### Welcome to AMCap

#### **Presentation**

**AMCap** is a small yet fully functional video capture and preview application compatible with Microsoft DirectShow (formerly ActiveMovie, hence the name). It is based on the sample *AMCap* source code from the Microsoft DirectX 9 SDK. This custom version adds many new features including:

- DV camcorder playback and recording
- improved MPEG-2 playback and recording
- improved analog TV tuner support
- still capture in BMP, JPEG and PNG formats
- optional real-time compression (Windows Media or any installed CODECs)
- remember video input, standard, size and many other options from previous session
- full screen mode
- support for multi-monitor and deinterlacing (using VMR9)
- caption bar and menu on/off
- always on top feature

The **VMR-9** option enables multi-monitor support, zooming, aspect ratio and deinterlacing features (Microsoft DirectX 9.0 required.)

#### **Limitations of the demo version**

The demonstration version will stop after about 15 minutes of preview or capture and still capture is limited to 3 snapshots per session.

#### How to obtain the unlimited version?

If after testing, you are satisfied with this version of AMCap and you wish to obtain the fully functional version, please register at the URL below.

https://www.regnow.com/softsell/nph-softsell.cgi?item=4076-4

The version of AMCap that you receive right away after your registration is fully functional and does not have the limitations mentioned above.

## **Keyboard Shortcuts**

#### Application control

| Keys                       | Actions   |  |  |
|----------------------------|---|--|--|
| Ctrl+C                     | Starts a video capture  |  |  |
| Ctrl+I                     | Displays on-screen information if a crossbar is available (VMR9 only) |  |  |
| Ctrl+L / Enter             | Makes a still capture   |  |  |
| Ctrl+S                     | Saved captured video  |  |  |
| Ctrl+Z                     | Toggles the zoom (VMR9 only)  |  |  |
| Alt+Enter                  | Toggles full-screen mode  |  |  |
| F1                         | Opens the help file   |  |  |
| F9 / mouse wheel           | Decreases the application volume                                      |  |  |
| F10 / mouse wheel          | Increases the application volume                                      |  |  |
| F11                        | Toggles menu bar and caption on and off                               |  |  |
| F12                        | Toggles "always on top" state   |  |  |
| 09                         | Selects a TV program  |  |  |
| Del / Backspace            | Cancels last typed program digit                                      |  |  |
| PgDn / Browser<br>Backward | Selects previous TV program   |  |  |
| PgUp / Browser<br>Forward  | Selects next TV program   |  |  |
| -                          | Selects previous video input (if many)                                |  |  |
| +                          | Selects next video input (if many)                                    |  |  |
| Esc                        | Stops current capture   |  |  |
| Spacebar                   | Pauses or plays the live preview                                      |  |  |

#### **Device control**

| Keys                        | Actions      |  |
|-----------------------------|--------------|--|
| Ctrl+A / Media Pause        | Pause        |  |
| Ctrl+F / Media Fast Forward | Fast-Forward |  |
| Ctrl+P / Media Play         | Play         |  |
| Ctrl+R / Media Record       | Record       |  |

| Ctrl+T / Media Stop   | Stop   |
|-----------------------|--------|
| Ctrl+W / Media Rewind | Rewind |

#### Still Capture

AMCap makes it very easy to capture still pictures from a supported video capture source (usually a webcam), once the program is configured, just hit the *Enter* key and a still picture is saved to your hard drive. Follow the 3 steps below to get started.

#### 1. Select the device and enable preview

- select the *video capture source* (e.g. your webcam) from which you want to make still captures in the **Devices** menu. This is not needed if you only have one source.
- make sure the *Preview* mode is enabled in the **Options** > **Preview** menu (this now is the default).

#### 2. Configure the resolution

- if your capture source features a *Still* pin, for high-resolution still captures, click **Options** > **Still Capture Pin...** to configure the resolution of the still pictures (see notes). This feature also allows you to use the trigger on the device to capture stills.
- if your capture source does not have such a feature, the resolution of the still pictures is the same as for video capture. In that case, you can configure it from the **Options** > **Video Capture Pin...** menu.

