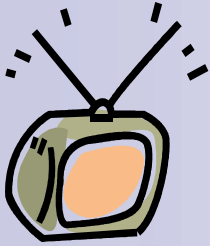


# Get the Picture: Television Technology



**Effective June 12, 2009**, regular analog television signals will no longer be broadcast from TV towers. Households that do not have a digital TV and receive their television signal over the air will be affected. Read the CPB's [What You Need To Know About the Digital Television Transition](#) resource to learn more about the transition and the coupon program for the purchase of converter boxes. If an affected household chooses to purchase a new TV rather than take an advantage of the converter box free coupon program, below are brief descriptions of the digital televisions on the market today for your guidance.

When looking to purchase a new digital television, many decisions will need to be made, including whether you want a high definition television (HDTV). HDTV is a format that provides crystal-clear quality wide-screen pictures with surround sound. While much television programming is now broadcast in high definition (HD), you may not be able to watch all your favorite shows in this format.

Each television type has benefits and limitations, some of which are listed below. Besides considering such aspects as screen size, price, glare from a curved screen or flat screen, viewing range and resolution quality, remember to measure the space in which you plan to place the television in your home.

**DIRECT VIEW or CRT:** These are traditional tube-type sets that use cathode-ray tubes to “paint” the image onto the screen.

### Pros

- 👍 Bright, clear picture with strong colors
- 👍 Relatively inexpensive
- 👍 Can be viewed from any angle

### Cons

- 👎 Bulky and heavy
- 👎 Limited in size
- 👎 Limited number of models available because of new technology

**FLAT-PANEL PLASMA:** They work by shooting ultraviolet rays at a panel coated in phosphor, which makes specks of the phosphor turn red, green or blue. Unexcited phosphors stay black, providing high contrast.

### Pros

- 👍 Large screen size
- 👍 Sleek design
- 👍 Space saver - able to

### Cons

- 👎 Relatively expensive
- 👎 Can suffer from burn-in (residual image embedded on screen)
- 👎 Black levels are low (affects picture detail)



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**FLAT-PANEL LCD:** LCD panels are made of two layers of a glass-like material, which are polarized, and are "glued" together. One of the layers is coated with a special polymer that holds the individual liquid crystals. Electric current is then passed through individual crystals, which allow the crystals to pass or block light to create images. LCD crystals do not produce their own light, so an external light source, such as a florescent bulb is needed for the image created by the LCD to become visible to the viewer.

## Pros

- 👍 Sleeker design than plasma
- 👍 Bright and sharp images especially for video plasma games and home theater systems
- 👍 No problems with burn-in

## Cons

- 👎 Limited screen sizes
- 👎 Black levels and contrast worse than plasma
- 👎 Narrower viewing angle than plasma

**PROJECTION:** A projection TV creates a small picture and then uses a beam of light to display that picture at a much larger size. Projection TVs are available in two main configurations -- front projection and rear projection. A front-projection system uses a projector and a separate screen, and it projects images onto the front of that screen. Whereas, rear projection displays images on the back of a screen rather than the front, and the projector is completely contained within the television itself. Projection televisions are available as CRT, plasma and LCD. The pros and cons associated with this technology are comparable with respective non-projection televisions.



**NOTE:** Prices may vary depending on screen size, technology and additional features. Emerging technology may create more competitive pricing and choices for consumers. Shop around prior to making your purchase and ask questions until you are satisfied that you are purchasing the television that best suits your needs.

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