QTVR Tools 1.0 User Guide

Edition May 2002

PHASE ❶NE

Notice

Phase One® is registered trademark of Phase One A/S.

The names Apple Macintosh®, Quicktime® and Microsoft Windows®, are all registered trademarks of their respective companies.

All specifications are subject to change without notice.

Phase One takes no responsibilities for any loss or damage sustained while using their products.

Printed in Denmark.

Contents

The QTVR basics

Congratulations with your new Phase One QTVR solution!

QTVR or QuicktimeVR® is a part of Apples Quicktime media format, a widely spread format for playing video and streaming media on computers, be it on CD's or on the Internet.

Where Quicktime is mostly used for streaming media, film or broadcasts, Quicktime VR is used for displaying scenes and objects in 3D, or Virtual Reality as the name insinuates.

Phase One's QTVR solution, is mostly aimed at making Quicktime VR objects, but with a little creativity, or by additional help from other 3'rd party tools it is possible to make scenes or animated movies using this solution.

For novices an understanding of the basics in Apples Quicktime and QuicktimeVR format will be a great advantage.

Further Information can be obtained from these links:

http://www.apple.com/quicktime/qtvr/

http://www.letmedoit.com/qtvr/qtvr_online/course_index.html

Apple has also released a number of free and helpful tools that can be downloaded for free from:

http://developer.apple.com/quicktime/quicktimeintro/tools/

We hope You will enjoy working with the Phase One QTVR Solution.

Introduction to this manual

This manual assumes that the reader is familiar with the Phase One Capture One Software for either PC or Macintosh, as the QTVR Tool on both platforms actually are dependent of a basic photographic setup.

CD Contents

The CD has both a Macintosh partition and a Windows partition.

Dependent of which system you use, you will only see the content of the corresponding partition.

Macintosh CD:

QTVR Tool 1.0 (the QTVR Tool application

QTVR Tools 1.0 User Guide (This manual)

QTVR Samples (a collection of samples)

Extras (a folder with the QTVR Tool for the Phase One Scanning Backs plus a scriptable stand alone TurnTable Controller)

Windows CD:

Setup.exe (The QTVR Tool 1.01 Installer application for Windows)

QTVR Tools 1.0 User Guide (This manual)

QTVR Samples (a collection of samples)

Installation

Before Installing the QTVR Tool software be sure to have installed either the Phase One Capture One 2.8 or later or the Bapture One Basic 1.01 or later.

Also Make sure that the Apple Quicktime Player Is Installed on the Computer.

Available from: http://www.apple.com/QuickTime/download/

Installing the software on a Macintosh

Insert the CD-ROM into the CD-ROM drive

To install the QTVR Tool on a Macintosh (MacOSX) just drag the QTVR Tool 1.0 to the Applications folder or the preferred folder where you want it.

Installing the software on a PC

Insert the CD-ROM into the CD-ROM drive

Dubbelclick on the Setup.exe and follow the instructions on the screen until the installation is completed.

Using The QuicktimeVR Tool for MacOSX

Setting up the Capture One application

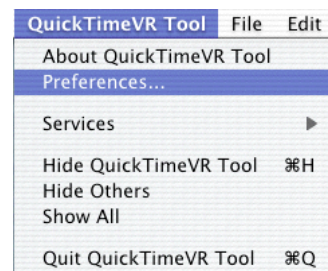Starting the QuickTimeVR Tool will automatically start the Capture One application and place it in the background.

All capture settings (i.e. colour management, and ISO/film curve) in the scene of the Quiktime movie should be set inside the Capture One application.