#### 3. Capture and save still pictures

• press *Enter* or *Ctrl+L* to make a still capture

- if this is your very first capture, a **Still Capture** property page will show. Configure the folder and filename, select a file format (JPG recommended) and click **OK**. If you don't do that configuration, no picture will be saved and you will be prompted with this page again when you attempt to capture another still.
- you can now make as many still captures as you wish you just by pressing the *Enter* key.
- you can click the **File** > **Open Folder** > **Still Capture...** menu to open the folder where the still captures are stored.

#### **Notes:**

- the GdiPlus.dll library is required for still capture to work. On Windows Millennium, 98 and 2000, you need to download the redistributable file available here (scroll down and click the GDI+ link) or here and copy it to the AMCap installation folder. On Windows XP and later, this file is preinstalled and you don't have anything to do.
- in this version of AMCap, the still capture feature is always available and active (but in overlay mode), so you don't have anything to do to enable it anymore.
- with some older webcam models and drivers, the use of the Still pin may
  be unreliable and possibly lead to blue screens (BSOD). In that case, clear
  the option Use Still pin instead of Capture pin when available in
  Capture > Setup... > Still Capture tab and use the Options > Video
  Capture Pin... menu to configure the resolution of the stills.
- if you need the stills to be captured to the clipboard instead of a file, you can toggle the **Capture** > **Still Capture** > **Copy to clipboard** menu option at any time.
- if you want to make still captures at regular intervals or hands-free, you can use the **Capture** > **Still Capture** > **Delayed Snap** menu, configure an interval and click **Start**.

#### See also

• Video Capture

#### Video Preview

Previewing video in AMCap is the easiest way for you to try your webcam or any *video capture source* (a TV tuner, a video capture card or device, a DV camcorder, etc.) If you only have one webcam as a *video capture source*, you should actually have nothing to configure but the video preview size.

#### 1. Select the video source and set video parameters

- select the *video capture source* (e.g. your webcam) from which you want to capture video in the **Devices** menu. This is not needed if you only have one source.
- in the case of an analog *video capture source*, adjust the *video standard* from the **Options** > **Video Capture Filter...** menu.
- if your *video capture source* provides hardware compression, you may tick the **Options** > **MPEG2** menu for better preview and capture performances. (MPEG2 is usually only supported by some tuner and video capture cards.)
- if the *video capture source* has multiple inputs, select the right input from the **Options** > **Crossbar Video Input** menu.

#### 2. Select the audio source (optional)

If you want to listen to audio as well:

- select the *audio capture source* in the **Devices** menu.
- select the right audio input in the **Options** > **Audio Input** menu.
- if an **Options** > **Crossbar Audio Input** menu is available, make sure the right audio input is selected.

• tick the **Capture audio from video source** option in the **Devices** menu if the *video capture source* also provides audio (e.g. a TV tuner or a DV camcorder.) In this case, the possibly selected audio source is ignored.

#### 3. Enable the preview and change the preview size

- tick the **Options** > **Preview** menu if it is not already ticked.
- click the Options > Video Preview Pin... menu to change the preview size. If this menu is not available, click the Options > Video Capture Pin... menu instead.

If your video capture source is an analog TV tuner, please check Watching TV for more details and to learn how to configure the TV programs.

#### See also

- Keyboard Shortcuts
- Still Capture
- Video Capture
- Watching TV

### **Video Capture**

#### **Getting started**

When you use AMCap for the first time, it is recommended that you go to the setup once to configure general options: click **Capture** > **Setup...** then review all the options (not only for video capture).

The **Video Capture** tab holds most options to enable and to manage video capture. You have at least to choose whether you want to capture to a preallocated file (recommended for slow PCs) or to unallocated files, then configure the folder and the filename.

If you choose to capture to a pre-allocated file, select a filename then click the **Allocate...** button to create the optimized file.

By default, captured video will be uncompressed. The benefit is that you get the best picture quality and you can choose to compress the file at a later time with the best possible results. You can also choose to make real-time compression (if you have a PC powerful enough). To enable and to control compression, click the **Compression** tab and adjust the options.

