

Osprey-50 USB Installation and User's Guide

Part Number:

Version Number:



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-  Reorient or relocate the receiving antenna.
-  Increase the separation between the computer and the receiver.
-  Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
-  Consult the dealer or an experienced radio/TV technician for help.

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Table of Contents

1	Getting Started	1
	What is Streaming Video?	1
	About This Guide	2
	Symbols	3
	System Requirements	3
	Additional Requirements	3
	Troubleshooting	4
	Electronic Support	4
	Phone Support	4
2	Installing the Osprey-50 USB Video Capture Device	5
	Installing the Osprey-50 USB Drivers	5
	Completing the Osprey-50 USB Driver Installation	6
	Connecting the Osprey-50 USB Cable	7
	Connecting the Audio and Video Sources	8
	Connecting Video Cables	8
	Connecting Audio Cables	9
	Determining Your Audio Cable Type	10
	Connecting Your Audio Source	10
	Testing the Installation	11
3	RealProducer G2 Installation	13
	Installing RealProducer	13
	Method One	13
	Method Two	14
	Completing the RealProducer Installation	15
4	RealPlayer Installation	19
	Installing RealPlayer	19
	Method One	19
	Method Two	20
	Completing the RealPlayer Installation	21

5	Installing the Windows Media Encoder Application.....	25
	Installing Windows Media Encoder	25
	Method One	25
	Method Two	26
	Completing the Windows Media Encoder Installation	27
6	Installing the Windows Media Player.....	31
	Installing Windows Media Player	31
	Method One	31
	Method Two	32
	Completing the Windows Media Player Installation.....	33
7	Capturing Video Using the AmCap Application.....	39
	Capturing your Video and Audio	39
	Preparing to Capture.....	39
	Begin Capturing Video.....	41
	Stop Capturing Video	43
	Viewing Captured Video	43
8	Creating a Video Stream with RealProducer	45
	Creating a RealMedia File from an AVI File	45
	Placing Your RealMedia File on a Web Page	52
9	Creating a Video Stream with Windows Media Technologies	53
	Creating a Windows Media File from an AVI File.....	53
A	Appendix A - Troubleshooting.....	59
	Blue Video Screen.....	59
	Black Preview Video Screen	59
	Scrambled Video Image.....	59
	Grainy, Dithered Image	60
	Poor Video Quality at Large Frame Sizes.....	60
	"Unable to Initialize Direct Draw" Message in Windows 98	61
	Unable to Open Driver or Similar Error Messages	61
	Video Compression and Playback Issues	61

B	Appendix B – Glossary of Terms	63
	4:2:2 Packed Video Format	63
	AVI (Audio Video Interface)	63
	CCIR601	63
	CIF (Common Intermediate Format)	63
	Codec (Coder/Decoder)	63
	DirectDraw	64
	Direct Capture	64
	Grey8 Video Format	64
	NTSC-NTSC-M, NTSC-J	64
	PAL-BDGHI, PAL-M, PAL-N, NC	64
	Plausibly Live	64
	QCIF (Quarter Common Intermediate Format)	65
	RGB15 Video Format	65
	RGB24 Video Format	65
	RGB32 Video Format	65
	SECAM	65
	Streaming	66
	YUV12 Planar Video Format	66
	YVU9 Planar Video Format	66
C	Appendix C – Other Resources	67
	Osprey Product Line	67
	ViewCast.com Product Line	67
	RealNetworks Product Line	67
D	Appendix D – Uncompressed Video	69
	File Size Calculations	69
	Capture Size Limitations	69
E	Appendix E – Ligos Indeo Installation	71
	Installing Ligos Technology's Indeo	71



Getting Started

Thank you for purchasing an **Osprey-50 USB** video capture device. The CD-ROM included with the capture device makes it easy to create movies and streaming video on your computer. It includes hardware and software allowing you to create streaming video. The hardware and software for included in the **Osprey-50 USB** package includes:

-  Osprey-50 USB device enables you to take video from an external source, such as a camcorder, VCR, DVD player, or other device, and store it as a file on your computer.
-  Windows Media Encoder allows you to take your video and create a streaming media file.
-  Windows Media Player allows you to view streaming media content.
-  RealProducer software allows you to take your video and create a streaming media file.
-  RealPlayer allows you to view streaming media content.

What is Streaming Video?

Streaming video is a method, which represents a one-to-many, real-time broadcast of video and audio over the Internet. It can also be transmitted over a variety of local and wide-area network implementations. It can be a live broadcast of an event or presentation, or on-demand prerecorded video (a RealMedia file).

When the term Streaming Video is used, it generally means audio and video combined. Streaming Audio is audio only.

Streaming video allows users to view audio/video content without having to download the file to their local computer. The video is "streamed" to your computer, which means the player on your side starts playing the content after a short buffering period, which can be between five to twenty seconds, depending on the video bit-rate and network traffic. The buffer allows the player to maintain continuous playback in the event of minor network congestion.

A simple example is a "shock-resistant" portable CD player. These CD players store three to five seconds of a track from a CD in their memory, so if the player gets bumped, it doesn't skip. Streaming video works the same way. The player keeps a buffer of video and if there is any network congestion, the player keeps playing without stopping. A streaming video player stores more in memory than the CD player because network congestion can be several seconds, as opposed to a bump to the CD player lasting only about a second.

Streaming media also takes into account the viewer's connection to the Internet. For example, some people have 28.8K modem connections, others have 56K modem connections, and some are directly connected via a T1 line. When you create your streaming video, you need to set a bit-rate for the target audience. You can either set a single bit-rate, such as 56K, or a bit-rate including multiple settings, such as 28K, 56K, and 100K.

With a single bit-rate stream, only users connecting at the specific bit-rate or higher are able to view the video stream. For example, if you set the bit-rate to 56K, a user with a 28K-modem connection is not able to view the video.

With a multi-bit-rate stream, you can create a single stream supporting multiple bit-rates, so people with 28K modems can watch the stream along with people viewing the stream at 100K. To do the same with single bit-rates, you have to create multiple streams, all set to different bit-rates.

One advantage to having multiple streams of varying bit-rates is each stream can be configured specifically for the target bit-rate. For example, a video image size of 320x240 (also known as "CIF", pronounced "Sif") is great for higher bit-rates, such as 100K. However, it is not a good size for lower bit-rates. A video image size of 160x120 (also known as "QCIF", pronounced "Q Sif", or "Quarter Sif") is great for low bit-rate connections like 28K or 56K.

With several single bit-rate streams, you can optimize your content for each connection speed.

About This Guide

This manual is contains the following sections:

-  **Getting Started** - Introduction to your Osprey-50 USB Capture Device
-  **Osprey-50 Device Installation** - Installing the Osprey-50 USB Capture Device and drivers
-  **RealProducer Installation** - Installing the RealProducer Software
-  **RealPlayer Installation** - Installing the RealPlayer Software
-  **Windows Media Installations** - Installing the Windows Media Encoder and Player software
-  **Capturing Video Using AmCap** – Capturing uncompressed video
-  **Creating a Video Stream with RealProducer**- Creating streaming media with RealProducer
-  **Creating a Video Stream with Windows Media Technologies** – Creating streaming media with Windows Media Technologies

Symbols

This document contains symbols indicating useful information:



SEE ALSO: Indicates other sections of the document or other documents containing related information



NOTE: Supplemental information



SHORTCUT: Indicates shortcuts



WARNING: Indicates information not to be ignored

System Requirements

The system requirements for the *Osprey-50 USB* product include the following:

-  Computer with Sound Card with 1 available USB port
-  Windows 98
-  120MHz Pentium or better (200+ MHz MMX recommended)
-  32 Megabytes Memory (64MB or better recommended)
-  500 Megabytes of Free Space (mainly for creating AVI files)

Additional Requirements

There are additional system requirements not included in the *Osprey-50 USB* which include:

-  Audio/Video input source - camera, camcorder, VCR, DVD, etc.
-  Composite (RCA) or S-video cables to connect input source to Osprey-50 card
-  Audio Cables to connect Audio/Video source to sound card

Troubleshooting



Refer to [Appendix A](#) for solutions to the most common problems prior to contacting Technical Support.