For detailed description of each feature inside the Capture One Application, please confer with the Capture One User Guide.
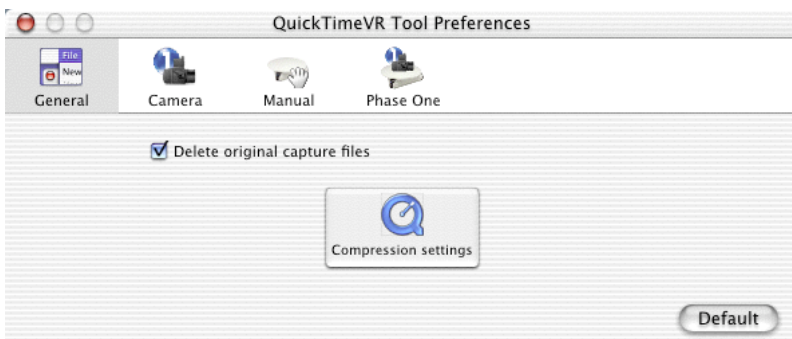
Setting up the QTVR Tool preferences

From inside the QuicktimeVR Tool, start by selecting "Preferences…" in the QuicktimeVR Tool menu.

This will bring up the preferences window.

General

Inside the General view you can select whether or not you want to delete the original Capture files, when creating a movie.

Clicking the default button restores everything to the default values.

With the Quicktime Compression settings button you specify the compression settings of the Quicktime VR movie.
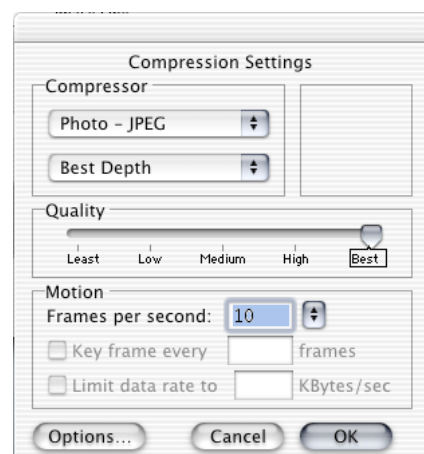
This example shows a compression window.

The size of the movie file produced depends upon the settings you enter in the compression window.

In the Compressor panel you select the type of Compression. The higher the pixel depth the larger the file size and the better the image resolution.

In the Quality panel you select the level of quality you want to achieve. The higher the quality the larger the file size.

In Motion mode you select frames per second. (i.g. for QTVR objects a value of 10 is recomended)
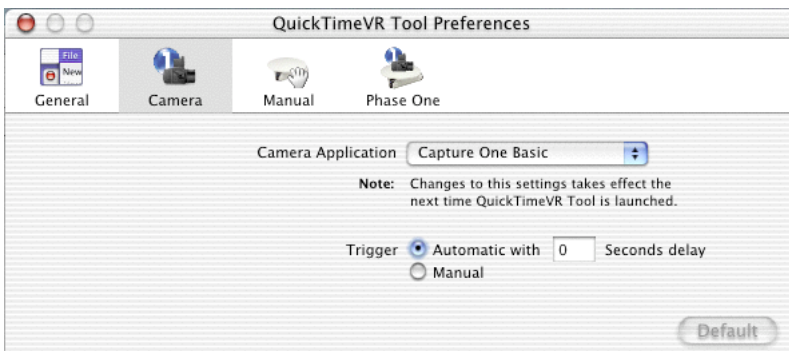
Camera

Here you can choose which Camera application is to be automatically started when starting the QuicktimeVR Tool.

The Trigger option lets you specify if the camera should shoot automatically whenever it is ready or with a certain delay. Usefull if you have a very slow flash system, that needs to have time to get to full power.
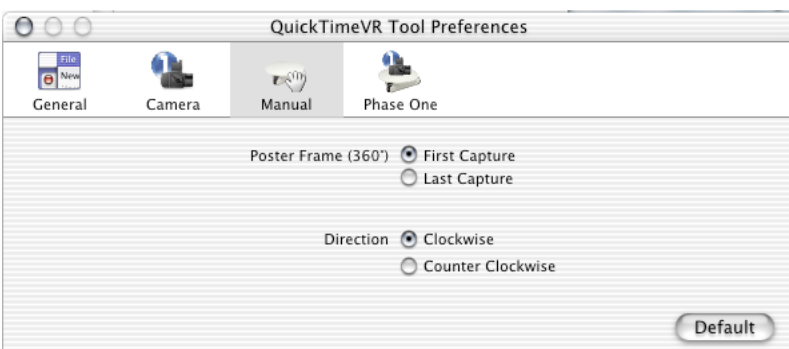
Or it can be set to manual mode, to enable the use of manual camerabodies or if you want absolute full controle over when the QuicktimeVR Tool will fire the Camera.

