



OUTDOOR ANTENNA INSTALLATIONS



Congratulations! Your new antenna will give you the best possible digital and HD picture quality (yes, even better than cable or satellite). Today, local digital TV (DTV)—including HDTV—is available over the air using this antenna. Over-the-air signals are not compressed like cable or satellite transmissions and THEY'RE FREE! Here are a few simple tips to make the installation as easy as possible and optimize the performance of your new antenna.

While your new antenna will allow you to receive local over-the-air (OTA) digital TV stations, it will not provide cable or satellite channels. After local OTA signals are received by your antenna, the digital signals must be decoded, so your DTV set can display a digital picture.

To watch true HDTV, you must have:

- Programming originating (produced) and broadcast in HDTV (Not all programming from your local station or cable or satellite channels is broadcast in HD - consult your local programming guide)
- An HDTV tuner (receiver)
- An HDTV monitor (display).

There are currently 3 ways to decode these local DTV stations utilizing this antenna:

1. An HDTV set with a built in digital tuner. Most TVs sold after 2007 will have these built in. If the owner's manual does not specifically state a digital tuner is included, you will need to purchase an ATSC set top box.
2. An over-the-air digital tuner (Often called a set-top box).
3. An HD satellite tuner. Both Dish Network® and DIRECTV® offer HDTV satellite receivers with the over-the-air digital tuner built-in.

Please note that once the antenna is mounted and plugged into the appropriate source on your DTV or digital tuner, you will need to perform a channel scan. If the antenna is moved, an additional channel scan must be performed again to assure correct alignment.

Installation Tips

1. Mount the antenna on your rooftop for optimal performance. The antenna may be installed in an attic, but this may cause loss of signal strength. Face the front of the antenna towards the transmitting towers. Don't know where your towers are? Visit www.antennapoint.com.
2. Once the antenna is mounted and the cable is connected you are ready to run the cable to your digital tuner, HD satellite receiver or digital TV (Note: shorter cables runs are better).
3. Perform the channel scan after installing or relocating your antenna—consult your TV manual for instructions.
4. Avoid using an antenna mounted amplifier in urban areas.
5. Seal all outdoor connections, especially at the antenna, with a waterproof sealant. Humidity in the atmosphere, can for water droplets and corrode your connections.

Fact: Most of the DTV/HDTV antennas returned to us are in perfect working order, but are returned because of faulty installation techniques.

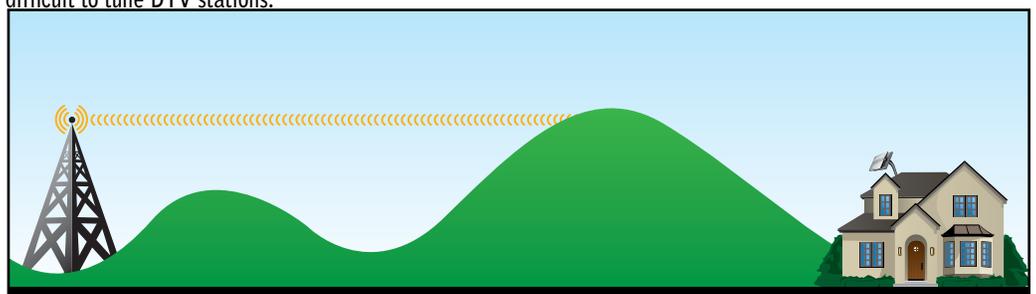
Troubleshooting Tips:

If your signal is weak, check the length of your cable run (the shorter the better) and remove any splitters or diplexers. Check all connectors/junctions for secure fit or corrosion. If your cable run must be longer than 75 feet, or you must use a splitter, consider a pre-amplifier-- http://www.antennasdirect.com/antenna_amplifier.html. Experimentation with antenna location often resolves problems. Try moving your antenna to different attic/roof locations.

If you believe your installation is correct, and you still cannot receive any DTV signals, there may be issues with your digital tuner. Faulty decoding chips or bad firmware can affect sensitivity making it difficult to tune DTV stations.

Digital Signals are "Line-of-Sight"

Line-of-Sight means that DTV signals cannot pass through objects, so elevate the antenna to clear any obstacles between you and the transmitting towers. REMEMBER: HIGHER IS BETTER!



