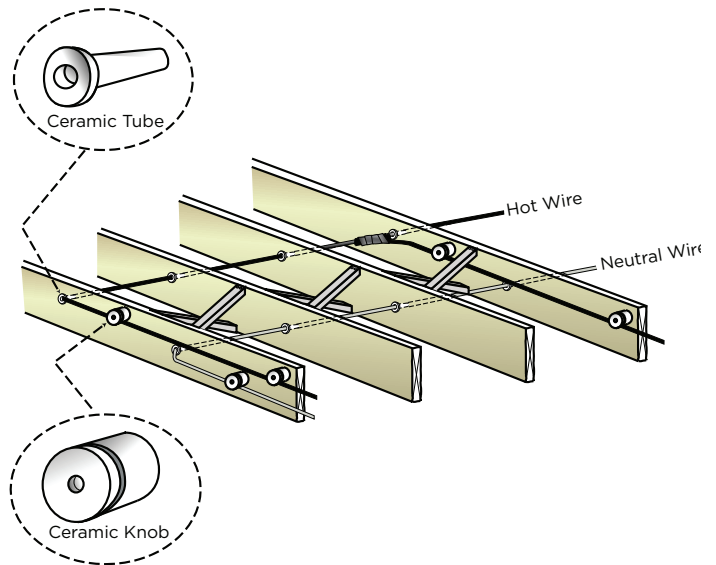


# Knob and Tube Wiring

The oldest residential wiring is called knob and tube wiring. Ceramic knobs support individual strands of wire along their run and ceramic tubes protect the wire where it passes through wall studs or floor joists. Knob and tube wiring was state-of-the-art up until around 1950. If not abused or tampered with, knob and tube wiring is still capable of carrying electricity throughout your home.



## Knob and Tube Wiring Problems

Knob and tube wiring is generally safe except in the following circumstances:

- **Brittle insulation** – the insulation on the wire cannot handle high temperature environments, such as those found in modern ceiling-mounted light fixtures. If the wire has been inappropriately used for such an application, the insulation around the knob and tube wire will become brittle and break off, leaving exposed wire.
- **Improper splices** – splicing into knob and tube wiring is not a straightforward process. While an electrician can do a proper splice, Pillar To Post inspectors often find inappropriately performed splices which create a serious safety hazard.
- **Not a grounded system** – the ungrounded aspect of this kind of wiring is not a defect but knob and tube cannot be used to wire modern electrical outlets. It is only appropriate for ungrounded applications.

## Do You have Knob and Tube Wiring?

If your home was built prior to 1950, you may have knob and tube wiring and not know it. Most homes with knob and tube wiring have been at least partly upgraded. It is not unusual to find all new wiring at the breaker panel and old knob and tube wiring for the lighting circuits on the top floor of the home.

## Is it Safe?

Knob and tube wiring is not inherently unsafe. Installations have to be evaluated on a case-by-case basis. Safety usually depends on the history of modifications and upgrades to the system. An electrician can evaluate the safety quotient for you.

## Home Insurance

Most home insurance companies will not write new policies on homes with knob and tube wiring. If you are already living in the home and have a policy, you can simply have an electrician evaluate the system and correct any deficiencies. If you are buying a home, you will probably have to replace all the knob and tube wiring. The insurance company will insure you through the transaction but will require you to upgrade within a defined period of time.

This situation sometimes creates conflict during a home inspection. The inspector informs the buyer of a likely wiring upgrade to satisfy the insurance company. But the seller does not understand the fuss because they have home insurance already. The insurance will not likely chase down existing policies for upgrades, but they will take the opportunity with a new policy to request an electrical upgrade.

## Updating the Wiring

If you only have a few knob and tube circuits to replace it will not be expensive. But if the home has knob and tube wiring throughout, an upgrade may involve more than just replacing existing circuits, and thus may present a greater expense. In an upgrade, the wiring will be replaced to today's standards. For example, in the era of knob and tube wiring, a living room might have had only a single electrical outlet. Today, outlets are installed within six feet of any point along the wall. This probably also means you will need to upgrade the breaker panel to accommodate the additional system circuits. In the end, it is generally well worth the expense to upgrade to a modern electrical system.