Again the default button restores things to the default values.

Manual

In the Manual Preferences you have the option to specify which frame should be the poster frame (only applies to 360 degrees movies).
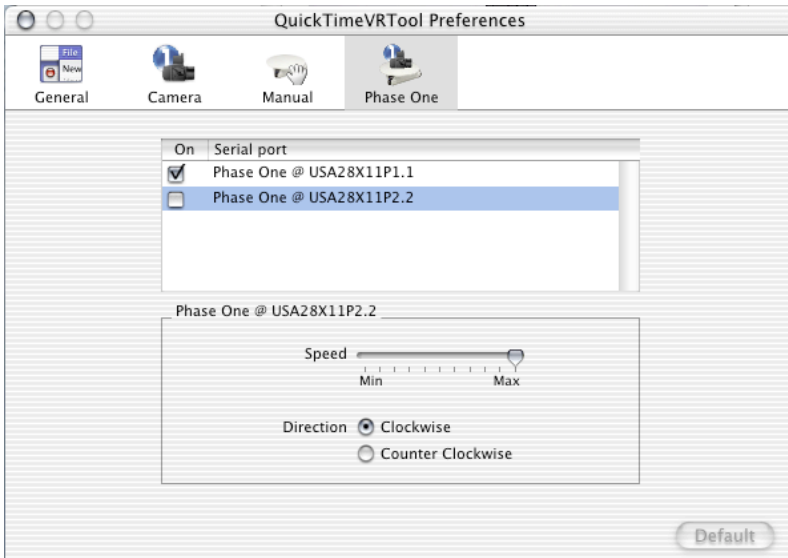

You can also select the direction the manual turntable runs.

Phase One Turntable

The Phase One Turntable connect through an RS232 serial port, on newer Macintosh Computers this means you have to have either a USB to Serial adaptor or a serial port PCI Card. (KeySpan www.Keyspan.com makes a USB To Serial adaptor used in this sample)

In this dialog all the serial ports are listed, and you can select which port your Turntable is connected to.

You Can also select the rotation speed and which way the turntable runs.

QTVR Tool description and use

Main Window

The QuickTimeVR Tool main window has 3 groups or frames; The Toolbar in the top, the Capture Session list to the left and the Movie Window to the Right.

Toolbar

New Session lets you add a new Capture session, the new session will be listed just beneath in the Capture session frame.

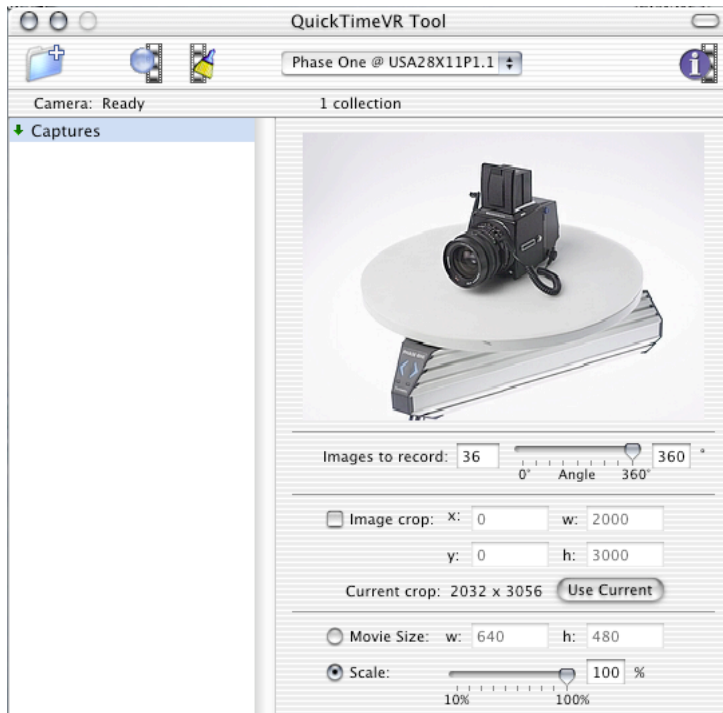Record button starts the recording process

"Clean Up" button, deletes all preview image files associated with the session.

