

Federal law requires that all full-power television broadcast stations stop broadcasting in analog format and broadcast only in digital format after February 17, 2009 (**Hawai'i will transition at 12 noon on January 15, 2009**). Broadcast stations in all U.S. markets are currently broadcasting in both analog and digital. If you have one or more analog televisions that receive free over-the-air television programming with an outdoor antenna or "rabbit ears" on the TV, you will either need a digital television (a TV with a built in digital tuner) or an analog television connected to a "digital-to-analog converter box" (which converts digital signals to analog signals for viewing on your analog set) in order to continue to watch programming from full-power broadcast stations. This Fact Sheet provides information on antennas and on what is needed for good quality reception of digital broadcasts.

## **Try Using Your Existing Antenna First**

First, it is important to know that if your television currently receives good quality reception on analog channels 2-51 with a broadcast antenna, it should be able to receive digital television (DTV) signals, including high definition television (HDTV) signals, with the same broadcast antenna. You do not need to purchase a "DTV antenna" or an "HDTV antenna" to receive DTV or HDTV signals. However, consumers should be aware that if they use a digital-to-analog converter box, they will still need to use an antenna to receive DTV signals.

Prior to making any changes to your current antenna or antenna system, you should check to see if it will receive the digital signals being broadcast in your area. Connect your existing antenna to either a digital television or a digital-to-analog converter box connected to an analog TV. Make sure your TV is set up to receive over-the-air broadcasts (as opposed to being connected to a paid provider such as a cable or satellite TV company). It may also be helpful to perform a "channel scan," in which your TV will automatically check to see which stations it can receive. In many cases, this is all you will need to do to watch digital television broadcasts.

## **For Help With Reception Problems**

If you experience reception problems, the following information and tips may help to improve your reception for digital broadcasts.

- During the transition to digital TV, many stations are temporarily operating at reduced power levels. If you are not receiving certain digital TV stations, this does not necessarily mean there is a problem with your antenna or receiver. Check with the TV station to find out whether they are planning changes that will improve reception.
- When an analog TV signal is weak or receives interference, static, snow, and distortion will often appear on the screen, but you can watch the picture through the noise. Digital broadcasting will provide a clear picture even with a weak signal and in the presence of interference. However, if the digital signal falls below a certain minimum strength, the picture can suddenly disappear. This "cliff effect" means that if you typically watch analog TV stations that have a lot of static and distortion, you may have to adjust or upgrade your antenna system to get a reliably good signal for digital broadcasts.
- TV reception can be affected by factors such as terrain, trees, buildings, the weather (rain, wind, humidity), and damaged/deteriorated equipment. Often digital reception can be improved just by changing the location of your current antenna. Moving it away from other objects and structures, or placing it higher can often improve reception.
- Many antennas need to be oriented or aimed to get the best signal from the desired station. For indoor antennas, you may need to do this manually by trial and error. For outdoor antennas, a



rotor that re-orientes the antenna can improve performance, particularly when trying to receive stations that transmit from different locations.

- Television stations broadcasting in digital use both the VHF band (channels 2-13) and UHF band (channels 14-51). Many indoor antennas use “rabbit ears” for the VHF band and a “loop” or “bow-tie” antenna for the UHF band. Make sure you are using an antenna that covers both the VHF and UHF bands and have connected it properly.
- Simple indoor antennas, such as rabbit ears, provide minimal performance that may or may not be suitable for your location. If you are unable to obtain satisfactory reception with your current indoor antenna, you may wish to obtain an indoor antenna that includes features for better reception of UHF signals and/or an amplifier to boost the received signal (often referred to as an active indoor antenna).
- Generally, an outdoor antenna will get better reception than an indoor antenna. If you already have an outdoor antenna and are getting good quality reception from VHF and UHF channels, your antenna should work fine for digital television.
- The performance of outdoor antennas can degrade over time due to exposure to the weather. If you are having problems, check for loose or corroded wiring, broken antenna elements and that the antenna is pointed in the right direction.
- Try to keep the length of wire between your antenna and digital receiver as short as possible for best reception.
- You can use a single antenna to provide digital broadcasts to multiple TVs in your home. Remember, however, that each analog TV connected to your antenna will need its own digital-to-analog converter box to view digital broadcast programming.
- “Splitters” that are used to connect a single antenna to multiple receivers reduce the amount of signal available to each receiver. If you are having problems, check to see whether reception is improved without the splitter. In some cases an “active” splitter that includes an amplifier can solve the problem.
- If you are near a station’s broadcast tower, reception of that station, as well as other stations, can be impeded by signal “overload”. Consider using an “attenuator” or removing amplifiers to improve your reception.
- If you decide to replace or upgrade your outdoor antenna, websites such as [www.antennaweb.org](http://www.antennaweb.org) provide information on the locations of broadcast towers and the types of outdoor antennas appropriate for the stations you wish to receive. If you need assistance with upgrading your antenna system, check with a local antenna retailer or antenna installer.

For more information about the DTV transition, go to [www.dtv.gov](http://www.dtv.gov) or contact the FCC by e-mailing [dtvinfo@fcc.gov](mailto:dtvinfo@fcc.gov); calling 1-888-CALL-FCC (1-888-225-5322) voice or 1-888-TELL-FCC (1-888-835-5322) TTY; faxing 1-866-418-0232; or writing to:

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