



Zoner Photo Studio 14

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Zoner Photo Studio 14

Introduction

Thank you for choosing Zoner Photo Studio. This program is the latest in a long line of successful digital photo software. It contains the latest digital image processing technology and many new features.

We firmly believe that Zoner Photo Studio will become an irreplaceable aid for you in your photography work.

We wish you many successes in your endeavors with digital photography and more!

Zoner Software

Minimum System Requirements

- **Operating system:** Microsoft Windows XP SP2, Windows Vista, Windows 7 (32-bit or 64-bit)
- **Processor:** Intel Pentium 4 or compatible with SSE2 support
- **RAM:** 1 GB
- **HDD:** 350 MB free disk space
- **Resolution:** 1024×768 High Color (TrueColor strongly recommended)

Microsoft Internet Explorer 7 or higher and DirectX 9 or higher must be installed.

System Requirements for Advanced Work

Work with large photographs and panoramas has especially high memory demands. We recommend at least 2 GB of RAM and the use of a 64-bit version of Windows.

For convenience, we also recommend a relatively high-performance processor. Zoner Photo Studio can take advantage of multi-core processors—if it detects multiple cores, it automatically divides up tasks and calculations among them.

Lastly, we recommend a monitor resolution higher than the minimum given above.

Warnings

Unlike some photo managers that work through a database of pictures rather than the real files, Zoner Photo Studio works directly on your computer and on any devices attached to it. This means you can start working with your pictures immediately and that they are not trapped "inside" Zoner Photo Studio, but it also means that you can erase these files and make irreversible changes to them. Therefore you should always keep in mind the first rule of digital photography:

Always work with copies of files, and keep backups of your originals!

Installing the Program

Before installing the program, make sure that your computer's configuration meets the [minimum system requirements](#) and that you have administrator rights on your computer.

To ensure problem-free use of your CD or DVD burner in Zoner Photo Studio, install the Zoner Photo Studio burning drivers. These drivers are on your installation CD if you have purchased one. Otherwise, visit the Zoner Software website's Support section: <http://www.zoner.com/support>. If asked to restart Windows after installation, we recommend that you do so, especially if you plan to make use of the burning functions right away.

64-bit version

The installation program contains both a 32-bit and a 64-bit version of Zoner Photo Studio. The two versions are installed or not based on the version of Windows you are using:

- **32-bit Windows** —only the 32-bit version of the program is installed
- **64-bit Windows** —both the 32-bit and the 64-bit versions of the program are installed. The Start menu and the Windows desktop receive 2 shortcuts, one for each version. The name of the shortcut for the 64-bit version ends in **x64**. These characters also appear in the program's title bar when it is running.

64-bit version - Advantages and Limitations

The 64-bit version speeds up work with the program and makes it possible to work with larger pictures. On the other hand, some program functions do not work in 64 bits and so are unavailable. The 64-bit version does not contain:

- the Media Archive
- assigning of GPS coordinates using Google Earth
- 64-bit 8bf plugin modules

Uninstalling the Program

There are two ways to uninstall Zoner Photo Studio:

- Click the Start button on the Windows taskbar, continue on into the Control Panel, use the Add or Remove Programs item, select Zoner Photo Studio 14, and click the Remove button. (The above applies for Windows XP. If you are using Windows Vista, then use Start, then Settings, then Control Panel, then Uninstall a Program in the Programs part of the control panel; then Zoner Photo Studio 14, then Uninstall.)
- Click the Start button on the Windows taskbar, continue on into the Zoner Photo Studio 14 folder, and use the Uninstall Zoner Photo Studio 14 item.

Troubleshooting

If you run into any trouble while using Zoner Photo Studio, the first thing you should do is to make sure that you are using the latest build of the program. (One build is one "small version," as opposed to the "large version" changes that require an upgrade purchase to move between. Each new build makes the program more reliable, and sometimes adds enhancements as well.) To check for a new build, use **Help | Check for Update...** inside the program.

If you are using the latest build, then please study the frequently asked questions list at <http://www.zoner.com/support>, where you may find a solution based on the experience of the Zoner Software support team.

If you do not, then please contact Zoner Software. Please do your best to provide all information relevant for solving the problem. This includes the program version, edition, and build, your operating system, any special settings you use, etc. Please describe the exact steps that preceded the error or the problems in your work with Zoner Photo Studio. To contact technical support easily, use **Help | Contact Technical Support....** This automatically starts an e-mail to Zoner Software technical support in your e-mail client, including information on your operating system and other relevant technical information if you use the corresponding option. This information is very valuable to the Zoner Software support team, as it can help uncover the cause of the problem.

Please also feel free to write to support with your suggestions on how we could improve and expand the program. Many of the features that you see today are thanks to suggestions from people like you!

Technical Support

You can find support contacts and forms on the Zoner website: <http://www.zoner.com/support>

Supported Formats

Zoner Photo Studio 14 can **read** the following formats:

Bitmap Formats

PSD, PSB – Adobe Photoshop Image

JPEG – File Interchange Format

GIF – Compuserve Graphics Interchange Format

TIFF – Tagged Image File Format

PNG – Portable Network Graphics

PCD – Kodak Photo CD

BMP – Windows Bitmap

PCX – ZSoft Image File

TGA – TrueVision Targa

ICO – Windows icons

RLE – Windows Bitmap

MAC – Mac Paint

WPG – WordPerfect Graphics (bitmap)

DIB – Windows Bitmap

BMI – Zoner Bitmap Image

PSP, PSPIMAGE – Paint Shop Pro

CRW, CR2 – Canon RAW

DNG – Digital Negative ("Adobe RAW")

MRW – Minolta RAW

NEF – Nikon RAW

ORF – Olympus RAW

PEF – Pentax RAW

ARW, SRF, SR2 – Sony RAW

MEF – Mamiya RAW

ERF – Epson RAW

RAW – other RAW formats

THM – JPEG thumbnail

HDP, WDP – HD Photo (formerly Windows Media Photo)

JP2, J2K, JPC – JPEG 2000 Codestream

PNM, PPM, PAM, PBM, PGM – "portable bitmap" format group

WBMP – "wireless" format

3FR – Hasselblad RAW Image

BMS, JPS, PNS – Stereo Image

DCM – DICOM Image

KDC – Kodak Digital Camera Image

RAF – Fuji RAW

FFF – Hasselblad RAW Image

RWZ – Rawzor RAW Image

RWL – Leica RAW Image

MPO – Multi-Picture Object

CS1 – Sinar RAW Image

JXR – JPEG XR

SRW – Samsung RAW Image

HDR – Radiance HDR Image

To expand the range of bitmap formats that is read-supported, install their WIC codecs (e.g. the WebP codec).

Vector Formats

WMF – Windows Metafile

EMF – Enhanced Metafile

ZBR – Zebra for Windows, the oldest graphics editor produced by Zoner Software

ZMF – Zoner Draw 4 and 5

ZCL – clip art for Zoner Draw 3

ZMP – Zoner Photo Studio print jobs

Multimedia Formats

- Video files – **ASF, AVI, M1V, MOV, MP4, MPE, MPEG, MPG, MTS, OGV, QT, WMV**. Install [MPlayer](#) to expand the range of supported formats to include: **3GP, DIVX, DV, DVR-MS, FLV, M2T, M2TS, M2V, M4V, MKV, MPV, MQV, NSV, OGG, OGM, RAM, REC, RM, RMVB, TS, VCD, VFW, VOB**.
- Audio files – **AIF, AIFF, AU, MID, MIDI, MP2, MP3, MPA, RMI, SND, WAV, WMA**
- Animations - **FLI, FLC**

Keyboard Shortcuts

Global Shortcuts

Ctrl+Tab, Ctrl+Shift+Tab	Changes the active tab
Ctrl+F4	Closes the active tab
F11, Ctrl+F11, F12	Fullscreen (various modes)
Ctrl+M	Program Preferences
F1	Help Topics
F5	Refresh
Alt+C	Copy to Folder
Alt+M	Move to Folder
F2	Rename
Ctrl+Shift+number (1 - 5)	Rate picture
Ctrl+Shift+9	Remove rating
Shift+Alt+number(1 - 9)	Label picture
Shift+Alt+0	Remove label

Basic Picture Editing

Ctrl+L	Rotate left
Ctrl+R	Rotate Right
Ctrl+Shift+R	Specific Rotation
Ctrl+Shift+W	Specific Crop
Ctrl+E	Resize
Shift+E	Advanced Resize
Ctrl+W	Canvas Size
Ctrl+Shift+T	Place Image
Ctrl+T	Place Text
Ctrl+Shift+B	Canvas and Borders
Ctrl+Q	Batch Filter
Shift+Q	Apply last batch filter

Picture Adjustments

Ctrl+0	Quick Fix
Shift+L	Levels
Shift+C	Curves
Ctrl+1	Enhance Colors
Ctrl+2	Enhance Color Temperature
Ctrl+3	Enhance Exposure
Ctrl+4	Enhance Image
Ctrl+5	Sharpen
Ctrl+6	Blur

Ctrl+7	Brighten Shadows
Ctrl+Shift+N	Noise
Ctrl+Shift+A	Fix Chromatic Defect
Ctrl+Shift+D	Fix Barrel Distortion
Ctrl+Shift+V	Fix Vignetting
Ctrl+Shift+L	Line spacing
Ctrl+G	Grayscale

Browser Only

Backspace	Up One Level
Esc	Deselect All
Num *	Invert Selection
Num /	Advanced Selection
Num +	Add to Selection
Num -	Remove from Selection
Ctrl+Shift+K	Search and Replace
Delete	Delete file or folder
Shift+Delete	Delete file or folder; skip Recycle Bin
Ctrl+Shift+C	Copy Picture to Clipboard
Ctrl+C	Copy file or folder
Ctrl+X	Cut file or folder
Ctrl+V	Paste file or folder
Ctrl+A	Select All
Ctrl+I	Invert Selection
Ctrl+F	Search
Ctrl+P	Print and Export wizard
Ctrl+O	Sort Pictures
F3	Slideshow
Ctrl+F3	Advanced Slideshow
F4	Viewer
F7	New folder
Ctrl+Shift+P	Play audio note
Ctrl+Shift+S	Stop audio note
Ctrl+Shift+M	Send by email
Ctrl+Shift+F	Convert File
Shift+Enter	Image Information
Shift+Alt+Enter	Image Information
Alt+Enter	File properties
Enter	Open in Editor
Ctrl+Enter	Open in Editor
Ctrl+K	Batch Assign Information
Ctrl+Shift+Q	Batch Rename
Ctrl+J	Compare Images

Ctrl+Q	Batch filter – settings
Shift+Q	Apply last batch filter
Shift+K	Show/hide Keywords Pane
Alt+number (1 – 9)	Custom workspace
Alt+0	Default workspace
Tab	Switch focus between the Browser and the Navigator
Shift+Tab	Switch focus between Browser windows, if two Browsers are active

Descriptions Pane

Enter	Move to next picture
Shift+Enter	Move to previous picture
Ctrl+Enter	Move to new line in Descriptions Pane

Editor Only

Ctrl+N	New Image
Ctrl+Del	Delete file
Ctrl+Shift+Del	Delete file or folder; skip Recycle Bin
Del	Delete selected area from the picture
Ctrl+O	Open file
Ctrl+S	Save file
Ctrl+Shift+S	Save as
Ctrl+Shift+E	Export to PDF – only in print job editor
Shift+R	Convert to bitmap – only in print job editor
Z	Zoom*
P	Panning*
C	Crop*
H	Align Horizon*
K	Edit Collinearity*
V	Perspective*
X	Morphing Mesh*
Shift+X	Deform
R	Red Eye Reduction*
S	Clone Stamp*
U	Iron*
E	Effect Brush*
J	Healing Brush*
B	Paintbrush*
G	Fill*
Y	Eraser*
M	Rectangular Selection*
O	Elliptical Selection*
L	Lasso*
N	Polygonal Lasso*

A	Magnetic Lasso*
W	Magic Wand*
Q	Selection Brush*
I	Place image*
T	Place text*
Shift+T	Insert symbol*
F	Gradient filter*
D	Droste Effect*
Ctrl+A	Select All
Ctrl+Shift+I	Invert Selection
Esc	Cancel selection (if any)
Ctrl+A	Crop tool—create largest possible rectangle that still respects the current crop ratio
Shift+A	Crop tool—create largest possible rectangle (auto-switching orientation if useful) that still respects current crop ratio
` (the key under Esc)	Swap crop sides
Ctrl+C	Copy image
Ctrl+Ins	Copy image
Ctrl+V	Place Image
Shift+Ins	Place Image
Ctrl+Shift+Ins	Paste image into new Editor
Shift+Enter	Image Information
Enter	Switch to Browser
Ctrl+Enter	Switch to Viewer
F3	Run slideshow
Esc	Close Editor (unless there is a selection or something else "escapable")
Ctrl+F	Fullscreen
Arrow keys	Pan picture
Spacebar	Temporary pan mode*
Ctrl+Spacebar	Temporary zoom mode*
Tab	Toggle cropping marks (off/golden/thirds)
Num +	Zoom in*
Num -	Zoom out*
Num 0	Zoom to fit*
Num *	100% zoom*
Num .	Fit one side*
Num /	Zoom lock*
Ctrl+Page Up	Previous page (multi-page files)
Ctrl+Page Down	Next page
Ctrl+Shift+X	Delete page
Home	First file in folder*
End	Last file in folder*
Page Up	Previous file*
Page Down	Next file*

Shift+P	Pre-print color preview (if color management is active and a printer profile has been set)
Ctrl+Shift+O	Show focus points (only available for uncropped pictures from Canon cameras)
Shift+O	Show blowout
Ctrl+H	Show Histogram
Ctrl+Shift+H	Advanced Histogram
Ctrl+Z	Undo
Ctrl+Y	Redo
Ctrl+Shift+Z	Redo
Shift+Z	Undo last step
Ctrl+P	Print
*these shortcuts are naturally not available during text editing, etc.	

Viewer window

Ctrl+O	Open
Shift+Enter	Image Information
Home	First
PgUp	Previous
PgDown	Next
End	Last
Ctrl+Enter	Switch to Editor
Enter	Switch to Browser
Ctrl+C	Copy to Clipboard
L	Temporarily rotate left
R	Temporarily rotate right
Ctrl+L	Rotate left
Ctrl+R	Rotate Right
Num +	Zoom in
Num -	Zoom out
Num *	100% zoom
Num 0	Zoom to fit
K	Zoom lock
Ctrl+F	Fullscreen
Shift+I	Show header
Ctrl+I	Show footer
F3	Run slideshow
Ctrl+F3	Slideshow settings

Editor – Selection And Cropping

Arrow keys	Move selection frame
Ctrl+arrow keys	Quick-move selection frame
Shift+arrow keys	Edit selection frame shape

While Using Text Tool in Print Job Editor

Ctrl+B	Bold
Ctrl+I	Italic
Ctrl+A	Select All
Ctrl+D	Duplicate selected object in print job editor

Editor – mouse wheel

- **rotation** – previous or next picture or change of zoom level (depending on your setting in **Settings | Preferences | Editor | Mouse wheel action**)
- **click** – Fullscreen
- **Shift+rotate** – Change radius, for certain tools only
- **Ctrl+rotate** – Change zoom level

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Zoner Photo Studio 14—Help

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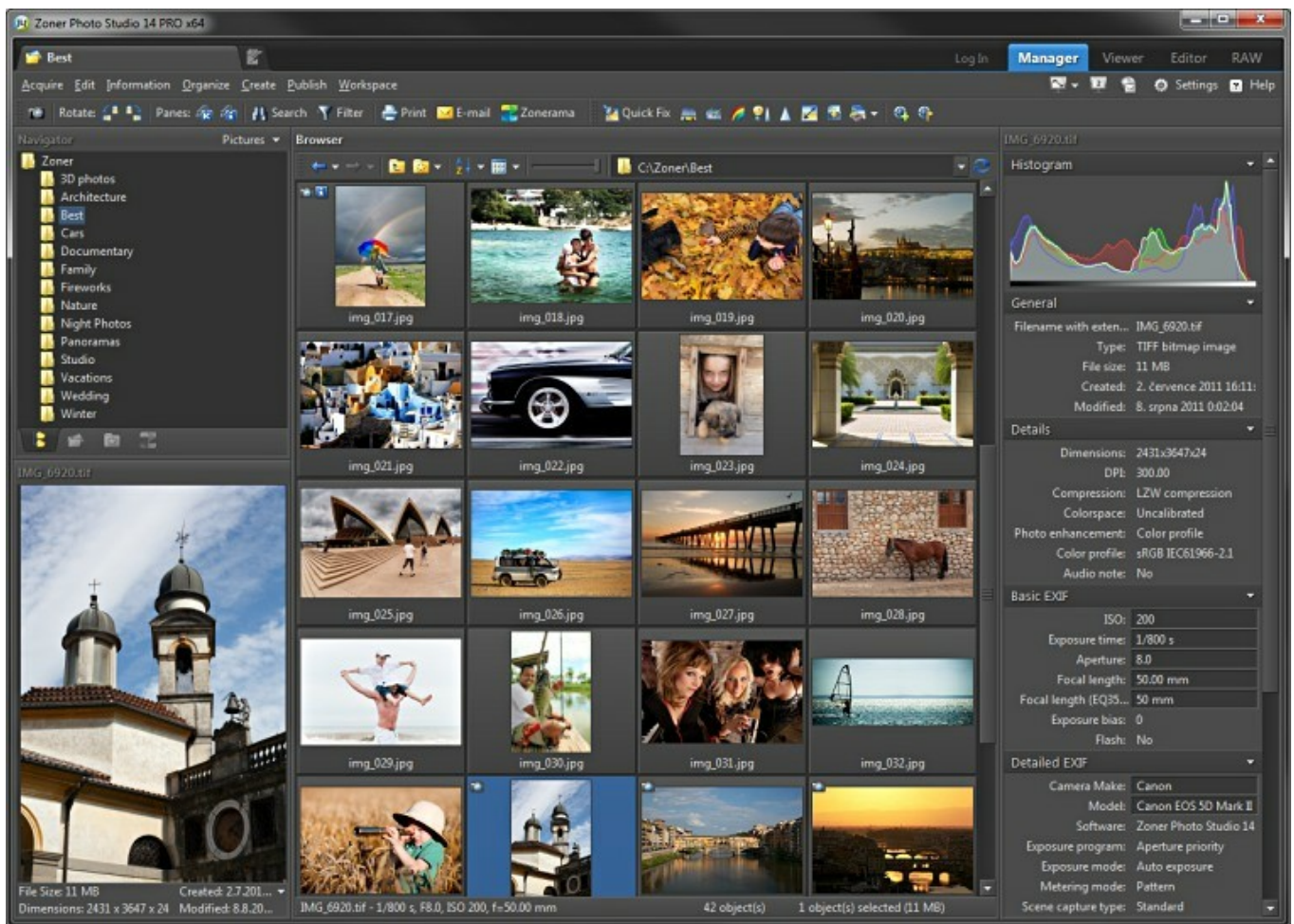
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Program Interface

Program Interface Zoner Photo Studio is made up of four modules: **Manager**, **Viewer**, **Editor** and **RAW**. To switch among them, use the buttons at the top right of the program window.

Opening up modules puts them into tabs, which run left to right along the top of the program window. The Manager can only be in one one tab, but you can have multiple Editor, Viewer, and RAW tabs open at a time.

- [The Manager Module](#) - use this to browse and organize your photos. It always contains at least one [Browser](#) window, and can contain one each of the [Navigator](#), [Preview](#) and [Information](#) windows. (The last two of these are normally joined into one window.) You can also use the Tasks pane to quickly access selected functions.
- [The Viewer Module](#) is for quickly viewing pictures.
- [The Editor Module](#) is for editing them.
- [The RAW module](#) is for developing photos from any RAW format.



The menus on the left, shown beneath the tabs, change as you switch among modules. The menus on the right always stay the same.

Click **Fullscreen** to open a menu with options related to fullscreen and semi-fullscreen viewing: **Hide Title Bar [F11]**, **Hide Menu and Tabs [Ctrl+F11]**, and **Hide Toolbars [Ctrl+F12]**. To display the menu, tabs, or toolbars when they are hidden, move the mouse over the top edge of the screen.

The Messages button lists messages regarding Zoner Photo Studio discounts, news, etc.

Use the menu named **Settings** (at the top right, beneath the area for choosing a module) to reach the program **Preferences [Ctrl+M]**, where you can find other [program preferences](#). The **Presets Manager** lets you export the settings for individual editing windows. You can also use it to **save and load or restore default settings for the whole program**. This menu also includes a function you can use to [calibrate your monitor](#) that lists steps to follow and shows test pictures for the process. Use the last option, **Custom...** to adjust the menus, keyboard shortcuts, and toolbars to meet your needs. Everything can be customized for the Browser and Editor separately.

The **Help** menu starts with an item to show the **Help Topics [F1]**. Use **Check for Update...** to make the program check on the Internet to see if you have the latest version. Use **License** to view a window where you can enter your license code to activate the program. **Contact Technical Support...** opens a new e-mail message window in your e-mail program, if any. (Sending via Hotmail, Gmail, etc. is not supported.) Unless you uncheck the corresponding option, this e-mail includes an attachment with information on your version of Windows and its settings. To determine which edition of the program you are using and which build (patch) you are using, use **About...**

Second Monitor

If two monitors are connected to the computer, you can use **Second Monitor** to open a new program window on the second monitor. By default a new Viewer is opened, displaying whatever file is selected in the main window's Manager. This behavior of the Viewer can be managed using the Synchronize button at the Viewer's top right. Use the items in tabs' right-click menus to move them from one monitor to the other.

Use the settings in the program **Preferences**, in its [Second Monitor](#) section, to set which monitor each tab type should open up in.

The Manager Module

The Manager Module, home to the main menu, is the heart of Zoner Photo Studio. The Manager's menus are organized by what step in the typical photo workflow they represent - **Acquire**, **Edit**, **Information**, **Organize**, **Create**, **Publish** and **Workspace**. Other sections will cover these functions.

Many useful functions are also available via the main **toolbar** and **custom toolbar**, towards the top of the window.

Work With Windows

You can move windows around inside the Manager by clicking and dragging their title bars (the bars at the windows' tops stating their names). To resize a window, click and drag one of its edges.

Besides the standard window layout (with Navigator and Preview/Information on the left, and Information and a single Browser on the right), Zoner Photo Studio supports other layouts as well. To switch between saved layouts - workspaces - use the **[Alt+0]** through **[Alt+9]** keyboard shortcuts or the Workspace menu. To save a workspace, use **Workspace | Save Workspace...** Only the window arrangement is saved; other information like the current folder is not. For quick access to your favorite folders, use **Favorites Folders**, a button available on the Browser toolbar.

To return to the default window arrangement, use [Alt+0].

The Information Window

Use this window to view all available [picture information \(metadata\)](#) for the picture that is selected (highlighted) in the Browser window. If the Preview window is not displayed, then you can switch the Information window to Preview mode. To do so, use the Preview command in the window's title-bar menu.

The information is organized into groups by type. To configure the information shown, click **Settings** at the bottom of the window. The settings in **Display Settings** can be saved and loaded back in using the Presets feature.

For files that are not read-only, you can change some information directly within this window. Picture-information edits made in this way are saved to disk when you move to the next file.

Click **Copy to Clipboard** to send all non-hidden information in this window to the Windows Clipboard.

The Browser

The Main Menu

The main menu of Zoner Photo Studio is beneath a bar with tabs for all windows open in the program.

The functions offered by the Manager are divided into several menus based on where they fit in the photo workflow. These menus are: **Acquire**, **Edit**, **Information**, **Organize**, **Publish**, **Create**, and **Workspace**.

The majority of each Browser window is used for showing the contents of whatever folder has been selected in the

Navigator. By default, it shows them in a mode called **Thumbnails**. Most of the other modes—that is, **Large Icons**, **Small Icons**, **List**, and **Details**—are similar to one offered when browsing in Windows itself. The last display mode, **Tiles**, is a bit unique; it combines a thumbnail and several lines of picture information. To switch among these modes, use **Display Mode** on the Navigation Toolbar, located near the top of the Manager.

When the Catalog view is active, the top part of the Browser window shows a toolbar named [Catalog Filter](#).

The Manager window's bottom area can show the **Descriptions Pane** and other panes are shown here when browsing special Zoner Photo Studio folders (e.g. the Web Albums settings panel). The left side of the window can show the **Keywords Pane** for easily assigning keywords to photos.

To switch among display types, use the **Display Mode** button in the window's Navigation Toolbar or use the right-click menu for blank areas of the Browser listing. To modify the display of thumbnails and their information, use [Settings | Preferences... | Thumbnails](#) and [Settings | Preferences... | Thumbnail Descriptions](#).

The Zoner Photo Studio Browser works in many ways similarly to file management in Windows itself. To select pictures, copy and move them via drag and drop, etc., do what you would normally do in Windows. You can also use the buttons in the Main toolbar to view files, edit them in the Editor, rotate them, print, etc. The Navigation toolbar shows a visited folder history, a Favorite folder list, and controls for setting sort order and display modes. By default, the Custom Toolbar shows **editing functions**; in the Browser, you can apply these to many photos at once, that is, you can make **batch edits**.

When organizing photos, the best route is sometimes to use a second Browser window. To do so, use **Workspace | Two Browsers Stacked / Side by Side**. To switch between Browsers, click within the Browser you wish to switch to. The folder listing in the Navigator automatically changes to match this Browser: whatever folder you visit in the Browser automatically becomes selected in the Navigator.

When thumbnails are loading in the background, an hourglass appears by the mouse cursor.

Thumbnails Mode

This is the default mode. Browser windows in this display mode show thumbnails (small previews). Other information can also be shown alongside the thumbnails.

The thumbnails show icons indicating the presence of [picture information \(metadata\)](#) and other facts about the thumbnail pictures. Moving from the top left corner of each thumbnail, the icons refer to photographic picture information, text picture information (name, author, description, etc.), keywords, audio notes, information backups, digital signatures, GPS data, and online/offline status. Online/offline status is only relevant in the Media Archive and so is not shown during normal browsing.

Double-clicking any of these icons brings up a window showing information related to them. An icon at the far right of each thumbnail indicates the program associated with the file's file type in Windows. Double-clicking it opens the picture in that program (unlike double-clicking the main part of the thumbnail, which will open it in the Zoner Photo Studio Editor or Viewer). Showing these icons slows browsing down slightly. Use [Settings | Preferences... | Thumbnails](#) to avoid this by turning them off.

Along the bottom, a thumbnail can have a Windows shortcut symbol, denoting that you are working with a shortcut to a file, not the "real" file. At the bottom right, any rating and/or colored label that the picture may have are shown.

The program can display several lines with picture information (time, shutter, etc.) under each thumbnail. You can configure this under [Settings | Preferences... | Thumbnail Descriptions](#).

For faster browsing, the program makes use of thumbnails stored inside of pictures (e.g. in their EXIF information) and of thumbnails stored ("cached") on disk after your first visit to a folder. Cached thumbnails are loaded in during your next visit; this is much faster than re-generating them.

Rotating the mouse wheel while holding down **[Ctrl]** resizes thumbnails.

Details Mode

Details mode always shows a row of column headers at the top, similar to its namesake in Windows. Using the right-click menu for these column headers, you can add or remove columns for a variety of picture information. Clicking and dragging a header will move the whole column to another position. Just clicking a header will sort the file listing by that column's information type. Clicking it repeatedly will toggle between an ascending sort and a descending sort. The arrow next to the column name indicates ascending/descending.

The backgrounds of the files in the listing have different colors depending on the files' types. You can turn this behavior off if desired: go to [Settings | Preferences | Display | Highlight to distinguish bitmap/vector/video/sound](#). For files that can be thumbnailable, a thumbnail of any file will be shown beside the mouse cursor as you run

the cursor over it.

Tiles Mode

This mode is similar to Thumbnails mode plus extended descriptions. Here, however, the extra information is to the right of the thumbnails. This is especially practical when showing long texts such as descriptions. The column width is set automatically based on thumbnail size and the width of the Browser window. To change settings for the Tiles display mode, use [Settings | Preferences... | Thumbnail Descriptions](#).

If the description shown for a thumbnail is wider than the space for showing it, then at the right of the descriptions area, a scrolling arrow is shown. You can also scroll description text by middle-clicking the area with the description and dragging in the desired direction.

Rotating the mouse wheel while holding down **[Ctrl]** resizes thumbnails.

Status Bar Information

The status bar contains information concerning the active picture. It is at the bottom of each Browser window. To configure what information is shown here, use [Settings | Preferences | General | Status bar information](#). (This setting is also used by the Editor.) The "codes" that appear here and in other places mentioned above for setting what information to show where are called "Variable Text," and they are discussed elsewhere in the Help. The right side of the status bar shows some special information: the total number of objects (normally files) in the listing and the size of any selected files.

Displayed File Types

Normally, the program displays all files in all supported graphics, audio, and video formats. To show a broader or narrower range of file types, use [Settings | Preferences | Integration](#). Here you can also set whether or not to **Show folders in (the) Browser**.

The Preview Window

Use the Preview window to quickly preview the active (highlighted) picture in the Browser window and basic information about it. If the Information window is not displayed, then you can switch the Preview window to Information mode. To do so, use the Information command in the window's title-bar menu.

You can use the right-click menu in this window to turn on the display of blowout and underexposure in the picture, or to turn on the display of the histogram. (You can also temporarily display blowout by clicking the mouse wheel over the Preview window). Double-clicking on the Preview window opens the previewed picture in either the Viewer or the Editor, depending on your setting under [Settings | Preferences](#).

Note that you can customize blowout/underexposure highlighting in the [program preferences](#).

The bottom part of the window shows information on the picture file's size and dimensions and its dates of creation and last changes.

The Navigator Window

The navigator can be in any of four display modes: **Folders**, **Catalog**, **Favorites**, or **Zonerama**. To switch among the modes, click on their corresponding tabs at the bottom of the Navigator. Click an item in the Navigator to show the files corresponding to that item in the Browser.

Folders

The top right of the Navigator contains controls for choosing a folder display mode:

- **Tree** —In this display mode, you can browse all the folders on your computer, just as if you were browsing in Windows.
- **Pictures** —A shortcut to the folder where you keep your pictures. When you were installing Zoner Photo Studio, you may have made your own choice of what folder will be used for Pictures. If you did not, it was left as Windows' Pictures folder (under Windows' Documents folder). You can change it in the program preferences, under [Folders](#).
- **ZPS Folders** —This shows the folder "above" all of the special folders in Zoner Photo Studio —that is, Albums, CD Compilations, Media Archive, Search Results, and Web Albums. When you were installing Zoner Photo

Studio, you may have made your own choice for what folder this should be. If you did not, it was left as Windows' Documents folder. You can change it in the program preferences, under [Folders](#).

- **Albums** —This shows your albums. In Zoner Photo Studio albums are normal Windows folders and the items within them are Windows shortcuts, so you can work with your albums even outside the program. (This is only recommended if you are familiar with Windows shortcuts.) Like all other special folders, Albums is beneath Zoner Photo Studio Folders.
- **Web Albums** —This is where the folder tree for Web albums is created, stored, and administered. Each Web album and folder can have its own picture, title, description, and custom settings. While you are visiting any individual web album (but not the Web Albums folder itself), a special control panel appears at the bottom of the active Browser window. For more Information, see [Web Albums](#).
- **CD Compilations** —This folder contains compilations of pictures readied for you to burn to disc using Zoner Photo Studio. While you are visiting any individual CD compilation (but not the CD Compilations folder itself), a special control panel appears at the bottom of the active Browser window. Click **Burn** to start the burning process for the current compilation. Click **Recalculate Size** to see the current size of the compilation, so you can make sure it will fit on your disc. (This is not done "on the fly" for reasons of speed.)
- **Media Archive** —This folder contains subfolders for each of your media archives. These subfolders contain shortcuts to the pictures in the given archive. You can see picture previews and information while browsing these folders. To learn more about this feature, visit the topic named [Media Archive](#).

You can drag and drop folders in the Navigator window. You can scroll the folder listing during drag-and-drop work. To do this, hover the mouse cursor over the edge of the listing that you want to scroll towards. You can also expand a folder (that is, show its subfolders) during drag-and-drop work: hover over the plus sign next to the folder.

Catalog

The Catalog displays pictures sorted into folders by the date they were taken. For more information, visit the chapter named [Catalog](#).

Favorites

This mode displays a list of your Favorite Folders, for quick access to them.

Zonerama

In this mode, the Navigator shows albums uploaded to Zonerama. For more information, visit the chapter named [Upload to Zonerama](#).

The Tasks Pane

The Tasks pane offers convenient access to frequently used functions in Zoner Photo Studio.

This pane contains **Acquire**, **Edit**, **Organize**, **Create**, and **Publish** tabs with selected functions for your photo workflow in each pane. Click the name of a function to use it immediately.

The Editor Module

Edit your pictures using the Editor's [tools](#) and [editing functions \(editing windows\)](#). You can show multiple Editor tabs at once.

You can open a new Editor tab in [several ways](#). To close an active Editor tab, press **[Esc]** or **[Ctrl+F4]**. If you have made any changes to the picture inside, you will be asked if you want to save changes before closing it.

You can also launch the Editor independently as the associated viewer for any picture format in Windows. "Being the viewer for a format" is formally called being "associated" with it. You can associate Zoner Photo Studio with many different formats under **Settings | Preferences | Integration**.

The Editor window has several main menus: **File**, **Edit**, **Enhance**, **Effects**, **Layer**, **Selection**, and **View**. The contents of these menus are described in separate chapters.

Beneath the menus there are **toolbars with buttons for the Editor's tools and functions, including the Options toolbar for the current tool**. You can add, subtract, or rearrange buttons for some toolbars using the **Custom...** command in their right-click menu or **Settings | Custom...** in the main program menu (i.e. outside the

Editor). The Options toolbar is special. It changes on the fly to offer options relevant to the tool that is active in the **main toolbar** that lies along the left edge of the Editor window.

The status bar shows information about the picture open in the Editor. You can set what kind of information is shown in the left part of the status bar with the help of [variable text](#) by modifying the Status Bar Information setting in the General section of the [program preferences](#). This setting is shared between the Editor and the Browser. If you have never worked with Variable Text before, we strongly recommend that you first read the chapter about it: [Variable Text](#).

On the right side of the status bar, you can find information about the picture's size and color depth and (for multi-page documents) the page number. The next block of information in the status bar shows the position under the mouse cursor and the values of the color under the mouse cursor. If there is a selection at the moment, you can see its width and height here.

You can switch the Editor into full-screen mode by pressing **[Ctrl+F]** or by clicking the mouse wheel. Full-screen mode can hide menus and toolbars. To return to normal mode, press **[Ctrl+F]** or click the mouse wheel.

To delete the file you are editing straight from inside the Editor, use **File | Delete File [Ctrl+Del]**. If you are using the Recycle Bin in Windows (unless you specifically turned it off, you are using it), the picture is sent there. Press **[Ctrl+Shift+Del]** to skip the Recycle Bin.

The Filmstrip

Use the Filmstrip to quickly browse among the other files in the folder with the current picture. To optimize use of your screen space, reposition the Filmstrip if appropriate. It can be anchored to the top, bottom, left, or right.

The Viewer Module

Use the Viewer module to quickly view pictures at full size. You can also use the Viewer to rotate, copy, move, and delete pictures, to show picture information, and to add descriptions and ratings.

To call up the Viewer module when working in the Browser, press **[F4]**, click the **Viewer** button, use the right-click menu for a thumbnail in the Browser, or double-click a preview—if the option for this is set under [Settings | Preferences...](#)

When possible, the Viewer loads RAW-format pictures at preview quality, so as to speed up display. During zooming, such pictures are loaded in at full quality in the background, so that you can also see their details in full quality. During this, the mouse cursor changes to indicate a background process—e.g. a rotating circle appears beside it. When you are moving to the next picture, the Viewer "remembers" the previous picture and starts preloading the next one in the background, so you can move among pictures smoothly.

Automatic **slideshows** can be run in the Viewer by pressing **[F3]**, and customizable slideshows (with e.g. transition effects and music) are under **Slideshow Settings... [Ctrl+F3]** in the Viewer's Slideshow menu and right-click menu. Clicking the mouse wheel during a slideshow temporarily highlights blowout.

You can move among pictures using the arrow buttons and the **[Page Up]** and **[Page Down]** keys or by scrolling the mouse wheel (depending on your setting under **Settings | Preferences | Viewer | Mouse wheel action**).

During both slideshows and ordinary viewing, you can zoom in and out using **[Num +]**, **[Num -]**, **[Num *]**, (1:1) and **[Num 0]** (zoom-to-fit) on the numpad. To lock the zoom level so it remains the same as you move among pictures, press **[K]** or use the corresponding toolbar button.

The Viewer normally shows a **Filmstrip** with thumbnails of all the pictures in a folder. To optimize use of your screen space, reposition the Filmstrip if appropriate. It can be anchored to the top, bottom, left, or right. There are several other information windows that can be shown or hidden: the [Descriptions Pane](#), a window for editing [Image Information](#) and a window for showing the [location](#) where the picture was taken on a map (if the picture includes GPS data).

Most Viewer features and settings are available from the Viewer's right-click menu.