Click **OK** to validate.

#### **Capturing video**

#### 1. Select the video source and enable preview

- select the *video capture source* (e.g. your webcam) from which you want to capture video in the **Devices** menu. This is not needed if you only have one source.
- tick the **Options** > **Preview** menu if it is not already ticked. Please note that preview is not required at all but it will be needed most of the time to control what is actually captured.

#### 2. Select the audio source and enable audio capture (optional)

If you want to capture audio as well:

- tick the **Capture** > **Capture** Audio option.
- select the *audio capture source* (e.g. your sound card) in the **Devices** menu (see notes).
- if an **Options** > **Crossbar Audio Input** menu is available, make sure the tuner audio input is selected.
- select the right audio input in the **Options** > **Audio Input** menu.

or

• tick the **Capture audio from video source** option in the **Devices** menu if the *video capture source* also provides audio (e.g. a TV tuner or a DV camcorder.) In this case, the possibly selected audio source is ignored.

#### 3. Capture and save video

- click **Capture** > **Start Capture** then **OK**, or simply hit *Ctrl+C* to start the capture.
- stop the capture using the **Capture** > **Stop Capture** menu or hit the *ESC* key.
- if you configured AMCap to capture to a pre-allocated file (in Capture > Setup... > Video Capture tab), click the File > Save Captured Video... menu to export the video you just captured and before making a new capture.
- you can click the **File** > **Open Folder** > **Video Capture...** menu to open the folder where the video files are stored.

#### **Notes:**

- exporting the video from the pre-allocated file may be a long and boring process so if you have a fast PC, you may prefer to configure AMCap to capture to unallocated time-stamped files. That latter option will create a new file every time you start a capture.
- if you want to capture video using the *Windows Media 9* (WMV9) compression, you will have to download and to install the redistributable *Windows Media Format* component. You can download the file by clicking the **Help** > **Redistributable Components** > **Windows Media Format** menu.

#### See also

- Keyboard Shortcuts
- Video Preview

• Still Capture

### **Watching TV**

When an analog TV tuner is installed in your system, AMCap can work as an advanced TV set. All you have to do is configure the TV programs once and you are set.

#### **Getting Started**

The initial configuration of the TV programs is needed to easily select and navigate from program to program like a TV set. This needs to be completed only once but you can redo it at will. Follow the next few steps to configure the programs:

- Select the TV tuner to use in the **Devices** menu.
- Click the **Options** > **TV Programs** menu.
- In the **TV Programs** dialog box, click the **Scan...** button.
- In the **TV Program Scanner** dialog box, select the video standard of the TV programs available in your area (e.g. *NTSC* in Japan and the USA, *SECAM L* in France, *PAL* in most parts of Europe, etc.) in the **Standard** drop-down list.
- Click the **Start** button to initiate the detection of the available TV programs. A progress bar lets you know the advancement of the scanning.
- Click the **Close** button to go back to the **TV Programs** dialog box once the scanning is stopped and the TV programs are found.

Note: you can select another video standard and start a new scan in case you are near some boundaries and you receive foreign programs in your area. The programs found in every scan are added at the end of the current list and won't replace the current programs.

Now that you have a list of the available TV programs, you can:

- rearrange the order of the programs using the Move Up and Move Down buttons.
- delete duplicate programs or programs with poor quality using the **Delete** button.
- edit the programs using the **Edit** button to give them a name.

Click **OK** to save the current list of programs.

#### **Watching TV**

#### 1. Select the video source and set video parameters

- select the *video capture source* (e.g. a TV tuner card) from which you want to watch TV in the **Devices** menu. This is not needed if you only have one source.
- if an Options > Crossbar Video Input menu is available, make sure that the tuner video input is selected. It is also recommended to tick Select Related Input in that same menu to automatically switch to the right audio input.
- if your *video capture source* provides hardware compression, you
  may tick the **Options** > **MPEG2** menu for better preview and
  capture performances.

