

Serving the Ponchatoula-Springfield Area

G & G Computer Repair

Gary Marmillion Call 225-294-3683

Gary Marmillion, Sr. & Gary Marmillion, Jr. Email marmillion@live.com

Website - https://www.greenthumbnsy.com/gandgcomputer.htm

What to do when you can't access the Internet

Note: If you CAN access the internet and you simply need help configuring your router <u>PC World has a good article for you</u>. They also have a page which <u>picks the best new Routers</u>.

If you find that your router or modem is faulty I have included a few suggestions for getting a new wireless router/DSL modem.

DSL Modem/Wireless Routers - some suggestions

Common problems that prevent an internet connection

*Router (or modem) needs to be rebooted. (turn device off, wait 10 seconds, turn device on again.)

*Improperly configured router.

*For DSL connections: No DSL Filter on all phone lines or devices plugged in improperly, to wrong ports.

*Faulty Cables - either network cable(s) or phone cable(s).

*Faulty device - either router or modem.

*Bad placement of the Wifi Router.

Choose what type of problem you have

- Modem or router has no lights
- Modem or router has lights but they are red, yellow, or orange instead of green
- Modem or router has green lights but no internet connection.

If you have a wireless connection problem

- Wireless connection
- Forgotten wireless password
- <u>Login to your router</u> (to set it up or change the settings)
- Reset your router
- <u>If you reset your router by mistake</u> or suspect that it may have been reset. (Perhaps the settings have been changed by mistake.)
- Find your router's login address using ipconfig

DSL Modem/Wireless Routers - some suggestions

General Guide

Check your modem or router

The lights (blinking or steady) on your modem or your router should be green. If you see any orange, yellow or red lights - or no lights at all, you have a problem.

No lights - Check your connections

*If your modem or router has no lights lit check to be sure the device is turned on (check the power switch if the device has one) and is plugged in to an electrical receptacle that is powered up. Plug another device into the receptacle to check. Above all, be sure the power connections are secure - unplug and re-plug them, on both ends, to be sure.

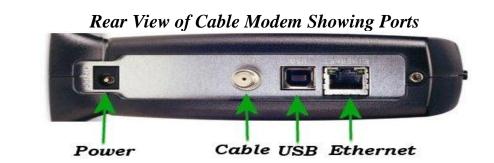
*Try plugging your router or modem into another electrical receptacle just to rule out any power problems before assuming that it is nonfunctional.

If you need to replace your modem and you are renting it from your ISP call them for a replacement. If not you will need to purchase a new modem.

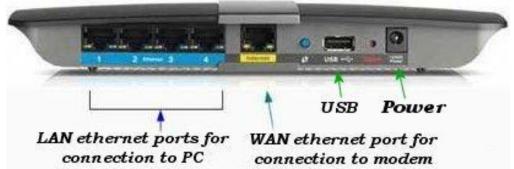
*If you have both a modem and a router and the lights are green on the modem but no lights or orange, yellow, or red lights on the router unplug the network (Ethernet) cable that is plugged into the WAN port of the router and plug it into the PC, connecting the modem directly to the PC with the network cable.

If your router had **no lights** and the internet connection is established then you likely have a problem with the router.

If your router had any **orange, yellow, or red lights** you may have a bad network cable. Or the router may have a bad LAN port - try plugging the network cable from your computer into another LAN port on the router and/or try a different network (Ethernet) cable if you have an extra one available.



Rear view of Router showing ports



For normal operation with **two devices** the network (Ethernet) cable that connects the modem to the router should be connected to the Wide Area Network (WAN) port on the router. The network cable to the computer should be connected to one of the LAN Ethernet ports on the router. (FYI: The little blue recessed button is for resetting the router. If this button is pressed and held for a few seconds the router will be reset to its factory configuration - all user settings will be lost and must be re-entered before a connection is possible.)

Modem/Router combination device

If you have a combination device, a DSL or Cable Modem/Router, use only the Local Area Network (LAN) ports to connect to your computer(s). Do not use the WAN port for connection to the computer. *Note: The WAN port is used only to connect the router to a modem when two devices are used.*

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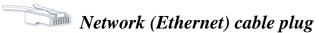
Lights - But orange or red instead of green

*If your device (modem or router) is on but has orange, yellow, or red lights instead of green the first thing to do is reboot your device. Turn it off, wait at least ten seconds then turn it back on - unplug then re-plug the power cord if necessary.

