Welcome to LView® Pro

Thank you for choosing LView Pro.

The Evaluation Version of LView Pro allows you to try the software for a period of up to 21 days, before purchasing the Full Version.

LView Pro is protected under United States and International Copyright laws, and its use is conditioned to observance of the terms stated in the LView Pro License Agreement.

For more information, see :
LView Pro web page
What is new in LView Pro 2.6?
What is LView Pro?
Summary of Features
Legal use of LView Pro
Purchasing LView Pro and Price Information
Purchase Form
How to use LView Pro
Setting preferences
Closing LView

LView Pro web page

Please visit the LView Pro web site to obtain the latest Evaluation Version, purchase the software, or to obtain other up to date information about LView software.

The LView Pro web page is located at http://www.lview.com.

What is new in LView Pro 2.6?

Graphical image adjustments using Histograms and Curves dialogs
Adjust images with a click of a button, by using either Histograms or Curves graphical interfaces, or both. Three automatic adjustment types are supported, for Normal, Low and High-key images. Histogram and Curve parameters can also be fine-tuned with slider controls or by using numeric input, for precision.

Pressure pad support
Support for pressure sensitive tablet is available for paintbrush tools, and tablet control options are easily accessibility at all times. Pen pressure sensitivity can be used to dictate opacity, color, or size. Use of tablet pressure achieves realistic paintbrush emulation.

Enhanced brushes
A new Brush Palette maintains unlimited sets of brushes, each set capable of containing an unlimited number of brushes. Two basic types of brushes are supported: Elliptical brushes (with configurable diameter, angle, roundness, density, and spacing), and Bitmap brushes (created from arbitrary image selections, for maximum brush shape flexibility). Each brush paints in one of three user selectable modes: Normal, Threshold, and Outline.

New painting options
An array of new painting options is available for brushes and other tools, such as:
• Wet edge effects,
• Opacity control,
• Optional ink build to simulate successive strokes,
• Automatic ink fading (to background color or to transparency, in a user selectable number of steps),
• And more.

Improved Patterns and paper texture handling
Patterns and textures are available for most painting tools, brushes, fill tool, even for the selection brush and selection fill tools.

New mouse pointers
Paint with mouse pointers that reflect the currently selected brush shape. Select from brush Image, brush Outline, or brush Threshold. Optionally, use precise mouse pointers for non-brush tools.

Wet edges simulation available
For painting tools (brushes, air-brush, clone, fill)
For selection tools (shape, free hand, fill)
For selection operations (feather w/ wet edges)

Blending modes
The following blending modes are available for all painting tools:
Normal, Dissolve, Multiply, Screen, Overlay, Soft Light, Hard Light, Color Dodge, Color Burn, Darken, Lighten, RGB Darken, RGB Lighten, Difference, Exclusion, Hue, Saturation, Color, Luminosity, Saturate, De-Saturate, Emboss, Sharpen, Soften, Blur, and Smudge.
Some image editing dialogs also offer a choice of blending mode, such as Image Filters (both pre and user defined), image operations.

Semi-transparent selections
Image selections allow partial selection, ranging from full opacity to full transparency. Numerous new selection operations are offered, such as:
• Feather (with wet edges)
• Anti-aliasing
• Expand/contract (preserving transparency similar to original selection),
• Change opacity (threshold, scale)
• Use of selections as masks for transparency weighted application of painting and image manipulation (color adjustments, histograms, curves, filters, etc)
• Send/retrieve selections to/from editor
• Soften, Grow similar, All similar, Boundary
• Free transformation and Free deformation for floating and non-floating selection areas

Pen tool and Paths
Use Paths for precise and re-usable drawing, and selection area definition. Paths, especially with the Magnetic Pen, are essential for efficient creation of image cutouts.
Use Path tools to:
• Interactively draw and edit lines and bezier curves
• Create selections from polygons enclosed in paths or sub-paths
• Create selections from path (or sub-path) boundaries
• Stroke paths with the brush or line tools
• Fill paths (sub-paths) with the fill tool
• Free transform and Free deform paths, sub-paths, or path points

New Text Options
Text can now be defined as a group of sub-paths, which provides convenient vector format for storage and manipulation. Text, in either selection or sub-path format, may be freely transformed or deformed with the new interactive tools (see below).

Free transformations
Interactively transform selections (floating or non-floating) and paths (whole, selected sub-paths or path points):
• Move, rotate, skew, symmetric skew (for perspective),
• Preview operations with fast draft mode
• Confirm operations with precise mode
• Undo/redo free transformation operations before confirming

- Preserve aspect ratio, constrain to movement to angle (operation dependant 45 and 15 degree options)

Free deformations
Similar to free transformation operations, but not constrained to straight bounding segments. Deform selections and paths by freely distorting its bounding segments. Create new anchor points and curves. Use one of the pre-defined bounding shapes, and graphically define interior distances. Use the same convenient editing options available for free transformations (undo/redo, preview, confirm).

Undo/Redo
Unlimited levels of Undo and Redo operations are easily accessible at the floating Undo/Redo History Palette. Reaching undo/redo states is a single mouse click away

Support for ICC previewing
Uses color profiles to simulate color rendering in output devices.

Crop tool
Define and adjust crop areas, with intuitive graphical and precise numeric interface.

Improved Numeric Parameter Input
Frequently used numeric parameters are input with a choice of up/down controls, precise slider controls and coarse slider/indicator controls, for easy and fast access while maintaining precision.

"Menumonic" icons and Flat tool bar buttons
User selectable display of icons in menus and use of flat toolbar buttons.

What is LView Pro?

LView Pro is the optimal, cost-efficient, solution for most users' image processing needs.

This version of LView Pro continues the trend set by its predecessors. It is custom made to take advantage of features found in the latest Microsoft Windows operating systems.

A complete image processor, LView Pro allows you to create images from scratch and/or from pre-existing image files. TWAIN compatible devices are supported, such as digital cameras, scanners, and frame grabber cards, enabling smooth transfer of images into your computer.

LView Pro's image editing resources take photo editing to the next level.

LView software was first published in early 1993, as a standalone utility for viewing and editing image files. From its first version, LView became well known for its essential characteristics: ease of use, reliability, and performance. LView software, downloadable from the Internet, quickly became the preferred tool for images viewing and editing.

By the time when Web publishing became popular, LView had already been upgraded to LView Pro, and included support for the creation of images with transparent colors, and other features specific to Web graphics. Maintaining its characteristic of providing state-of-the-art software quality, the first 32-bit versions of LView Pro were available one year prior to the release of Microsoft Windows 95.

LView Pro helps organize image libraries, by creating image catalogs. Slideshow and format conversion operations, as well as regular file operations (such as copy, move, delete, and rename) are available.

Whether you are an expert or novice in digital image processing, use graphics at work or for the pleasure of viewing and building image libraries, you will find an invaluable tool in LView Pro.

Summary of Features

The following paragraphs summarize main features of this version of LView Pro:

Two powerful applications in one
• Image Editor, with integrated support for multi-frame images and Animation
• Image Catalog

Advanced Image Selection Operations:
Semi-transparent selections
Precise selection and cutout definition from Paths
Select rectangles, ovals, circles, or squares.
Free selection.
Selection Fill tool.
Selection brush, with user defined size and shape.
Combine selections by adding or subtracting from selected areas.
Save selections to the disk for later use.
Copy and paste selections to/from the image or clipboard.
Move or clone selected areas.
Use selections to clip painting operations.
Drop Shadows from selected areas.
Change the selection transparency, increase its feather, remove transparent pixels.
Colorize selected areas. Crop image to selected area. Paste from the clipboard into new or existing selections.

Advanced Color Matching
Match colors by Red/Green/Blue components, by Hue/Saturation/Value attributes, or by Brightness. User defined tolerance factor, matches similar colors. Color matching is used in several operations, such as Color Fill, Selection Fill, Transparent Pixel removal, etc.

Undo and Redo operations
Unlimited Undo and Redo levels, accessible through floating Undo/Redo History palette.

Paint Colors
Individual support for Foreground, Background, and Transparent colors.

Color Selection Window
Select paint colors for palette based and True Color images. Sort palette entries, delete unused entries, swap palette entries, change color specifications, save and open palette specifications to/from disk files. Display colors attributes in Red/Green/Blue or Hue/Saturation/Luminance, in decimal or hexadecimal base. Use the Mask feature to quickly match image pixels to respective palette entries.

Functional Zoom

Scaling from 1:16 to 16:1, change zoom factor with the mouse, menu, or keyboard shortcut. All editing operations are available in all zoom levels.

Functional Grid
Configurable size, pixel grid, snap painting operations to grid.

Open Multiple Windows for the Same Image or Catalog
View the image in its normal size in one window, while editing a zoomed part of it in another window. Browse catalog images in one window while viewing the original image files in another window.

Brush Palette
Unlimited sets of Elliptical and Bitmap Brushes.

Blending Modes
Normal, Dissolve, Multiply, Screen, Overlay, Soft Light, Hard Light, Color Dodge, Color Burn, Darken, Lighten, RGB Darken, RGB Lighten, Difference, Exclusion, Hue, Saturation, Color, Luminosity, Saturate, De-Saturate, Emboss, Sharpen, Soften, Blur, and Smudge.

Clone Brush
Paint an image over another image, choosing between aligned, non-aligned, or stationary mode.

Pencil Tool
With optional Color Replacing mode.

Advanced Fill Tool
Fill with solid colors, Patterns, Images or Gradients (Linear, Rectangular, Diamond, Cross, Oval, and Radial). Use Advanced Color Matching (see above). Fill within Selections.

Color Channel Separation and Merging
RGB and YUV color models.

Image Transformations and Deformations
Interactive transform or deform, or select pre-defined shapes and effects among: Mosaic, Ellipse, Pinch, Punch, Horizontal/Vertical Convex/Concave Cylinder, Horizontal/Vertical Perspective, Horizontal/Vertical Skew, etc. User defined transformations are supported.

Image Special Effects
Add Borders, Buttonize, Gray Palette, Motion Blur, and Seamless Pattern.

Image Filters
Edge enhancement, Find edges, Trace contour, Blur, Soften, Sharpen, Emboss,

Despeckle, Median, Erode, Dilate, Noise, etc. User defined filters are supported.

Image Color Depth
Change the number of colors on an image, creating adequate palettes or using user supplied palettes. Optional inclusion of Windows' colors. User defined number of palette entries.

Image Color Editing
Negative, Grayscale, Contrast, Brightness, Red/Green/Blue, Gamma Correction, HSV, YUV, etc. User defined color transformations are supported.

Common Image Operations
Flip Horizontal/Vertical, Rotate left, right, or user defined angle, Resize, with resample option for True Color images.

Advanced Image Operations
Combine images with Add, Subtract, Multiply, Difference, Darker, and Lighter pixels, with optional divisor and bias parameters.

Create Image Catalogs
Manage large number of image files, copy/move/rename/delete image files
Optionally store thumbnails (miniatures of the original images) and text descriptions
Make slide-shows with the original images, featuring interactive or timed slide advancement.
Browse original images in Full Screen mode.
Batch-convert image files.

Full Support for Multi-Frame Image Creation
Use one editor for both single frame images and multi-frame animations. Preview animations without leaving the editor.
Clone frames, insert frames from disk files, change frame order, choose image replacement methods, and inter-frame delays. Full transparency support. Create a single global color palette based on colors from all frames. Interactive frame relative positioning.

TWAIN Support
Use LView Pro to interface with your TWAIN compliant device, such as a scanner or frame grabber card. Images are transferred directly into LView Pro, to be edited and saved to the disk.

OLE2
Use LView Pro to embed images into Word Processor documents, Database records, etc.

Printing
Page setup and print preview. Associate with graphics file types, and activate LView Pro

from the Explorer to view, edit, or print files.

Graphics File Formats
LView Pro supports the formats most commonly found on the Internet and in Microsoft Windows environments:

BMP
Windows and OS/2 Bitmap
GIF
CompuServe's Graphics Interchange Format, including subformats GIF87a and GIF89a. Support for transparency, interlacing, and animation.
JPG
Joint Photographer's Experts Group, lossy compression, JFIF format. Support for progressive encoding and decoding.
PBM
Jef Poskanzer's Portable Bitmap.
TGA
Truevision TARGA.
PCX
ZSoft's PCX.
TIFF
Aldu's Tagged Image File Format.

Legal use of LView Pro

For information about Legal use of LView Pro please read the following topics:
[LView Pro License Agreement](#)
[LView Pro evaluation License](#)

LView Pro License Agreement

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Full Version
One copy of the Full Version of LView Pro may be used by at most one person at any given time. The Full Version of LView Pro may be accessed through a network if and only if a copy of LView Pro is purchased for each workstation connected to the network, regardless of whether LView Pro is used at different times or concurrently.