#### 2. Select the audio source (optional)

If the MPEG2 option is not enabled or not supported by the *video capture source*, you may have to do the following steps:

- select the *audio capture source* corresponding to your tuner card in the **Devices** menu.
- select the right audio input in the **Options** > **Audio Input** menu.
- if an **Options** > **Crossbar Audio Input** menu is available, make sure the tuner audio input is selected.

#### 3. Watch live TV

If you already completed the steps from the Getting Started section above to configure the programs, you are ready otherwise now is the right time to configure the programs.

To watch a program, first make sure the *Preview* mode is enabled:

• tick the **Options** > **Preview** menu if it is not already ticked.

Now you can use either the keyboard or possibly some mouse buttons or the keys of a compatible remote control unit to change the current program:

- press the **0** to **9** keys on the numeric keypad or on the remote control unit to type the number of the program to switch to.
- press the Page Up or Page Down keys on the keyboard to respectively select the next or the previous program. You can do the same from a compatible remote control unit, using the Next Program and Previous Program keys.
- press the **Browser Backward** or **Browser Forward** keys on the keyboard (these keys are sometimes mapped to some mouse buttons as well) to respectively select the next or the previous program.
- you can possibly control the volume level of the application, by using the **F9** (down) and **F10** (up) keys or the mouse wheel.

#### Note:

you have to enable the *Video Mixing Renderer* (VMR) feature if you want the name of the programs (or the channel numbers if no name is configured) to show on-screen when you switch from one program to another. You enable the VMR from the Capture > Setup... menu > Options tab > Video renderer drop-down list.

#### See also

- Keyboard Shortcuts
- Video Capture
- Video Preview

#### Frequently Asked Questions

For the most up-to-date list of questions please take a look at <a href="http://noeld.com/amfaq.htm">http://noeld.com/amfaq.htm</a>

1. I captured a video using AMCap but when I try to process it in RegiStax I get a "Failed to decompress AVI frame" message. Is it possible to capture uncompressed video with AMCap?

This message is not directly related to AMCap. By default AMCap captures uncompressed video. This message usually means that the .avi file is too large and exceeds 1GB in size. In RegiStax, try to uncheck as many frames as needed from the end of the list and try again or use *Windows Movie Maker* or another video editor to trim the file. Please visit the RegiStax website if you need further assistance with this program.



2. I just installed a webcam but it won't work. When I enable preview, I only get a green or a black screen or I simply get a message that I don't have a video capture hardware installed or "Cannot add vidcap to filtergraph, hr=0x80040275". How do I get my webcam to work?

As usual, there may be a lot of reasons including the worse one, a failing device. On the other hand, you can often fix such an issue with one or more of the following steps:

- first off make sure that your computer and Windows meet the requirements of your webcam (see the user manual or the manufacturer's website)
- unplug your webcam, reboot your system, plug your webcam and try again
- unplug all other USB devices connected to your PC and try again. If that works, plug back the USB devices one by one to identify which

one is conflicting.

- unplug your webcam and fully uninstall the current drivers from Control Panel > Add or Remove Programs icon. Reboot your system then try to reinstall the drivers. Only plug the webcam after installation is complete and possibly rebooting (but if told to do otherwise.)
- check whether new drivers are available for your webcam on the manufacturer's website and possibly install them
- try my Webcam Diagnostics assistant and see what errors (if any) are reported

For issues related to preview, you may also try to:

- install the latest DirectX runtime from Windows Update
- install the latest version of the drivers of your graphic card available on the manufacturer's website



## 3. When I make captures there is no sound recorded. How do I enable audio capture?

Here are the most common options and features to configure:

In AMCap:

- click the **Devices** menu and make sure a sound card or a webcam microphone is ticked
- in Capture menu, tick Capture Audio

In the system:

- double-click the **Volume** icon near the clock on the taskbar (the icon looks like a speaker, it may be hidden in that case you have to enabled it from the Control Panel)
- in **Volume Control** applet, click **Options** > **Properties** menu

- select the **Mixer device** if you have many
- click Recording
- make sure **Microphone** or **Line In** (or any other audio input from which you want to capture) is ticked
- click OK
- in **Recording Control** applet, tick the **Select** box of the audio input from which you want to capture audio
- adjust the **Volume** level of that input

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#### 4. The preview is mirrored or flipped. How do I fix this?