*Check the connection to the modem.

If you have DSL check that the phone line is connected securely to the DSL modem (or DSL modem/router) and be sure all phone lines in the house have a DSL filter that's connected properly. *Try a new phone line if you have one*.

*If your connection to the PC is wired check the network (Ethernet) cable running from the router or modem to your PC - unplug it and inspect it for physical damage then if it looks good re-plug it on both ends making sure it clicks back in securely to both the PC and the router or modem. Try a new or different network cable if you have one.



*If checking the cables and rebooting the device(s) does not help then call your internet provider's technical support. They should be able to tell if there is a fault on the line that prevents an internet connection. (They may want you to reboot your router or modem and perhaps even check the connections again.)

On the DSL filter (for DSL connections)

All phone lines should be plugged in to the port marked with the phone icon on the DSL filters. *If you have phones in the house that are not connected with a DSL filter you will probably have connection problems.*

Only the modem or modem/router should be plugged in to the port marked DSL with a PC icon.

Green lights on modem and/or router

but no internet connection

Check your network connection by clicking the network icon located in the notification section of the taskbar on your computer's desktop. Right-click the icon and choose <u>Troubleshoot problems</u>. Windows Network Diagnostics will attempt to fix your connection.

If Windows Network Diagnostics was no help, check the settings of your modem/router before bringing the PC to a technician for repair.

On the DSL filter:

All phone lines should be plugged in to the port marked with the phone icon on the DSL filters. *If you have phones in the house that are not connected with a DSL filter you will probably have connection problems.*

Only the modem should be plugged in to the port marked DSL with a PC icon.

Setup your modem/router

Be sure your ISP (Internet Service Provider) username and password are entered correctly. If either one is incorrect you will not have an internet connection!

It is an excellent idea to write your ISP username and password down in case your modem goes bad and you need to replace it.

If none of the above helped to solve the problem and your modem and/or router has green lights and your ISP's tech support says your connection is good then your router may be faulty.

Always check or replace your cables, both phone and network, before assuming your router is faulty. If it turns out that you need a new router it is a good idea to get new cables anyway.

If your router is wireless you can check this by using another device known to be working such as a WiFi enabled smart phone or a WiFi datapad.

If the router is not wireless use another PC that has a network port (perhaps a laptop) to attempt a wired connection.

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Wireless Connection

If you have two devices - a modem and a wireless router, first check to be sure the lights are green on your modem. If not **reboot the modem** (turn it off or unplug it, wait 10 seconds and turn it back on again or plug it back in).

If the modem's lights are green continue. If not, call your ISP to troubleshoot your modem and connection.

If you have a single device – check your wireless router or combination modem/router. Are all the lights green? If not reboot it. Turn it off for at least 10 seconds, turn it back on then wait for it to reboot.

If after the reboot all the lights are still not green you may have a problem with your router. If you have a network cable - connect your PC directly to one of your router's LAN ports just to check.

If the lights are green look for the network icon (the little icon with the bars) in the notification area of your taskbar on your computer's desktop. When you click the icon a window will appear showing available wireless networks and connection status.

If all the lights are green on your wireless router and the network icon on your PC shows bars yet you still cannot connect properly to the internet then **Reboot the Wireless Router** - turn it off (or unplug it) for at least 10 seconds and then turn it back on (or plug it back in) again to see if the problem has been solved.

If you have a wireless router that is configured correctly and a computer with a wireless adapter then the PC will always attempt to connect to the strongest wireless signal available.

If you have a laptop (notebook PC)

If your PC is too far away from your wireless router the signal may be too weak for a good internet connection. Move your PC closer to the wireless router and check your connection again.

If the wireless icon in the taskbar has a red X in it check to see if your wireless is turned off. Check for a wireless switch on the front or side of your laptop depending on brand. If the PC is not equipped with a wireless switch many times one of the function keys may turn wireless on or off.

If the icon has a caution sign in it that is usually an indication that you have no connection or a connection but no internet access.

If you're not connected click the icon and choose your wireless network then <u>enter your wireless password or passphrase</u> and click <u>Connect</u> and wait while Windows connects you to the network.

If you are not able to connect to your preferred network <u>right-click</u> the icon and choose <u>Troubleshoot problems</u>. Windows Network Diagnostics will attempt to fix your connection.

