

Recovering Internet/Phone/TV Service



While the digital equipment in the home can occasionally go offline spontaneously, this usually happens as a result of a power failure or power surge. Therefore, when a community-wide power failure takes place, Lucas Valley Cable staff often answers dozens of phone calls, e-mails, and makes numerous home visits to restore service.

Since system recovery is often a matter of following a few simple steps, you may want to perform those steps yourself to get back online more quickly. *We suggest that you print this document and place it near your cable modem so it will be handy in the event that you would like to restore your equipment to normal operation without the delay often associated with calling for support.*

Power Cycling

Modems, routers, access points, and Analog Telephone Adaptors (ATA's), cable boxes, and other home digital devices are best reset by power cycling. This is done by disconnecting them from power for one or two seconds. Fortunately, this can easily be done on the back of the unit being reset, making it unnecessary to locate the exact outlet associated with each device. While sometimes systems can be restored by power-cycling all equipment simultaneously, a more systematic approach usually works best, and is described below.

Recovery Steps for Phone and Internet

As a general rule, recovery is best accomplished in the sequence modem-to-computer. You may not have all of the devices mentioned below, so you can simply skip those steps that do not apply.

Step 1: The Cable Modem.

If you obtained your cable modem from Lucas Valley Cable, it will look like one of the photos to the right and will have a Motorola "batwing" logo. The modem normally has four green lights that are on steady all the time, a yellow "Activity" light that blinks or is on continuously when data is flowing through the modem, and in some cases a "Standby" light.



Sometimes a modem is brought offline accidentally by clicking a Standby button (on the front of the gray modems, top of most black modems). Some modems have a Standby light – if that is on, click the Standby button and all the lights should come on immediately; the modem is now online. If all the lights are off and you do not have a Standby light, try clicking the standby button to see if service can be restored.

Sometimes a cable modem can "hang" (be offline) even when all four lights are on. To be sure that is not the case, power cycle the modem (see Power Cycling, above). The power connection is at the bottom of the unit. Watch the four lights carefully. They should come on one-at-a-time, top-to-bottom. If the lights come up in any other pattern, the modem is defective; call LVC for a replacement (free if you obtained your modem from LVC). If all four lights don't come on steady, you have a signal problem. Call LVC.

If the above steps are successful and your Internet phone is still not working or your computer is not on the Internet, go to the next step.

Step 2: The Telephone ATA

The ATA will only be present if you have our digital telephone service. *If your telephone service is not with LVC, skip this step.*



Your ATA will look like the box at the right.

- The light nearest the center of the ATA is a power light and will generally be on continuously in normal operation.
- The next light is Internet activity. It will normally be on, but will blink rapidly when your Internet access is in use or when a telephone call is taking place.
- The third light is the telephone light. It will be on steady (phone on-hook) in normal operation, or it will blink in a regular on-off pattern if the phone is off hook. If this light is off, your telephone is not “registered.” (If you have two digital phone lines, the fourth light is for the second line. The last two lights have the same behavior.)

If you power-cycled your cable modem (above), the next step is to power-cycle the ATA (its power cord is the thin black wire at the extreme left, when the ATA is on its side and viewed with the four lights facing the front). After you have power-cycle the ATA, watch the Activity light on the cable modem; it should blink as the ATA gets an IP address. All of the applicable ATA lights should come on over a period of several seconds, in the order presented above. If this does not happen, call LVC support.

Step 3: The Router

If you have only one computer, and it is wired directly to the cable modem, you have no need for a router; proceed to the next step. Otherwise, you will have some kind of router. Some of the routers installed by LVC look like the photos at the right.



Many of our customers have purchased routers themselves. Routers are made by Netgear, D-Link, Belkin, Apple, and others. Configuring routers differs among manufacturers, but they all can generally be reset with a power cycle (see Power Cycling, above). The power cord on routers installed by LVC (made by Cisco/Linksys) is located at in the back at the extreme left, when the router is viewed from the front. Virtually all routers from any manufacturer have a similar power connection.



If you have power-cycled your modem and/or ATA, you must also power cycle your router as it might otherwise be using a wrong IP address and you will not be successful getting an Internet connection. When you power cycle your router, the first thing it will do is request an IP address. You should therefore see the activity lights blink on the ATA (if present) or the cable modem (if an ATA is not present). The lights on the router will blink for several seconds as computers and other devices are detected and assigned their own local IP addresses. During the time the router is unplugged, your computer may show “Network Cable Unplugged” (Windows XP) or some other sign that the Internet connection is missing. When you plug the router back into power, that notice should disappear. On Windows XP systems, a “computer” icon in the System Tray (lower right on most systems) with a yellow dot moving back-and-forth as it connects to the router. If the yellow dot disappears, the connection was successful; if it is replaced by a yellow triangle and a notice “Limited or No Connectivity,” the connection was not successful.