Technical and customer support is available via phone, E-mail, or the World Wide Web. Before you contact support, make sure you have the following information available:

-  System CPU type (Pentium)
-  Amount of memory in your system (RAM)
-  Operating system (Windows 98)
-  Detailed information about the problem, including the exact wording of any error messages
-  Information about what you've already done to fix the problem

Electronic Support

For support on the Osprey-50, RealProducer, or RealPlayer, use the following E-mail address:

 support@viewcast.com

Phone Support

For support on the Osprey-50, RealProducer, or RealPlayer, use the following phone number:

 North America: (631) 434-3197



Installing the Osprey-50 USB Video Capture Device

Installing the **Osprey-50 USB** Video Capture Device consists of several steps. These steps are outline in this chapter of the manual. These include:

-  Installing the Osprey-50 USB drivers
-  Connecting the Osprey-50 USB cable to your computer
-  Connecting the audio and video sources
-  Testing the installation

Installing the Osprey-50 USB Drivers

To install the Osprey-50 USB drivers:

1. Click **Start** and select **Run**.

The Run window displays.

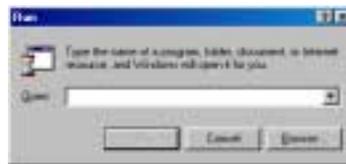


Figure 2-1: Run Window

2. Click **Browse**.

The Browse window displays



Figure 2-2: Browse Window

3. Locate your CD-ROM drive in the Look In drop-down list.
The contents of the CD-ROM display.



Figure 2-3: Contents of the CD-ROM

4. Double-click the **O50USB** folder.
5. Double-click the **Osprey50USB_98-2K.exe** file.
The Run window displays.

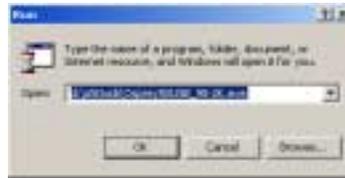


Figure 2-4: Run Window

6. Click **OK**.
The installation process begins.

Click the Windows 98 button to begin the installation process. Then proceed to the section titled "Completing the Osprey-50 USB Driver Installation".

Completing the Osprey-50 USB Driver Installation

This section of the chapter describes the remaining part of the Osprey-50 USB driver installation.

- To complete the installation:**
The Welcome window displays.



Figure 2-5: Welcome Window

1. Click **Next**.

The Osprey-50 USB Installation window displays.



Figure 2-6: Osprey-50 USB Installation Window

2. Click **Next**.

After all the required files are copied, the installation prompts you to restart your computer.

3. Click **OK** to restart your computer.

Connecting the Osprey-50 USB Cable

This section details how to connect your Osprey-50 USB cable to your computer.



Figure 2-7: Osprey-50 USB Cable

The USB port on your computer is a small rectangular opening. It is usually located near the other devices connecting to your computer. These include your monitor, printer, mouse, and keyboard.

Look for this symbol on your computer.

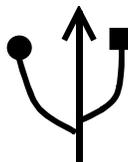


Figure 2-8: USB Port International Symbol

If you do not see the symbol located on your computer, look at Figure 2-9 to help you locate your USB port.

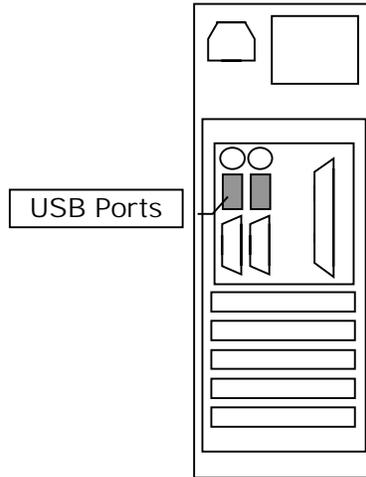


Figure 2-9: Tower Style Computer – Back View

Connecting the Audio and Video Sources

The third step is to connect your video input device to your Osprey-50 USB Video Capture Device. You also connect your audio input device to your computer's sound card. This allows you to capture audio and video from the device and turn it into videos and streaming media files.

Connecting Video Cables

The Osprey-50 USB cable has two inputs, one composite (RCA) and one S-Video. See Figure 2-10.



Figure 2-10: Osprey-50 USB Video Capture Device Video Inputs

There are many types of video sources. These include:

-  Camcorders
-  VCRs
-  DVD players

These types of devices usually come with connections known as RCA style. RCA style connections are also referred to as composite video. Your device may also have an S-Video connection.



S-Video signals provide a sharper image with better color separation. However, a composite input also provides a very high quality image.

To connect your video input device to the Osprey-50 USB cable:

1. Connect the cable to the Video Out port on your video source.
2. Connect the same cable to the input on the Osprey-50 USB cable.



You can use either an RCA style or S-Video cable to connect the video input device to the Osprey-50 USB cable.

Connecting Audio Cables

Sound cards can vary between computers.

-  Sound cards installed into an expansion slot
-  Sound cards built into the computer's motherboard

The types of connections for the audio can also vary between computers and sound card manufacturers.

-  RCA style input
-  3.5mm style input (stereo or mono audio)



Sound cards with stereo capability often have two connectors for the audio input. Sound cards without stereo input capability may have one microphone and one line input.

In addition to the above differences, the connection ports on the sound card can be labeled differently.

-  Microphone In or Mic In
-  Line In



Refer to your sound card or computer documentation for more specific information on connecting audio to your sound card

Your audio source can be the same as your video input device. These include:

-  Camcorders
-  VCRs
-  DVD players

It could also be a microphone, CD player, or any device separate from the video input device. Your audio device should have one of the following types of connections:

-  Dual RCA Connector
-  Single RCA Connector
-  3.5mm stereo or mono

For assistance in determining the audio cable needed to complete the audio connections, please refer to the next section titled "Determining Your Audio Cable Type".

Determining Your Audio Cable Type

	Audio Source Connection	Dual RCA Connector	Single RCA Connector	3.5mm Connector
Sound Card Connection	Single RCA Connection	Two RCA Single RCA	Single RCA	3.5mm Single RCA
	3.5mm Connections	Two RCA 3.5mm	Single RCA 3.5mm	3.5mm 3.5mm

To use this table:

1. Locate your audio source connection type in the top row of the table.
2. Locate your sound card connection type in the left column of the table.
3. Look across the table to determine the audio cable type needed for your specific configuration.

The cable type columns describe the connector types on each end of the cable.

For example, your camcorder contains two RCA audio output connections and your sound card has a 3.5mm connection. You need an audio cable, which has two RCA style connectors on one end and a 3.5mm connector on the other end.



If you don't have the appropriate cables to complete the connections, you may purchase cables at any retailer that sells audio and video equipment.

