

ARTBEATS®



REELExplosions™

Online Manual

Quick Start

If you hate to read manuals and feel comfortable with importing and manipulating video clips, you can use the clips as they are without any special instructions. However, this manual contains helpful information even for an expert, so we suggest you eventually take a closer look.

The Quick Reference Card included in the product packaging provides a printed thumbnail of each movie. To make sense of the DOS format file names, please refer to this Quick Reference Card.

The movies can be accessed directly from the CD-ROM. For the most part, the folders are self-explanatory. Thumbnail movies are provided for each clip and are designated by a “T” just before the .mov extension. High Resolution files are provided for selected animations, and can be found in the “Zero G (In Frame)” folder. High res files are designated with an “H” just before the .mov extension. Mattes that can be used as alpha channels are provided for many of the clips and are designated with “M” after the clip name. The mattes can be found in the “Extras” folder.

If you need to install QuickTime and you are using a Mac or a Windows PC, the QuickTime Installer program can be found in the “QuickTime 2.5” folder on the MacOS side or the “QTWIN” directory on the PC side. Windows 3.xx users should use “QTEASY16.EXE” and Windows 95 or NT users should use “QTEASY32.EXE.” Use the “Run...” command and type “D:\QTWIN\QTEASY16.EXE” or “D:\QTWIN\QTEASY32.EXE” where “D:” is your CD-ROM drive designation letter.

About This Document

This manual is designed to be cross-platform and easy to read on a 640x480 monitor. It was created in Adobe Systems' Portable Document Format (PDF) using Adobe PageMaker 6.5™ and Adobe Acrobat Distiller 3.0™. Adobe Acrobat Reader™ enables the user to view and print PDF documents, and must be installed on the user's computer or work station in order to read this manual. Should you wish to read this manual on a computer that doesn't have Acrobat installed, MacOS®, SGI-IRIX®, and Microsoft Windows® versions of the Acrobat Reader Installer program are included on the CD. MS-DOS and various other Unix versions are available at Adobe's web site at <http://www.adobe.com>.

Instructions

Reading this manual on your screen and printing it is very easy. Simply click on a chapter heading or subheading from the list on the left of your screen to learn more about the subject. If the chapters don't appear to the left, choose **“Bookmarks and Page”** or **“Thumbnails and Page”** from Acrobat's **“View”** menu. Use the scroll bar on the right to move forward and backward through the topics pages, or use the **“Next Page”** and **“Previous Page”** commands under the **“View”** menu. Standard methods can be used for printing specific pages or the entire document.

Introduction

Thank you for purchasing *ReelExplosions*™. We hope that you find the content useful and of high quality. Your satisfaction is fully guaranteed, and we'll be happy to address any technical problems that may develop. We also value any comments or suggestions you might have for this or any future products. We can be reached at (541) 863-4429, Monday through Friday from 8 am to 5 pm Pacific Time.

Production Notes

The research and development for *ReelFire*™ and *ReelExplosions* involved two 35mm film shoots, one in Bellingham, Washington and one in Myrtle Creek, Oregon. The Bellingham shoot utilized the pyrotechnic artistry of Robby Knott, special effects veteran of many films and TV series including *Remington Steele*, *Field of Dreams*, *Dances with Wolves* and *Dante's Peak* (second unit). Robby created zero gravity explosions (the ones where trailing sparks drift toward the camera), propane mortars and lots of fire and smoke. The Myrtle Creek shoot involved a professional fireworks display sponsored just for this project plus gas fires, candles, more smoke, and explosions.

After the film (over 15,000 feet) was telecined and processed, we felt that there was still room for more variety so took an opportunity to shoot a few more effects using a 16mm camera. These included more fireworks and bombs plus a wonderful gas & magnesium explosion shot at the 1997 Western Winter Blast, an annual fireworks festival. That clip will be included on

ReelExplosions. Our intent was to gather enough content for four collections, two of *ReelFire* and two of *ReelExplosions*. This is why Numbers appear in the product title. Only 4 of the clips in this product were shot on 16mm, the rest are all 35mm.

Brief Description

ReelExplosions contains 120+ broadcast quality clips in Apple™ QuickTime™ format, many which come with corresponding mattes for keying. In addition, we have provided QuickTime thumbnails which can be viewed in real time from the CD and, for Macintosh users, catalogs for easy browsing. We will cover each of these categories in greater detail below.

The clips were filmed in 35mm or 16mm motion picture film and transferred via telecine to Digital Betacam tape which was then digitized as a sequential series of PICTs. Each clip was then color corrected and retouched using Macintosh™ computers, frame by frame in many cases. Movie files were created from the sequential frames using Adobe After Effects™ with the Photo JPEG codec. Finally, the clips were flattened for cross-platform compatibility.

Four of the explosions were scanned at 2K resolution and were placed as high resolution clips on *ReelExplosions*.

Custom CD-ROMs of the sequential series of Macintosh PICTs (PCT files for Windows users) are available. You may also purchase a professional video tape version of the product at our dubbing and material costs. Finally, since most of the clips come from 35mm film, high resolution scans of the explosions can be made available. Please contact us for further details concerning any of these three options.

