



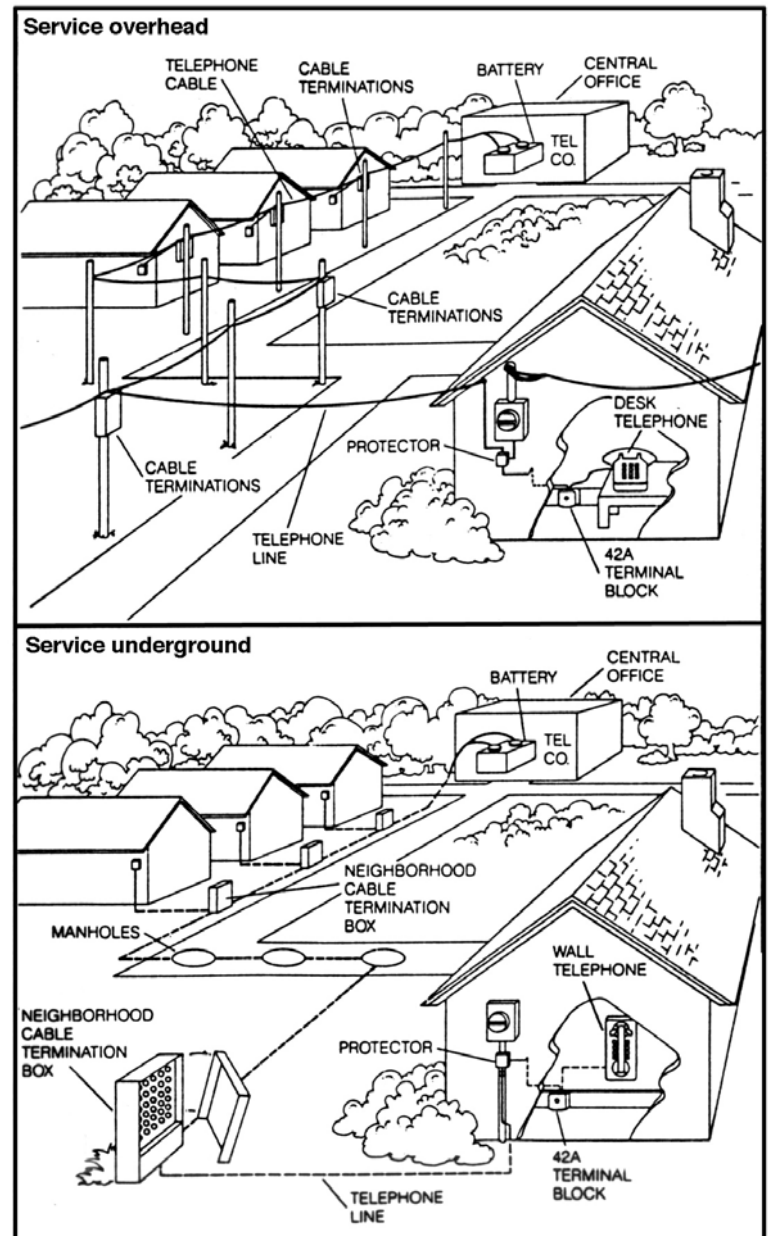
UNDERSTANDING YOUR PHONE LINE

It's hard to believe that, before July 1977, it was illegal to work on the phone service in your home. All wiring and equipment was considered the property of the local phone company. You were not permitted to hook up specialty phones or any device that was not owned by the phone company. Service employees of the phone company were the only people allowed to do any of the installations of equipment and wiring.

Things are different now. Most people purchase and install their own phones rather than paying monthly for equipment rental. Any wiring and equipment from the service protector box is now considered the homeowner's responsibility. The cost of a service call to a residence (unless you pay a monthly fee for a maintenance plan) can be quite expensive. It makes sense to learn to do some simple line work yourself.

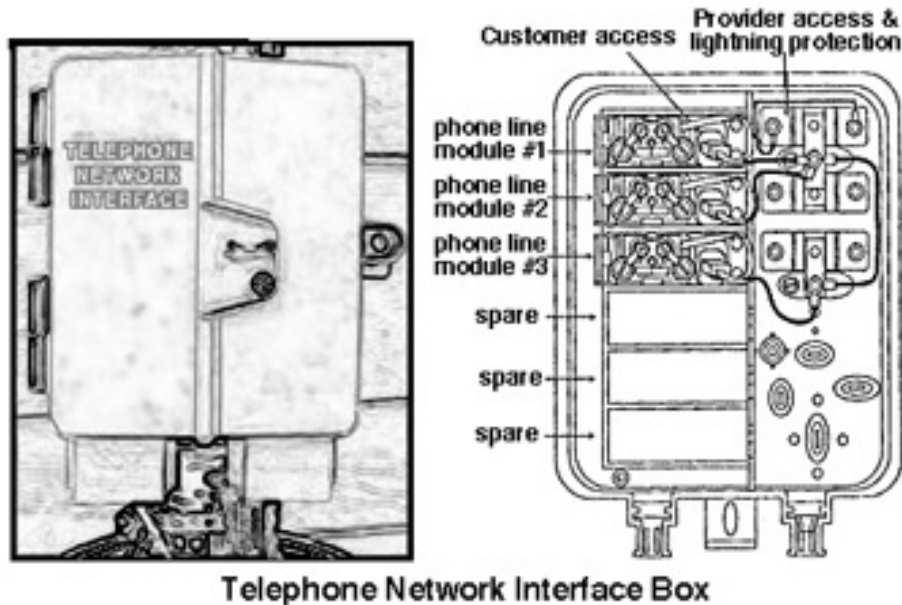
A single-line telephone system is pretty simple. Two wires, bundled with others in a cable, come from the local exchange building. These wires, whether strung on poles or buried underground, are usually attached to a grounded lightning protector before entering the house. Once inside, the wires are grouped in a thin cable with red, green, yellow and black conductors. The red wire is called the "ring" wire, and the green is called the "tip." The yellow and black wires are not used in a single-line service, unless there is a need to power a dial light on an older phone; then, they are wired to a transformer.

The voltage on the line when you pick up the phone and hear the dial tone is 48VDC (direct current voltage). When the phone rings, a low-amperage 90 to 115VAC charge (alternating current voltage) is being sent across the wires. This ring charge can give you a stinging (but non-lethal) shock, so you need to be careful when working on your system. It's a good idea to take a handset off the hook while working on the line or equipment, and ignore the recorded warning message.



(continued)

Extending the phone lines and adding wall jacks are the most common changes that homeowners want to make to their phone system. The easiest way to start is to extend the new wire from an existing wall jack. There is generally a cover over the terminal block (42A) that can be removed with a single screw. Connect the four wires in the new cable to the terminal screws on the block by looping the wire under the appropriate screw (the new red wire to the “R” terminal, the new green wire to the “G” terminal, and so forth.)



The new cable can be run along the top of the baseboard, under the baseboard, between the baseboard and carpet, or through the walls. Connect the new jack to the cable in the same way that you connected the cable to the terminal block. Jacks for desk phones are usually located along the baseboard; to install a wall phone, run the cable to the wall plate up through the stud cavity and bring it through the wall at the appropriate height (approximately four feet). Then, just plug in your new phone.

Wall jacks for computer modems are installed much the same way. Two-line phones are a bit more complicated, but are well within the ability of the average person to install. You can probably find additional information and wiring diagrams for home telephone systems in your local library.