Governing Law
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LView Pro evaluation License

Read the License Agreement section first.

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Purchasing LView Pro and Price Information

The Evaluation Version allows you to evaluate the software for a period of up to 21 days. Purchase of the Full Version is mandatory for use extending beyond the evaluation period.

Pricing: As of this release, the price of a single user license of LView Pro 2.6 including S&H via Postal Service inside USA is US$50.00. Volume discounts are available as described on the purchase form. Prices are subject to change without notice. Please visit the LView Pro web site for current pricing information.

Ordering Methods
- Secure on-line Credit Card orders made at the LView Pro Web site http://www.lview.com
- Mail orders: Must be accompanied by the Purchase Form, mail to address listed on form.
- Fax orders: Must be accompanied by the Purchase Form, fax to number listed on form.
- Email orders: Email the Purchase Form to email address listed on form.

Accepted Payment Options
- Credit Cards (VISA, MasterCard, American Express, Discover, Diners).
- Checks or Money Orders in US currency drawn on a US bank.
- Purchase Orders: Available for corporate or governmental purchasers; for a maximum payment term of 30 days; option restricted to mail or fax ordering methods.

Description: The Full Version of LView Pro is available in CD-ROM format. The CD-ROM contains the LView Pro and Setup software, and documentation files. Included in the CD-ROM is a collection of +800 high-resolution images scanned from photographs taken from various sites in the Greater Miami Area.

Purchase Form

1. Shipping Information (please PRINT):
Name: _____
Company: _____
Address: _____
Address: _____
City, State: _____
ZIP, Country: _____
Phone: _____
Email: _____

2. Pricing for LView Pro 2.6 or newer: (Please write for quantities over 99 copies)

1st copy (w/CD-ROM) US$50.00	1	x US$50.00=	US$ 50.00	**A**
2nd to 24th copies US$25.00 ea	___	x US$25.00=	_____	**B**
25th to 99th copies US$20.00 ea	___	x US$20.00=	_____	**C**
Additional CD-ROMs US$10.00 ea	___	x US$10.00=	_____	**D**
Sub total (add **A + B + C + D**) * **A** IS MANDATORY			_____	**E**
Florida orders add required sales tax (**6% of E**)			_____	**F**
Non US orders add **US$ 8.00** additional S&H			_____	**G**
Total (add **E + F + G**)			_____	

3. Payment:
US funds only. Send check or money order drawn on a US bank, payable to MMedia Research Corp.
Select payment option:
__ Enclosed check or money order, number: _____
__ Credit card: ( ) VISA ( ) MasterCard ( ) AMEX ( ) Discover ( ) Diners
Cardholder name: _____
Card number: _____
Expiration date (MM/YY): _____
Cardholder signature: _____

4. Send this form together with payment to:
  Mail: Mmedia Research Corp.
            LView Pro Purchase
            1749 East Hallandale Beach Boulevard PMB#254
            Hallandale, FL 33009   --   USA
  Fax: 954-458-9698 (Florida, USA) **(Credit card only)**
  Email: Purchase@lview.com **(Credit card only)**

Credit card orders may be submitted on-line at http://www.lview.com

How to use LView Pro

If you are new to image editing or to LView Pro, read the following topics:

[User Interface](#)
[Using toolbars, menus, and dialogs](#)
[Viewing images](#)
[Getting images into LView](#)
[Adjusting the Image color](#)
[Working with Selections](#)
[Editing and Re-touching](#)
[Painting, Drawing, and Text](#)
[Saving Images](#)
[Printing](#)

Setting preferences

LView Pro allows you to set some global options also know as preferences. Some of the settings become effective right away, others only take place on the next session. For a detailed list of the preferences that can be set in LView Pro, see [Settings for LView Pro (Preferences)](#),

Closing LView

Use the menu command **File | Exit**, or the keyboard shortcut ALT + F4.

Use this command to end your LView Pro session. You can also use the **Close** command on the application Control menu. LView Pro prompts you to save documents with unsaved changes.

All settings of the current session are preserved (menu positions, etc)

User Interface

For information about User Interface please read the following topics:

[Title Bar](#)
[Control menu](#)
[Menu Bar](#)
[Main Toolbar](#)
[Document Window](#)
[Draw Toolbar](#)
[Draw Options Bar](#)
[Color Selection](#)
[Status Bar](#)
[The Brush Palette](#)
[The Undo/Redo History Palette](#)
[Hiding and displaying the tool bars and palettes](#)

Title Bar

LView Pro 2.6 - Image.bmp

The title bar is located along the top of the application window. It contains the name of the application and in case a document (image or catalog) is being edited, it contains the file name of document that is on the Active Editor.

To move the window, drag the title bar.   Note: You can also move dialog boxes and document windows by dragging their title bars.

Click to open the Control menu, double click to exit LView Pro
Click to Minimize LView Pro or a document window
Click to Maximize LView Pro or a document window
Click to exit LView Pro or close a document window

Control menu

The control menu is displayed when you click on the LView Pro icon of any of the open windows under LView Pro, or when you click on the Title bar of a minimized window.

Menu Bar

The menu bar is located below the [Title Bar](#). It contains the entries for the menu commands of the application.
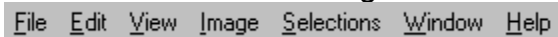
To display the contents of a menu topic, point the mouse to the topic or use the keyboard shortcut method, where you press the key ALT and then the letter on the menu topic that is underlined. To get help on a menu command, press F1 while the menu option is displayed.

When no document is being edited, the menu bar is:
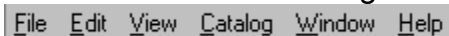
File   Edit   View   Help

When the document being edited is an image file, the menu bar is:

File   Edit   View   Image   Selections   Window   Help

When the document being edited is a catalog, the menu bar is:

File   Edit   View   Catalog   Window   Help

To hide / display "menumonic" icons with the menu items, use the menu command **File | Preferences | Tool Bars & Menu Icons**.

Main Toolbar

The Main Toolbar is initially displayed across the top of the LView Pro window, below the menu bar. It can be moved and sized. This toolbar provides quick mouse access to commands used in LView Pro.

To hide or display the Main Toolbar, use the menu command **View | Main Tool bar** (or **T**).

For the name of each button, move the mouse over it and a tool-tip window will display the button function or name.

Document Window

The Document Window is the area where the documents being edited or viewed are displayed. LView Pro supports two types of documents: images and catalogs. Each type has its own editor. LView Pro has a multiple document interface. See [Viewing images](#).

Draw Toolbar

The Draw Toolbar is initially displayed across the left side of the LView Pro window. It can be docked at any side of the Document Window and while not docked, can be moved and re-sized. This toolbar provides quick mouse access to painting, drawing, and other image related commands used in LView Pro.

Zoom: see [To change the zoom level](#)

Hand Scroller: see [To scroll an image](#)

Grid: see [Using a grid with the image](#)

Frames: see [Image Frames and Animation](#)

Crop: see [Cropping images](#)

Free Transformation: see [Image transformations](#)

Free Deformation: see [Image deformation](#)

Path: see [Paths](#)

Shape Selection: see [Shape Selection tool](#).

Free Selection: see [Free Selection tool](#).

Selection Brush: see [Selection Brush tool](#).

Selection Fill: see [Selection Fill tool](#).

Color Dropper: see [Choosing the painting colors with the color dropper](#).

Pencil: see [Using the Pencil tool](#).

Paint Brush: see [Using the Paint brush tool](#).

Airbrush: see [Using the Air Brush tool](#).

Fill: see [Using the fill tool](#)

Clone Brush: see [The clone brush tool](#).

Text: see [Working with text](#).

Line: see [Drawing with the Line Tool](#).

Shape: see [Drawing with the Shape tool](#).

Draw Options Bar

The Draw Options Bar is initially displayed across the bottom side of the LView Pro window. It can be docked at the top or at the bottom of the Document Windows, and while not docked, can be moved (but not re-sized). This tool bar provides access to configuration options for the tools available in the LView Pro [Draw Toolbar](), and its contents change according to the selected tool in the Draw Toolbar. For detailed information, see each tool for its draw options.

Some of the options displayed in this dialog bar are used by more than one tool.

Color Selection

The Color Selection dialog bar is initially displayed across the right side of the LView Pro window. It allows quick access to painting colors. For palette based images, the Color Selection dialog bar provides access to palette entry colors and performs palette-related operations.

For more information, see :
Color Selection dialog for a true color image
Color Selection dialog for a palette based image
Elements of the Color Selection dialog bar

Color Selection dialog for a true color image

For description, see [Elements of the Color Selection dialog bar](#).

Paint Colors

Color information

Current color

HSL/RGB button and DEC/HEX button

Color palette area (true color image)

Color Selection dialog for a palette based image

For description, see [Elements of the Color Selection dialog bar](#).

Paint Colors

Color index for palette based images only

Color information

Current color

HSL/RGB button and DEC/HEX button

Operation buttons for palette based images only

Color palette area (for palette based images)

Elements of the Color Selection dialog bar

Paint Colors

Three boxes located on the upper part of the Color Selection dialog bar. They display, respectively, the Foreground, Background, and Transparent colors. See [Choosing the paint colors](#).

Color Information

Three numeric fields that display the color components of a color as *Red, Green, and Blue* or as *Hue, Saturation, and Luminosity*. For palette based images, displays the palette index of the color.

Current Color

Color rectangle under the Color Information area. It displays the color under the dropper mouse pointer.

HSL/RGB button

Select the mode to display the **Color Information** as *Red, Green, and Blue* or *Hue, Saturation, and Luminosity.*

DEC/HEX button

Select between decimal or hexadecimal numeric base to be used on the **Color Information** numeric fields.

Operation Buttons

For palette based images only, provide access to palette related operations. For details, see [Palette operations](#).

Color Palette Area

Located at bottom part of the Dialog Bar, provides the possible options for the Foreground, Background, and Transparent colors among the colors displayed here. When the active image is in True Color format, contains 24-bit colors. When the active image is in Palette Based format, it contains the color palette entries with the number of colors for the palette.

Status Bar

The status bar is displayed at the bottom of the LView Pro window.
To display or hide the status bar, use the menu command **View | Status Bar** (or S).

The **left area** of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you move the mouse pointer over them. The information displayed on the Status Bar is usually a complement to the message displayed by the tool-tip. It also displays information about the numeric fields and drop down list available on the Draw Options tool bar.

The **right area** of the status bar provide information about the active image or catalog:

When the Active Editor is the Image Editor, the status bar information is:

Where:
⬚ Display the mouse pointer position, from the upper left corner of the image.
⬚ Display the size of the image or current operation.
🔍 Display the current zoom level.
Ⅱ Display the frame number in a multi-frame image.

When the Active Editor is the Catalog Editor, the status bar information is:
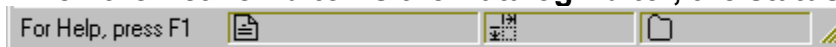
Where:
📄 Display the filename corresponding to a catalog record
⬚ Display the original size of the image in a catalog record.
🗀 Display the position of a record and the number of records in the catalog.

The Brush Palette

The Brush Palette is a floating palette, with the auto-hide option. It is composed by sets of brushes that are available for the painting tools. To hide/display the Brush Palette, type **B**. If the auto-hide option is set, only the caption of the Brush Palette will be displayed. When you move the mouse over the caption, the whole palette is displayed. For details, see [Brush palette](#).

The Undo/Redo History Palette

The Undo/Redo History Palette is a floating palette, with the auto-hide option. It allows a very fast access to undo/redo states, by just clicking on the states available on the list of actions. To hide/display the Undo/Redo History Palette type **U**. If the auto-hide option is set, only the caption of the Undo/Redo History Palette will be displayed. When you move the mouse over the caption, the whole palette is displayed. For details, see the [Undo/Redo History Palette](#).

Hiding and displaying the tool bars and palettes

LView Pro allows you to hide/display specific toolbars or hide/display all tool bars.

To hide / display all toolbars and palettes:
Use the menu command **View | Hide Tools** to hide/undo hide all the tool bars (Main Toolbar, Draw Toolbar, Draw Options, Color Selection, and Status Bar) and all the palettes (Undo/Redo History Palette and Brush Palette). When you use this command, LView Pro hides all tool bars and palettes that are currently visible, and changes the name of this menu command to Undo Hide. Use the menu command **View | Undo Hide** to make these tool windows visible again.

You can also hide/undo hide all tool windows by pressing the **H** keyboard shortcut key.