The RAW Module

Use the RAW module to convert pictures from RAW formats into normal bitmap formats. Multiple RAW module windows can be open at once. To open a RAW window, click the RAW button at the top right of the Manager. This function is intended for advanced users who wish to get the most out of [the RAW format](#).

The RAW processing module can be used both for processing individual pictures and for processing them in batch. Every control in the RAW module except for the queue menu works only with the currently active picture, including the Add To Queue, Develop, and To Editor buttons. To batch-edit RAW-processing settings, use the right-click menu for the thumbnails column. To add pictures to the queue, use either this right-click menu or the Add to Queue button.

The Thumbnails Column

Click a thumbnail here to load in the corresponding picture. There can be up to three icons on each thumbnail:

- an icon at the top left indicating that the picture has been added to the queue
- an icon at the top right indicating that the picture has already been processed in the queue
- an icon at the bottom right indicating that the picture contains non-default RAW conversion settings

If a picture is currently being processed, then progress information is shown beneath its thumbnail.

Multiple pictures can be selected at once using the usual Windows method of **[Ctrl]** and **[Shift]** clicking. Use the **[Ctrl+A]** keyboard shortcut to select all pictures at once. When multiple pictures are selected, you can right-click over any of the selected pictures or use the Queue menu to change the RAW conversion settings for all of them at once and to add all selected pictures to the queue.

The right-click menu commands are:

- Add to Queue - adds all selected pictures to the processing queue
- Remove from Queue - removes all selected pictures from the queue
- Increase Priority - puts the selected pictures in second place in the queue
- Paste Default Settings - resets the settings stored for the picture back to their defaults
- Paste Current Settings - sets the settings for the currently active picture into all selected pictures
- Paste Settings from Clipboard - pastes the settings in the Clipboard into the selected pictures
- Remove from List - completely removes the selected pictures from the list of pictures in the thumbnails column

Some of these functions are also available from the main Queue menu. This menu also contains a function for starting queue processing.

When a picture is added to the queue, its conversion settings are saved. Any further settings changes will not affect its processing unless it is removed from the queue and added back into it! This also applies for settings like file format and target path.

History

This displays a list of the last changed settings, including their last states. Click the items in this window to browse among them, thus comparing the visual effects of various choices of settings changes.

Preview

The preview for each picture is generated based on the current settings. For reasons of speed, it is generated in full at 1/4 the quality of the original, and then generated for the visible area only at full quality. If the picture is fully visible, then the whole preview is at full quality. When a preview is too large to be visible in full and you pan the preview, the visible area is generated at full quality on the fly as you pan.

The zoom level can be changed using the View menu, using buttons on the main toolbar, and using the right-click menu. You can also change the zoom level using the mouse wheel, or double-click to toggle between the **1:1** and **Zoom to fit** zoom levels.

You can show/hide blowout highlighting for the preview, and you can change how the preview is generated using **Full Quality Preview**, which makes the program generate the whole preview at full quality.

The last important function relevant to the preview window is **Crop**, available under **Edit**. Use it to show the cropping and rotation tool within the preview window. To rotate the picture, click and drag anywhere outside the cropping frame or on the handle inside the center ring. To change the cropping frame, click and drag any of the frame's corners or the sides. To move the cropping frame, click and drag inside the frame. To toggle ratio locking for the cropping frame, use the picture's right-click menu while cropping. You can also work with the cropping frame ratio using a menu on the toolbar. You can show various kinds of cropping marks using items under **View**.

Histogram

Histograms in general are discussed in their own help [chapter](#). The right-click menu for the histogram lets you set its display mode.

RAW Controls Pane

Use the controls in the tabs on the right side of the module window to check and change the settings to be used for developing the current picture. The individual controls are divided into groups. To deactivate a group, uncheck the checkbox on the left of its title bar. To restore default settings for a group, click the button next to the checkbox.

Exposure

- Use this to correct exposure by up to +/-4eV.
- Lights - when this is moved into the negative values, blowout protection is activated. Blowout protection reconstructs the picture in places where detail has been lost in one or more color channels. This method's brightness reconstruction is relatively good, but because color information in such places has been lost, the final color may not match the original picture.
- Shadows - controls the amount and depth of shadows in the picture.
- Contrast - controls the overall contrast of the final picture.
- Clarity - changes local contrast at contours in the picture.
- Underexposure method - this determines the method by which the program handles the missing information for the brightest areas while it is darkening the picture. This setting is utilized when you bring Exposure into negative values and when you apply HDR to bright areas. It offers three methods:
- Linear—mainly useful for portraits. It darkens the picture in a natural way. In overexposed areas, it grays the picture. This method takes no special steps to stop blowout (loss of detail from overexposure). To create detail in overexposed areas, use the Lights control.
- Vivid Colors—this method is useful for landscape photographs. It preserves brightness in areas with blowout, and non-linearly darkens the brightest areas, while increasing their contrast and saturation.
- Contrast—this method works similarly to Vivid Colors, but it does not increase colors' saturation and does increase contrast for a smaller range of brightnesses.

White balance

- White balance - lets you choose from among several predefined values. The default settings correspond to those stored in the picture from the camera.
- Eyedropper - this lets you set white balance by clicking on a pixel in the preview whose color should be neutral after white balancing is performed.
- White temperature - this lets you control white balance by shifting the picture on the blue-yellow axis.
- Hue - this lets you control white balance by shifting hue along the green-purple axis.

Note: during eyedropper-based white balancing, the hue and white balance values are updated after the preview is generated.

Sharpen

This works the same as the unsharp mask within the editing window for [sharpening](#).

Tone curve

Use the tone curve for fine control over the brightness levels in a picture. You can edit the curve by dragging the handles on it to new positions; these set the path that the brightness curve should take. To add new handles anywhere on the curve, click in the place where you want to add the handle. Right-click over a node to delete it.

The horizontal axis shows input brightness values. The vertical axis shows output values. The curve must always be continuous, so you cannot move points completely freely. Shifting the curve's endpoints changes the input values for the white point and black point, just as if you were using the Levels function. By shaping the curve into an S-shape, you can make complex adjustments to the picture's contrast.

Color

- Hue - this lets you shift colors by adjusting hue.
- Saturation - this lets you shift colors by adjusting saturation.
- Vibrance - this lets you shift colors by adjusting vibrance.

Noise Reduction

- Noise reduction - this sets the amount of noise reduction in the picture's brightness element.
- Col. noise reduction - this sets the amount of noise reduction in the picture's color element.
- Suppress color stains - use this to eliminate large color stains that remain after removal of colored noise.

Transformations

- Barrel distortion - this sets the amount of barrel distortion correction applied.
- Rotation - this sets the rotation of the picture. See the section on the cropping tool.

Antivignetting

Use this to either suppress unwanted darkening at the edges of a picture (i.e. vignetting) or do the opposite—add such darkening e.g. in order to emphasize content in the middle of the picture.

Fix Chromatic Defect

If a chromatic defect is not in the middle of the image and expands towards the edges, you can suppress it using the **Red-Green** and **Yellow-Blue** controls. These shift the color elements against each other to suppress the defect.

HDR - lights, HDR - shadows

The controls here are identical those for the [HDR function in the Publish menu](#).

Color Shift

Use this for minor HSL-mode color corrections. For greater convenience you can use an eyedropper to obtain the color to use for shifting.

Grayscale

The red, green, and blue sliders control how strongly the individual color channels affect the grayscale output. The default settings corresponds to the values that are normally used for grayscale conversion.

Conversion

Demosaicing sets what method is used for the process of "demosaicing" raw data.

Method **AHD** The AHD method is superb at reconstructing horizontal and vertical lines. Its is less useful when working with pictures that have large monochromatic surfaces with strong noise. For such pictures it can cause distortions of the picture that can be unaesthetic after you have sharpened the picture. The method named **Wenmiao Lu** handles large monochromatic surfaces well, but is weak in handling places with very fine details. The **VCD** and **IDCD** methods work similarly; they are a good replacement for **AHD** when editing pictures with severe noise. **Bilinear** - this is the simplest interpolation method, and is mostly provided due to how universal it is.

Artifact suppression sets the amount of suppression of color defects that arise during demosaicing. When this value is at its maximum, slight noise reduction is also applied before demosaicing.

Camera Profile

This section lets you set which DCP profile is used for demosaicing. These profiles are used for correcting colors and brightness levels. Although Zoner Photo Studio does not include any such profiles, they can be downloaded for free on the Web for certain cameras.

Resize

This lets you resize pictures before saving them. Like the path and format settings, resize works as a global setting that is not assigned to a picture until it is added to the queue or developed.

Format and Path

The options in this group are global—that is, they apply to the whole program, not just the current picture.

- **File format** - this sets the target format for conversion. It also affects the final color depth after conversion.
- **Color profile** - this sets the target color profile.
 - The **sRGB** color space is the standard color space. It is shown faithfully on a monitor and printed faithfully on an ordinary photo printer. This color space is the best one for everyday home photo tasks and when sending photos off to a photo lab for processing, or to a photo bank, etc.
 - **AdobeRGB** is a color space that lets you work with a large number of blue and green tones. It can give better prints than sRGB, but only if your photo processing programs and equipment support AdobeRGB from start to finish, including your monitor and the target printer. Without such equipment, AdobeRGB may leave you with washed-out prints.
 - **ProPhoto RGB** and **Linear ProPhoto RGB** are wide-gamut color profiles. They are only appropriate when saving pictures with a color depth of over 8 bits per channel. Profile **Linear Pro Photo RGB** adds a linear gamma curve atop Pro Photo RGB.
- **Target path** - this sets the target path. Relative paths can also be used. Thus for example if you enter "jpeg," all output pictures will be saved to a subfolder named "jpeg" beneath the original folder(s) with their source RAW pictures.
- **Target file** - the RAW converter normally does not overwrite files; it creates new ones. Here you can change this behavior.

Main Operations

- **Add to Queue** - this adds the picture to the queue with the current settings and makes the next picture in the thumbnails column the active picture. The picture does not immediately start being processed, unless queue processing is active. This function only affects the current picture; it ignores any selection of multiple pictures in the thumbnails column.
- **Develop** - this processes a picture immediately - outside of the queue. If there are no pictures in the queue, then the RAW converter closes after processing is finished.
- **To the Editor** - this processes a picture immediately and opens it in the Editor for further edits. If there are no pictures in the queue, then the RAW converter closes after processing is finished.

Custom Settings

You can work with the settings for the current picture using the commands in the Settings menu:

- **Copy to Clipboard** - this copies the current picture settings to the Clipboard
- **Paste from Clipboard for All Selected** - pastes settings from the Clipboard for all pictures selected in the file-thumbnails column.
- **Current Settings for All Selected** - pastes the current settings into all pictures selected in the file-thumbnails column.
- **Restore Settings for All Selected** - restores the default settings for all pictures selected in the file-thumbnails column.
- **Set Current as Default** - use this to create your own custom default settings, to be automatically applied to pictures as they are loaded in the RAW module.
- **Restore Default Settings** - use this to restore the default settings.

The main toolbar includes controls for managing and creating presets—sets of RAW conversion settings. Presets save all picture-related settings. They ignore global settings like file format and file path.

Notes on Work with the RAW Module

- Although the RAW module allows you to continue working with a picture while the queue is being processed, doing this on any 32-bit Windows can lead to situations where there is not enough computer memory available for the work.
- In the RAW settings under [Settings | Preferences... | RAW Format](#) you can allow the processing of ordinary bitmap formats in the RAW module. However, in the RAW module, the picture is linearized and can undergo several edits. Therefore, effects like pixelization can affect it to a greater degree than during normal processing in the Editor. Also, RAW module settings are not saved for such files.
- Saved settings are stored not only for RAW files, but also for the pictures that come out of RAW conversion. A reduced version of them can be shown in the Image Information window.

Histogram

A histogram shows how many pixels in a picture are at each of its possible brightness levels. Its horizontal axis represents the scale of possible brightness values, usually either for the picture overall or for a single color channel. Its vertical axis represents the pixel frequency in the picture for each of these values.

If the histogram shows too many pixels on the left (that is, in the dark tones) and not enough on the right, then the picture is probably underexposed. If most values are on the right, the picture is probably overexposed. In most cases, a normal photo should make use of the whole range of the histogram.

Histograms are only truly useful for pictures with 24-bit, 32-bit, or 48-bit color, or for grayscale pictures. (However, any picture in a modern photo format will use one of these color types anyway.)

Right-clicking on a histogram will show a context menu where you can switch among several display modes: Brightness, brightness plus channels, channels, red channel, green channel, or blue channel. You can also set the histogram to half size or full size, and choose between a light or dark histogram background.

Acquiring Pictures

Copy from Device

Use this function to copy pictures from, for example, a camera's memory card onto your computer. Unlike in Zoner Photo Studio versions 10 and earlier, you cannot move pictures off your camera using this function; you can only copy them. It also offers tools and options that help you organize your photos right as you download them.

Most digital cameras support USB Mass Storage. This is a technology that makes the camera act like an extra disk for your computer: it gets a letter and you can browse it and copy pictures from it right within Windows (but not as conveniently as in Zoner Photo Studio).

Some manufacturers do not support this technology, but do support another called WIA (Windows Image Acquisition). While not as convenient as USB, WIA will still get your pictures onto your computer. Some WIA cameras require that you connect in PTP (Picture Transfer Protocol) mode. For more information about connecting your camera in PTP mode, see your camera's manual. In PTP mode, RAW thumbnails might not be displayed, depending on various factors.

Use **Acquire | Copy from Device...** in the **Browser** to start the acquisition process. You first reach a window where you can choose a camera connection type or tell the program what the path to your camera card is. If the OK button is grayed out, this usually means the camera is not connected or turned on, or that the memory card is not in it. Once you have fixed the problem, click **Refresh**.

In the next step, you can see thumbnails for the pictures from the camera. This is useful when you only want to download certain pictures from a batch. To select or cancel selection of all the pictures on the camera, use **Select All** and **Deselect All**. To set what folder the selected folders are downloaded to, use the Target box. This box "remembers" either **the last folder you used** or the **currently selected folder**, depending on your settings in the program **Preferences**.

In the next step, you can see thumbnails for the pictures from the camera. This is useful when you only want to download certain pictures from a batch. To select or cancel selection of all the pictures on the camera, use **Select All** and **Deselect All**. You can also select pictures in a tree that displays the pictures' hierarchy in the target folder based on the **subfolder format** set in the download window's **Options**. To set what folder the selected folders are downloaded to, use Target. This box "remembers" either **the last folder you used** or the **currently selected folder**, depending on your settings in the download window's Options. For removable devices (like cameras or memory cards), you can turn on **automatic copying** of pictures right after the device is turned on or a card is inserted.

You only need to tell Zoner Photo Studio the path to your photos once, unless you switch devices. Once you tell it a path and it finds some photos on it, it will remember that path forever. It will open the same folder the next time you use **Copy from Device...** if it can. If it cannot (say, because you switched camera types or forgot to connect the camera), you will be shown the connection setup window again.

Use **Show this window automatically whenever device goes online** to make this window display automatically when a camera is connected. There is a similar checkbox in the [program preferences](#).

Options

Click **Options** to show the window for picture download options. Use **Rotate images to respect EXIF orientation** to make the program take advantage of your camera's ability to detect its own orientation and write it to EXIF. Use **Acquire only images that are not yet in the target folder** to prevent Zoner Photo Studio from downloading photos with filenames that already exist in your target folder. Use **Mark images as read-only** to make the program assign the file property called "Read-only" to the downloaded photos. This protects them from unwanted changes and from being overwritten. Turn off **Load thumbnails** to get started downloading faster, although without thumbnails it can be hard to choose pictures. However, if your camera places thumbnails in photos' EXIF information, then Zoner Photo Studio uses them, so thumbnail display will be very fast. Use **Load contents of subfolders** if your camera creates a tree of folders instead of using just one folder. The Copy from Device window informs you when this option is active. **Close window after downloading images** closes the Copy from Device window once the program finishes downloading pictures.

Use **Filename capitalization** to set whether the names of files should be kept as-is, forced into all small letters, or forced into capital letters; these options are officially called **Do not change**, **Convert to lowercase**, and **Convert to UPPERCASE**.

There are also (extremely useful) options for automatically assigning information to the **Author** and **Copyright** fields. See the Help chapter named [Information](#).

Target folder provides automatic sorting of pictures into subfolders based on their picture-taken date or date of downloading. When creating folders by picture-taken date, Zoner Photo Studio may create multiple subfolders within the target folder to reflect the multiple days on which pictures were taken.

Subfolder format tells the program how to name the subfolders it makes. It is based on the Variable Text feature. The default here is {Y}-{M}-{D}, that is, "year-month-date." This may look strange at first, but it ensures that in normal alphabetical file listings, your photo folders will automatically be in the "right" order. For more information, see [Variable Text](#). The Copy from Device window visually indicates what subfolder naming format is being used.

Scanning Pictures in via TWAIN

The TWAIN interface is used primarily for communication with scanners. (It is occasionally used for acquiring pictures from TV cards, etc.)

To acquire pictures over TWAIN, use **Acquire | Scan using TWAIN Device...** in the Manager, or **File | Scan using TWAIN Device...** in the Editor.

Use the **Native mode** to switch your scanner to a mode where it is in control of the whole scanning process. In this mode, it composes the final scan and hands it over to the program when it is done. If you are not using this option, then communication with the scanner takes place in advanced mode instead. In advanced mode, the program communicates with the scanner during the whole process and assembles the final picture itself. This method saves memory (no temporary image is needed) and usually speeds up scanning. Advanced mode is at its most useful when you are working with large pictures and/or professional scanners. Normally you really only need to know about the two modes because of their use in troubleshooting: often scanning problems disappear if you simply switch modes here.

When you use this command, Zoner Photo Studio launches the TWAIN interface driver. (This was supplied with your scanner.) What the program does with the output of the scan depends on whether you use **Open picture in Editor**, **Save picture to disk** or **Save Pictures to PDF**.

When you are saving directly to disk, the **Target folder** sets where the pictures you scan are saved. To set how the program automatically names these picture files, use the **File name** control, where you can take advantage of the program's [Variable Text](#), and **counter**. Click **Format** to choose the saved picture's [file format](#). When you use this function from the Editor, the acquired picture is always opened in the Editor window directly, so these options are not displayed.

During scanning to PDF, the settings for the name of the output PDF are the same as above. Click **PDF Options** to display a window for work with the settings for the output PDF. During scanning to PDF, a window appears to show how many pictures have been brought in. Use the buttons in this window at any time to **finish the PDF file**, **cancel scanning** or **show the interface** of your scanning program. Each picture scanned into the PDF is stored on its own page, and it has the dimensions that were set for it by the TWAIN interface.

You can use the TWAIN interface to acquire photos from certain cameras, and historically TWAIN served as a fallback when USB was not available for a camera. However, this approach has several downsides.

The TWAIN interface hands the program only the picture itself. EXIF and similar picture information is lost.

If the camera contains pictures in JPEG format, then the TWAIN acquisition process "unpacks" those JPEGs and delivers only the pictures inside to Zoner Photo Studio. If Zoner Photo Studio saves the pictures to JPEG with different settings than the camera used (and it is almost certain that it will), then the final file will unnecessarily either grow (without gaining any new useful information) or shrink (and lose detail in the process). For these reasons, we recommend that you use the [Copy from Device](#) function instead.

Acquiring Pictures from the Windows Clipboard

The **Acquire | From Clipboard...** function opens the contents of the Windows Clipboard in the Editor.

The Clipboard is where information goes when you cut or copy it in Windows. To place part of a picture in the Clipboard, select that part of it and then use e.g. **[Ctrl+C]**. That part of the picture is then placed in the Clipboard and can be pasted elsewhere in the picture, or in a completely different picture using e.g. **[Ctrl+V]**. You can also send a screenshot to the Clipboard by pressing **[Print Screen]**.

If the Clipboard contains a picture, then you can use the **Acquire | From Clipboard** Browser menu item to open a new Editor window and paste the picture into it. To then save the picture in a format of your choice, use **File | Save**.

Screen Capture

Use the screen capture function to take what is on the screen and place it in a file. This function is useful for preparing pictures for computer manuals, discussing software problems with companies' support staff, and anything else where a picture of what's on the screen is worth 1,000 words.

Pressing **[PrintScreen]** in Windows will already capture the screen for you, at least in a basic way. It places the resulting "screenshot" in the Windows Clipboard. If you instead press **[Alt+PrintScreen]** then only the current window will be saved. Zoner Photo Studio can save the current contents of the screen directly to a file, or open them in the Editor. You can even capture the mouse cursor, which a normal screenshot will not achieve.

To turn screen capture mode on and off, use **Acquire | Via Screen Capture...** in the Browser. Before the mode actually turns on, you will come to a window where you can adjust screen capture settings. When screen capture mode is active, a special icon is shown in the Windows system tray (at the bottom left of the screen, next to the clock). Right-clicking on this icon will exit screen capture mode, or resume screen capture mode if you have paused it.

Screen Capture Mode

The **Capture whole screen using PrintScrn** option to capture the whole screen. Use **Capture active window using PrintScrn** to capture only the window of the program that is "active" within Windows.

(That is, the one you are "working with" at a given moment -- it will generally have a brightened title bar.) A window can include many subwindows and toolbars. For example, even the Window taskbar includes the Start button, some toolbars, buttons for running programs, etc. You can capture these independently if desired.

The **Capture highlighted window using left-click** option, you can narrow down your screen capture to a single window or a single part of a single window. Everything that will not be captured is dimmed. The part that will be captured looks normal (and thus is "highlighted" in comparison). During this screen capture type, pressing **[Esc]** temporarily turns off the dimming, which you can then turn back on by pressing **[PrintScreen]**. The screen capture itself is performed by left-clicking. The right mouse button, meanwhile, is reserved for showing a menu with options relative to the mode. Use the last option, **Capture window under cursor using PrintScrn** to capture windows or parts of windows without viewing highlighting of them while you are preparing to take the screenshot.

In practice, the **[PrintScreen]** key may be marked **PrintScrn, Prnt Scrn, Prt Scr, Prt Sc, etc.**

Picture

Use the Open Picture in Editor command to immediately open the screen capture in a new Editor tab. Use Save Picture to Disk to choose or create a folder to save to, and then select a format and save the picture. The way the folder is filled in depends on your setting here—Default to folder used last time automatically fills in the last folder you used; Default to currently active folder fills in the folder shown in the Browser. You can also have the program Open folder when finished. To individually name files before saving them, use the Always ask for filename option. To let the program name them, use Name files automatically. The automatic filenames consist of a prefix of your choice and a customizable counter. You can set the first number in the counter (Start), how many numbers to go up by each time (Step), and a minimum number of digits to force with leading zeros if necessary (Digits).

To capture the screen at regular intervals, use **Time-lapse screen capture** and enter the Interval under **Interval**. To exit time-lapse screen capture mode, press **[Esc]** and to renew it, press **[PrintScreen]**. During it, an animated icon appears in the Windows system tray.

Options

You can choose whether not to **Include the mouse cursor**. Use the **Include window shadow** option to capture the shadows that show around windows in when you have support for this active in Windows Vista or Window 7. **Force solid background color** eliminates any window transparency (and shadow, outside of Windows XP), replacing it with a forced background color of your choice. This is only supported on Windows XP and Windows Vista. You may have tried at some time to capture a window and found that noisy bits of the surroundings annoyingly showed through in the transparent corners or in Vista's new shadows. This option is the solution to that.

Acquiring Pictures from Websites

This function automatically downloads pictures from web pages and, optionally, also from the subpages of multi-level websites, like e.g. most web galleries.

Web galleries generally only show thumbnails on their top level, with the full-size pictures being on a second level that is shown after clicking through the thumbnail. These galleries are thus at least "two links deep," in terms of what the Acquire from Web Site window asks. Each further gallery page to click through until you reach the pictures is "one more link deep."

To actually get started downloading pictures from the web, use **Acquire | From Web Site...** in the Browser.

Enter the address of the page that you want to download from in the **URL** field. You also need to enter the name of the folder that the pictures will be downloaded to (**Download to**). You can type a folder name in by hand, reuse a previous choice via the history list, or click the folder icon to browse for it.

"Download to" Options

- **The target folder**—the pictures are all stored in one folder, no matter how many links deep they were originally. If the downloader encounters more than one file with the same name, then the files receive an underscore and a number in the end to keep them unique.

- **A subfolder named after the site**—the pictures will be stored in folders named after the domain names of where they came from, and the pictures will be named after their source addresses;

Example:

folder: www.zoner.com

file: test.mountains.iceberg.jpg

- **Subfolders with the same organization as on the site**—Zoner Photo Studio recreates on your disk the same file and folder structure that existed on the website.

Example:

folder: www.zoner.com

subfolders: \test\mountains

file: iceberg.jpg

Under **Search this many links deep** you tell the program how "deep" to look for pictures (see the discussion at the top of this topic). It is important to make sure you are only downloading what you actually want to download. The **Download these image types**: option helps you do this: it lets you choose which formats you want. If you are after photos, you should almost certainly turn off every format but JPEG. The **Login required** option handles a different problem: non-public websites. If your desired source needs a user name and password, enter them here. Use the **Take images from this domain only**: option to keep the program from "clicking through" links to pictures on other domains; this is normally turned on because it is rare that pictures on other domains are still within your interest—most of the time, they are things like banners. Use **Limit image size (in kB)** to set a minimum and maximum size for the downloaded files. Pictures smaller than the recommended 10 KB are usually thumbnails, advertising, or page graphics (rounded-corner graphics, etc.)

Click **Settings...** to reach a window with proxy server settings. Proxy servers are generally used in company networks. If you need to work with proxy settings but do not know how, contact your network administrator. Click **Start Download...** to start the actual downloading process. A progress window is shown during downloading so you can see what is currently being downloaded.

File Formats

You can save to the following formats:

- **GIF*** — lossless LZW compression, maximum of 256 colors (stored in a palette), useful for non-photographic Web graphics
- **JPEG** — only True Color and grayscale color depths are supported; compression is lossy (more compression = more loss of detail); great for photos
- **PNG*** — a modern, universal format; has lossless ZIP compression (better than LZW); can use a palette but does not need to; does not support EXIF
- **TIFF*** — a classical DTP format; supports the most options of all the formats (LZW/ZIP/JPEG/RLE compression or no compression; palette or no palette; CMYK colors)

- **TGA** — a historical format
- **BMP** — the standard Windows image format; normally uncompressed; most picture software supports it
- **WPG** — image format for Corel WordPerfect; does not support True Color pictures
- **BMI** — a format used by Zoner Draw; contains ZIP compression; optional palette
- **PCX** — historical format; RLE compression; only useful for simple line drawings
- **JXR***, **HDP** — quite new formats; advanced versions of their "parent" JPEG; support 48-bit color depth

*save pictures to these formats to preserve [transparency](#).

JPEG

Progressive — the picture will be saved in such a way that it can be displayed (at reduced quality) before it is done loading. This is only useful for the Web, and only for large pictures and/or audiences with slow connections.

JPEG compression — special [lossy compression](#) developed for efficient storage of photographs. The more compression, the more damage to the picture (loss of detail). However, you can get quite good compression without visible damage. For high-quality photos use 90 and above; for previews, you can use lower values like 75. Compression damage varies depending on the nature of a picture, so if you are trying to walk the line on compression vs. quality, be sure to preview each individual picture, not just one. For more information, see [Lossy JPEG Compression and Lossless Operations](#).

TIFF

This classical DTP format supports a wide range of color depths, color models, and compression types.

RAW

RAW files store unprocessed ("raw") data from camera sensors. RAW is actually not one format, but a variety of formats with this kind of data. RAW files have greater color depth than JPEG (48 bits), they do not suffer quality loss from compression like JPEG does, and they offer you a chance to achieve better white balance, etc. than your camera can when it comes time to produce JPEGs or TIFFs. (You cannot just leave pictures in RAW, because RAW files cannot be printed/published.) On the other hand, it takes time and skill to get better outputs from RAW files than you would if you just left the work to the camera.

The RAW Format

Almost all professional cameras, and most hobby cameras, let you work with pictures in the RAW format. RAW files contain unprocessed ("raw") sensor values obtained straight from the camera sensors, and usually also a preview in JPEG format. To turn these values into an actual usable picture, you must use a converter, a special program that does the RAW conversion work that the camera would normally do instead. The converter interpolates the sensor values ("demosaics"), performs white balancing, and sets the picture's saturation, contrast, brightness, and sharpness.

One advantage of acquiring pictures from RAW is that it lets you attempt to "do the camera's work better than the camera." Another is that you are working with a picture that has not yet suffered lossy JPEG compression even once. A third is that RAW files generally contain more than just the 8 bits of color depth that JPEG supports.

However, work with RAW has its downsides as well. First, while it is usually discussed as if it were a single format, each RAW file actually contains one out of many "real" formats—RAW "subformats"—on the inside. These vary not only among manufacturers, but even sometimes among individual camera models. Furthermore, no manufacturer to date has publicly released documentation for "its" RAW format. No documentation means, among other things, no way to write to the format, so RAW is, and may remain, read-only.

Zoner Photo Studio normally displays the lower-resolution previews contained inside RAW files, as they are entirely sufficient for normal use. The Editor can load pictures at full quality via the corresponding option in the File menu. The Viewer automatically loads pictures at full quality when you zoom in. When loading pictures at full resolution, the program can take advantage of WIC codecs to ensure that each RAW file is displayed at full resolution in a way matching its internal preview. When the WIC codec is missing and when a picture is being developed in the RAW module, the program uses its own algorithms, and a picture may be processed differently from the way the manufacturer's software, etc. processes it.

Besides the formats of individual camera manufacturers, Zoner Photo Studio also supports DNG (Digital Negative), a universal RAW format designed by Adobe. Meanwhile, Adobe has created a program, named Adobe DNG

Converter, to convert between the individual RAW subformats and DNG. This program can be downloaded from their website for free. When you install this converter and set the path to it in the Zoner Photo Studio [Preferences](#), and enable its use, you gain the ability to directly process every RAW format that Zoner Photo Studio can handle in cooperation with the Converter. You can then use the RAW module with its numerous settings to develop photos from all RAW formats, with the photos being converted to DNG in the background as an intermediate step with no action needed from you. Note that Adobe periodically updates Adobe DNG Converter so that it can support formats from the latest camera models.

Acquiring Pictures from PDF

Use this function to acquire bitmap pictures stored within PDF files. The function stores JPEG-compressed pictures as JPEG files, and other pictures as PNG files.

This function only examines the part of the PDF that is needed in order to extract the pictures. Since that means that only the PDF file's picture data storage area is checked, this function can acquire pictures even from a damaged, otherwise unusable PDF file (e.g. one badly downloaded from the Web). Because this method is used, the pictures are extracted exactly as they are stored in the PDF, and so they can have e.g. a different rotation than the one seen when viewing the PDF. For pictures with JPEG compression and CMYK color, you may want to use the **Convert CMYK JPEG files to RGB** option, since PDF stores pictures with CMYK color in a way that is incompatible with most programs. (Color information is stored in them in reverse.)

The PDF format can widely vary. Thus, this function has certain restrictions.

It only supports pictures within the following limits:

- colors: palette colors with 2, 4, 6, or 8 bits/pixel, or RGB or CMYK color.
- compression: only ASCII85, LZW, ZIP, JPEG, and JPEG2000.

This function does not support:

- acquiring pictures from files with copy-protected content
- acquiring pictures less than 5 pixels wide or high

Extracting JPEGs from File

This function looks for JPEG signatures in any file you choose, and if it finds such a signature followed by valid data, then it extracts that data and saves it to an external file. Use this function to acquire JPEGs stored in a file of your choice, e.g. the JPEG previews from RAW files.

Use the **Do not create copies of JPEG files** option to prevent the function from creating duplicates of JPEG files if you accidentally use it on them.

Edits, Effects, and Enhancements

The program's editing windows are available from both the Editor and the Browser. Unlike the Editor, the Browser enables **batch editing**—editing of multiple photos at once. If you select multiple files and visit an editing window in the Browser, you are making a batch edit.

If not even one file is selected, then you cannot perform direct operations (rotation and flipping), but the ones that lead to an editing window are still available—in this case, they apply to every file in the current folder.

Edits you make in the Browser are always irreversible: the change is saved to file immediately!
So here as always: edit copies of your pictures, not the originals.

Editing Pictures

Rotation and Flipping

Rotating Left, Right, or by 180°

In the Browser, select all the pictures to rotate and use **Edit | Rotate Left [Ctrl+L]**, **Rotate Right [Ctrl+R]** or **Rotate & Flip | Rotate by 180°**. The edit is made immediately to all selected pictures. When you use this function from the Browser on JPEG images, it is, when possible, [lossless](#). The menu items for this function are the same in the Editor as in the Browser.

Specific Rotation

In the Browser, select the pictures to be rotated to a specific angle and use **Edit | Rotate & Flip | Specific Rotation... [Ctrl+Shift+R]**. The menu item for this function is the same in the Editor as in the Browser.

You can set which **Background color** is used to fill out the empty spaces in the corners after you rotate.

Flipping Pictures

To flip (mirror) a picture in either the Browser or Editor, use **Edit | Rotate & Flip | Flip Horizontally** or **Flip Vertically**. When you use this function from the Browser on JPEG images, it is, when possible, [lossless](#).

Adjusting rotation via EXIF

Some digital cameras with a special sensor can detect the camera's orientation during a shot and store this in the picture information. In ordinary programs, the picture's rotation after downloading is never affected by this setting. In Zoner Photo Studio it depends on your choice under **Settings | Preferences | General | Automatically rotate images to match EXIF orientation flag**. If you wish them to be correctly rotated in every program, then select them in the Browser and use **Edit | Rotate & Flip | Adjust Rotation via EXIF**. Whenever possible, this operation is [lossless](#).

Rotating to an Orientation

Use this function to rotate a picture or pictures to an orientation - either landscape or portrait. You can choose the direction of the rotation. This function is available in the Browser under **Edit | Rotate & Flip | Rotate to Orientation....** Whenever possible, this operation is [lossless](#).

Setting the EXIF Orientation Flag

This function is available in the Browser under **Edit | Rotate & Flip | Set EXIF Orientation Flag...** Use it to change the rotation flag that advanced digital cameras record in pictures' EXIF information. This function does not change the picture itself.

Resize

Use this function to set a picture's dimensions in terms of pixels. You can also use it to set a physical size if you first tell the program the picture's intended dots per inch (DPI).

To resize pictures, use **Edit | Resize [Ctrl+E]**.

To change the DPI value in a picture's EXIF information, and NOT its pixel count, turn off **Resample image** before continuing your work in this window. The DPI value tells printers, etc. how many pixels should be used for one physical inch. Useful DPI settings depend on the purpose of an operation. For screen display, 96 DPI is fine. For print, at least 150 is recommended. The best choice of DPI also depends on specifics like printer quality, paper quality, etc.

Resampling of a picture reduces or increases the number of pixels and thus the picture's size in bytes. To set the picture's width and height, either use the Width and Height controls or, when **Keep proportions** is active, set just one; the program automatically calculates the other. **Sharpen** can be used to reduce the harm caused by the loss of information involved in shrinking a picture. (Major shrinking can cause a loss of detail, and mild sharpening can partially eliminate this phenomenon.) To set what method is used for resizing, use [Method](#).

If multiple pictures are selected, you can restrict the function so it only shrinks or only stretches pictures, using the control named **Mode**.

Save image only saves disk space by stripping away any EXIF or other picture information that might be in the resized pictures.

For best results when resizing multiple pictures at once, use Advanced Resize rather than Resize.

Resampling Methods

There are very many ways to resample a digital picture—to redraw it using more or fewer pixels. These methods differ in how they decide on values for the pixels in the new picture, and in how many pixels in the original are used for such decisions. There is no "silver bullet"—each method has its advantages and disadvantages. It all depends on how the filter is put to use and on the characteristics of the original picture.

One way in which resampling methods differ is the "sharpness" of the output picture. When you are shrinking pictures, some methods, like bicubic and supersampling, lead to a mildly blurry image. Thus it is a good idea to mildly sharpen after resampling in such cases.

- **Nearest Neighbor**—the simplest and fastest method; it does not use any interpolation, but rather chooses one single pixel in the original for each pixel in the output; a bad choice for photos, but irreplaceable for technical drawings with hairlines.
- **Bilinear**—the simplest kind of interpolation; uses the relative sum of the four nearest pixels; fast and usually suitable for shrinking.
- **Bicubic**—relatively advanced interpolation; uses the 16 nearest pixels; interpolates values along a cubic curve; suitable for both stretching and shrinking (if the picture is sharpened afterwards).
- **Hermite**—another type of interpolated curve; uses the four nearest neighboring pixels
- **Bell**—gives a very "soft" image; useful for pictures with noise
- **Mitchell**—an excellent combination of speed and quality; uses the 16 nearest pixels; has a "self-sharpening" effect
- **Lanczos**—demanding for the processor; pixels are interpolated using a special curve simulating the real dissemination of information; 36 pixels from the original are used per output pixel; has a strong "self-sharpening effect"; most useful when stretching pictures; can cause distracting grid-like artifacts during shrinking due to the sharpening effect.
- **Supersampling**—designed only for shrinking pictures; uses the weighted average of all the pixels that are lost during shrinking. Generally gives the best results for photos, because it works with all pixels in a photo. Can suffer from unsharpness, but this can be solved by mild sharpening afterwards.

