QuickTime for Windows
Version 2.1
12 December, 1995

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KEY FEATURES
•32-Bit QuickTime for Windows
   - Windows NT 3.51 build 1057 compatible
   - Windows 95
•Multifunctional 16/32-bit Control Panel.
•Option for automatic deletion of older versions of QTW.
•New single file QuickTime installer for more reliable installs.
•16- and 32-bit QuickTime for Windows can coexist on Win95 and WinNT.
•Support for text tracks.
•Support for MPEG file playback via Sigma Designs Real Magic Board.
•Support for MIDI Music track.
•Support for QuickTime VR for Windows. (16-bit QuickTime for Windows only - see known issues).
•Support for IMA 4:1 compressed audio.
•Support for video hardware frame buffer access components.
•Movie Player application can copy selected portions of text track and current visual to clipboard.
•Support for ATI Mach64 Graphics accelerator.
•Support for Tseng W32P Graphics accelerator.
•Support for 16- and 32-bit DCI (Display Control Interface) primary frame buffer access protocol.

•Support for P9000 Graphics accelerator.
•Support for the Cirrus Logic CL-GD54xx GUI accelerator.
•Support for the WD 90C33 Graphics accelerator.
•OLE 1.0 (Object Linking & Embedding). The Movie Player is an OLE server, enabling QuickTime movies to be placed and played in 16- or 32- bit applications.
•QuickTime offers MCI (Media Control Interface) that provides media integration in applications like Windows' Media Player and various multimedia authoring applications.
•Visual Basic 2.0, 3.0 and 4.0 are supported with 16-bit VBX file for QuickTime Movie control.

KNOWN ISSUES
1) When you are running Windows 95, if the screen color depth is set to True Color (24-bit), you may lose the drag window when dragging in the Movie Player. Windows 95 makes the drag window border color the same as the default gray background.
2) When you are running Windows 95 and you assign a sound to the Open Program execution for the very <u>first time</u>, you may get a system halt when you launch the 16-bit QTW Movie Player. The problem does not occur after the initial system halt.
3) The game Critical Path requires MCIQTW.DRV in its directory. When you install QTW 2.1 and delete the old version, this file is removed. You must copy C:\{windows\system}\MCIQTW.DRV to the default Critical Path directory x:\{Critical Path\QTW} for the game to work.
4) Only the 16-bit QuickTime for Windows supports QuickTime VR. The 32- bit cannot view QTVR scenes or objects.

MAKING MOVIES PLAYABLE ON BOTH MACINTOSH AND WINDOWS
To make a movie playable on a PC and the MAC:
1) Open a movie file using MoviePlayer 2.0 or above on the Macintosh
2) Choose Save As from the File menu.
3) In the resulting dialog box, click the radio button labeled "Make Movie Self-contained". This tells the utility to sever any links to other movies after incorporating the relevant video into this movie.
4) Select the checkbox labeled "Playable on non-Apple computers". This causes the movie to be saved as a single forked movie.
5) Rename the movie using PC naming conventions. The filename can be 8 characters. Use the extension .mov. For example: MYMOVIE.MOV

The resulting movie is a QuickTime cross-platform file that can be played on any x86-based computer including Windows 3.x, Windows NT and Windows 95. **IMPORTANT! Remember to follow the DOS naming conventions to avoid problems.

PRODUCT SUBMISSIONS ENCOURAGED
Apple Computer encourages developers of products that use QuickTime for Windows to send evaluation copies. Products such as CD-ROM titles, movie clip libraries, applications and utilities are often reviewed and considered for co-marketing opportunities. Two copies of the product are requested, one for marketing evaluation and one for technical evaluation. These products will aid us in ensuring that full compatibility with future versions of QuickTime for Windows is maintained. Please submit products, with appropriate product and company information, to:

QuickTime for Windows Product Submission
Apple Computer, Inc.
1 Infinite Loop, MS: 302-3KS
Cupertino, CA 95014

OLE 1.0 SUPPORT
The QuickTime for Windows 2.1 Movie Player (both 16- and 32-bit) can act as an OLE 1.0 Server. The following products have been tested and basic compatibility has been verified. Be aware that because of inconsistent implementation of OLE from application to application, some anomalies may occur.

