

Radio issue while in AM mode and...



[Devon Wartluft](#) 190 posts since Jan 31, 2018

Radio issue while in AM mode and inverter on Feb 11, 2021 11:30 PM

What do you guys think of this. Radio is on in AM mode, while factory installed inverter is turned on. Doing it units LH3819 miles 275k and two brand new unit MV2902 and MV2903.

Tags: radio, p4, inverter, am



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 2:43 AM

It reads like your inverter is causing Radio Frequency Interference (RFI). AM is more susceptible than FM.

The closest the inverter and radio get to each other would be the Inverter + cable connected to the outside of the BCA and the antenna coax runs closely past the inside connections of the BCA.

I could not make out all you said in the video. Was it just the inverter being turned on and nothing plugged into any outlet. Doesn't necessarily have to be an appliance that is turned on to cause RFI. Try disconnecting the outlets (orange cables next to inverter). Inverter connections all tight? I have had issues with a ground tripping the GFCI, [EATON inverter GFI tripping](#). Perhaps it could cause your symptom.

Swapping inverters to see if problem follows the inverter.

I'm not convinced the radio is the problem, it works with the inverter off, but you could compare Seek Sensitivity between trucks. - The display will show SEEK SENS and the current level from -2 to +2. Rotate the knob clockwise to increase the Sensitivity value and counterclockwise to decrease it. Press the Knob to select the desired option. This option is only available when radio is playing Tuner Mode. Or swap radios between trucks to see if the problem follows.



[Devon Wartluft](#) 190 posts since Jan 31, 2018

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 2:35 PM

How it has played out. I had unit LH3819 at 27k miles come in with this complaint that once the inverter was turned on and the radio was in AM mode id get that noise. The driver turns the inverter off the radio is good to go. So far it doesn't matter if anything is plugged into the inverter or not. I've even unplugged the wiring at the inverter to the outlets. Issue is present whether idling or just key on. The video it took was in a different unit a brand new unit because as a wild hair i figured i best try a different unit. In the two brand new trucks i tried it on the issue if more noticeable.

When the inverter is running all the outlets are operating properly and not tripping breakers.

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I'm thinking were looking at the an RFI issue you mentioned cause a few other phone calls I've made they have mentioned something similar. I've got a feeling that this is just an unattended issue with the system.



[Devon Wartluft](#) 190 posts since Jan 31, 2018

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 2:44 PM

Called Xantrax the issue is caused because the inverter is modified sin wave and like you said how it emits RFI or some other things. AM frequencies cant handle that. If you want a true sin wave need to go with a Freedom XC2000 or similar true sin wave inverter.



[Devon Wartluft](#) 190 posts since Jan 31, 2018

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 2:45 PM

Sorry sine wave not "sin wave"



[Jesse Gutierrez](#) 496 posts since Mar 5, 2017

Re: Radio issue while in AM mode and inverter on Feb 13, 2021 5:05 AM

Basically the am radio is picking up the A/C Sine waves from the inverter ?



[Scott Trippel](#) 4,094 posts since Dec 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 6:12 PM

Would an RF choke help? what do you think [Michael Palumbo](#)

Is it a factory installed inverter? If so DTNA should be made aware of it.



[Devon Wartluft](#) 190 posts since Jan 31, 2018

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 6:40 PM

Yes factory installed inverter. But now I'm not sure a True sine wave will help either. The LH3819 unit has a xantrax modified sine wave and the MV2902 unit has an eaton pure(true) sine wave.

Can you please explain ad RF choke and I've had a few guys mention a filter. When it comes to radio and signals I'm pretty green on experiance.

Yes I'm working with my DSM and were getting a Dealer Product Report typed as well.



[Scott Trippel](#) 4,094 posts since Dec 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 7:52 PM

See this thread

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[SS 1022974 WST Western Star static noise feedba... | DTNA Solutions](#)

We had an issue with non factory UHF radios causing the outside air temp to squeal when the mic was keyed. The choke did not help. But we were able to fix it by getting the antennas farther away from the cab body.



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 12, 2021 8:09 PM

I don't think an RF choke will help with AM. I'll reference an article I was reading, grain of salt for sure, but it makes a lot of sense when combined with Devon's symptoms. <https://radiojayallen.com/combating-am-and-sw-interference/>

I want to quote one sentence from the third paragraph.

It's an unfortunate fact that many modern electrical devices generate AM interference...after all that's one reason why FM was invented.

Back when I didn't know left loose from righty tighty I drove a newer at the time Transtar. Could only pick up a few, close by AM stations unless the headlamps were on. With lamps on I once got a WGN Cubs game from south western Utah. No idea how that worked. Felt silly driving with headlamps on during daylight back then.



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 13, 2021 3:42 PM

This is a shot in the dark. You might verify the radio ground is connected to GND-E_1A splice pack and not one of the other GND splice packs.

References G66-04663-010 and A66-10341-000



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: Radio issue while in AM mode and inverter on Feb 13, 2021 4:08 PM

You might try turning the bunk speakers off at the bunk speaker switch.



[Sean Evans](#) 478 posts since Nov 12, 2014

Re: Radio issue while in AM mode and inverter on Feb 13, 2021 5:17 PM

I have HID fog lights on my F150, the ballasts cause a lot of interference when they are on, I tried a few things to make it better, but from my research a Faraday Cage around the source of the EMI is the only really tried and true method to cut down on interference.



[Sean Evans](#) 478 posts since Nov 12, 2014

Re: Radio issue while in AM mode and inverter on Feb 13, 2021 5:28 PM

Radio issue while in AM mode and...

Might be worth contacting these guys ---> [EMI Shield](#), [RFI Shielding](#), [RF Shields](#), [EMI Shielding Gasket Materials](#)