Advanced Resize

This function can change a picture's size in pixels and, in the process, also crop it or change its ratio of sides.

To reach this window in either the Browser or the Editor, use the **Edit | Advanced Resize... [Shift+E]** menu item.

This window provides three different approaches to resizing:

- **Custom Size**

Keep proportions—check width and/or height and the filter will resize the picture in such a way as to meet the width/height conditions you set while still preserving the image's ratio of sides.

Add borders—if the dimensions you choose do not fit the original ratio of sides, then the picture is resized and borders are added on the top/bottom or on the sides, as appropriate. These borders are filled in with a color of your choice.

Stretch—the picture is resized to the dimensions you enter, even if it means changing its ratio of sides.

- **Resize and crop**—this combines resizing in one dimension with cropping in the other.
- **Percent**—proportional resizing, in percent of original size

The bottom right constantly shows information on the final size in pixels of the resized picture.

Canvas Size

This function resizes a picture by cropping it or adding a colored border.

To reach this function, use **Edit | Canvas Size [Ctrl+W]**.

If the **Relative** is not checked, then the **Width** and **Height** values determine the picture's size. To set the new size via the increase/decrease in size, rather than setting the new size directly, use the **Relative** option. (To set a decrease in size, use a negative value.) To set where to "anchor" the whole operation, use the **Image alignment** control. Increasing the canvas size adds a border around the picture. Click **Color** to set its color using the Windows color picking window. Click the eyedropper to set the color by clicking a color in the picture.

Canvas and Borders

Use this mode to give a picture a frame made up of up to three rectangles with a color of your choice, in several modes:

Use the **Edit | Canvas and Borders [Ctrl+Shift+B]** menu item in both the Browser and the Editor for this.

Choosing a Mode

The **Frame** mode increases the size of the picture by the size of the frames, and thus always preserves all picture data. The **Preserve size** mode covers the original picture with the frames on all sides, and thus preserves the original size of the picture. The **Preserve ratio** option covers the original picture with the frames in such a way as to preserve the original ratio of sides.

Entry Method and Units

When you use the **Canvas and borders** entry mode, you can add an inner or outer frame neighboring the border you set. The width of these frames may never be larger than that of the border. If you set a larger width, the border will adjust automatically. If you choose Three lines, then you will enter three lines with various widths that will surround the picture.

You can enter their widths directly as pixels, or as relatively, in percent. Entering them in relative terms is very useful when you are doing batch work, not all photos have the same size (e.g. due to cropping), and you want the frames to have a unified look.

When you check the **Symmetrical** option, you will be working directly with the width for one side only; the other sides will be calculated automatically.

Specific Crop

Use this to crop whole batches of pictures at once using predefined criteria.

To reach this window from the Editor or Browser, use **Edit | Specific Crop... [Ctrl+Shift+W]**

Use the **Height and Width** fields to set the crop size in pixels. Use the square of dots to anchor the crop to a corner, side, or the middle. Use **Preserve ratio** to ensure that the cropped version of each picture will have the same ratio of sides as the original did.

Use the **Ratio of Sides** dropdown to set the crop to a fixed size in pixels or a fixed ratio of sides. Click **Swap Values** (shown between the two sizes or ratios) to swap the two values, switching the crop from Portrait to Landscape or vice-versa.

Place Text

The most common use for the Place Text function is adding a copyright watermark to a photo, or adding descriptive text near one of its edges.

To reach this window, use **Edit | Place Text [Ctrl+T]** in the Browser or Editor.

In this window, you tell the program what text to place, what settings it should have, its position, offset, and transparency. You can set the text's size either absolutely (in pixels) or relatively (in percent of the picture's size). Besides static, fixed text, you can make use of the program's Variable Text feature in this window. This feature enables you to make use of information about a picture, so you can e.g. store the time a photo was taken inside the photo. If you have never worked with Variable Text before, we strongly recommend that you read the Variable Text topic before beginning work with it.

Once you have added text to a picture and saved that picture, the change is irreversible—the text cannot be changed or removed afterwards.

Place Image

This function is most often used to place a small logo (a watermark) or the photographer's signature in a photo.

To reach this function, use **Edit | Place Image [Ctrl+Shift+T]** in the Browser or Editor.

In the window, you choose which picture to place, its **Position**, its **Rotation**, its **Indentation** away from its base position, whether or not to **Use transparency stored in overlaid image** (relevant when placing GIF and PNG pictures) and if desired an overall **Transparency**. There is also a **Use as watermark** option via which you can use the placed image as a mask with a shadow; use the **Light source** control to affect the shadow's direction.

If the picture is too large, then you can use the **If needed, shrink overlay to fit** option, or **Resample** it to a certain percentage of its original size.

Change Color Depth

Use this command to convert a picture between 48-bit color (3 × 16 bits) and classical 24-bit color (3 × 8 bits). You can also use it to convert pictures to 8-bit or 16-bit color.

A 48-bit color depth can express vastly more colors than 24 bits: $2^{24} = 16,777,216$ different colors, while $2^{48} = 281,474,976,710,656$ colors. Although this difference is not visible to the human eye (the human eye can distinguish "only" about 10 million colors), it does manifest when a picture undergoes digital processing, because many more details are available.

For example, during major brightening of a strongly underexposed photograph, formerly "almost black" areas may flow into a single color. This is caused by the fact that only a narrow portion of the histogram was used in the original picture. If, however, the source picture is stored at a 48-bit color depth, then there is a much higher chance that even this reduced portion of the histogram will be wide enough for the pixels in this area to have differing values, so that finer color transitions remain after brightening.

The disadvantages of 48-bit color depth are larger file sizes, the limited number of programs that support this color depth, and a restricted choice of formats. (Within Zoner Photo Studio, you can only save with 48-bit color depth do

the TIFF, PNG, and HDP formats—the JPEG format does not support 48-bit color depth.)

ICC Profiles

Assigning an ICC profile

Pictures in the JPEG and TIFF formats can contain an ICC profile. An ICC profile is a description of how to interpret the colors in a picture. Different output devices (like a screen, or a printer) store colors in different ways, typical for the given device. Storing an ICC profile enables all devices that you work with to show your picture in exactly the same way, as long as they support color management and they are correctly calibrated. If a picture has no ICC profile, you can assign one to it, using **Edit | Other | Assign ICC Profile...** By assigning profiles to pictures, you ensure that pictures taken in a color space other than sRGB will be interpreted correctly. After you choose a profile, you can set how the operation will treat pictures that already have an ICC profile. If the **Overwrite existing profiles** option is checked, then old profiles will be overwritten by new ones. Adding a profile does not transform the colors inside the picture data itself.

This function depends on color management being active in the [Color Management](#) section of the program preferences.

Convert to Profile

This function converts picture data to the color space of the selected profile using the method selected under **Reproduction**. The Perceptual method is offered at first, and is Zoner's recommendation. When you perform this edit in the Editor and then save the picture, the changes are irreversible.

In the Browser, meanwhile, this is like all other edits always irreversible: the change is saved to file immediately!
So here as always: edit copies of your pictures, not the originals.

This function depends on color management being active in the [Color Management](#) section of the program preferences.

Convert File

Use this function to batch-convert picture files to another format.

A typical example is conversion of photos that you have scanned in in TIFF format into JPEG files for use on the Web. If your pictures are stored in JPEG format and you wish to do a large number of edits on them, and it is impractical to make these changes using the Batch Filter or during a single Editor session, then it can be a good idea to convert them to TIFF before the changes. The TIFF format is very useful when you are going to edit pictures, because you can save and re-save pictures to TIFF without any loss of quality, and you can use a higher color depth than in JPEG.

Use **Edit | Convert File Format [Ctrl+Shift+F]** in the Browser to reach this window. It is unavailable in the Editor (but see below).

There is a drop-down menu on the left side of the window where you can choose what [format](#) to convert to. Depending on that format, other settings are displayed at the bottom, such as compression type and color depth.

The right side of the window contains three menus for managing **color conversion** and one controlling how **picture information** will be saved.

The **Image information** menu sets whether all picture information, EXIF information only, EXIF information only minus a thumbnail (preview), or no picture information will be saved. If you use any setting other than "All" here, the picture and the color profile will automatically be converted to sRGB.

If the picture is open in the Editor, you can save it in any of format that you could convert it to. To do so, use **File | Save As... [Ctrl+Shift+S]**. In this window, you can both choose a format and give the file a new name and move it to a new path (folder).

Convert to Web JPEG

Use this function to save a picture in JPEG format with an output file size of your choice.

To set your desired output **Size** in kilobytes, use the slider or enter it numerically. You can also set limits for the compression **quality** and other JPEG compression settings—**sampling**, the **progressive** format, and **optimized encoding**.

You can also convert the picture to **grayscale** and choose whether or not to save space by omitting **EXIF** text information, a **preview**, and the **ICC color profile** from the picture.

Batch Filter

Use the Batch Filter to apply several edits, enhancements, or effects all at once to one or more pictures. To affect multiple pictures, use it from inside the Browser.

To reach the Batch Filter, use **Edit | Batch Filter... [Ctrl+Q]**.

Most editing windows are actually, from the program's point of view, variants of a single [picture edits window](#), but this one is significantly different in that you can use as many edits, effects, or enhancements from here as you want. If you have come to this window from the Browser, then you can use it for file operations as well.

Thus you can, for example, use a single visit to the Batch Filter to shrink a picture, sharpen it, brighten it, give it a white border and a black frame around the border, add a copyright watermark, and then rename it. During renaming work, you can make use of the same settings as in the [Batch Renaming](#) window.

Use the "plus" and "minus" buttons at the top right to add and remove edits. Use the arrows to change the order in which they are applied. After you choose a particular edit on the right, settings for it are automatically displayed at the bottom. As usual, at the bottom right, you can save the whole set of current Batch Filter settings as a **preset** with a name of your choice. The Batch Filter offers a little more convenience regarding presets than usual: you can apply a preset directly from a submenu of the main Browser or Editor menu: **Edit | Apply Batch Filter**.

Naturally, the **Format** and **Renaming** edits can only be applied once each, only the order "change format, then rename," and only after all other changes. When you have reached the Batch Filter from the Editor, these two functions do not make sense, and thus they are ignored. You can use a name and path of your choice for the output folder. Besides normal absolute paths, you can indicate the output path using a relative path such as "..\backup"—in this example, the folder would be automatically created one level above the current folder.

You can apply edits to one picture at a time, or apply them to all the pictures in the batch. (The column on the left of the window lists all pictures in the batch.)

For more information on the individual edits offered here, see the topics concerning them.

Enhancing Pictures

Quick Fix

This function automatically fixes a picture based on its available picture information and on an analysis of the picture. It does not interfere in matters of exposure level. This function is good for quick batch edits.

You can reach it via **Edit | Adjust | Quick Fix [Ctrl+0]** in the Browser, and via **Adjust | Quick Fix** in the Editor.

There are no settings for this function. It performs automatic contrast stretching, local contrast enhancement (and in some cases sharpening), saturation editing, and noise reduction with the help of the picture's EXIF information.

Levels

The Levels tool is an important tool for correcting the brightness levels in a picture. You can use this function to, for example, change a picture's "black point" and "white point" using a histogram. You can also use it to lighten or darken the midtones of a picture—to perform gamma correction.

To reach this window, use **Edit | Adjust | Levels [Shift+L]** in the Browser, or **Adjust | Levels** in the Editor.

Besides manual editing, you can also use it for automatic edits via the window's **Automatically correct colors** option. In the left part of the window, you can see a histogram preview and settings for manual edits. The **Channel** menu lets you choose which color channel to edit. RGB means the brightness channel. You can configure all these settings separately for each channel. The most basic settings when adjusting levels are the input and output levels and the gamma-correction coefficient. The gamma correction slider is located between the input values and output values. It determines colors' brightness in the midtones. All five values can be entered either directly using a number in the corresponding field, or visually, by clicking and dragging the corresponding triangle under the histogram and the brightness scale.

You can use the **Black point** and **White point** eyedroppers to select an input level for individual brightness elements by manually selecting a color directly from a preview pane. Clicking the brightest and darkest pixels in the picture generally gives the most useful white and black points.

When you turn on automatic mode, input levels for the individual channels are set automatically. When you use **Automatic contrast**, they are set the same for all channels. When you use **Automatic levels**, they are set for each channel independently. Automatic contrast "stretches" the brightness of the whole photograph to the maximum values, while Automatic levels "stretches" individual colors separately, and thus can change the picture's tinting. You can sometimes take advantage of this to remove tinting from a picture. The **Target colors and cutoffs** controls sets what colors to map the lightest and darkest areas to. The **cutoffs** aspect of it sets how much of the histogram should be cut off on the left and the right to ensure that the actual effective white and black points are used, rather than one of a few unrepresentative pixels that lie beyond them.

Curves

Like [Levels](#), curves serve for correcting tone range and color balance. They will help you to perfect pictures' tone range and a exposure, especially if they were taken under extreme conditions.

You can call up this function using **Edit | Adjust | Curves [Shift+C]** in the Browser menu or **Adjust | Curves** in the Editor menu.

Work with curves is more demanding than work with levels. On the other hand, it lets you very precisely set the individual color channels in the picture. While the Levels filter only lets you affect the range of input and output levels and gamma correction, in the Curves filter, you can set the shape of the conversion function (shown as a curve for the sake of visualization) almost at will. The horizontal axis shows input values. The vertical axis shows output values.

The **Channel** menu lets you choose which color channel to edit. RGB means the brightness channel. You can configure all these settings separately for each channel. To get a better idea of how the individual RGB channels are responding, it can be good to turn on **Show color elements**. The **Linear** option determines whether an interpolation curve should link the nodes you add to the curve, or a series of straight lines should link them instead.

Click **Select pixel in image** if you would like to use a pixel from the picture itself to set the color for the current node. If you hold down **[Shift]** at the same time, a node with this color will be added to the curve.

You can easily edit the curve using the mouse. Clicking anywhere on the curve between the red endpoints will add a new node to the curve. You can click any node on the curve to then move it to another position, using either drag-and-drop, the arrow keys, or direct editing via the **Input** and **Output** fields. If you right-click on a node, you can delete that node. You can also select a node by left-clicking it and then pressing **[Del]**. You can keep on deleting nodes until the only two nodes left are the red endpoints. Click **Erase Curve** to restore the original "curve" for the selected **Channel**. That curve is formed simply by a straight line leading from the top left to the bottom right. If the curve is erased for all color channels, then the picture will stay unchanged. Clicking **Automatic Contrast** or **Automatic Levels** will erase the current curves within the R, G, and B channels and set up new ones corresponding to each button's purpose. To control the sensitivity of these automatic settings, use the **Cropping** controls (separate for **Lights** and **Shadows**).

Tips

- Shifting the endpoints will change the input values for the white point and black point, just as if you were using the Levels function.
- Moving the nodes horizontally to the positions where the histogram for the RGB channel "begins" and "ends" will cause an effect similar to using Automatic Contrast within the Levels filter: the brightness of the whole photo will be "stretched" to the maximum values.
- Moving the nodes horizontally to the positions where the histogram for the R, G, or B channel "starts" or "ends" causes an effect similar to when you are using Automatic Levels: the individual color channels throughout the

photo will be "stretched" to their maximum values. If each channel is edited using a different curve, then the picture's tinting will change.

- If you wish to influence shadows, create and move nodes on the left sides. If you wish to influence lights, work on the right side.
- Moving a node you have created down on the curve or to the right will darken a part of the tones in the picture. Moving a node up or to the left lightens part of the tones in the picture.
- The curve you create should have an ascending path; if it is descending in some section, that section will be tinted.
- But to get the most contrast for a photo, create an S-curve. This will slightly darken part of the midtones, while "stretching out" the remaining midtones and light tones.

In practice, using the Curves tool well simply requires experience. There are no particular settings that can be recommended universally, because each photo has different tonal characteristics and requires specific edits. To gain the experience mentioned above, you mainly need to keep using the Curves window and pay a close eye to the preview pane and to changes in the histogram.

Enhance Colors

This function is for editing colors by editing their color channels. To bring up this window, use **Edit | Adjust | Enhance Colors... [Ctrl+1]** in the Browser or **Adjust | Enhance Colors...** in the Editor.

This window contains: controls for editing the R, G, and B color channels, hue, saturation, and lightness, and brightness and contrast, and a gamma correction control.

The **Mode** control (Normal, Lights only, or Shadows only) only affects gamma correction. The **Preserve colors** control only preserves colors during gamma correction (but see below). **Preserve colors** ensures that colors' hues will not change even after major brightening, so that the picture will not start to look "washed-out." During edits to color channels, this option ensures that the picture's overall brightness will be preserved.

This window also includes an **Automatic contrast** control.

Enhance Color Temperature

You can use this function to manually correct pictures that are suffering from tinting due to bad white balance settings during picture-taking.

To reach this window, use **Edit | Adjust | Adjust Color Temperature... [Ctrl+2]** in the Browser window, or **Adjust | Adjust Color Temperature...** in the Editor menu. You can define the color temperature by setting a neutral color or by entering a color temperature.

By manually setting a neutral color lets you set a "gray" point. This is a pixel that should have no tinting after the edit. You cannot use for this purpose a point suffering from maximum blowout (a pure white pixel), because no color shift can be determined on the basis of pure white.

You can set a lighting temperature using two sliders. The first slider is for shifting colors based on the picture's current lighting temperature, from blue to yellow. The second slider is for correction from green to purple.

Enhance Exposure

Use this function to automatically improve exposure. This function is especially useful for improving the exposure of many photos at once.

To bring up this window, use **Edit | Adjust | Enhance Exposure [Ctrl+3]** in the Browser or **Adjust | Enhance Exposure** in the Editor

You can use this window to **Auto-enhance** pictures or for manual enhancement. For manual enhancement, you can increase or decrease contrast or lighten or darken the picture. To set whether the enhancement should affect the whole picture, or only light or dark areas, use the **Mode** control. To set the strength of the change, use the **Intensity** control. To make the program automatically set white balance, use **Automatic white balance**.

Enhance Image

Use this function for batch edits where you would like to have several of the key exposure edits available all at once.

To bring up this window, use **Edit | Adjust | Enhance Image... [Ctrl+4]** in the Browser or **Adjust | Enhance Image...** in the Editor.

This function contains a **menu** with items for histogram equalization, fine histogram equalization, RGB histogram equalization, and fine RGB histogram equalization. Use these to adjust the brightness distribution so as to highlight details. There are also functions here for removing vignetting, improving exposure, and enhancing shadows.

Use automated histogram equalization to optimize the photo's color scheme so that all details are highlighted as well as possible.

Use the slider to set the **effect strength** (from 0 to 100%). The effect is applied to the whole picture, to light parts, or to shadows.

This function is most useful when you are batch-editing photos with similar exposure characteristics.

When you are editing photos with different characteristics, it may not bring good results.

Sharpen

This function can at least partially repair a picture that suffers from blurring. It is a good idea to use this function after resizing a picture.

To reach this function, use **Adjust | Sharpen... [Ctrl+5]** to sharpen pictures. The most important option in this window is the sharpening type.

- **Simple sharpening** is a quick way to sharpen fine details in certain situations such as after you have shrunk a picture. For this type, you can choose an effect strength and whether or not to use the Brightness method.
- **Unsharp mask** has its roots in film-camera technology. It sharpens only highly visible edges and borders. For this type, you can choose an effect strength, a radius, and a threshold, and toggle the Brightness method.
- **Gaussian sharpening** is a method for removing Gaussian blur. For this method, you can choose an effect strength, a radius, and noise suppression.
- **Overall sharpening** gets rid of overall blur in a picture. For this method, you can choose an effect strength, a radius, and noise suppression.
- **Soft sharpening** sharpens a picture's fine details while suppressing rough structures, making it useful for sharpening e.g. portraits. You can adjust the effect strength.

The **Brightness Method** setting means that the filter will only be applied to the picture's Lightness element within the HSL color model. This prevents the shifts in color that can otherwise happen around borders when you are sharpening strongly.

Differences Among Sharpening Methods

The various sharpening methods have considerably varying effects on pictures. While the **Unsharp mask** sharpens mainly highly visible edges in a picture, the other methods always sharpen the whole picture, thus emphasizing all details. In practice this means that in low-quality photos - whether they suffer from noise or excessive compression - the Unsharp Mask is the most advantageous of the methods, since the remaining ones would overly emphasize the less attractive parts of the picture.

Use the **unsharp mask** method to eliminate unsharpness that arose while taking the picture, scanning, etc. This method is very appropriate for photographs because it uses the details of the picture itself for its decisions. The basic idea behind this method is simple. A blurred copy of the original picture is created, and then that copy is "subtracted" from the original. The new copy that results from this has highlighted edges. This new copy is then "added into" the original. The **Radius** sets how much the mask is blurred, so its size is very important. Too high a value will cause oversharpening, which will show up as bright (or even shining) contours around any edges in the picture. The **Threshold** determines how different two brightness values should be before they are treated as an edge. A value of 0 means that the effect will be used on all pixels in the picture. If the effect overly emphasizes noise, then we recommend that you experiment with values in the range from 2 to 20.

The **Gaussian sharpening** and **Overall sharpening** methods are designed to remove concrete types of blurring using what is called a convolution matrix. The **Overall** type can rescue pictures damaged by unsharpness during picture-taking itself. **Gaussian** sharpening helps pictures that became blurred during processing - e.g. during shrinking. **Radius** sets how much of each pixel's surroundings will be included in calculations. A larger radius will be subjectively perceived as a much stronger sharpening effect. The **Noise suppression** can prevent oversharping without preventing sufficient sharpening.

When you shrink a picture using supersampling, this causes overall blurring, not Gaussian, but this is somewhat of an exception. Blurring that arises during picture-taking tends to lie on the border between Gaussian and overall blurring.

Blur

This function offers several methods for blurring photographs, both to enhance them photographically and for artistic purposes.

To reach this window, use **Edit | Adjust | Blur... [Ctrl+6]** in the Browser, or **Adjust | Blur...** in the Editor.

The filter offers six types of blurring: Fine, Gaussian, Overall, Directional, Rotational, and Zoom. The first type is good for creating weak blurring. For a stronger effect, use Gaussian or Overall. The other blurring types have some extra settings. For Directional blurring, you can set the **Direction**. For Rotational and Zoom blurring, you can set the X and Y **Center** of the blurring. (You can also select the center directly from the picture, using an eyedropper.) The first slider, **Strength**, is shared by all blurring types. The **High quality** option increases the precision of calculations at the price of increased time for calculating the blurring.

Brighten Shadows

This function finds and lightens dark places in a picture. Its effect is as if you had used a flash while taking the picture.

To reach the **Brighten Shadows** window in the Editor, use **Adjust | Brighten Shadows... [Ctrl+7]**. To reach it in the Browser, use **Edit | Adjust | Brighten Shadows... [Ctrl+7]**. You will especially appreciate this function when you are editing pictures with a large dynamic range, where e.g. a bright sky makes it impossible to properly expose the lower part of the photo, making it remain too dark and short on detail. The algorithm behind this function simulates what professional graphic artists do using layers in advanced editors—mixing the original photo with a black-and-white mask. However, unlike that manual work, this function is automatic.

The **Mask source** setting is useful when the effect is overemphasizing one of the color channels in the picture. If, for example, the picture contains a large amount of red (the red channel is strongly affected by this effect), choose the red channel as the source. The effect will then not be used on the red channel at all. (The mask is used in inverse form.) The usefulness of the remaining settings, **Brighten shadows**, **Light dampening**, and **Midtones**, depends strongly on the nature of the photo and what you want to do with it, and it is practically impossible to recommend specific settings here. We recommend that you experiment and make use of the preview window to compare the original photo with the result. Use **Strong effect** option when you are edited highly underexposed photographs. It doubles the strength of the brightening effect. Caution: when used in the wrong circumstances, this option can do more harm than good.

Noise

To remove noise from a photograph, use **Edit | Adjust | Noise [Ctrl+Shift+N]**. Zoner Photo Studio contains a tool for removing both the noise typical for long exposure times (sometimes called "hot pixels" noise; called "salt and pepper" in the program) and additive noise.

You can apply both methods at once. For the first method, you can choose the **Noise type** to remove. For the second one, you can set the noise removal Mode and **Strength**.

Advanced Noise Reduction

Use advanced noise reduction to gain detailed control over noise reduction settings. This gives advanced users full control over the noise reduction process.

To call up this function, use **Edit | Adjust | Advanced Noise Reduction** in the Browser or **Adjust | Advanced Noise Reduction** in the Editor.

This function first analyzes the noise in the image and only then begins correcting it. This process can take a long time on large images. However, changing most settings does not demand running the process again, and so is significantly faster. To exchange noise reduction quality for speed, use the **Quality** setting. Use the **Brightness** and **Colors** sliders to set the noise reduction level independently for the picture's brightness and color elements.

Besides these global settings, you can selectively adjust the amount of noise reduction for individual colors or image brightness levels. For this, use the controls under **Local correction, by color** and **Local correction, by brightness**. These controls each comprise a strip with a color or brightness gradient beneath a curve with several nodes. Drag the nodes of the curve to reshape it, thereby raising or lowering the noise reduction levels for individual colors/brightness levels. Click anywhere on a curve between its nodes to add a new node. To delete a node, press **[Del]**. Use the eyedropper to select a color or brightness level directly from the picture.

For pictures with very strong noise, the noise often tends to create color stains, which remain unattractive even after noise reduction. Use **Color stain removal** to eliminate this problem. Watch the intensity of color stain removal carefully. Too much intensity leads to excessive loss of detail in the image.

The noise reduction quality, that is, the amount of noise reduction compared to the amount of detail lost, highly depends on properly determining how much noise is in the image. Therefore, a rather detailed noise analysis takes place before noise reduction starts. However, in some cases the analysis can still incorrectly guess the noise intensity level, leading to incomplete noise reduction on the one hand, or overly aggressive reduction on the other. In such cases, under **Image noise intensity**, change the detection method to **Set manually** and adjust the detected noise intensity. It can be adjusted independently for colors and brightness. We recommend setting both noise reduction sliders to 100% and then watching the preview while adjusting the noise intensity so as to put it at a level where noise reduction is strong, but loss of image detail is still acceptably low. Then return the noise reduction sliders to the desired values.

Fix Chromatic Defect

To repair photos with this defect, use **Edit | Adjust | Chromatic Aberration...** **[Ctrl+Shift+A]** in the Browser. In the Editor, use **Adjust | Chromatic Aberration...**

Chromatic aberration can have any of several causes; one cause is different refraction of rays of light with different wavelengths. Its effect in pictures is to give places with high contrast a purple, or occasionally green or blue, blurred contour. Zoner Photo Studio provides an easy-to-use tool for remedying this defect.

When there is no chromatic aberration in the center of a picture and it becomes gradually stronger towards the edges, you can fix it using the **"Red-green"** and **"Blue-yellow"** sliders. By using these to "push" the color channels towards each other, you will fix the defect.

But if the chromatic aberration manifests itself in another way or if the mentioned controls are not enough to suppress it, you can turn on the **Desaturate a particular color** controls. These let you selectively suppress colors in the picture, with a tolerance level of your choice.

Fix Barrel Distortion

You can fix photos suffering from barrel or pincushion distortion using **Edit | Adjust | Barrel Distortion** **[Ctrl+Shift+D]**.

Barrel and pincushion distortion are frequent lens defects that have unpleasant effects on photographs of architecture and objects with straight edges. Use the slider here to set how strongly the photo's contents should be "pushed in" or "pushed out." When correcting barrel distortion, the **Auto-crop** option here is quite useful. You can set a **quality** level for this function; this sets what algorithm is used by the function. The low-quality but fast **Nearest neighbor** method is good while seeking the right amount of correction to use. The high-quality but slow **Bicubic method** is best once you are ready to apply the correction.

You should remove barrel or pincushion distortion from a picture before making any other edits to it (and especially before cropping it or correcting collinearity or perspective).

Fix Vignetting

To remove vignetting from a picture or add vignetting, use **Edit | Adjust | Vignetting...** [Ctrl+Shift+V] in the Browser or **Adjust | Vignetting...** in the Editor.

Vignetting is uneven exposure throughout a photo, with darkening towards the corners. Typical causes of vignetting are add-on lenses and filters for wide-angle lenses, and low-quality lenses.

When **Automatic mask** mode is active, the brightness correction mask is created automatically based on the picture.

When it is off, the mask is created based on the **Radius** setting, which sets how quickly the picture darkens towards the corner. This second antivignetting mode is only useful for uncropped pictures, because it always places the center of the correction in the center of the picture. Use the **Effect strength** slider to set the amount of vignetting to add or remove. (To add vignetting, use negative values.)

Interlacing

This window helps you fix problems surrounding interlacing, a common phenomenon in pictures obtained from video.

Digital cameras and other video equipment work, for historical reasons, with interlaced pictures. Such pictures contain two "fields"—half-pictures—that can each come from different scenes, especially if the source video sequence contained a large amount of motion. The first field is stored in the odd rows of the picture; the second field is stored in the even ones. If the scene is static, without movement, then the picture has full resolution, and no deinterlacing is needed. (The same applies for pictures taken from classical film video, which also usually contains two fields in each picture.) If the scene changes fundamentally between frames, then the picture will contain two fundamentally differing fields. The vast majority of camera stills are somewhere inbetween: some parts are moving; others, static.

Use **Edit | Adjust | Interlacing...** in the Browser window or **Adjust | Interlacing...** in the Editor window to reach the Interlacing window, or press [Ctrl+Shift+L].

Zoner Photo Studio can help you adjust and fix photos containing interlaced fields. Different methods are the right solution for different pictures—sometimes you will want to only deinterlace a part of a picture; sometimes you will even want to use different (de)interlacing tools for different part of a picture!

- **Blended clipping**—this method is the one generally recommended. It tries to intelligently join both fields in areas without motion, so as to increase the picture's final resolution. In areas with motion, the program needs advice on a "preferred" field that should be kept (and the other thrown out).
- **Blend fields**—this method joins both fields into one picture. In places with motion, the picture will be "double" and blurry.
- **Interpolate field**—only the preferred field will be used for calculations; the other field is thrown out and replaced with lines determined via interpolation.
- **Duplicate field**—only the preferred field will be used for calculations; the other field is thrown out and replaced with lines determined via duplicating lines from the preferred field.
- **Subsample field**—only the preferred field is used. Instead of filling in lines between it, it is shrunk using interpolation (subsampling), so that the ratio of sides in the final picture remains correct. The resulting picture will have 1/4 the resolution of the original.
- **Swap fields**—This method is not a deinterlacing method at all. It swaps the two fields instead. This is useful because some programs erroneously save fields in the opposite of the correct order. Swapping solves this.

The **Prefer first field** checkbox sets which of the two fields is the "preferred" one. The right setting for this checkbox will vary from case to case.

Joining threshold—this sets the minimum amount of difference that is judged to be motion when you are using **Blended clipping**. If you set it too high, then blended clipping may not catch and remove all interlacing artifacts in the picture. If you set it too low, you will effectively be needlessly reducing the picture's resolution, because more of the non-preferred field will be thrown away and replaced via interpolation than is necessary. We recommend values from 10 to 25.

Test brightness, not color—motion detection when using **Blended clipping** is based on differences in either color or brightness for each pixel in the first and second field. Detection based on color is most useful for drawn pictures or other scenes with large areas of one color (above all animated films). Brightness-based detection works well for parts of a picture with transparent elements (like television graphics, or logos).

You should de-interlace a picture before making any other edits to it (and especially before resizing it).

Effects

To apply artistic effects to pictures, use the Editor's **Effects** menu, or in the Browser, use **Edit | Effects**.

Edits that you make in the Browser are applied to files directly; you cannot undo them! So here as always: edit copies of your pictures, not the originals.

Old Photograph

This is a popular effect for both photos and film. It is sometimes also called "sepia." There is a slider here for setting the "age" of the picture.

Use **Edit | Effects | Old Photograph...** in the Browser or **Effects | Old Photograph...** in the Editor.

Add Grain

This effect simulates high-sensitivity film. You can set the **amount** of graininess and the **grain type**. Use **Colored Grain** to switch from a monochrome grain to a multicolored grain.

Use **Edit | Effects | Add Grain...** in the Browser or **Effects | Add Grain...** in the Editor.

Explosion

This effect looks as if you were viewing the picture through smoked glass. There is a slider here for setting the effect strength.

Use **Edit | Effects | Explosion...** in the Browser or **Effects | Explosion...** in the Editor.

Oil Painting

This effect makes a picture look as if it had been painted with a brush. There is a slider here for setting the effect strength.

Use **Edit | Effects | Oil Painting...** in the Browser or **Effects | Oil Painting...** in the Editor.

Waves

This makes a picture look as if it were reflected on a water surface with circular waves. There is a slider here for setting the effect strength.

Use **Edit | Effects | Waves...** in the Browser or **Effects | Waves...** in the Editor.

Pencil Drawing

This makes the picture look as if it had been drawn using colored pencils. There is a slider here for setting the effect strength.

Use **Edit | Effects | Pencil Drawing...** in the Browser or **Effects | Pencil Drawing...** in the Editor.

Pixelization

This lowers the quality of a picture by making it "blocky." You can set the size of the pixels (the blocks).

Use **Edit | Effects | Pixelization...** in the Browser or **Effects | Pixelization...** in the Editor.

Emboss

This effect makes a picture look as if it has been stamped into a mold. With the Desaturate option active, it will also be drawn in just a single color. Use the sliders here to set the effect strength and the direction from which light is shining on the picture.

Use **Edit | Effects | Emboss...** in the Browser or **Effects | Emboss...** in the Editor.

Detect Contours

This effect seeks out high-contrast edges. There is a slider here for setting the effect strength.

Use **Edit | Effects | Detect Contours...** in the Browser or **Effects | Detect Contours...** in the Editor.

Negative

This inverts the values in the color channels, creating a negative of the picture.

Use **Edit | Effects | Negative...** in the Browser or **Effects | Negative...** in the Editor for this.

Equalize Histogram

This function adjusts the frequencies of the brightness elements in the picture so that its histogram corresponds to the theoretical ideal histogram. This is a fully 16-bit function, unlike the **Equalize Histogram** control in the window named **Enhance Image**.

Use **Edit | Effects | Equalize Histogram...** in the Browser or **Effects | Equalize Histogram...** in the Editor.

Dynamic Thresholding

Ordinary thresholding is a process that converts a picture to black and white. Dynamic thresholding is too, but unlike in classical thresholding where a pixel is considered as black beyond a certain threshold, this function uses the surroundings of each pixel for its evaluation. Thanks to this fact, dynamic thresholding can give good results even in pictures with large brightness variations. You can change the feel of this function's output by adjusting the dynamic **Threshold** and **Surroundings**.

Use **Edit | Effects | Dynamic Thresholding...** in the Browser or **Effects | Dynamic Thresholding...** in the Editor.

Soft Contours

The Soft Contours effects sharpens a picture's fine details while suppressing rough structures, making it useful for sharpening e.g. portraits. This window contains four controls for four different levels of fineness of detail. Raising the value for a control raises the contrast for details with that level of fineness, while lowering the value lowers the contrast. Increasing the contrast for sufficiently fine details sharpens a picture, while decreasing the contrast for rougher details softens hard shadows while still leaving fine details sharp.

Damaged Photograph

This function alters a photograph to imitate damage caused by time (e.g. yellowing and faded corners) and mishandling (e.g. scratches and smears).

Access this function using **Edit | Effects | Damaged Photograph...** in the **Browser** or **Effects | Damaged Photograph...** in the Editor.

This function has Advanced and Basic versions. The Basic version offers a single slider; use it to set the desired level of damage. Use **Advanced settings** to switch the interface to the advanced mode, where each type of damage can be set independently. Click **Random with Same Settings** to change the shapes and positions of the individual image defects. Click **New Random Settings** to set the individual sliders to random positions.

Texture

Using this function makes a photograph look as if it had been painted onto a texture.

Access this function using **Edit | Effects | Texture...** in the Browser or **Effects | Texture** in the Editor.

Use **Texture** to set the type of material whose texture is simulated. Use the **Intensity** slider to set how visible the texture is.

Tone Mapping

Use Tone Mapping to produce HDR from a single picture. Use the settings here to influence local contrast and emphasize details in light and dark areas.

Use **Intensity** to set how strongly tone mapping affects surrounding pixels. **Compression** This determines how strongly the whole HDR dynamic range should be represented in the final output. Use **Light** to reduce the influence of lights and shadows. To set color intensity, use **Saturation**. Use **Gamma** to shape the gamma correction curve. The **White Color and Black Color** settings determine the "cutoff" percentages for the effect. **Lights Intensity and Shadows Intensity** set how strongly the effect is applied in the picture's lights/in its shadows.

The settings here are the same as for [Create | Tone Mapping HDR](#) in the Browser.

Shift Colors

Use this function to fine-tune colors of your choice. To set the color to edit, click the eyedropper and then click a spot with that color inside the picture. The color you clicked is added to the color list. You can then edit its **Hue**, **Saturation**, and **Lightness**. Normally, your changes also affect colors surrounding the color you change. This is done in order to avoid sharp transitions. However, if a color is selected in the list but no edits have been made to it, then it is immune to this kind of color change. To start changing the color-shifting settings for a color, click that color in the list. To remove a color from the list, click **Remove color from list**. Shift Colors affects pixels with the selected color regardless of their locations. To shift colors in only a part of a picture, select that part of the picture before using Shift Colors.

