



Why your home videos  
won't last forever.

[www.picturebox.ie](http://www.picturebox.ie)

The chemical makeup of popular home movie videotape formats unfortunately ensures that they are extremely susceptible to three elements: the passing of time, the number of times they are played or duplicated, and the environment in which they are stored. Unless these tapes are transferred to digital formats, their images and audio will eventually be lost and irretrievable.

### Overview

There are three elements to home movie videotape formats that contribute to its eventual degradation, although most consumers are unaware of these factors. These are: time, usage, and environment. While camcorder videotape became popular in the 1980s as an inexpensive method for shooting footage of family movies, unfortunately it is not a permanent or durable medium.

Most experts agree that analog videotape begins to degrade after only 10 years. The most clear evidence begins with loss of audio quality or image quality (distorted image, loss of image, wavy lines, snow and hiss). As these tapes sit stored in family basements and garages, they are literally withering away. When they are finally brought out and played again, it often comes as a surprise to the owner that the once-clear tape they remembered from a few years ago is now a grainy, dull version of what it once was.

Sometimes consumers have the VHS tapes transferred to digital without first viewing the condition of the tape. Thus, they don't know how much degradation has already occurred.

The digital conversion preserves the footage as it was at that point in time. Or, they are unaware that while the tape may still play sufficiently well in the original camcorder in which it was shot, it will not be able to play well anywhere else. This is because the original equipment "heads" (which convert signals from electrical to magnetic) line up exactly with the tape. Not being able to show the footage on any other device except on the original camera, however, prevents others from enjoying it fully.

Additionally, in many cases, the original camcorder is not operational (broken, missing cables) or not available.

### Culprit Number 1: Time

The first enemy of videotape is the simple passing of time. Like most physical media, the elements that went into the creation of the tape break down bit by bit over time. Tape loses its magnetic particles as well as its lubricants. This is an unavoidable but realistic factor and has resulted in the loss of hundreds of thousands of valuable hours of footage that once were extremely vibrant.

### **Culprit Number 2: Usage/Duplication**

Unlike DVDs, in which a laser “reads” the data without ever touching the physical disk, a videotape makes contact with the equipment heads every time it is played. This eventually wears down the tape. And every time a copy or “duplicate” is made of the tape, each successive “generation” loses quality and clarity.

### **Culprit Number 3: Environment**

The third major enemy to videotape is the environment, including heat, moisture, mildew, water, and so on. These elements react with the materials that comprise the videotape, and cause warping, distortion, and brittleness. Eventually the tape will be unreadable in any type of player.

### **Videotape is Magnetic**

Understanding the chemical makeup of videotape is helpful in realising why it is so fragile. Videotape consists of a layer of tiny magnetic particles applied to polyester film.. These particles carry the video signal and are changed into patterns during the recording process. When the tape is played back, the patterns are picked up by a playback head and become the video image you see on your T.V. Because of its physical nature videotape can suffer any number of setbacks such as stretching, breaking, and loss of quality, none of which are present in digital formats.

### **Solution**

Analog videotape was popularised in the 1970s and 1980s, and helped introduce a new generation of families to the benefits of home movie making. These memories need to be preserved for future generations, and the most efficient method is to transfer them to digital formats such as DVDs. Once the older physical media is transferred into an electronic file, it can be more easily shared, enjoyed, and distributed without worry of loss of further image quality.

### **About Picturebox**

Picturebox is a home video editing and DVD creation company. We transform your home movies, old-media and images into crystal-clear DVD's that you can enjoy and share, time and time again. In Picturebox's studio, our production professionals use state-of-the-art technology and techniques to edit home movie video & films, video tapes, photographs and slides into full-length productions.

Founded and led by Con Kennedy, Picturebox is based in Dublin, Ireland.

For more information, visit [www.picturebox.ie](http://www.picturebox.ie) or call 087 243 0082.

#### **Disclaimer**

This article is provided purely as a guide for Picturebox clients. Use of or reliance upon the information in this article shall be at the reader's own risk, and shall not establish any contractual or other legal relationship between Picturebox and the users of this information.