Connecting Your Audio Source

Connect the audio cable from your audio output device to the sound card. If your sound card has a port labeled "Line In", connect the remaining end of the cable to this port. If your sound card has a port labeled "Mic In" connect the remaining end of the cable to this port.

Testing the Installation

Testing the installation prior to installing the remaining software is critical. The application used to test the installation is AMCAP.

To test the installation:

1. Click **Start** and select **Programs**.
2. Select **Osprey-50**.
3. Select **AMCAP**.

The AMCAP window displays.



Figure 2-11: AMCAP Window

4. Click **Options**.
5. Select **Preview**.

Video displays in the video window.



If you do not see video in the video window, refer to [Appendix A – Troubleshooting](#) in this manual.



RealProducer G2 Installation

RealProducer enables you to create RealNetworks RealMedia files from several different media formats. These include:

-  Convert AVI files to the RealMedia format
-  Directly from the Osprey-50 and your sound card

It employs easy to use wizards that guide you through the creation process. It also has a customizable interface so you can use the advanced mode instead of the wizards as you get more familiar with the software.



For more information on the RealProducer, view the RealProducer documentation after installation.

Installing RealProducer

There are two methods to begin the RealProducer installation routine.

Method One

Method One involves running the installation from the *Osprey-50* installation window. See Figure 3-1.



Figure 3-1: Osprey-50 Installation Window

Click the RealProducer button to begin the installation process. Then proceed to the section titled “Completing the RealProducer Installation”.

Method Two

Method Two consists of bypassing the *Osprey-50* automatic installation process.

To manually install RealProducer:

1. Click **Start** and select **Run**.

The Run window displays.



Figure 3-2: Run Window

2. Click **Browse**.

The Browse window displays



Figure 3-3: Browse Window

3. Locate your CD-ROM drive in the Look In drop-down list.

The contents of the CD-ROM display.



Figure 3-4: Contents of the CD-ROM

4. Double-click the **RealNetworks** folder.
5. Double-click the **Producer** folder.
6. Double-click the **RPRODG261.EXE** file.

The Run window displays.

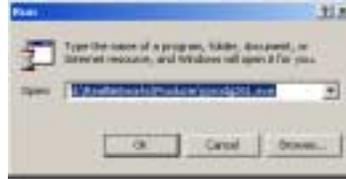


Figure 3-5: Run Window

7. Click **OK**.

The installation process begins.

Proceed to the next section titled "Completing the RealProducer Installation" beginning on page 15.

Completing the RealProducer Installation

This section of the chapter describes the remaining part of the RealProducer installation.

To complete the installation process:

The installation begins by extracting all the required files to complete the process.

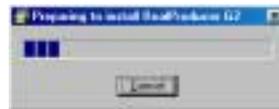


Figure 3-6: Preparing to Install RealProducer G2

After the files are extracted, the RealProducer License Agreement window displays.



Figure 3-7: RealProducer G2 License Agreement Window

1. Click **Accept** to agree to the license agreement. If you do not agree to the agreement, click **Cancel** to stop the installation process.



The RealProducer G2 License Agreement must be accepted to install the software.

The Setup of RealProducer G2 window displays.



Figure 3-8: Setup of RealProducer G2 Window

2. Enter your e-mail address in the first field.
3. We recommend you do not change the Destination Directory. To change the directory, click **Browse**.
4. Click **Finish**.

The Configuration of RealProducer window displays.



Figure 3-9: Configuration of RealProducer



The **Enable Recording** checkbox allows viewers of your content to download the files to their hardware drive while the view the content. If you do not want to allow people to download the content to their computers, un-select this checkbox.

This option can be changed from within the RealProducer G2 software at a later time.

- Click **Next** after making your decision regarding the Enable Recording option.
The Configuration of RealProducer window displays.



Figure 3-10: Configuration of RealProducer

- Verify the address in the **E-mail Address** field. This is the same e-mail address you entered earlier in the installation process.
- Select your country from the **Country** drop-down list.
- Enter your zip code in the **Zip Code** field.



The Inform Me of Updates and Events checkbox instructs RealNetworks to send you periodic e-mail newsletters regarding news and events. If you do not want to receive the newsletters, deselect this checkbox.

- Click **Finish**.

After the installation is complete, RealProducer launches the first window of the Recording Wizard. We recommend you cancel the Recording Wizard and exit RealProducer G2 at this time.



Chapter 8 provides information on using the RealProducer.

This completes the installation of RealProducer G2.

The next step is installing RealNetworks' RealPlayer G2. For instructions regarding how to install RealPlayer G2, proceed to the "[Installing RealPlayer](#)" chapter of this manual.

4

RealPlayer Installation

The RealPlayer software enables you to play RealNetworks RealMedia files created with the RealProducer. The RealPlayer also enables you to listen to live and prerecorded audio and video on the Internet. It also provides “one-button” access to news and entertainment via presets that are configurable by the user.



For more information on the RealPlayer, view the RealPlayer documentation after installation.

Installing RealPlayer

There are two methods to begin the RealPlayer installation routine.

Method One

Method One involves running the installation from the *Osprey-50* installation window. See Figure 4-1.



Figure 4-1: *Osprey-50* Installation Window

Click **RealPlayer** to begin the installation process. Then proceed to the section titled “Completing the RealPlayer Installation”.

6. Double-click the **RN6PINST_6_45.EXE** file.
The Run window displays.

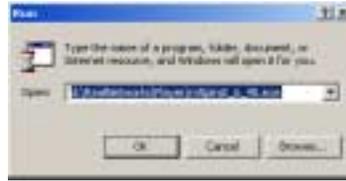


Figure 4-5: Run Window

7. Click **OK**.
The installation process begins.

Proceed to the next section titled "Completing the RealPlayer Installation".

Completing the RealPlayer Installation

This section of the chapter describes the remaining part of the RealPlayer installation.

To complete the installation process:

The installation begins by extracting all the required files to complete the process.



Figure 4-6: Preparing to Install RealPlayer G2

After the files are extracted, the RealProducer License Agreement window displays.



Figure 4-7: RealPlayer G2 License Agreement Window

1. Click **Accept** to agree to the license agreement. If you do not agree to the agreement, click **Cancel** to stop the installation process.



The RealPlayer G2 License Agreement must be accepted to install the software.

The Setup of RealPlayer G2 window displays.



Figure 4-8: Setup of RealPlayer G2 Window

2. Enter your e-mail address in the first field.
3. We recommend you do not change the Destination Directory. To change the directory, click **Browse**.
4. Click **Finish**.

After the files are copied to your computer, the Configuration of RealPlayer window displays.



Figure 4-9: Configuration of RealPlayer Window

5. Verify your e-mail address in the **E-mail Address** field. This is the same e-mail address entered earlier in the installation process.
6. Select your country from the **Country** drop-down list.
7. Type your zip code in the **Zip Code** field.



The Inform Me of Updates and Events checkbox instructs RealNetworks to send you periodic e-mail newsletters regarding news and events. If you do not want to receive the newsletters, deselect this checkbox.

8. Click **Next**.

The Configuration of RealPlayer window displays.



Figure 4-10: Configuration of RealPlayer Window

9. Select your Internet connection rate from the Connection Speed drop-down list.



If you are unsure of your connection rate to the Internet, refer to the manual provided with your modem. You should not select a connection speed faster than your actual Internet connection. This does not improve the quality of video and audio viewed on the Internet.

10. Click **Next**.

The Configuration of RealPlayer window displays.



Figure 4-11: Configuration of RealPlayer Window

11. Select one or more of the pre-set channel categories available.

12. Click **Next**.

The RealPlayer window displays.