Grayscale

To convert a color picture to shades of gray (a black-and-white photo), use this function. You can influence the method used, to guarantee perfect grayscale pictures with good contrast.

Some color contrasts will disappear after conversion to grayscale (e.g. the difference between green and blue or red), making the result look especially "gray" compared to a color picture. An elegant solution to this is color-channel-based grayscale conversion, which can give you a picture with good contrasts even in cases like this.

To use this function, go to **Edit | Effects | Grayscale [Ctrl+G]** in a Browser window, or **Effects | Grayscale** in an Editor window. This window offers you several methods for converting to grayscale. They affect how the individual color channels will be processed:

- **Grayscale**—uses all channels in a fixed ratio that corresponds to the typical way that the human eye perceives light. This is a useful method for most photographs.
- **Desaturation**—this removes the color elements from the picture.
- **Advanced**—this uses a complicated conversion method. The results are comparable with the first method, but more demanding on your computer.
- **Average of channels**—the average value among all color channels is calculated for each pixel.
- **Maximum of channels**—this uses the color channel with the highest value.
- **Minimum of channels**—this uses the color channel with the lowest value.
- **Red channel**—this uses the red channel only.
- **Green channel**—this uses the green channel only.
- **Blue channel**—this uses the blue channel only.
- **Custom**—the channels are used in the ratio that you set under **Source channels**. This method gives the most opportunity to choose which elements should receive how much emphasis. Turning on **Normalize** will ensure that the sum of the percentages will be an even 100%.

Mix Channels

This effect changes a picture's tinting by assembling colors from the original color channels in a new relation to each other.

Work with RGB channels is especially useful when repairing defective pictures with misassembled channels, for advanced color balance adjustments, and for reconstructing the colors in infrared photographs. For infrared photography, due to extremely strong exposure of the red channel, we recommend conversion to black and white, or swapping of the red and blue channels, for a more natural feel.

To reach this window, use **Edit | Effects | Mix Channels...** in the Browser, or **Effects | Mix Channels** in the Editor.

The first three items in this window's **Channel** menu set what channel's output should be affected by the source channels listed below the menu. **Offset** gives a flat strengthening/weakening of the whole channel. Setting the channel to **Grayscale** switches the whole window into grayscale mode. Unlike the [Grayscale](#) function, it enables subtraction of individual color channels.

Gradient Map

Use this function to tint the picture towards a pair of colors of your choice. The input picture is first converted internally to grayscale. All output colors are mapped to shades in that "hidden" grayscale step.

You can reach this function using **Edit | Effects | Gradient Map** in the Browser, or **Effects | Gradient Map** in the Editor.

The darkest shades in the picture will receive the color on the left of the gradient; the lightest shades get the color on the right. You can set the endpoints of the gradient by clicking the buttons at the two ends of it. You can add other colors of your choice in the middle of the gradient. To do so, either double-click the gradient or click **Add**. To change a color on the inside of the gradient, select the marker for it and then click **Active**. You can also move the marker to a different place inside the gradient. Clicking **Erase** will erase the selected color from the gradient; **Erase All** will erase all colors inside the gradient, leaving only those at the two ends.

Custom

Very advanced users can use the custom filter to apply a customizable convolution matrix to a picture.

Use **Edit | Effects | Custom...** in the Browser or **Effects | Custom...** in the Editor to reach this function.

The principle behind this function is actually quite simple at its core. The matrix contains 5×5 coefficients, which set how the value of each individual pixel in the future picture will be calculated. Each coefficient multiplies the brightness of the given pixels during processing. The value stored directly in the middle of the matrix represents the value that is used directly for the given pixel itself. The other coefficients are used for processing this pixel's surroundings. For example, the coefficient at the top left is used to multiply the brightness of the pixel two pixels up and to the left from the given pixel; all 25 coefficients are used in a similar manner. The resulting values are summed together one by one, and then their sum is divided by the **Divisor** value. You can have its value **Set automatically** by the program to the sum of all coefficients. The **Shift** is then added to the result of the division, and the result is the final brightness value sent to the given pixel. The whole calculation is repeated for every pixel in the picture and for each of the three color channels.

The function's practical use depends on what matrix you use. For example, a high positive value in the middle and negative values in its immediate surroundings cause sharpening of a picture, doing the inverse blurs it. Using the Shift value, you can lighten or darken the whole picture by a specified amount.

Variations

Use the Variations function to edit a photo's brightness and tinting "visually"—by viewing variations of the current picture and picking the best one.

To reach this function, use **Effects | Variations** in the Editor.

The preview at the far left shows the original picture. Use the three pictures directly to its right to lighten and darken it. Use the six pictures to the right of those to change its tinting. The column for lightening and darkening includes the original for comparison. The hexagon for tinting also includes the original for comparison. To edit the picture's colors, click the preview with the new look that you desire. To return to the picture's original look without leaving the window, click the preview of the original.

Use the slider at the top right to change the effect's **Strength** to any of five levels from **Small** to **Large**.

Envelopes

You can find the Envelopes function under **Edit | Effects | Envelopes...** in the Browser, and under **Effects | Envelopes...** sets what path (folder) is shown when using the Editor's Save As... window.

Use Envelopes to give your photos stylish frames. These frames can have any of several dozen predefined shapes, such as hearts, bubbles, etc. Zoner Photo Studio can set the envelope's background color and the sharpness of the transition into the envelope. It can also do a "fading" crop into the envelope.

You can choose from several types of envelopes:

- **Black-and-white and Color Templates** —The photo will be "cropped" to fit the envelope (frame) you choose. You can move the envelope around the photo and resize it. The crop receives the color you set under **Color**. The borders can be made blurry, by increasing the value for **Blur**.
- **Postage Stamp** —Use this to add a postage stamp border that goes around the picture or fits into it. You can set the stamp's color, background color, and width, and a position and rotation for its shadow.
- **Puzzle** —Use this to divide a picture into puzzle pieces with a pen width, pen color, and percentage of missing pieces of your choice.
- **Filmstrip** —makes the picture look like a frame in a filmstrip.
- **Notebook paper** —makes the picture look like a piece of notebook paper.

Custom Envelopes

You can create your own envelopes in addition to the ones already provided. Envelopes "crop" pictures based on masks that are saved in one of the system folders of Zoner Photo Studio – the Envelopes folder. Black-and-white envelopes are defined using a GIF-format picture with a size of 1024 × 768 pixels and a preview (also in GIF format) with a size of 60 × 45 pixels. Color envelopes are defined using a picture in the PNG format, with alpha channel transparency, and another picture for the preview (also a PNG file), with the same sizes as above.

Give the files that make up your custom envelopes numeric filenames following the existing pattern in the Envelopes folder. Your envelopes will then automatically appear in the program's list of envelopes. Zoner Draw (a separate program also by Zoner Software) is one very good program for preparing custom envelopes. The Envelopes folder contains a sample Zoner Draw file (envelope.ZMF) to help you prepare custom black-and-white envelopes.

Borders

Fading Borders

If you want to "fade out" the edges of a picture, you can use **Edit | Effects | Fading Borders....** In this window, you set either a single fade width for all sides (if the **Symmetrical** option is on) or set them separately for all four sides. The **Transparency** setting determines how strongly the picture will be made transparent at its borders. You can also set the color of the background that the picture will be placed upon.

Soft Shadow

The Soft Shadow effect makes pictures seem to float above a background. To reach this function, use **Edit | Effects | Soft Shadow**. You can set the horizontal and vertical offset for the shadow in pixels. The Blurring setting determines how strongly the edges of the shadow are matted. Transparency affects how the color obtained from mixing the **Shadow color** and **Background color** will be finalized.

3D Buttons

Use **Edit | Effects | 3D Buttons...** to reach this window, where you can make pictures look like buttons by lightening/darkening their edges. These buttons will have a 3D look.

Plug-In Modules

To use plug-ins compatible with Adobe Photoshop (8bf plug-ins) within Zoner Photo Studio, use the Editor's Plug-ins menu. Plug-ins are external picture processing "filters"—functions—that you can use on the current picture.

Zoner Photo Studio does not include these plug-ins, but both free and commercial plug-ins are available on the Web. To find free plug-ins on the Web, do a Web search for e.g. "free 8bf."

Edit Image

There are several ways to start editing a picture:

- the commands named **Edit Image... [Enter]** and **Edit Image in New Tab... [Ctrl+Enter]** in the Manager's **Edit** menu,
- clicking the **Editor** button at the top right of the program's main window,
- the **Editor** or **New Editor** items in the right-click menus for pictures' thumbnails in the Browser,
- if you have enabled it under [Settings | Preferences...](#), then double-clicking a picture in the Browser. Doing this while holding down **[Ctrl]** opens a new Editor,
- clicking the **Open New Editor** button to the right of the tabs at the top of the main window opens a new, empty Editor

If you already have an Editor tab open and the picture in it has not been changed since it was last saved, the new picture is opened straight to that tab. Otherwise, a new Editor is opened instead of using any of your existing tabs. If no Editor tab is open yet, this opens one up.

Editing the Selection Border

To reach the Editor's functions for editing the selection border, visit the menu named **Selection**. The selected part of a picture lies within a border (normally shown as an animated dashed line). You can copy the selected part of a picture to the Windows Clipboard and then [paste it into another picture](#). Most of the Editor's tools, filters, and effects work with the selected part of a picture. If there is no selection, they affect the whole picture.

Besides the commands for [editing the selection border](#) there are also several others here:

Edit Selection

There are several things you can do with a selection: **stretch it/shrink it**, give the selection outline an emphasized **border** with a size of your choice, or **blur** the selection; this is good for "softening" the selection borders. Enter the numbers for these settings as numbers of pixels. When **Automatic Preview** mode is active (the padlock icon), changes are previewed immediately.

Displaying the Mask And the Selection Border

The "Mask" used in Zoner Photo Studio is simply one way of displaying the selection - the Editing Layer. To adjust the mask display settings, use the items under **Selection | Mask Display** or use the toolbar named **Mask**. You can choose among several different ways of showing the mask:

- **Do not show** - no selection mask is shown at all
- **Normal** - the unselected part of the picture is covered in a red mask
- **Inverted** - the selected part of the picture is covered in a blue mask
- **Mask Only** - only the selection itself is displayed, in black and white. White indicates the selected part of the picture; black indicates the unselected part; grays indicate selection blurring.

Use **Show Selection Outline** to hide or show the selection border. This can be useful when, for example, previewing the output of editing tools full-screen in the Editor. The mask display and selection outline settings return to their default settings when you move to a different picture: that is, the mask is not shown and the selection outline is visible.

Framing the Selection Border

Use **Selection | Border** to fill the border of the selected part of a picture with a **Color** of your choice, in a way defined by the **Mode** and **Opacity**. You can also set the pen **Width** and its **Position**.

Fill Selection

Use **Selection | Fill** to fill the selected part of a picture with a **Color** of your choice, in a way defined by the **Mode** and **Opacity**.

Fill with Surroundings

Removing an unwanted object from a picture can be a relatively demanding and time-consuming process, requiring the use of multiple tools, and with no guarantee of a satisfactory result. Use the **Fill with Surroundings** tool to make Zoner Photo Studio attempt to remove an object automatically, thus avoiding this tedious process. Create a selection containing the material to be retouched out of the picture, then press **[Shift+Delete]**. This function fills the selected area with fragments based on the picture, making the area blend with its surroundings as well as possible. Because the algorithm for filling in an area has high processing demands, this function is recommended for small areas only. When a large area is selected, especially in a high-definition image, the process can be extremely slow.

Save Selection

This saves the current selection (to PNG by default) so that you can later read it back in using **Load Selection**.

Load Selection

This loads in a selection (not its contents!) from a file. You can add the loaded selection with the current one, subtract it, or use its intersection. You can also set its position in the picture.

The Editing Layer

The Editing Layer

Most edits and effects in the Editor, as well as the tools for inserting text and pictures, are applied to what is called the **Editing Layer**. To control which part of the picture is affected by this layer, use selections. To edit selections, use the [selection tools](#). You can set the Editing Layer's **Opacity** and if appropriate change the **Layer Mode** using the controls in the toolbar named **Layer**. The Opacity percentage sets how strongly the original picture is covered up. The layer's Mode sets how the changes are integrated into the original picture; 20 modes are available.

You can adjust the settings for the effect or tool you are applying, for the selection itself, and for the Editing Layer all at the same time, with the changes previewed nonstop in the Editor.

The **Apply** and **Cancel** buttons on the toolbar apply the current changes or cancel them. You cannot change Editing Layer settings after you click Apply.

Effects

When placing an object (a picture, text, or symbol), you can apply various effects to the Editing Layer. To display the window for adjusting effect settings, click **Effects...** in the Layer toolbar or use **Layer | Effects...**. You can change effects' settings for as long as the Editing Layer is active. Once you click Apply, these settings become inaccessible.

The following effects are available:

- Shadow
- Inner Shadow
- Outer Glow
- Inner Glow
- Outline
- Bevel and Emboss

- Satin
- Color Overlay
- Gradient Overlay

To save effect settings so they can later be reloaded, use the **Presets** at the bottom of the window.

Transparency in the Editor

The Editor supports transparency stored within pictures in these formats: **PNG, GIF, TIFF** , and **JXR**. To ease your work with transparency, the program shows it as a gray-and-white checkerboard.

Applying And Removing Transparency

To apply transparency to a selected part of a picture, use **Layer | Set Transparency**. If needed, set the degree of transparency in percent. To quickly set the transparency for the selected part of the picture to 100%, press **[Del]** . To "draw" transparency onto the picture, use the [Eraser](#).

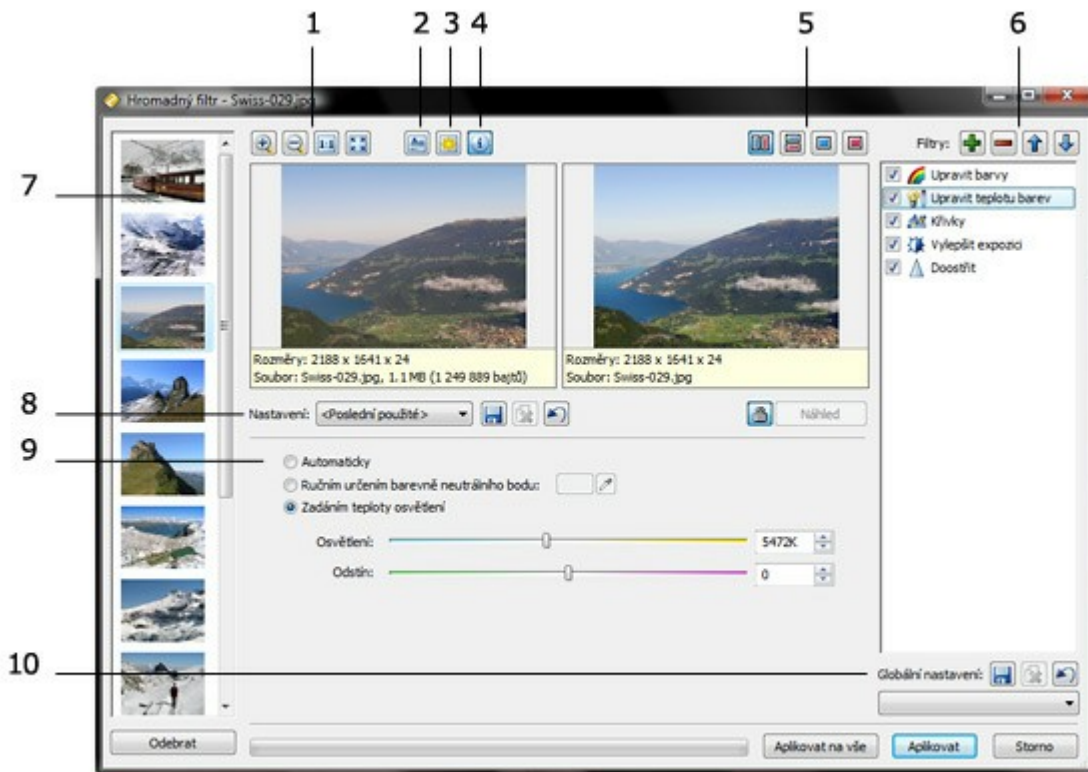
To remove all transparency from a picture, use **Layer | Remove Transparency....** You can set the background color to use as a replacement for the transparency.

Saving Files with Transparency

When saving files with transparency, you can **Keep Transparency** for formats that support it. In other formats, to set the color with which to replace transparency, use **Replace transparency with this color:**.

Universal Window for Editing Functions

Most of the editing windows in Zoner Photo Studio are actually variations of a single window. This window has two modes for displaying previews. The first of these two methods is the classic one: previews directly within **preview panes** at the top of the window. In the second method there is **no preview pane** and so changes are previewed directly within the Editor. To switch among modes, click **Change Window Mode [F10]**. The bottom part of the universal window always differs depending on which effect you are using. Outside of the Editor, only the first, classic mode is available.



1 – thumbnail size, 2 – histogram display, 3 – blowout display, 4 – information, 5 – layout of before/after previews, 6 – add, remove, change the order of edits, 7 – thumbnails of files to be edited, 8 – save/load presets for this window, 9 – control panel, 10 – save/load batch filter

Thumbnail column on the left in batch editing windows

When you are in the classic window mode, the top part of the window enables you to see the results of your current edit before it is applied. In the left part, there are four buttons for controlling the zoom level - for zooming in, zooming out, 100% zoom, and the fit-to-window zoom level. (You can also zoom in and out using the mouse wheel.) The next group of buttons can show and hide a histogram display, blowout highlighting, and a picture information display. Histogram displays can be moved around freely within preview windows.

The buttons at the top right set which previews are shown, and with what layout. Normally, the source and target (before and after) previews are side-by-side. By clicking the mouse wheel, you can temporarily show the contents of one preview within the other preview.

When a picture's preview is zoomed in large enough that it does not fit within its preview pane, you can click and drag it to set which part of it is shown. The sizes of the preview panes change depending on the size of the editing window.

When an editing window includes one or more eyedropper buttons, you can click an eyedropper button and then select a color from inside a preview.

If refreshing (redrawing) of the previews is uncomfortably slow, you may wish to turn off automatic previewing by clicking the **Automatic Preview** button (the "lock" button). To manually refresh a preview pane, click **Preview**. The "Outdated preview" text displayed over a preview pane with a "stale" preview disappears as soon as you do a manual refresh.

Previewing Directly in the Main Editor Window

In this mode, the main Editor window displays how the picture looks with the current changes. To see how it looks without the changes, uncheck **Preview**. In this previewing mode, the Editor window is partially blocked - you can only resize the Editor, change its display (the zoom level and blowout and histogram displays), and edit the selection mask.

You can also modify several display settings for the editing window. To do so, click the button named **Options**. Here you can make the editing window transparent, and set the strength of that transparency.

Batch Operations

During batch operations (editing of more than one file at a time), the editing window contains a column at the left with thumbnails for all of the files that the edit will affect. You can browse among these thumbnails so as to "test" how the edit in question affects them. Click **Remove** to take the highlighted picture out of the list of pictures to be edited. To apply the edit to the current picture, click **Apply**. You can also apply it to all pictures (**Apply to All**). Click **Cancel** to cancel out of the whole batch edit.

Saving Editing Window Settings as Presets

You can save the settings for any editing window as a preset with a name of your choice and later reload that preset (those settings). Additionally, whenever you apply an edit, the settings you use are automatically saved to a preset named **<Last used>**. The settings stored in the **<Last used>** preset are automatically read in the next time you use the given editing window. Use the **Save Preset** button to store a preset. Use the **Delete Preset** button to delete a preset. You cannot delete the **<Last used>** and **<Default>** presets. The **Default Preset** button is a quick way to load in the **<Default>** preset. This represents the window's "factory settings."

You can import and export presets in the window that appears when you use **Settings | Presets Manager...**

After you leave any editing window, its size is stored, as are the settings for blowout and histogram display and for **Automatic Preview**. The remaining settings are stored separately for each editing function, as described in the discussion of presets above.

The Editor's View Menu

When displaying a multi-page TIFF or ZMF file, the Editor can show any of the pages within it. You can move among pages using **View | Previous Page [Ctrl+Page Up]** and **Next Page [Ctrl+Page Down]**.

Show Blowout

To highlight blowout (overexposed regions) and underexposed regions in the current picture, use **View | Show Blowout [Shift+O]**.

In regions with blowout, one or all color elements have reached their maximum values. No room to go higher means no room for variation, so regions with blowout lack detail. Overexposure is actually not the only cause of blowout; it actually also affects regions with strong light sources, like the sun or a fire. Blowout does not automatically mean a bad photo, though multiple and large regions with blowout do mean a bad photo. In some places, blowout is inevitable (e.g. reflections off of shiny objects). Blowout highlighting is informational only. It makes no sense to, for example, darken a photo just so that Zoner Photo Studio stops highlighting blowout in it: the detail has already been lost, so darkening won't restore it.

Zoner Photo Studio can highlight eight different types of blowout: blowout in the R, G, and B channels, combined RG, RB, and GB, RGB (places where all three elements have blowout), and summary blowout, where even though there is no blowout in the individual channels, their sum exceeds a certain threshold. You can choose to have places without blowout be displayed in grayscale or in color. Places with blowout are shown in saturated colors representing the affected channels: red for R, green for G, blue for B, yellow for RG, purple for RB, cyan for GB, and bright yellow for RGB. Summary blowout is displayed in medium yellow.

Zoner Photo Studio can also call attention to underexposed areas - overly dark places lacking detail. These places are displayed in bright sky blue.

You can change how blowout is highlighted using **Preferences | Other | Display of blowout and underexposure**. For more on this, see the topic about the "Other" section of the program preferences.

Show Histogram

Use **View | Histogram [Ctrl+H]** to show an undocked Histogram window inside the main Editor window. This window can be repositioned. Right-click over the histogram window to show a menu that you can use to resize the window and change the histogram's appearance.

Pre-Print Color Preview

Use **View | Pre-Print Color Preview [Shift+P]** only when you have turned on color management (**Settings | Preferences | Color Management | Use color management**) and selected a printer profile: it is only useful in this situation. This function translates the picture into the color profile that the printer would apply during printing, and displays the result on-screen.

Show Focus Points

Use **View | Show Focus Points [Ctrl+Shift+O]** to see the places in the photo that were selected as focus points at the moment when the camera trigger was pressed. This function is only available for pictures from Canon and Nikon cameras, and only works correctly on unmodified photos.

The Show Blowout, Pre-Print Color Preview, and Show Focus Points options have one important thing in common. They only change the way the picture looks on-screen. For all other purposes (e.g. when saving), the program works with the original source picture. Also, these functions turn off automatically when you switch among pictures.

Lossy JPEG Compression and Lossless Operations

JPEG compression, defined by an ISO norm in 1990, was developed for the purpose of efficient storage of photographic data. Lossy compression (such as JPEG) takes advantage of the human eye's imperfection and stores data with a certain loss of information, thanks to which it achieves much higher compression than lossless compression does. The mentioned imperfections include for example a greater sensitivity towards large changes than fine details, and towards brightness changes than color changes. JPEG takes advantage of this to reduce the size of color information by recalculating color channels to a lower resolution (subsampling). The amount of detail preserved by JPEG is configurable, and is measured by a "quality level" on various scales; Zoner Photo Studio uses a scale from 1 to 100. Higher values mean less distortion and a larger output file. Smaller values mean more distortion and a smaller output file. JPEG compression settings affect only the picture's quality and file size. Its size in pixels remains unchanged.

Choose compression levels based on how you plan for the picture to be used. Use values from 30 to 60 to maximize size saving. Use values from 70 to 80 for usual purposes, e.g. for pictures published on the Internet. Use values from 80 to 100 for desktop publishing. Although higher values give more detail, this relationship is not linear. Values above 90 give nearly imperceptible improvements while markedly increasing file sizes.

Because of rounding errors in calculations, and in some cases due to color subsampling, JPEG compression causes quality loss even when you use a quality value of 100. Therefore, JPEG compression is inappropriate for pictures that require absolute precision (pen drawings, line drawings, etc.). However, for photographs, it is invaluable, since with proper settings, the changes to a picture are imperceptible. The JPEG Group also created an ISO standard for lossless JPEG compression, but this standard is unused. It is outdated today, since the more modern PNG standard generally gives better results than lossless JPEG.

Lossless Operations

It is sometimes necessary to rotate pictures because they were taken in portrait orientation (with the camera turned on its side). Every time you open, edit, and resave a picture with JPEG compression, some detail is lost. Therefore, Zoner Photo Studio enables lossless transformations wherever possible, that is, for mirroring pictures and for rotating them by 90 degrees.

Lossless transformations are only possible for those JPEG images that have both dimensions divisible by a number that can in turn be obtained by multiplying the basic JPEG-block size (8) and the color channel sampling values (1 or 2). This number determines the size of the blocks used for performing JPEG compression. The typical samplings are 2:1 in both directions, or 2:1 in the horizontal direction only. Typical block dimensions are 16 × 16, 16 × 8 and 8 × 8. Cameras normally produce photos with dimensions that are multiples of these values, and thus for uncropped, unresized photos, the above-mentioned transformations are always lossless in Zoner Photo Studio.

The program's behavior when these transformations are performed on photos whose sizes do not meet this requirement depends on a setting in [Settings | Preferences | General](#): either the picture is cropped to meet the requirement, or the transformation is lossy rather than lossless.

Lossless transformations are only possible for operations performed from the Browser. By its nature, work in the Editor involves decompressing a picture and then recompressing it before saving.

To eliminate unneeded quality losses when resaving in the Editor, use high JPEG compression quality values such as 90 to 95. To set what values are used automatically, use [Settings | Preferences | General](#). To set the value manually while saving, use "Save As" and then the control offered during the saving process. To avoid quality loss altogether, use a format with lossless compression, like PNG or TIFF. If you need support for EXIF picture

information, do not use PNG: it does not support it.











Editor Tools

Use the Editor tools for precise edits to individual pictures. You can find these tools on the main toolbar, on the left of the Editor window. After you select a tool, the Options toolbar shows tool-specific settings. Some of these are also available when you right-click the image. You can only have one tool active at a time. Whatever tool is active when you leave the Editor will be active again the next time you launch it.

The tools can be displayed in either one or two columns. To switch between these display modes, use the toolbar's right-click menu. If some tools do not fit on the toolbar because the main program window is small, you can reach the missing tools from the menu that appears after clicking the arrow symbol at the end of the toolbar.

You can save and later reload sets of settings ("presets") for certain tools. Use the toolbar button with a "gear wheel" to open the window for this. In this window, you can also return a tool's settings to the Default preset.

The Editor Tools and Their Shortcuts

 Zoom	Z	Retouching and Drawing Tools	
 Panning	P	 Red Eye Reduction	R
 Crop	C	 Clone Stamp	S
Alignment Tools		 Iron	U
 Align Horizon	H	 Effect Brush	E
 Edit Collinearity	K	 Healing Brush	J
 Perspective	V	 Paintbrush	B
Transformation tools		 Fill	G
 Morphing Mesh	X	 Eraser	Y
 Deform	Shift+X	Pasting and Effects Tools	
Selection Tools		 Place Image	I
 Rectangular Selection	M	 Place Text	T
 Elliptical Selection	O	 Insert Symbol	Shift+T
 Lasso	L	 Gradient Filter	F
 Polygonal Lasso	N	 Droste Effect	D
 Magnetic Lasso	A		
 Magic Wand	W		
 Selection Brush	Q		

The Pan and Zoom Tools



Zoom

Use **Zoom [Z]** to zoom in or out of the picture. To conveniently zoom via keyboard shortcuts; use: **[Num +]** and **[Num -]** for zooming in and out, **[Num *]** for 1:1 scale (100% zoom), **[Num 0]** to fit the whole picture on screen, **[Num .]** to fit only the "short side" (the side easier to fit) on screen, and **[Num /]** for zoom lock. The mouse wheel can also be used to zoom; for this, rotate it while holding down **[Ctrl]**.

To temporarily switch to the Zoom tool while another tool is active, hold down **[Ctrl+Space]**.

Zoom Lock works as follows: when you move among pictures using the Editor's Next, Previous, First, and Last File functions, the zoom level stays the same. The lock turns off when you open a new Editor window.



Panning

Use **Panning [P]** to shift (pan) the image around the screen if it is larger than the screen. To pan without using this tool, hold down **[Space]** or wheel-click the mouse and then drag. You can also simply pan using the arrow keys.

The Crop Tool



Crop

To crop a picture, use the Editor. It contains the **Crop tool [C]**, which you can find in the Editor's main toolbar, the one that runs down the left side. Activate this tool, then draw out (or lay down - see below) the cropping rectangle, and then perform the crop. An easy way to do so is to click **Crop**. If you have right-click menus active in the Editor (using the Editor preferences), then you can crop using an item in the right-click menu. If not, then right-clicking crops immediately.

Digital and film photography use different ratios of sides: 4:3 vs. 3:2. And the ratios of sides in most professional photo prints are still 3:2 to this day. When you are preparing to send photos out for professional printing, e.g. to a photo lab, you will usually want the pictures they receive to have the same ratios of sides as the paper they will be using. Otherwise, they will have to either crop the photos themselves (quickly, blindly, and badly) or give them white borders.

You can force the cropping rectangle to have a fixed ratio of sides, or even an entirely fixed size. The fixed ratios of sides are, above all, an easy way to crop to the 3:2 ratio discussed above. Fixed sizes are good for things like desktop wallpapers. Several frequently useful ratios and sizes are provided in a drop-down list on the options toolbar - the one whose contents change depending on which tool you are using. The **Free Aspect** for this. **Current Aspect** matches the ratio of the cropped picture itself. Turn on **Fixed Aspect** to set a fixed ratio of your choice using the toolbar. As always with fixed ratios, this means in practice that as you draw out one side of the rectangle, the other will change to match. Turn on **Fixed Size** to enter your own choice of fixed size using the toolbar. Use the last option, **Settings...** to open a window for such work.

Click **Swap Values** (the toolbar button between the two size or ratio boxes) or press the **[^]** key (under **[Esc]**), the values in the two boxes switch places, turning your Portrait crop into a Landscape one or vice-versa.

If you turn on the **Snap to edges** option, then the relevant edge of the cropping rectangle will "snap" to any significant edges detected in the picture as you go about sizing or moving it. You can temporarily turn snapping on or off by holding down **[Alt]**.

If you press **[Ctrl+A]** and you are not using a fixed aspect or size, the cropping frame will immediately stretch out to cover the whole picture. When you are using a fixed ratio, the cropping frame will only stretch out to occupy the largest possible area that it can before hitting an edge. That can be a problem if your picture has a Portrait orientation while your cropping frame is Landscape, or vice-versa. Although you can swap the crop's ratio of sides, this is inefficient when you are trying to crop many pictures in a row. Press **[Shift+A]** to stretch the cropping frame to the largest size supported by your chosen fixed aspect, even if it needs to swap the sides to reach that size.

Red Eye Reduction Tool



Red Eye Reduction

There is a tool in the Editor dedicated to red eye reduction. To start using it, click the **Red Eye Reduction [R]** button in the main toolbar.

This tool offers three modes.

In **Remove Red Eye** mode, you can just click on the red part of an eye, and the program will automatically find the borders of the red region and perform the correction. Use the **Remove White Eye** mode when you encounter extremely strong flash reflections (especially common in the dark) and eyes in the picture are unnaturally shining.

You can change reduction settings in the toolbar even after you have clicked on an eye. The changes will immediately be reflected in the picture itself.

In **Remove Using Brush** mode, you give a brush size via the toolbar, and then you repair the eye area by "painting" on it. If you paint in the wrong place, just undo your steps: **Edit | Undo [Ctrl+Z]**. Red eye reduction work in general goes best when you are zoomed in on a picture.

You can also work in **Advanced** mode. In this mode, you can choose a different problem color than red or white; just use the eyedropper to pick it out. This is useful for animal-eye problems.

In the options toolbar, you can set the tool's **Radius**, its color **Tolerance**, **Darkening** of the retouched area, **Blurring**, and the tool's **Extent**. You can use a tablet with this tool just like with the other [retouching tools](#).

The Retouching Tools



The Clone Stamp

Use the clone stamp to "paint" one part of a picture onto another. Usually you will be doing this because you want to cover up something using a background texture from some area with a similar background, but no foreground. Some typical things covered up this way are telephone wires and pimples.

The **Clone Stamp [S]** is on the Editor toolbar.

After activating the tool, press and hold down the **[Ctrl]** key (the mouse cursor changes to a crosshairs) to set the source area for cloning. After that, the tool will start cloning the source area ("painting" with it) wherever you click or drag with it. The **Radius** sets how large an area of the picture is transferred, **Opacity** is the maximum allowed amount of transfer (achieved by repeatedly using the tool over the same part of the picture), **Density** is the amount of the picture applied during one use of the effect over a part of the picture. In **Aligned** mode, the source area will always move with the target area. When this mode is off, the source will always return to the original point when you let go of the mouse button and then start "painting" again.

Spacing sets how often the tool should be applied. You set it as a percent of the brush size. Thus with small values, the tool will be applied during even the tiniest motion of the mouse, while with a value of 100%, it will be applied only once per full brush length.

Blur The Blur value sets how the tool will behave at the brush edges.

Use the **Mode** to set how the cloned part of the picture blends into the original picture.



Iron

Use the Iron to iron out fine details, like in portrait photography. To activate it, use the toolbar button named **Iron [U]**.

The settings for **Radius**, **Opacity**, **Density**, **Blur** and **Spacing** work the same as they do for the other tools, e.g. the Clone Stamp. The **Smoothing** setting determines the effect's strength.



Effect Brush

Use the Effect Brush tool to "paint on" local picture edits. To activate it, use the toolbar button named **Effect Brush [E]**.

What precisely this tool does at a given moment depends on which **Effect**: option you have set: brightness, gamma, contrast, saturation, or sharpening. It also depends on your setting for **Strength**. The other settings, like **Radius**, **Opacity**, **Density**, **Blur** and **Spacing** work the same as they do for the other tools, e.g. the Clone Stamp.



Healing Brush

Use the **Healing Brush** to remove minor scratches and distracting spots and replace them with material from the healthy, "clean" part of the picture. Work with this tool as you would with the **Clone Stamp** while keeping in mind that this tool does not transfer the source region itself, but just its texture, which is adapted to the target area as you apply it.



Tablet Support

Zoner Photo Studio supports work with a tablet for all of its retouching tools. Once your tablet is properly installed and connected, a tablet icon will appear in options toolbar in the Editor. Clicking it will open a window where you can ask the program to vary one option based on the pen pressure that the tablet measures as you draw. The options you can affect using pen pressure are as follows: **Radius**, **Opacity**, **Density**, **Blur**, and **Spacing**. Of course, all this only apply if the current tool actually has the given option.

Note that for technical reasons, only one program in Windows at a time can work with pen pressure on a tablet.

If Zoner Photo Studio is not reacting to pen pressure, check to see if any other pressure-sensitive programs are running. If they are, close them, and then restart the Editor.

Alignment Tools



Align Horizon

The Editor has a dedicated tool for aligning horizons. To activate this tool in the Browser, use **Edit | Tools | Align Horizon [Shift+Alt+H]**; in the Editor, use **Align Horizon [H]**. In the past, you may have fixed tilted horizons using rotation and trial and error. However, trying to arrive by guesswork at how many degrees to rotate a photo leads to wasted time and poor results. In Zoner Photo Studio you simply line up a guideline against the real horizon, and the program takes care of the rest.

When you activate this tool, a guideline with two handles will appear. Line it up against the real horizon, or even against a vertical like a flagpole if you prefer - simply anything that can be used to remove the tilt from the picture. Then click **Apply**. You can also right-click instead. Use **Snap to edges** if you want this tool to auto-detect significant edges in your picture and to "jump" to them on its own. You can temporarily turn snapping on or off by holding down **[Alt]**. **Auto crop** makes the program automatically crop away the empty areas that appear after fixing perspective.

Use **Grid** option turns on display of a grid that can help you find the best rotation for the picture.



Collinearity

To adjust collinearity, that is, to eliminate "tumbling" lines, use the tool named **Collinearity [K]**. Use this tool to remove collinearity problems in e.g. photos of buildings, where the effect of perspective causes the building in the picture to narrow (to recede).

When you activate this tool, two vertical lines are shown in the picture. Click and drag to lay these lines along the edges of the object to be straightened out, then click **Apply**. You can also right-click instead. To adjust collinearity, the program must deform the picture. Thus it will need cropping after the fix. For minor edits, the Auto crop option will suffice for this. Use **Snap to edges** if you want this tool to auto-detect significant edges in your picture and to "jump" to them on its own. You can temporarily turn snapping on or off by holding down **[Alt]**. **Auto crop** makes the program automatically crop away the empty areas that appear after fixing perspective.



Perspective

Perspective editing is basically collinearity editing in two dimensions at once. To activate this tool, use **Perspective [V]**. This tool is an easy way to straighten up e.g. photos of signs.

When you activate this tool, a rectangle is shown in the picture. Click and drag the corners of this rectangle to match the corners of the object to be straightened out, and then click **Apply**. You can also instead finish the straightening by right-clicking or using a right-click menu. To adjust perspective, the program must deform the picture. Thus it will need cropping after the fix. For minor edits, the Auto crop option will suffice for this. Use **Snap to edges** if you want this tool to auto-detect significant edges in your picture and to "jump" to them on its own. You can temporarily turn snapping on or off by holding down **[Alt]**. **Auto crop** makes the program automatically crop away the empty areas that appear after fixing perspective.