If your router fails to come up properly, it may require a factory reset or even a re-load of its firmware (depending on the amount of damage caused by the power surge associated with the outage). If LVC

installed your router, please call LVC for help. We can usually get routers back up or we can provide a replacement (\$60 plus tax for a wireless router with four hard-wired Ethernet ports). The easiest way to determine if you have a router problem is to bypass the router by unplugging the Ethernet cord that is connected into the “Internet” (or “WAN” on some older routers) jack on the router directly into a computer. If the computer comes up properly, you can conclude that the router has failed. You may continue to use the Internet connection on a computer that is bypassing the router until the router is repaired, but only if the computer has an adequate firewall.

Step 4: Your Computer(s)

You should now be able to get on the Internet with your computer(s), however in some cases the IP address in the computer may not match the IP address in the router and you can get either no connectivity or a warning that there is a duplicate IP address. This can be resolved by getting each new computer to renew its IP address. The easiest way to do that is to unplug the cable plugged into the computer’s Ethernet jack for several seconds and plug it back in. Or you can go to your computer’s maintenance screens and disable and then re-enable your local area (or wireless) connection. Sometimes you can locate a “Repair” option by right-clicking the appropriate icon in the system tray. In the worst case, a reboot of the computer may be necessary.

To determine whether your computer is actually online or not, it is best to use a browser connection to a popular site like Yahoo.com or Google.com, rather than checking for e-mail. For Windows computers, the best way to check for an internet connection is by opening a DOS window. This may take more patience than most people have, so it is treated at the end of this document.

If your computer is wireless, the power-cycling of the router will generally restore operation. If, however, the router has reset itself to its factory configuration (which happens occasionally when there are power failures), the wireless access point name (“SSID”) of the router will show “Linksys” (if the router was installed by LVC) rather than what it should be. Although you can connect to the router with a wireless device at this point, it is dangerous to do so because wireless privacy will be turned off. Your recourse at that point is to follow the instructions on the Linksys installation disk or www.linksys.com, or you can call LVC and we will set it back up for you.

If All Else Fails...

Lucas Valley Cable is dedicated to resolving difficulties arising from such events as power outages. Contact LVC Support:

- By email: support@lucasvalley.net
- By phone (voicemail): 259-5856

Please be sure to include your *street address* and *name*. Often voicemails are hard to understand, and if you include your street address we can poll your cable modem and come up with a preliminary analysis of the problem before we return your email or call.

TV Cable Boxes

Power outages can cause TV cable boxes to lock up. When this happens they will ignore commands from the remote or front panel, or they may skip channels or exhibit other bizarre behavior. Before calling for support, try to reboot the cable box by power cycling it. *Note: You must actually disconnect*



power. You cannot reboot a cable box from the remote or front panel buttons. Motorola DCT and DCH boxes (shown in the photo) can be easily power cycled behind the box; the power cord is at the extreme left when viewed from the front. The older DSR470 boxes do not have a rear-panel disconnect feature.

Debugging Computer Internet (Ethernet) Connections with the DOS Window

The method described below is helpful in determining where an Internet connection is “broken.” It uses commands that may only be available on computers running Windows, and is shown here only for the benefit of those with at least some knowledge of networking.

1. Click the Start button and click “Run.”
2. Type **cmd** into the “Run” area and then Enter. A black box appears.
3. Type: **ipconfig** and then Enter.
4. Under the appropriate interface (usually Local Area Network) locate the computer’s IP address.
 1. 192.168.1.x usually means that you are connected to a Linksys router
 2. 10.x.x.x usually means you are connected to an Apple router
 3. 192.168.0.x means you are connected directly to an ATA device or a non-Linksys router
 4. 207.168.234.x or 207.168.235.x means you are connected directly to a cable modem
 5. 0.0.0.0 or 169.x.x.x means you have no connection
 6. If you get no IP address at all, the interface you are using may be disabled. Use the Control Panel to enable it and try again. In most cases, each interface should be set to “automatic” for both its IP and DNS address information.

If you have one of the above successful connections, you can now determine the limits of your connectivity by using a process called “pinging”:

7. Locate from the ipconfig response the “Gateway IP.” It will be the same as your computer’s IP but will end with .1.
8. Type into the CMD window: **ping**, a space, the gateway address, and then press Enter.
9. If the ping was successful, the computer will report four successful returns. If it shows that the address was not accessible or that it timed out, the ping was not successful in making a connection to the IP address that you are pinging.
10. If you were successful in step 9, type: ping 207.168.234.1
11. If that is successful, you are able to communicate all the way to the LVC edge router. Generally, that indicates that you are fully online.
12. For further testing, you may want to type: **ping yahoo.com** (or some other popular web site).

Sometimes step 12 will fail because the DNS application in your computer or router has failed. Some viruses and worms deliberately change DNS settings, so you may need to contact a computer professional if you encounter that problem.