Figure 4-12: RealPlayer Window

The RealPlayer installation is complete. When RealPlayer launches the first time, it plays a welcome sound. If you do not hear this sound, check all of the connections to your sound card. If you are still having difficulty, refer to the RealPlayer documentation or visit the RealNetworks web site.



Installing the Windows Media Encoder Application

The Windows Media Encoder application allows you to create streaming media files that are compatible with the Windows Media Player. You can create your content in a variety of ways. These include:

-  Convert AVI files to the Windows Media format
-  Directly from the Osprey-50 and your sound card

It employs easy to use wizards that guide you through the creation process.



For more information on the Windows Media Encoder, view the Windows Media documentation after installation.

Installing Windows Media Encoder

There are two methods to begin the Windows Media Encoder installation routine.

Method One

Method One involves running the installation from the *Osprey-50 USB* installation window. See Figure 5-1.



Figure 5-1: Osprey-50 Installation Window

Click **Windows Media Encoder** to begin the installation process. Then proceed to the section titled “Completing the Windows Media Encoder Installation”.

Method Two

Method Two consists of bypassing the *Osprey-50 USB* automatic installation process.

To manually install Windows Media Encoder:

1. Click **Start** and select **Run**.
The Run window displays.



Figure 5-2: Run Window

2. Click **Browse**.
The Browse window displays



Figure 5-3: Browse Window

3. Locate your CD-ROM drive in the Look In drop-down list.
The contents of the CD-ROM display.



Figure 5-4: Contents of the CD-ROM

4. Double-click the **WindowsMedia** folder.
5. Double-click the **Encoder** folder.

6. Double-click the **wmencoder.exe** file.
The Run window displays.

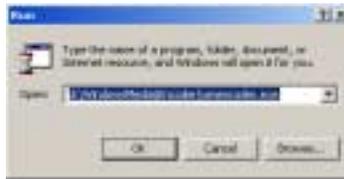


Figure 5-5: Run Window

7. Click **OK**.
The installation process begins.

Proceed to the next section titled “Completing the Windows Media Encoder Installation”.

Completing the Windows Media Encoder Installation

This section of the chapter describes the remaining part of the Windows Media Encoder installation.

To complete the installation process:

The Windows Media Encoder 7 Setup License Agreement window displays.



Figure 5-6: Windows Media Encoder 7 Setup License Agreement Window

1. Click **Yes** to continue the installation.



The Windows Media Encoder 7 License Agreement must be accepted to install the software.

The Welcome window displays.



Figure 5-7: Welcome Window

2. Click **Next**.

The Windows Media Encoder 7 Setup Wizard window displays.



Figure 5-8: Windows Media Encoder 7 Setup Wizard Window

3. Click **Finish** to install the required files to your computer.

The required files are installed.



Figure 5-9: Windows Media Encoder 7 Setup Wizard Window

After the required files are copied to your computer, the Setup Complete window displays.

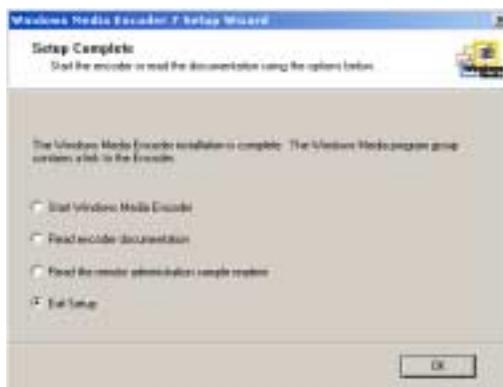


Figure 5-10: Setup Complete Window

4. Click to select the **Exit Setup** radio button.
5. Click **OK** to complete the installation.



We recommend that you complete the remaining software application installation prior to capturing or compressing your video.

This completes the installation of the Windows Media Encoder software.

The next step is installing Microsoft's Windows Media Player. For instructions regarding how to install the Windows Media Player, proceed to the "[Installing the Windows Media Player](#)" chapter of this manual.



Installing the Windows Media Player

The Windows Media Player software enables you to play Microsoft's Windows Media files created with the Windows Media Encoder. The Windows Media Player also enables you to listen to live and prerecorded audio and video on the Internet. It also provides "one-button" access to news and entertainment via presets that are configurable by the user.



For more information on the Windows Media Player, view the documentation after installation.

Installing Windows Media Player

There are two methods to begin the Windows Media Player installation routine.

Method One

Method One involves running the installation from the *Osprey-50 USB* installation window. See Figure 6-1.



Figure 6-1: *Osprey-50* Installation Window

Click **Windows Media Player** to begin the installation process. Then proceed to the section titled "Completing the Windows Media Player Installation".

- Double-click the **wmp7.exe** file.
The Run window displays.



Figure 6-5: Run Window

- Click **OK**.
The installation process begins.

Proceed to the next section titled “Completing the Windows Media Player Installation”.

Completing the Windows Media Player Installation

This section of the chapter describes the remaining part of the Windows Media Player installation.

To complete the installation:

The Windows Media Player 7 Setup window displays.



Figure 6-6: Windows Media Player 7 Setup Window

- Close all of the applications currently running on your system.
- Click **Yes**.

The License Agreement window displays.



Figure 6-7: License Agreement Window

3. Click Yes to accept the terms of the license agreement.



The Windows Media Player 7 License Agreement must be accepted to install the software.

*The installation routine extracts the files needed to complete the installation.
The Welcome window displays.*



Figure 6-8: Welcome Window

4. Click **Next**.

The Privacy Statement window displays.



Figure 6-9: Privacy Statement Window

5. Click to select the **I have read the Privacy Statement** checkbox.

6. Click **Next**.

The Windows Media Component Setup window displays.

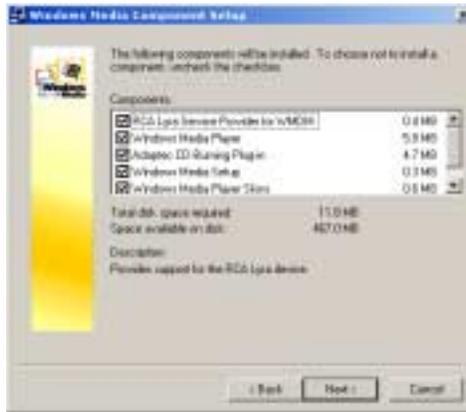


Figure 6-10: Windows Media Component Setup Window

7. Click to select the components you want to install.



By default, all of the components are selected. This is the recommended configuration.

8. Click **Next**.

The Windows Media Component Setup window displays.



Figure 6-11: Windows Media Component Setup Window

9. Click to select the components you want to configure.

10. Click **Next**.

The Windows Media Component Setup window displays.



Figure 6-12: Windows Media Component Setup Window

11. Click **Next**.

The installation process begins.

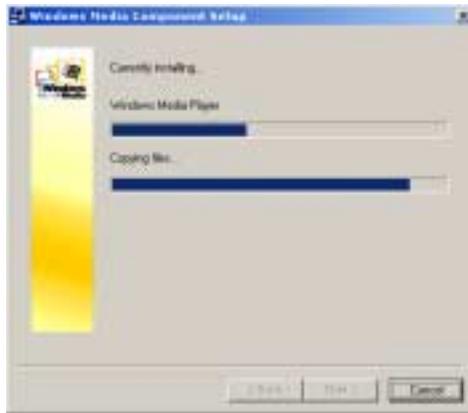


Figure 6-13: Windows Media Component Setup Window

After all of the necessary files are copied to your computer, the Setup Complete window displays.