Transformation tools



The Morphing Mesh

Use the Morphing Mesh to distort a picture, or to straighten out an already distorted picture.

Click **Create Mesh...** on the options toolbar (below the menus) to make the Morphing Mesh appear atop your picture. The mesh is represented as a grid of points; you move the points to adjust the mesh. The picture under the network "liquefies" and reacts to deformations of the mesh. To add a point (a node) to the mesh, double-click on the place where you want to add the point. To remove a point, select it and click **Remove Point** on the options toolbar. To remove the entire morphing mesh, click **Remove Mesh**. However, this only removes the mesh, not the deformation that it caused.



Deform

The Deform tool works similarly to the Morphing Mesh, but for this tool, it is not necessary to work with a mesh. Move the mouse cursor over the picture, click, and drag to locally deform the image.

Use the **Strength** setting to set the strength of the transformation; use **Radius** to set how much of the cursor's surroundings are affected by the tool. Other deformations besides shifting are available; to choose the type of deformation, use **Effect**. Unlike for shifting, these types of deformation do not require click-and-drag. Just click and hold down the left mouse button over a spot to repeatedly apply the selected effect to it. One effect is different from the others: **Restore**. Use it to gradually undo deformation, locally restoring the original.

The Paintbrush, Fill, and Eraser Tools



Paintbrush

Use the Paintbrush tool to paint color onto a picture. The most basic option for this tool is the brush color. You can change it by clicking the colored rectangle (this calls up a color mixing window) or using the eyedropper to choose a color from the picture itself. The other settings, like **Radius**, **Opacity**, **Density**, **Blur** and **Spacing** work the same as they do for other tools, e.g. the Clone Stamp. Use the **Mode** to set how the color painted on by the brush blends into the original picture.



Fill

Use the Fill tool to set an area to fill with a color of your choice. The program sets the fill area based on its similarity to the spot you click. Similarity is checked based on your settings for **Comparison mode (RGB, Brightness, or Hue)** and based on your setting for **Tolerance**. The **Continuous** option determines whether the fill will "spill" out into all similarly-colored areas in the whole picture, or just one continuous area. To use the tool, click on a spot within the similarly-colored area that you want to fill in with the fill color.



Eraser

Use the Eraser to erase part of the picture. The settings for **Radius**, **Opacity**, **Density**, **Blur** and **Spacing** work the same as they do for other tools, e.g. the Clone Stamp. The erased part of the picture becomes transparent. For more information on transparency, see [Transparency in the Editor](#).

Creating a Selection

There are several Editor tools for **creating a selection**, a part of a picture to which the program's edits and effects should be applied. You can also copy the selection and paste it into another picture.

A selection can take on any form from a simple rectangle to a collection of areas as complicated as you would like. You can compose a selection using any combination of the selection tools.

The selection process always has a "selection mode" that affects how your actions affect the selection. It starts in "normal" mode. **Normal** Normal mode creates a new selection each time you drag out a rectangle, click the magic wand, etc. Use the options toolbar button named **Add to Selection** if you want your new selection(s) to instead be added to the existing one. To just enter this mode temporarily, hold down **[Shift]**. (A plus sign will appear by the mouse cursor.) If you want to do the opposite - to subtract your new selection(s) from the existing one - turn on **Remove from Selection** or hold down **[Ctrl]** during your work. (A minus sign will appear by the mouse cursor.) Mode **Intersection** or hold down **[Ctrl]** and whether or not to **[Shift]** while making the new selections. (An x will appear by the mouse cursor.)

The **Blur** control on the options toolbar for all these tools sets how edits will behave when they reach the edges of the selection: with a blurred border, effects will gradually lose intensity - "fade" - towards the edge. Click **Invert** or pressing **[Ctrl+Shift+I]** deselects all selected areas of the picture and vice versa. Use the **Antialiasing** option antialiases (smooths) the edges of non-rectangular selections.

You can erase your whole selection by pressing **[Esc]**.

Rectangular Selection

To activate the Rectangular Selection tool, use the Editor's **Selection | Rectangular Selection [M]** command or the toolbar button. Use this tool to select areas that can easily be defined using one or more rectangles. After activating the tool, you click and drag out a rectangle to make the selection. If you hold down **[Shift]** while making your selection, it will be a square. If you hold down **[Ctrl]** then clicking will set the center of the rectangle rather than its top left corner.

Elliptical Selection

To activate the Elliptical Selection tool, use the Editor's **Selection | Elliptical Selection [O]** command or the toolbar button. Use this tool to select areas that can easily be defined using one or more ellipses. After activating the tool, you click and drag out an ellipse to make the selection. If you hold down **[Shift]** while making your selection, it will be a circle. If you hold down **[Ctrl]** then clicking will set the center of the ellipse rather than the top left corner of the rectangle that contains it.

Lasso

Use the Lasso tool to enclose a complex area by hand. To activate the Lasso tool, use the Editor's **Selection | Lasso [L]** command or the toolbar button. After activating the tool, you click and drag with the mouse to enclose the desired area. If you do not enclose it completely, the program will add a straight line between the starting and ending points to finish the job.

Polygonal Lasso

Use the Polygonal Lasso tool to select any area that you can easily enclose using a collection of straight lines. To activate this tool, use the Editor's **Selection | Polygonal Lasso [N]** command or the toolbar button.. After activating the tool, click in the picture and then gradually "click around" the desired area. If you ever want to undo your last click, press **[Backspace]** or **[Delete]**. To finish the enclosing shape—the polygon—you can either double-click or just use a single-click that is close enough to the starting point. (The mouse cursor will change when you are close enough.) When you hold down **[Alt]** while selecting, you will temporarily switch from the polygonal lasso to the magnetic lasso.

Magnetic Lasso

Use the Magnetic Lasso tool to select complex areas that contain parts of a picture with clearly defined edges: those with a high contrast between the two sides of the edge. The program will seek such edges and automatically

snap the selection to them. To activate this tool, use the Editor's **Selection | Magnetic Lasso [A]** command or the toolbar button. Your actual workflow with this tool is the same as with the polygonal lasso. Use the **Sensitivity** option sets how far away from your lines the program should look for edges in the picture. The **Line smoothing** option affects the shape of the selection line; higher values give a "smoother" line, but may also make it poorly copy complex edges. If you hold down **[Alt]** then you will temporarily switch to the polygonal lasso.



Magic Wand

To activate this tool, use the Editor's **Selection | Magic Wand [W]** command or the toolbar button. Use the Magic Wand to select areas similar to the place where you click. Similarity is checked based on your settings for **Comparison mode (RGB, Brightness, or Hue)** and based on your setting for **Tolerance**. Use the **Continuous** option determines whether the selection will "spill" out into all similarly-colored areas in the whole picture, or just one continuous area. To use the tool, click on a spot within the similarly-colored area that you want to select.



Selection Brush

Use the **Selection Brush [Q]** to create a selection by "painting" it. The settings are similar as for the Paintbrush tool—you can set the **Radius, Density, Blur**, and **Spacing**. This tool offers two modes—one for adding to, and one for subtracting from the selection. To switch modes, use the buttons in the Options toolbar. To temporarily switch modes during your work, press and hold down **[Ctrl]**. To quickly check which mode you are in, look for the "+" or "-" by the mouse cursor.

Placing Pictures, Text, and Symbols



Place Image

Use this tool to place (to paste) a picture, or just a copied part of a picture, inside the one open in the Editor.

To paste just part of a picture, select that part in any Editor window using the selection tools, and then press **[Ctrl+C]** to copy it. To paste, use **[Ctrl+V]**. The **Place Image [I]** tool then activates just as if you have clicked the toolbar button. Work with this tool is like work with the [Editing Layer](#). When you are using this tool, the options toolbar offers a button for pasting a picture from a file.

Set the position for pasting the picture or text, and its **Transparency** and **Blur edges** settings, and then confirm the pasting by right-clicking in the picture or by clicking **Apply** on the Layer toolbar. To remove the Editing Layer and cancel pasting, click **Cancel** on the Layer toolbar or press **[Esc]**. To add a configurable shadow to the pasted picture, click [Effects](#).



Place Text

Clicking **Place Text [T]** activates the text placement tool. Click with it in the place where the top left corner of the text frame should be. The text placement frame behaves as an [Editing Layer](#). To enter the actual text, use the **Text** box in the Text window. In this box, you can take advantage of the program feature called [Variable Text](#). The window includes controls for setting the text's **Font, Size, Line spacing**, and optionally a **Background**, which can have a **Color** and **Opacity**. There are also three buttons for the three most common font changes: **Bold, Italic, Underline**.

For multi-line text, there are three buttons to set its alignment: **Left, Center, Right**. Use **Print quality** to influence or turn off font anti-aliasing. Use the Options toolbar to set how much to **Blur edges**.

Use the Layer toolbar to set the text's **Transparency** and the layer mode. To actually paste the text, click **Apply** – this merges the Editing Layer with the picture. To cancel the pasting of the text and exit the Editing Layer, click the **Cancel** button. To restore the original font and alignment presets, click the **Restore Settings for All Selected** button. To add a configurable shadow to the pasted text, click [Effects](#).



Insert Symbol

Use **Insert Symbol [Shift+T]** to insert a symbol. This works very similarly to Insert Text. The menu at the top left of the Insert Symbol window offers these options:

- **Last Symbols Used**
- **Symbol groups** —e.g. arrows, mathematical symbols, etc. The symbols displayed are organized by font.
- **All Symbols** —all available symbols are displayed. The symbols displayed are organized by font.
- **Individual symbol fonts** —displays only symbols contained in the selected font.

The choice of symbols depends on the fonts installed in your operating system. To add a configurable shadow to an inserted symbol, click [Effects](#).

Transforming Inserted Objects

You can transform an inserted object (a picture, text, or symbol) in one way at a time—the "transformation mode"—which you can choose using the six buttons at its top left: **free transformation, resizing, rotation, skewing, deformation, and perspective**. To switch among transformation modes, click on their icons. The default mode is **free transformation**. In this mode you can move or resize the object freely by dragging its edges or handles. Drag the mouse outside the object to rotate it. To change the center of rotation, drag the handle that is initially in the middle of the object. In the other modes (except for rotation), use the object's edges or handles to transform the object.

When you are resizing an object, the program normally forces its ratio of sides to stay the same. Hold down **Ctrl** while resizing to be able to change its ratio of sides.

Until a picture is actually placed, you can cancel its transformations. To do this, click **Original size** on the toolbar.

After you merge the pasted object with the picture, you cannot go back and change it.

More information

[Editing the Selection Border](#)

[Creating a Selection](#)

[The Editing Layer](#)

Gradient Filter



Gradient Filter

This tool creates an effect similar to the use of the gradient filters that you can place across a camera lens. You can use it to, for example, change the character of a scene by color toning the sky.

The main settings for this tool are the positions and angle of the filter's centerline. To set these, you visually stretch out a guideline right on top of the picture itself. You can use the handles at its ends to manipulate it, similarly as with the [alignment tools](#). In one direction away from this line, the effect fades out towards nothing (towards transparency); in the other, towards full strength.

To add the gradient, click on the picture. The filter's baseline will automatically be placed where you clicked. **The gradient width** can be set either numerically in the toolbar or visually by dragging the arrow in the filter guidelines. Its numerical size is expressed relative to the picture size, so 100% means the picture's whole height. You can rotate the gradient by dragging the mentioned arrow or by clicking **Flip**. Click the color button to set the gradient's color. **The Presets** control lets you save and later reload gradient filter settings (though not including their tilt and centerline) under names of your choice.

The gradient filter is applied using Zoner Photo Studio's [Editing Layer](#), so you can for example apply transparency to it, using **Layer Opacity**. To apply the gradient filter, click **Apply** on the toolbar for Layers. To apply the gradient filter and remove the Editing Layer, click **Cancel** on the Layer toolbar or press **[Esc]**.

Droste Effect



Droste Effect

The Droste Effect tool creates a specific type of recursive picture. That is, the selected portion of the picture rotates inwards in constantly shrinking spirals. In the Droste Effect implemented in Zoner Photo Studio, the part of the picture to be placed in the spiral is selected by the user. This part is defined using a ring. You can set its position, its inner and outer radius, and the point towards which the spiral converges.

**Not every picture is appropriate for applying the Droste Effect. Pictures of circular or oval objects work best.
Usually for these, no selection needs to be made before using the effect.**

It is best to use a picture with an object in its center. The idea is for that object to be replaced by the spiral formed by recursing the selected part of the picture. Thus the first step in using the tool is to select the part of the picture to be rotated. The "uninteresting" part of the picture, to be replaced by the spiral, should not be in the selection. This is because when the function encounters the unselected area, picture data from the outer, neighboring spiral is inserted. This gives an effect where the picture rotates inward in an particular part of the original picture only.

Information

Most digital cameras can save supplementary information into JPEG-format pictures, including things like shutter speed, exposure time, whether or not a flash was used, focal length, etc. This information is stored under a standard named EXIF (EXchangeable Image Format). Twenty pieces of camera-settings information are stored on average. Meanwhile, EXIF can also store text descriptions, keywords, ratings, GPS data, and more.

EXIF is not the only standard for storing picture information. There are two others: IPTC and XMP. The IPTC standard was created mainly for authorial descriptions of pictures and communication between photographers and publishers. Adobe's XMP is the most open and modern of the three standards, and can include custom information.

Metadata

The more technical name for what we call "picture information" is metadata. "Metadata" means "information about information" - in this case, about the set of information that makes up the picture itself. Most metadata for photos is text metadata, telling about where, when, how, etc. the photo was created, and perhaps also how it should be used. You can take advantage of metadata to organize your picture archive so that you can later quickly and efficiently find the photos that you are looking for. Besides text information, digital photos can also contain audio notes, color profiles, previews, and other binary data.

In Zoner Photo Studio As mentioned above, avoids the term "metadata" in favor of the phrase "picture information." Picture information can be managed from the Information menu in the Browser, or the File menu in the Editor. The Image Information window is a quick and easy way to add textual picture information.

Zoner Photo Studio supports all three picture information standards: EXIF including its latest version, 2.3 (EXIF Print), and XMP.

Variable Text

Variable text is text that can include a series of codes that tells the program to include not a fixed piece of information, but instead a certain kind of information about a picture—its output can "vary." You can mix ordinary unchanging text and these codes freely within variable text. The program evaluates the codes, examines the picture's picture information, and fills in the relevant text. Each code must have exactly the form listed below, and must be enclosed in {curly braces}. However, any place where you can use variable text offers either a menu or an entire window that can take care of both of these requirements for you.

For example, the variable text `{PATH}{NAME}.{EXT} Dimensions: {W} x {H}`

might lead to this for a particular picture: `E:\Photos\Photo.JPG Dimensions: 1209 x 984`

{PATH} is replaced by the path to the file, "E:\Photos\", {NAME} by the filename, "." is kept as-is, {EXT} is replaced by the filename extension "JPG," " Dimensions: " is kept as-is, and {W} and {H} are replaced by the picture's width and height.

To reach the window for adding these codes, click the small button with the triangle next to the text field where you want to use variable text. The left part of this window lists all the available variable-text codes. After you select a code and click **Add**, the code will be inserted at the position of the text cursor. The precise format of the code can vary depending on your settings under **Include descriptor**, **Separator**, **Time and date format**, and **Uppercase/lowercase**.

If you are willing and know how, you can also [modify variable text](#) directly without using this window.

Editing Variable Text

Meanings for the Individual Fields:

Field	Meaning
{I}	Picture's place in a series - e.g. "Picture X out of Y"
{C}	Total picture count in series; can only be used in file lists and slideshows

{PAGE}	The number of the page on which the picture will be printed
{PAGES}	Total number of pages
{TIME}	Current time (e.g. at the start of generating a gallery)
{DATE}	Current date
{NAMEEXT}	Filename with extension
{NAME}	Filename without extension
{EXT}	File extension
{PATH}	Path to file
{FT}	File type
{FS}	File size
{TC} or {PT}	Created (Picture taken)
{TM} or {TA}	Last changed (Last opened)
{W}	Width
{H}	Height
{BPP}	Bits per pixel
{IS}	Data size
{C}	Compression
{CM}	Color model
{DPI}	DPI
{OA_MEDIUMNAME}	Media name
{OA_MEDIUMSERIALNUMBER}	Media number
{A}	Author
{T}	Title
{K}	Keywords
{D}	Description
{AUD}	Audio Note
{FLASH}	Flash
{ET}	Exposure length
{F}	Shutter
{FL}	Focal length
{ISO}	ISO
{CAM_MAXAPERTURE}	Maximum aperture

{CAM_FOCALLENGTH35MM}	Focal length (EQ 35mm)
{CAM_DIGITALZOOM}	Digital zoom
{CAM_EXPOSITIONADJUSTMENT}	Exposure balancing
{CAM_EXPOSUREMETERINGMODE}	Exposure measuring mode
{CAM_EXPOSUREMODE}	Exposure mode
{CAM_WHITEBALANCE}	White balance
{CAM_MODEPSMA}	Exposure program
{CAM_ORIENTATION}	Camera orientation
{CAM_SHARPNESS}	Sharpen
{CAM_CONTRAST}	Contrast
{CAM_SATURATION}	Saturation
{CAM_GAINCONTROL}	Gain control
{CAM_PHOTOENHANCEMENT}	Picture Enhancement
{CAM_SCENECAPTURETYPE}	Type of captured scene
{CAM_LIGHTSOURCE}	Light source
{CAM_FLASHDETAILED}	Flash, detailed
{CAM_LENSNAME}	Lens used
{CAM_FOCUSMODE}	Focusing mode (that is, automatic or manual)
{CAM_FLASHENERGY}	Flash energy
{CAM_FLASHBIAS}	Bias (balance) of flash
{CAM_SCENETYPE}	Scene type
{CAM_SUBJECTDISTANCE}	Distance to subject
{CAM_SUBJECTDISTANCERANGE}	Distance mode (macro, etc.)
{CAM_COLORPROFILE}	Name of picture's color profile (if present)
{CAM_CAMHWMAKER}	Camera manufacturer
{CAM_CAMHWMODEL}	Camera model
{CAM_CAMERASW}	Software
{CAM_FIRMWARE}	Firmware version
{CAM_CAMERASERIALNUMBER}	Camera's serial number
{CAM_CAMERAOWNER}	Camera owner
{CAM_LONGITUDE}	Longitude
{CAM_LATITUDE}	Latitude
{CAM_ALTITUDE}	Altitude
{IMG_PICTURERATING}	Picture ratings
{IMG_ISSIGNED}	Picture has a digital signature - yes/no

{IMG_HASCAMERADATA}	Picture has picture information regarding camera settings - yes/no
{IMG_HASTEXTDATA}	Picture has text picture information - yes/no
{IMG_COLORSPACE}	Color space (sRGB etc.)
{IMG_QUALITY}	JPEG compression quality for original of picture
{IMG_COPYRIGHTEDITOR}	Editor copyright
{IMG_COPYRIGHTPHOTOGRAPH}	Photographer's copyright
{IMG_CATEGORY}	Category
{IMG_SUPCAT}	Supplementary category
{IMG_CAPTIONWRITER}	Author of picture's description
{IMG_AUTHORPOSITION}	Author's position
{IMG_CITY}	City
{IMG_STATE}	State/Province
{IMG_COUNTRY}	Country
{IMG_COUNTRYCODE}	Country code
{IMG_LOCATION}	Position
{IMG_CREDIT}	Credits
{IMG_PHOTOSOURCE}	Source
{IMG_HEADLINE}	Header
{IMG_SPECIALINSTRUCTIONS}	Instructions
{IMG_TRANSREF}	Link to origin
{IMG_URGENCY}	Urgency
{IMG_LABEL}	Labels
{IMG_PICTURERATING}	Rating
{USRF#xx}	The contents of custom information field #xx

Web Galleries Only

{GPSLINK} By default, this is a link to a web map

Only during filtering of the Catalog view

{RT_SEARCH_RANK} Number of times search text appears in file
 {RT_SEARCH_GPSDISTANCE} Distance from GPS coordinates sought

If the #S modifier is in a field and that field is not the last one, then a text separator will automatically be written after the text. Normally this is a comma and a space: ", " For example, for a photo with the title "Photo," the code {NAME#S}{D} will be translated into "Photo, description" if the photo has a description, or just "Photo" with no separator otherwise. To use a different separator than the standard one, you can define your own using e.g. {NAME#S"; "}

Most fields have predefined field descriptors, e.g. {NAME} "Name: " etc. You can include these descriptions automatically, by adding #P at the end of a code. For example, {NAME#P} is expanded into "Name: Photo.jpg." You can use such descriptions without worries even for codes that may not give any output, because if there is no output for a code for a given picture, no description will be shown either.

If the predefined description does not meet your needs, you can define your own. To do so, use the technique

illustrated below: {NAME#P:"My name: „}.

Other ways to extend fields

Modifying the size indication for the {FS} and {IS} fields

{FS}	automatically
{FS#FM:A}	automatically
{FS#FM:B}	bytes
{FS#FM:K}	kilobytes
{FS#FM:M}	megabytes
{FS#FM:G}	gigabytes
{FS#FM:A-}	automatically (without units)
{FS#FM:B-}	bytes (without units)
{FS#FM:K-}	kilobytes (without units)
{FS#FM:M-}	megabytes (without units)
{FS#FM:G-}	gigabytes (without units)

Modifying the internal separator for {IID_KEYWORDS}

{K#IS:";"}	custom internal separator (default is ",")
------------	--------------------------------------------

Default value

{TC#DV:"Unknown"}	"Unknown" value to show if the selected field cannot be used
{TC#DV}	„?“

Modifying character case

{NAME}	unchanged (standard behavior)
{NAME#C:U}	force uppercase
{NAME#C:L}	force lowercase
{NAME#C:C}	make first letter in each word uppercase, make the rest lowercase

Suppress the actual code output

{???#DO}	suppresses the writing of the code output itself. Just the name of the field is used instead. For example: {NAME#DO#P} "Name:"
{???#DO: ONLYIFVALID}	only gives output when the given code is valid for the given file

Time and date formatting

{TC#F:S}	short date format (e.g. 9/30/2008 1:45 AM for the United States)
{TC#F:L}	long date format (e.g. Tuesday, September 30, 2008 10:29:29 AM for the United States)
{TC#FD:S/L}	date only (short/long)
{TC#FT:S/L}	time only (short/long)

{TC#FT:"time format"}

h	Hour without leading zero, 12-hour cycle
hh	Hour with leading zero, 12-hour cycle
H	Hour without leading zero, 24-hour cycle
HH	Hour with leading zero, 24-hour cycle
m	Minutes with no leading zero
mm	Minutes with leading zero
s	Seconds with no leading zero
ss	Seconds with leading zero
t	Single-character a.m./p.m. indicator - A/P
tt	Multi-character a.m./p.m. indicator - AM/PM

{TC#FD:"date format"}

d	Day of the month, with no leading zero
dd	Day of the month, with leading zero
ddd	Three-character day-of-week indicator
dddd	Full name of day of the week
M	Month number, with no leading zero
MM	Month number, with leading zero
MMM	Month as a three-character shortcut
MMMM	Full name of month
y	Year as last two digits, with no leading zero
yy	Year as last two digits, with leading zero
yyyy	Year as all 4 digits

All month names, day names, and other language-independent texts are replaced based on your regional and language options in the Windows control panel.

Examples of use:

Variable text: {TC#FD:"ddd',' MMM dd yy"#S:";"}{TC#FT:"hh':mm':ss tt"}
result: Tue, Sep 30 08; 10:29:29 AM

Formatting GPS coordinates

{CAM_LONGITUDE} Degrees° Minutes' Seconds" Direction (49° 33' 30" S)

{CAM_LONGITUDE# same as CAM_LONGITUDE, but with no parameters
F:N}

{CAM_LONGITUDE# Degrees° Minutes' Seconds" Direction, with decimal precision (49.00° 33.00' 30.00" E)
F:S}

{CAM_LONGITUDE# Degrees° Minutes', with decimal precision (+49° 33.500')
F:M}

{CAM_LONGITUDE# Degrees as a floating-point number (e.g. 49.5583333)
F:D}

When you are preparing Web galleries, you can also specify which files should be used when the program is "mining" the data to use in the codes. This can be useful with, for example, date information: wanting to publish the

time when a picture reached the gallery is different than wanting to publish the time when the picture file reached your gallery. If the variable text codes are written in uppercase letters, the original picture on disk is used as the source. If they are written in lowercase letters, then the picture located on the web is used as the information source.

You can chain modifiers one after the other. Example of use: {NAME#C:U#P}. If a code does not make sense in the context where it is used, it is ignored.

Formatting options for codes used to set Tiles and Thumbnails texts

- ****, **** —start and end of bold text
- **<i>**, **</i>** —start and end of italic text
- **
** —new line (can be used in combination with {_E#T:"
"})
- **<alb>**, **</alb>** —start and end of text that you want to receive automatic line breaks (e.g. in Tiles mode)
- ****, **** —active link...

Data Import/Export

Generate Lists

Use **Information | Data Import/Export | Generate Lists** in the Browser menu to create a text file with a list of files and information about them, in a form of your choice. After choosing files, you select an output type and prepare [variable text](#).

Use the **Folder names** control to set whether and how folder names will be included in the output. If the output includes both files and folders, then folder names will be preceded by three asterisks. Unlike filenames, you cannot affect the processing of folder names using variable text.

When you turn on **Generate HTML table**, the function will generate a Web page, with your data placed in a simple table, suitable for import into other programs and for processing. Wherever you include the code {TAB} among your text, this will add a new column.

Use the **Save to file** option to have the list be saved to a file of your choice instead of just to a temporary folder. The filename can include either an ordinary absolute path or a relative path like "..\list.txt").

If **Save to file** is turned off, then after you close the window, the list is saved to a temporary folder and is opened in your computer's associated viewer for text files or web pages. By default, these will be Notepad and Internet Explorer respectively.

Importing and Exporting Descriptions

Some programs generate and save simple one-line file descriptions in special, and quite non-standardized, files located in the same folders as the files being described. These files are generally have names like `description`, `0index.txt`, `files.bbs` etc. Use **Information | Data Import/Export | Export Descriptions** and **Import Descriptions** to create such files or to bring the information from such files into pictures' standard picture information. During export, you can choose whether to use the **Title** or **Description** field as the description.

If the pictures already had description files, these will be overwritten by your export. If you check the **Preserve remaining files' descriptions** box, then the descriptions for any pictures in the folder that were not selected will be kept as-is; otherwise, they will be thrown away.

If you turn on **Give exported file Hidden attribute**, then the file will receive the Hidden file attribute. This will make it invisible to most programs.

Import from ACDSee™

Zoner Photo Studio offers easy importing from the ACD™ Systems program ACDSee™ 5. If you have some picture information stored in ACDSee 5, you can export it using **Tools | Database | Export Database Info**. During export, you will be asked whether you want to **Generate one database file per folder** or **Generate one database file**. This function creates a file, or one file per folder, named `ACDDatabase.xml`, for the given folder and all of its

subfolders. These files contain descriptions, notes, keywords, author, time, and date information.

To import this information, use **Information | Data Import/Export | Import from ACDSee(tm)...** in the Browser. You first choose what files to import and then choose what kind of information to import. Imported values will always overwrite existing ones. The only exception here is keywords. If you check **Merge new keywords with originals**, then the new keywords will be added to the existing ones. The importer will treat commas, semicolons, and new lines as keyword separators.

Scan for Keywords

Use **Data Import/Export | Scan for Keywords** to use the keywords that are already in your pictures as raw material for building or supplementing the keyword list contained "inside" Zoner Photo Studio.

During the choosing of a **Media Archive**, the keyword list from the archive will be scanned and added to the database. As relates to actual individual pictures, Zoner Photo Studio does not maintain their keywords in a database of its own; it stores keywords directly inside image files, in their EXIF data. This way, pictures will not lose their keywords no matter where you move them, and any EXIF-aware program can process their keywords.

We recommend that you use this function when, for example, upgrading from previous versions of Zoner Photo Studio. This way, Zoner Photo Studio will have a complete list of the keywords you have used in the past, and will offer them in all of its windows where you can search keywords or add them.

Managing Information

Backing up and Restoring Information

Many picture editing programs cannot work with picture information such as EXIF or IPTC information or color profiles.

Many such "unaware" programs are also too useful to pass up. To solve this problem, use Zoner Photo Studio's functions for backing up and restoring information. The program can back up and restore all picture information, including EXIF MakerNote information. To back up picture information, use the Browser's **Information | Manage Information | Create EXIF Backup** menu item. Information is stored in a hidden file with the same name as the picture, but with the `exifbak` extension.

Pictures with backup information have arrow icons in their thumbnails. To restore a picture's information from backup, use the Browser's **Information | Manage Information | Restore from EXIF Backup** or **Advanced Restore from EXIF Backup...** In advanced restoration, you can selectively restore only the information items that you want.

Remove EXIF Data

Use **Information | Manage Information | Remove EXIF Data** to remove all EXIF picture information from a picture, including its color profile. The actual picture data is unaffected by this function.

Remove Data Blocks from JPEG

Use **Information | Manage Information | Remove Data Blocks from JPEG...** to remove data blocks of your choice from all currently selected JPEG-format pictures. These blocks can have various meanings depending on which program saved the picture, and thus this function is intended for advanced users. The actual picture data is unaffected by this function.

Delete EXIF Backup

The **Information | Manage Information | Delete EXIF Backup** command deletes all information needed for restoring a picture's EXIF data after it has been damaged or destroyed. The picture itself remains unchanged.

Add EXIF Preview

EXIF previews are used to speed your picture browsing (unless you have disabled their use in the program preferences). Use **Information | Manage Information | Add EXIF Thumbnail...** in cases where, for example, you have edited a picture in another program, and that program did not update its EXIF preview to reflect how it actually currently looks. The picture itself is unaffected by this, as is all of the remaining picture information.

Remove EXIF Preview

Use **Information | Manage Information | Remove EXIF Preview...** to remove the EXIF preview from a picture. The picture itself will be unaffected, as will all of the remaining picture information.

Fix EXIF Marker Position

The specification for the EXIF standard states that the EXIF block must be the first block in an image file. Unfortunately, some programs do not observe the specification, and thus the EXIF data can then be inaccessible in other software. Zoner Photo Studio can both work correctly with pictures where EXIF data is in a nonstandard block and fix such pictures so their EXIF data will be usable anywhere. To do so, use **Information | Manage Information | Fix EXIF Marker Position....** The EXIF block will be moved to the first position in the file, where it belongs.

Set Date using EXIF

Use **Information | Manage Information | Set Date using EXIF...** to set pictures' file creation dates to match their EXIF picture-taken dates. This lets you sort pictures based on when they were taken even in programs that cannot use EXIF information.

Audio Note

Some cameras can save a short audio note inside a photograph. Zoner Photo Studio can manage existing notes and add new ones.

Play Audio Note

To play an embedded or external audio note, use **Information | Audio Note | Play Audio Note [Ctrl+Shift+P]**. Alternatively, click the audio note icon that is shown at the top of the picture's thumbnail in the Browser.

Stop Audio Note

To stop the playing of an audio note, use **Information | Audio Note | Stop Audio Note [Ctrl+Shift+S]**.

Edit

To reach the window for editing an audio note, use **Information | Audio Note | Edit**.

To remove an audio note, use this window's **No audio note** option. This option is active if a picture contains no embedded audio note. If the picture does contain an embedded note, then **Embedded audio note** is active. You can also use this option to play a note and to embed a note. Use **External audio note** to set the location of a picture's external audio note or to see the location of an already-attached one. An external audio note files must be in the same folder as its corresponding picture file. To set whether or not Zoner Photo Studio moves/renames/deletes external audio files along with their corresponding pictures, use the [program preferences](#). The EXIF norm does not support the use of MP3 format audio notes.

Under the pane for viewing the sound waves of an audio note, there are buttons for playing, stopping, and playing the note. Use the **Change Format...** button to change the sound quality. Use the **Edit...** button to launch a sound editor. (To set which editor this is, use the [program preferences](#)). To delete the audio note, click **Remove**.

This window can also be reached by using **Information | Image Information [Shift+Enter]** and then visiting that window's Audio Note section.

Digital Signatures

Digital signature technology helps to **verify the origin and completeness of a picture**. The author (or owner, or administrator, etc.) signs the picture and thereby places his signature in the picture file, as well as a description of the picture's characteristics.

Signed pictures are differentiated in the Browser listing via a ribbon icon. You can verify a signed picture at any time, for example by double-clicking its ribbon. Although a signed picture can still be changed, it is easy to discover that it has been changed.

Digital signature technology does not protect a picture from unauthorized publication.

Adding Digital Signatures

Use the Browser's **Information | Digital Signature | Add Digital Signature** menu item to add to a picture a signature and a "fingerprint" of the picture's current contents. This information describes the state of the picture at the time of signing, and is used when you wish to verify the digital signature. Signing makes use of the signing certificate that you have specific under **Settings | Preferences [Ctrl+M]**, in the **Signing Certificates** section.

Verifying Digital Signatures

Use the **Information | Digital Signature | Check Digital Signature** command to verify that a particular signed picture is still the same as it was at the time of its signing. You can also perform this operation by clicking the "ribbon" digital signature icon shown on a picture's thumbnail.

Go to **Settings | Preferences [Ctrl+M]** and then the **Signing Certificates** section for options governing the verification of digital signatures. **Verify that certificate has not been revoked**: this option requires that you be connected to the Internet, so if you are not connected non-stop, it can be best to turn it off. The **Only check revoking for signature certificates** prevents the whole certificate hierarchy from being checked.

Remove Digital Signature

Use **Information | Digital Signature | Remove Digital Signature** to remove a digital signature from a picture.

Picture Rating

You can use picture ratings to store information on photographs' quality. Naturally, this is something purely subjective, but it will help you in finding your best pictures.

To give a picture a rating (from 1 to 5), use the corresponding buttons in the **Descriptions Pane** or use the ones in **Information | Image Information [Shift+Enter]**. They are in the section named **Description**. To add ratings from the Browser, use **Information | Rating** and then the desired rating, or use shortcut keys: **[Ctrl+Shift+1]** through **[Ctrl+Shift+5]**. Use **None** to remove the rating from a photo. The shortcut for this is **[Ctrl+Shift+9]**.

A picture's rating, if any, is shown at the bottom right of its thumbnail in the Browser, as an icon with a number. Right-clicking that icon calls up a menu. Use this menu to change the rating or remove it (the "-" item).

To show ratings in the Browser, use Details mode. To show rating while using Search, that is, **Organize | Search... [Ctrl+F]**, go to the **Notes** tab and use the group named **Picture rating**. This is also the place for setting the **Search mode**: whether to seek values below, above, or equal to the value entered, or not filter by it at all. To actually set the rating used for evaluation, use **Rating**.

Labels

Use the Labels feature to add colored labels to your pictures, to help sort them by a system of your own.

To add labels to pictures, use the **Descriptions Panel**, or use the **Information | Image Information [Shift+Enter]** window's **Descriptions** tab. Alternatively, use the Browser's **Information | Label** submenu or the **[Shift+Alt+1]** through **[Shift+Alt+9]** hotkeys. To remove any existing rating from the picture, click **None** or use the keyboard shortcut **[Ctrl+Shift+0]**.

The label (if any) for a picture is indicated in its Browser thumbnail, by an icon at the bottom right. Right-clicking that icon calls up a menu where you can change the rating or remove it (the "-" item).

To set which colors are used for labels, use **Settings | Preferences | Labels**. Here you can define up to 9 custom labels or choose colors used in other programs. Label information is stored within a picture's XMP-type picture information.

GPS

Zoner Photo Studio lets you work with longitude, latitude, and altitude. You can assign coordinates to pictures here, and display their coordinates on a map as well. You can have the program batch-assign coordinates from a GPS device's tracklog, or assign them by hand using an online map.

The coordinates are recorded to both EXIF and XMP picture information, so that you can process them and work with them in many other programs, not just Zoner Photo Studio. Some of the Web galleries you can make in the program can also show pictures' GPS coordinates on a map.

Assigning GPS Data

Use this function to add information to a picture about its GPS coordinates and its altitude. You can add this information automatically using a track log downloaded from a GPS device, or manually by either entering coordinates directly or reading them off of a map.

Use **Information | GPS | Assign GPS Data...** in the Browser or **File | GPS | Assign GPS Data...** in the Editor to open this window, which shows a preview of the picture and, beneath it, controls for assigning GPS data to it. The window's right portion contains a map and its controls.

Reading in Data from a GPS Track Log

Click **Read Data from GPS Track Log...** to read in coordinates from a track log generated by a GPS device. Zoner Photo Studio supports several major log formats. You can find instructions on downloading and storing a track log in a desired format in the documentation for your GPS device.

Once the track log is loaded, information on the number of records in the log and the times when the first and last records were created is displayed under the button. The time when the first picture was taken is also displayed here. Picture-taken time/date information is used to determine which GPS data from the log is assigned to which picture. If the camera's clock was not perfectly synchronized with the GPS device's clock, use **Time correction** to avoid imprecise results. Use the **Set position using:** control to set how the program calculates values for pictures taken at times for which there is no position record. (This is useful when, for example, the GPS device was recording positions automatically at one-minute intervals, rather than your manually using it each time you took a picture.)

