FT70D High Power Problems

Category: Fusion,Troubleshooting
February 14, 2023
The other day I was working my Fusion repeater with my FT70D. Since I was “DX” I had the HT on high power. Although it looked like I was getting into the repeater just fine, I couldn’t enter the WiRES-X control mode. However when I switched to low power I WAS able to control the repeater.

What gives? Why could I control the repeater (node) on high power, but not on low power?

Back at the house where my repeater is located, the problem still existed. I could use the WiRES-X control mode on low power but not on high power. Since I’m within 10 meters of the repeater, signal strength couldn’t be an issue.

Looking at the output spectrum of the FT70 revealed the problem. On high power there were some spurs that shouldn’t have been there. The spurs were much weaker on low power. Other radios didn’t exhibit the spurs. Click on the images to compare and see the details.


FT70D spectrum on low power

FT70D on High Power

Date and Time

Category: Date and Time
February 14, 2023

Link	Site	Notes
https://time.is/	Verify the time settting on your computer. Essestial for HF digital modes.	
http://www.thinkman.com/dimension4/	Tool to automatically and accurately set your computer time. Essential for digital modes.	
http://www.timebie.com/std/utc.php	Calculate time zones.	
https://www.timeanddate.com/	Outstanding and fun site for anything to do with dates and time.	

WSPR and FT8 Links

Category: HF Digital Modes
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Site	Purpose	Notes

https://en.wikipedia.org/wiki/WSJT_(amateur_radio_software)	About the WSJT software	
https://en.wikipedia.org/wiki/Joseph_Hooton_Taylor_Jr.	About the Author	
http://physics.princeton.edu/pulsar/K1JT/wsjtx.html	Home Page	
https://en.wikipedia.org/wiki/WSJT_(amateur_radio_software)	Source Code	
http://physics.princeton.edu/pulsar/K1JT/Moonbounce_at_Arecibo.pdf	Running Moonbouce!	
http://www.g4ilo.com/wspr.html	Article	
http://www.qrp-labs.com/	WSPR kits and other cool stuff	
http://wsprnet.org/drupal/	Montor WSPR signals around the world	
https://www.n1rwy.org/?p=157	Set up the FT-991 to run digital modes.	
Date and Time	Check here for tools to set your PC’s time. Essential for these modes.	

C4FM Audio Quality

Category: Fusion
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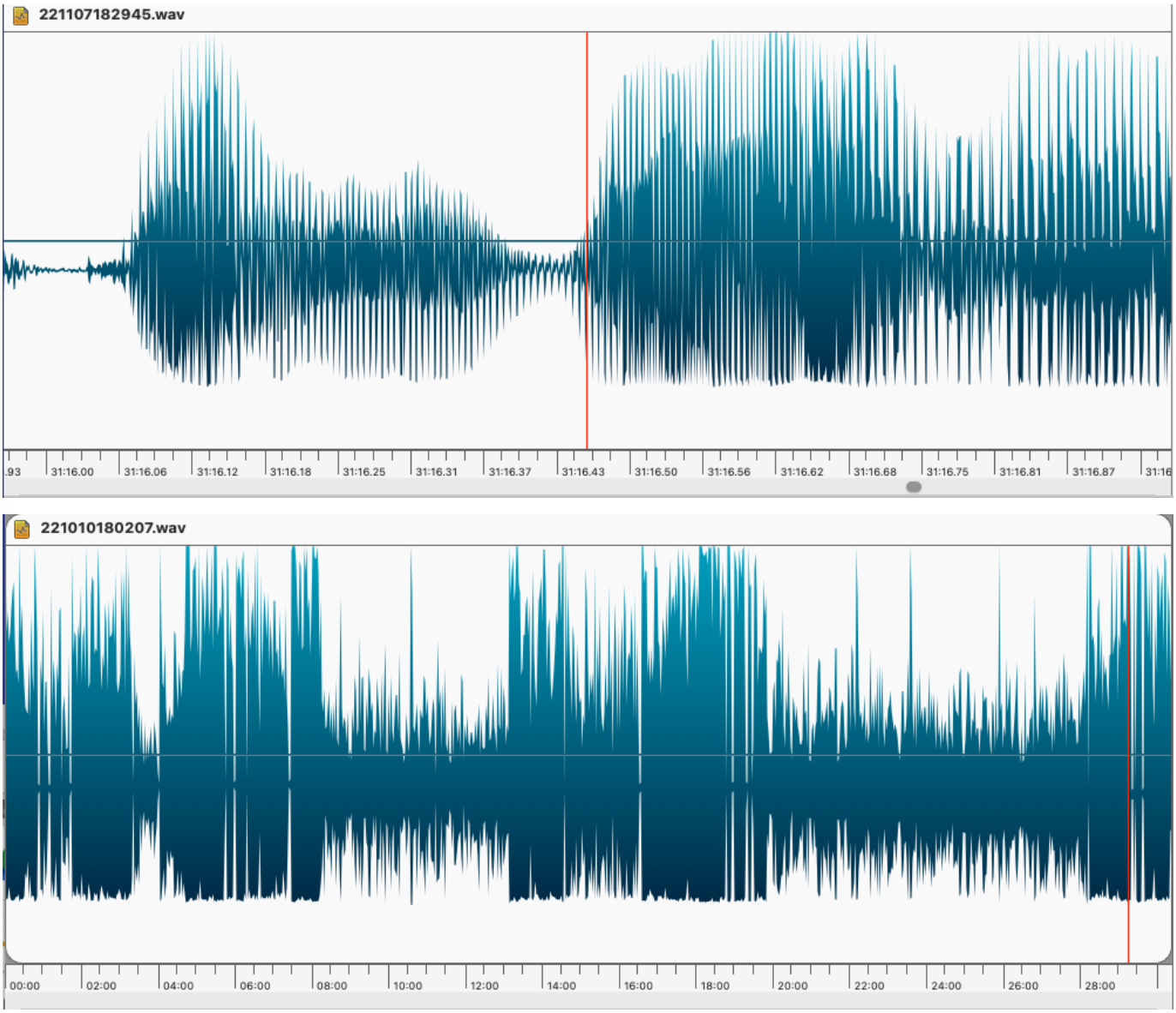
Photos show the waveform capture from an FT5 during a MNWis net. Note that they are not symmetrical around zero. The 2nd image has more detail and you can see that the waveforms are not symmetrical. The clipping sound is heard when the audio level hits the limits even though it is still not at 100%. Odd.



Waveform of MNWis net