Figure 6-14: Setup Complete Window

12. Click **Finish** to restart your computer.



The Windows Media Player installation requires that you restart your computer. This ensures the application performs as expected.

This completes the Windows Media Player installation.

The first step in creating streaming media is to capture your video. For information on how to capture uncompressed video, refer to the "[Capturing Video Using the AmCap Application](#)" chapter of the manual.



Capturing Video Using the AmCap Application

This chapter of the manual provides detailed instructions on capturing your video and audio using the AmCap application provided with the *Osprey-50 USB* capture device. AmCap is a video capturing application only. There are no editing capabilities.



There are other applications which you can use to not only capture your video and audio but also edit, add titles, and add special effects. These products include: Adobe Premier, MGI VideoWave, and Pinnacle Systems DC50.

When capturing video from a source, the files can become very large. To help you determine the approximate size of your captured video, please see "[Appendix D – Uncompress Video](#)".

Capturing your Video and Audio

There are two steps in capturing your video. The first is to prepare the AmCap application with the correct settings. The second is capturing the video.

Preparing to Capture

Prior to actually capturing your video, the AmCap application must be configured to achieve the best results.

To prepare for video capture:

1. Click **Start** and select **Programs**.
2. Select **Osprey-50**.
3. Select **AmCap**.

The AmCap Application window displays.



Figure 7-1: AmCap Window



If AmCap does not contain an image, please see "[Appendix A – Troubleshooting](#)".

4. Click **Options** and select **Video Capture Filter**.

The Properties window displays.



Figure 7-2: Properties Window

5. Select your video standard from the drop-down list.
6. Click **OK**.
7. Click **Options** and select **Video Capture Pin**.

The Properties window displays.



Figure 7-3: Properties Window

8. Select a frame per second rate in the **Frame Rate** field.



A rate of 15.000 frames per second is acceptable for most streaming video uses.

9. Select a color depth from the **Color Space/Compression** drop-down list.
10. Select an capture window size from the **Output Size** drop-down list.



An output size of 320 x 240 is also known as CIF. A 160 x 120 output size is known as QCIF. These are the most common window sizes for streaming video.

If the viewers of your streaming video are going to have slower Internet connections, 28.8 Kbps or 56 Kbps, we recommend using the smaller window size of QCIF. This provides a better finished product for the viewer.

11. Click **OK**.
12. Click **Options** and select **Audio Capture Filter**.
The Properties window displays.



Figure 7-4: Properties Window

13. Select the audio input you are using on your sound card from the **Pin Line** drop-down list.
 14. Click **OK**.
- The next step is to capture your video.

Begin Capturing Video

This section of the chapter details how to capture your video.



Prior to capturing your video, verify that your video source is connected to the Osprey-50 USB device and your audio source is connected to your sound card. For more information on connecting your sources, please refer to the "[Installing the Osprey-50 USB Video Capture Device](#)" chapter of this manual.

To capture your video:

1. Click **Capture** and verify the selection **Capture Audio** is selected.



If you do not want to capture audio, deselect the Capture Audio selection.

2. Click **Capture** and select **Start Capture**.

The Set Capture File window displays.

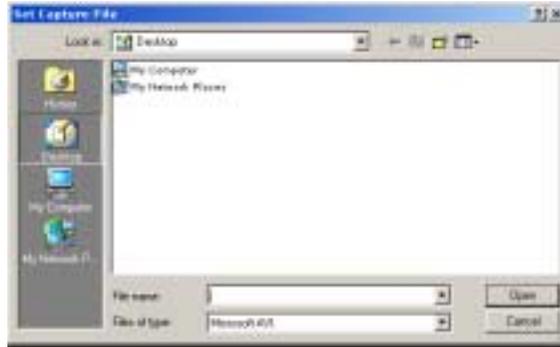


Figure 7-5: Set Capture File Window

3. Select a drive and directory for the captured video.
4. Type a file name for the captured video.



Uncompress video files can be very large. Make sure you have enough disk space to accommodate the captured video. For additional information regarding uncompressed video files, please see "[Appendix D – Uncompressed Video](#)".

5. Click **Open**.

The Set File Size window displays.



Figure 7-6: Set File Size Window

6.	If you ...	then ...
	want to limit the file size of your captured video,	type the size in megabytes in the Capture File Size field.
	do not want to limit the file size of your captured video,	proceed to step 7.

- Click **OK**.
The Ready to Capture window displays.



Figure 7-7: Ready to Capture Window

- Click **OK** to begin capturing video and audio.

Stop Capturing Video

When you are ready to stop capturing video, click **Capture** and select **Stop Capture**.

Viewing Captured Video

You should view your uncompressed video prior to converting it into a streaming video format.

To view your captured video:

- Locate your captured video using Windows Explorer.
- Double-click on the file.

This launches your installed player and allows you to view your video.



If you are not satisfied with your video and would like to capture it again, please refer to the "[Begin Capturing Video](#)" section of this chapter.

Congratulations! You have captured your video and now you are ready to convert it into a streaming format. Please refer to one of the chapters below depending on the format you have chosen to use.



[Creating a Video Stream with RealProducer](#)



[Creating a Video Stream with Windows Media Technologies](#)



Creating a Video Stream with RealProducer

This chapter details how to create a RealMedia file. This chapter also includes how to add the RealMedia file to your web page.



RealMedia files are much smaller in size than AVI files. There is no direct ratio for comparison because there are too many variables. However, as an example, a 10MB AVI file may be reduced to less than 100KB when compressed with RealProducer.

Creating a RealMedia File from an AVI File

To create a RealMedia file:

1. Click **Start** and select **Programs**.
2. Select **RealProducer**.
3. Select **RealProducer G2**.

The RealProducer G2 New Session window displays.



Figure 8-1: RealProducer G2 New Session Window

4. Click to select the **Record From File** radio button.



To record audio and video directly from the Osprey-50 video capture card and your sound card, select **Record from Media Device**.

5. Click **OK**.
The Recording Wizard window displays.



Figure 8-2: Recording Wizard Window

6. Click **Browse** to locate the AVI file you created.
7. Click **Next**.
The Recording Wizard window displays.



Figure 8-3: Recording Wizard Window

8. Enter a title for your video in the **Title** field.
9. Enter the author of the video in the **Author** field.
10. Enter the year in the **Copyright** field.
11. Enter a description of your video in the **Description** field.
12. Enter a few keywords about your video in the **Keywords** field.



The keywords are utilized when people search for your video.

13. Click **Next**.

The Recording Wizard window displays.



Figure 8-4: Recording Wizard Window

14. Click to select the **Single-Rate for Web Servers** radio button.



Single-rate streams are created for only one bit-rate. SureStream files contain information allowing the streams to be played back at various bit-rates.

15. Click **Next**.

The Recording Wizard window displays.



Figure 8-5: Recording Wizard Window

16. Select a **Target Audience** setting that is best suited for your viewing audience.



This setting optimizes your video for the selected target audience.

17. Click **Next**.

The Recording Wizard window displays.



Figure 8-6: Recording Wizard Window

18. Select the appropriate audio format.



For a majority of the videos you encode, Voice Only is the best setting.

19. Click **Next**.

The Recording Wizard window displays.



Figure 8-7: Recording Wizard Window

20. Click to select the **Video Quality** radio button.



The Normal Motion Video selection maintains the video quality from the original AVI file.