The [GPS](#) section of the program Preferences has an option to filter out "junk" GPS tracklog data.

Entering Coordinates Manually

Use the **Latitude** and **Longitude** controls to enter GPS coordinates manually. If you have the coordinates recorded in a text file, then you can copy them out of the text they are in and paste them into the corresponding fields using the Paste from Clipboard button. Zoner Photo Studio tries to correctly process even coordinates written in non-standard form.

You can also copy values from here to the Clipboard, using the Copy to Clipboard button. Values are pasted in the standard form: 49°11'55.83"N, 16°37'41.42"E.

You can also enter the **Altitude**, which is not copied via the Clipboard, and may also be missing from track logs.

Click **Show on Map** to show the entered position on a map of your choice. To instead have the position updated automatically as you work, use Automatic.

When using Google Maps, you can enter the location as a place name, and the program will show the first location that corresponds to a Google Maps search for that name.

Reading Coordinates from a Map

To choose a map from which to read in coordinates, use the **Map** control, above the map pane. You can also optionally show it on Google Earth using **Simultaneously show in Google Earth**.

You can change the zoom level on Google Maps using the mouse wheel.

The right-click menu will depend on which map service you are using; it is the same as when you are working with that service in an ordinary Web browser.

To acquire coordinates from Google Maps, left-click on the map.

Zoner Photo Studio also lets you acquire coordinates from [Google Earth](#).

Showing GPS Data

Use this function to make Zoner Photo Studio display a picture's shot location on a map.

To display this window, double-click the globe icon on a picture's thumbnail, or select a GPS-enhanced photo and use the Browser's **Information | GPS | Show GPS Data...** command. Alternatively, in the Editor, use **File | GPS | Show GPS Data...**

Use the **Map** menu to choose which map Zoner Photo Studio uses to show the shot location.

Different on-line map services offer different features. The service normally offered, Google Maps, offers normal maps, satellite maps, and hybrid maps, and a choice of scale.

Remove GPS Data

This function removes all information about GPS coordinates and altitude from a file.

To reach this function, use **Information | GPS | Remove GPS Data...** in the Browser or **File | GPS | Remove GPS Data...** in the Editor.

Maps

Zoner Photo Studio supports two kinds of maps:

- on-line maps on the Google Maps service. You can use these both for displaying photo's GPS coordinates (that is, showing on a map where the pictures were taken) and as the foundation for setting GPS coordinates. (You must be connected to the Internet to use Google Maps.)
- the map software named Ozi Explorer. You can set the GPS coordinates for a photo by double-clicking a map in Ozi Explorer. (Ozi Explorer is third-party commercial software.)

If you run into trouble while using Google Maps with Zoner Photo Studio, first check your Internet connection. If problems continue, check the program's settings for connecting to the Internet, and your firewall settings.

Cooperation with Google Earth

If you have Google Earth installed, then you can make use of it to assign GPS coordinates to photographs and to display your pictures' positions on a map.

When you use **Information | GPS | Assign GPS Data from Google Earth...** in the Browser, Google Earth is launched, and above it, a window is displayed with a preview of the picture with a preview of the picture buttons to **Assign Coordinates to (the) Picture**, **Close** the program, and move to the next or previous picture. To "reach" the place on the Earth whose coordinates you wish to assign, use the same methods as you would normally use for viewing places in that program.

You can display all the GPS-enhanced pictures in a folder, or all such selected pictures, in Google Earth by using the Browser menu item named **Information | GPS | Show in Google Earth...**. The pictures in Google Earth are displayed as thumbnails above the areas where their coordinates lie. After you click a thumbnail, a large version of the picture is displayed, along with its title and description, if such information is stored in the picture.

Use **Information | GPS | Show in Google Earth (Advanced)...** in the Browser to create a KML or KMZ file that you can then immediately view in Google Earth. GPS coordinates and the title and description of the picture are written to the KML file. The KMZ file also contains a thumbnail for each picture.

Create KML/KMZ files, then show in Google Earth immediately opens the file you created in Google Earth. **Create KML/KMZ files, then save them to disk** enables you to name and save the file.

The **For KMZ archives, include large previews** option adds both thumbnails and larger pictures for viewing to the KMZ file. If you do not check this option, Google Earth will show you only marked picture-taken locations, with no thumbnails.

You can add picture information of your choice to pictures' **Title** and **Description** fields using the program's [variable text](#) feature. Normally, the Title {T} and Description {D} fields are chosen here. (You can set the contents of these two fields using, for example, the Browser's Descriptions Pane.

KML (Keyhole Markup Language), supplemented by KMZ (Compress Keyhole Markup Language), is a standard for storing GPS, descriptions, and pictures for use in Google Earth, Google Maps, and other geographical programs and websites.

Keywords Pane

You can use the keywords pane to add keywords to pictures, to filter pictures by selected keywords, and to manage the keywords tree.

Keywords are fundamental for any digital photo archival system. Keywords precisely describe pictures' contents and their most important details. A picture can have more than one keyword. A keyword can also actually contain more than one word, though we recommend that you do not do this. We also recommend that you use singular, not plural—e.g. "dog", not "dogs." You can use keywords in many ways—for example, to help find photos and to filter the display of thumbnails in a folder.

To show the keywords pane, use **Information | Keywords Pane [Shift+K]** or click its icon on the Browser toolbar. This pane is displayed at the left edge of the Browser window. All of the program's functions for work with keywords are available from the Keywords Pane's right-click menu. Your work in the keywords pane has no effect on what pictures are selected in the Browser. Keywords in the panel can be sorted into categories. You can expand and collapse categories by clicking the arrow before their name or by using the Keywords Pane's right-click menu.

To assign keywords to currently selected pictures, use **Assign Keywords to Selection** in the Keywords Pane's right-click menu, or use **Assign Keywords And Categories to Selection**. To select multiple keywords at once so you can add them all at the same time, click them while holding down **[Ctrl]**. When assigning keywords to one picture at a time, you can also use drag and drop.

To add/remove keywords for multiple pictures at once, use **Batch Assign Information [Ctrl+K]**. To edit keywords for a single picture, use **Information | Image Information [Shift+Enter]**.

Filtering a Folder using the Keywords Panel

Use the **Filtering by Keywords** submenu of the Keywords Pane's right-click menu to filter the current folder using the currently selected keywords. This submenu contains several items:

- **All (AND)** - this shows pictures that contain all selected keywords.
- **At Least One (OR)** - this shows pictures that contain at least one of the selected keywords.
- **None (NOT)** - this shows pictures that contain none of the selected keywords.
- **No Keywords** - this shows pictures that do not yet have any keywords assigned.
- **Do Not Filter** - this turns off filtering. You can also add keywords using [Scan for Keywords...](#) under Information | Data Import/Export.

You can turn off the [Filter](#) using **Remove Filter**.

Managing the Keywords Tree

The keywords tree in Zoner Photo Studio is a list of words and categories, where each category can contain more words and categories beneath it. Each keyword can also become a category, and thus you can organize your system of keywords into an easy-to-navigate tree structure. The tree is only within Zoner Photo Studio; keywords must be recorded into pictures themselves linearly, with no tree structure.

Use the Keywords Pane's right-click menu to **add new keywords** or **edit the selected keyword**. You can convert keywords to categories; you can also add them to existing categories using the right-click menu item named **Change Category**.

Selected keywords can be removed from the tree using **Delete** – however, this does not remove them from pictures that contain them. When you are deleting a picture that is also a category, Zoner Photo Studio asks you if you also want to delete the keywords in this category.

You can also add keywords using [Scan for Keywords...](#) under Information | Data Import/Export.

Descriptions Pane

Use the Descriptions Pane to conveniently add descriptions to pictures in the Browser or the Viewer.

To show this panel, use **Information | Descriptions Pane** in the Browser or Viewer, or click the corresponding button on the main toolbar.

The Descriptions Pane helps you quickly give a picture a **Name**, **Description**, **Rating**, and **Label**. All values you enter are written to file immediately once you move to another picture. In order to add a new line in the Description field, you must press [**Ctrl+Enter**], because the [**Enter**] key moves you to the next picture instead. To give a picture a rating or label, click the corresponding icon, or use keyboard shortcuts: [**Ctrl+Shift+1**] through [**Ctrl+Shift+5**] for [Rating](#) and [**Shift+Alt+1**] through [**Shift+Alt+9**] for [Label](#).

Using the Descriptions Pane in the Browser

To move to the next picture without using the mouse, press [**Enter**]; to move to the previous picture, press [**Shift+Enter**]. You can also move between the descriptions pane and the main Browser window using [**Ctrl+Tab**].

Image Information

Use the Image Information window to view, add, and edit [information](#) (metadata) contained in a picture.

To display this window, use **Information | Image Information** in the Browser, or press [**Shift+Enter**] in the Browser, Editor, or Viewer.

The top of this window shows a preview and the picture's filename, file size, bit depth, and date of creation and of last changes.

Under the preview is a menu for choosing what type of information to show. To the right of the menu, there are icons you can use to show various information types, and one to **show your position on an online map**. To set a particular map, use the [program preferences](#).

Use **Description** to edit the picture's title, author, copyright, and description, and the description's author. You can also edit the picture's rating and its label. These fields are most often useful during archival and publishing.

Use **General Information** to work with all available information about the camera's settings when the picture was taken (EXIF information and MakerNote). Some items have a pencil symbol by them. This means that they can be edited.

Use **Keywords** to add and remove keywords for a picture via two buttons: << and >>. Click >>> to add a keyword including the categories above it. Click **Add** to edit [the keywords tree](#) rather than the picture's keywords.

Use **Origin** to edit detailed information about the picture's origins (location, city, etc.). To set these automatically based on a picture's [GPS information](#), click **Get Information Online**. For this button to work, the picture must have GPS data, and you must have an Internet connection. **Transfer information** and the right way to use it are defined by the IPTC standard, which is designed for electronic communication between an editor and a journalist or professional photographer.

This information is always stored in the standard EXIF, IPTC, and XMP fields. Other programs can read it back in from there.

Use **Audio Note** to add, edit, remove, etc. an [audio note](#) for a picture.

Use **Custom Information** to edit XMP information fields that you can [define yourself](#).

All of the information in all sections except for Audio Note can be **copied to the Clipboard**.

Statistics

Using this function, you can show statistics on pictures' picture information (shutter information, film sensitivities, titles, keywords, etc.) for a folder or for selected photos.

To show statistics, use **Information | Statistics...** in the Browser. In the top section, choose which picture information **Field** you wish to analyze. You can also choose a **Graph type** and a **Sorting** method. Underneath the graph, you can also choose how many values it shows. Click **OK** to close the statistics window.

Batch Assign Information

Use this function to add or change picture information, including ratings, keywords, and picture-taken dates, for multiple photos at once.

To edit photos' picture information, use **Information | Batch Assign Information... [Ctrl+K]** in the Browser. Batch assigning information is efficient when you need to change the picture information for many pictures at once. To edit the information for just a single picture more conveniently, use [Image Information](#).

This window's settings are divided out over six tabs. To quickly deactivate/reactivate a tab, and thus the settings on that tab, use the checkbox next to its name.

The values in all checkmarked tabs are used - not just those in the visible tab!

Each text field must also be activated (checkmarked) before use. Next to the text fields are arrows for automatically inserting [variable text](#) into the field. Use the variable text feature to make use of information from one field (or from the picture's file properties) in another field. (For example, to automatically fill pictures' Titles with their filenames, use {NAME}.)

If you turn on a field but leave it empty, then that field's contents will be erased in all of the pictures in the batch!

Use the **Basic Information** tab to edit pictures' titles, authors, copyrights, descriptions, and description authors. You can also batch-assign ratings and labels here.

Additionally, you can batch-assign pictures' location with fields for place, city, state/province, and country.

Use the **Keywords** tab to assign and remove keywords in batch with the aid of the program's [keywords tree](#). Use **Remove All** to remove all picture keywords (even words that are not listed in the program's keywords tree). This option removes the entire contents of the keywords field, even for example spaces and other characters that can cause problems. There is a right-click menu for the keywords list; this menu is the same as the one in the [Keywords Pane](#).

Use the **Date and Time** tab to set pictures' date and time or shift them by a certain amount. Set date values using the calendars that become active when you click **Set picture-taken time and date** and **Shift date**. Use **Shift date** to push times and dates forward or backward by a given amount, e.g. to go back and change the time zone in which you took a group of pictures.

Use the **Custom Information** tab to batch-add or batch-edit [custom information](#) types for pictures outside of what is normally available.

Use **Change IPTC encoding to UTF8** to change the way IPTC blocks are stored so that extended character sets are in better agreement with the standard. However, for now, photo programs widely ignore the standard and do not recognize it. Therefore, Zoner Photo Studio does not use it by default and it can only be activated in this window.

Use **Write data only where it is not already present** to restrict the changes' effects to empty fields. This makes it easier to apply batch information edits when some pictures in a batch already contain information.

Presets work the same in this window as elsewhere: you can store all of your settings for the whole window as a preset so you can reuse them later. The presets controls are at the bottom left, no matter what tab you are in. To fill in the fields in this window using the information in an existing picture, click **Read in from Picture...** Click **Apply** to run the operation on all selected pictures. Click **Cancel** to exit without changing any pictures' information.

Search and Replace

You can use this function to replace one piece of text with another within picture-information fields of your choice. This function is useful when, for example, you have entered some information incorrectly, or to replace information in one language with information in another language.

To reach this window, use **Information | Search and Replace... [Ctrl+K]** in the Browser.

This opens a window for batch edits of all textual picture information in the selected pictures, via search-and-replace. Use the column on the left to choose which text items in the photos to **Search in**. Use the **Find** and **Replace** fields to indicate what text should be replaced with what other text. Use **Whole words only** to set whether or not to replace text when the contents of the **Find** field in the text not as a separate word, but rather as a part of a word. The **Match case** option determines whether or not capitalization differences should be ignored. The **Approve changes one by one** option sets whether replacements should be automatic, or whether you will monitor the whole process picture-by-picture instead. When this option is turned on, the **Search**, **Replace**, and **Replace All** options become active so that you can use them to confirm each replacement. Use the **Apply** button (and the **Apply to All** button if multiple pictures are selected) at the bottom of the window to do the actual replacing and resaving of the modified files.

The Search and Replace makes changes to text information within files themselves, and these is no Undo for this function.

Organizing Pictures

Catalog

The catalog makes it easy to browse through even unorganized photos, no matter where they are on your computer. The photos are automatically sorted, based on their EXIF information, by year, month, and date.

To browse the Catalog, switch the [Navigator](#) into Catalog mode. This mode can display all photos that have been viewed so far in the Browser as well as all photos that have been added using **Organize | Add Files to Catalog...** You can also add a folder to the Catalog by right-clicking the folder in the Browser.

The time period shown in the Catalog depends on what level is chosen in the Navigator. You can adjust Catalog settings under [Options | Catalog](#).

Remember, the Catalog only shows pictures from folders that you have either viewed at least once in Zoner Photo Studio, or added to the Catalog using Add Files to Catalog.

The Catalog Filter

When the Catalog view is active, the top part of the Browser window shows a toolbar named **Catalog Filter**. Files in the catalog can be filtered by these conditions:

- **Text**—filters by text in pictures' information; results change immediately as you type. To set what parts of picture information to examine, use **Search In** and choose either all text in the picture or a particular kind, like keywords or descriptions.
- **Attributes**—use this to filter files by their **Rating** and **Labels**.
- **GPS**—To acquire GPS coordinates, use one of the three toolbar buttons—Get Position from File, Get Position from Current Picture, or Get Position from Map. After picking a GPS coordinate, set how far from that coordinate to search, using **Neighborhood**.

To show/hide the individual filter condition toolbars, click the buttons with their names. Click **None** to stop filtering Catalog view. The end of each filtering toolbar shows a button for restoring it to its original state. Filtering conditions can be combined; in that case files are shown when they meet all conditions.

The current Catalog display can be saved to **Favorite Folders**, including the current filter.

File Operations

Zoner Photo Studio behaves similarly to the file browsing tools in Windows itself.

Overview of basic file operations:

- drag-and-drop copying and moving of files*
- copying and moving of files via the Windows Clipboard*
- copying (creating) Windows shortcuts
- creating new folders
- deleting files and folders
- renaming files and folders
- displaying files' Properties windows

Right-click menu

When you right-click on a file in the Browser, a context-sensitive menu appears, similar to the one that appears when you right-click a file in Windows' own file-browsing tools.

Selecting Files

Selecting files in the Browser works similarly to how it does in Windows overall. There are some extra methods for selecting files provided under **Organize | Selection**. Use **Organize | Selection | Advanced Selection [Num /]** to select files by criteria. The available criteria are: **Existing filename**, **Rating** and **Labels**. The way that file selection works depends on the selection mode you have chosen. They are: **Select**, **Add to Selection**, **Remove from Selection** and **Refine Selection**. The **Add to Selection** and **Remove from Selection** modes can be quickly reached from the Browser using shortcut keys: **[Num+]** and **[Num-]**.

Deleting Files

In the file deletion window, use the **Options** button to show settings for **deleting related files**. Use **All files with differing extension** when, for example, deleting JPEG/RAW file pairs. Used by accident, this option can easily lead to erasing of needed files, so it is automatically turned off when moving to a different folder.

File Tree Versus Database

Most programs for working with digital photos choose one of two basic approaches to working with photos - classical browsing of the disks on your computer, or browsing of databases of indexed files. Each of these methods has its advantages and disadvantages in certain situations. Zoner Photo Studio tries to provide the best of both methods. For ordinary work with pictures, you do not really need a database. But for detailed work with, above all, external (removable) media, you can take advantage of a picture database.

Advanced File Operations

Zoner Photo Studio enables you to queue up multiple file moving, copying, etc. operations at once. Each such operation can be in any of three states:

- **Running** —the files are actively being copied/moved. Only one file operation is ever in this state at one time.
- **Paused** —You must place an operation into this state manually. An operation will never take place as long as it still is in this state. You can remove it from this state and return it to the queue.
- **Queued** —Operations enter this state when a new operation is added for processing—that operation automatically enters the Running state, and the previously Running one enters the queue. Any operation waiting in the queue can start running immediately if you intervene to make this happen.

As is hinted above, the operations queue works on a "last in, first out" basis. You have two ways of intervening here:

- Letting an operation waiting in the queue jump to the front of the queue. Other operations will automatically start up after it has finished.
- Pause the currently running operation—this makes the "youngest" operation in the queue start running automatically. You can place a paused operation back in the queue, after which it will start up automatically once its turn in the queue comes up.

Basic Organizing Tasks

The **Organize** menu contains commands for use in navigating, archiving, and organizing your photos (and other multimedia files). This menu contains commands for creating new folders and albums, for work with the Media Archive feature, for work with the Windows Clipboard (copying, pasting, etc.), and for selecting files (Select All, inverting the selection, or selection by various other criteria).

Albums

Use albums to group pictures together by theme. Albums are normal Windows folders, but Zoner Photo Studio always places Windows shortcuts to files in them instead of actual picture files themselves. The easiest way to bring shortcuts into folders is to drag and drop from another Browser window. (Note that pictures brought into Albums will only be automatically turned into shortcuts when you are working in Zoner Photo Studio.)

All your albums are placed under the Albums folder. Unless you have chosen another location, you will find it under your My Documents folder (or Documents on Windows Vista). To change its location, use **Settings | Preferences | Folders**.

Albums behave in most ways like normal folders; you can browse and edit the pictures shown in them. However, if

you erase a picture from an album, you have only erased a Windows shortcut to it; the original is preserved. Likewise, copying or moving album items affects the shortcuts, not the originals. When you want to "physically" copy selected pictures in an album, use the **Materialize...** item in the Organize menu of the Browser.

When you edit photos in an album, you are editing the originals, not copies!

If you hold down **[Ctrl]** while dragging pictures into an album, then an actual copy of the picture is placed in the album instead of a shortcut. A picture that is in an album in this form will take up space on your hard drive, but it will no longer have any effect on the original.

Since albums are essentially ordinary Windows folders, they are available for other programs as well, not just for Zoner Photo Studio. Remember that other programs will not automatically bring in pictures as shortcuts, however.

CD Compilations

Zoner Photo Studio can make use of CD/DVD burners, so you can burn directly from the program. There are two basic routes for burning. You can either select and burn a group of files directly, or use **Organize | New CD Compilation**. CD compilations are similar to [albums](#) (files and folders are stored here as shortcuts to original files), but while browsing them, you are shown a burning pane, with buttons named **Burn** and **Recalculate Size**. You can edit such a compilation at any time and burn it again as many times as desired.

Web Albums

Use the Web Albums feature to create a multi-level virtual web gallery on your hard drive, ready for uploading and re-uploading. You do not need any other programs to maintain your galleries on the Web. Zoner Photo Studio can automatically synchronize the contents of your virtual albums on your hard drive with the "real" contents of your gallery on the Web, and can do so without needing to re-upload your whole album over again. This means you can manage extensive Web photo galleries without any knowledge of HTML, using just Zoner Photo Studio.

To create a new Web album, use **Organize | New Web Album**. Web albums behave similarly to the ordinary Zoner Photo Studio [albums](#)—instead of photo files themselves, the program places shortcuts to the files in the album, avoiding pointless duplication of the originals. Web albums can have a tree structure, that is, multiple levels with as many folders on each level as you wish. If you do wish, after all, to include originals in the album rather than shortcuts, hold down **[Ctrl]** as you drag and drop them into the album.

When you edit photos in a Web album, you are editing the originals, not copies!

To bring photos into a Web album, drag and drop them in from another Browser window. If the name of a photo or a folder contains characters like spaces or accent marks that cannot be used on the Web, you will be asked to rename the file, and a similar but Web-friendly name will be suggested automatically.

Click **Album Settings** to call up a wizard where you can choose a template for the album and change template-specific settings. In the last step of the album settings wizard you can enter the FTP settings the program should use when uploading the album. The template settings you use for the album start out applying to every folder in the album. However, you can customize them for an individual folder by checking the **Folder Settings** box and clicking the **Folder Settings** button while you are visiting a given folder.

When you click **Synchronization...**, the gallery will be generated and uploaded via FTP (the first time you use it) or synchronized with the existing online gallery. Clicking **Preview...** starts up a Web browser and points it to your Web gallery.

If you delete photographs or folders in a Web album, then their counterparts in the Web gallery will be deleted during the next synchronization.

Sorting

You can sort the files in a folder by their attributes—their names, file sizes, extensions, types, and dates. You can also set your own custom sorting, or use advanced sorting, that is, sorting based on EXIF picture information. You can set sorting type in the Browser's right-click menu (the **Sort by** item), in the Browser's main menu under **Organize | Sort by**, using the **Sort by** button on the toolbar, or using column headers, if you have activated **Organize | Sort by | Show Header**.

Custom sorting—in this mode, you can sort pictures freely, by dragging and dropping their thumbnails to the

intended places in the sorting order. The first time you switch to custom sorting for a folder, whatever sorting order you are currently using for that folder is retained. You can then drag the picture to the position that you need. The red line between pictures while you drag indicates what the dragged picture's sorting position will be if you drop it at a given moment. You can cancel custom sorting for a folder at any time using the right-click menu. If you rest the mouse cursor over an edge of the thumbnails window during your drag-and-drop work, the display will scroll so that you can see what is beyond that edge.

The sorting method has an effect on the speed of the program. Sorting by EXIF information requires that EXIF information be read for each file in a folder before that folder can be displayed. For this reason, sorting by name is the fastest.

Filter

When you want to see only the kinds of files that interest you during browsing, and there is a "technical" way to define what you want, use the Filter. Any files that do not meet the conditions you set will be temporarily hidden.

The Filter window lets you set exactly the same kinds of conditions as you can set for the [Search function](#). The conditions are divided into tabs (sections). You can disable an entire tab at once using the checkbox by its name.

Note that filter conditions in checkmarked tabs are used even if those tabs are not currently displayed!

You can filter by full or partial filename, date of creation, date of last changes, size, name, author, description, keywords, technical details like shutter speed, or GPS information.

To turn the filter on and off, use **Organize | Filter...** or the Filter button on the main Browser toolbar. You can also turn on keyword filtering from the [keywords pane](#).

Searching

To search for photos in selected folders and their subfolders, use **Organize | Search... [Ctrl+F]**.

This window divides the search conditions you can use into four types. The conditions are divided into tabs (sections). You can disable an entire tab at once using the checkbox by its name.

Note that search conditions in checkmarked tabs are used even if those tabs are not currently displayed!

You can search by filename, location, the picture file's time/date, the actual picture-taken time/date, file size, author, description, rating, and keywords. In the Advanced Search tab, you can also search by camera-related EXIF picture information (shutter, exposure time, ISO, exposure compensation, flash, focal length) and by similarity of color to a selected photograph. In the GPS tab, you can search by a geographical location. To set the location to search by, use the map or choose a picture whose coordinates the program will use. You can use conditions ("contains"/"does not contain") and logical operators (AND and OR) to modify searches for textual picture information.

The results of each search are stored to a **Search Results** folder whose name includes the search's time and date. Use **Settings | Preferences | Folders** if you wish to change the folder under which Search Results folders are stored.

You can search in the Media Archive. During such searches, you can limit which parts of the archive should be searched.

Media Archive

Zoner Photo Studio can help you create an index of your external media, like CDs or DVDs. You can use Zoner Photo Studio to store thumbnails, large previews, and photo information for any medium of your choice. You can search in this index without needing to have the individual DVDs, external hard drives, or whatever other media you have indexed be present at the time. You can easily sort the archive listings by picture information (when you are using the Details listing type).

Online/Offline

The archive database contains thumbnails and large previews so that you can easily browse through an archived

disk without it having to actually be present. When you ask the program to actually open such a file in full quality, you will be requested to insert the disk in question. The (un)availability of data at a given moment is shown using the online/offline indicator. This is shown next to the thumbnail for a picture or folder.

Thumbnail Sizes And Database Size

While indexing a medium for the Media Archive, you define the sizes of the thumbnails to show in the Browser and the previews to show in Preview/Information. Zoner Photo Studio stores large previews separately from the actual database. This is because the maximum database size under Windows itself is 2GB, and collections of previews for very large media archives can occasionally exceed this limit. If you do happen to cross this limit, you will not be able to add further media. To shrink the data in the database, you can try [media archive maintenance](#).

Add Medium

The **Organize | Media Archive | Add Medium** Browser menu item starts the process of adding a new medium to the Media Archive. You can also add a medium by right-clicking while browsing the Media Archive and then using the **Add Medium** right-click menu item. In the first step of the Add Medium wizard, you choose a medium or a path (using the **Browse...** item) and choose whether or not to index empty folders. In the second step, you choose which types of files should be added to the database.

In the third step, you choose which folders on the medium or path will be indexed. Normally, all folders containing at least one file matching your file-type filter will be indexed. These folders are highlighted with a "picture" icon. Folders that do not contain any such files, even in their subfolders, will not appear at all in the final index. Such folders are displayed in red. Folders that contain at least one highlighted subfolder somewhere in their trees are marked in blue. The **Include subfolders** and **Include empty folders** options also affect which folders are selected.

In the fourth and fifth steps, you set whether and how first thumbnails, and then large previews, will be included in the index. The thumbnails are used in the main Browser pane; the previews are used in, for example, slideshows. In the last step, you can name the archive. Clicking **Finish** ends the wizard and starts the actual indexing process.

Rename Medium

Organize | Media Archive | Rename Medium... lets you rename the archive for an already-archived medium.

Remove Medium

Use the **Organize | Media Archive | Remove Medium...** menu item to remove an existing medium from the database. After removing a large number of media or any medium with large previews, it is a good idea to use the command for media archive maintenance.

Media Archive Maintenance

The Browser's **Organize | Media Archive | Media Archive Maintenance...** command launches a process that can speed up the media archive and reduce the size of the database containing the archive's information. As you add and remove information in the database, the information can become fragmented, making it take up extra space and slowing down work with it. Defragmentation removes this problem.

This operation is performed the first time you run Zoner Photo Studio. During the operation, it is important that no copy of Zoner Photo Studio, including the Editor, is accessing the archive. This is primarily important when several people are using the program together on a network.

Using this function, you can export picture previews out from the Media Archive into external files. This is only necessary if you have imported the Media Archive from an version 10 or earlier of Zoner Photo Studio. The current version already stores previews externally. Removing previews from the database fundamentally reduces its size.

Remove Large Previews

You can use **Organize | Media Archive | Remove Large Previews...** to fundamentally reduce the size of the Media Archive database. The Microsoft JET database engine used for the Media Archive has a database file size limit of 2 GB. In past versions of Zoner Photo Studio, previews were saved inside this database, and thus the

database could easily exceed this limit.

If you only want to export previews out of the database into external files, use the [Perform Media Archive Maintenance](#) command.

After removing large previews, you should in any case perform maintenance.

Create New Archive

Use **Organize | Media Archive | Create New Archive...** to create a new Media Archive file located in the current folder. You can create a new Media Archive in any folder except one that belongs to another archive. An extra archive you create this way is not interconnected with the original media archive or with any other ones you create. Operations in Zoner Photo Studio (e.g. searches) only affect the current archive. If there is no current archive, then operations affect the standard archive (the only one that existed before you created any new archives).

Materialize

All of the program's "Album" features and the Media Archive use Windows Shortcuts to files rather than the actual files. To conveniently copy the originals that these shortcuts represent, use **Organize | Materialize...** in the Browser.

Batch Rename

Use this function to batch rename pictures, with the option to make use of their picture information.

Cameras give pictures fairly meaningless names made up of some letters and a number. That number may be a picture's position in a folder, its position in all the pictures you have ever taken, etc. In any case, it is of little use for organizing or publishing.

You can rename a single file in the same way as in Windows: select the file and then click on it (after a pause) or press **[F2]**.

You can also select a whole group of files and rename them in the window that appears when you use **Organize | Batch Rename...** **[Ctrl+Shift+Q]** in the Browser.

In the **Filename** box, you can compose the pattern by which the new names should be formed. This pattern can make use of a limited version of the program's [variable text](#) feature and/or a counter.

Existing filename	{N}	Year	{Y}
Existing extension	{E}	Month	{M}
Author*	{A}	Date	{d}
Title*	{T}	Hour	{h}
Counter	{C}	Minute	{m}
		Second	{s}

*information from the picture information field of the same name

The code for including the existing filename can be supplemented with information on which part of that filename to include; for example {N5-8} would include the fifth through eighth character. The date that is filled in is either the file's date of creation or the date of last changes.

Besides normal absolute paths, you can indicate the output path using a relative path such as "..\backup"—in this particular example, the folder would be automatically created one level above the current folder.

Use **Remove accents, replace spaces** if you wish to place files on the Web or some other environment where spaces or accent marks could cause technical problems.

Tips for Batch Renaming

The most commonly used combinations of variable text used for batch renaming are described below.

Filenames Based on When Pictures Were Taken

This kind of renaming is useful when bringing together pictures taken on multiple cameras, when using photos for documentation, and when archiving photos.

Variable text (date as filename): `{Y}-{M}-{D}-{h}-{m}-{s}-{C}`

Filenames That Include a Counter

Using a counter at the beginning of a filename is a good way to ensure that the [custom sorting](#) you have set within Zoner Photo Studio works even outside of it.

For the counter—`{C}`—you can set a starting value, a step (how much to go up each time), and the number of digits that should be guaranteed by adding zeros at the beginning of the number if necessary ("001," "002," etc.)

Variable text (to add a counter just before a filename): `{C}-{N}`

Filename Making Use of Picture Title

You can use this technique to make files' contents clear from their filenames. Although just renaming the files by hand would do almost the same, the variable text cited below also includes a counter, so you do not have to order the pictures alphabetically. A name like this is useful when publishing photos on the Web, sending them by email, sharing them, etc.

Variable text (counter, contents of the picture's Title, then Author fields): `{C}-{T}-{A}`

You can freely mix variable-text codes and ordinary text—for example "`{C}` Chicago vacation" to get names like "01 Chicago vacation."

If you do not have a serious reason to do otherwise, do not change the file extension (which is normally set to "`{E}`"). If you change a picture's extension, it can "disappear" from the Browser.

This is because Zoner Photo Studio (and Windows itself) determines the format of a file based on its extension, and, depending on your program preferences, Zoner Photo Studio may show only certain pictures and hide all other formats. If you do accidentally change a picture's extension (e.g. from JPG to JPG001) and it disappears, turn on the display of all files under **Settings | Preferences | Display** and use renaming to change the extension back.

Compare Images

Use the Compare Images function to view multiple pictures at once in order to select the best ones from among them. To access Compare Images from the Browser, use **Organize | Compare Images [Ctrl+J]**. Compare Images opens up as a tab in the main program window. To switch from it to a different tab, use the buttons at the top right.

The way that the Compare Images space is divided up depends on the display mode: **One preview, Two previews, vertical, Two previews, horizontal, Three previews, vertical, Three previews, horizontal** or **Four previews**.

One of the previewed pictures is always the active picture. It is framed with a red rectangle. This picture can be copied or moved to another folder, or deleted from disk. Click another picture's thumbnail to make it active instead. You can also move among pictures using the **Previous File** and **Next File** buttons. These automatically skip over files that have already been displayed.

The other functions govern the contents of the preview panes—zooming in and out, showing/hiding a picture's histogram, turning blowout highlighting on/off, and showing/hiding picture information.

If the **View | Information** option is active, a pane beneath each thumbnail shows picture information and controls for labels and picture ratings.

The Filmstrip can be dragged to any of the four possible anchor points—top, bottom, left, or right—to make better use of screen space.

You can also use the mouse wheel to quickly display a picture from one pane in another pane. In two-picture mode,

you can click the mouse wheel over any part of a preview and, until you release the mouse wheel, the other preview is shown in place of that preview. The other preview receives a blue frame around it. In modes with more than two pictures, setting the "other" picture is more complicated. You need to hold down the mouse wheel in a place that corresponds to what the position of the desired picture would be if the active preview were divided into sections in the same way that the overall preview space is divided into sections. For example, if you are using the "Three previews, horizontal" mode, then each preview is divided into three sections side by side, and clicking in, for example, the leftmost third of the picture displays the picture from the leftmost preview pane in the active pane.

Use the settings in [Settings | Preferences | Compare Images](#) to set how mouse wheel scrolling works here and what information is shown under pictures.

Sort Pictures

This is a wizard for sorting photos on a disk or in a folder into a new, organized folder structure in a few easy steps.

Use **Organize | Sort Pictures [Ctrl+O]** to reach this function.

The first step includes a drop-down menu where you can choose a disk containing files to organize. You can also instead choose a particular folder, using the **Browse...**

You can also choose a **picture sorting method**. There are three standard options here representing common ways of organizing pictures into folders by their picture-taken dates. These differ in the number of different levels of folders are created. The **Custom** option enables you to set your own choice of how many levels and what to base them on (e.g. pictures' times and date, shutter speeds, authors, focal lengths, etc.), with the help of the program's [variable text](#) feature. Clicking the arrow button here takes you to a window that largely automates the process of work with this feature. To indicate a subfolder, use the "\" (backslash) character.

At the bottom of the window for this step, you set the folder to which the sorted pictures should be copied. To continue to the next step, click **Next**.

In the second step of the wizard, you can choose whether, besides sorting bitmap images (photos and graphics), you would like to also find and sort vector-graphics files (files from Zoner Draw and saved print jobs from the Print and Export wizard), videos, and sounds. You can use the **Only sort files larger than** option to filter out very small pictures (like miniatures and banners). To continue to the next step, click **Next**.

In the third step, you can see the picture folders that were found and are marked for sorting. Here you can deselect folders that you would like for the program to not sort. Click **Finish** to finish the wizard and start the actual sorting of the selected folders. If you are not ready to do this yet, click **Previous**.

This function is useful when you want to reorganize an existing photo archive (set of photos) or create a new one. You can add further pictures to an archive in a variety of ways, e.g. using the [Copy from Device](#) function, which also provides for some basic sorting of pictures into folders.

Creating Special Outputs

Panoramas

Functions **Publish | Panorama** Use **Publish | Panorama** to turn a group of photos into a panorama.

The source pictures must have been taken with a certain amount of overlap, so that they can be joined properly. In this function, you prepare your source pictures and configure settings using a wizard, and then the program handles the rest automatically. In the first step, you choose the pictures from which the panorama will be assembled. In the next steps, you configure (if needed) various settings to ensure that the panorama is assembled correctly.

Sorting the Pictures

After the pictures are loaded, they are analyzed, and the program tries to guess the panorama type and the order of the pictures. In this step, you can either accept the program's guess or select a different panorama type or a different order for the source pictures. Use the buttons for these changes; to re-order pictures, you can also use drag-and-drop. When you are dragging a picture, its outline is displayed, and a vertical line shows where its new position will be if you drop it.

