How the Japanese heat their homes in winter

Did you know that in winter, the average temperate of a Japanese home is *colder* than homes in Russia? This is because houses in Japan have no central heating! I know from experience with 3 winters in Russia and 36 winters in Japan. Only individual rooms in Japan are heated by the use of portable kerosene burning stoves. The stoves are ignited only when the room is occupied, and usually extinguished when people leave the room. Even in bedrooms at night though occupied, they are turned off just before bed. It's considered dangerous to leave them on at night when sleeping.

Click on any photo to see an enlargement.

This was the most common type of heater in Japan and is still sold today. It sits on the floor, weighs only a few pounds, and can be moved around easily. Its fuel is kerosene. In the event of an earthquake or somebody hitting it by accident, there is a mechanism that pulls down the wick to turn it off quickly in order to prevent a fire. The top gets hot and cannot be touched without burning one's hand. Sometimes people set kettles on top to boil water or to add humidity to the air.

Here we see the heating element removed and the wick visible. When these types of heaters are still new, they are lit by pushing a lever which presses an electric heating coil against the wick. The coil becomes red hot when the lever is pressed. It is powered by two batteries in the back of the heater. However, in the case of an older heater, often the electric heating coil is either burned out, or the batteries are dead. In this case, rather than immediately replace the batteries, most people use a match to light the wick. In order to do this, the heating element must be raised up slightly by hand

to get the match close to the wick. The problem of using a match is that unless the heating element is set back properly over the wick the way it should be, the kerosene will not burn hot enough and will produce a smelly black smoke that fills the room! Once this happened just after the kitchen ceiling was freshly painted white. The person left the room and it was not until several hours later the problem of the smokey heater was discovered. Can you guess what color the ceiling became? Gray!

This photo shows the back of the room heater. You can see the two dry cell batteries in the holder that are used to light the electric coil that ignites the wick. In a couple years it will stop working and a match will have to be used instead.

In these two photos you can see the tank that holds the kerosene fuel for the heater. The tank needs to be filled every other day if used regularly. The left photo shows the tank on its side on top of a different type of heater than the one above, but it is the same kind used.

Many homes use orange plastic containers to store the kerosene as shown in these photos. Some people use much larger drums and have the kerosene man come when empty, but it is cheaper to use the smaller containers and take them to the local gas station to fill them. I’m using a battery powered pump to fill the heater tank, but many people also use a siphon pump. The battery pump is designed to turn itself off when the tank is full, but sometimes the mechanism fails to work. There are accidents both with the battery pump and the siphon pump. The tank overflows and kerosene spills on the floor. Even without any spillage, I usually wind up with some kerosene on my hands when removing the pump from the tank.

This is a different type of kerosene heater which uses electricity from a wall socket to power an internal fan to blow the heat out. It also uses electricity to initially warm the kerosene to a certain temperature before it ignites. It is also portable can be moved around from room to room. Without electric AC power from a wall outlet, these types of heaters will not run! They are a bit heavier than the non-electric type of heater but it’s also more convenient to turn them on because you just need to push the power button. They won’t turn on immediately. It takes 2 or 3 minutes for a heating coil to warm the kerosene sufficiently to ignite. The newer models with better technology start a bit quicker because they use electricity to keep the kerosene warm, but it may also up the electric bill. However the quick on function can be disabled. They also have a thermostat device that regulates the amount of heat. You can adjust the temperature to higher or lower. I think the electric-kerosene heater may use fuel more efficiently than the wick only type.

In the event of a power outage, this heater will turn off immediately and are therefore **useless** if the power grid goes down! In January 2006, tens of thousands of homes in my area suffered a day long power outage due to heavy snow shorting out an insulator of a high voltage power line. We were glad that we had several non-AC power dependent kerosene heaters to use to warm our house. The electric AC power kerosene type of heater is high tech and will eventually break down. It cannot be started with a match. The top does not get hot and is therefore safer to use with little children in the room. If jarred or bumped, a safety mechanism will automatically turn the heater off. Another mechanism will turn the heater off after 3 hours. This is to prevent CO poisoning while sleeping at night. This is yet another reason why these heaters are never left on all the time.

Kerosene heater

Top view of the electric kerosene heater. Can you see that it is dented? The top of these types of stoves is thin metal. Because the top does not get hot like the non-electric wick heater, young people often are tempted to use them as chairs! Sitting on it only *once* will dent it **permanently**! Even worse than using it as a chair is to use it as a footstool. The resulting dent is yet more noticeable.

The low table in these photos is called a *kotatsu*. It has an electric heating element under the table connected to a power cord which is plugged into an AC wall outlet. Sitting at a kotatsu is another way the Japanese keep warm at home in the winter. Even though the room temperature may be cold, it feels quite warm and cozy to sit in front of the kotatsu with one’s legs under the table with the blanket covering them and keeping in the heat! Though electricity is expensive in Japan, the kotatsu doesn’t need much power to keep the small space under it warm. Moreover, it has a thermostat which turns the heater off when the temperature gets too high, and so using them is quite economical.