

Valley Radio Club of Oregon
Eugene, Oregon
W7PXL

RFI Group

Radio Frequency Interference:

**An Information Handout
provided by
The Valley Radio Club
of Oregon**

Established 1932

What is RFI?

RFI stands for Radio Frequency Interference. Radio Frequency interference is anything which causes interference to any Federally licensed radio operation(s) within the United States of America or it's possessions. Radio Frequency Interference is often called RFI by those in the business of communications, and it causes many types of problems, such as:

- Visual/audible noise on Televisions (snow)
- Interference to operational Federally licensed radio stations
- Static on AM, or FM radios, or stereo equipment

Why is RFI bad?

RFI negatively impacts radio communications as well as potentially degrading the proper operation of consumer electronics. RFI sources can and do interfere with the efficient use of many areas of the radio spectrum. In some cases, this can cause problems such as interference with your favorite TV program, to degrading critical communication infrastructure used to protect life and property. The Federal Communications Commission is tasked with the responsibility of keeping the radio frequency spectrum used within the United States useful to the entities it licenses. Some of those entities are:

- **Police/Fire**
- **Amateur Radio**
- **Radio and Television Broadcasting**

Why am I getting this handout?

You are receiving this handout because a possible Radio Frequency Interference source or sources have been identified in your area, and may be causing interference to at least one the following communications systems/stations listed below:

- **Police Communications**
- **Fire Communications**
- **Power Companies**
- **Amateur Radio**
- **Broadcast TV**
- **Broadcast Radio**
- **Cellular Phone**
- **Cable TV**
- **Cable Internet**
- **DSL Internet**
- **Wireless Internet**
- **In Home Wireless Telephones**

This handout is part of a program sponsored by the Valley Radio Club to attempt to solved this problem at a local level in order to avoid possible Federal enforcement action(s).

What causes RFI?

RFI can be generated from numerous sources. They can include:

- **Loose or poor electrical connections within distribution and building electrical systems.**
- **Poorly designed or manufactured consumer electronics which may be in violation of Federal Communications Commission part 15 rules and regulations.**
- **Plasma TV's**
- **Lighting and lamp Dimmers**
- **Electric Motors**
- **Indoor high power grow lighting systems**
- **Aquarium Heaters**
- **Door Bell Transformers**
- **Older Compact Fluorescent Lamps**
- **Floor Heaters**
- **Neon Signs**
- **Electric Fences**
- **Power Tools**

RFI TIP:

RFI can be dangerous: Something shorting out can generate RFI and it can also start a fire!

Who is responsible for enforcement actions relating to RFI?

The Federal Communications Commission (FCC) licenses radio transmission and reception stations in the United States. As part of that responsibility, the FCC is the regulatory agency charged with maintaining the licensed radio frequencies to be free of harmful interference, (RFI).

Such licensed frequencies include those used by fire, police, cellular phone services, cable TV, amateur radio, as well as commercial radio and television broadcasting. Ultimately, it is the Federal Communications Commissions responsibility to take enforcement actions against those generating RFI that negatively impacts the authorized users of licensed radio frequencies.

More information about the Federal Communications Commission and their role in addressing RFI issues can be found at the following links:

<https://www.fcc.gov/enforcement-bureau>

<http://www.ecfr.gov/cgi-bin/text-idx?node=47:1.0.1.1.16#sp47.1.15.b>

The Valley Radio Club, (VRC), is not an RFI regulatory body nor associated with any governmental or utility agency.

The Valley Radio Club, (VRC), believes that identifying and correcting RFI issues in a non-confrontational manner, at the local level, is the best approach for all concerned. The VRC further believes it can offer an effective local approach to addressing RFI issues in the Eugene-Springfield community before they are escalated to the level of the Federal Communications Commission for enforcement actions.

How can I identify active RFI sources?

If the source is affecting you directly, you may notice any of the following symptoms:

- **Static in your AM or FM radio**
- **Intermittent wireless Internet connections**
- **Computers may reboot for no apparent reason**
- **Your lights may flicker**
- **Your cordless phone may have static**
- **Comments from your neighbors that they are suffering from any of the above issues.**

You may also be affecting others and not even know it! There are a number of people available from the Valley Radio Club to assist you in locating these possible problem(s), all of whom will assist you free of charge. Again this service is free of charge, and no one will attempt to sell you or obligate you to anything.

We are looking to locate and solve the RFI problems is all. We are trying to avoid Federal Communications Commission involvement.

If you would contact us at 458-210-6409, we can schedule a visit to your home and assist you in testing for RFI. You are in control of this test, it can be done without entry into your home, or if you like, two of our members will assist you in locating RFI sources within your home, again it is up to you how we proceed with testing. All members of the VRC will have identification badges and will show them to you prior to any interaction. Again, this service is completely free and without obligation of any kind.

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More information about RFI

The Valley Radio Club of Oregon:

<http://www.valleyradioclub.org/rfi.html>

Filters for RFI:

<http://www.morganmfg.us/radio-products/ac-line-filters-protectors/>

http://www.w0qe.com/RF_Interference/grow_light_electronic_ballasts.html

<http://www.galaxyballasts.com/products/grow-amp-ballast-series/1000-w-select-a-watt-turbo-charge.aspx>

<http://growershouse.com/nanolux-rf-filter-set-reduce-rf-interference>

<https://www.hydrofarm.com/p/BAF2020>

The American Radio Relay League:

<http://www.arrl.org/news/colorado-ham-tracks-down-resolves-interference-from-pot-cultivators-grow-lights>

<http://www.arrl.org/radio-frequency-interference-rfi>

<http://www.arrl.org/regulatory-rfi-information>

<http://www.arrl.org/fcc-rfi-information>

<http://www.arrl.org/grow-light-rfi>

<http://www.arrl.org/news/arrl-to-fcc-grow-light-ballast-causes-hf-interference-violates-rules>

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How can the VRC assist you?

The Valley Radio Club's web page located at:

<http://www.valleyradioclub.org/rfi.html>,

will cover most of what is covered in this handout, and allow you to further evaluate your options with regards to RFI problem(s). Better yet, feel free to join us at one of our monthly meeting of the Valley Radio Club and meet some of the Amateur Radio Operators in your area, and discuss this important issue with us, or call 458-210-6409.

If you are interested the Valley Radio Club RFI Group would be willing to schedule a time in which a test can be performed which will more precisely identify those items in your immediate area that may be sources of RFI.

The test is very simple and does not require entrance to your home, it is free of charge, and you are obligated to do nothing as a result of the tests. Normally, the testing take no more than ten minutes of your time. It will also assist us and you in locating the actual source(s) of RFI in your area.

Please share this information with your friends!

THANK YOU:

The VRC wants to thank you for the time you've taken to learn about RFI issues. We hope you will join us in minimizing RFI issues in our community.

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ALWAYS CONSULT A QUALIFIED PROFESSIONAL BEFORE MAKING ANY CHANGES TO AN ELECTRICAL DEVICE.

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