*Microsoft Windows 3.1 Write
*Microsoft Windows 95 WordPad
*Microsoft Word for Windows 6.0a
*Microsoft Excel 5.0
*Microsoft Works for Windows

INTEL INDEO DECOMPRESSOR IS BUNDLED
Intel's Indeo 3.2 decompressor is provided with QuickTime for Windows 2.1. Please call Intel Customer Support at 1-800-468-3548 for any Indeo specific questions.

MACINTOSH FEATURES THAT ARE NOT CURRENTLY SUPPORTED ON QTW.
•Capture
•Compression*
•PhotoCD
•SMPTE Time codes
•Data references
•Sound Manager
•Text Descriptors.

*Although compression is not an option within QuickTime for Windows' Movie Player, applications such as Adobe's Premiere and Autodesk's Animator Studio can create QuickTime movies that can be played on both the PC and the Mac.

*MINIMUM PC CONFIGURATION
386SX at 20 MHz
4 MB RAM
80 MB hard disk
VGA or better display card
Windows compatible sound card
CD-ROM recommended
Windows 3.1x, Windows 95 & Windows NT 3.5 or later
DOS 5.0. or higher (double space is supported).

* MPC 1 and above rated machine.

COMPONENTS OF QUICKTIME FOR WINDOWS 2.1
DLLs
Movie Player application and OLE 1.0 server
Picture Viewer application
On-line help
Control Panel*

*The Control Panel provides detailed information and configuration

options for all the components of QuickTime for Windows.

TO LICENSE QUICKTIME FOR WINDOWS FOR DISTRIBUTION
Contact:
Apple Software Licensing
2420 Ridgepoint Drive
MS: 198-SWL
Austin, TX 78754
phone: 512-919-2645
fax: 512-919-2120
AppleLink: SW.LICENSE

Please provide the following information to receive a license agreement:

contact person
mailing address
phone number
fax
#email

Provide a complete description of the product, a description of how
QuickTime for Windows is used in the product, and the distribution plans
for the product.

A QuickTime for Windows License Kit containing the Apple License
Agreement and license information will be sent to you.

WHERE TO GET QUICKTIME FOR WINDOWS
QuickTime for Windows is bundled with various third-party products that
support QuickTime for Windows, such as movie clip libraries, software
applications and CD-ROM titles. Look for the QuickTime for Windows logo
on the packaging of products such as these:

•Adobe Premiere 4.0 for Windows
•Adobe Acrobat 2.1 CD Sampler
•Adobe Acrobat Exchange 2.1 for Windows
•Adobe Acrobat Pro 2.1 for Windows
•Adobe Acrobat for Workgroups 2.1
•Macromedia Action 2.5 for Windows
•Macromedia Authorware Pro 2.0 for Windows

QuickTime for Windows 2.1 is also available via ftp by visiting the
QuickTime WWW server: http://quicktime.apple.com/. Additional
information about QuickTime is also provided at the site.

The QuickTime Developer's Kit v. 2.0 (APDA, #R0147LL/D), provides you
with a Hybrid (PC/Mac) ISO format CD-ROM that contains the DLLs, sample
applications and source code, movie files, on-line documentation, help
files, and the QuickTime for Windows programmers manual.

Also look for future QuickTime for Windows retail products.

QuickTime VR for Windows
QuickTime VR for Windows does not come with QuickTime for Windows. The
component QTVRW.QTC is distributed separately. You will normally find
it with commercial titles that use QTVR technology or you can get it off

of our ftp site listed above.

It works only with the 16-bit QTW and will not work with the 32-bit QTW.
Because you can have 16/32-bit QTW in your Win95 or WinNT at the same
time this shouldn't pose any problems.