21. Click **Next**.

The Recording Wizard window displays.



Figure 8-8: Recording Wizard Window

22. Enter the path and file name in the **File Name** field for your RealMedia file.



You can also click **Save As** to locate a specific directory on your computer for the RealMedia file.

23. Click **Next**.

The Recording Wizard window displays.



Figure 8-9: Recording Wizard Window

24. Verify all the information on the summary window. If anything is incorrect, click **Back** to return to the previous window and make any necessary changes.

25. Click **Finish**.

The RealProducer window displays with the first frame of your video in the left video window.



Figure 8-10: RealProducer Window

26. Verify all of the settings on the RealProducer window.



If any of the settings are incorrect, you may change them on this window. You do not need to go through the Recording Wizard again.

27. Click **Start**.

RealProducer begins to create a RealMedia file. The encoded video displays in the video window on the right.

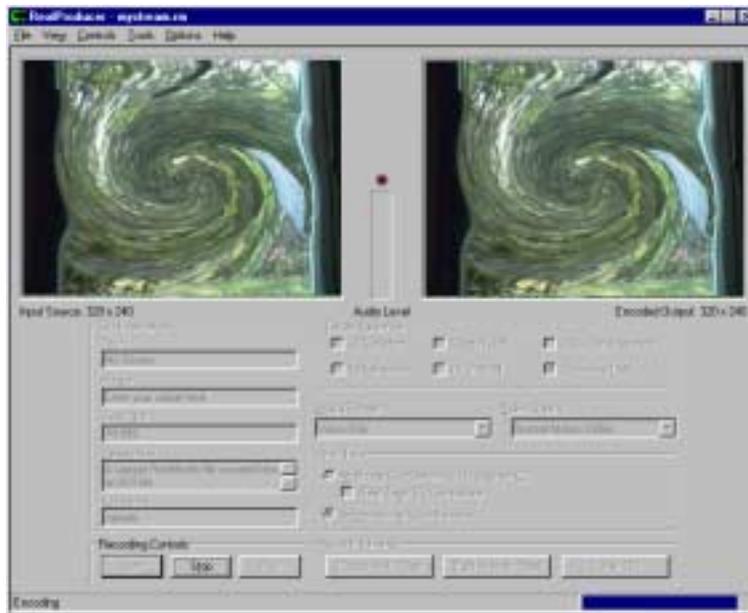


Figure 8-11: RealProducer Window



The time to encode an AVI file is approximately the same length as the original video. For example, if your AVI file is 80 seconds, it takes RealProducer approximately 80 seconds to create the RealMedia file.

When the RealMedia file is complete, the Processing Complete window displays.



Figure 8-12: Processing Complete Window

28. Click **Close**.



Janus is an on-line guide hosted by RealNetworks where you can list information about your video. If you choose to add your clip to Janus, you are prompted to complete a web form providing information about your video. This helps people find your clip on the Internet.

The RealProducer displays a window verifying that you do not want to add your video to Janus.



Figure 8-13: RealProducer Window

29. Click **No**.



We suggest that you add your video to Janus when you are creating video for streaming on the Internet. In this example, however, you do not need to add your video to Janus.

30. Click **Play** to view your RealMedia file.

RealPlayer displays your completed video.



Figure 8-14: RealPlayer

Congratulations! You have successfully created a RealMedia file from an AVI file.



The video looks different as a RealMedia clip as opposed to an AVI clip. This is because the RealProducer compresses the video for easy viewing over the Internet. This is part of the encoding process. If you exit the RealProducer, and look at the RealMedia file size, you should notice the file size is significantly smaller.

The remainder of this chapter includes supplemental information regarding how to place your new RealMedia file on a web page.

Placing Your RealMedia File on a Web Page

It is easy to link your RealMedia file to your web page. There are just a few things to consider:

-  Your web site and RealMedia file must exist on the same server
-  If your web site is hosted on a remote system, copy your RealMedia file to that system

On your web page, create a link to the RealMedia file. This is done in the same manner as linking to an HTM or HTML file.

When someone accesses your web page and clicks the link to the RealMedia file, RealPlayer launches and your video begins playing.



The person accessing your video must have RealPlayer installed. You should place a link to the RealNetworks page so people can download RealPlayer if they do not have it installed on their computer.

If you do not have an existing web page, you can still share your video with friends and family on the Internet by using one of the templates from *Your Video on the Web*. Access the web site at www.yourvideontheweb.com and follow the instructions for uploading your video to the Internet.



For information on other ways to use RealProducer, visit the RealNetworks web site at www.real.com.



Creating a Video Stream with Windows Media Technologies

This chapter details how to create a Windows Media file from the AVI file you created. This chapter also includes how to add the Windows Media file to your web page.



Windows Media files are much smaller in size than AVI files. There is no direct ratio for comparison because there are too many variables. However, as an example, a 10MB AVI file may be reduced to less than 100KB when compressed with Windows Media.

Creating a Windows Media File from an AVI File

This section details how to transform your AVI file (created in Chapter 7) into a WMV file.

To create a Windows Media File:

1. Click **Start** and select **Programs**.
2. Select **Windows Media**.
3. Select **Windows Media Encoder**.

The Windows Media Encoder Welcome window displays.



Figure 9-1: Windows Media Encoder Welcome Window

4. Click to select the **Broadcast, capture, or convert a file using the New Session Wizard** radio button.
5. Click **OK**.

The New Session Wizard window displays.



Figure 9-2: New Session Wizard Window

6. Click to select the **Convert an audio or video file into a Windows Media File** radio button.
7. Click **Next**.

The File Selection window displays.

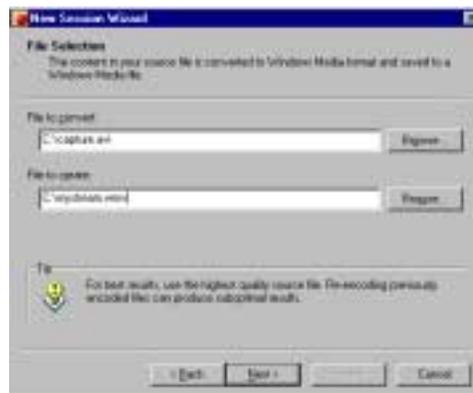


Figure 9-3: File Selection Window

8. Enter the path to the AVI file created in Chapter 6. You can use the Browse button to look for the file.
9. Enter the path of the new WMV file. By default, it will be created in the same directory as the AVI file.

10. Click **Next**.
The Output File Distribution window displays.



Figure 9-4: Output File Distribution Window

11. Click to select the **File will stream from a Web server or play directly on a computer** radio button.
12. Click **Next**.
The Profile Selection window displays.



Figure 9-5: Profile Selection Window

13. Select a **Profile Selection** setting that is best suited for your viewing audience.



This setting optimizes your video for the selected target audience.

14. Click **Next**.

The Display Information window displays.

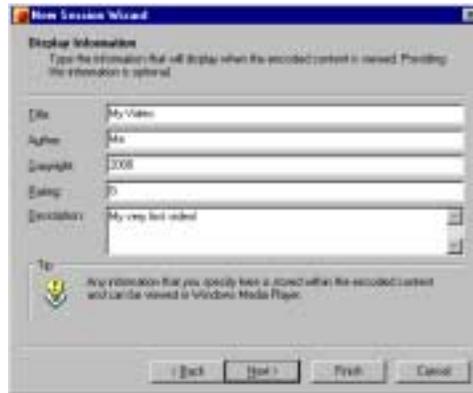


Figure 9-6: Display Information Window

15. Enter information about your video clip.
16. Click **Next**.

The Settings Review window displays.



