


Fall 2004

Canadian Digital Television

I Want my HDTV



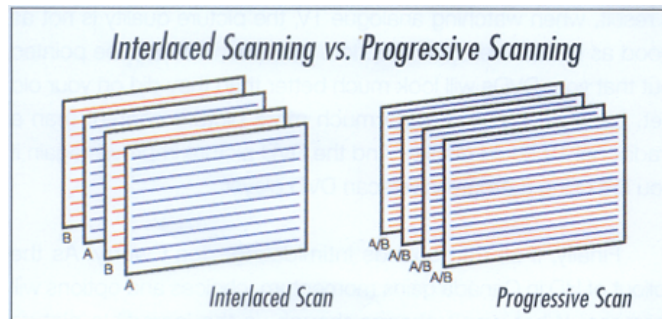
visit **www.cdtv.ca**

I Want my HDTV

CDTV has prepared this pamphlet for Canadian consumers to answer the most frequently asked questions about HDTV. Much more information is available at www.cdtv.ca.

Over the next several years the North American television industry will transition from analogue (NTSC), to a new format called Digital TV or DTV. There are two subsets in DTV: SD or Standard Definition, and the top end HD or High Definition. The key difference between the new DTV and the old analogue TV we've been used to is that the programs are delivered digitally, by cable, satellite or over-the-air (OTA) transmission. This eliminates the effects of interference, ghosting and noise, and assures outstanding images on the screen. And for viewers, HDTV, the top end of DTV, delivers brilliant, high-resolution digital images in a wide-screen format, and includes 5.1 Dolby Digital audio for a complete home theatre experience. Ideally suited for a big screen set, the quality of HDTV is truly amazing.

To better understand why there is such a difference in the picture you get with HDTV, here are some key technical specification comparisons between the old analogue system, the new "Standard Definition Television" (SDTV) and High Definition Television (HDTV).

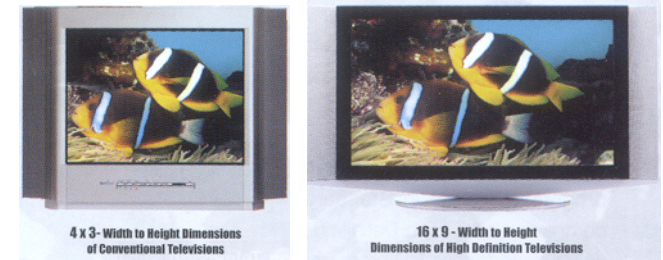


Picture Resolution

The biggest difference you'll see with HDTV is the picture quality. HDTV displays can show up to 6 times the amount of picture information (pixels) on the screen. HDTV signals are transmitted in either 720p (progressive) scanning lines, or 1080i (interlaced) scanning lines, compared to fewer than 400 scanning lines typical of analogue broadcasts and TVs.

Aspect Ratio

HDTV has been designed with a different screen shape or aspect ratio. The 16x9 rectangular shape is more natural to the eye than the 4x3 square shape of old TVs. The wide screen aspect is ideally suited for movies and sports. Many new programs are being created in this aspect ratio, although other programs are still presented in 4x3 on your wide-screen set, with grey bars on the sides.



Technical Comparison

This chart shows the different quality levels between Analogue, Standard Definition, and High Definition TV. Many programs that you see on an HDTV channel may have been originally produced in analogue or SDTV format and were up-converted for broadcasting. The up-conversion produces a better image but not the same high quality as a program that was originally produced in an HDTV format. In addition, up-converted programs will not appear in a 16x9 wide-screen format and likely will not fill your HDTV screen completely. In this case, black or grey bars will appear along the left and right sides of your television screen. Only programs that were produced in a 16x9 format will fill the entire screen of your HDTV. Both 720p and 1080i provide outstanding High Definition pictures.

	Analogue	SDTV	HDTV
Pixel count	253,000+/-	<480,000	920,000 @ 720p 2,000,000 + @ 1080i
Horizontal (scanning lines)	480i (336 visible)	480i / 480p	720p or 1080i
Aspect Ratio	4x3	4x3 or 16x9	16x9
Progressive Scan	No	Yes	Yes
Interlaced Scan	Yes	Yes	Yes
Audio	2 channel	2 ch. digital	Dolby Digital
Broadcast Formats	1 analogue	12 Digital	6 Digital

HDTV Ready?

There is a difference between High Definition television sets, and televisions that are High Definition Ready. Some sets have an HD tuner built-in, and are called HDTV's, but most sets now are "HDTV-Ready", meaning that they need to be connected to a specific HD set top box that can deliver the HD signal to the TV. In most markets these set top boxes are available from your cable or satellite service provider. Within a few years, all TV's sold will have a built-in HD tuner, which will enable you to receive free "over-the-air" (OTA) broadcasts using an antenna. Some border communities will also be able to pick up US over-the-air broadcasts. Canada currently has 3 markets with HD broadcasting being developed in Toronto, Montreal and Vancouver. The good news is that many of the other markets have broadcast license applications in progress. Check for updates at www.cdtv.ca.