To hide / display individual toolbars:
Use the following menu commands from the **View** menu to hide/display a specific menu bar or palette. You can also use the keyboard shortcut
- **View | Main Toolbar** (keyboard shortcut: **T**)
- **View | Draw Toolbar** (keyboard shortcut: **D**)
- **View | Draw Options** (keyboard shortcut: **O**)
- **View | Color Selection** (keyboard shortcut: **C**)
- **View | Status Bar** (keyboard shortcut: **S**)
- **View | Undo Palette** (keyboard shortcut: **U**)
- **View | Brush Palette** (keyboard shortcut: **B**)

Getting Started

For information about Getting Started please read the following topics:

[Computer Image Representation](#)
[Using toolbars, menus, and dialogs](#)
[Viewing images](#)

Computer Image Representation

For information about Computer Image Representation please read the following topics:

[Bitmap images](#)
[Computer colors](#)
[Image Colors](#)
[Understanding Image size and resolution](#)
[Understanding Display Modes](#)

Bitmap images

LView Pro works with **bitmap images**. Bitmap images use a grid of picture elements, also know as **pixels** to represent images. You can imagine each pixel as a small square placed close to each other. Each pixel has a color and a location. The image below is composed of 32x32 pixels. The figure that it intends to represent is a black circle over a yellow square.

To better understand the concept of pixels, its locations and colors, see below the same image using a "magnifying glass":
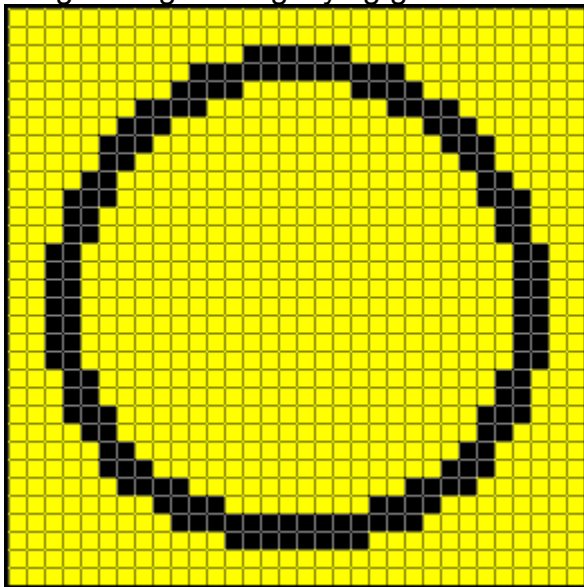
Each square of the magnified image represents one pixel of the normal size image. Some of them are painted in yellow and others in black, and they are positioned in a way that the resulting image is the intended circle. By changing the colors of each pixel and increasing the number of pixels, you can reproduce any photographic image on the computer monitor. The quality of the reproduction will depend on the number of colors, the number of pixels, your computer video card and computer drivers (display mode), the calibration of your monitor and many other factors. Similar concepts also apply for the printed image.

Computer colors

Computer display colors are described in terms of basic color components: Red, Green, and Blue (**RGB** for short). In general, each color component can assume values between 0 and 255, for two reasons: values limited to this range can be in a single computer byte, and 256 values seem to provide a sufficient variety of shades. The value 0 is normally associated with the absence of color, and the value 255 with the full color. Examples:

- RGB = **(255, 0, 0)** represents the brightest pure **Red** color.
- RGB = **(0, 255, 0)** represents the brightest pure **Green** color.
- RGB = **(0, 0, 255)** represents the brightest pure **Blue** color.
- RGB = **(0, 0, 0)** is pure **Black**.
- RGB = **(255, 255, 255)** is pure **White**.
- RGB = **(255, 255, 0)** is pure bright **Yellow** (Red combined with Green)

0   A **shade of gray** is obtained when all color components have the same value, varying from black to white. A light gray color can be described with RGB = (192, 192, 192), dark gray with (128, 128, 128).

1   When and each of R, G, and B are encoded with a single byte, RGB color descriptions require three bytes of storage, and are called **24-bit colors**, because each byte has 8 bits. Images described with 24-bit colors are also called **True Color images**. Images composed only of shades of gray are called **Grayscale** images.

2   This representation of the image pixel is called the RGB color model. LView Pro also supports the HSL and YUV color models. For details, see Color Models.

Image Colors

Computer images can be thought of as a finite collection of pixels (dots) disposed in rows and columns, as mentioned on [Bitmap images](). Pixels contain the RGB (red, green, and blue) description of the image color at the pixel's position. Colors identified by the human eye can be composed by different amounts of red, green, and blue. In one image, pixels describe colors in two different ways:
- Each pixel contains its RGB color description: the image is in **True Color** format.
- Each pixel contains one index to the image's color table (**color palette**): the image is in **palette-based** format.

Color Palette

A color palette is a table of RGB color descriptions. Normally, color palettes are limited to 256 entries, indexed from 0 to 255. On a palette-based image, each pixel contains a palette entry, a number from 0 to 255, which can be stored in a single computer byte.

Notes about palette based images

- Palette based images are limited to 256 colors (the max. number of palette entries).

- Because of the limitation on the number of colors, several editing operations cannot be applied to palette based images. If you wish to perform an operation that is restricted to True Color images, use the menu command **Image | Color Depth** to transform the image into True Color format. Your display mode must be a True Color mode.

- More than one palette entry can contain the same RGB color specification

- Two pixels that are painted with the same RGB combination may refer to different palette entries

- The memory, in bytes, required to store an uncompressed palette based image is roughly equal to the product of the image's dimensions (width x height) in pixels.

Notes about True Color images

- True Color images are limited to slightly less than 17 million colors (the number of RGB color descriptions that can be made with 1 byte for each R, G, and B).
- The actual number of colors in a given image is limited to the total number of pixels it contains. For instance, a 1,000 x 1,000 (width x height) image can contain at most one million colors (if each of its pixels contains a different RGB combination).
- The memory, in bytes, required to store an uncompressed true color image is roughly equal to 3 times the product of the image's dimensions (width x height) in pixels.

Understanding Image size and resolution

For information about Understanding Image size and resolution please read the following topics:

[Image Size](#)
[Image file size](#)
[Monitor resolution](#)
[Printer resolution](#)

Image Size

The image size is represented by the number of pixels on the horizontal multiplied by the number of pixels on the vertical (e.g. 734 x 578). The size of the image when displayed on the monitor depends on the dimensions of the image (horizontal x vertical) and the settings of your display.

For instance, if your computer's graphics mode is set to 640 x 480 and your monitor screen size is 15" an image of 734 x 578 will not fit on the monitor screen using a zoom of 1:1. If you change the graphics mode to 1024 x 768, the image now will be totally displayed on the monitor, but the image pixels displayed will be smaller.

Related items:
Image file size
Monitor resolution
Printer resolution

Image file size

The image file size will depend on the graphic file format that you are using to save the image. For instance, a bitmap image, true color, with dimensions 1000 x 500, saved as a Windows Bitmap file (e.g. Imagename.bmp), will result in a file size of 1,500,000 bytes. (1000 x 500 x 3, where 3 is the number of bytes required for each pixel, one for Red, one for Green, and one for Blue – see The RGB model).

Related items:
Image Size
Monitor resolution
Printer resolution

Monitor resolution

Monitor resolution depends on the size of the monitor and the size of the monitor pixel. The typical resolution of a PC monitor is about 96 dpi (based on a .28 mm dot pitch monitor). Monitor resolution is not the size of the screen area (part of the settings of your desktop). You cannot change the monitor resolution. When you try to fit a desktop that is 1280 x 1024 on a 14 " monitor, the resulting image will not be clear. You then reduce the desktop size to a smaller configuration, like 800 x 600 and then the resulting image will be properly displayed. However, you have not modified the monitor resolution.

Related items:
[Image Size](#)
[Image file size](#)
[Printer resolution](#)

Printer resolution

The printer resolution depends on the specifications of the printer. A common resolution for laser jet printers is 600 dpi (dots per inch). For best results, use an image resolution that is a fraction of the printer resolution. When scanning an image, you have to keep in mind what would be the final output of the image. If you are going to use an ink jet printer of 300 dpi, you only need to scan the image using a resolution from 75 dpi to 150 dpi.

Related items:
Image Size
Image file size
Monitor resolution

Understanding Display Modes

Your computer is equipped with a display card (hardware) and a display driver (software). The card and driver combination is what enables the computer to display images using the computer monitor or display or screen. While you can't easily change the display card (unless you purchase a new one to replace the old one inside your computer), you can change the way the display driver works.

Display drivers are capable of working in different (display) modes. In some modes, only 16 simultaneous colors can be rendered. In other modes, it may be possible to display 256 simultaneous colors, out of a color palette (a table of color descriptions). These are called Palette Based display modes.

Display modes capable of rendering 24-bit colors are called True Color display modes.

Some display modes can display 24-bit colors, but need to truncate color components. For instance, a display mode may be able to display only 6 bits of Red, 5 bits of Green, and 5 bits of Blue (a total of 16 bits, or 2 bytes). True color images can be viewed and edited in these display modes, although they will not display as accurately as they would in a true color mode. Display modes that render 24-bit colors after truncation are called High Color modes.

It is recommended that you work with images using a High or True color mode. LView Pro can view and even edit True Color images under palette based display modes, but color detail is lost in the process. You can use *Control Panel*'s *Display* settings to check and change the display mode you are using (click on the *Start* button on the Windows task bar, then select *Settings*, and click on the *Display* icon. To properly set the display mode, click on the Settings tab of the *Display Properties* dialog and define the Color and Screen Area size. For details, consult the documentation of your computer).

Using toolbars, menus, and dialogs

The toolbars, the menus, and the dialogs allow you to view, edit, paint, select colors, select painting tools, select images, and many other functions. Some of the toolbars of LView Pro are floating, meaning that they can be positioned at any location along the display area (not only inside LView Pro main window). Other toolbars are floating and allow docking meaning that they can positioned at any location, and when placed closed one of the edges of LView Pro window, they anchor on this edge.

To display the toolbars:
Use the View Menu, and then select the specific toolbar you want to hide or view.

To move a toolbar
Drag the toolbar by its title bar.

When you move the mouse pointer over the toolbar button, input or selection box and wait some seconds, the name of the tool is displayed into a pop-up dialog, know as tool-tip. A short functional description of the tool is also displayed on the Status Bar.

For more information, see :
Selecting tools on the Draw toolbar
Selecting menu items
Menu preferences
Tool bars preferences
Identifying the selected tool trough the mouse pointers
Mouse Buttons
Keyboard keys that change the mouse action
Using numeric input boxes and sliders
Using Multiple Operation Dialogs

Selecting tools on the Draw toolbar

To select a tool, click its icon on the toolbar. When the tool is selected, the tool button on the toolbar appears pressed. Sometime you cannot select a tool because the conditions for using it are not present, and the tool button appears dimmed.

Selecting menu items

To display the contents of a menu topic, point the mouse to the topic or use the keyboard shortcut method, where you press the key ALT and then the letter on the menu topic that is underlined. To get help on that menu command, press F1 while the menu option is displayed.

Menu preferences

To hide / display "menumonic" icons with the menu items, use the menu command **File | Preferences | Tool Bars & Menu Icons**.

Tool bars preferences

LView Pro allows you to define how the tool bar buttons will be displayed. To select between *flat toolbar buttons* and *delimited toolbar buttons* use the menu command **File | Preferences | Tool Bars & Menu Icons**.

Identifying the selected tool trough the mouse pointers

After you select the tool, most of them change the mouse pointer to reflect the current tool and the state of the tool.

For instance, you can change the mouse pointer to a precise mouse pointer, or you can change it to reflect the exact size of the brush in use.

The mouse pointer has an area that defines where the effect of that tool begins (also know as hot spot).

You have the option to change the mouse pointer for painting tools (while positioning the pointer and while painting) and for other tools.

To change a mouse pointer:

Use the menu **File | Preferences | Mouse Pointers**

Use the Brush Palette menu or click on the button on the Brush Palette.

Mouse Buttons

LView Pro uses both the left and right mouse buttons on selection, painting, and drawing operations. The documentation uses the terms **primary** and **secondary** to refer to these mouse buttons. When Windows is configured for **Right-handed** operation, the primary button is the **left** mouse button (and the secondary is the **right** button). When Windows is configured for **Left-handed** operation, primary button means right button (and secondary means left). If no mention is made to one of the mouse buttons, such as "clicking the mouse", consider the click as being performed by pressing the primary mouse button.

Whichever configuration is used, the primary mouse button is the one you use to access window menus, click on buttons, etc.

When using the painting tools, the primary mouse button uses the **foreground color** and the secondary buttons use the **background color**. See Color Selection.

Keyboard keys that change the mouse action

Most of the tools are modified by the use of the ALT, SHIFT, and CTRL keys and by combinations of the threes. For details, see the description of the tool

Using numeric input boxes and sliders

Most of LView Pro numeric input boxes have the following components:
- The numeric field
- The up and down arrows
- The coarse slider / indicator
- The pop-up precise slide bar selector

To enter information using the numeric field:
> Click on the numeric field and edit the number. Using the *backspace* key will erase digits, using the *arrows* will move the cursor along the digits.