Figure 9-7: Settings Review Window

17. Click **Finish** to begin creation of the Windows Media file.
18. The Windows Media Encoder window will appear, along with an information dialog.

The Information Dialog window displays.



Figure 9-8: Information Dialog Window

19. Click **OK**. The Encoder will start encoding the video and it will be visible in the window as it encodes.

20. When the encoder finishes encoding, the Encoding Results window will appear, showing the results of the encode.

The Encoding Results window displays.



Figure 9-9: Encoding Results Window

21. Click **Close** to close the Encoding Results Window.
22. Click **Session** and select **Exit** to exit the Windows Media Encoder.
23. Click **No** when prompted to save the session settings.

Congratulations! You have successfully created a Windows Media file from an AVI file. To view the clip, simply double click on the WMV file that you created, and it displays in the Windows Media Player.



The video looks different as a Windows Media clip as opposed to an AVI clip. This is because the Windows Media compresses the video for easy viewing over the Internet. This is part of the encoding process. If you exit the Windows Media, and look at the Windows Media file size, you should notice the file size is significantly smaller.



Appendix A - Troubleshooting

This appendix contains a list of known issues that may occur when using the Osprey-50 USB device with the RealProducer software. Also see the RealProducer documentation and the documentation for your computer and Sound Card.

Blue Video Screen

The currently selected video input is not receiving an active video signal. Check that the camera, VCR, or other video source is powered and that its output is connected to the Osprey-50's input. Check that the correct video input is selected in the Control Dialog's Source page.

Black Preview Video Screen

If you select a Color Format other than RGB or Grey8, you may get a black preview screen. The problem is that the application does not know how to decode these more specialized formats. It must be able to locate a software video compressor on your system that works with this format.

If you encounter this situation with a Color Format that you need or want to use, you have to obtain a suitable compressor.

Scrambled Video Image

You may have set the wrong video signal format for the signal input you are using - for example, you may have told the driver to look for NTSC-M video but are using a PAL-BDGH video source. First, make sure you know what signal format your video source is generating. Then, go into the Signal field of the Control Dialog's Source page, and click the button for that signal format.

Grainy, Dithered Image

Check that you are using a display format with greater than 256 colors. If a 256-color format is used, the system can only approximate the actual colors, and does so with a loss of resolution and precision. You can determine (and if necessary adjust) the display depth from the field titled Color Palette under the Settings tab of the Control Panel ... Display.

Poor Video Quality at Large Frame Sizes

Large frame sizes with the deep pixel depth (24- or 32-bit), or complex format (YVU9 or YUV12 planar), impose heavy demands on the PCI bus's data transfer capacity. Our experience is that some systems cannot handle these formats at full frame sizes.

Systems vary in their data transfer limits. The characteristics of the PCI bridge are often more important than processor speed.

If you are having problems, we recommend that you:

-  Use a smaller frame size (480 x 320 or less)
-  Use a shallower color format (RGB15 or RGB24 instead of RGB32)
-  Try an RGB format instead of a YVU format, and a packed format instead of a planar format
-  If you have a choice of PCs for video capture, try using another system with a different system board chipset

Unwanted Closed Caption Text

Closed Caption text consists of white or colored characters drawn on black character cells. In video that contains Closed Captioning information, the first active line of video in each field contains encoded Closed Caption text. In video that does not have Closed Captioning information, that line is simply ordinary video.

If you leave Closed Captioning enabled and view non-Closed Caption video, the Osprey-50 USB device will attempt to interpret the first line of each field of video as Closed Caption character codes. Some video may appear sufficiently similar to Closed Caption data that the software thinks it is Closed Caption text. The result will be occasional randomly drawn text appearing on the screen.

The solution is to turn off Closed Captioning when you are viewing sources that are not Closed Captioned. To do so, open the Control Dialog's Closed Caption page and uncheck the Enable box in the Display field. The change takes effect when video is restarted after exiting the dialog.

"Unable to Initialize Direct Draw" Message in Windows 98

The DirectDraw system files ddraw.dll, ddraw16.dll, and ddhelp.exe must be installed in the Windows 98 system. Furthermore, the file version as shown in the file properties data must have 4.03 or higher in its first three digits. The software will work even with this problem, except that Overlay drawing will not be available. Obtain and install a service pack from Microsoft if you do not have these files.

Unable to Open Driver or Similar Error Messages

If AMCAP or any other application gives an error message stating that it can't open or find a driver for the Osprey-50 USB device, it may mean that the drivers were not installed properly.

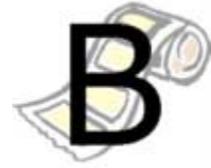
Video Compression and Playback Issues

When capturing video with AMCAP, you have an option of compressing the video before it is output to the AVI file. The compression is done video a software "Codec", which stands for "Compressor/Decompressor". A software codec will compress the video, and decompress it when you want to view the video. This is useful because compressed video takes up less space than full frame (uncompressed) video, and it will help to reduce the size of AVI files.

If you use a software codec, keep in mind that other users may not have the same codecs on their system, and they may not be able to view your AVI file. If you are encoding with the RealProducer, it compresses the video but the RealPlayer can decode it. If you know your AVI files will only be used on one system, then you can use any codec and not worry about compatibility issues.

How did I get these software codecs on my computer?

AMCAP can use any available software codec on your system. These codecs can be installed manually, such as the Intel Indeo codec, or they may have come with other software applications on your system. If you are not sure how a codec was installed, then you should probably avoid using that codec, as you may not be able to determine how to install it elsewhere.



Appendix B – Glossary of Terms

4:2:2 Packed Video Format

This mode represents each pixel with a total of 2 bytes (16 bits) of data. The data is encoded as separate data for luminance (intensity) and chrominance (color). These modes are mainly useful as inputs to software compressors.

AVI (Audio Video Interface)

A Microsoft Windows format for files containing multiple streams of different kinds of data, such as video, audio, and MIDI. Applications built with the Video for Windows Development Kit use the AVI file format.

CCIR601

A video proportioning standard that can be selected on the Osprey-50's Control Dialog Format page. The default standard is Square Pixel. Selecting CCIR601 increases the video size; but Square Pixel is the most commonly used standard.

CIF (Common Intermediate Format)

320x240-pixel windows format for displaying video. See also "QCIF-Quarter Common Intermediate Format".

Codec (Coder/Decoder)

Software or hardware encoding an analog stream (video or audio) into a compressed digital format and then decodes and decompresses the digital data back into analog data.

DirectDraw

A software interface standard for transferring video processing from a PC's CPU to the video adapter. The standard was first developed by Intel and called the Display Control Interface (DCI) and is now supported by Microsoft with the name DirectDraw as a registered trademark. The driver allows an application to send update information directly to the video adapter.

Direct Capture

Direct, or uncompressed, capture provides the highest quality image, but takes the most space. A 30-second clip of uncompressed video in 16-bit RGB format, CIF size, uses nearly 150Mbytes of disk space. The images are digitized version of the input and have no compression artifacts.

Grey8 Video Format

Each pixel has one byte of data, representing one of 256 grayscale levels.

NTSC-NTSC-M, NTSC-J

The input signal formats used in North America and Japan (NTSC-J). Full-sized NTSC has 525 lines total, 480 lines visible, per frame and a display rate of 60 fields per second, or 30 interlaced frames per sec.