Requirements

Hardware:

This varies greatly depending upon your application. Consult your video editing software's hardware requirements for specific information.

Software:

Apple® QuickTime® software (included). Any nonlinear video editing application that can import QuickTime movies, or a file conversion utility to convert QuickTime movies to .AVI format. See “Converting Movie Files.”

Register

Please fill out the registration form and send it in. Registration entitles you to free technical support and free updates (bug fixes) if they are needed. Our technical support line is (541) 863-4429. Alternately, you can fax any questions to (541) 863-4547 or you can send e-mail to us at techsupport@artbeats.com.

Copyright and Licensing

All QuickTime movies, mattes and/or still images on this CD-ROM set are original to Artbeats Software, Inc. and are protected under the copyright laws of the United States. You are granted a non-exclusive license to use these files under the following guidelines:

1. They may not be used on more than one computer at a time. Please contact us for a multi-site license if you need to use them over a network or at more than one station.
2. They may be incorporated into any video, multimedia or print project for commercial, industrial, or broadcast use as long as the clips are not sold as background or effects clips or included in any other clip media/stock product, library, collection, or set of clips for distribution or resale. These guidelines apply even if the files have been significantly altered.

Broadcast Quality Clips

The main content of this product is divided into four categories: Ground Explosions, Zero Gravity (In Frame), Zero Gravity (Full Frame) and Gravity Affected. They are provided in QuickTime format and have been compressed with JPEG at a quality setting of 95. This compression was used for storage purposes only and was not intended for quick playback, even from your hard drive. You will need to use your own video editing software to compress them further for real time play back.

The length of each clip varies from 1¼ second (37 frames) to 10 seconds (300 frames) and the frame size is 720 x 486 pixels. They can be imported into any video editing software that supports the Apple QuickTime format.

A Note About Margins...

You may notice that a narrow margin within the outside edge of each frame will show some artifacts. This is not a mistake or a defect, it is merely our attempt to cover up a black margin left over from the film to video transfer process.

Although this margin is well within the non-visible “overscan” area, we thought it best to “fill” it with a scaled up version of the current image. That way, any special effects like Gaussian Blur can be applied without being contaminated by black spilling over from the edge.

A Note About In Frame Explosions...

One of the categories mentioned above is called “Zero G (In Frame)”, indicating that this group of explosions stays mainly within the boundaries of the frame. As you may have guessed, this can be difficult to accomplish for any pyrotechnician. There is always a trail of sparks that wants to exit the frame, and that is the case with many of the explosions here.

If it is vital for your project that none of the sparks exit the frame then we suggest using one of the “EXmasks” provided in the Extras Folder. When the mask is used as a traveling matte with a black image, you can force the sparks to fade to black before they exit the frame. This is easy to do, but if you are not familiar with transparency, masks and layering, we suggest you refer to your video editing software user manual first.

Mattes

We have provided separate grayscale clips that can be used as mattes for compositing many of the explosions. Not every explosion is represented with a matte, since some of them had elements that were too dark to be isolated. The mattes were designed to give best results when used on a neutral or dark background.

The mattes were not incorporated into the QuickTime movies as alpha channels but are provided as separate clips that can be found in the “Extras” folder. This was done to ensure cross platform compatibility.

Most non-linear digital video editing software will allow the user to incorporate one of these

clips as a “traveling matte”. This can be used as a mask to isolate foreground footage (our explosion, for example) from background footage. You can have an explosion appear in a blue sky, a dark cave or on a field of stars. It really doesn't matter.

Using mattes may not be the best solution in every case. For example, the matte will cause the smoke of an explosion to disappear rather than letting it hang around and dissipate. Also, the lighter the background, the less realistic the composite will look. On a light background, you may have to “choke” the image to get rid of the dark halos that surround sparks (there are filters in Adobe After Effects that can help).

Thumbnails

These are small versions of the larger “standard” clips provided for quick viewing purposes. The size is 256 x 192 pixels at 15 fps. This should be small enough to play from most 2x CD-ROM drives at full speed with no jumping. They can be played from the catalog or any player that supports the Apple QuickTime format.

You may see small artifacts when you play these clips. They were created during the compression process and do not exist on the high resolution clips.

Catalogs

Macintosh users can access a catalog for quick browsing of what the disc contains. You will find separate catalogs for the Thumbnails and Extras. If you do not have the Kudo® Catalog Reader™ installed on your system, please double-click on the “Mac Install Me First Installer”.

Unfortunately, due to inherent limitations of the Kudo Catalog Reader, Windows and Unix users will not be able to access this catalog.

Converting Movie Files

For those of you who need to convert these clips from QuickTime to AVI, we found the following article which may be helpful.

Converting Between QuickTime and AVI

by Bob Currier, Synthetic Aperture

I've done a lot of QuickTime to AVI conversion, and have found three Windows based ways that work, and one Mac based way that works in certain circumstances. I've found the old Microsoft Mac tool to be way more trouble than it is worth, even with all the patches installed.