To change values using the up and down arrows:
> Click on the up symbol to increase the value, click on the down symbol to reduce the value.

To change values using the coarse slider and indicator:
> The *coarse slider / indicator* is displayed below the numeric field. It not only displays the value in relation in relatively to its maximum value, it also allows quick editions by clicking in any part of the slider or by dragging it to the desired size representing the new value.

To change values using the pop-up precise slide bar:
> To display the pop-up precise slide bar, click on the area below the up and down buttons. This will open a slide bar that will allow a more precise adjust of the value. You move the slide bar cursor by clicking on it and dragging. You can also move the slide bar using the arrow keys, page-up and page-down keys, and home and end key.

Using Multiple Operation Dialogs

When using the on-line help, press F1 for specific dialog information.

Multiple Operation Dialogs are dialog boxes that can perform more than one operation. Each operation may work on image data processed by previous operations. At any time, all preceding operations may be reverted, and the editing process can be restarted from the original image data.

LView Pro groups similar operations into Multiple Operation Dialogs, because it is often the case that more than one of such operations is needed. Pre-defined and User-defined Color Adjustment operations, for instance, are grouped into a Multiple Operation Dialog. If the image needs both Brightness and Contrast adjustments, both are performed in a single dialog box and the overall adjustment does not require entering and leaving different dialog boxes.

Multiple Operation Dialogs also make it easier to experiment with the options for individual operations and to change order of different operations.

LView Pro uses Multiple Operation Dialogs for the following commands:
- Color Adjustment operations, pre-defined or user-defined, for details see Pre-defined color adjustments and User-defined color adjustments.
- Filter operations, pre-defined or user-defined, for details, see Image filters.
- Transformation operations, pre-defined or user-defined, for details, see Image transformations.

For more information, see :
Multiple Operation Dialog box options:

Multiple Operation Dialog box options:

Select

Display a list of available operations. When an operation is selected, LView Pro immediately applies it to the image in the Preview window.

Revert before apply

Check this option if you want LView Pro to change the image using only the currently selected operation. If this option is unchecked, operations will modify the image data maintaining all modifications made by previously selected operations.

Preview

This window shows a preview of the effects of operations performed to the active image or current selection.

Close

Click on this button to close the dialog and keep the changes made.

Apply

Click on this button to apply modifications to the active image or selection. If the Revert before apply option is selected the image reverts to the state it was before the previous operation was applied.

Revert

Click on this button to revert the image to the state it was before the Multiple Operation dialog was started. This button can undo changes even when the Revert before apply option is not selected.

Help

Click on this button to obtain help about the type of operations offered in the Multiple Operation dialog box. You can also use F1 to receive specific operation information.

New

This button is available for user-defined Multiple Operation dialog boxes. Click on this button to create a new user-defined operation.

Edit

This button is available for user-defined Multiple Operation dialog boxes. Click on this button to edit the specification of the currently selected user-defined operation.

Delete

This button is available for user-defined Multiple Operation Dialog boxes. Click on this button to delete the currently selected user-defined operation.

Options

Options for the operations available on the list appear under the Preview window, when the selected operation accepts optional parameters. When a Multiple Operation Dialog box displays user-defined operations, optional parameters will appear when the selected operation uses any of the adjustment factor variables available for their expressions.

Viewing images

LView Pro allows you to see different images at the same time or different views of the same image. It also allows you to catalog a group of images and view each image of the catalog component in a separate view. You can change the viewing zoom and scroll the view. A list of the images that are open is displayed on the *Window* menu.

For more information, see :
Active Editor
Multiple Document Interface
Active Document
Scrolling, zooming and viewing images
Using a grid with the image
Multiple windows viewing options
Windows control options

Active Editor

When the active document is an image, the active editor is the Image Editor. Conversely, when the active document is a catalog, the active editor is the Catalog Editor.

The terms active image and active catalog are also used to refer to the active document.

Images in LView Pro may be composed of more than one frame. Throughout the documentation, the term active image is used to refer to the frame of the active image that is currently being displayed and edited.

Multiple Document Interface

A Windows application has a **single document interface**, when it can only work with a single document at a time. An example of an application that has a single document interface is Windows' Notepad. To edit more than one document, using a single document interface application, you need to start more than one **instance** of that application (one for each document).

LView Pro implements a **multiple document interface**, which means that a single instance of LView Pro can edit multiple documents (images or catalogs). In fact, you can even open more than one window for the same document, to edit different parts of the same image, or to view the same part using different zoom levels. As a rule, each **document** (image or catalog) being edited is displayed in its own window, and a document can be displayed in more than one window.

Multiple Document Interface is useful for many reasons. All the open documents share the same system resources (such as menus, buttons, bitmaps, etc.), which saves memory. In addition, multi-document operations can be performed (such as cloning parts of one image into another; operating images together; splitting images into color channels; etc).

Active Document

When more than one document is opened, the one that was edited last (or opened last) is called the active document. Menu, mouse, or keyboard commands operate on the active document. LView Pro displays the name of the active document on its Title Bar, so you know on which of the current opened documents the actions will be performed. You will also notice that the Window Title of the active document is painted with a different color. If the document is maximized, the Window Title is not displayed, and the name of the active document is displayed on the Title Bar

For more information, see :
Window Title
Changing the active document (Navigating among opened images)

Window Title

Each document has its own window title that displays the name of the document being edited on that window. If the document is maximized, the window title is not displayed and the name of the document being edited is displayed only on the Title Bar. The Window Title is also referred to as the Caption Bar.

Related items:
[Changing the active document (Navigating among opened images)](#)

Changing the active document (Navigating among opened images)

LView Pro displays a list of currently open document windows at the bottom of the *Window* menu. A check mark appears in front of the active document.

You can make another document become the active document by giving it the focus. You have the following option to do that:

- Click on its caption
- Clicking the mouse button on the document's scroll bars
- Select it using the *Window* menu, and choose a document from the list to activate it.
- Navigate among open documents using CTRL + F6 and CTRL + SHIFT + F6.

Related items:
[Window Title](#)

Scrolling, zooming and viewing images

LView Pro can display images in Zoom levels ranging from 1:16 to 16:1. When the resulting view is larger than the viewing area, scroll bars are displayed and you can scroll along the image. Zooming and Scrolling are intimately related in LView Pro. Note that changing the zoom level does not alter the dimensions of the image. To alter the dimensions, use the Resize command

For more information, see :
To Use LView Pro in Full Screen mode
To change the zoom level
To scroll an image
To cancel the zoom effect
To resize the active document window to better fit the document's dimensions.

To Use LView Pro in Full Screen mode

Use the menu command **View | Full Screen.**

Use this command to enter/leave Full Screen mode. LView Pro positions its window over all available display area, including over the task bar area. The LView Pro caption is hidden, and the menu is positioned just outside the display area, to make more editing/viewing space. You can have access to the menu commands by clicking the mouse on the first row of pixels or by using a keyboard shortcut to access top-level menu items. (Such as ALT + F to access the *File* Menu and ALT + V to access the *View* Menu).

Full Screen mode is especially useful if your display is configured for less than 1024x768 resolution. You can also enter/leave Full Screen mode by pressing the F keyboard shortcut key.

Related items:
[To change the zoom level](#)
[To scroll an image](#)
[To cancel the zoom effect](#)
[To resize the active document window to better fit the document's dimensions.](#)

To change the zoom level

Do one of the following:

To increase the zoom level (more detail):

- Use the menu command **View | Zoom In** and select the desired level

- Use the key   **+**

- Use the zoom tool () from the Draw Tool Bar and click on the primary button (see [Mouse Buttons](#)). When you select the Zoom tool on the Draw Toolbar, the mouse pointer takes the shape of a magnifying lens.

To decrease the zoom level (less detail):

- Use the menu command **View | Zoom Out** and select the desired level

- Use the key   **-**

- Use the zoom tool from the Draw Tool Bar and click on the secondary button (see [Mouse Buttons](#)). When you select the Zoom tool on the Draw Toolbar, the mouse pointer takes the shape of a magnifying lens.

When the mouse pointer is shaped as a magnifying glass, you can increase/decrease the zoom level continuously. To do that, c**lick and hold** down either mouse button **without moving the mouse pointer**. The zoom levels are automatically increased/decreased after a short initial delay.

Related items:
[To Use LView Pro in Full Screen mode](#)
[To scroll an image](#)
[To cancel the zoom effect](#)
[To resize the active document window to better fit the document's dimensions.](#)

To scroll an image

Do one of the following:

- Click on one of the scroll bars and move the scroll bar cursor to the area you want. You can achieve that by dragging the scroll bar cursor or clicking in one of the scroll bar's arrows.

- Use the Hand Scroller tool on the Draw Tool bar. The mouse pointer takes the shape of a hand. Click either mouse button on an image, and move it around. LView Pro scrolls the image on screen, as if you were grabbing and moving it with the mouse pointer.

Related items:
To Use LView Pro in Full Screen mode
To change the zoom level
To cancel the zoom effect
To resize the active document window to better fit the document's dimensions.

To cancel the zoom effect

Use this Main Toolbar button to quickly turn off the Zoom. It will return the view to the 1:1 zoom.

You can also use the menu command **View | Zoom Off**, or its keyboard shortcut **Z**.

Related items:
[To Use LView Pro in Full Screen mode](#)
[To change the zoom level](#)
[To scroll an image](#)
[To resize the active document window to better fit the document's dimensions.](#)

To resize the active document window to better fit the document's dimensions.

Use the menu command **Windows | Auto Fit**.

Related items:
[To Use LView Pro in Full Screen mode](#)
[To change the zoom level](#)
[To scroll an image](#)
[To cancel the zoom effect](#)

Using a grid with the image

LView Pro can display a grid to aid in the process of painting and drawing. The Grid helps you position drawings at precise distances and compare the position of different parts of the image. Some painting, drawing, and selection operations can be constrained to operating over grid lines, making it easier to paint/draw in straight lines, draw squares and circles.

For more information, see :
[To display / hide the grid](#)
[To change the grid options](#)

To display / hide the grid

Click on the Toggle Grid button , on the main toolbar to show/hide the grid. This is equivalent to use the menu command **View | Grid**.

You can also use the keyboard shortcut **G**.

Related items:
[To change the grid options](#)

To change the grid options

Click on the Grid Tool on the Draw Toolbar. The Draw Options Dialog Bar displays and allows you to modify the following grid setting options:

Show

Select this option to show the Normal Grid or the Pixel Grid (depending on their individual settings). This is equivalent to using the Grid command. When this option is not selected, LView Pro does not show the Grid.

Normal Grid

Select this option to show the Normal Grid when Show is selected. The Normal Grid is displayed as squares of configurable Size.

Size

Set this option to the desired size for the Normal Grid.

Pixel Grid

Select this option to display a Pixel Grid (a pixel size grid), instead of the Normal Grid, when the current Zoom level is greater than the selected value for Zoom. The Pixel Grid is useful for pixel precise drawing/painting/selecting operations as it clearly individualizes pixels in the image. Note that the Pixel Grid is only displayed when Show is selected, and it takes precedence over the Normal Grid, depending on the current Zoom level.

Zoom

Set this option to the minimum Zoom level from which the Pixel Grid should take precedence over the Normal Grid.

Style

There are four available styles for the Grid:

> **Reverse Color**
>
> > This style of grid is always visible. The grid is painted by reversing the color of pixels underneath it. If you are editing an image with many gray colors, the grid may appear too faint. Select another style of grid in this case.
>
> **B&W Selection**
>
> > This style of grid is painted with alternating Black and White line segments (resembling a selection frame).
>
> **Solid White**
>
> > This style of grid is painted with solid White lines. It is useful when editing a dark image.
>
> **Solid Black**
>
> > This style of grid is painted with solid Black lines. It is useful when editing a light image, or images that do not have many dark areas. This grid may be smoother to work with than the Reverse Color grid, for photographic quality images.

Snap To

Select this option to make LView Pro snap drawing/painting/selecting operations to the Grid, when the Grid is visible.

Related items:
[To display / hide the grid](#)

Multiple windows viewing options

You can open the same image in different windows and use different zooms on each of them. This is very useful to edit a small part of an image with precision, while viewing the changes on another full view.

For more information, see :
[To open multiple windows with the same image](#)
[To arrange multiple opened windows](#)
[To arrange minimized windows](#)

To open multiple windows with the same image

Use the menu command **Window | New Window**.

This command will create a new window that will display and allow edition of the active document (image or catalog). New windows can be created and closed individually. The document is closed only when the last window associated with it is closed.

Related items:
[To arrange multiple opened windows](#)
[To arrange minimized windows](#)

To arrange multiple opened windows

Do one of the following:

•Use the menu command **Window | Cascade** to arrange the windows in an overlapped fashion.