When you get the component you should place it in your Windows\system
subdirectory, e.g. Win95\System. QuickTime for Windows will
automatically activate and use the VR technology. If you load a
QuickTime VR scene through the QTW Movie Player, you can scan the VR
scene by placing your mouse over the VR scene, pressing the left mouse
button, and then dragging the mouse.

RECOMMENDED FOR DEVELOPMENT
In addition to the QuickTime for Windows Development Kit, the following
is useful in the development of cross-platform QuickTime support.

•QuickTime for Macintosh Development Kit (APDA)

•QuickTime Movie Exchange Toolkit (APDA #R0190LL/A)
Convert multimedia data created on other workstation platforms to
QuickTime movies playable on a Macintosh.

For development kits and developer information contact:
APDA
Apple Computer, Inc.
P.O. Box 319
Buffalo, NY 14207-0319

USA   (800) 282-2732
Canada   (800) 637-0029
Intl   (716) 871-6555
AppleLink   : APDA
Compuserve   : 76666,2405
America OnLine: APDA
Internet   : APDA@applelink.apple.com

QuickTime for Windows 2.1
Hardware Compatibility List
12 December, 1995

This information is a guide to developers who are working with and
distributing QuickTime for Windows per their license agreements. The
list is not comprehensive but continues to grow.

All listed adapters have been tested as fully as possible, but there are
some caveats due to numerous variations in the number of combinations of
CPUs, hard drives, video cards, sound cards and RAM.

Compatible hardware/drivers are those combinations that have been tested
as fully as possible and which appear to function adequately.

The OPTIMIZED category indicates whether that particular video
hardware/driver combination allows QTW to write directly to the video
memory for optimal performance.

When possible the name of the manufacturer, product name, driver date
and/or version, and depth (in the case of video drivers) is listed.

Compatible Videocards and OEM Videos

Videocard	Driver Version	Res.	Colors	Optimized?
Standard EGA	Windows EGA	640x400	16	no
Standard VGA	Windows VGA	640x480	16	no
Standard SVGA	Default Win95	640x480	16	no
	Default Win3.x		256	no
		800x600	16	no
			256	no
		1024x768	16	no
			256	no

IBM:

8514	Win3.x	1024x768	256	no
XGA	07/27/92	640x480	16	no
		1024x768	(16bit)	no

Only XGA20 supports 16-bit color. Do NOT use the drivers supplied with
Windows 3.1. Instead, use the drivers supplied by IBM.

XGA2	07/27/92	640x480	256	no
			(16bit)	no
		800x600	256	no
			(16bit)	no

Actix:

Graphics Engine Ultra Plus 03/25/93		640x480	256	no
			(64K 16bit)	no
			(24bit)	no
			(turbo)	no
		800x600	256	no
			(64K 16bit)	no
		1024x768	256	no
			(64K 16bit)	no

ATI Technologies:

ATI Mach32 VGA Wonder	v3.0	640x480	256	yes
			(16bit)	yes
			(24bit)	yes
		800x600	256	yes
			(16bit)	yes
			(24bit)	yes
		1024x768	256	yes
			(15bit)	yes
ATI Mach64 VLB	Flexdesk v2.0	640x480	256	yes
			(15bit)	yes
			(16bit)	yes
			(24bit)	yes
		800x600	256	yes
			(15bit)	yes
			(16bit)	yes
			(24bit)	yes

```
                                        1024x768    256          yes
                                                    (15bit)      yes


VGA XL                  04/09/92        800X600     16           yes
                        04/20/92                    (16bit)      yes
                                        1024x768    256          yes

Ultra (OEM)                             640x480     (16bit)      yes
                        04/09/92        1024x768    256          yes

VGA XL                  08/14/92 1.42   640x480     256          yes
                        07/28/92                    (16bit)      yes
                                        800x600     256          yes
                                                    (16bit)      yes
                                        1024x768    256          yes

ATI VGAWONDER XL24       06/25/92       640x480     256          yes
                                                    (16bit)      yes
                                        800x600     256          yes
                                                    (16bit)      yes
                                        1024x768    256          yes

ATI Graphics Ultra       08/14/92       640x480     16           no
                                                    256          no
                                        800x600     16           no

ATI Graphics Ultra Pro  03/10/92        640x480     256          yes
                                                    (16bit)      no
                                                    (24bit)      no
                                        800x600     256          yes
                                                    (16bit)      no
                                                    (24bit)      no
                                        1024x768    256          yes
                                                    (16bit)      yes

ATI Graphics/Pro  11/27/92              640x480     (16bit)      no
                                        1024x768    256          no



Compaq:
Presario CDS 992  v4.0(Win95)           640x480     16           yes
(OEM video CL-GD5429/30/34 2MB VRAM)                256          yes
local bus                                           (16bit)      yes
                                                    (24bit)      yes
                                                    (32bit)      yes
                                        800x600     16           yes
                                                    256          yes
                                                    (16bit)      yes
                                                    (24bit)      yes
                                                    (32bit)      yes
                                        1024x768    16           yes
                                                    256          yes
                                                    (16bit)      yes
                                        1280x1024   16           yes
                                                    256          yes
```

```
Dell:
466/M OEM Video    v1.7 (Win3.x)        640x480     16          yes
(S3 86C801/86C805) v4.0 (win95)                     256         yes
ISA                                                 (15bit)     yes
                                                    (16bit)     yes
                                        800x600     16          yes
                                                    256         yes
                                        1024x768    16          yes
                                                    256         yes


Diamond Multimedia:
Speedstar 24       4/14/92              640x480     16          yes
ISA    (wspdtsf.DRV)                                256         yes
                                                    (15bit)     yes
                                                    (24bit)     no*
*Movies render as a thin line at the top of the screen in 24-bit mode.
(For compatibility, with some loss of performance, make the following
modifications in the control panel video tab:
"Draw Method=Video Driver")
                                        800x600     16          yes
                                                    256         yes
                                                    (15bit)     yes
                                        1024x768    16          yes
                                                    256         yes


SpeedStar 24x                           640x480     (24bit)     yes
ISA                                     800x600     (16bit)     yes
                                        1024x768    256         yes


Stealth            09/25/92             640x480     256   yes
ISA                                                 (16bit)     yes


Stealth Pro        12/07/92             640X480     256         no
                                                    (16bit)     no
                                                    (24bit)     no
                                        800x600     256         no
                                                    (16bit)     no
                                        1024x768    256         no
                                                    (16bit)     no


Viper VLB*         04/27/93             640x480     256         yes
                                                    (16bit)     yes
                                                    (24bit)     no
                                        800x600     256         yes
                                                    (16bit)     yes
                                                    (24bit)     yes
                                        1024x768    256         yes
                                                    (16bit)     yes
Viper PCI*  Win 3.x                     640x480     256         yes
Weitek P9000       9-27-93                          (16bit)     yes
                                                    (24bit)     yes
                                        800x600     256         yes
                                                    (16bit)     yes
                                                    (24bit)     yes
                                        1024x768    256         yes
                                                    (16bit)     yes
*As of Dec 6, 1995, Viper's Windows 95 drivers are not available.
```

```
Genoa:
8500  v1.41 (Win3.x)                  640x480      16              yes
WindowsVGA 24 (Cirrus GD540x-2x)                   256             yes
ISA                                                (16bit)         yes
                                                   (24bit)         yes
                                                   (turbo)         yes
                                      800x600      16              yes
                                                   256             yes
                                                   (16bit)         yes
                                      1024x768     16              yes
                                                   256             yes


Matrox:
Matrox 1024 08/21/92 2.07      1024x768    High Color(24bit) no


Miro:
8S    v2.21 (Win3.x)                  640x480      16              yes
(S3 86C801)                                        256             yes
ISA                                                (15bit)         yes
                                                   (16bit)         yes
                                                   (24bit)         yes
                                      800x600      16              yes
                                                   256             yes
                                                   (15bit)         yes
                                                   (16bit)         yes
                                      1024x768     16              yes
                                                   256             yes


Orchid Technology:
Prodesigner IIs   v1.5(Win3.x)        640x480      16              yes
(1MB ET4000)                                       256             yes
ISA                                                (15bit)         yes
                                      800x600      16              yes
                                                   256             yes
                                                   (15bit)         yes
                                      1024x768     16              yes
                                                   256             yes


Fahrenheit VA      02/19/93           640x480      256             Yes
                                                   (24bit)         yes


Fahrenheit 1280    08/10/92           640x480      256             Yes
                                                   (16bit)         yes


7 VRAM2 ERGO       03/10/92           800x600      256             Yes
                                      1024x768     (16bit)         yes



Fahrenheit         08/10/92           640x480      (16bit)         no
                                      800x600      256             yes
                                                   (15bit)         no


Pro Designer II    03/01/92           640x480      (15bit)         no
                                      800x600      256             yes
                                                   (15bit)         no
                                      1024x768     256             yes
```

```
Packard Bell:
Executive 5190CDT        v4.0(Win95) 640x480    16           yes
(OEM video CL-GD54xx)    v1.10b(Win3.x)         256          yes
local bus                                       (16bit)      yes
                                                (24bit)      yes
                                     800x600    16           yes
                                                256          yes
                                                (16bit)      yes
                                     1024x768   16           yes
                                                256          yes


SIMGA:
Legend GX   04/01/92(1.13)           640x480    256          no
                                     800x600    256          no
                                     1024x768   256          no

Legend 24X  11/13/92                  640x480    256          no
                                                (16bit)      no
                                                (24bit)      no
                                     800x600    256          no
                                                (16bit)      no
                                     1024x768   256          no


Western Digital:
Windows' Accelerator    v3.1         640x480    16           yes
(WD 90C33)  1/7/93                              256          yes
ISA   3/11/93                                   (16bit)      yes
                                     800x600    16           yes
                                                256          yes
                                                (16bit)      yes
                                     1024x768   16           yes
                                                256          yes
```