Joining Pictures

At the end of this step, the actual joining of the pictures into a panorama takes place. However, you must first enter the **focal length** of the lens that was used to take the pictures. The program also guesses this value automatically, but here again you can **set it manually**. This is recommended for experienced users only. Pictures from digital cameras generally have focal length information stored in their EXIF data. However, this is usually the relation between the true focal length and the size of the camera's sensor. To compose a panorama, meanwhile, you need to know the focal length equivalent for 35 mm film. To get this equivalent focal length, you multiply the actual focal length by a certain factor, which is the ratio of the diagonal of a 35mm film field to the diagonal of the sensor. Click **Determine** to open the **Determine Focal Length** window. In this window, you enter either the multiplication factor or the sensor size of the camera with which the pictures were taken. (The sensor size should be mentioned in the camera's manual.) Once you click OK, the equivalent focal length is determined automatically and meanwhile the multiplication factor is also saved, so that for all future pictures from the same camera, the equivalent focal length is determined automatically. If the picture's EXIF data does not include focal length information, then the **Determine** button is grayed out and the focal length equivalent must be entered directly.

To start the actual assembling of the panorama, click **Join**. Once the panorama has been assembled, the **Next** button becomes active, enabling you to continue to the next step of the wizard.

Edit Connections

In this step, you can manually correct the automatically-determined joining points between source pictures. During automatic joining, the program finds, for each pair of neighboring pictures, points contained in both of those pictures. Then it uses these pairs of points to calculate any eventual shifting and rotation of the pictures against each other. If any of the joins is less than ideal, then click the red framed area enclosing that join.

This displays a window showing the pair of photos that meet in the given join. Each of the shared points that define the join is shown for each of the two pictures. The points are color-coded by pair. You can use the mouse to reposition these points, or enter new points by clicking in the places where you want them. (The program tries to automatically find the position of the paired point in the other picture.)

You can erase a point by clicking the **Erase Point** button or pressing [Del]. Click **Delete All Points** to erase all shared points. For correct joining, you need at least two points; the maximum you can enter is 12 shared points. To make your joins as precise as possible, use as many points as you can, and distribute them evenly throughout the join area. Also, emphasize places with high contrast (objects' corners, etc.). If the **Optimize point position** option is active, then it is enough to enter the position of a shared point only approximately; the program then seeks out an optimal position for it.

A horizon line is also shown on the panorama. This line sets the panorama's virtual horizon. If your panorama is forming an unpleasant "arc," move this line up or down to solve the problem. To rotate the horizon line, and thus the panorama as a whole, use the mark at the right edge.

Crop

Because the source pictures are usually variously shifted against each other, the final panorama generally needs cropping. In this step, you can enter the cropping borders, although the program tries to guess a suitable crop automatically. The program's guess is the crop displayed when you enter this step.

Finalizing

After you click **Next** in the cropping step, the panorama is assembled at full size and then the last step in the wizard is displayed. In this step, you can **Save...** the panorama to a file, or use **Open in Editor** to open it in the Editor, where you can finalize it.

Panorama Tips

- Photos taken using a wide-angle lens often suffer from barrel distortion, which makes it more difficult to correctly join them, and also often causes ugly breaks within what should be straight lines. You can counter this problem by using a larger focal length in the panoramas wizard than the one that was actually used when taking the source pictures.
- When manually fine-tuning your joins, enter primarily points in the middles of the transitions between pictures. Also, emphasize places with high contrast (objects' corners, etc.).
- Keep in mind that the final image can be relatively large, and this means large memory requirements. For example, a panorama containing 10 pictures from a 6-megapixel camera has, assuming 30% overlap between pictures, roughly 22,000 × 2000 pixels, and occupies over 130 MB of memory (!) if it is perfectly flat, and even more if it is not. Therefore you need to ensure that the computer on which you compose the panorama has enough memory. If you do not need to have the panorama at a large resolution (if you will not be printing it), we recommend that you assemble it from reduced-size copies of the original files. This significantly lowers the process's memory demands, making the work of assembling the panorama much faster.

How to Take Pictures for a Panorama

- The individual pictures should be taken using a lens with a large focal length. Source pictures from wide-angle lenses (and especially zoom lenses) often suffer from barrel distortion, making it impossible to precisely join them. If you cannot use a lens with a larger focal length (because you cannot get far enough away), it is a good idea to at least take pictures with the camera turned on its side. (You will need to take more source pictures, but they will be easier to join.)
- While taking pictures, you should be turning the camera around the center of its optical apparatus. If you do not do so, then the individual pictures will each be taken from a slightly different angle. This too makes joining more difficult (especially for close objects). This requirement can only be met completely using special tools, but even just placing the camera on a tripod will help considerably. When taking pictures by hand, it is practically impossible to meet this demand, and thus it will also be impossible to join your pictures with complete precision.
- During picture-taking, the camera should rotate around its vertical axis only. Once again, the easiest way to achieve this is using a tripod. (The ideal is to keep the camera straight using a level. Tripods often have a level built-in.) When taking photos by hand, just try to rotate the camera on only one axis.
- The overlap between pictures should be from 30 to 50%. If it is smaller, then it can be difficult to find points shared between neighboring pictures, and it also becomes necessary to join pictures towards their very edges, where lens defects are the most apparent, making the seams between pictures much more noticeable. The program does not expect overlap greater than 70-80%, and so larger values can cause bad joins.
- If there are no great changes in lighting conditions throughout the scene you are capturing, it is a good idea to use exposure locking. If, however, the lighting conditions differ significantly among pictures and some of them could therefore be overexposed or underexposed, we recommend that you set exposure manually and even out exposure differences among pictures using exposure correction. Naturally, you can make use of automatic exposure, but in this case the exposure levels can differ significantly between neighboring pictures, and even though the joining algorithm generally does a good job of evening out such differences, joins between pictures can be quite noticeable. If your camera enables it, then we recommend in any case that you manually set white balance.

3D Images

Functions **Create | 3D Images...** Use the Create | 3D images command to create pictures (anaglyphs) that look 3D when viewed through special colored glasses. To create such pictures, you need two special source pictures that are then joined into a single picture—an anaglyph.

Creating source pictures is fairly simple, and you do not need to bring any special tools along with your camera—you just take two pictures of the subject from two slightly different angles. When taking the second shot, you move the camera by about the distance between an average pair of eyes (around 2 1/2 inches: 6-7 centimeters).

After you choose the two source images, Zoner Photo Studio tries to **Find Shared Points**. Using these points, it tries to compose the anaglyph precisely even in cases where you turned, raised, or lowered the camera between the two shots. You can delete any improperly detected shared points by selecting them and clicking **Delete Selected Point** or by pressing **[Del]**. To delete all shared points, click **Delete All Points**. You can add new points by clicking on the previews. The most points you can add is 12.

It is important to ensure that the left photo is on the left and the right photo is on the right. If the photos are switched, the final picture will not look 3D. If you do need to swap them, you can do so using the button named **Left < — > Right**.

The second step of the wizard is where the 3D picture is actually created. You can choose from among four types of 3D picture. **Black-and-white** For black and white anaglyphs, the program converts the two photographs to grayscale and then from grayscale to the target colors. The remaining three methods create 3D pictures in color. **Color** retains all colors. If the scene contains any large bright red surfaces, they can look unpleasant in the final picture. To solve this problem, use **Half-color** which weakens the red channel by an amount of your choice. To weaken the red channel by a different amount, use **Optimized**. You can then set the **Red channel level** manually using a slider.

The arrows controls on the bottom left let you manually correct the positions and rotations of the pictures against each other. Use the button in the middle of them to remove your manual adjustments.

Unjoined edge regions are automatically removed as long as you leave on the option named **Crop**. In the last step, click Save... to save the 3D picture, or Open in Editor... to edit it in the Editor.

Support for the MPO, JPS, PNS, and BMS formats

For normal image formats, you must also select two source pictures. However, there also exist specialized formats where both pictures are stored in a single file. In this case, select just this one file. The 3D wizard automatically reads in the individual pictures.

Some persons with vision defects do not see anaglyph-type 3D pictures in 3D.

Exposure Blending HDR

Use the HDR (High Dynamic Range) function to assemble multiple photos with varying exposure ranges into a single picture. This is sometimes called "sandwiching."

This function helps solve the problem of the limited dynamic range of camera sensors. Because of this limited range, digital cameras cannot satisfactorily capture scenes with large differences in brightness, like a dark forest beneath a bright sky, or a dark room with light pouring in from a window. Since a photograph cannot capture a scene with such a large exposure range in a way that captures details in all parts of the scene, the photographer is forced to "sacrifice" details in either the light or the dark areas. But if the photographer can take three pictures identical except for their exposure - underexposed, overexposed, and "medium" - they can take advantage of HDR. Zoner Photo Studio can then use the most detailed areas from each shot to put together a new picture.

HDR pictures are normally composed from three shots, but sometimes two are enough, that is, either normal + underexposed (to capture lights), normal + overexposed (to capture shadows), or under/overexposed. After selecting source pictures in the Browser, use **Create | HDR via Exposure Mapping...** to start the wizard. To fix any mistakes you might have in your selection, use the wizard's first step. In the next step, the pictures are automatically aligned. Double-check the alignment and manually fix it here if needed. For advice on checking and fixing alignment, see the Help section for [Aligning Pictures](#), as this function contains a similar window.

Use the next step to set which picture is properly exposed, which is underexposed, and which is overexposed. The program will try to order the pictures automatically. However, you can also reorder them by dragging and dropping them. In the next step, the HDR picture is actually created. You can use several settings to influence how it will look.

The various settings are separate for lights and for shadows, but their meaning is the same for both. Use **Transition threshold** to set the brightness level beyond which a pixel in the underexposed/overexposed picture is copied into the "medium" picture. However, this threshold need not be a sharp one; pixels from the source pictures can be phased in gradually. To set the width of such gradual transitions, use **Transition smoothness**. However, even with this sort of smooth transition, the border between the original and the changed part of the picture can be quite visible. You can alleviate this by using what is called an unsharp mask to blend the edit into the surrounding pixels as well. You can change the mask's unsharpness using **Mask blurring**. The last setting is **Intensity**, which sets the ratio between the original picture and the one being copied in.

Use the buttons in the last step to save the final HDR picture to file or open it in the Editor so you can continue editing it.

Tone Mapping HDR

Use Tone Mapping HDR to combine several photographs with varying exposure ranges into a single picture via tone mapping. Unlike Exposure Blending HDR, it enables work with an unlimited number of source pictures.

This function helps solve the problem of the limited dynamic range of camera sensors. Because of this limited range, digital cameras cannot satisfactorily capture scenes with large differences in brightness, like a dark forest beneath a bright sky, or a dark room with light pouring in from a window. Since a photograph cannot capture a scene with such a large exposure range in a way that captures details in all parts of the scene, the photographer is forced to "sacrifice" details in either the light or the dark areas. However, if the photographer prepares several shots that are identical except for their exposure levels, tone mapping HDR can be used. Zoner Photo Studio then uses the most relevant parts out of each of these images and assembles them together to create a new HDR image, to which tone mapping is then applied.

An unlimited number of source pictures can be used for tone mapping HDR. After selecting source pictures in the Browser, use **Create | Tone Mapping HDR**. To create an HDR image, the program must know the exposure value (EV) of each source picture. Darker pictures have lower exposure values than light ones. The exposure value is taken automatically from EXIF using the data for aperture, exposure time, and ISO. If there is not enough data available for that, the EV must be entered manually. Click **Set** to set the exposure value difference between pictures or set the exposure value separately for each picture. In the next step, the pictures are automatically aligned. Double-check the alignment and manually fix it here if needed. For advice on checking and fixing alignment, see the Help section for [Aligning Pictures](#), as that function contains a similar window. In the next step the HDR image is actually created, and tone mapping is initialized. Various settings are provided here for influencing the final output.

Use **Intensity** to set how strongly the tone mapping affects surrounding pixels. **Compression** This determines how strongly the whole HDR dynamic range will be represented in the final output. Use **Light** to suppress lights and shadows effects. To set color intensity, use **Saturation**. Use **Gamma** to shape the gamma correction curve. The **White Color and Black Color** settings determine the "cutoff" percentages for the effect. **Lights Intensity and Shadows Intensity** set how strongly the effect is applied in the picture's lights/in its shadows.

In the last step, you can either save the final HDR picture to file or open it in the Editor, where you can continue editing it.

Note that one possible and even attractive use of tone mapping HDR is the creation of HDR from one single image (typically JPEG or RAW).

Postcards

To create images that look like postcards, use **Create | Postcard**.

After you start this function, Zoner Photo Studio chooses a postcard type based on the number of source pictures you have selected. If no appropriate type is available, it chooses the first type. To bring pictures into the postcard,

drag and drop their previews. To reposition them within the postcard, right-click, drag, and drop them. You can also add pictures using the button named **Add Picture**. Each field in the postcard can receive a **placement method (Place:)**, **Transformation**, position, and size. To select a field in the postcard, left-click it. To remove a picture from a selected field, press **[Delete]**. **Envelope** settings are shared by every frame in the postcard; so are the settings for **blurring**, **frame width**, **frame color**, and **background color**.

You can set the postcard's **dimensions**, **the border thickness and border color**, **the grid thickness and grid color** and whether or not to **draw the outside edges of the grid**.

Dimensions can be entered in millimeters, or given in inches at a DPI of your choice. 96 DPI is enough for the screen; 150 DPI is recommended for printing and 300 DPI for quality printing.

Use the buttons in the next step to save the postcard or open it in the Editor for further edits.

PDF Slideshows

PDF slideshows are a very good way to share photographic presentations. They can be used even if your audience uses a Macintosh or Linux computer. Unlike "self-launching" presentations, this is a safe format - no program code is transferred, and thus the risk of transferring viruses among computers is minimal.

At their core, PDF slideshows are standard PDF files that contain one full-page photograph per page. During slideshow generation, you can set the way each photo (page) in the slideshow will be displayed. This means the **Transition effect** used and the amount of time to **Show (the) image for** – these can be set individually for each picture. Click **Apply to All** to apply the selected effect and display time to all pictures. You can also give the whole document a unified **effect display time (Show effect for)** and you can **set a soundtrack**. The soundtrack can be in the MP3, WAV, MIDI, AIFF or AU format. When possible, use MP3, because of its advanced compression. For more information, see [Export to PDF](#).

For your audience to see your slideshow as intended, they need to have Adobe Reader 6 or higher on their computer. (It is unlikely that they will not.) Older versions of Adobe Reader and other PDF viewers (e.g. GSView) will display the photos only, without the transition effects and the soundtrack.

Removing Noise using Multi-exposures

When taking pictures in insufficient light and without a tripod, it's usually not possible to use a very long exposure time, and a high ISO is usually needed too. This leads to photos with a lot of noise. If, however, you have taken several such photos in a row, you can use this function to combine them into one picture. The program averages their pixels, reducing noise. When taking the source pictures, make sure to move the camera as little as possible, because even a small change in its position can cause quite large changes to perspective, making it difficult to align the pictures so they can be sharpened. Cameras' functions for taking quick series of pictures are very useful here. About 4-6 shots is best. With fewer, the noise reduction is smaller than it could be. With more, the risk of nudging the camera during the series is greater.

After selecting source pictures in the Browser, use **Create | Join Multi-exposures | Remove Noise...** to start the wizard. To fix any mistakes you might have in your selection, use the wizard's first step. In the next step, the pictures are automatically aligned. Double-check the alignment and manually fix it here if needed. For advice on checking and fixing alignment, see the Help section for [Align Pictures](#), which contains a similar window. In the next step, the sharpened picture is generated. Use the settings here to influence the results.

Use **Crop** to crop away edge areas where the source shots have not perfectly overlapped. Small shifts of the camera between pictures are normal for shots taken by hand, so pictures need to be aligned. This process is not always perfect, so edge areas may be blurred. Use the **Sharpen** option to eliminate this blurring. If some objects have changed position between shots, use the option named **Remove differences between pictures** and if necessary use the **Amount to remove** slider to fix the problem. Use the lowest slider level that works, because higher levels can mean less noise reduction: with strong reduction, in pictures with a high degree of noise, the noise can be mistaken for a change in the picture, and thus not reduced. But areas that contain removed differences between pictures always receive less noise reduction than other areas. This option can also be useful even when a scene contained no moving objects. If the camera position shifted heavily between shots, it can be hard for the program to align them well. Use this option to eliminate e.g. doubled contours caused by poorly aligned source pictures.

In the last step, you can either save the final picture to file or open it in the Editor, where you can continue editing it.

Removing Moving Objects

Use this function when you want to photograph a certain object, but other objects that you do not want in the picture keep moving around it—for example a monument surrounded by tourists. Prepare for this function by taking pictures of the object at several time intervals. Then use the function to join them into a single picture. For each part of the final picture, the function only uses the part of the picture that best matches the other pictures. Therefore, when taking your source pictures, make sure that for every area in the picture's subject, there are at least two shots where nothing is blocking it. Although shots from a tripod work best, you can also shoot by hand—the function straightens them out before starting. We strongly recommend using exposure locking and manual white balance for your source shots.

After selecting source pictures in the Browser, use **Create | Join Multi-exposures | Remove Moving Objects...** to start the wizard. To fix any mistakes you might have in your selection, use the wizard's first step. In the next step, the pictures are automatically aligned (straightened). Double-check the alignment and manually fix it here if needed. For advice on checking and fixing alignment, see the Help section for [Align Pictures](#), which contains a similar window. In the next step, the final picture is created. Use **Blur edges** for smooth transitions between parts taken from different pictures. Use **Duplicate Objects** to bring all the removed objects back into the final picture. Use this technique for creative images where e.g. a single object in a photo is in several different places in the picture.

With poor source materials, the final output can sometimes contain scraps of the objects that were removed. Use manual correction to handle this. In the place that you wish to adjust, drag out a frame, and in the next step of the wizard, choose which source picture to use for the area in the frame.

In the last step, you can either save the final picture to file or open it in the Editor, where you can continue editing it.

Aligning Pictures

Use this pictures to align several pictures of the same object taken without a tripod. After selecting source pictures in the Browser, use **Create | Join Multi-exposures | Align Pictures...** to start the wizard. To fix any mistakes you might have in your selection, use the wizard's first step. In the next step, the program tries to find points shared between the different pictures, and to use these to align the pictures. The pictures are always aligned to the first one in the series. The left part of the window contains a list of the pictures in the series. Click a picture other than the first one in order to select the picture and to check its alignment in the preview pane on the right. Use the buttons under the preview to toggle the display in the preview pane between the aligned picture, the first picture, and the one overlaid above the other.

If no shared points could be found for a given picture or it is badly aligned, edit the shared points manually using **Edit Shared Points**. During shared point editing, the right part of the window shows the two pictures and their shared points aside each other. Click a spot in either picture to add a shared point. The program automatically adds its equivalent to the other picture. Click and drag a point to move it. To delete a point, press **[Delete]** or click **Delete Selected Point**; click **Delete All Points** to remove all shared points. To help check alignment during editing, use the buttons on the right to see how the program has overlapped the pictures. Click **Save Added Points** to exit editing and align the picture based on the newly added shared points. Click **Cancel Shared Point Editing** to restore the state before you started editing.

Use **Crop** to crop away edge areas where the source shots have not perfectly overlapped.

Use the last step of the wizard to save the final picture, add a useful suffix to the names of the individual files, and choose a folder and format for saving the files.

Publishing

Slideshows

To start a slideshow, use **Publish | Slideshow [F3]** in the Browser menu, press **[F3]** in the Viewer, or click the Slideshow button on the main toolbar.

To customize the slideshow settings, use **Publish | Advanced Slideshow... [Ctrl+F3]** in the Browser menu or **Slideshow | Slideshow Settings...** in the Viewer. A slideshow does not necessarily display files in alphabetical order, but rather based on the order in which files are listed in the current folder. A slideshow starts from the currently selected picture. You can also start a slideshow by clicking the mouse wheel on a thumbnail in the Browser.

The slideshow settings window has four tabs. The **Display** tab lets you set which file types will be displayed, and whether movement among pictures should be automatic or manual. If any audio or video files are among those in the slideshow, and they are not filtered out, they will also be played or displayed. On computers with multiple monitors, you can set on which monitor the slideshow should take place.

Use the **General** tab to adjust general slideshow settings. The **Show thumbnail pane** item turns on a thumbnail strip displayed at the top of the screen for quick navigation in the slideshow. **Block screensaver** ensures that your slideshow will not be interrupted by your screensaver. If audio notes are assigned to files, the program can play these.

Use the **Header and Footer** tab to set whether or not headers and footers will be displayed, and what they will contain. Use the program's Variable Text feature to set up their contents. The **Effects** tab sets whether pictures will be displayed immediately or instead introduced using various transition effects.

During the slideshow itself, you can temporarily rotate pictures by 90° and delete, copy, or move them. Right-clicking over a picture in a slideshow displays a menu providing easy access to most slideshow functions. While browsing pictures, you can change the zoom level (and lock it), add a rating, and toggle the display of blowout **[O]** and histograms **[H]**. You can also toggle the display of picture information **[Shift+Enter]** and switch to the Editor **[Ctrl+Enter]**.

You can use the controls at the bottom of the slideshow settings window to store all slideshow settings as a preset, to load such a preset, or to return to factory settings.

Wallpaper

"Wallpaper" means a picture that is shown in the background on the Windows desktop. Use the **Publish | Wallpaper** menu item to use the picture as wallpaper in any of five modes, or to remove the wallpaper.

Printing a Single Picture

To print a single picture from the Editor, use **File | Print... [Ctrl+P]**.

In the printing window, you can set the size and position of the picture and add a caption.

After choosing a printer, you can click **Properties...** to set a paper size and color (this is very important when printing to special photo paper). Zoner Photo Studio can also read in page size and margins on its own. If you turn on **Print to file**, the program will save the printout as a data file use by the selected printer instead of actually printing. **Number of copies** is automatically preset based on your settings in the printer properties, but you can also set it within the main preprint window. The **Automatically change paper orientation to match image** option changes the paper orientation (landscape vs. portrait) to match the orientation of the picture you are printing.

There are buttons beneath the print preview for changing the picture's size and position.

The **Fit to page and if required** option centers the picture on the page and handles how it should be fit on the page, using the fitting method that you select. The **Add borders** option adjusts the picture so that it fits on the page in full. The second option, **Crop**, makes the picture completely fill up the page's printable area and crops out any part of the picture that spills off the page. Such edge areas are marked in red in the preview.

The **By image DPI** option places the picture on the page at the size needed to achieve the DPI level you set.

The **Custom** option enables you to set a fixed **Width** or **Height** for the picture. You can set just one dimension—the program will automatically, proportionally calculate the other dimension.

You can use the buttons beneath the picture to anchor the picture to an edge or corner of the page, or to its middle. You can also instead use the **fixed position** menu. Use the **Custom** option to set a position of your choice for the **Left** and **Top** corner of the picture.

You can choose which **Units** to define the custom position in—millimeters or inches.

You can also optionally add a **Caption** to the picture. You can **Place** the caption below or above the picture, and **Align** it to either the edges or the center of the picture.

You can either write the caption manually or make use of picture information via the program's [variable text](#) feature. Click **Font...** to select a font and size for the text.

Printing and Exporting Groups of Pictures

In the Browser, there is a single wizard that provides access to all the program's ways for printing and exporting multiple pictures at once. In several steps, you can create any of four basic types of print output. Your first step in the process is to select the pictures that you wish to print or export. Then use the **Publish | Print & Export...** [**Ctrl+P**] menu item. In the first step, you double-check that you really want to use all of the pictures that you selected, and deselect any that you do not want. You can skip this step in the future if you check the **Skip this step from now on** box. To continue, click the **Next >** button.

On the following page you can choose what type of print or export you want to prepare:

- **Templates**—page layouts prepared by Zoner that you can place photographs into
- **Contact Sheets**—automatically generated layouts with the number of rows and columns you choose, with customizable spacing between pictures, headers, footers, and captions
- **Calendars**—automatically generated calendars for a year, month, and day of your choice
- **Paper Saver**—printing of any number of photos with any combination of sizes and shapes on the minimum necessary number of pages

Placing Pictures in a Print Template

Pictures can be placed either manually or automatically. In the mode named **Automatically**, pictures will be placed on individual pages based on their current positions in the folder, and the print job will be generated all at once, with the corresponding number of pages. The **Automatically with rotation** mode rotates pictures by 90° if their orientations do not correspond with the orientation of their placement frames. When you are in the mode named **Manually**, in the next step you will see an empty print page onto which you can drag pictures from the list on the left side of the window. You can add further pages by clicking the **Add Page** button. You can also delete pages. You can move among pages using the **<<** and **>>** buttons.

There are three different ways that pictures can be placed:

- **Frame**—the whole picture is fit into the frame, and its ratio of sides is retained. If its ratio of sides is not the same as the frames, then empty strips surround its sides or its top and bottom.
- **Crop**—the picture is fit into its frame based on its "shorter" dimension (the dimension that will make the other dimension "stick out" when it is fit snugly into the frame) and the other dimension is cropped.
- **Stretch**—the picture is placed in a frame and, if it does not fit snugly in the frame, its ratio of sides is changed so that it does snugly fit.

You can mirror or rotate pictures after placing them. These transformations always relate to the currently selected frame, which is highlighted with a red frame.

Output Options

Once you are done preparing the print job, the program offers five options as to what to do next: **Print**, **Save**, **Export**, **Edit** and **Edit in Zoner Draw 5**. These options are described below.

Saving Print Jobs

Pages can be saved to the ZMP format. You can open ZMP files in the Editor and then edit, print, and save them from there. ZMP files do not actually store photos inside of them, only links to the photos.

Exporting Print Jobs

Zoner Photo Studio can export a print job to the widespread PDF document format. This is an easy way to send electronic albums to your friends without the need to include a viewing program. (Adobe's PDF viewing program named Adobe Reader is already installed on most computers.)

When you click [Export to PDF...](#) after preparing a print job, a window for work with PDF settings is displayed, followed by a window for setting the PDF file's name and path.

The first of these windows is described in more detail in the Export to PDF topic. Another possibility is to export the individual pages of the print job as a series of bitmaps; this is described in the Convert to Bitmap topic.

Editing Print Job Pages

You can edit the pages of a print job in a special print-job version of the Editor. To start editing them, either use the button for this at the end of the Print and Export wizard, or open a saved ZMP file (see above). The Editor toolbar changes when you are editing print jobs. This version of the Editor contains several desktop-publishing editing tools:

- **the arrow**—for selecting and editing objects (moving, resizing, rotating, and skewing them)
- **small arrow**—for shaping objects, and especially for editing existing text
- **the "T"**—for adding new text
- **import**—for adding pictures
- **paging**—for moving among pages

This version of the Editor is in practice generally used for fine-tuning the positions of photos and adding custom supplementary texts. Not all parts of print job pages can be edited. Some elements are unchangeable parts of the templates. You can save print jobs after editing them.

Editing Print Job Pages in Zoner Draw 5

You can edit print job pages in Zoner Draw 5, a separate product by Zoner. There is a button for precisely this within Zoner Photo Studio, but it is grayed out unless Zoner Draw 5 is installed. Work with this program is somewhat more complicated than work with the built-in Editor, but it also offers more possibilities. For detailed help on using Zoner Draw, use the Help **[F1]** function in that program.

Printing using Templates

Templates

Zoner Photo Studio contains several dozen templates grouped by theme: simple and complex contact sheets, prints to photo paper, business prints, congratulations on a new baby, weddings, birthdays, photodocumentaries, etc.

Some templates contain editable text. Some templates further let you make use of the Variable Text feature, so that texts can vary based on information about a picture or about the printout page. For more information, see the topic on the Variable Text feature.

Custom Templates And New Templates

You can create your own templates using Zoner Draw 5 (a separate product). For more information on this, see the Zoner website.

New templates are published on the Zoner website from time to time. To reach the page where they are published, click the **Get more** link next to the list of template categories in the print wizard.

Contact Sheets

Choosing a Page Size

For the **Contact Sheets**, **Calendars**, and **Paper Saver** printing types, the next step is choosing a page size. You can choose one of the paper sizes offered, or use the last item, **Custom**. For custom page sizes, you can either enter the size yourself, or use the **Read Page Size and Margins from Printer...** button, which will call up your printer's own Print Setup window so you can choose a size from there. This button will also automatically set the printer's smallest possible unprintable regions as the page borders.

Contact Sheets

Use the Contact Sheets printing type print a specified number of pictures per row and column, and the size of the spaces between pictures. You can include a page header and footer, picture captions, and a background for the page and for individual pictures.

Calendars

When creating a calendar in Zoner Photo Studio, the most important thing is picking a template. Several templates are included for each of a variety of periods: weekly, monthly, bimonthly, quarterly, half-yearly, and yearly. You can also choose a starting **month**, **year**, **week orientation**, and a choice of **day of the week**.

In the next step, you configure the details of the day and month displays, day names, underlining, framing, and special days. For all of these texts, you can set the font, size, alignment, color, and other attributes after clicking the corresponding **Text Properties** button.

Paper Saver

This function optimally distributes pictures with sizes of your choice so that they fit on the least possible number of pages.

If the predefined sizes do not meet your needs, you can choose the **Custom** item and enter all needed sizes by hand. To add a group of picture "frames," enter their widths, heights, and quantity, and then click **Add**. To remove all the frame groups that you have added, click **Remove All**. To remove a single group, click **Remove**. To edit a group, select it, change its settings using the controls at the top, and then click **Change**.

Print Settings

Before printing a print job that you have just created in one the publishing wizards or that you are editing in the print-job version of the Editor, you can configure various print settings. The settings here are divided into four tabs.

- **Printer**—Here you can select a **Printer name** to choose a printer. Under the drop-down printer list, you can see basic printer information. Click **Properties...** to call up a window for choosing printer properties, like the page format, print quality settings, paper type, etc. **Print range** sets whether the whole document should be printed, or just selected pages or selected objects. (This last option only makes sense when printing from the Editor.) **Number of copies** sets how many copies of the given print range will be printed out. When you use **Print to file**, the document will not actually be printed; the print output will be saved to a file instead. This is useful when you need to send a file to a printer that is not connected to your computer, or for exporting to PostScript.
- **Options**—Use the **Fit to page** option to make the program proportionally resize the contents of each printed page so that they just barely fit on the page. Use this option when, for example, you want to print a document on paper that has the same shape as a template, but a different size. For non-US users, a good example would be moving from the normal A4-sized templates to A3-size paper. When you use the **Center on page** option, the contents of each printout page are centered on the page. You can use the **Scale** to stretch or shrink the contents of the printout pages. Use the **Print text as curves** item to make the program treat text as a collection of curves instead of as actual text. Some printers are unable to print letters that cross the edge of a printed page. This is a problem when, for example, you are using the Billboard Printing option. Printing text as curves will prevent this. **Print quality** sets how fountain fills and transparent areas will be printed. ("Fountain fills" is a term from a kind of graphics called vector graphics. They are gradual transitions from one color to another. They are only found in templates themselves, not in your photos.) Only the highest level, "Transparency," guarantees that the document will look the same way on paper as it does on the screen. However, it is also the slowest to print.

Wireframe—object outlines only

Low—pictures and fills are shown as hatching instead of their real contents. Fountain fills are reduced to 10 steps.

High—Fountain fills have a reduced number of steps.

Full—everything is printed exactly as shown, except for transparent areas.

Transparency—objects' transparency is also taken into account.

- **Billboard printing**—Use the controls on this tab to print documents larger than your printer's maximum paper size. While the standard templates have the Letter or A4 paper size, you can create your own templates (using Zoner Draw, a separate product) with sizes of up to several meters. Billboard printing enables you to actually print such large sizes, by dividing them out into multiple pages that you then reassemble with the help of printing marks. That is, when you turn on billboard printing, each page in the printout will contain information around its edges informing you of which pages to join to which other pages. This makes it easy to print large pictures for use in place like shop windows. Before you can do all of this, you need to actually turn Billboard Printing on. To do so, use the **Enable billboard printing** control. Then set what kind of **Cutting marks** you prefer. Normally, the program will print out all pages in the billboard printing job, but there can be situations where you only want to print selected pages. To call up a window where you can select pages to print, click **Select Pages....** The pages marked in blue in this window will not be printed.
- **Prepress**—Here you can select whether or not to **Print prepress marks**, and what kinds to use. Prepress marks are supplementary information about a document or marks that are helpful when e.g. cropping the printed page. Use **CMYK separations** when printing to film for a professional printing machine. When preparing color publications, you need to supply pages "separated" into the basic print colors. To print separation, check the CMYK separations checkbox and then the plates that you wish to print.

Convert to Bitmap

This function is only available when you are editing a readied print job. It converts the print job into a bitmap.

This function is available as a button in the last step of the Print and Export wizard, and under **File | Convert to Bitmap** when you are editing a print job in the Editor.

In the conversion window, you can set how the bitmap's size in pixels will be determined: directly, or in terms of dots per inch (DPI). To convert multiple pages to a bitmap, you must use the Convert to Bitmap command from the last step of the Print and Export wizard.

Export to PDF

Use **File | Export to PDF [Ctrl+Shift+E]** while you are editing a finished print job (created using e.g. **Publish | Print and Export [Ctrl+P]**) to export it to PDF (Portable Document Format). PDF documents can contain some information about themselves, so you are offered a chance to enter **Title, Subject, Author, and Keywords** data for the PDF. The remaining items in the PDF export window let you adjust technical aspects of the PDF to save space, or ensure that your audience can read it.

One way or another, each PDF needs to handle the fonts for any text you use. We highly recommend that you include them directly. For this, you need to do nothing; it is the default setting. But occasionally it is better to export text as curves instead. For small amounts of text, this can reduce your PDF's size: while expressing text as curves wastes space, including the font file would take even more space. But one disadvantage will still remain: since the text is now curves, not text, your audience will not be able to search in it, copy it, etc. This choice is placed under **Export text as**.

Normally it is a good idea to use some kind of **Image compression**. JPEG compression is best for photos and other pictures with the same range of color (i.e. TrueColor); ZIP is best for the rest. Below this you will find more settings that can help keep your PDFs small. ZIP compression will not touch its quality, but also does little to compress photos. The ZIP compression level setting lets you trade quality for speed. JPEG compression can as usual worsen pictures' appearance, but at high quality levels (low compression levels) it is unnoticeable, while still heavily shrinking the file.

When publishing photos you may often use pictures straight from the camera. Normally you will not want to show them to your audience at their original size. Resizing them is technically called resampling them, and so the next item here is **Bitmap resampling**. 96 DPI is normally enough for screen viewing. If your audience will be printing your pictures, use 150 DPI. If they will want to make good-quality prints, use 300 DPI and up. The **Resampling method** sets what resizing technology to use. Usually, Supersampling will give the highest-quality results. **DPI for vector transparency** sets what quality should be used in places with vector transparency. (In practice, this means any transparency at all.) The same guidelines apply here as for bitmaps.

When you check **Open automatically after export**, the exported PDF will immediately open up in the viewer associated with PDFs on your computer. Normally this will be Adobe Reader.

The **Compress text and vectors** and **Compress fonts** options will make the program use ZIP compression on these parts of the document. This has no effect on quality; it trades some speed of opening for some size.

When you check **Anti-alias bitmaps**, the exported PDF will contain instructions informing PDF-viewing programs to smoothen edges in pictures when not displaying them at original size.

Create Web Gallery

To create a Web gallery so that others can view your pictures on the Internet, use the Create Web Gallery wizard. To start this wizard, use the Browser's **Publish | Create Web Gallery...** menu item. (This wizard creates a static, unchanging web gallery. To create a gallery that you can easily update later, use the [Web Albums](#) feature instead.)

In the first step, select what pictures should be published. In the second step, select which template will be used as the foundation for the gallery. In the third step, adjust template-specific settings as needed. There are multiple types of settings for each template: for example global settings, settings for thumbnail pages, and settings for titles on thumbnail pages. To switch between settings types, use the **Show settings for...** control.

In some settings fields, you can take advantage of the program's [variable text](#) feature. To save your settings for this step or later reload them, use the "presets" controls at the bottom of the window.

Preview

To preview the effects of your edits directly in a Web browser during this step, click **Preview...** To ensure quick previewing, the preview only makes use of a few pictures.

Finishing Up

In the fourth, final, step, to preview your whole gallery, click **Preview**. To save the gallery to disk so you can edit it in outside of Zoner Photo Studio before uploading, click **Save...** To upload your gallery to a Web server, click [Upload via FTP](#).

Upload to FTP

You can send the files currently selected in the Browser to a web server using FTP upload. For this, use the Browser's **Publish | Upload via FTP...** menu item.

In the left window you can select the connection that you wish to use for the current transfer. Use the **Add FTP Connection...** and **Duplicate FTP Connection...** buttons to set the connection to your Web server. Your web space provider can provide you with the FTP connection details.

Configuring the FTP Connection

You can set a **Connection name** for each connection to make it easier to tell them apart. For each such stored connection, you can set the server address, the path to the server, and proxy server settings. The **Host** is the domain name or IP address of the server that you are connecting to. The standard **Port** for FTP connections is 21. Do not change this value unless the web space provider does not tells you to use another port. The **User name** is your login name on the server. Your web service provider information you of this user name and your **password** when you signed up for their services. **Remote path** is the path on the server where you wish to place the photos. If the path—the folder—does not exist, then it will be created automatically.

The **URL definition** helps to set the final path to the photo, and depends on your web space provider. You can see the final path in the **Preview URL** item.

Only change the **FTP proxy server** settings if your Internet services provider (not your Web space provider) directly tells you to change them. Proxy servers are used in home and corporate networks, where the administrator of the network will advise you regarding any settings changes you may need to make.