Try another PC or device. If you have another PC or any device such as a smart phone or tablet (an iPad) that has a wireless adapter. Try to connect with one of them before assuming that it is a computer problem.

Perhaps you have a friend or neighbor who has a laptop, a tablet, or a smart phone you can use to test your wireless before bringing your computer to be serviced.

Also, if you have a PC that can be moved easily (such as a laptop or all-in-one PC) you could bring it to a friend or neighbor who has a working wireless to check to see if your PC will connect before incurring a PC technician's charges.

If you are still unable to connect to the internet after all of this and your ISP's tech support assures you that your internet connection good but is otherwise unable to help may need to replace your router.

If you are certain your router or cables are not at fault then **bring your** computer to a qualified PC technician.

Forgotten Wireless Password

If you wish to connect another PC or wireless device to your wireless network you will need to know your default wireless name (SSID) and password (or passphrase).

But if you have forgotten your wireless password here's how to locate it.

If you have a desktop router program such as Cisco Connect or <u>Netgear</u> <u>Genie</u> you can access your wireless password from that.

If not use the following procedure:

Log in to your router

- *Start your internet browser. (Microsoft Edge, Firefox, Google Chrome, etc)
- *Look for the internet address bar and highlight the internet address there then hit the backspace key to delete the entire address.
- *Type **192.168.0.1** (the Default Gateway address) into the address bar and press the Enter button on your keyboard.

Note: Many router brands use this default address for their routers but not all. For instance Belkin's is 192.168.2.1 and Linksys' is 192.168.1.1 The 2Wire router is usually 192.168.0.256 or 172.16.0.1

Default Netgear router login address is routerlogin.net

If you can't get to the login page for your router <u>click here for another option</u> to get the correct Default Gateway address.

If the address was correct a **login page** (dialog) (similar to the one below) will appear in your browser where you can enter a username and a password. Common router login default usernames include variations of <u>admin (Admin, administrator, etc.)</u>, and the password is often <u>admin, password, or simply left</u> blank.



Default Usernames and Passwords for some common router brands:

Netgear - Username is **admin**, Password is **password**

Linksys - Username is blank, Password is **admin** (some Linksys routers require **admin** in the username also

D-Link - Username is **admin**, Password is blank

Belkin - Username admin, Password is blank

2Wire - Username blank, password **Wireless** or Username **2wire**, password blank

If you happen to have internet access with another device go to routerpasswords.com to get find the default username and password for your router.

If you have logged in to your router before the username and password may have been saved. If so click OK or press enter.

However, if you have **logged into to your router before and changed the router login username or password but have forgotten it** your only option is to reset your router.

If you have never logged in to your router with your browser before:

- Enter the default login and press enter.
- Once you log in to your router choose Wireless from the menu options.
 For some routers you may need to choose <u>Advanced</u>, <u>Setup</u>, <u>and/or</u>
 Wireless Setup.
- In this section you will see your Wireless Name (or SSID) listed.

- Also, somewhere in this section, you will see your wireless password or passphrase listed.
- Be sure to write the SSID and your password (or passphrase) down to save your connection information for future reference.
- With some routers your password or passphrase may be listed as a series of dots. If so, simply choose a new password or passphrase (usually at least 8 characters) and *carefully* enter it into the password (or passphrase) box. *Be sure to write it down to save your connection information for future reference.*
- If you change your password be sure to press the SAVE button in the window before you log out or turn off your browser!

If you have no internet connection check to see if the ISP Username and Password are entered correctly. These will usually be found in the Internet section of the router settings. Click here for help.

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Reset your router

Resetting a router is different from rebooting. You should only reset your router, as a last resort, if you cannot access your router's login or configuration information.

A reboot simply involves turning your router off (wait ten seconds) and then on again which will often allow it to reconnect.

A reset involves pressing the reset button on the back of the router and holding it down for at least ten seconds. A reset completely erases any and all configuration information stored in the router's memory and returns it to its default factory configuration.

If you can't log in to your router generally your only other option is to <u>reset</u> <u>your router</u>. If you have two devices - a modem and a separate wireless router a reset will be fairly painless.

However, if you have a combination modem/router device be aware that you will need to completely reconfigure your router. You will lose not only your router

wireless security and local information but also your **Internet Service Provider** username and password.

Before you can connect to the internet again you must call your ISP's support to get your username and password from them if you have forgotten that also.

When you get it be sure to write it down just in case you have more problems in the future.