Compatible Sound

```
Adapter                       Driver                  Date/Version

Creative Labs:
SoundBlaster Pro              SBPSND.DRV              5/15/92
(This driver has been known to repeat sounds under stressed data
throughput like CD-ROM players that can't maintain a reasonable data
rate.)
SoundBlaster Pro              SBPSND.DRV              02/05/92
SoundBlaster Pro 16           SB16SND.DRV            4/14/93
SoundBlaster AWE32            Wave/MIDI              v3.02
ThunderBoard                  SNDBLST2.DRV          3/10/92
ThunderBoard                  SNDBLST2.DRV          5/13/92

Media Vision:
ProAudio Spectrum            MVPROAUD.DRV          02/03/93 v1.3
ProAudio Spectrum Plus       MVPROAUD.DRV          02/03/93 v1.3
(Make the following modifications in the control panel audio tab:
   RateAlgorithm=Manual override
   RequestedRate=22095
```

```
      ActualRate=22536)
ProAudio Spectrum 16          MVPROAUD.DRV          02/03/92
Audio Port                    MVAPORT.DRV           04/14/92
(Does not support sound sampled at above 11kHz.
Please make the following modifications in the control panel audio tab:
    RateAlgorithm=Manual override
    RequestedRate=11025
    ActualRate=11025)


Microsoft Sound System        SNDSYS.DRV            09/21/92 v1.0

Cardinal Technologies:
Sound Studio                  TAPIGSS1.DRV          12/28/92

Orchid
Sound Producer Pro            PRODUCER.DRV          01/13/93
              10/01/92

Turtle Beach:
MultiSound                    MULTISND.DRV          08/27/92 v1.1
Monte Carlo                                         V2.03

ATI Stereo F/X                SFX.DRV               05/04/92

Packard Bell:
Executive 5190CDT Win95
(OEM sound card:              Win 3.xx Sound 16A    v1.0
Aztech Sound Galaxy Washington 16)

Compaq:
Presario CDX 992*             Win95                 yes
(OEM sound card:              Win 3.xx              yes
Compaq ESS ES688 AudioDrive)
Please make the following modifications in the control panel audio tab:
    RateAlgorithm=Manual override
    RequestedRate=22050
    ActualRate=22100)

Creative Labs    ThunderBoard          SNDBLST2.DRV       03/10/92
Creative Labs    ThunderBoard          SNDBLST2.DRV       05/13/92

Creative Labs    Sound Blaster 2.0                        02/16/93
Sound 'sticks' with this driver.

Digispeech    PortAble Sound Plus       PRTSND.DRV        04/14/93

IBM   M/Audio                          ACPA.DRV      10/29/92 11:38
Adjusting the volume from the Movie Controller may cause the volume to
be muted. To restore the volume, stop and restart the movie.
Sound may skip when resizing window.

IBM   M/Audio                          ACPA.DRV          8/28/92
Limited volume control from keyboard.

MediaVision Thunder and Lightning      TLWAVE.DRV        08/25/92
Please make the following modifications in the control panel audio tab:
    RateAlgorithm=Manual override
```

```
    RequestedRate=22222
    ActualRate=22222)
```