In The Turntable Popup menu In the center you can select what turntable you whant to use (the ports are activated inside the preferences menu described in previous chapter).

Clicking the Capture Info button will show all the capture folders and capture files in detail. Double click will open the folder in the finder

Movie Window

The preview window will show the movie in the currently selected capture folder. If no movie is created the default movie will be shown

Images to Record

Here you can type the number of images to record into the movie, you can also set the capture angle you want your movie to cover. If set to 360, the object movie can be dragged around in a circle, whereas if you set the range to 90, then the object can only be dragged through 90 degrees of a circle.
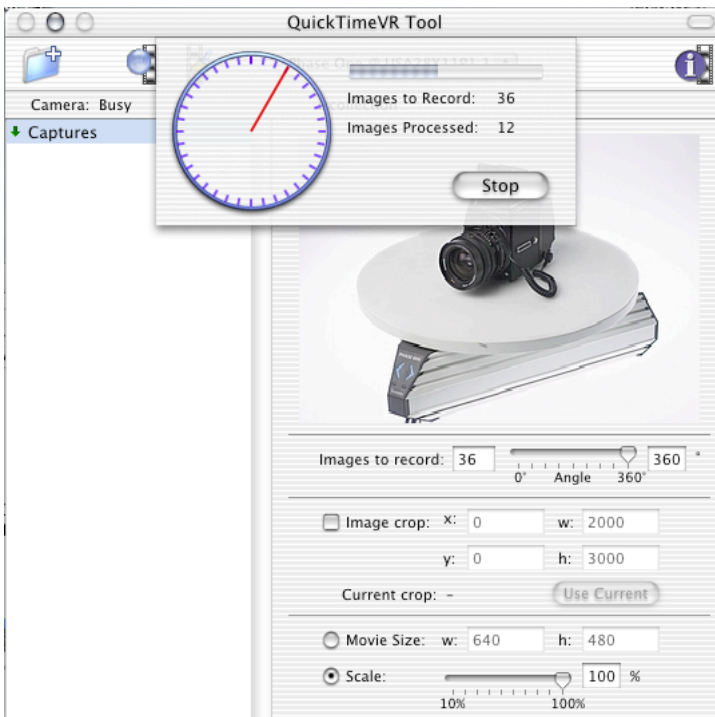
Image crop specifies if you want only the cropped part of an image. Pressing the Use Current button automatically fetches the crop from the Capture Application.

Movie Size

The slider shows the scale of the movie file, both in the actual Image export file size 640 x 480 and the corresponding percentage of the movie.

Capturing a Movie

When Record button is pressed, a dropdown window will show the progress of the hole process.

The Images to record field shows how many captures are carried out. according to your required angular position in the circle.
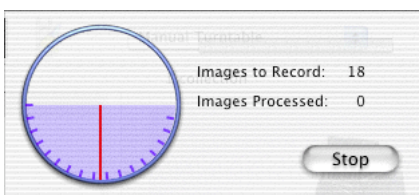
The Images Processed field shows how many images have already been processed during the current session

The red line inside the circle shows you where the turntable is at right now. Each position is represented by a blue point on the circle.

Pressing the stop button stops the current session.

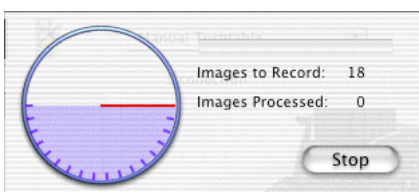If you choose to take 36 shots around a full circle of rotation, you will find that the animation is fairly smooth. More shots per resolution give smoother animation, but the file size will increase accordingly. Conversely, less shots give a coarser animation for a smaller file size.

180 degrees movies

If "Images to record" is set to i.e. 180 degrees it is indicated by a blue color in the circle.