This is either due to the chosen Color Space / Compression or an issue with the driver of the video capture source. You can try the following steps:

- click Options > Video Capture Pin... and choose another Color Space / Compression
- Try to reinstall the drivers of your video capture source (possibly your graphic card)
- install the latest version of the drivers of the video capture source from the manufacturer's website

Alternatively, you may use the **View** > **Flip View** menu.

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#### 5. There is no sound at all during the preview. How do I fix this?

- First make sure that the right audio device is ticked in the **Devices** menu.
- Click the **Options** > **Audio Capture Filter...** menu
- Under **Pin Line**, select the appropriate input (if there are many) then tick **Enable**
- Adjust the volume with the **Pin Line Input Mix** slider

• Click **OK** to apply the new settings

Note: you can also adjust the audio properties from the **Volume** applet (in the notification area, formerly the system tray) **Options** > **Properties** menu > **Recording** option (see FAQ #3).



## 6. When I try to preview during a recording, I get an error "0x80070057"? What does that mean?

The error code simply means *invalid parameter*. It does not give much clue about what fails. This can be due to the capture driver or the graphic drivers or an incompatibility in the current settings. Try these few steps:

- first restart your system and make a new test, if the problem persists try the other steps below
- clear **Capture** > **Still** > **Enable**
- clear View (or Window) > VMR9 > Enable
- clear **Options** > **MPEG-2** if your capture source is not MPEG-2

Try again. If the problem persists, visit the websites of the manufacturers of both your capture source and your display card and check if updated drivers are available. If some new drivers are available, restart your system and try to install them.

If you are not using the latest update of DirectX, you may also consider installing it from Windows or Microsoft Update.



## 7. I get an error (possibly 0x80070057) when I click View > Flip View > Flip, Mirror or Rotate and the view is not flipped or mirrored? What can I do to flip the view?

The error code simply means *invalid* (or unsupported) parameter. The driver of your video source may not support flipping and mirroring, this is not a required feature. Try using the VMR9 instead: click **View** > **VMR9** > **Enable**.



#### 8. What is VMR9 and what are the requirements?

VMR9 means *Video Mixing Renderer version 9*. It is an optimized and enhanced video renderer provided with DirectX 9.0 and later. If the option is grayed out in the **View** menu, you need to install the latest DirectX 9.0 runtime available from the Windows or Microsoft Update website.

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## 9. The files I captured do not play after a certain size on my Windows 98 system. What are the file size limits?

The file size limit does not only depend on the installed Windows system but also on the file system which is either FAT16, FAT32 or NTFS. The size may also be limited by the underlying capture technology. The common file size limits are like this:

| File system                  | File size limit |
|------------------------------|-----------------|
| FAT16 (Windows 9x/ME)        | 2GB - 1 byte    |
| FAT16 (Windows NT and later) | 4GB - 1 byte    |
| FAT32                        | 4GB - 1 byte    |
| NTFS                         | 2TB - 1 byte    |



# 10. Whenever I try and select Still capture mode (or Preview with selecting Still capture enabled), I get the following message: "CreateGrabber: CoCreateInstance failed, hr=0x80040154". What does that mean and how do I get still capture to work?

The error means that the Sample Grabber, a software component used to make the still captures, is not installed or registered in your system. This usually means that the version of DirectX installed on your PC is outdated. To fix this issue, go to the Windows or Microsoft Update website and install the latest version of DirectX.