You will also need instructions for reconfiguring your router. If you still have an internet connection it will save some trouble by <u>clicking here to get them</u> **before** you reset your router.

If you wish to proceed with the reset look on the back of your router and find the reset button.

The reset button is generally recessed to prevent accidental activation. Use the point of a pen, a paperclip, or a pin to push and hold the reset button while the router is turned on.

Hold the reset button down for at least 10 seconds.

The router's lights should flash and the router should reboot.

After the router reboots it will be reset to the original manufacturer's default settings.

You should now be able to use your router's setup disk or downloaded information to configure your router and your wireless security however you choose.

Tip: When choosing your wireless security type always use WPS security with at least a 12 character passphrase since WEP can be hacked easily.

If you have a separate modem and router but you have no setup disk or instructions for your router either connect your computer directly to the router (or modem) with a network (Ethernet) cable or click wireless network icon (the little icon with the bars) in the notification area of your taskbar on your computer's desktop and choose the default connection to connect to the internet. (The default wireless connection has no password.)

Get your router's configuration instructions

There are too many brands of routers to give specific configuration instructions for each one. It's best to go to your router maker's support page for that information.

If you still have an internet connection start your internet browser and enter your router's name into the search box followed by support - Netgear support, DLink support, Linksys support, etc.

When you get to the general support page enter your router's model number to get specific instructions to configure your router.

Many router manufacturers have a **PDF help file** you can download. There also may be a **connection wizard program** your can download also.

If you have a modem/router and haven't reset your router yet be sure your read the instructions to be sure you can understand them **before** you reset and lose all connection information. <u>Then go back to reset your router</u>.

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If you reset your router by mistake

If you have no internet connection because you have reset your router/modem by mistake you can still get your internet connection going again (without instructions from your router's maker) by logging into you router using the instructions above.

*Then after you have successfully logged into your router choose the **Internet or Setup** section then enter your ISP's username and password you got by calling your internet provider's tech support.

*If there is a box asking if your internet provider requires a login choose Yes.

*Generally the Encapsulation or type of connection can be left as default - PPPoe (PPP over Ethernet).

In the **Internet section** there will be a window (similar to the one below) where you can enter your ISP login information

Does your Inte	ernet connection require a login?					
Yes						
© No						
Encapsulation			PPPoE (PPP over Ethernet) ▼			
Login	Enter your ISP user name here		>	72.55		
Password E	nter your ISP user password here		>			
Service Name						
Connection Mode				Always On		
Idle Timeout (r	minutes)				0	
Internet IP Add	iress					
Get Dynam	nically from ISP					
Use Static	IP Address]-[]-[].[
Domain Name	Server (DNS) Address					
Get Autom	atically from ISP					
Use These	DNS Servers					

*Be sure to check your entries before proceeding.

After you have entered the above information correctly also be sure to **click the Save button** in the window to save your changes.

If you have entered and saved the information successfully your router's lights should all be green.

You should now be able to access the internet even if you have to connect your PC to the modem with a network (Ethernet) cable.

But you should be able to choose the default wireless connection (that does not require a password) by clicking the network icon (the little icon with the bars) in the notification area of your taskbar on your computer's desktop.

Now you can go to your router manufacturer's support page for help to configure your router's wireless security if necessary.

If you cannot access the internet after all of this then it is probable that the router/modem is faulty and requires replacement.