•Use the menu command **Window | Tile Horizontally** to vertically arrange the windows in an non-overlapped fashion.

•Use the menu command **Window | Tile Vertically** to arrange multiple opened windows side by side.

Related items:
To open multiple windows with the same image
To arrange minimized windows

To arrange minimized windows

Use the menu command **Window | Arrange Icons** to arrange the icons for minimized windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

Related items:
[To open multiple windows with the same image](#)
[To arrange multiple opened windows](#)

Windows control options

When you open the Control menu, you have the following options: Restore, Move, Size, Minimize, Maximize, Close, Next, and Previous.

For more information, see :
[Restore](#)
[To move a window](#)
[To change the size of the window](#)
[Minimize](#)
[Maximize](#)
[Close](#)
[Next](#)
[Previous](#)

Restore

Use this command to return the active window to its size and position before you chose the Maximize or Minimize command.

Related items:
[To move a window](#)
[To change the size of the window](#)
[Minimize](#)
[Maximize](#)
[Close](#)
[Next](#)
[Previous](#)

To move a window

You can move a window by dragging its caption (title bar) and positioning it at the desired location.

You can also use the control menu command *Move*.

Use this command to display a four-headed arrow ⊕ mouse pointer so you can move the active window or dialog box with the arrow keys or the mouse.

Note: This command is unavailable if you maximize the window.

Related items:
[Restore](#)
[To change the size of the window](#)
[Minimize](#)
[Maximize](#)
[Close](#)
[Next](#)
[Previous](#)

To change the size of the window

You can use the mouse to drag the size bars at the corners or edges of the window.

You can also use the control menu command *Size*.

This command will display a four-headed arrow mouse pointer so you can size the active window with the arrow keys or the mouse.

After the mouse pointer changes to the four-headed arrow:
- Press one of the DIRECTION keys (left, right, up or down arrow key) to move the mouse pointer to the border you want to move.
- Press a DIRECTION key to move the border.
- Press *Enter* when the window is the size you want.

Related items:
Restore
To move a window
Minimize
Maximize
Close
Next
Previous

Minimize

You can minimize a window with the mouse, by clicking on the minimize button on the window caption (or title bar).

Use the control menu command *Minimize* to reduce the LView Pro window to an icon, or to reduce the active document window to an icon.

Related items:
Restore
To move a window
To change the size of the window
Maximize
Close
Next
Previous

Maximize

You can maximize a window with the mouse, by clicking on the maximize button on the window caption (or title bar).

Use the control menu command *Maximize* to enlarge the active window to fill the available space.

Related items:
[Restore](#)
[To move a window](#)
[To change the size of the window](#)
[Minimize](#)
[Close](#)
[Next](#)
[Previous](#)

Close

Use the control menu command *Close* to close the active window (or dialog box).

You can also close the active window using CTRL + F4.

Double-clicking a Control-menu box is the same as choosing the *Close* command.

Note: If you have multiple windows open for a single document, the *Close* command on the document Control menu closes only one window at a time. You can close all windows at once with the *Close* command on the *File* menu.

Related items:
Restore
To move a window
To change the size of the window
Minimize
Maximize
Next
Previous

Next

Use this command to switch to the next opened document window. LView Pro determines which window is next according to the order in which you opened the windows.

You can also navigate among windows with the command CTRL + F6 (next) and CTRL + SHIFT + F6 (previous). See Changing the active document (Navigating among opened images).

Related items:
Restore
To move a window
To change the size of the window
Minimize
Maximize
Close
Previous

Previous

Use this command to switch to the previous open document window. LView Pro determines which window is previous according to the order in which you opened the windows.

You can also navigate among windows with the command CTRL + F6 (next) and CTRL + SHIFT + F6 (previous). See [Changing the active document (Navigating among opened images)](#).

Related items:
[Restore](#)
[To move a window](#)
[To change the size of the window](#)
[Minimize](#)
[Maximize](#)
[Close](#)
[Next](#)

Getting images into LView

The first step of the LView Pro image editing process is to get the image into the document window. LView Pro allows you to achieve this using the following options:

- Create an image from scratch
- Read an image from disk
- Paste an image from the desktop of the computer
- Capture or acquire an image from a digital source such as a scanner, a digital camera, a video card capture card

For more information, see :
[Creating new images](#)
[Opening image files](#)
[Capturing images from the video screen.](#)
[Acquiring images from Digital Sources](#)
[Cropping images](#)
[Changing the image dimensions](#)
[Color Depth](#)

Creating new images

The *New* command from the *File* menu allow you to create a new image. You need to specify the dimensions of the image, the number of colors, and the background color of the image (the solid color that will fill the whole image area).

To create a new image:

- Use the menu command **File | New** and make sure that LView Pro IMAGE is selected, then press OK.

- Enter the image dimensions in pixels

- Enter the number of colors (palette with 2, 16 or 256 color, or True Color).

- Enter the background color. The options display the name of the color and the value of the RGB components. You can also select any color by previously setting the background color on the Color Selection dialog bar.

- Click OK.

The image will be created with the name 'image' followed by a number. No file type is displayed yet because no specific file type was selected, only after saving the image a file type will be defined. You will notice also an asterisk besides the name, informing that the image has not been saved yet and there are modifications on it.

Opening image files

LView Pro allows you to open images in different file formats. For more information on the file formats supported by LView Pro, see [File Formats](#).

You can open an existing image file in a new Image Editor window. Multiple images and catalogs can be edited, each in its own window. See [Changing the active document (Navigating among opened images)](#).

For more information, see :
[Opening files](#)
[Opening the last files used](#)

Opening files

To open a specific file
- Use the menu command **File | Open**
- Type the name of the folder from where you want to open the file in the field **Look in.**
- Type the name of the file name in the field **File name.**

To open a file using wild chars (* and ?)
- Use the menu command **File | Open**
- Type the name of the folder from where you want to open the file in the field **Look in.**
- Select the file type extension on the field **File of Type**
- Type the name of the file using the wild chars (e.g. "imag*").
- Click on **Open.**
  A list of the files that matches the wild char specification will be displayed.
  Select one of the files by single clicking on it.
  Now you can see a preview of the file on the dialog (make sure the option on the **Preview Images** options is **in Color** or **in Grayscale**).
- Now you can do one of the following:
  Select the file name by clicking on it, or
  Browse trough the files using the arrow keys until you reach the file that you want, then click on **Open**.

To make sure that your next operation will open a file using the same properties from last operation.

- Check the box **Next Time default to the same directory** (Next time you use the open command, it will be already looking for files in the directory that was last used in the **Look in** field).

- Check the box **Next Time default to the same File Type** (Next time you use the open command, it will be already using the file type that was last used in the field **Files of Type**).

The **File Type Options** button allows you to modify properties for the file formats during the save operation.

You also have the options of using the folder icons **Up One Level**, **View Desktop**, **Create New Folder** (useful when saving files), **List**, and **Details**. These icons are located on the side on the **Look In** field.

Color conversion on open

This topic is only important if you are using a palette based display mode.

Some image file formats are capable of storing images in True Color format, or images without color palettes. When such image files are opened, and Windows is set to use a palette based display mode, LView Pro automatically converts the image into palette based format. The options for that conversion are defined on the menu command **File | Preferences | Color Conversion | On Open**. Use the dialog to select how this type of Color Depth conversion should be performed.

Color Conversion on Open is not necessary when Windows is set to use a True or High color display mode. In this case, this dialog will not be available.

Opening the last files used

LView Pro displays a list of recently opened documents at the bottom of the *File* menu.

Open the file menu by selection the menu command *File* and then type the number, click, or select with the keyboard one of the file names from the list of files at the bottom of the *File* menu.

An asterisk * next to an image's name indicates that the image has not been saved since was last modified.

To specify the number of files that will be kept on that list, use the menu command **File | Preferences | Recent File List**.

Capturing images from the video screen.

LView Pro allows you to capture any image that is being displayed on the monitor video screen. The image will be captured based on the way it is being displayed, meaning that it will use the screen resolution, not the actual dimensions of the image.

To capture the whole desktop as a new image document
- Press the **Print Screen** key.
  It will capture the desktop as if you were taking a picture from the computer screen.
- Change the focus to LView Pro (using alt + TAB or clicking on its icon on the task bar).
- Use the menu command **Edit | Paste**, and then select **As a New Image** (Ctrl + V).
  A new image document will be created into LView Pro with the name "Clip" followed by a number and the type "bmp" ("Clip" suggesting that the image came from the Windows clipboard).

0   To capture a single window that has the focus as a new image document
- Press the **Alt** + **Print Screen** key.
  It will capture only the window that has the focus.
- Change the focus to LView Pro (using alt + TAB or clicking on its icon on the task bar).
- Use the menu command **Edit | Paste**, and then select **As a New Image** (Ctrl + V).

You can also paste the captured image with the following options:
- As a New Selection (Ctrl + E)
- As a Selection Area (Ctrl + A)
- Into Selection (Ctrl + I)

Acquiring images from Digital Sources

LView Pro provides you a way to interact directly with your scanner, video frame grabber, or digital camera using a **TWAIN** interface. The source device (scanner, camera, video grabber, etc) must be properly connected, installed and energized. The device drivers must have been installed using the software that are provided and supported by the device manufacturer. These drivers will allow LView Pro to interact with your digital device. If you cannot use the device with the software provided by the scanner manufacturer, you will not be able to use LView Pro to interact with the device. If you are having problems with the software of the scanner, camera, or video grabber please contact your scanner manufacturer for support.

For more information, see :
Importing images from a scanner, digital camera, or frame grabber using a TWAIN interface
Defining the scanning resolution
Adjusting the image after the scan

Importing images from a scanner, digital camera, or frame grabber using a TWAIN interface

1) Select a source device:
> Use the menu command **File | Select Source***.*
> A dialog will appear offering a list of compatible TWAIN devices installed in your system. If this option is not available (dimmed), the installation of the device is not correct. Contact your device manufacturer for updated drivers or support.
2) Acquire the image from the device
> Use the menu command **File | Acquire**.
> A dialog from your scanner interface will be displayed. Please use the instructions provided with your device.

You only need to use the menu command **File | Select Source** when you restart the program again or want to change the source. All next **File | Acquire** commands will be performed on the last selected source.

Defining the scanning resolution

To ensure that your scanned image will have the desired final size, you must consider the following factors:

- The dimensions of the material you are scanning.
- The desired size of the resulting image.

For instance, if you scan a 6 x 4 inches photograph using a scanning resolution of 150 dpi, the resulting image size will be 6 x 150 dots by 4 x 150 dots (900 x 600 pixels). If you want a larger file, you can use more dpi, or vice-versa.

You also need to consider the resolution of the output device.

Some scanner interfaces also provide an option for setting the black and white colors before the scanning takes place, resulting in a better distribution of the tonal range.

Adjusting the image after the scan

You may need to resize or re-dimension the image after the scan. For details, see [Changing the image dimensions](#).

You may also need to adjust the image color. LView Pro provides many resources to correct the image color, like [Histograms](#), [Curves](#), [Pre-defined color adjustments](#), and [User-defined color adjustments](#). For details see [Adjusting the Image color](#).

After adjusting the image color, you may want to edit the image, for instance, by using one of the painting tools with the one of the retouch blending modes, like the sharpen method, or rotate the image, etc. For details, see [Editing and Re-touching](#).

Cropping images

Sometimes the resulting image from a scanning or from the capture of the video desktop contains more information than needed. In cases like this, you may want to crop the image.

LView Pro has the following options to crop an image:

Using a selection

1) Define a selection area using the Shape Selection tool.

> You can use any of the selection shapes (square, ellipse, rectangle, or circle). If there is any area that is outside the selection on the new image, it will be filled with the current background color.

2) Use the menu command **Image | Crop**.

> This will replace the current image with the cropped area. You can always use the undo command to return to the previous state.

Using the crop tool

1) Click on the crop tool

2) Click on the starting pointing of the image where you want the crop area to start and drag the mouse until you have the desired crop area. While you drag the mouse, you will be seeing the crop marquee.

3) Adjust the crop area, after you release the mouse, by positioning the mouse over one of the corners or edges of the crop marquee and dragging them. You can see the dimensions of the crop area displayed on the status bar.

4) You can now perform the crop using one of the options below:

- Click on the Confirm Crop Button (   ) on the Draw options tool bar.
  The crop will be performed without any confirmation.
- Use the menu command **Image | Crop.**
  This option will open a dialog that will allow you to enter numeric values for the crop area, perform the crop, or continue with the graphical crop adjust.
- Right click the mouse, activating the same dialog as in **Image | Crop**.
- Click on the Numeric Crop button (   ) on the draw options tool bar.

