolf to expect interference. This is the power of suggestion at work. Now that they are listening more often and also more acutely, they are noticing noise much more. The suggestion from WJFF that the new Spanish language FM signal on 94.9 in Providence is causing interference, induces the listeners to erroneously report interference where weak reception occurs but no interference exists. These listeners appear to be mis-identifying WJFF's weak signal noise as interference

from W235CN. This illusion is compounded by the fact that they can actually hear W235CN pop in through the static as they get closer to Providence. They think, 'Ah Ha! I can hear the Spanish station interference!', notwithstanding the fact that WJFF is no longer a useful signal where W235CN can finally be heard.

Further, all attempts at gathering more detailed and necessary information by Radio Sharon have failed because the listeners have been uncooperative in all attempts to discuss or demonstrate the alleged interference.

As a result of serious defects in the informal objection and the uncooperative nature of the complainants, apparently under the influence or control of WJFF, there is no further need for Radio Sharon to take additional action on the informal objection of Red Wolf. Radio Sharon's well documented drive tests indicate that no such interference exists. The videos of all drive tests are unedited and available to view online. The results are self-explanatory. This objection should be dismissed and the license grant of W235CN reinstated.

Respectfully Submitted,

/S/

Barry J. Magrill, PE.
Engineering Consultant to
Radio Sharon Foundation.

Exhibit A: Drive Test Data Summary

<https://1drv.ms/v/s!Ank5m1tDEIRcmROp9mFqf4VsjSRA>

L-15 Carol Thomas 1554 Feb 11, 2018
6 Garwaine Drive
Lincoln, RI

W235CN is running 250W ERP. This video portrays the drive to Carol Thomas house at 6 Garwaine Drive. When W235CN is turned off remotely no other station is heard. Nothing audible is heard along entirety of her block. No other station is heard and the path is traced on Mr Perdomo's I-phone GPS which is visible in the video. There is nothing to be heard except static which fits the propagation models well.

Mr. Perdomo switches his translator on and off several times. The translator is heard when it is on, but only static is heard when the translator is off. WJFF has no signal in this area.

<https://1drv.ms/v/s!Ank5m1tDEIRcmRL7IBwnIk-9Poyk>

L-9 Glenn Sulmassy 1624 Feb 11,2018
1150 Douglas Pike
Smithfield, RI

W235CN is turned off and translator W235AV is heard in English. W235AV is heard airing "Handle on the Law". The W235AV reception varies from a weak to a strong signal. W235AV gives an ID indicating WTAG is its primary station. This site is between the W235AV 40 and 20 dBu predicted interfering contours. WJFF cannot be heard during this trip and it is unlikely it could be heard since there is a swamping signal from another translator (W235AV) on the air. Glenn Sulmassy has a professional relationship with WJFF. He works for WJFF, a conflict of interest.

This information is available via Facebook.

https://1drv.ms/v/s!Ank5m1tDEIRcmRb9sU_WKykxTI3h

L-12 Lima Family 1205 Jan 29, 2018
309 little Pond Road.
Cumberland, RI

With W235CN turned off, at this site one can hear W235CS broadcasting in Spanish and W235AV broadcasting in English. W235AV was broadcasting Rush Lindbaugh. W235CS is transmitting an audible Spanish signal but WJFF is not heard even when moving slowly. If it can't be heard with an automotive radio, it probably cannot be heard on an in home receiver even with a directional antenna due to the swamping effect of radio signals from W235CS and W235AV. Thus it is unlikely that L-12 could be regular listeners of WJFF at home, as they indicated in their complaint. This is even more unlikely since W235CS was licensed August 7, 2017 and W235AV was licensed in 2007. This is why it is important to have correct detailed information. These people may have turned on their radio and assumed that they were hearing W235CN when in fact they were listening to W235CS. W235CN is audible when turned on, but WJFF is not audible with W235CN silenced. Because of the two other signals present and WJFF with no audible signal in the area, these people cannot be listening to WJFF at home, as they claim.

https://1drv.ms/v/s!Ank5m1tDElRcmR_3k26xJsSWL24V

L-3 David Mossberg 1258 Mar 15, 2018
94 Underwood Dr
Warwick, RI

With W235CN turned off in front of 94 Underwood Drive, no other radio station is heard. Only static can be heard as the car drives around the block. There is no hint of WJFF's signal which fits nicely the model of predicted signal strength which says that the WWJF signal would have much less than a 40 dBu signal which would be in the noise floor for most radios.