In this case the poster frame defaults to the currently facing frame, but starts the capturing half way back, and continues past the poster position to the end of the movie. This ensures that the position you initially setup is actually the posterframe, and you can turn the object half the way to the left,and half the way to the right from that.
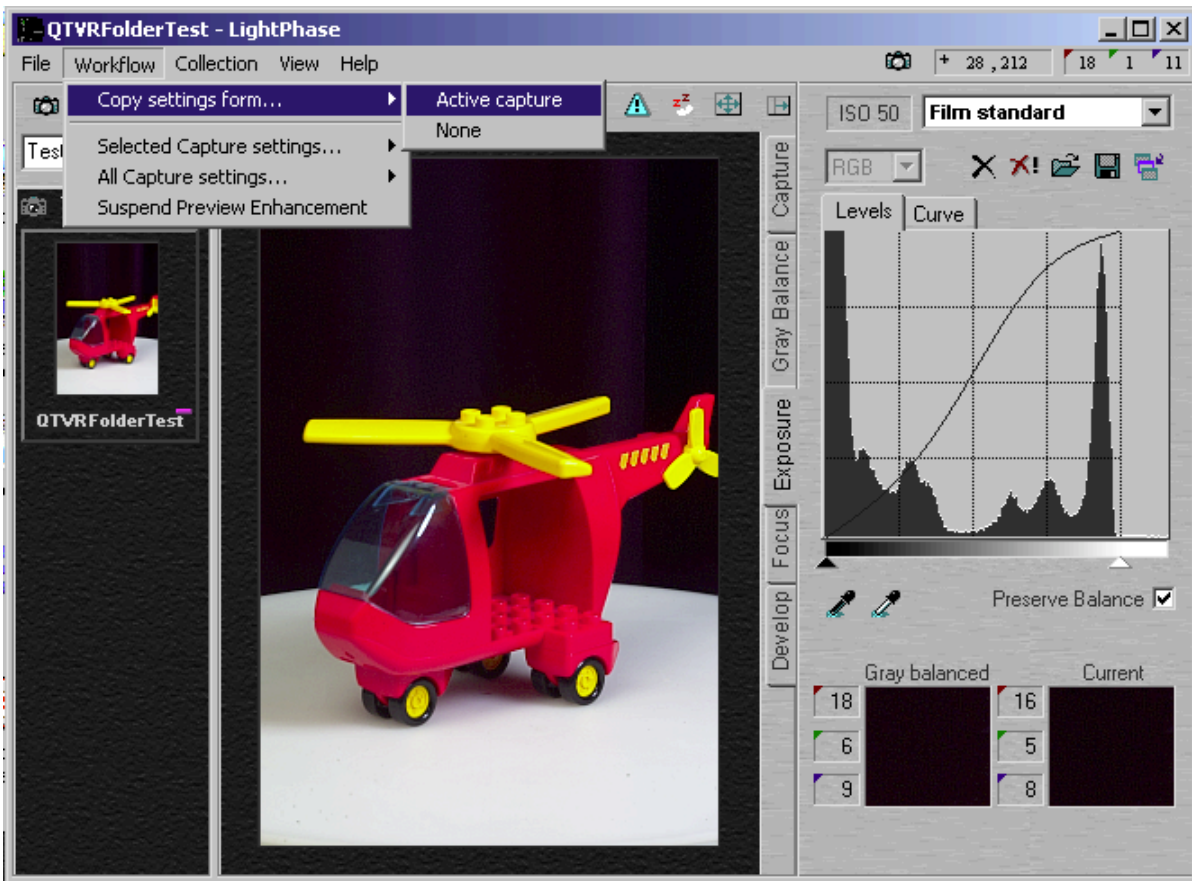
Using The QTVR Tool on Windows

Setting up the Capture One application

Starting the QuickTimeVR Tool will automatically start the Capture One application and place it in the background.

All capture settings (i.e. colour management, and ISO/film curve) in the scene of the Quiktime movie should be set inside the Capture One application.

Before Starting a QTVR recording from the QTVR Tool, be sure to select the menu "Copy settings from Active capture". This ensures that all the settings, done to the active preview is applied to the following captured images, and thereby the QTVR movie.

For detailed description of each feature inside the Capture One Application, please confer with the Capture One User Guide.