The television manufacturers have been leaders in the introduction and marketing of High Definition Television in Canada. In fact, a recent analysis of advertising trends indicates that the dominant Consumer Electronics stores are advertising HD products more than they are the older analogue sets and HDTV-capable sets are more affordable than ever. There are several different display technologies within the world of HD, Plasma, LCD, DLP and CRT all deliver wonderful results, so talk to your salesperson to choose the best technology for you.

How Do You Get HDTV?

First, ensure that the set you buy is either HD-Ready or has a built-in HD tuner. Ensure that the set has proper inputs for receiving HD signals. You'll need component video inputs at a minimum, with DVI (Digital Visual Interface) or HDMI (High Definition Multimedia Interface), the new standard inputs, which are becoming more common. Most HD and HD-Ready sets come in the wide-screen 16:9 aspect ratio, which is the way HD content is created.

Secondly, you need to receive High Definition programming. Your options for receiving HD are three-fold.

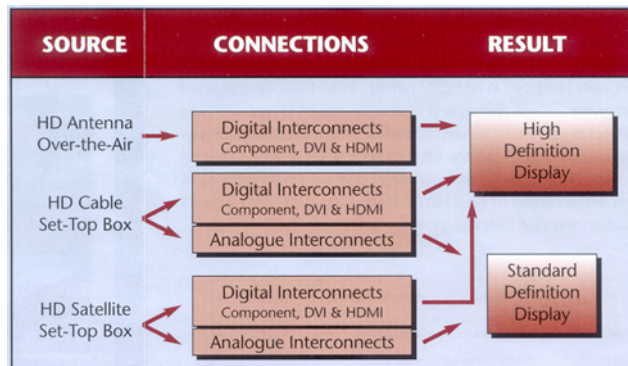
1. Over-the-air, which is limited but will become more prevalent over time. The big advantage with OTA HD is that it is free. You will need an HDTV set that has an HD tuner built-in or a set top box tuner. This tuner will enable the set to receive and decode over-the-air HD broadcasts, using an antenna. OTA broadcasts are free, but there are only 3 markets with HD broadcasting underway. It's important to note that the specially channels with HD programming do not broadcast over-the-air, and are only available from cable or satellite.

Your new HD set should still be able to receive analogue broadcasts with its regular analogue built-in tuner.

2. Most of the Cable companies can now provide digital cable services, which deliver SD level picture quality with even the analogue programs being converted to SD. However, to receive and display HD programming, you will need a special HD set top box, which can decode and deliver the HD programming available in all its glory. Digital and HD set top boxes are typically available for rent or purchase.
3. The two satellite companies in Canada transmit all of their programs digitally in Standard Definition, and the satellite companies offer High Definition set top boxes for sale or rent, which decode their HD programming for display.

Connecting Your High Definition Television

There have been technological advances in getting the digital data (program content) from the set top box/antenna to the TV for display. To receive digital content, your set will need at least one of the following interfaces: Component video jacks, DVI, or HDMI.



Your HD set will be able to receive and display High Definition programs only when using an HD set top box or antenna with an HD tuner, using digital interconnections such as DVI or HDMI or the appropriate analogue component such as RGB or YPbPr connectors. When HD programming is not available, the default will be SD display quality.

What Can You Watch in HD?

A number of Canadian broadcasters such as CTV, CityTV, Global and OMNI 1 and 2 are providing digital services and have some HD programming now. Over the next few months CBC and SRC will be joining them and providing additional HD content. Over time these over-the-air broadcasters will be increasing the amount of their HD programs. In addition to distributing these Canadian services, cable and satellite companies are offering a number of HD programming options, including most of the OTA HD broadcasts from the US networks; ABC, CBS, NBC, FOX, and PBS. In addition speciality channels such as TMN, Sportsnet, TSN and Discovery have HD programming available through cable and satellite services, along with HD pay-per-view programming such as movies and sports.

Many programs are now being created in HDTV, or on film that can be converted to the HDTV format. These programs are usually indicated as "HD" in the local TV programming guides. Other programs may have been created in analogue (or NTSC format), and then up-converted to SD by the broadcaster. A program can only be considered HD if it was created, transmitted and displayed in HD, with a 16:9 aspect ratio, Dolby Digital audio, and either 720p or 1080i lines of resolution.

Your new HDTV is designed to be able to display much more picture information than is available with analogue broadcasts. As a result, when watching analogue TV, the picture quality is not as good as HD or even SD reception. However, it should be pointed out that your DVD's will look much better than they did on your old set, because DVD's provide much more picture content than a traditional TV could display. And the DVD picture improves again if you are using a progressive scan DVD player.

If all that sounds intimidating, don't worry. As the rollout of HD in Canada gains momentum, choices and options will increase. What won't change though, is the incredible picture quality you see when you get HDTV. It is the highest picture definition ever, which is why it's called HD.

Canadian Digital Television (CDTV) is a non-profit industry organization endorsed by the Canadian Government. CDTV is comprised of members from Canada's leading broadcasters, cable, satellite, pay and specialty service providers, television manufacturers, and is supported by many retail organizations.

CDTV's mandate is to guide an orderly transition from analogue to digital television in Canada. As such, CDTV will act as an unbiased and definitive source of information related to DTV in Canada for consumers.