The conversion methods I've used are:

1. Adobe Premiere for Windows. Be sure to not re-compress the video in the process, which Premiere will happily do by default.
2. If you get a copy of Nels Johnson's "How to Digitize Video" book (ISBN 0-471-01440-0), it comes with a CD-ROM which contains TRMOOV.EXE, a PC program which will convert between AVI and QT. The trmoov tool is also available on the Download Recordings Web page.
3. Intel has a program, SmartVid, which will convert files without regard to the codec used, unlike their old "Indeo-only" program. It can be downloaded from the Intel Web page. Be sure to carefully follow the instructions, as they don't make it easy to install.

4. The Mac-based solution is a tool from Horizons Technology and can be purchased from their Web site. It requires a PowerPC processor, and is currently not compatible with QuickTime 2.5, requiring that you save movies with QuickTime 2.1 before conversion to AVI.

Now, that said, don't expect perfection with any of these. Because of basic differences between the way that the video is laid down, what you get will be a compromise, at best. There was a nifty article by Nels Johnson on this subject in the June 1995 issue of DV magazine. If you are going to be doing a lot of this conversion, it is certainly worth looking up. Back issues of DV can be ordered by calling (603) 924-0100. Unfortunately, their Web archive doesn't go back that far.

I've had the best luck with trmoov, which re-interleaves the audio, since AVI likes audio between every frame which pretty much drives QuickTime nuts. There is a bug, however, that reverses the left and right channels of stereo audio when going in the AVI to QuickTime direction.

Premiere/Windows does a good job and you can control the interleave, but it is quite a hefty investment if this is all you are going to use it for. (Since Premiere can output QuickTime files, I also use it for overflow compression for those times when even the old Mac II is tied up compressing.)

SmartVid does a good job, but it doesn't deal with audio interleaving. Intel recommends that you re-interleave the audio using VidCap, a Video for Windows tool that can be found in Microsoft's Multimedia Jump Start kit, available via ftp and from Microsoft's web site.

For a successful conversion, there must be matching video codecs supported by both QuickTime and Video for Windows. I always work with the assumption that codecs are not compatible unless I've done extensive testing. Cinepak is the most commonly used codec for conversion between QuickTime and AVI. It is fully compatible except for some 8 bit color palette handling issues, where QuickTime and VfW choose different default palettes at playback.

Indeo 3.2 is also available under both systems, and widely used in AVI files. You will need to install the Indeo codecs (available on the Intel Web site) for use on the Mac. When you install the Intel codecs on your Mac, you will also get the YVU9 codec, which is a good codec for moving uncompressed video between QuickTime and AVI. There is currently no QuickTime support for the newer Intel Video Interactive (IVI or Indeo 4) on either the Mac or PC.

There is a bundle of codecs that comes with Microsoft Internet Explorer and Maczilla that provides support for some AVI codecs on the Mac. If you install the file "Windows Compressors" in your extensions folder, you will gain the ability to convert some additional AVI files to QuickTime and play them on the Mac. The compressors supported by this extension are Microsoft Video (msvc), Windows Raw (WRAW), and Windows RLE (WRLE).

Audio is another important factor when converting movies. For AVI files, be sure to stick with audio sample rates of 11.025 KHz, 22.050 KHz, or 44.1 KHz. The other Mac sample rates will not play well in AVI files. Also stay away from audio compression. AVI does not support MACE compression, nor is QuickTime's IMA compression compatible with the Microsoft implementation of the same "standard." And, needless to say, anything other than playing a single video track and a single audio track is beyond AVI.

If all you are looking to do is play an AVI file on your Macintosh, then the simplest solution is Microsoft's Internet Explorer 3.0. This web browser will open AVI files and play them on your Mac. It won't play every AVI file out there because of codec considerations—more on that later—but it is the simplest player around.

Converting between QuickTime and AVI is a common operation, with most existing AVI files having started their lives under QuickTime. There is not a one-to-one relationship between the formats, but with a little care and planning you can easily move content from one format to the other.

Credits & Acknowledgments

It took an ambitious staff to produce ReelFire and ReelExplosions. The film crews worked in the rain and mud and freezing weather on all night shoots. Artbeats is extremely grateful for their hard work and professional service, without which this product would not have been possible.

Bellingham Unit

Director	Phil Bates
Producer	Pippa Breakspear
Pyrotechnician	Robby Knott
Director of Photography	Mark Rasmussen
Camera Assistant	Stuart Lillas
16mm Camera Operator	Ron Lindeboom
Still Photography	Kathlyn Lindeboom
Production Assistant	Penny Love
Grip	Jeff Leenstra
	Harvey Hollifield
Construction	Stan Towner
	Randy Hartnell
Catering	Donna Wheat

Myrtle Creek Unit

Director	Phil Bates
Producer	Laura Hollifield
Pyrotechnicians	Harvey Hollifield
	Larry Linton
Director of Photography	Calvin Kennedy
Camera Assistant	Michael Spodnik
Audio	Bob Hayes
Still Photography	Gary Leif
Grip	Mike Monteleone
Production Assistant	Julie Hill
Catering	Laura Hollifield & Debra Bates

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