<https://1drv.ms/v/s!Ank5m1tDElRcmR5dHmedbjvK9iFg>

L-1 John Botello 1320 Mar 4, 2018
9 Davis Street
West Warwick, RI 02893

A stop is made in front of 9 Davis Street. The W235CN translator is silenced and nothing but static is heard. Driving around the block nothing is heard until the last when a very weak signal is heard playing music. It is too weak to ID, but occurs when W235CN is returned to the air. John Botello, Jr is part of the WWRI-LP sportscast according to Facebook. WWRI is a 1st Adjacent LP to W235CN. Employees of radio stations probably do not qualify as casual listeners. In his initial complaint dated Nov 8, 2017 Mr. Botello says a new station is interfering with his reception of WJFF. W235CN commenced operations November 24, 2017, two weeks **after** Mr. Botello's letter. Effectively, if Mr. Botello is to be believed, he was clearly already receiving interference before W235CN began broadcasting. Either that or he had an amazing future

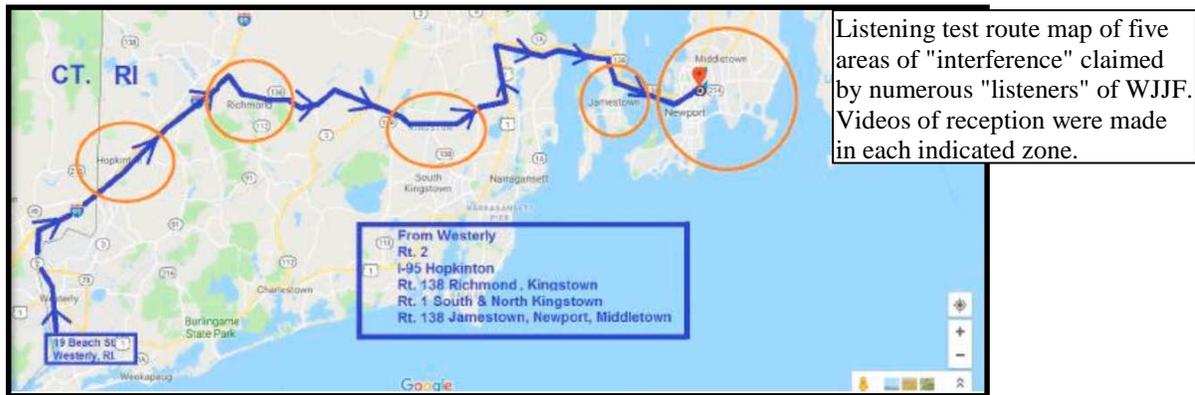
premonition. Since WWRI is a first adjacent signal to W235CN, there is a real conflict in that the WWRI signal would benefit if W235CN were to be silenced.

<https://1drv.ms/v/s!Ank5m1tDEIRcmSDiURQ1nxabWaM3>

L-11 Mikayla Labb 1507 Mar 4, 2018
2 Fox Meadow Drive
Johnson, RI 02919

W235CN is switched off . There is no signal from WJFF heard. Instead W235AV rebroadcasting WTAG is heard broadcasting a station promotional ID. W235AV is heard varying in signal from strong to weak with another Spanish translator (W235CS?) as predicted by our Propagation modeling software. Due to the power of W235AV at her location it is very doubtful Ms. Labb can hear WJFF at her residence, Even with a directional antenna.

The map below and the next five videos described on the following page were made on a drive test from listener 3A's location at 19 Beach Street in Westerly, RI to Middletown, RI. There are several listener addresses near L3A and multiple reports of severe interference from W235CN to WJFF along I-95 and Route 138 with reports of interference extending all the way to Jamestown, Newport and Middletown, RI. The route map is shown below. W235CN was turned off and on at multiple locations along the route in each video to demonstrate that it had no effect on the reception of WJFF. The radio used is a factory installed Nissan automotive receiver with a diversity receive system. This receive setup is an example of the current standard in consumer radios. Nowhere along the entire drive path can W235CN be heard, even when WJFF's own signal has faded to the noise floor. Further, W235CN has no noticeable effect on WJFF's signal in places where it (WJFF) can be heard. The video also demonstrates that WJFF's signal is much too poor to rise to the level of a regularly received broadcast along much of the route.