QuickTime Tool description and use

Session Tab

The QuickTime Tool Session Tab consists of four groups:

Movie Session, Capture files-, QuickTime and Capture.
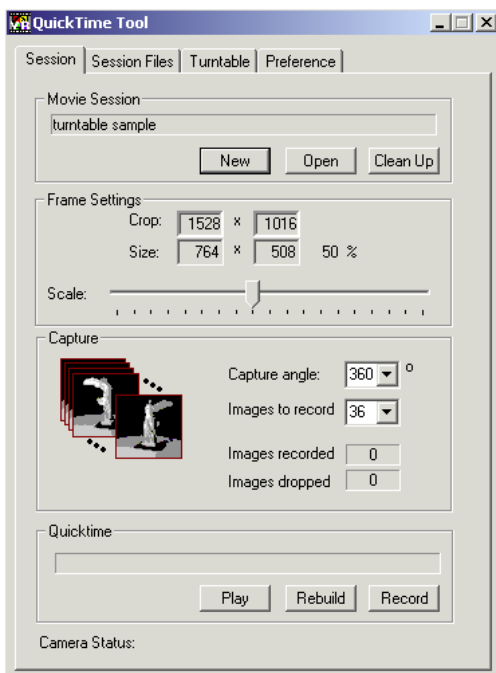
Movie Session

Movie Session lets you add a new session, which can be used later if you after capture of the images want to alter the compression or size of the final movie.

The "New" button creates a new session, the "Open" button lets you open an already existing session, and the "Clean Up" button, deletes all image files associated with the Session.

Frame Settings

The slider shows the scale of the movie file, both in percentage of the actual Capture One export file size 508 x 764 and the corresponding pixel size of the movie.

Theese values can also be typed in manually, but may vary a few pixels to fit the scaling algoritm of the final movie (i.e. setting the hight to 100 may produce a 99 pixel high movie).

Capture Panel

Her you can set the capture angle to specify the angular range you want your QTVR file to cover.

If the range is set to 360, then the QTVR objects in the final file can be dragged around in a cyclic manner, whereas if you set the range to e.g. 90, then the object can only be dragged through 90 degrees.

The Images to record field shows how many captures are carried out. Set this according to your required angular resolution.

The Images recorded field shows how many images have already been captured during the current session. This number also corresponds to the number of red dots shown in the Turntable panel.

If you choose to take 36 shots around a full circle of rotation, you will find that the animation is fairly smooth. More shots per resolution give smoother animation, but the file size will increase accordingly. Conversely, less shots give a coarser animation for a smaller file size.

Images dropped displays the number of captures that was initiated before the camera was ready. This will normally only occur when using the Quictime Tool in Manual mode and the Delay Before Next Capture was set too low.

QuickTime Panel

Displays the progress bar of the current QuickTime movie.

The "Play" Button Plays the movie belonging to the current Session.
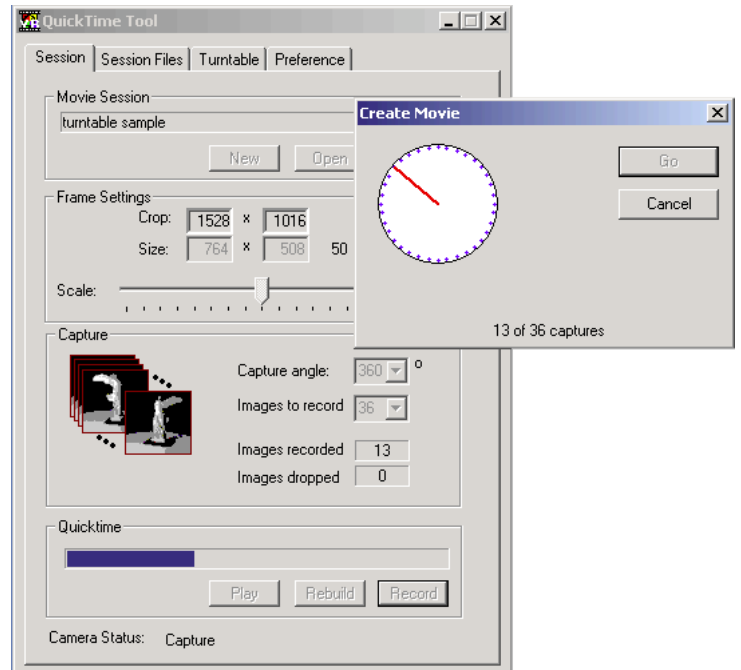
The "Rebuild" button rebuilds the movie with the current frame settings, quicktime compression etc. This way you can recreate quicktime movies, with new compression and scale without capturing all the images again.