If you want to cancel the crop command, click on the cancel button (   ) on the draw options tool bar.

Changing the image dimensions

After you have the image on the editor, you may need to change the image dimensions. LView Pro provides you two methods to perform that: image resize and image re-dimension.

For more information, see :
Image Resize
Image Re-dimension

Image Resize

The Image Resize command allows you to adjust the image dimensions to match a specific print dimension or define a new image size in order to fit on a web page. For instance, you can create a larger image, keeping the same aspect ratio (or proportions).

For more information, see :
Aspect Ratio
Resample

Aspect Ratio

The aspect ratio is the proportion between the between image width and height. When you change the aspect ratio of an image, it appears distorted in one of the dimensions.

Related items:
[Resample](#)

Resample

In order to fit the resized image into the new dimensions, the resulting number of pixels in both dimensions must be changed, and pixels must be created or deleted. Depending on how this is performed, it may result in jagged lines and image artifacts on the resized image. The resample algorithm of LView Pro allows you to perform image resizing reducing the problems mentioned.

It is important to understand that resample can produce an image with less quality. For instance, when the resize is from a smaller image to a larger image, pixels must be added and these new pixels can make the image a little blurry. You can fix this by using the image filters (like the sharpen filter)

You can eliminate the need for re-sampling, by producing a source image that is larger than the final image (for instance, by scanning with a higher resolution). This way, when you resize the image to a smaller size no new pixels will be added.

To resize one image preserving the aspect ratio:
- Use the menu command **Image | Resize**.
- Check the **Preserve Aspect Ratio** check box.
- Enter the new size of the image.
  Standard image sizes (320x200, 640x350, 640x480, 800x600, 1024x768 and 1280x1024) are available. If the original image does not have the same aspect ratio as one of the new image sizes only one of the dimensions will match the height or the width of the standard sizes. (Because of the preserve aspect ratio option.) In this case, LView Pro computes the other dimension value to fit the image into the selected size.
- Click **OK**

If the resulting image is larger than the source image, you can also check the **Resample (higher quality, slower)** check box.

Related items:
Aspect Ratio

Image Re-dimension

The image Re-dimension allows you to change the active image dimensions. Unlike the Resize command, Re-dimension does not change the appearance of the image. It simply enlarges or shrinks the editing area, creating empty spaces or removing part of the image. The original image is placed on the upper left corner of the new editing area. When Re-dimension is used to enlarge the editing area, new areas are painted with the current background color.

The **Image | Re-dimension** command allows you, for instance, to make "room" on one image for additional images, like in the case where you want to put two images together, into a bigger image, without changing any of them.

Color Depth

Color depth is the **potential number of colors** of an image. It specifies how much color information is possible to store in each pixel. For instance, an image with a color depth of 1 has only 2 colors (21: black and white). On the other side an image with color depth of 24 (a bit map image with 3 bytes for each pixel, 3 x 8 bits = 24 bits) has 224 colors (a number close to 17 million).

A palette based image can contain at most 256 colors (see Image Colors) and a True Color image can contain any RGB color combination (see Computer colors). There are occasions when a True Color image must be converted to palette based format, and vice-versa. In other cases, a palette-based image must be converted to use a different color palette, perhaps with a different number of color palette entries.

For more information, see :
Color Depth conversions in LView Pro

Color Depth conversions in LView Pro

The following are all the occasions where color conversions occur in LView Pro.

1. When a True Color image is opened for viewing/editing and Windows is set to use a palette based display mode. This color depth conversion is performed automatically. You may configure options for this type of conversion using the On Open command.
1. When a True Color image is saved using a graphics file format that cannot store images in True Color format. LView Pro automatically performs a color depth conversion You may configure options for this type of conversion using the On Save command.
1. When you select the Global Palette button to create a single color palette for all frames in the active image. LView Pro displays a dialog box to obtain options for the color depth conversion operation.
1. When you select the Color Depth command. LView Pro displays a dialog box to obtain options for a color depth conversion operation.

Steps in a color depth conversion operation

- Decide if the conversion result will be in True Color or Palette based format. In cases 1-3 above, the result is a palette-based image. In case 4, you may wish to convert a palette based image into True Color format. This is useful, because many editing operations cannot be performed on palette based images, because of their intrinsic limitation on the number of colors. Conversion from palette-based to True Color format is straightforward and does not require any other options to be specified. Note that LView Pro will only convert to True Color format when Windows is set to use a True or High color display mode.
- If the conversion result is a palette-based image, the next step is to create a new color palette. LView Pro can create the palette based on the colors of the image being converted, or it can read a palette specification from a disk file. In general, best results are achieved by allowing LView Pro to create the palette. But, it may be necessary to convert an image to use a determined palette, e.g. when preparing images that will coexist in a software or environment that is limited to displaying certain color palettes.
- If you do not choose to specify a palette file, other palette creation options are taken into consideration. You specify the maximum number of colors on the color palette (a number greater than 1 and smaller or equal to 256). Optionally, you may request that the default Windows colors be added to the palette. This is useful if the converted image will be displayed in Windows environments. Palettes containing the default Windows colors must have at least 16 entries.
- Once the palette creation method is selected, LView Pro proceeds to create the palette based on the image colors or to read a palette from the selected file. When the palette is available, LView Pro converts the image to use it by matching the current colors in the image with the colors in the new palette.
- Two color matching methods are available, **Error Diffusion** and **Nearest Color**. When converting a True Color image into palette based format, it is virtually

impossible to find matches for the (potentially) thousands or millions of colors in the original image among the (at most) 256 colors in the new palette. The **Error Diffusion** method tries to correct errors made when matching colors by propagating these errors into subsequent matching operations. This method is best applied when converting photographic quality images of people, sceneries, wildlife, etc. The **Nearest Color** method simply picks the best color in the new palette to match each color in the image. This method works best with line drawings, cartoons, etc.

Adjusting the Image color

LView Pro provides two methods to adjust the color of the pixels of an image: **Color Adjustments** (a menu and numeric based interface) and **Curves and Histograms** (a graphical interface). LView Pro Color Adjustments are operations that change the color of all pixels in the active image (or when a selection is defined and the image is in True Color format, the color of all pixels in the current selection).

In a color adjustment operation, the new color of a pixel is determined by two factors: the current color of the pixel, and the type of color adjustment operation. In other words, the colors of neighboring pixels are not taken into account (unlike in a Filter operation), and the position of pixels in the image is not changed (unlike in a Transformation operation).

Most of the **pre-defined Color Adjustments** operations are very straightforward and act like the buttons on a TV set (like brightness, contrast, etc.). You can also create your own color adjustments by using the **User Defined Color Adjustments.**

LView Pro also provides two tools that are extremely powerful, controls many factors at the same time and performs very effective color and tone corrections on the image: **Histograms** and **Curves**.

It is essential that you use all these tools on a true color image. If you have a palette-based image, change its color depth to a true color image, perform the corrections and then, if needed, return the corrected image to a palette-based image. See [Color Depth](#).

For more information, see :
[Histograms](#)
[Curves](#)
[Pre-defined color adjustments](#)
[User-defined color adjustments](#)

Histograms

The histogram is a graphic representation of how the image tone information is distributed through the image. The horizontal axis represents the **brightness** values of the image and the vertical axis represents the **quantity of pixels at that brightness level**.

The brightness information is represented ranging from the lowest levels of brightness to the highest.

The left side of the horizontal axis represents the dark parts of the image, or the pixels with the lowest level of brightness, also know as shadows.

The right side of the horizontal axis represents the brightest part of the image, or the pixels with the highest level of brightness, also know as highlights.

The central area of the horizontal axis represents the intermediate levels of brightness, also now as mid-tones.

This graphical representation provides all tonal information about the image in a single graphic. For instance, it provides a quick way to identify the tonal range of the image (image key type). A **low-key image** has more points on the left side of the histogram. A **high-key image** has more points on the right side of the histogram.

Using the histogram information allows you to better identify what kind of tone corrections may be performed to improve the image quality.

For example, quick way to correct a dark image:

To correct an image that is too dark (probably has a histogram with more points on the left side than on the left), click on the **Low Key** button and you will see a better image. Then, if this still is not enough, slide the **black triangle** of the **Output levels slide bar** to the right and see the even better results. Sometimes you have to apply more than one correction to be able to produce a good result.

For example, quick way to correct an over exposed image

To correct an image that has too much light (probably has a histogram with more points on the right side than on the left) click on the **High key** button. Then slide the **white triangle** of the **Output levels slide bar** to the left and notice that the image darkens. By changing also the mid-tones level (the **gray triangle** on the **Input levels slide bar**) you can fine adjust the image.

For more information, see :
Histogram components
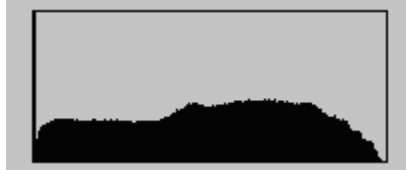How to use a histogram

Histogram components

The histogram dialog contains the following components:
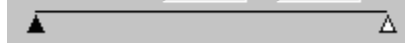
Input levels numerical dialog.

Histogram curve

Input levels slide bar

Output levels slide and numerical dialog.

Selector for all channels/individual R,G, B channel

Input Level droppers (Low, Mid, and High)

- Image preview and image preview checkbox.
- **Ok** button, to apply the adjustments on the image
- **Cancel** button, to exit the dialog without changing the image
- **Normal** button, to: automatically adjust a Normal image (equally distributed points)
- **Low key** button, to automatically adjust a Low key image (more points on the dark area - left)
- **High key** button, to automatically adjust a High key image (more points on the bright area - right)
- **Revert** button, to revert the operation performed.
- **Advanced/Standard** button, to open / close the advanced options sub-dialog. See Histogram's Advanced options sub-dialog.

How to use a histogram

The basic steps for correcting an image using the histogram tool are:

- Obtain the histogram of the image

- Interpret the histogram information

- Change the image using the histogram automatic functions, and or

- Change the image using the histogram manual adjusts.

For more information, see :
[Obtaining the histogram of the image](#)
[Interpreting the histogram information](#)
[Changing the image using the histogram automatic options](#)
[Changing the image using the histogram manual adjusts.](#)

Obtaining the histogram of the image

Use the menu command **Image | Graphics Adjustments | Histograms**.
      The histogram dialog will be displayed. A preview of the image is also displayed on the dialog. If a selection is defined, the histogram will be applied only in the selection.

Related items:
Interpreting the histogram information
Changing the image using the histogram automatic options
Changing the image using the histogram manual adjusts.

Interpreting the histogram information

The interpretation of the histogram will allow you to identify the image distribution and the modifications that can be made. LView Pro allows you to perform very fast and powerful image corrections even if you cannot interpret the histogram information.

The general rule for interpreting the histogram is to try to identify the image key.

If the image has more points on the left side of the histogram (dark or shadows areas), it is a Low key image.
If the image has more points on the right side of the histogram (bright or highlight areas), it is a High key image.
If the distribution is uniform, the image is a Normal key.

Related items:
Obtaining the histogram of the image
Changing the image using the histogram automatic options
Changing the image using the histogram manual adjusts.

Changing the image using the histogram automatic options

You can achieve excellent results by using the **Normal**, **Low key**, and **High key** buttons. These automatic adjustments will produce the same effects as if you were performing many manual adjustments.

These buttons should be used as follows:
- If the image is **High key** (many points on the right side, or brightest side), click on the **High key** button to correct it.
- If the image is **Low Key** (many points on the left side, or darkest side), click on the **Low key** button to correct it.
- If the image is **Normal** (has an evenly distributed histogram), click on the **Normal**.

The information used to perform these operations is based on the parameters provided on the **Advanced options sub-dialog**.

Related items:
Obtaining the histogram of the image
Interpreting the histogram information
Changing the image using the histogram manual adjusts.

Changing the image using the histogram manual adjusts.

Sometimes the automatic adjustments of the histogram are not enough to adjust the image. In this case, you can further adjust the image by using the manual adjustments. The best results are achieved using a combination of the Automatic and Manual methods.

The procedure is to first identify the low and high values, then adjust the mid-tones values. Sometimes just the setting the low and high levels is enough. However if the original image histogram has more points concentrated on one of the extremes of the brightness axis, you may need to adjust the mid tones level.

The first part (low and high values) will produce a better distribution of the image pixels along the **brightness** range, resulting in a more detailed image definition. The second part (mid-tone level) will result in an image with a better **contrast** adjust.

The procedure is composed by the following actions:
1) First, change the Low and High levels using one of the methods described next.
2) Finally, change the Mid-tone level, using one of the methods described next.

You can use the slide bars (Input levels), Input levels numeric dialog, or use the Input levels droppers.

