How to Reduce Wireless Pollution from Your Computer.

Hard wiring your Computer to the Internet

Step 1: Determine your internet service provider. If it is Comcast, call to request a basic modem that has no WiFi capabilities. There is a pending class-action lawsuit against their new Xfinity WiFi systems, so they are now giving customers more control over what comes into their homes. If your only choice is AT&T, then you are pretty much stuck with their all-in-one modem/router combo. AT&T wants to eventually provide all internet/TV data through cell towers (wirelessly), so they are currently providing very powerful WiFi enabled modems. The good news is that you can disable the WiFi in an AT&T modem by following the process in this video.

Step 2: Let's assume you have Comcast and have called to acquire the basic modem without WiFi (this is the Arris model TM722G). You can either rent this modem from Comcast ($10/month) or purchase your own here. You will then need a router to send the data to your computers, tablets and TV. For this, we suggest a Netgear Router, which has an easy On/Off switch for WiFi (keep it off except for rare exceptions). This router will allow you to run up to 4 Ethernet cables to different computers and a TV. Note that you could get a Netgear modem/router combo that integrates with Comcast, saving you the monthly modem rental fee.

Step 3: You will now need some Ethernet cables. One short cable (3-5 feet) will go from your Comcast modem to your Netgear Router. This will typically be provided by Comcast or within the Netgear router box. For Ethernet cables that will go from your Netgear Router to your laptops, we suggest flat, shielded CAT7 cables that come in 25 or 50 feet. If you need extra distance, here is a 100 foot Ethernet cable that works well.

Step 4: Programming your Netgear Router is very easy. There are basic setup instructions in the box (just a few initial steps) and there is a CD that comes with the router if your computer has a CD drive. The CD will do the installation (or you can download the file) and you will just need to set a password for your home network.

Step 5: For PC computers and TV's, you can simply plug the Ethernet cables into the devices. If you use Apple computers and tablets, you will need an adapter to get the Ethernet to your Macbook Air or iPad. The best option is the Thunderbolt to Gigabit Ethernet Adapter. Just make sure your device has a Thunderbolt port. If not, then get a USB to Ethernet adapter. It is now also possible to wire an iPad (video below).

Step 6: Now that you have wired internet in your home, there are just a couple things left to do. You will want to turn off the WiFi and Bluetooth functions on your laptop (turning off the Airport for Macs and putting PCs in airplane mode). This will keep it from radiating and searching for a network while you work on the device (to more permanently disable your WiFi function – refer below) We also suggest that you get an external wired keyboard and wired mouse, and a body-voltage grounding pad to help keep you from feeling drained while working on the computer.

Beware of WiFi Modem/Routers turning themselves back on

Xfinity modem/router combo pose problems with the WiFi coming back on after it was disabled. This is why we recommend the non-WiFi modem option above. Check with your RF meter every once in a while. There have been issues with AT&T and Comcast here in the States where the WiFi has been disabled, but then turned back on again when the companies do a reset of the system/modem (usually every couple weeks).

This is why, whenever possible, we suggest people purchase their own modem that has no WiFi capabilities. This will save money over time (most companies are charging you $5-$10 per month for use of their modem) and you now have complete control over your system. You just have to do a little research on what modem will work with your internet service provider.

This article is a good place to start:
http://blog.chron.com/techblog/2014/06/want-to-use-your-own-modemrouter-with-comcast-heres-how/

Call your Internet Service provider and ask what kind of wired systems they offer. Most companies have a non-WiFi modem option if you say you prefer that. You may have to purchase your own modem to obtain one with no WiFi capabilities, which is an option that we actually prefer. Our service provider told us what models are compatible with their service, and we bought it on Amazon.com.

https://www.amazon.com/SURFboard-SB6121-DOCSIS-Retail-Packaging/dp/B004XC6GJ0
This is a great little modem with no WiFi functions. It connects to the cable coming into your home.

You can use Ethernet to go directly between this modem and your computer. Or, you can connect the Netgear router I mention above to this modem if you have multiple devices in your home that you need to run Ethernet to.

Here are some videos to demonstrate wiring iPads to Ethernet:
https://www.youtube.com/watch?v=CG4xh9Gm7jE
https://www.youtube.com/watch?v=vnaEWwBY7Dw

And this, for older models, since it appears that Apple disabled the ability to use an ethernet connection for newer versions of IOS: https://www.youtube.com/watch?v=2ndUO_p_9oI

Caution: Replacing WiFi with "wired" Internet through your Home's Electrical Wiring.

This technology is called Powerline Communication (PLC data transfer). It sends the data as EMI (electromagnetic interference) on your home wiring, which creates harmonics of the fundamental 50Hz or 60Hz frequency on the electrical wiring, commonly called, "dirty electricity." Ethernet cables are a much better performance-wise and a safer health-wise, and using a little ingenuity you will be able to rearrange furniture to hide the Ethernet cables, or run them under the floor, along eaves, snaked within walls, or wherever they can be placed out of sight. We personally don't mind having some cables laying around our house, it's much safer than the alternatives!

Turning off your WiFi in your Modem is not necessarily enough

You'll also need to check your computer settings to turn off (disable) WiFi functions that will continue to broadcast signals looking for opportunities to make wireless connections even if you have turned off authorization for your computer to make wireless connections, or turned off the wireless function of your modem.

Turning off WiFi from your computer permanently is usually a three step process:

1. **Turn off the WiFi option router/hub/modem, and use the wired option only**
2. **Deny Authorization for your computer to make wireless connections**
3. **Disable the device that is programmed to eternally seek wireless connections**

(Note: if these instructions seem too daunting, call a computer tech service for a house call to help you)

How to Deny System Wide Authorization for your computer to make wireless connections

Generic Instructions: Authorization is normally located in your Network and Internet folder, or some similar sounding folder.

Typically (Windows 10) you would go to Settings App (which was the Control Panel in earlier Windows versions) > Network and Internet > Ethernet > Network and Sharing Center > Change Adapter Settings > Network Connections – each device that is a network connection will be shown on that screen, both wireless and wired (Ethernet). Locate any WiFi, Bluetooth, and/or Zigbee devices, right click on each device individually and select Disable.

These authorization disables (turns off) all active wireless connections but leaves the devices running in the background – those programmed to constantly seek wireless connection.

How to Disable the Devices that are Programmed to Continuously seek Wireless Connections

Generic Instructions (if these do not apply to your computer hire a computer tech to help you to turn off ALL your wireless wherever it may be: Find your "Device Manager" – the folder where you can manage all devices your computer uses, including "Network Adapters", which controls your computer's communication with the outside world (internet, other computers in your network, smart devices in your home etc).

Typically you would go to Control Panel (Windows 7 and 8) or Settings App (Windows 10) > Hardware and Sound > Device Manager > Network Adapters … Then click your Network Adapters list to open up a list of devices. Locate any device that says "Wireless", then right click on that device and select the "Disable" option, which will change to the words "Enable" when it has been turned off.

Check the immediate area with a radio frequency meter to confirm that wireless communication EMF pollution in your environment, cannot now occur. Check with your meter again, periodically, in the event that an operating system update resets your computer back to its wireless default.

www.emf-experts.com