Send by E-Mail

Use the **Publish | Send by E-Mail... [Ctrl+Shift+M]** item to hand selected files in the Browser over to your e-mail program, which will then attach them to a new message. Before control is transferred to your e-mail program, you are given a chance to apply several types of edits to your pictures.

The e-mail program used must be an actual program, and must support the MAPI interface. Web e-mail services do not support this interface, so you cannot send files over a web e-mail service using this function.

You can shrink pictures or convert them to JPEG before sending. Using the **Shrink TrueColor images** item will shrink pictures with dimensions higher than the values you set down to those values. (TrueColor images are images with a certain maximum color range; normally, photographs will be in TrueColor.) They will be shrunk proportionally so that it fits the maximums for both width and height (and fits at least one of these snugly). Use the **Convert TrueColor images to JPEG** to change the picture's format to JPEG (if needed) and resave the picture with a compression level of your choice. Pictures stored in GIF and other formats with palette-based colors will ignore this function.

You can also compress your picture files before sending them. When you check **ZIP-compress** images, all the files will be saved into a single compressed file with the name and compression level that you choose.

Use **Size warning** if you want Zoner Photo Studio to warn you when the total size of your pictures exceeds an amount of your choice. This warning window gives you a chance to either continue or go back and change settings.

You can also use this window to send pictures **To (the) clipboard** instead of attaching them to an e-mail. When you click this button, the pictures in question, in altered versions with the compression, etc. you have requested in this window, are saved to a temporary folder, and links to those temporary files are placed in the Windows Clipboard. After this, you can go to any window capable of accepting a pasted file—like a new e-mail window or a folder—and use **[Ctrl+V]** (or the Paste item in the program's Edit menu) to paste the files into it. Temporary files will be deleted automatically when you exit Zoner Photo Studio; only files that still have a link to in the Clipboard will be retained.

When **Convert pictures with a profile to sRGB** is active, pictures with a color profile other than sRGB will be converted to this, the most "universal" color space. (If you have no experience with color profiles, the chance that you will need to change this option is low.)

You can choose which e-mail program actually "receives" the pictures. In Windows Vista, go from the Control Panel to Programs, then to Default Programs, then to Set your default programs. In Windows XP, go to Start, then All Programs, then Set Program Access and Defaults.

Upload to Zonerama

The Zoner Photo Studio interface provides easy access to web albums hosted on **Zonerama**. Thanks to this integration, you can easily and quickly manage web albums straight from inside the program.

You must log in before using the service the first time. To do so, click the **Log in** button, next to the buttons for switching among modules.

Use **Publish | Upload to Zonerama** to automatically make the Manager display two Browser windows, one for a folder on your computer and another for an album on your Zonerama account. When the Zonerama Browser window is active, the Navigator shows the list of all your albums.

To create a new album, use **Organize | New Album**. New albums are set as private, that is, they are not displayed among the public galleries on Zonerama. To change this setting, right-click and use **Set Privacy**.

Drag photos between windows to upload them from disk onto a gallery, from a gallery onto disk, or among galleries.

The versions of photos uploaded to Zonerama are automatically shrunk down to Zonerama's maximum supported size if needed. Thus after downloading back onto your computer they will have this new smaller, lower-quality size. That is, Zonerama is not suitable for backing up original photos, but instead for easy Web photo sharing.

You can **rename**, **delete**, or change information for pictures on Zonerama in the usual ways. You can also **set as a photo as an Album Cover** from its right-click menu.

To browse photos at full size, switch to the **Viewer** or a **Slideshow**.

The bottom part of the Zonerama Browser window shows a status bar with information on the selected album and a link named **Show on Web**. Click this link to open the active Zonerama web album in a web browser.

Burn Image CD/DVD

Zoner Photo Studio can make use of CD/DVD burners, so you can burn directly from the program. To burn pictures to CD or DVD using this function, select them and then use **Publish | Burn Image CD/DVD**. To make the program include a freeware, freely-distributable, automatically-launched viewing program on the burned CD, check **Add image viewer to CD/DVD** in the first step of the wizard. To control that viewer's behavior, use the other settings in this step. It is also possible to adjust the behavior of this viewer after it launched.

In the next step, you can check the amount of data on the future medium. In this step, choose one of the three options for what the program should do next: burning, saving the CD contents, or saving an ISO file.

Burn

Click the **Burn...** button to make the program start burning pictures to CD or DVD. Select a **CD/DVD drive**, a **Burn speed** (Zoner Photo Studio normally uses the highest possible speed), a **Label for (the) medium**, whether or not to **Verify burned data**, and whether or not to use the technology your burner provides to **Handle buffer underruns**. Modern burning drives contain such technologies under a variety of brand names, such as BURNProof, JustLink, Power-Burn, SafeBurn, and Seamless Link. These technologies prevent interruption of the burning process due to insufficient data.

Click **Burn** here after placing an empty disc in the burner. Zoner Photo Studio automatically detects rewritable media (CDRW, DVD+RW, etc.) and offers to delete their contents as needed. After burning, the disc is ejected automatically.

You can also burn from CD compilations. CD compilations are similar to albums, but they are specialized for CD and DVD burning. Use them for pictures you expect to burn multiple times.

Save CD/DVD Contents

To save the prepared contents of your intended CD/DVD to a folder, use this button. This option is useful when you need to burn from a different program than Zoner Photo Studio.

Save ISO File

To save the prepared contents of your intended CD/DVD to an ISO file, use this option. An ISO file describes the contents of a future CD/DVD under the ISO 9660 standard and contains everything needed to burn a CD/DVD. Most specialized burning programs support burning from ISO files.

DVD Slideshows

The DVD Slideshow feature is another impressive way to present photos on ordinary DVD players.

Use **Publish | DVD Slideshow** to reach a wizard where you can create a standard Video DVD that you can play back on any DVD player. In the first step of the wizard, you choose a TV standard and a ratio of sides. Choose these based on what kind of screen your audiences will be using. The **Image coverage** sets how large a part of the screen the slideshow will be using. Use **Title borders** to move the titles away from the edge of the screen. On screens where the picture already starts far from the edge of the screen, you may actually wish to use less than the normal 5%. Use **Interlaced mode** when you know your slideshow will be watched on a traditional CRT screen. But keep in mind that interlaced-mode slideshows take much more time to generate. Use **Suppress flickering** when your pictures contain very fine details that cause the picture to flicker (to shake). Each "sub-slideshow" within the slideshow is called a "clip." With the normal 1x1 menu style, there will only be one clip. Use the **Clip settings** controls to get each clip in the menu its own name, font, and background image.

You can give your slideshow a **Menu style**, a **Title** and its **Font**, a **Background image** and **Fitting method**, and choose whether or not to use a **Shadow under images** and what color it should be, and what **Background color** and **Selection color** to use. You can verify that your adjustments are doing what you want by monitoring the preview pane.

In the next step, the pictures in the show are listed in the left column, and you can customize a number of aspects of each picture. Use the **Image** tab to give pictures a **Transition effect** and a **Transition length** and to set their **Fit**

mode, Display time, Header, and Description. For these last two, you can get a good deal of use out of the program's [Variable Text](#) feature. **Transition length** means how long the transition effect will be displayed. After that, the picture itself will be displayed for the **Display time**. With a display time of zero, the show will move on to the next picture right away.

Use the **Pan&Zoom** tab to add the quite popular Pan&Zoom transition effect, which pans and zooms in while transitioning to a given picture, and pans and zooms out while moving on to the next one. Here you can either use the preset **Pan&Zoom style** or set up your own style using the **Initial zoom level** and **Target zoom level** controls and/or adjusting the two frames shown in the preview panes.

A preview of the effect will be shown automatically after any changes, but if you want to watch the preview again, just click **Play**. The first time you use this function, it can take up to several seconds.

In the next step, you give each clip a soundtrack. Soundtracks can be in WAV, MP3, or Ogg Vorbis format. Use the **Video and audio track length synchronization** controls to set whether, and how, the video and audio tracks will be synchronized.

Don't synchronize means the program will take no action here: if the soundtrack is longer than the video, then the soundtrack will play until its end, and the last picture will stay on the screen until the soundtrack is done playing. **Crop audio track** will make the soundtrack stop playing when the last picture's **Display time** ends. The soundtrack will be faded out when this happens. **Adjust video track length to audio track length** will make the program temporarily change pictures' **Display time** values so that the overall video length matches the soundtrack length. When you click **Permanently fit video length to audio length**, the program will transform this temporary change to **Display time** values into a permanent one that will be reflected in the preceding steps of the wizard.

You can save or restore all the settings at any time in the form of a preset, using the buttons at the bottom of the window.

All of the buttons in the next wizard step make the program start generating a final output. This process places large demands on a computer (especially its processor). Exactly how large a demand depends on the number of pictures in the slideshow. The temporary files created during rendering remain on your disk until you leave this step.

Clicking **Burn DVD Slideshow...** starts the pre-burning and burning processes. **Save ISO File...** saves an image of the DVD medium as an ISO file. An ISO file precisely represents a future burned DVD saved under the ISO 9660 standard with the ISO/UDF 1.02 hybrid file system. This file contains everything needed to burn a DVD in any program that supports standard ISO files. Most burning programs do support them. **Copy VIDEO_TS Folder...** copies the temporary VIDEO_TS folder that will be thrown away when you exit the wizard. Most software DVD players can play the contents of a VIDEO_TS folder, and the more advanced burning software can also burn it to DVD.

We recommend that you verify that the medium you use will be playable on the player(s) that your audience will use. We recommend that if possible, you use DVD+RW and DVD-RW media (that is, rewritable media) during your testing.

Program Settings

To display the window for work with program preferences, use **Settings | Preferences [Ctrl+M]** in the program's main menu.

The left side of this window shows a list of sections. The right side shows options within a given section. Click **Restore Settings for All Selected** to restore the defaults (factory settings) for the currently-displayed section.

Appearance

Use Zoner Photo Studio's **Visual Themes** to set the program's color scheme. The **Use same as in Windows** option makes the program use the same colors as you have set in Windows. The other options have preset colors.

In the **Toolbars** group, you can choose a **Toolbar background**, an **Icon saturation level**, and an **Icon contrast**.

To call up a window for showing/hiding buttons, click the **Change Toolbar Settings...** button.

General

Use the option named **Double-clicking a thumbnail in the Browser** to determine how to open pictures with a double-click: either in the Viewer or the Editor. In previous versions of Zoner Photo Studio this opened the Editor, but the Viewer provides faster full-size picture browsing. This option also determines what happens when you double-click the Preview window.

When displaying pictures that do not fit on the screen at 100% (1:1) scale, the program must shrink them on-screen. To set the method used for this resizing, use **Bitmap display quality**. **Low** gives high redrawing speed, but low quality. For most purposes, the best option is **Normal**. **High** gives the best display when editing photos, but it also places the highest demands on your processor. This setting is shared by all sections of the program.

Default JPEG compression determines what JPEG compression quality is used when saving pictures. The next option determines what happens **if (an) image does not qualify for lossless JPEG transformation**. **Crop to qualify it** makes the program automatically crop the picture as needed. **Perform lossy transformation** makes the program preserve the picture's exact size. Uncropped photographs from a digital camera always meet the size requirements.

Milliseconds to wait before automatic preview in editing dialogs determines how soon the autopreview in editing windows updates after you change settings. Use **Sound editor** to set what program is run when you click **Edit** in the Audio Note section of the Image Information window.

Use the Status bar information control to set what is shown in the Editor's and Browser's status bars. Use the **Show "Copy from Device" when device goes online** to make the program's copying window appear automatically after connecting a camera, etc. **Automatically rotate images to match EXIF orientation flag** makes the Editor and Slideshow automatically rotate pictures to landscape/portrait as needed to match their EXIF orientation.

Display

Use this section to set which file types are displayed in the Browser. (A file's filename extension determines its type.)

You can either tell the program to **Show all files** or select which types of **supported files** it should display.

Turn off **Highlight to distinguish bitmap/vector/video/sound** to prevent the Browser from color-highlighting files by type in the Details viewing mode. Turn off **Show folders in Browser** to prevent the Browser from displaying folders.

Catalog

When the Catalog function is **Active** then all photos shown in the Browser are automatically added to the Catalog. At any time, you can **Delete** the Catalog or set a different **Catalog folder**. You can also set the **Maximum number of thumbnails** and **use JPEG compression for thumbnails**.

Use **Maximum thumbnail size** to set the size for the thumbnails in the Browser or—when working in other

modules—in the Filmstrip.

Warning: If you choose a size larger than 160 pixels, thumbnail generation can slow down considerably, because at sizes above this the program cannot take advantage of pictures' internal EXIF thumbnails. These thumbnails have a size of 160 × 120 pixels.

Use the **Language to use for fulltext searching** option to ensure that the fulltext search can find alternative forms (like plurals) for words in your language. This is done during indexing, so after a change, you should erase and recreate the Catalog.

Don't include these folders lets you set certain parts of your disk as being off-limits for the Catalog—for example temporary folders, or family-photo folders on your work computer.

To add only files from selected folders to the Catalog, create a list of them under **Add to Catalog from these locations only**.

There is also a button here for using the opposite approach; the button is named **Add Files to Catalog...**

Thumbnails

The settings in the Thumbnails section govern how thumbnails (small picture previews) are shown in Browser windows. Use the settings here to set the **Thumbnail Width** and **Ratio of Sides**. To quickly resize thumbnails within the Browser itself, use the slider on its toolbar or scroll the mouse wheel while holding down **[Ctrl]**. To set the maximum thumbnail size, use the Preferences section named [Catalog](#).

Zoner Photo Studio can and normally does **Load EXIF thumbnails** when they are present, instead of generating its own. This speeds up browsing, but if your pictures have outdated EXIF thumbnails, you'll see those, rather than thumbnails based on how they look now. Zoner Photo Studio itself always updates EXIF thumbnails whenever it edits a picture. In pictures where EXIF thumbnails are missing or outdated, you can tell Zoner Photo Studio to generate new ones. For this, use **Information | Manage Information | Add EXIF Preview...** This function works only with pictures in the JPEG and TIFF formats.

Use **Generate thumbnails for videos** to make Zoner Photo Studio stop creating thumbnails for video files. If a video already has such a thumbnail, it is retained until the thumbnail cache is erased. **Display icon for associated program in image thumbnail** makes each file show an icon for the program associated with it in Windows. **Display image thumbnails in folder icons** makes Zoner Photo Studio show the first four pictures in each folder within the folder's icon. The **For folder thumbnails, use pictures up to this many levels deep**: control sets how deeply the program seeks pictures to show as miniatures within folder thumbnails.

An information bubble appears when you hover the mouse over a thumbnail. To set its contents, use the **Tool tip**: setting.

Thumbnail Descriptions

Here you can choose whether or not the program should **Show file names** in the Browser and whether or not it should **Display extended information below thumbnails**. This information should be displayed directly below thumbnails, or as tooltips. The editing box in the middle of this section sets the contents and format of the extended information. This box makes use of the program's Variable Text feature. At the bottom, you can similarly set what is shown when you are using the Browser's Tiles display mode.

Editor

Use this section to change settings that affect how the Editor looks and behaves, like the **Editor background color** and the **Default Zoom** used when opening pictures in the Editor. **Darken area to be cropped** sets how strongly the program darkens on-screen the area to be removed during cropping.

Use **Mouse wheel action** to set which action the Editor takes when the mouse wheel is rotated: moving among pictures, or changing zoom level. When rotating the mouse button, press and hold **[Ctrl]** to change Zoom level regardless of this setting.

The **Animate selection outline** option makes the outline (border) of any selected area in the picture "move" so it is more visible. If you encounter problems with selections in the Editor, such as a flashing screen or program slowdowns, turn off this option.

The next item is called **For the "Save As..." command, offer:** . Use this to set whether the Editor's save-as

window starts out showing the last folder visited, or the one containing the currently open file (if any).

Use the bottom group of controls to make the Undo command more powerful at the cost of higher memory demands, or vice versa. **Minimum number of steps** is a number of steps guaranteed even if this means exceeding the memory limit. **Limit for temporary files** sets this memory limit.

Viewer

Use the options in this section to set the appearance and behavior of the Viewer.

- Use **Mouse wheel action** to set which action the Viewer takes when the mouse wheel is rotated: moving among pictures, or changing zoom level. When rotating the mouse button, press and hold **[Ctrl]** to change Zoom level regardless of this setting.
- **Viewer background color**
- **After last file, loop back to first file**
- **Enable mouse zooming** —active this option if you want to use the left and right mouse buttons to zoom the Viewer in and out. With this option active, you can also click and drag out a frame to zoom to the framed area. Otherwise, this is not possible as left-clicking immediately moves the Viewer to the next picture.
- **Right-click moves back one picture** —turn this option off to make right-clicking in the Viewer show a menu providing most Viewer functions. To show the same menu even when the option is turned on, right-click in the Viewer while holding down **[Ctrl]**.
- **Play sounds stored in pictures** —with this option on, any audio note stored in a picture plays as it is shown.
- **Header And Footer Settings...** —this shows a window with detailed settings for the appearance and content of the Viewer's header and footer. Use the program's Variable Text feature to make the program show picture information of your choice in these panes. To save and reload your settings choices, use the Preset controls at the window's bottom left.

Compare Images

In this section, you can adjust program preferences for the function named [Compare Images](#).

Use **Mouse wheel action** to set which action Compare Images takes when the mouse wheel is rotated: moving among pictures, or changing zoom level.

You can also change the **Picture captions**. These are defined using the program feature named [Variable Text](#).

Folders

Here you set the path to the **Pictures** folder. The contents of this folder is displayed when you use the **Pictures** in the [Navigator](#). You can set this path during your first run of the program. If you do not, it is left as Windows' Pictures folder (under Windows' Documents folder).

You can also set the location for the **ZPS Folders** in this section. This path is home to several special folders used by Zoner Photo Studio: Albums, CD Compilations, Media Archive, Search Results, and Web Albums. This path is normally set to your Windows documents folder—"My Documents" in Windows XP, and simply "Documents" in Windows Vista.

The **Always start the Browser in this folder** sets if Zoner Photo Studio should always start in a particular folder. If this option is active, then you can **Browse...** to set what folder that should be. If this option is inactive, then Zoner Photo Studio will always remember what was the last folder you visited before exiting the program, and automatically open that folder the next time you use the program.

Integration

Use the settings in this section to adjust integration between Zoner Photo Studio and the Microsoft Windows environment.

Checkmarking a file extension and clicking OK will register the associated file type to Zoner Photo Studio within Windows. That way, you can call up the Zoner Photo Studio Editor or Viewer by, for example, double-clicking on a picture in Windows. (From there, you can reach the Browser by clicking **[Enter]**.)

Use **Integrate Zoner Photo Studio into Windows** to show items for quickly launching **Zoner Photo Studio** and **Zoner Editor** in the right-click menu that appears when you right-click a file in most places in Windows.

In Windows Vista, you will see two buttons. One is marked **Set as default program for all supported file types**. Clicking this button associates all supported file types with Zoner Photo Studio. The second button, **Custom Settings...**, displays a window from Windows itself where you can choose which formats to associate with Zoner Photo Studio.

Color Management

Checking **Use color management** turns on the program's support for work with input and output devices' color profiles. On a properly configured system, using color management gives you more faithful colors on the monitor and when printing.

Image's color space—this option sets whether pictures will be processed in the color spaces that are assigned to them, or whether they will be converted to a custom color space during loading instead.

Working color space—this sets the default color space used during conversion to CMYK and RGB (if automatic conversion to a working color space is enabled).

Color management during printing—this sets whether and how programs and the printer driver will monitor conversion to the printer profile.

Device Profiles

- **Monitor**—color profile for display
- **Printer**—color profile for printing
- **Camera**—color profile automatically placed in a picture when using the "copy from device" command
- **Scanner**—color profile automatically placed in pictures when you use the "Scan Using TWAIN Device" function

When No Profile Is Selected...

- **Monitor** and **Printer**—the profile selected within Windows is used
- **Scanner** and **Camera**—no profile is assigned

CMYK Image Profiles

Default input profile is a color profile used for conversion from CMYK to RGB in pictures that contain no color profile. If none is selected, a mode compatible with older programs is used. **Output profile** is the target color profile for CMYK pictures. If none is selected, a mode compatible with older programs is used.

Color management during printing

Color management during printing—this sets whether and how programs and the printer driver will monitor conversion to the printer profile.

Color management modes during printing:

- **Controlled by application** —it is assumed that color management in the printer is turned off. The application has full control over conversions among profiles. This option does not work correctly for printers that do not have an RGB profile, but it gives the best output control.
- **Controlled by printer (sRGB)** —it is assumed that color management in the printer is turned on. Pictures are sent to the printer in sRGB only, but the printer profile settings are applied.

- **Controlled by printer (Adobe RGB)** —works like the above, except that the program sends the picture to the printer in Adobe RGB.
- **None** —the picture is converted to sRGB and sent to the printer without the use of color management. Output control is fully managed by the printer.
- **XPS printing** —the picture is sent to the printer as an XPS document. This enables the printing of pictures with a higher color depth. This function is only available for printers with an XPS driver, and color management is fully controlled by the printer.

Even though Zoner Photo Studio can load in CMYK pictures with the use of a color profile, internally, it always works with pictures in RGB. The way in which CMYK pictures are interpreted is not 100% compatible with Adobe Photoshop. For this reason, it is better to transfer pictures in RGB.

Information

Even though Zoner Photo Studio can read information from various formats, it focuses primarily on the JPEG and TIFF formats. Within pictures of these formats, information can be stored in three types of so-called "data sources"—EXIF (**Ex**changeable **I**mage **F**ile **F**ormat), IPTC and XMP (**eX**tensible **M**etadata **P**latform). The options on this tab give you tighter control over these data sources. Zoner Photo Studio loads picture information into a cache. The cache information is reused until program exit. Thus certain changes to these settings are only respected after the program is restarted.

Primary Data Source sets which data source (which standard) should be given preference when loading picture information. This option does not affect the saving of information. Information is always saved to all supported sources. In light of the limitations of the EXIF and IPTC standards, encoding problems can occur when using Zoner Photo Studio in conjunction with other programs or web galleries. Therefore we recommend leaving the default, that is the XMP standard, which does not suffer these problems.

Default IPTC Encoding - use this to choose the default encoding for the IPTC information block, if the program is creating it. For full compatibility with older applications, leave the Current Code Page setting. For full support of all character sets, switch to UTF-8.

Preserve EXIF Maker Notes —besides publicly available information, digital cameras can also store information inside EXIF in private formats specific to the camera's manufacturer. For the major camera manufacturers, Zoner Photo Studio can at least partially understand this information, and after loading the information in, it can save it back into pictures correctly. But if nonsensical data appears in the software supplied by your camera manufacturer for pictures edited in Zoner Photo Studio, try turning this option off.

Save keywords to EXIF notes— the EXIF specification does not set aside a space for storing keywords. For this reason, Zoner Photo Studio normally saves keywords to EXIF notes. Use this option to turn that behavior off.

Load in IPTC keywords —turn this option off if bad fragments appear among your keywords. This problem can occur when you are loading pictures on a computer with different Windows language settings than the ones used by the person who originally saved the information.

Save information for DNG images to an external XMP file – Zoner Photo Studio can save XMP information inside DNG files, but storing it externally is faster and is safer for the DNG file.

Click [Custom Information](#) to set up custom XMP data to meet your individual needs. You will most appreciate this ability if you are placing pictures in a company database or publishing system.

Custom Information

Zoner Photo Studio can save picture information in three standard formats for such information; one of them is XMP.

The specification for XMP can be found at e.g. http://www.adobe.com/devnet/xmp/pdfs/xmp_specification.pdf. The XMP standard allows for the addition of custom information types, and Zoner Photo Studio supports this aspect of XMP. The information defined in Zoner Photo Studio is normally in the `http://zoner.com/xmp/userdata/1.0/` namespace. Only text information is allowed. Four types of custom information are supported. Zoner Photo Studio does not enable full use of these types. This possibility is present only so that certain standard XMP data that Zoner Photo Studio does not display can be mapped to custom information.

These types are:

- **plain text** (and lists—these actually only differ in the way they are visually presented)
- **date and time** (this is stored in XMP as text with certain rules)
- **localized text** (an XMP type that is used for e.g. storing copyright)
- **text sequence** (an XMP type; author information, for example, is stored in this way—under XMP a photo can have multiple authors and these can be stored as multiple items)

For a normal user, the only important types are plain text and, occasionally, date and time.

Configuration—this sets the placement of the configuration file. If you wish to share custom information with multiple users, it is essential for these users to also have the items selected in their own configuration files. You can achieve this either by copying the configuration or by placing it on a shared path. If the configuration is on a shared path, do not permit multiple users to edit it at once.

An item's **Title** is the name under which it is shown in your copy of Zoner Photo Studio. The type is governed by the rules mentioned above. This option shows the variants available for the "list" type.

Use the settings under **Configure XMP settings** to configure how information is stored in XMP. If this group of controls is not activated, the configuration is created automatically on the basis of the item name, and the program shows a warning whenever any conflict occurs.

Namespace identifies the group of data to which the selected item belongs. You can find a list of standard namespaces in the XMP specification, but you can also create your own namespaces.

The **Prefix** sets how the items in the corresponding namespace will be identified in the stored XMP file. It should be short and should contain neither spaces nor extended characters.

The **Item** control sets the name under which the item will be stored in XMP. Its name should be short and should contain neither spaces nor extended characters.

Here is how you would include a copyright field as Custom Information (even though, of course, the program already offers such a field):

Title: Copyright
Type: Localized text
Namespace: <http://purl.org/dc/elements/1.1/>
Prefix: dc
Item: rights

Labels

Use the Labels feature to add colored labels to your pictures, to help sort them by a system of your own. Labels are stored in EXIF and XMP picture information as texts that describe their color ("red," "green," etc.)

RAW Format

This section contains options that govern the processing of the RAW format.

If WIC codecs are installed on your computer, then the program gives them priority when loading RAW files, because WIC codecs ensure that the display will match the JPEG previews produced by your camera. If the codecs are absent, the program processes RAW using its own resources. If your particular camera is not directly supported, Zoner Photo Studio tries to read the RAW with the aid of a program called ddraw. Optionally, using a setting in the Preferences, processing via WIC codecs can be given priority throughout the program, to help unify how RAW files are displayed.

Show previews instead of full-resolution images gives you faster previewing of RAW files when they contain a JPEG preview or it is possible to load them at low resolution. To then view them at full quality, use the Editor command named **File | Reload at Full Resolution**.

Let the RAW converter process all bitmap files enables the loading of all bitmap formats within the RAW module. In the RAW module, the picture is linearized and can undergo several edits. Therefore, effects like pixelization can affect it to a greater degree than during normal processing in the Editor.

RAW-to-DNG converter tells the program the path to Adobe DNG Converter. If the converter is installed in its standard location, Zoner Photo Studio finds it automatically. If the use of the external DNG converter is enabled, Zoner Photo Studio enables the use of the RAW module for all RAW files. Processing a picture with the RAW module in this case includes creating a temporary DNG version of the picture to enable its processing within Zoner Photo Studio. **Convert to linear image (interpolate) when converting to DNG** tells Zoner Photo Studio to use the DNG converter's method, rather than its own internal method, for the process called "demosaiicing." Use this method when none of the methods offered in the RAW module offer satisfactory results.

Interpolation quality when using ddraw and **Automatic white balance when using ddraw** are settings for the ddraw library (used when no other RAW conversion method is available). They increase photo quality at the cost of longer loading times. Low quality is enough for ordinary previewing. Medium quality is more advanced and thus demands more processing power, but can remove certain artifacts (local quality problems). High and Very High quality offer even better quality but are especially demanding. These options have no effect on the quality of the functions in the RAW module. They are only used for the ddraw library.

Helper Programs

You can set a list of "helper programs" for any format of your choice. First you create a list of helper programs using the **Add** button. Then you choose a format (a filename extension) to assign them to and click **Assign**. You can then easily reach these programs in the Browser, by right-clicking and then using the **Applications** submenu within the right-click menu.

Signing Certificates

This section shows the digital signature certificates installed on your computer. Whichever certificate you choose here will be used signing digital photos in Zoner Photo Studio. **Verify that certificate has not been revoked**: this option requires that you be connected to the Internet, so if you are not connected non-stop, it can be best to turn it off. **Only check revoking for signature certificates** prevents the program from checking the whole certificate hierarchy.

Other

To erase the custom keywords you have defined, click the **Set Default Keywords** button. To restore the keywords list by reading in keywords from your pictures, use **Information | Data Import/Export | Scan for Keywords....**

To make the program show all warnings, including those for which you have turned on "Do not show again," click **Renew All Warnings** .

The **For Canon images, show Canon's exposure values instead of true values** item sets whether the program uses the exposure values you set on your Canon camera, or rather the ones that the camera actually used instead. These values often do not fall precisely within the classical exposure values.

Compensate for asymmetric resolution lets the program automatically correct photos that have differing resolution in the horizontal and vertical directions.

The settings group named **Display of blowout and overexposure** determines how the program displays areas with exposure problems, that is, areas that are so dark or so light that they have lost detail. When **Desaturate image** is active, the picture will be converted to grayscale in those areas where there are no problems. **Use colors in blowout highlighting to indicate problem channels** determines whether or not the program uses colors to highlight blowout that occurred in only one or two channels. **Show underexposed areas** determines whether or not areas with underexposure should be highlighted in addition to those with blowout.

This section also contains settings for **File operations** in Zoner Photo Studio. **Remove "read only" flag when copying files from CD** , when active, makes the program remove this flag when copying files from CD (these normally are automatically flagged read-only). **Sound signal when finishing long operations** determines whether or not a sound will be played at the end of any copying or moving operation that lasts more than 30 seconds. The **When moving/deleting pictures, do the same for supplementary files** option, when active, makes the program move/delete/copy files with the same name as a picture, but a different extension, for these extensions: EXIFBAK (backups of EXIF information), XMP (external picture-information file), THM (external thumbnail), and WAV (external audio note). **Automatically propose file names** makes the program suggest new names for files and folders based on names you have used in the past.

Do not copy contents of symbolic links— when this option is active, the program only creates copies of symbolic links themselves instead of copying their contents. When it is inactive, the whole structure of folders and files that the link refers to is copied.

Load images faster but at lower quality is a group of options that makes pictures open up automatically at a lower resolution, that is, more quickly but in lower quality. There is one setting here to use this behavior **During slideshows** and another to use it **For thumbnails and when archiving media**.

Filters

Here you can find settings that affect how "filter windows" behave. These are the windows where you apply edits, effects, and enhancements.

The **Offer highest color depth by default when saving in Editor** option tells the program to offer you the highest possible color depth when you save your pictures, even if you used a lower one the last time you saved.

Apply filters in Browser to all pages in multi-page TIFFs : files in the TIFF format can contain multiple pages, one image on each page. With this option on, any editing windows you use in the Browser will affect all pages of such files, not just the first.

The **Save "last used" presets when you exit the filter window** option makes the program record your settings in filter windows to the preset named "Last used" even if you did not apply those settings.

The next two items affect batch renaming. The first tells the program whether or not to **Reset (the) batch renaming counter** each time you enter a filter window. The second, **Reset batch renaming counter when the name template is changed**, resets the counter when you change the rest of the name, or the variable text used to generate the rest of the name.

With **Display full path in filter window** active, filter windows will always show the path to the file you are currently editing.

The last two options once again relate to batch renaming. Warning: The **Allow filename collisions during batch renaming** option is dangerous. However, it can also be useful. With this option on, if batch renaming produces a filename that matches an existing filename in the target folder, the file with the old filename will be overwritten. The picture will be destroyed. When you turn on **Allow batch renaming for all file types**, the batch renaming window will not be limited to renaming just pictures.

Plug-In Modules

Before the first time you use a plug-in, you must set the folder where it is located. To set the paths to plug-ins, use **Settings | Preferences | Plug-ins** window's **Add** button. To use a plug-in after you have set the path to it, use the Editor's **Edit | Plug-ins** submenu. Plug-ins each have their own controls and settings. In case of trouble with a plug-in, contact its author or consult its documentation.

GPS Settings

The field named **Show GPS on this web site**: contains, and lets you edit, the map website link that is shown when you use "Custom" in the program's GPS windows.

Click the **GPS icon on a Browser thumbnail to show a picture's location** on a map inside Zoner Photo Studio or Google Earth.

If the source tracklog for assigning GPS coordinates contains a large amount of errors in its data, turn on **Filter junk data from GPS tracklogs**.

Video

Zoner Photo Studio can play videos in the Manager's Preview window and in the Viewer.

The program can play videos using **DirectShow** - this method uses the codecs installed into Windows on a given computer. Generally a different codec is needed for each format. However, all the codecs needed for the commonly-used formats can easily be installed at once using a codec pack, like [FFDShow](#).

MPlayer enables the playing of a large number of video formats without the need to install extra codecs. To install MPlayer, install one of the video players that include it, like the freeware [SMPlayer](#). During the first run after

installation, Zoner Photo Studio searches for an installed copy of MPlayer in the typical locations. If it is found, the program sets video playback via MPlayer as the default. Otherwise, the path to MPlayer must be set manually by clicking **Browse**.

[List of supported formats.](#)

Second Monitor

When working with a computer connected to two monitors, for each tab of the program, you can set which monitor the tab is displayed in. The program usually refers to this as "which window" is used; thus the word "window" appearing in the control names cited below.

The following options are available:

- **Active Window** - the tab opens up in whichever window is active;
- **Previous Location** - the tab opens up in the same window where it was shown the last time;
- **Main Window** - the tab always opens up in the main window;
- **Second Monitor** - the tab always opens up in the window for the second monitor's window.

The Manager tab is always displayed on the main monitor. Other tabs can be moved among windows at any time using the options in the right-click menus for each tab.

Advanced

Enable OpenGL Display

Use this option to speed up display using OpenGL. The program can take advantage of OpenGL in the **Viewer**, **Editor**, and **RAW** modules. OpenGL may only be supported in the latest version of your graphics card driver. If you encounter display problems after activating this option, deactivate it or update your graphics card driver.

Enable display at 10-bit color depth

A display with 10-bit color depth (with 10 bits of information used for each color channel) enables display of over a billion colors, far more than traditional 8-bit displays. This gives a truer image and smoother color gradients. This function requires a graphics card and monitor that support OpenGL-based 10-bit color.

If the function works incorrectly, please first check that you have the latest drivers for your graphics card.

Enable use of GPU for calculations

Using the GPU (the graphics card) for calculations demands a high-performance graphics card with up-to-date drivers and support for CUDA or OpenCL. If the program does not find a supported graphics card, the options for GPU-boosted calculations are grayed out.

Supported graphics cards:

- all NVIDIA graphics cards with CUDA support
- ATI/AMD Radeon HD 5000 and higher

Since computers can have multiple graphics cards, available supported cards on your computer are listed and can be selected under **Graphics card**. Click **Benchmark** to compare acceleration between the processor and the selected graphics card. If the graphics card does not have sufficient memory or the drivers are outdated, benchmarking may not work correctly.

GPU acceleration speeds up the following functions:

- unsharp mask
- color temperature editing
- channel mixing
- Gaussian blurring
- Overall blurring

- soft contours

Calibrate Monitor

Use **Settings | Calibrate Monitor...** to display a window showing a calibration bar and a picture with balanced colors. You can use these to help calibrate your monitor. When color management is turned on, the color profile that has been selected is applied to the picture. Further instructions and recommendations for calibrating your manual are contained within the window itself.

Customize

Use **Settings | Customize...** in the main program window to customize the program's various menus, keyboard shortcuts, and toolbars. Alternatively, use **Customize...** in the right-click menu for a toolbar.

Use the window's **Menu** tab to hide functions in modules' menus.

Use the **Keyboard Shortcuts** tab to change functions' default keyboard shortcuts. You can assign multiple shortcuts to the same action. If you enter a keyboard shortcut that is already in use, then the program automatically shows the name of the action which is already using the same shortcut.

Use the **Toolbars** tab to edit the sets of buttons shown on toolbars. The left side shows available buttons. The right side shows buttons that are already present on the toolbar. Add a button, select an item on the left and a future position on the right, then click **Add**. **The item is then added at the selected position. Removal of buttons works similarly. To reorder the Displayed buttons**, either select items and click **Up** or **Down**, or drag and drop items to your desired positions directly.

Use the **Presets** controls at the bottom of the window to save and reload this window's settings.

Presets - Saving, Loading, and Restoring Settings

Zoner Photo Studio is rich in settings for its various windows and for the program overall. All of these settings are stored in the Windows registry. If you reinstall Windows or your disk fails, these settings are lost forever. For this reason, it can be a good idea to store your settings for the whole environment on disk, so that you can later renew them. To store settings, use **Settings | Save Settings...** in the Browser's main menu. Then you will be asked to store the settings file. You can then reload the settings later using **Settings | Load Settings...** When you use **Settings | Default Settings...**, the program will completely erase all custom settings. The program's behaviors will then return to what they were just after you first launched the program. After using the Load Settings or Default Settings command, you must restart Zoner Photo Studio before the changes come into effect.

None of these commands affects the settings for Web galleries. (These are saved in various INI files.)

Saving and Loading Keywords

Use **Settings | Save Keywords...** to save the program's list of keywords to an external XML file. To load in such a file, use **Settings | Load Keywords....** This is useful e.g. when transferring the program's keyword lists between two computers.