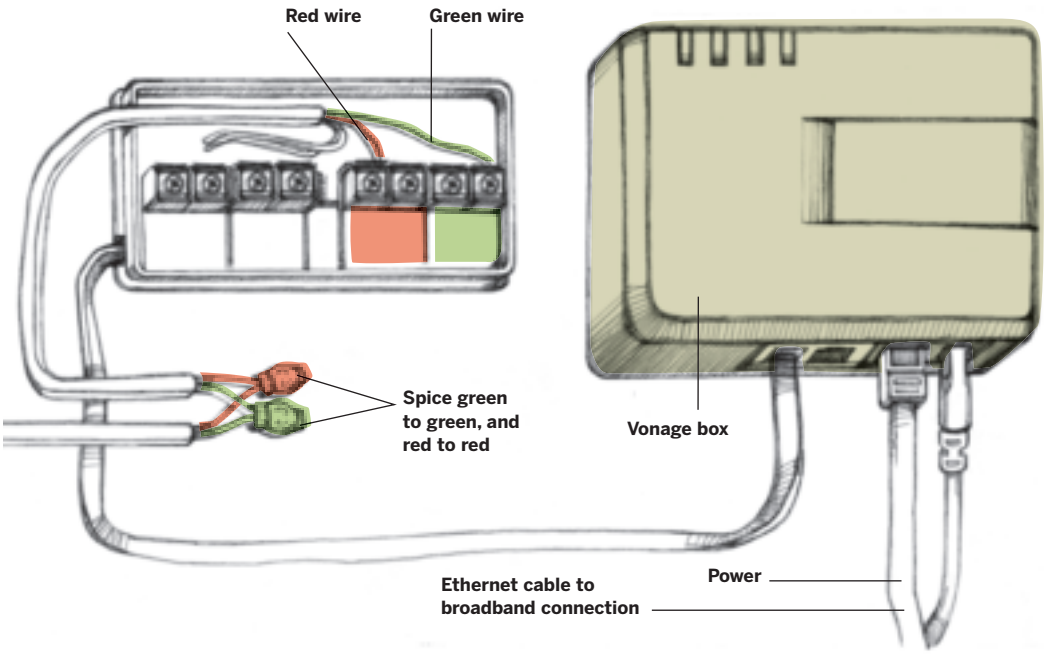

VOIP PHONE WIRING

Connecting multiple phones to a Vonage connection. By Jake Ludington

I have no complaints about my Vonage experience so far. The call quality is great. Getting voice mail messages in my email is probably my favorite feature. I can send faxes using a traditional fax machine. I'm able to place calls using a 900 MHz cordless phone or any other standard landline phone. I activated 911 dialing on my account so that emergency dispatchers could determine my location. The only thing that had me perplexed was how I could connect several phones the way I would in a normal landline configuration.

I had a revelation during a walk to the drugstore. The phone wiring in the house could be terminated at my Linksys Phone Adapter the same way the phone company brings their lines to the house and ties in to all the internal wiring of the house. Both scenarios route all the wiring in the house back to a central office. The traditional landline service routes underground or to a pole along the street back to the company while the VoIP method connects to my router headed for the servers at Vonage.

I currently live in an 80-year-old house. The phone wiring has been updated, but the routing of the wiring is a jumble of three different incoming lines routed to different sections of the house. This didn't matter to me when I moved in because we don't have a landline phone. In newer houses, this won't be a problem because all phone wiring should terminate at a central location.

Most home phone wiring is made up of two pairs of wires: red/green

Wiring all your phones to your Vonage account involves terminating the lines at the adapter.

and yellow/black. In most cases, the primary line you'll want to connect to route your VoIP service throughout the house is the red/green pair. If the house was wired using Category 5 cabling, green might be replaced with white-with-blue-stripe wires and red with blue-with-white-stripes. The yellow and black wiring pair will not be needed.

Required Tools and Supplies

Before starting, I needed a few supplies from the hardware store. I purchased a roll of Category 3 cable, a box of 3 port telephone splice connectors, and a phone wire junction box with a modular plug. You could get by without using the junction box, but I'm lazy and don't enjoy connecting RJ-11 ends to raw wire. The junction box makes it easy to quickly connect your household wiring to the phone adapter. Note: If you plan on connecting the VoIP phone adapter directly to a wall jack, you probably won't need these supplies.

Several tools are also required. To make the connections, you need a Phillips screwdriver and wire strippers. To finish up, you may want a cordless drill to fasten the junction box and phone adapter to the wall, as well as some coaxial cable straps to router your Ethernet cable along the wall between the phone adapter and your router. Make sure there's an outlet in close proximity to your phone wiring (to power the phone adapter) or get an extension cord long enough to reach.

Making the VoIP to Cat 3 Connection

First, find the location where external phone lines come in to your house. Determine which lines are internal and which lines route back to the phone company. Disconnect the phone lines coming into the house from the phone company because they might cause noise on the line (or damage the VoIP adapter), and they aren't being used anyway. Word of Caution: Do not attempt this if you still have an active line with the phone company; it will cause your landline service to cease functioning.

Connecting VoIP via a Wall Jack

If your phone lines all originate on the same copper pair from the phone company, this is potentially your stopping point. With the lines from the local phone provider disconnected, simply plug the VoIP adapter into any wall jack in your house and you should be able to make calls from any of the other wall jacks in your house.

Connecting VoIP at the Origin

Depending on how your home is currently wired, you may need splice connectors to combine all of the various ends throughout the configuration to a single wire that ultimately connects to the junction box. An alternative is to connect each individual line to the junction box. Red wires connect to red wires; green connect to green.

Once all the internal wiring is connected, plug in the phone adapter, connect the Ethernet cable to the appropriate port on the adapter, and connect the RJ-11 modular plug from the junction box to the phone adapter.

Test your connections by plugging a phone into one of the wall jacks in your house. If you get a dial tone, you're probably set. It's not a bad idea to place a call to your cell phone just to make sure everything is working.

The final step is to mount the junction box to the wall with the two bundled screws, secure the VoIP phone adapter so it won't come unplugged accidentally, and fasten the Ethernet cable to keep it out of the way.

Avoid Power Surges

VoIP phone adapters are susceptible to power surges due to lightning strikes, just like a modem might be. To protect your phone adapter, use a surge protector for the power brick and route the phone wiring through the surge protector in reverse. Connect the wall side of your phone connection (the part coming out of the junction box) to the phone/modem port on the surge protector. Connect the VoIP phone adapter to the line side of the surge protector.

Troubleshooting

It's a good idea to test your connections by placing a call to the VoIP phone number. For my tests, I used my cell phone so I could quickly verify the call.

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