The "Record" button Brings up the dialog "Create Movie".

Here you can see the actual capture points on the rotation indicated by a blue dot on the circle.

The red line indicates the current position.

Pressing the "Go" button starts capturing a new movie with the current settings.

Turntable Tab

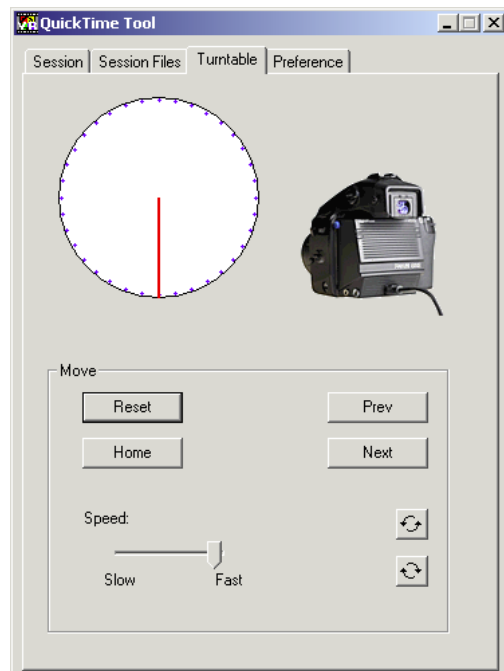The circle shows how many images will be captured and over which angular range they will be taken.

Each image is captured on the blue dots and the red indicator line shows where the turntables current possition is.

In the Move panel there are six buttons. These are used for manual control of the turntable.

The Reset button marks the current turntable position as "home".

The Home button returns the turntable to the position marked by the last reset.

The Prev and Next buttons are used when moving the turntable to the previous and next angular positions respectively.

In order to make the turntable move continuously, click on the Clockwise or Counter-clockwise buttons. To stop the turntable, click on one of these buttons again.

13

Preferences Tab

Here you can set up the different static settings.

Camera

The Camera Panel has two options;

Automatic or Manual Trigger.

When set to Automatic you can set a delay in the box to the right.

This is i.e. to ensure that you have enough time between captures to do what ever has to be done.

Motion Control Rig

This panel allows you to set up the preferences for the Turntable you have Manual option has two boxes with each two options.

Precalibration allows you to select if the camera should calibrate automatically (best quality) or if the calibration is done just before the first shot. *The purpose of this option is to ensure that the camera does not use extra time in the middle of a session, because it needs calibration, but the result may be a small drift of the noise ratio in the images.*

Poster Frame (360 deg)

This option lets you select which frame should bethe initial frame that you see when opening the movie (This only applies to 360 degrees, as in everything less the poster frame is set to the middle of the movie "Home Position)

When set to PhaseOne Turntable, you can select a communication port (for example COM1).

Compression

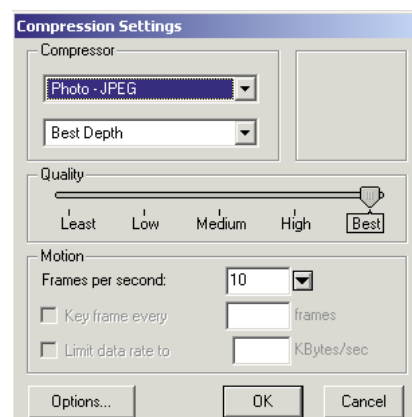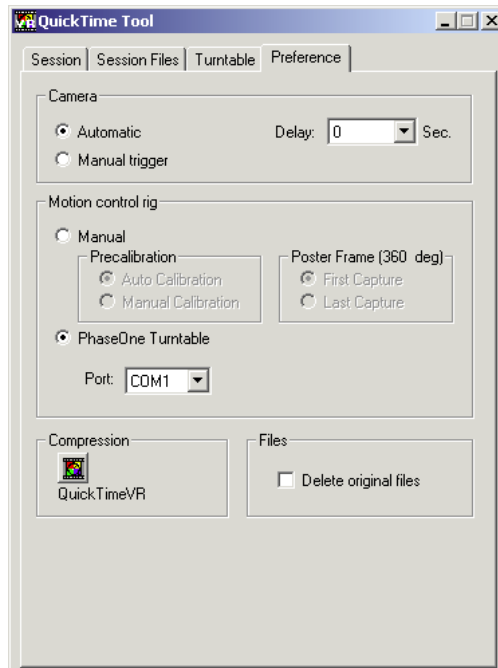The compression button specifies the compression settings for the movie files produced.

