

The DTV Transition: Background Summary

The Law

Under the Digital Television Transition and Public Safety Act of 2005, all full-power television stations were required to switch off their analog signals and begin broadcasting exclusively in the digital format by February 17, 2009. However, in early February, the U.S. Congress approved an extension of the deadline to June 12. The switch from analog to digital broadcasting is known as the digital television (DTV) transition. Some stations will make the transition to digital prior to June 12 due to unique technical issues.

The Difference Between Analog and Digital Broadcasting

DTV enables television stations to provide dramatically clearer pictures and better sound quality. By transmitting the information used to make a TV picture and sound as “data bits” like a computer, television stations can also carry more information using digital broadcasting than is currently possible with analog broadcast technology. For example, DTV makes it possible for stations to broadcast multiple channels of free programming simultaneously, called “multicasting,” instead of broadcasting only one channel at a time. Digital technology also enables television stations to provide free, over-the-air high definition television (HDTV) for consumers with HD television sets. The picture quality of HDTV is also better over the air in its purest form.

Author Thomas L. Friedman provides a useful description of digital technology in his book *The Lexus and the Olive Tree*:

“Digitization is the wizardry by which we turn voices, sounds, movies, television signals, music, colors, pictures, words, documents, numbers, computing language and any other form of data you can think of into computer bits and then transfer them by telephone lines, satellites and fiber-optic cables around the world . . . Digitization involves reducing any sound, picture, number or letters into a different code of 1’s and 0’s, and then transmitting them through telecommunications to another point where those 1’s and 0’s are decoded for the receiver and reconstituted into something very close to the original . . . It is much easier for the device receiving such a signal to read exactly what it is . . . This is why digital copies are always so much sharper and why anything that is sent as a string of 1’s and 0’s from your mouth or fax or computer in New York will automatically come out as the same 1’s and 0’s on the other end.”

The transition to digital television also frees up some of the airwaves since digital signals use less of the spectrum than analog signals. When the transition is completed, television broadcasters will vacate part of the spectrum — the so-called 700 MHz band consisting of channels 52-69 — which the government will reclaim for other uses.



Effect of the DTV Transition on Consumers

While the benefits of DTV are remarkable, millions of households risk losing television reception unless they take the steps to receive a digital signal. Television viewers who watch broadcast television using antennas on TV sets that are equipped with analog tuners – and who do not subscribe to a pay TV service – will be affected by the transition.

An estimated 19.6 million U.S. households rely exclusively on free broadcast television. Another 14.6 million households have secondary over-the-air television sets in a spare bedroom or kitchen that are not connected to a pay TV service.

Overall, more than 34 million households and nearly 70 million television sets nationwide stand to be impacted by the transition to DTV if consumers do not take the necessary steps to upgrade their televisions in time.

Households:

U.S. TV Households: 110,200,000

Percentage of TV Households:

Broadcast-Only 17.8%

Cable/Satellite, Cable/Satellite + Over-the-air 82.2%

Broadcast-Only TV Households 19,615,600

Cable/Satellite + Over-the-air 14,670,000

Total Over-the-air Households 34,285,600

Sets:

In Broadcast-Only Households 45,508,192

In Cable + Households

Connected Sets 236,425,284

Broadcast-Only Sets 23,551,944

Total Sets 305,485,420

Total Over-the-air-Only Sets 69,060,136

Source of estimates: NAB research analysis of Spring 2006 Knowledge Networks/SRI Home Technology Monitor survey; 2005-2006 Nielsen U.S. TV Household estimates.



How to Make the DTV Switch

Consumers have three options for upgrading to DTV so they can continue receiving free broadcast television after the transition:

- 1) Purchase a DTV converter box that will make digital programming viewable on older analog television sets. Converter boxes cost between \$40-70 and can be purchased online, by telephone or at local and national retailers. The federal government is offering households up to two \$40 coupons toward the purchase of converter boxes. Visit www.DTV2009.gov to learn more about the coupon program.
- 2) Purchase a new TV set with a built-in digital tuner. All TVs that have a digital tuner are able to receive digital signals broadcast by television stations.
- 3) Subscribe to cable, satellite or other pay TV service, but make sure that provider carries all of the local stations you want.

Converter Box Coupon Program

The federal government is providing coupons to defray the cost of upgrading to digital television. Managed by the Commerce Department's National Telecommunications and Information Administration (NTIA), the TV Converter Box Coupon Program allows all eligible U.S. households to request up to two \$40 coupons toward the purchase of up to two converter boxes. The coupons cannot be combined to purchase a single converter box, nor can they be used toward the purchase of other products. Coupons must be redeemed within 90 days of issuance.

For more information about the coupon program or to apply for coupons, call 1-888-DTV-2009 or visit www.DTV2009.gov.

Antennas and DTV

Consumers still need an antenna after the transition to DTV. In general, the same antenna that currently provides good quality reception on an analog TV set will also provide good DTV reception. However, the type of antenna needed for digital reception depends on several factors, including the position of the antenna, the distance from the transmitting station and in which frequency band (VHF or UHF) the local stations are located. After June 12, 2009, some stations will move to a different frequency band, which may require consumers to get a different type of antenna.

Consumers can find suggestions for appropriate outdoor antennas by entering their street address and zip code at www.AntennaWeb.org.

How TV Stations are Preparing for DTV

The vast majority of full-power television stations are already broadcasting in both analog and digital today. Since the late 1990s, television stations have been building digital facilities and airing digital channels alongside regular analog broadcasts in preparation for the transition to DTV. So consumers in most parts of the country can begin enjoying the benefits of digital TV now, and do not need to wait until June 12 to make the switch.

The National Association of Broadcasters (NAB) is leading an extensive consumer education campaign to ensure that no American is left unprepared for the transition to DTV. NAB's DTV transition campaign includes:

- **Research:** Working with some of the best survey research teams in the country to craft effective messages to reach diverse audiences and track consumer awareness levels.
- **Earned Media:** Working with reporters to ensure accurate coverage of the DTV transition across print, broadcast and online mediums.
- **Marketing and Paid Media:** Using innovative marketing tools and advertisements to help raise consumer awareness of the transition and producing high-quality "DTV Action" television spots for broadcasters to air in markets that have not yet made the switch.
- **Speakers Bureau:** Enlisting local broadcasters to address their local communities about the transition and help them prepare.
- **DTV Road Show:** Coordinating a traveling media event that has reached more than 200 cities.
- **DTV Transition Coalition:** Bringing together a diverse group of public and private organizations that share an interest in a successful transition to digital television.

The DTV transition is the greatest advancement in television technology since the introduction of color, and viewers everywhere will benefit. But consumers must take the necessary steps to upgrade to digital or risk losing access to free over-the-air television.

For more information about the NAB's DTV transition campaign, please contact Shermaze Ingram at (202) 429-5477 or singram@nab.org.

DTVAnswers.com

An initiative of the National Association of Broadcasters