Find the router's login address using ipconfig

- Click the Start Button
- Type **cmd** into the **Search** box
- Choose **cmd** from the available choices (if more than one)
- When the black command window appears (as shown below) type **ipconfig** and press ENTER.
- Look for **Default Gateway** it should be listed somewhere in the window under the heading of: **Wireless LAN Adapter**, **Local Area Connection**, **or Ethernet adapter Ethernet**. The Default Gateway number should look something like 192.168.0.1 (as in graphic above) or possibly even 192.168.1.1
- Write down the number periods included!
- Try logging into your modem with the Default Gateway number.
- Open your browser and enter the <u>Default Gateway</u> number into the address box and press enter.
- The login window for your browser should appear if not check to be sure you have entered the numbers exactly.
- Go back to instructions, if necessary, and try to login to your router again.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.
C:\windows\system32>ipconfig
Windows IP Configuration
Ethernet adapter Bluetooth Network Connection:
  Media State . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix . :
Ethernet adapter Ethernet:
   Connection-specific DNS Suffix
   Link-local IPu6 Address . . . . .
                                     : fe80::416d:7f03:33fc:df0e%14
                                 . . : 192.168.0.10
   Subnet Mask . . .
                    . . . . . . . . . . 255.255.255.0
   Default Gateway . . . . .
                                     : 192.168.0.1
```

Note: The above **cmd** window example is from a wired connection. If you have only a wireless connection to your computer the Default Gateway number you need will be listed under the heading of Wireless LAN Adapter Wireless (or Wifi) Network Connection: in the cmd window after you enter ipconfig and press Enter.

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DSL Modem/ Wireless Routers

Before you buy a new modem/router be sure to check all of your cables, both network and telephone. If you get a new router/modem you should replace all cables anyway. The cost for that should be less than \$10 - \$20.

If you spent \$100 on a new router only to discover that a \$2 telephone cable or a \$6 network cable was faulty and there was nothing wrong with your old router it would ruin your day. Especially if you can't get your money back for the new router because you've opened the package.

Also be sure to write down your DSL username and password so you can enter it into your new device. Get the username and password off of your old router or modem before you disconnect it.

Suggested list of Wireless modem/routers Listed by approximate price

Netgear Nighthawk AC1900 Smart WiFi Router (R7000) \$200 (Router only, no DSL modem)

Cisco Linksys Wireless-AC Universal Media Connector (Model WUMC710) \$170 (Router only, no DSL modem)

NETGEAR Cable Modem WiFi Router Combo C6250 \$120 - \$150

LINKSYS X3000 Advanced Wireless-N ADSL2+ Modem Router \$190
These top four are the latest technology

NETGEAR N600 Dual Band Wi-Fi DSL Modem Router ADSL2+ Gigabit Ethernet (DGND3700) \$120

Netgear Nighthawk AC1750 Smart WiFi Router (R6700) \$90 - \$120 (Router only, no modem)

TP-Link AC1900 Smart WiFi Router \$90 - \$120 (Router only, no modem) *These three are middle of the road*

NETGEAR N300 Wireless DSL Modem Router DGN2200 \$75 - \$90

LINKSYS X2000 Wireless-N Router with ADSL2+ Modem \$75 - \$90

ACTIONTEC 300 Mbps Wireless-N DSL Modem Router (GT784WN) \$65

These last three are older technology, but are serviceable

Where to get them

Check <u>Best Buy</u>, <u>Wal-Mart</u> and <u>Amazon.com</u> for best prices for these routers. When you get a new router be sure to get new cables for it. Many new routers have cables included. Be sure what's in the box *before* you leave the store.

What if it doesn't work?

If you have problems with your new router out of the box, just pack it back up for a return. Don't try to fight with Customer (technical) support, just send it back for a replacement or a refund if you have lost confidence in it. You must make up your mind about a return quickly since you will certainly have a time limit. Amazon gives you 30 days from purchase date, others may not be so generous. Note: A return for full refund usually depends on whether the Router is non-functional. If the Router is still functional you may have problems with the return.

What else is important

Placement of your WiFi Router

It is certainly true that many people consider most WiFi routers unsightly. But you shouldn't try to hide your router too successfully. Place your wireless router in a central location in your home if possible. <u>Place it up high - Do not place it in or under a cabinet or in a closet</u>.

If your wireless signal is weak <u>move your router around</u> to get the best reception, if at all possible or <u>move your PC closer to the router</u>, if possible.

Don't put too many walls between your Router and your PC or connected device. 2.4GHz Band Wifi signals should normally be able to pass through most glass windows and wood/sheetrock walls without too much degradation. 5GHz Band WiFi signals may encounter more problems depending on local conditions. However brick, masonry, and especially metal walls can severely interfere with both bands of WiFi signals.

Modern dual band WiFi routers broadcast signals on two radio frenquency bands, 2.4GHz and 5GHz

The trade-off between 2.4GHz and 5GHz isn't hard to understand at all: 2.4GHz gives you more range but a weaker signal, whereas 5GHz offers a stronger (and faster) signal but can't travel as far around your home. In other words, get anything that's going to be using a lot of bandwidth as close to the router as possible.

This is simple physics—radio waves attenuate (reduce in force) faster at higher frequencies, and that's the same with WiFi signal as it is with any radio wave. Devices using the 5GHz band will also have more trouble with walls and other objects when connecting to WiFi.

For more detailed information concerning WiFi bands go to this <u>How to Geek page</u>.