Problems Caused by Reflected Signals

Reflected signals (multipath interference) are often a source of problems. For those living close to transmitting towers, multipath interference occurs when strong signals bounce off nearby buildings and other surfaces causing signal loss. If your transmitting towers are close, try aiming your antenna in different directions away from the towers and check for more stations received. Users very close to the transmitters can use an attenuator to lower the signal strength to reduce multipath interference. If you live less than 5 miles from your local transmitters, you may need a variable attenuator to reduce the signal to a level that will not overload your HDTV set.

Keep the antenna away from any metallic objects. Mount your antenna away from all reflective surfaces or other antennas.

Weak Signals from Distance and/or Installation

In rural areas, 20 – 50 miles distant from the transmitter, an outdoor antenna equipped with an amplifier (http://www.antennasdirect.com/antenna_amplifier.html) can provide good reception especially if the signal is not blocked by terrain (hills, etc.)



Common causes of signal loss: (approximate)

- Long cable runs - 30% loss for every 100 ft of RG6
- Satellite Diplexers -10%-50% loss
- Splitters - 50% loss per port
- Corroded connections - 20% -90% loss

Another common cause of poor reception is strong signals from nearby FM Radio and TV stations. Strong signals can overwhelm a receiver. Too much signal is just as bad as too little.

Note: With digital television, it's an "all-or-nothing" proposition. On a digital channel you will never see "snow" or "fuzz" If you see "snow" when you are tuned to an analog broadcast. Once a digital signal is acquired, it will be perfect. If that signal is interrupted, it will be blank.

ALWAYS perform a channel scan after making changes to the antenna or connections, most TVs will not add the channels automatically.

Combining multiple antennas

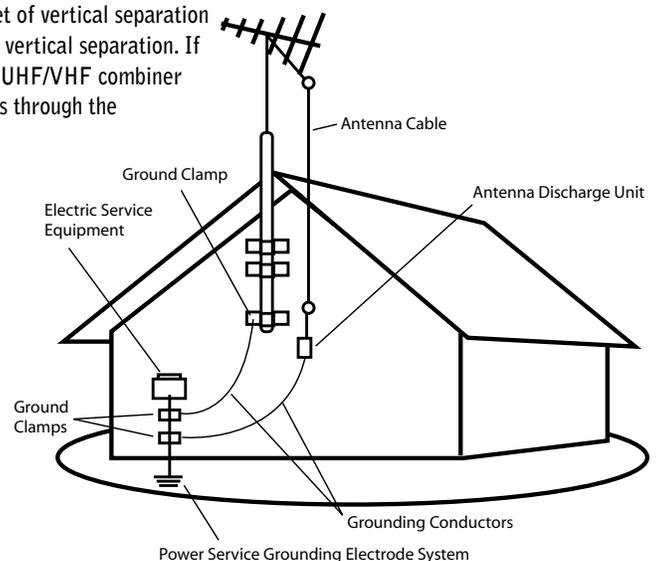
When using separate antennas, mounted on the same mast, try and keep at least 4-6 feet of vertical separation between antennas. UHF Yagi-style antennas can usually be mounted with about a 4-foot vertical separation. If you want to combine signals so that you have only one lead going into your house, use a UHF/VHF combiner which includes a channel filter for each antenna, so as not to pick up out-of phase signals through the other antenna.

Optional Grounding Information

Grounding the coax cable with a coaxial lightning surge protector will protect your equipment from voltage surges created by nearby strikes but will not protect from a direct strike. To protect yourself from a direct strike attach a lightning arrester to the antenna mast. Connect #8 gauge wire to a copper clad ground rod driving it at least four feet into the ground. Check your local electrical codes to make sure you are in compliance— We recommend calling a professional electrician to advise and/or install.

WATCH FOR WIRES!

Installation of this product near power lines is dangerous. We recommend you stay a minimum of 6 meters (20 feet) from all power lines. If any part of the antenna or mast assembly comes in contact with a power line, call your local power company. **DO NOT TRY TO REMOVE IT YOURSELF!**



WARNING Perform as many functions as possible on the ground. Installing antennas on windy days can be dangerous, even slight winds create strong forces. Be prepared to safely handle these forces at unexpected moments. Antennas Direct Inc. is not responsible or liable for damage or injury resulting from antenna installations.

WARNING Antennas improperly installed on an inadequate structure are very susceptible to wind damage. This damage can be life threatening. The owner and installer assumes full responsibility that the installation is structurally sound to support all loads (weight, wind & ice) and properly sealed against leaks. Antennas Direct Inc. will not accept liability for any damage caused by an antenna system due to the many unknown variable applications.

WARNING Do not attempt to install if drunk, pregnant or both. Do not throw antenna at spouse.

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