The example shows a compression window.

The size of the movie file produced depends upon the settings you enter in the compression window.

In the Compressor panel you select the type of Compression

The higher the pixel depth the larger the file size and the better the image resolution

In the Quality panel you select the level of quality you want to achieve. The higher the quality the larger the file size.

In Motion mode you select frames per second. The larger the frame rate the better the animation and the larger the file size

Files panel

When the Delete original files box is active, the Capture files created

during the capture process will be deleted as they are recorded into the QTVR file. (The previews are still visible in the Capture One Application, by pressing the refresh button the files are removed from the capture collection)
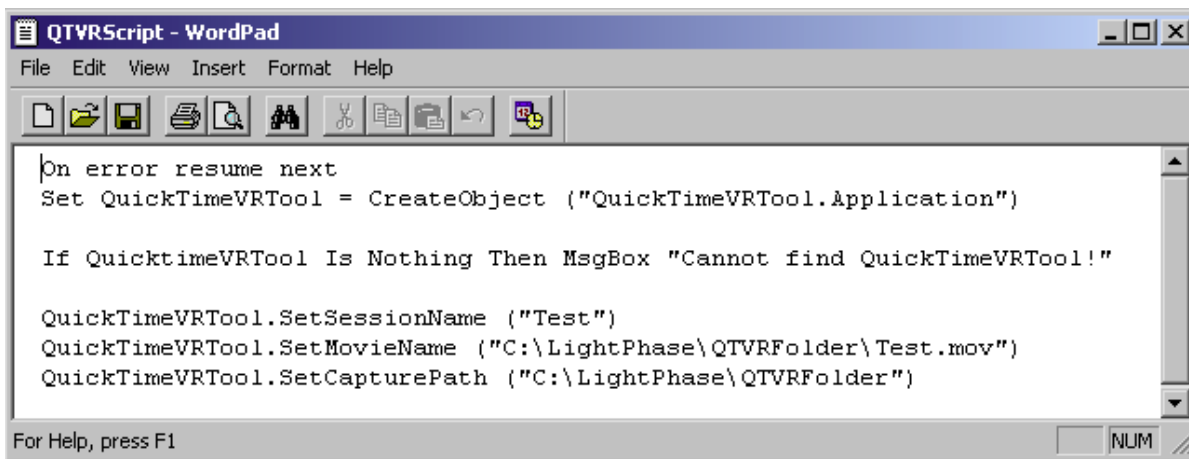
Scripting the QTVR Tool

Using Visual Basic scripting (which is part of the Windows operating system) it is possible to automate setup of the session name, movie name, and the capture path.

All you have to do is write a text file, and then save it with the ".wbs" extension.

When you then start the script, Windows will execute the commands inside.

Following is an example script made in WordPad containing the correct syntax.

```
QTVRScript - WordPad

File   Edit   View   Insert   Format   Help

On error resume next
Set QuickTimeVRTool = CreateObject ("QuickTimeVRTool.Application")

If QuicktimeVRTool Is Nothing Then MsgBox "Cannot find QuickTimeVRTool!"

QuickTimeVRTool.SetSessionName ("Test")
QuickTimeVRTool.SetMovieName ("C:\LightPhase\QTVRFolder\Test.mov")
QuickTimeVRTool.SetCapturePath ("C:\LightPhase\QTVRFolder")

For Help, press F1                                    NUM
```

Different predefined setups can be optained by defining one or more sessions inside the QTVRTool and then select them from a script.

Part #: XXXXXXX