PAL-BDGHI, PAL-M, PAL-N, NC

The input signal formats used in Europe (BDGHI), Brazil (M), Argentina, Paraguay, and Uruguay. Full-sized PAL (other than PAL-M) has 625 lines total, 576 lines visible, per frame and a display rate of 50 fields per second, or 25 interlaced frames per second.

Plausibly Live

Broadcast of a prerecorded event that can be viewed on the client as it is being broadcast. The stream is live, but the content is not.

QCIF (Quarter Common Intermediate Format)

A 160x120 pixel window format for displaying video (one-quarter the resolution of a CIF window).

RGB15 Video Format

Each pixel has two bytes (16 bits) of data. There are 5 bits each of red, green, and blue data; the sixteenth bit is unused. This is a "high color" mode, also known as a "5:5:5."

RGB24 Video Format

Each pixel has three bytes (24 bits) of data - one each for red, green, and blue. This is another "true color" mode with 16.7 million colors, and is a recommended format for capturing images with the highest possible color accuracy.

RGB32 Video Format

Each pixel has four bytes (32 bits) of data - one each for red, green, and blue, plus one byte of padding. The pixel has 256 shades of each of the three colors, for a total of 16.7 million colors. This is a "true color" mode.

SECAM

The input signal format used in France and some other countries. Full-sized SECAM has 625 lines total, 576 lines visible, per frame and a display rate of 50 fields per second, or 25 interlaced frames per second.

Streaming

Transmission of real-time data, commonly audio and video, from a server to a client where the client "plays" content as it is received. This differs from downloaded, cached, or buffered data, which is played after being received in full, or played part by part.

YUV12 Planar Video Format

This is a complex format in which there are 12 bits of data per pixel. Each pixel has 8 bits of luminance data. Each group of 4 adjacent pixels shares two bytes of chrominance data. The luminance, U-chrominance, and V-chrominance data are organized into separate blocks.

YVU9 Planar Video Format

Similar to YUV12 planar, except that there are 9 bits of data per pixel and each byte pair of chrominance data is shared by 16 adjacent pixels.



Appendix C – Other Resources

Osprey Product Line

ViewCast.com, Osprey Technologies Division

-  Phone: 888-684-6622
-  Fax: 919-319-0034
-  Web: <http://www.viewcast.com>
-  Email: info@viewcast.com

ViewCast.com Product Line

ViewCast.com, Inc.

-  Phone: 800-250-6622
-  Fax: 972-488-7199
-  Web: <http://www.viewcast.com>
-  Email: info@dfw.viewcast.com

RealNetworks Product Line

RealNetworks, Inc.

-  Phone: 206-674-2700
-  Fax: 206-674-2699
-  Web: <http://www.real.com>
-  Email: info@real.com



Appendix D – Uncompressed Video

This appendix contains information regarding uncompress video. It includes the following:

-  File size calculations
-  Capture size limitations

File Size Calculations

The video and audio files you create can be very large files. However, there is a simple formula that helps you estimate the amount of disk space you need per uncompressed AVI file.

The formula for calculating the approximate file size of an AVI (uncompressed video) file is:

$$\text{height} \times \text{width} \times \text{color depth} \times \text{fps} \times \text{length (in seconds)}$$

8,000,000

For example you have a video with the following characteristics:

-  Video window size = 320 (h) x 240 (w)
-  Color format = 24-bit RGB
-  Frames per second (fps) = 30
-  Length = 60 seconds

$$320 \times 240 \times 24 \times 30 \times 60$$

8,000,000

This results in an AVI file of approximately 414.72 megabytes.

Capture Size Limitations

The theoretical limit on an AVI version 1.0 file size is 4 gig (32 bits). However, due to a problem in the MS API (Application Program Interface) used to create AVI files, the index and several other entries become corrupt if you create an AVI file larger than 2 gig. Also, some players, such as the older MCI control, allow you to only play back a 1 gig file.

The following guidelines apply:

-  If you want every application to be able to play back the file, limit the size to 1 gig.
-  If you're only interested in Media Player and newer apps, limit the size to 2 gig.
-  VidCap32 creates AVI files larger than 2 gig, but the indexes are corrupt and can't be played back with any player. If VidCap32 runs out of space while capturing, the entire AVI file is marked corrupt.
-  You can use the riffwalk.exe utility in the Platform SDK to verify an AVI file. It echoes an error if the file is corrupt.

The OpenDML committee developed a specification for AVI 2.0 files. The enhancements include:

-  unlimited file size
-  interleaved indexes
-  support for field indexes in addition to frame indexes

The AVI 2.0 specification was also designed to be backwards compatible. So an application which does not support AVI 2.0 should still be able to play back the first 1 gig of the file.

For AVI 2.0 files:

-  AmCap creates AVI 2.0 format files; VidCap does not.
-  AmCap creates AVI files as large as the file system allows. If AmCap runs out of space, the AVI file is still good.
-  Only Windows Media Player and other newer apps can play back the entire AVI file.

To create a file greater than 4 gig, you must use NTFS. Here are the Windows file system limits:

-  FAT16: file 2 gigabytes, partition 2 gigabytes
-  FAT16 (NT): file 4 gigabytes, partition 4 gigabytes
-  FAT32: file 4 gigabytes, partition 2 terabytes
-  NTFS: file 2 terabytes, partition 16 exabytes (18.4 x 10¹⁸ bytes)

Hardware limits:

-  IDE drive size limit: 540 megabytes
-  EIDE drive size limit: 136.9 gigabytes
-  BIOS boot partition size limit: 7.8 gig

Notes:

-  A FAT16 partition larger than 2 gigabytes under NT is not visible to MS-DOS
-  The NTFS file size limit is actually 2³² clusters. Current industry standard hard disk sector size is 512 bytes, giving a 2 terabyte file size limit.



Appendix E – Ligos Indeo Installation

Ligos Technology's Indeo Video package contains software codecs and compressors that enhance the usefulness of the card. You need to install this package if you want to use the three YUV color formats:

-  4:2:2 packed
-  YUV12
-  YVU9

There is also a software compressor which creates compressed video files in real time at full capture speed. Indeo is recommended if you are using Microsoft Windows Media Encoder.

Installing Ligos Technology's Indeo



Figure E-1: Indeo Installation Window

To install Ligos Technology's Indeo Video software:

1. Click **Yes** to install Indeo Video software. Click **No** if you do not wish to install the software at this time.

The Indeo® Installation window displays.



Figure E-2: Welcome Window

The Software License Agreement window displays.



Figure E-3: Software License Agreement Window

2. Click **Yes**.

The Choose Destination Location window displays.



Figure E-4: Choose Destination Location Window

3. Click **Next**. If you wish to change the destination location for the files, click **Browse**.

The Setup Type window displays.



Figure E-5: Setup Type Window

4. Select **Developer** and click **Next**.
A question window displays.



Figure E-6: Question Window

5. If you ... then ...
 want to backup your system files, click **Yes** and proceed to step 6.
The Choose Destination window displays.
 do not want to backup your system files, click **No** and proceed to step 7.
6. Type the path or click **Browse** to locate the path in which you want to save the backup of your system files.



Figure E-7: Choose Destination Window

7. Click **Next**.
The Start Copying Files window displays.



Figure E-8: Setup Copying Files Window

8. Click **Next** to proceed with the installation. Click **Back** to make any changes prior to the installation.

After the files are copied to the system, the Indeo Software Setup Is Now Complete window displays.



Figure E-9: Setup Complete Window

9. Click **Finish**.