From Westerly to Richmond, RT. 2, i-95N, Rt. 138.
<https://drive.google.com/file/d/11MEizMGUmbiihfG1knx12zltI4pDPElq/view?usp=sharing>

L3A William Gingerella 1252 Mar 11, 2018
19 Beach Street
Westerly, RI 02891

W235CN is on at 75 W ERP and one can clearly hear WJFF. W235CN is turned off and there is no difference in reception. Mr. Perdomo drives through Westerly, RI. WJFF comes through regardless regardless of whether W235CN is on or off. With W235CN turned off, WJFF's signal is weak and exhibits Raleigh fading, or drop-outs in the signal. There is also selective fading and significant multipath resulting in severe distortion to the WJFF audio. This occurs when W235CN is off the air. But it also occurs when W235CN is switched on. No interference seems to be associated with W235CN regardless of whether it is on or off.



L3A
William Gingerella
19 Beach Street
Westerly, RI 02891

I-95 to 102 to 138 Kingston to Exeter to Middleton

<https://drive.google.com/file/d/1N4zqGN18xBrGWde7wKFWr4eJjiBnvhhP/view?usp=sharing>

Near the beginning of the route near 138 and Richmond WJFF is heard as a weak distorted signal but the W235CN translator is off. It is turned on and there is no difference to the WJFF signal. WJFF is suffering from moderate to severe selective fading. No interference is received from W235CN which is demonstrated by switching W235CN off and on without creating any interference to the received WJFF signal.

From Richmond, RI. to Newport, Middletown, RI.
<https://drive.google.com/file/d/1r2lYHhE-QBZNQzPSbPPFZKIYNw3SSg8k/view?usp=sharing>

Mar 11, 2018

Near Richmond, WJFF is highly noisy both with W235CN turned on or turned off. There is no audible difference depending on the state of W235CN. When W235CN is off another station (not in Spanish) pops in, at the South of North Kingston on I-95 just North of 138. WJFF has very deep fades and has highly distorted audio.

Route 138 to Middletown
https://drive.google.com/file/d/1dcpw68YiIxcocPweK6iV-qedQA33tQ_N/view?usp=sharing

There is no reception of WJFF as the vehicle approaches 1A on Route 138. Just an occasional word or two is heard. WJFF is essentially under the noise floor. WJFF is only heard in patches. Turning on W235CN doesn't create any hint of signal. WJFF is again heard on the bridge over the river but not on the land. In fact, it can only be heard reasonably well on the bridge over the river. Turning on W1235CN does not affect the WJFF signal at all.

Video in Middletown streets areas
<https://drive.google.com/file/d/1r2lYHhE-QBZNQzPSbPPFZKIYNw3SSg8k/view?usp=sharing>

Mar 11, 2018

WJFF has limited coverage to this area. W235CN can not be heard...not even once. Another station is heard for just a second but disappears quickly. It is heard at a time when W235CN is off the air. The other station is unidentified, but is not W235CN and also does not appear to have been WJFF.

Failure to identify W235CN

At the top of the hour, 24 hours per day

The Legal ID for W235CN is a combination of Spanish and English. It is

Este es (WSTL, W229AM, W235CN ... in English)

Nueve quatro bundo nueve (94.9 in Spanish)

Providence, Rhode Island (in English)

La Formosa is La Mega (OMG Female voice in English) Mega 949

This is the only ID that W235CN has been broadcasting.

<https://1drv.ms/u/s!Ank5m1tDEIRcmRFRc2OGVyd9isv>

Yet most complainants have said that the broadcast ID of the interfering station is "W300CA-WSTL". Obviously, none of them actually know what the alleged interference is from and may not even have heard W235CN at all. What they are really noticing is that WJFF has a poor signal and, because of the power of suggestion from being trolled by Red Wolf, they attribute the weak WJFF signal with interference from W235CN. Additionally, there are two other translators that demonstrably are audible when W235CN is off the air. It's entirely possible that W235CS, which also broadcasts in Spanish, was heard. Further, W235CN, which can be heard in the Providence area, is being accused of causing interference to WJFF when WJFF is not a regularly listenable signal, even by the wildest stretch of one's imagination. Just because a listener can hear another station does not mean that it is actually interfering. Interference only occurs if the affected signal is strong enough to be received but is audibly compromised by the interfering signal. Computer models and video evidence both show that this does not happen in the case of WJFF.

Sincerely,

/S/

Barry Magrill, PE

Fl Reg 45305

March 21, 2018