For more information, see :
Changing the Low and High levels using the slide bars (Input and Output levels)
Changing the Low and High levels using the Input levels and Output level numeric dialog
Changing the Low and High levels using the Input levels droppers
Changing the Mid level using the slide bars (Input levels)
Changing the Mid level using the Input levels numeric dialog
Changing the Mid level using the Input levels droppers
Histogram's Advanced options sub-dialog

Related items:
Obtaining the histogram of the image
Interpreting the histogram information
Changing the image using the histogram automatic options

Changing the Low and High levels using the slide bars (Input and Output levels)

- Define the channels where you want to perform the change:
- Change the Low level input level:
  Right click on the black triangle and drag it to the right until it is below the left edge of the histogram.
  This will darken the image.
- Change the High level input level:
  Right click on the white triangle and drag it to the left until it is below the right edge of the histogram.
  This will lighten the image
  The resulting image will better distributed on the brightness range.

You also have the resource of using the **Output levels slide bar**. When you move the white triangle of the Output levels slide bar to the left, you are changing the pixel distribution in a way that pixels with high brightness will be mapped into the range of pixels with lower brightness. By doing that, you will be reducing the number of pixels with high bright, consequently darkening the image (less pixels with more bright). Vice versa for the black triangle.

Moving the **black triangle** to the **right** on the **Output levels slide bar** will **lighten** the image.
Moving the **white triangle** to the **left** on the **Output levels slide bar** will **darken** the image.

Related items:
Changing the Low and High levels using the Input levels and Output level numeric dialog
Changing the Low and High levels using the Input levels droppers
Changing the Mid level using the slide bars (Input levels)
Changing the Mid level using the Input levels numeric dialog
Changing the Mid level using the Input levels droppers
Histogram's Advanced options sub-dialog

Changing the Low and High levels using the Input levels and Output level numeric dialog

Instead of using the **slide bars**, you can enter the values for the **Input levels numeric dialog** on the left box and on the right box. The **left** box of the Input level numeric dialog represents the **Low level** and the **right** box represents the **High Level**. The central box of the numeric dialog represent the Mid-Tones level and will be set on the next step. You can also change the numeric value of the **Output levels**.

Related items:
[Changing the Low and High levels using the slide bars (Input and Output levels)](#)
[Changing the Low and High levels using the Input levels droppers](#)
[Changing the Mid level using the slide bars (Input levels)](#)
[Changing the Mid level using the Input levels numeric dialog](#)
[Changing the Mid level using the Input levels droppers](#)
[Histogram's Advanced options sub-dialog](#)

Changing the Low and High levels using the Input levels droppers

This method requires that you clearly identify areas in the image that represent the dark parts and the clear parts (the shadows and the highlights). Sometimes the whitest point is not the highlight of the image, and this method demand more experience than the other methods.

One good tool for that is to set the colors on the **Color Selection dialog bar** to HSL instead of RGB. Click on the HSL/RGB button to make sure that you are reading HSL levels. This way, while you navigate with the **dropper over the image** you will be able to retrieve color information of H, S and L. This color model provides the Hue, Saturation, and Luminance (brightness) information. The **L readings**, you allow the identification of the points with higher and lower brightness information.

Click on the dropper that corresponds to the level you are adjusting and navigate over the image. When you locate the point that you consider the correct one, click on the image and notice how the image will change.

Related items:
[Changing the Low and High levels using the slide bars (Input and Output levels)](#)
[Changing the Low and High levels using the Input levels and Output level numeric dialog](#)
[Changing the Mid level using the slide bars (Input levels)](#)
[Changing the Mid level using the Input levels numeric dialog](#)
[Changing the Mid level using the Input levels droppers](#)
[Histogram's Advanced options sub-dialog](#)

Changing the Mid level using the slide bars (Input levels)

- Define the channels where you want to perform the change:
  The easiest way to see the results is by leaving the **All channels** option set.
- Change the Mid level input level:
  Right click on the gray triangle and drag it to the right or to the left. The ideal point would be the ''center of the histogram'' or the area that has more concentration of mid-tones pixels, but this is not very easy to identify. The best way is to see the results on the screen.
  Moving the **gray triangle** in the direction of the **black triangle** will **lighten** the image.
  Moving the **gray triangle** in the direction of the **white triangle** will **darken** the image.

Related items:
Changing the Low and High levels using the slide bars (Input and Output levels)
Changing the Low and High levels using the Input levels and Output level numeric dialog
Changing the Low and High levels using the Input levels droppers
Changing the Mid level using the Input levels numeric dialog
Changing the Mid level using the Input levels droppers
Histogram's Advanced options sub-dialog

Changing the Mid level using the Input levels numeric dialog

Instead of using the **slide bar**, you can enter the values for the **Input levels numeric dialog** on the central box.

Related items:
[Changing the Low and High levels using the slide bars (Input and Output levels)](#)
[Changing the Low and High levels using the Input levels and Output level numeric dialog](#)
[Changing the Low and High levels using the Input levels droppers](#)
[Changing the Mid level using the slide bars (Input levels)](#)
[Changing the Mid level using the Input levels droppers](#)
[Histogram's Advanced options sub-dialog](#)

Changing the Mid level using the Input levels droppers

This method requires that you clearly identify areas in the image that represents mid tones pixels of the image (the grayscale pixels). This method requires more experience than the other methods. See [Changing the Low and High levels using the Input levels droppers](#).

Related items:
[Changing the Low and High levels using the slide bars (Input and Output levels)](#)
[Changing the Low and High levels using the Input levels and Output level numeric dialog](#)
[Changing the Low and High levels using the Input levels droppers](#)
[Changing the Mid level using the slide bars (Input levels)](#)
[Changing the Mid level using the Input levels numeric dialog](#)
[Histogram's Advanced options sub-dialog](#)

Histogram's Advanced options sub-dialog

This sub dialog allows you to set the following parameters:
- Clip percentages for white pixels (the highlight side of the histogram, or the right side):
  This number defines the top percentage of bright pixels that will be ignored when creating the histogram. Pixels that have very high brightness levels will not be considered based on this number. The default value is 0.5 %.
- Clip percentages for black pixels (the shadows of the histogram, or the left side):
  The same approach is used for dark pixels.

  This way, the histogram adjust will be based on representative pixels, avoiding that, for instance, one part of the image that is completely dark does not result in a distorted histogram.

- Mid points:
  Normal: defines the location of the mid tones points for the Normal adjust.   The default value is 1.00.
  Low key: specify the location of the mid tones points for the Low key adjust. The default value is 1.30 (equivalent to move the gray triangle to some point closed to the black triangle).
  Hi Key: specify the location of the mid tones points for the High key adjust. The default value is 0.70 (equivalent to move the gray triangle to some point close to the white triangle).

- Open and Save histogram specification.
  Allows you to save and retrieve histograms' settings. You can save the image histogram to the disk and load it to be used with another image.

Related items:
[Changing the Low and High levels using the slide bars (Input and Output levels)](#)
[Changing the Low and High levels using the Input levels and Output level numeric dialog](#)
[Changing the Low and High levels using the Input levels droppers](#)
[Changing the Mid level using the slide bars (Input levels)](#)
[Changing the Mid level using the Input levels numeric dialog](#)
[Changing the Mid level using the Input levels droppers](#)

Curves

A Curve is a graphic interface that allows you to perform precise tone adjustments in the image. The histogram shows the distribution of the pixels along the brightness information. The curves allow you to change specific pixels grouped by the brightness values.

The horizontal axis represents the current (input) **brightness** value of the image pixels and the vertical axis represents the modified (output or displayed) **brightness** value. When the curves command is invoked, the curve is always a diagonal, meaning that all pixels displayed have the same brightness level as the original pixels. If you modify the curve, the brightness of the pixels displayed will change (if you confirm the modification).

The left side of the horizontal axis represents the pixels with less bright, or the pixels that compose the darks areas of the image (shadows). The right side, on the other hand, represents the pixels with higher levels of brightness (highlights).

For more information, see :
How to use a the curves dialog
Curves dialog components

How to use a the curves dialog

Use the menu command **Image | Graphic Adjustments | Curves** to open the Curves dialog

> The curves dialog will be displayed. A preview of the image is also displayed on the dialog. If a selection is defined, the curve is in related to the selection only.

For more information, see :
[Changing the image using the curves dialog automatic options](#)
[Changing the image using the curves graphic options](#)

Changing the image using the curves dialog automatic options

You can achieve excellent results by using the **Normal**, **Low key**, and **High key** buttons. These automatic adjustments will produce the same effects as if you were performing many manual adjustments.

 These buttons should be used as follows:
- If the image is **High key** (bright image), click on the **High key** button to correct it.
- If the image is **Low Key** (dark image), click on the **Low key** button to correct it.
- If the image is **Normal** (not too dark or bright), click on the **Normal**.

Sometimes is not easy to conclude what is the image classification. In case like this, just click on one of the 3 buttons, verify the results and revert it on the dialog or use the undo command if the dialog is already closed.

Related items:
[Changing the image using the curves graphic options](#)

Changing the image using the curves graphic options

1) Select the part of the curve that you want to remain with the same tone levels

Click on the Convert to curve button (in case it is not already depressed)
Click on the parts of the curve that you want to remain fixed. A point will be added (a black square) to the curve.
You can add up to 30 points. To delete a point, hold the Ctrl key down and click on the point. To continue the deletion, just release the mouse, move to other point and click the mouse again. You can also delete the point by dragging it out of the grid area.

2) Select the part of the curve that you want to adjust the tone levels

Click on the area of the image where you want the tone level adjusted (adding a point) and drag this new point to the new position at the grid The cursor will change a four arrows cursor. Dragging it above its current position will lighten the pixels that have that brightness level, dragging it below will darken the pixels.

For more information, see :
For example, to adjust only the dark areas of an image:
Changing the curves grid
Using the free hand tool

Related items:
Changing the image using the curves dialog automatic options

For example, to adjust only the dark areas of an image:

- Place some points in the bright area (the upper right segment: you can add a point at the center of the curve and another one at the third quarter).
- Place a point at the quarter curve (at the lower left) and drag it.
  If you drag it up, the curve will modify mostly in the area of the point, increasing the brightness of pixels belonging to the dark areas of the image.

Related items:
[Changing the curves grid](#)
[Using the free hand tool](#)

Changing the curves grid

You can toggle the grid details by holding down the ALT key and clicking in any point of the grid.

If you need more precision on the areas adjusted, add more points to restrain or release areas where the curve modification is needed.

Related items:
[For example, to adjust only the dark areas of an image:](#)
[Using the free hand tool](#)

Using the free hand tool

Click on the curves free hand tool.
Move the cursor to the grid area. The cursor will be replaced by a pencil.
Click on any part of the image and drag the mouse. A free hand curve will be created, replacing the original curve. The free hand curve does not need to touch the current curve.

You can also click on the **Smooth** button to smooth the curve.

You can click on the Convert to curve button to terminate any abrupt curve discontinuity.

Related items:
[For example, to adjust only the dark areas of an image:](#)
[Changing the curves grid](#)

Curves dialog components

The Curves dialog contains the following components:
- Brightness transformation curve
- Image preview and image preview checkbox.
- Convert to curve button.
- Free-hand curve button.
- Smooth curve button (only visible with the free-hand curve pushed)
- Input level of the curve (read only)
- Output level of the curve (read only)
- Selector for all color channels or individual R,G, and B channel
- Input Level droppers (Low, Mid, and High)
- Ok button, to apply the adjustments on the image
- Cancel button, to exit the dialog without changing the image
- Normal button, to: automatically adjust a Normal image.
- Low key button, to automatically adjust a Low key image.
- High key button, to automatically adjust a High key image.
- Revert button, to revert the operation performed.
- Advanced/Standard button, to open / close the advanced options sub-dialog. See [Histogram's Advanced options sub-dialog](#).

Pre-defined color adjustments

You can access LView Pro pre-defined Color Adjustments using the menu command **Image | Color Adjustments | Pre-defined**. Then proceed as listed below.

1) Select one of the following options:
- **Negative**: to produce a Photographic negative
- **Grayscale**: to Remove color
- **Contrast**: to adjust the image contrast
- **Brightness**: to adjust brightness
- **Logarithmic Brightness**: Alternative brightness increase
- **Hyperbolic Sine**: Alternative brightness + contrast increase
- **Exponential De-contrast**: to reduce contrast maintaining bright colors
- **Red, Green, and Blue**: to adjust color components individually
- **Gamma Correction**: to adjust individual R, G, and B gamma values
- **Hue, Saturation and Value**: to adjust color components by hue, sat, and val
- **YUV (Y, Cr, and Cb)**: to Adjust color components by YUV

2) You will be able to see the preview of the action over the active image or selection on the preview window.
3) Enter the desired value (if applicable)
4) Choose one of the following:
- Click on Apply to perform the action on the active image or selection
- Click on Revert to revert the action of the previously applied action.
- Click on Close to leave without changing
- Select another options and proceed as above.

