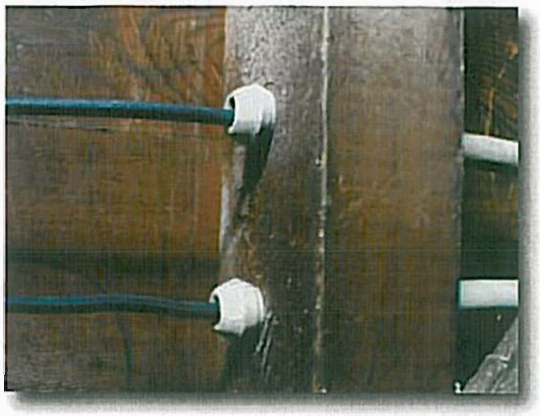
What is Knob & Tube Wiring?

The History of Knob and Tube Wiring

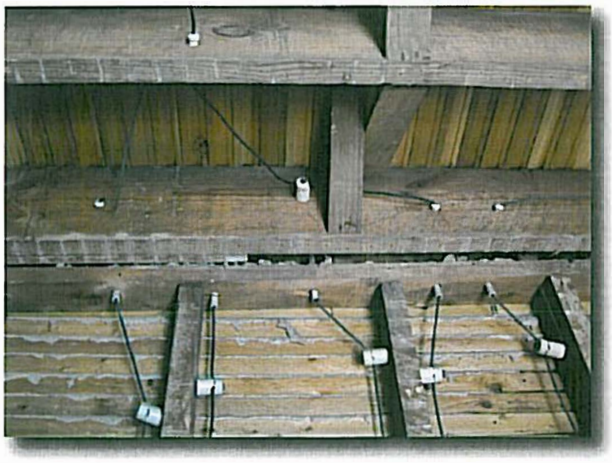


Developed in 1880 and used through the 1940's Knob & Tube wiring consists of single-insulated copper conductors passing through lumber framing drill-holes via protective porcelain insulating **TUBES**. They are supported along their length by nailed-down porcelain **KNOBS**. Where wires enter a wiring device, such as a lamp or switch, or were pulled into a wall, they are protected by flexible cloth or rubber insulation called "loom."

When Knob & Tube was developed, households had far less electrical appliances to support. As common household appliances, such as refrigerators and televisions were added to homes, the Knob & Tube setup was no longer sufficient to meet the amperage loads needed. In efforts to "adapt" the old wiring to handle modern needs, unsafe adjustments were often made by handymen who did not have proper knowledge or training. Often fuses with resistances higher that the wiring was meant to handle were installed, causing repeated blown fuses and possible heat damage to the wiring. Other complications arise from deterioration, animal chewing, and

Although it is unfair to cite all Knob & Tube wiring as unsafe, it generally no longer meets the needs of today's households. It is no longer allowed in new home construction. Existing installations should be inspected by a licensed electrician to ensure that unsafe modifications were not made over the years and to look for wear that could cause safety issues.

Problems Associated with Knob & Tube Wiring



It has no ground wire and thus cannot service any 3-pronged appliances

National Electric Code (NEC) requires that this wiring system not be covered by insulation

Rubber and cloth covered conductors deteriorate over time causing a major fire hazard

Unsafe modifications by amateurs is common

Vulnerable to overloading

Wire splices and connections commonly made inside walls

It lacks a grounding conductor. Grounding conductors reduce the chance of electrical fire and damage to sensitive equipment.

Many insurance companies refuse to insure houses that have knob and tube wiring due to the risk of fire

Advice for Homeowners

Advice for those with K&T wiring

- Have the system evaluated by a qualified electrician. Only an expert can confirm that the system was installed and modified correctly.
- Do not run an excessive amount of appliances in the home, as this can cause a fire.
- Where the wiring is brittle or cracked, it should be replaced. Proper maintenance is crucial.
- K&T wiring should not be used in kitchens, bathrooms, laundry rooms or outdoors. Wiring must be grounded in order to be used safely in these locations.
- Rewiring a house can take weeks and cost thousands of dollars, but unsafe wiring can cause fires, complicate estate transactions, and make insurers skittish.
- Homeowners should carefully consider their options before deciding whether to rewire their house.
- The homeowner or an electrician should carefully remove any insulation that is found surrounding K&T wires.
- Prospective home buyers should get an estimate of the cost of replacing K&T wiring. They can use this amount to negotiate a cheaper price for the house.
- In summary, knob-and-tube wiring can be a safety hazard due to improper modifications and the addition of building insulation. Inspectors need to be wary of this old system and be prepared to inform their clients about its potential dangers.

Getting a Knob & Tube Survey

To properly evaluate your current electrical system, a technician will perform a complete evaluation of electrical service and all related equipment including:

- Visual inspections of all open areas
- Create a detailed electrical floor plan
- Identify all existing electrical wiring i.e. Romex, BX, Knob & Tube
- Complete a home information form - i.e.: type of home, structure, detail
- Complete a 12 point safety inspection - i.e.: safety and electrical code issues
- Customer will receive a report of findings and a detailed estimate if work is needed
- Customer will receive a certificate of completion letter stating either no knob and tube was found or all knob and tube has been replaced and any visible knob and tube has been removed

Why do One?

Required by Insulation Contractors prior to installing insulation

Many insurance companies refuse to insure houses that have sub-standard wiring

Confirm the age and quality of your existing home electric system

Protect your investment

Life safety

Budgeting for future renovations

Get an accurate price quote on replacement of knob and tube wiring

Once work is completed receive a Certificate of Completion proving the system is up-to-date

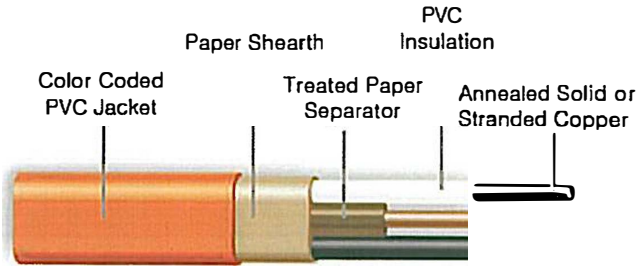
Today's Standard

ROMEX

Romex ™ is the most up-to-date electrical wiring available. It is used to supply electricity to most outlets in modern homes, as well as to fixed lighting units.

Here are a few basic facts about Romex wiring:

It is composed of two or more insulated conductors contained in a non-metallic sheath. The coating on NMC cable is non-conducting, flame-resistant and moisture-resistant. Unlike other cables commonly found in homes, they are permitted in damp environments, such as basements.



It is categorized by the National Electrical Code (NEC) as underground feeder (UF) or non-metallic sheathed cable (NM and NMC).

Underground feeder conductors appear similar to NM and NMC cables except that UF cables contain a solid plastic core and cannot be "rolled" between fingers.

Information Provided by

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