#### 11. The preview is in black and white. How do I turn the color mode on?

There may be different reasons for a B/W display:

- If you have a video capture card that supports different standards like PAL or NTSC, make sure that it is set to the correct mode for the input signal. To change it, go to Options > Video Capture Filter... and set the Video Standard (PAL in Europe, SECAM in France, NTSC in US and Japan, etc.)
- If you changed many settings and you cannot remember which ones, you can simply delete the *AMCap.ini* file after closing the program. If B/W preview remains after the program is restarted, make sure that the brightness and contrast levels are correct. To do so, click the **Options** > **Video Capture Filter...** menu and adjust the brightness/contrast levels. If you have a **Restore Factory Defaults** button, just click it. Also if a **Black and White** checkbox is available, clear it if it is ticked.
- Finally check whether the latest version of the drivers of your video capture source is installed in your system, some drivers simply don't restore or don't report the default settings correctly.

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## 12. I'd like to capture some video in PAL 60Hz at 30fps but AMCap does not allow me to set a frame rate above 25fps. Is there a workaround?

By default, PAL is a video standard at 50Hz and 25 frames per second (fps). To capture at 30 fps, you have to select *PAL\_60* in the **Video Standard** drop-down list from the **Options** > **Video Capture Filter...** menu. You can then go to **Options** > **Video Capture Pin...** and set **Frame Rate** to *30*. If *PAL\_60* is not available in the list, the driver of your video capture source or the hardware itself may not support it.



## 13. I get the following error on startup: "STIRegisterApplication: could not instantiate IStillImage, hr=0x80040154". I press OK and everything runs fine. How do I fix this?

You are most probably using a Windows version that does not support STI (e.g. Windows 2000 and older). To avoid the message at startup, clear

#### **Capture** > **Still** > **Register for STI Events.**

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#### 14. What is the "capture file"? What file do I have to select?

The capture file is a single working file that is not fragmented and that will be used by the program and the underlying system (DirectShow) to temporarily store the captured video. After every capture, you can save the actual video by using the **File** > **Save Capture Video...** menu.

By default, the capture file is called capture.avi and is located in the root of your primary hard drive, in other words it usually is c:\capture.avi. This must be a new file, don't select an existing file otherwise it will be overwritten during the capture or the file allocation.

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## 15. When I enabled the Windows Media 9 Series compression and I attempt to capture a video file, I always get the following error: "Cannot set output file, hr=0x80040154". What does that error mean and how do I fix it?

The error means that DirectShow is unable to locate the required Windows Media ASF Writer Filter. This component is not installed by default by the system and is only available as a redistributable component as part of the Windows Media Format installer. You can download the installer here or click **Help** > **Redistributable Components** > **Windows Media Format** in AMCap.

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# 16. While installing my webcam, a message popped up and told me that the drivers did not pass the Windows Logo testing and now AMCap says that no video capture source is installed. What's wrong and how do I possibly fix this issue?

Drivers that pass the Windows Logo testing are tested and then digitally signed by Microsoft, this ensures that the drivers meet the quality and stability requirements. Unsigned drivers don't usually mean that they are poor or unreliable, that just means that they were not tested by Microsoft. Because unstable drivers may lead the system to crash and give blue

screens (BSOD), the newest 64-bit editions of Windows may require signed drivers to ensure overall stability.

In general, it is recommended that you visit the website of the manufacturer to get the latest signed drivers for your devices. Only install unsigned drivers if you don't have a better choice.

When installing unsigned drivers, a dialog box pops up with a message like this:

```
Hardware Installation
<your webcam driver>
has not passed Windows Logo testing to verify its compatibility w
```

This dialog has two buttons: **Continue Anyway** and **STOP Installation**. If you hit the **STOP Installation** button or press the *Enter* key, the drivers won't install, this is probably what happened in your case.

If the manufacturer does not have signed drivers, complete the following steps to make sure that your system is not configured to never install unsigned driver software by default:

- Click **Start**
- right-click My Computer
- click **Properties**
- click the **Hardware** tab
- click the **Driver Signing** button
- tick Warn and Make this action the system default
- click **OK** twice to close the property pages

You will now be warned when installing unsigned drivers but this won't prevent you from installing them. Once you did this, run the drivers installation again. When the **Hardware Installation** dialog box pops up again, click **Continue Anyway** to complete the drivers installation.

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