Incompatible Video

```
ATI VGAWONDER XL24      07/29/92         24    640x480    Yes
```
In the 24-bit mode (16 Million Colors) Reds and Blues seem to be
reversed .

```
ATG CatsEye/X
```
We have field reports of systems hanging when movies are played with
this board.

```
Compaq Q-Vision
```
Updated drivers from Compaq will fix the problem.

```
Diamond SpeedStar 24 *  04/14/92          24         640x480 Yes
```
Movies render as a thin line at the top of the screen in 24-bit mode.
(For compatibility, with some loss of performance, make the following
modifications in the control panel video tab:
"Draw Method=Video Driver")

```
MediaVision
```
We have a field report that QTW does not work with the original
MediaVision video display adapter. The report indicates that the movie's
sound is played but the movie cannot be seen. Problem persists when
"Draw Method=Video Driver" is set via the control panel video tab.

```
OmiCorp Texan
```
We have field reports of sound but no movie (video) with this card.

```
PackardBell
```
We have several field reports dealing with a PackardBell. Reports of a
"shutters" type effect on local bus systems with Headlands HT-216 video
chips have been noted. The shutters effect is where a few lines of movie
can be seen, then a few lines of background, then a few lines of movie,
and so on. The reports also state that the image is also shifted down
and to the right about 10 pels.
Further reports tell of a lack of Movie image when running on Local Bus
Packard Bell Machines. All reported problems can be cured with some
loss of performance, by making the following modifications in the
control panel video tab: "Draw Method=Video Driver"

```
Sigma WindStorm             08/21/92         8     1024x768    No
Sigma WindStorm             08/21/92         16    800x600     No
Sigma WindStorm             08/21/92         8     800x600     No
Sigma WindStorm             08/21/92         24    640x480     No
Sigma WindStorm             08/21/92         16    640x480     No
Sigma WindStorm             08/21/92         8     640x480     No
```
QTW has very poor performance with this adapter.

```
Video 7 SPEA 7          OEM
```
With some loss of performance, the following modification must be made
in the control panel video tab: "Draw Method=Video Driver"

Incompatible Sound Cards

Media Vision Thunder and Lighting *
QTW has very poor throughput with this card.

Media Vision CDPC *
QTW does not work well with this system with movies over 10 seconds in
length.

Media Vision CDPC II
QTW does not work well with this system with movies over 10 seconds in
length.

Sigma Design   WinStorm   8/21/92
Very poor QTW performance when running audio and video together.

Tandy 'Gold Card'
We have only one unconfirmed report on this line of cards. A developer
states that he has a Tandy "Gold Card" and QTW crashed when ever he
tries to play a movie. Removing the card seems to fix the problem.

MODIFYING QTW.INI FOR COMPATIBILITY
Please use QuickTime's Control Panel to modify any configurable item.

END OF QUICKTIME FOR WINDOWS 2.1 READ ME