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Television (Flat Screen)

Equipment Description

Nearly all televisions sold today are thin, light-weight units that use digital signals to display a vivid color, flat screen picture using plasma, liquid crystal display (LCD) or light emitting diode (LED) technology. These TVs are operated by using a handheld infrared remote control to enable control of input source, channel changing, sound and picture quality adjustment, and powering on and off. Although most TVs can receive over-air digital channels using a digital antenna, they are usually connected to cable or satellite TV transmission systems, and are capable of multiple external source inputs from computers, DVD/blue ray players and gaming systems.

Loss Scenario

Broken screens, electrical shorts, and screen discoloration are common TV failures, and are most often caused by thrown objects, spilled liquids, or other inappropriate activities.

Plasma televisions are subjected to "burn-in", which is caused by projection of a single or common image for long periods of time. It results in a dull unwanted image "burned" into the screen which detracts from optimal viewing. Leaving the plasma TV turned on for long periods of time each day will eventually cause the screen to lose its brightness due to pixel deterioration. This may happen gradually over a number of years. LCD and LED TVs are not subject to screen burn-in or pixel deterioration. All modern TVs can be seriously impacted by electrical surge and other electrical quality issues.

Size and Carbon Footprint

Flat screen TVs will vary in physical size from handhelds to 60 inches or more. The average power consumption is 301 watts (W) for a plasma TV, 110 W for an LCD TV, and 101 W for an LED TV. If a plasma TV is run for five hours a day, the monthly energy consumption would be 45 kilowatt-hours (KWh), or 550 kWh a year. This would result in approximately 850 pounds of carbon dioxide (CO_2) generated annually.

TVs are often used with other equipment such as cable boxes, digital video recorders (DVRs), DVD and Blue Ray players, gaming equipment, and routers, which are connected to the TV and consume additional energy.

Maintenance Tips

- Keep your television free from dust as much as possible. Excessively dusty environments cause problems. Dust accumulation inside the TV can result in electrical shorts or other malfunctions. Use a soft cloth, ideally microfiber, or 100 percent cotton. Avoid using paper towels or dish cloths, as they can easily scratch the flat screen surface.
- Avoid using a plasma TV screen to display a single image, like a picture, or using the screen as a computer display for long periods of time, in order to reduce likelihood of screen "burn-in." If your plasma TV has an option called "white flash" it can be used to eliminate a burned-in image. However, using the white flash will shorten the overall life of your screen.
- Use a quality electrical surge suppression device or a battery based uninterruptible power supply (UPS) system on the electrical power to the TV to protect it from electrical power quality issues.

Loss Prevention Tips

- Televisions are susceptible to localized lightning strikes and power surges. To minimize potential for damage, unplug televisions during thunderstorms and while on vacation.
- Avoid exposing your LCD TV to very high room temperature and humidity, both of which can shorten the lifespan of your TV. High humidity in particular can lead to gradual interior corrosion. Additionally, temperatures below 50°F can negatively affect both response time and brightness displays, resulting in immediate loss of picture quality.

Check your TV manufacturer's instructions for information before considering mounting your television above your fireplace. Operating a TV in hot environments will greatly reduce the lifespan of your unit and may void your warranty.