At any time, after applying the changes, you can use the *Undo* command or Undo/Redo History Palette to revert to the previous state.

For more information, see :
Quick adjust for Brightness & Contrast

Quick adjust for Brightness & Contrast

Because Brightness and Contrast image attributes are commonly used, LView Pro provides keyboard shortcuts to quickly change them. Unlike all other editing commands, these keyboard shortcuts also work when viewing the original images associated with Catalog Records.

Using special keys for frequently used color adjustments:
- Press **Asterisk** (*) for a Small Brightness Increase.
- Press **Slash** (/) for a small Brightness Decrease.
- Press **Shift Asterisk** (Shift + *) for a small Contrast Increase
- Press **Shift Slash** (Shift + /) for a small Contrast Decrease

User-defined color adjustments

Use the User-defined color adjustments Dialog to apply one of the user-defined Color Adjustment operations to the active image or current selection. Color Adjustment operations work restricted to the current selection only when the active image is in True Color format.

From this same dialog you can also create new or edit existent user-defined Color Operations.

You can create new color adjustment operations by teaching LView Pro new ways to translate Red, Green, and Blue components. The Color Adjustment Specification dialog (accessible from the User-defined Color Adjustments dialog) allows you to do just that. New operations are defined by three required expressions (one for each color component) and one optional initialization expression. Some of the pre-defined color adjustment operations have options that can be adjusted during the execution of the operation. User-defined operations can also use up to 3 adjusting factors. The variables are:

X	Color value normalized to [0..1]
A1	Adjustment factor 1 [-255..255]
A2	Adjustment factor 2 [-255..255]
A3	Adjustment factor 3 [-255..255]

If you use any or all of the adjustment factors in the expressions, LView Pro will display them just like Red, Green, and Blue offset options are displayed in the pre-defined Color Adjustment Operation. Adjustment factors can be set to values in the range [-255..255]. You can transform them into another range, in the Initial Expression. For instance, if you would like to have an adjustment factor in the range [0..100], you could use the initial expression: A1=(A1+255)/510 * 100.

The variable X represents the current value of each component of each pixel, when you edit. If you wish to compute the negative of an image, you would set the new value of each component to 1-X (remember that X is normalized to the [0..1] range).

Here is another example of a more complex (and probably useless) operation, just to illustrate the process. This is what the operation will do:

- For pixels that have less than 64 on their current Red component, triple the Red component value. For other pixels, double the Red component.
- Divide the Green component by a user selected adjustment factor, between 1 and 2.
- Multiply the Green component by a second user selected adjustment factor, between 1.1 and 1.6.

To specify the above operation, you would set:

Initial Expression	**RedThreshold = 64/255 ;** **A1=(A1+255)/510+1 ;** **A2=(A2+255)/510*0.5+1.1**
New Red Component Expression	**X < RedThreshold ? X * 3 : X * 2**
New Green Component Expression	**X / A1**
New Blue Component Expression	**X * A2**

For more information, see :
Using the user-defined color adjustments dialog

Using the user-defined color adjustments dialog

Use the menu command **Image | Color Adjustments | User defined**

Dialog options:
Name
> Use this box to select the name of the operation. This name is displayed in the list of operations in the User-defined Color Adjustments dialog.

Message
> This box displays a message about the expressions that are typed in the following options. The message helps you find errors and correct the expressions.

Initial Expression
> Type an expression that will be executed once, in the beginning of the operation. This expression is useful to initialize variables for use on the other expressions.

New Red Component Values
> Type an expression to specify the new Red component of a pixel. This expression is evaluated for each pixel of the image.

New Green Component Values
> Type an expression to specify the new Green component of a pixel. This expression is evaluated for each pixel of the image.

New Blue Component Values
> Type an expression to specify the new Blue component of a pixel. This expression is evaluated for each pixel of the image.

Curve Window
> The shape of component expressions is displayed in this window, as you move the focus from expression to expression.

Working with Selections

There are many situations where you only want to work in one part of the image. LView Pro implements this concept of an isolated area with Selections. When a selection is defined, all commands issued will only be effective in the selection area, preserving the areas that are not part of the selection. A selection is delimited by an animated dashed line, also know as **selection marquee**. The color of the marquee will depend on the state of the selection (floating or non-floating).

There are many different ways to create a selection:
• Using the path tool.
• Using the selection tools:
      Shape Selection
      Free Selection
      Selection Brush
      Selection Fill
• Read a selection from the disk
• Use a selection from another image

The selection shape can range from simple shapes (such as rectangles, ovals, squares, and circles) to very complex and irregular shapes, composed by different areas of the image. The selection can be composed by non-contiguous areas.

LView Pro also provides many resources to edit selections.

For more information, see :
Floating and Non-Floating selections
Semi transparent selections
Creating selections
Editing selections
Commands for editing selections

Floating and Non-Floating selections

A selection can be in one of the following states:

Non-Floating

When a selection is first defined (delimited) or when areas are removed from or added to a selection, the selection state is set to non-floating. Non-floating selections are easily recognizable because they are delimited with a moving frame (also called marquee) painted with **Red and Gold** colors.

Floating

When a selection is moved, by clicking the mouse pointer in a selected area and dragging it, a non-floating selection is switched into floating state. Floating selections are easily recognizable because they are delimited with a **Blue and Gold** marquee.

Semi transparent selections

A selection can be defined in terms of area and in terms of opacity. The area defines the location of where you want the selection, and in consequence, the location where you want the commands applied, like a painting command. LView Pro also allows you to define the opacity of the selection. The opacity defines how much of the command you want applied on that area. In other words, you not only isolate an area, you also define how much effect you want on that area. The resulting selection is a semi transparent selection.

The size of the selection displayed by the selection marquee of a semi transparent can be adjusted, allowing the marquee to involve points above one specific level of transparency. Using this resource, the selection is restricted to a small area, even if the semi-transparent selection unfolds throughout the image area.   To adjust the selection marquee, use the command **File | Preferences | Selections Marquee**.

Creating selections

LView Pro provides the following resources to create a selection area:

- Shape Selection tool
- Free Selection tool
- Selection Brush tool
- Selection Fill tool

You can also create a selection from a path. For details, see [Paths as a selection tool](#).

For more information, see :
[Shape Selection tool](#)
[Free Selection tool](#)
[Selection Brush tool](#)
[Selection Fill tool](#)

Selecting the whole image

You can select the whole image using the menu command **Selections | Select All**.

Related items:
[Hide / Display the selection marquee](#)

Hide / Display the selection marquee

You can hide / display the selection marquee with the menu command **View | Selection marquee**, or its keyboard shortcut **M**.

Related items:
[Selecting the whole image](#)

Shape Selection tool

The Shape Selection tool allows you to create selections based on simple shapes.

1) Click on the Shape Selection tool ().

2) Select one of the following shapes, by single clicking on it:

 Rectangular selection shape

 Oval selection shape

 Square selection shape

 Circle selection shape

3) Define the Opacity, Feather, Wet Edges, and Anti Aliasing.

4) Position the mouse over the image, click on the starting point and drag the mouse. A selection marquee with the elected shape will be defined as you drag the mouse. When you surround the area that you want selected, release the mouse button.

For more information, see :
Adding and subtracting selections

Adding and subtracting selections

Complex selections may sometimes be easier to define when broken down into pieces. LView Pro allows you to piece a selection together by removing areas from and adding areas to existing selections.

When you hold down the ***Control*** key while using a selection tool, the area you define is **removed** from the current selection. The mouse pointer signals that the area will be removed from the selection by displaying a minus sign -.

When you hold down the ***Shift*** key while using a selection tool, the area you define is **added** to the current selection. The mouse pointer signals that the area will be added to the selection by displaying a plus sign +.

Free Selection tool

This tool allows you to select areas of the active image by freely drawing a line around these areas.

1) Click on the Free Selection tool ().

2) Define the [Opacity](#), [Feather](#), [Wet Edges](#), and [Anti Aliasing](#).

3) Position the mouse over the image, click and drag the mouse pointer around the area you would like to select.

You don't need to reach the same starting point to close the selection. When you release the mouse, LView Pro closes the selection area for you, using a straight line.

Selection Brush tool

The Selection Brush tool allows you to select areas of the image by painting its pixels with it. No pixels are painted with this tool. The actual result is that the pixels where you pass the tool over are included in the selection area.

All properties for the selected tool are considered: the brush used (its edge opacity, density, etc), the blending mode, the opacity, wet-edges, and all the other options available on the Draw Options Dialog Bar.

1) Click on the Selection Brush tool ().
2) Select the brush that you want to use. Make sure that the brush palette button is depressed (), if not, click on it. The Brush Palette menu will be displayed (for details, see Brush palette).

3) Define the Blending mode, Opacity, Auto fade, Wet Edges, Tablet Options, and Build Ink.

4) Click either mouse button and, without releasing it, drag the mouse pointer over the areas would like to select. As you drag the mouse, the selection area will be defined.

Selection Fill tool

This tool allows you to select areas of the active image using the Advanced Color Matching algorithm. The Advanced Color Matching is an algorithm that finds pixels with similar colors, based on user selected comparison criteria and variable margin of tolerance. For details, see Advanced Color Matching.

This tool works exactly like the Fill Tool, except that areas of the image become selected, rather than painted.

This is the indicated tool to quickly select areas with complex boundaries, yet filled with pixels of similar colors.

1) Click on the Selection Fill tool ().
2) Define the Blending mode, Opacity, Feather, Wet Edges, and Anti Aliasing.
3) Define the match mode (RGB, Hue, Brightness, none) and the tolerance.
> Increase the tolerance in order to produce larger selections (be careful with this approach because the resulting selection can be much larger than the selection you intend to create).
4) Select the option for including similar adjacent areas, by pressing or depressing Unrestricted Fill button (U)
> This option is effective only when the match mode is different from None.

> When the U button is **not depressed**:
>> The resulting filled area will be the area that was created originating from the point where the mouse was clicked and this area will be created using only contiguous pixels that falls on the match criteria.

> When the U button is **depressed**:
>> The resulting filled area will be the area that was created originating from the point where the mouse was clicked **plus** all the other **non-contiguous areas** of the image that also falls on the same match criteria.

5) Define the Fill Style and Build Ink.
6) Click either mouse button on a pixel within the area you would like to select.

For more information, see :
Advanced Color Matching

Advanced Color Matching

Advanced Color Matching is an algorithm that finds pixels with similar colors, based on user selected comparison criteria and variable margin of tolerance. Pixels that have similar information (based on the tolerance) as the originating pixel are considered falling under the same criteria.

Comparison Criteria and Variable Tolerance
The Tolerance option dictates how strict Advanced Color Matching should be. Setting Tolerance to 0 makes only exact matches acceptable. Non zero Tolerance allows similar color matching. The degree of similarity required for a color match is loosened as Tolerance values increase. Four color comparison modes are available:
None
> Pixels are matched regardless of their color. This mode is useful when using the Fill Tool to completely fill the area defined by a selection. In this case, all pixels in the selection must be affected by the operation, regardless of their color. The value assigned to the Tolerance option is not used in this mode.

Red, Green, and Blue
> Pixels are matched by their RGB color encoding. The Tolerance value is used to determine how much RGB deviation is acceptable. For details, see [The RGB model](#).

Hue
> Pixels are matched by their similarity in color (see [Color Models](#)). Use this mode to match similar tones of a color. The Tolerance value is used to determine how much Hue deviation is acceptable.   For details, see [The HSL and HSV models](#).

Brightness
> Pixels are matched by their similarity in brightness. The Y component of each pixel is calculated to check for matches. The Tolerance value is used to determine how much Y deviation is acceptable. For details, see [The YCbCr and YUV models](#).

When the ⃞U button is **not depressed**:
> The match process will look only for pixels that fall on the selected criteria and are CONTIGUOS to the originating pixel (the pixel where the mouse was clicked). The originating pixel not only defines the base for the match criteria (such as its RGB value), but also the base for including pixels because they are contiguous to areas that are connected to it.

When the ⃞U button is **depressed**:
> The match process will look for all image pixels that fall on the selected criteria, not considering if the pixels are contiguous to the originating pixel. In this case, the originating pixel will define only the base for the criteria. All the other **non-contiguous pixels** of the image that also falls on the same match criteria will be considered as a match, whether they are contiguous or not to the originating

pixel.

Editing selections

After the selection is created, you can modify it using the commands on the Selections menu. You can also perform transformations and deformations on the selection.

The best way to understand the results of the editing to a selection is compare the selections before and after the command. To do this, copy the selection before the command to the editor, with the command SHIFT + E (Copy to Editor), apply the command, and then copy the new selection to the editor again

The selection marquee also is affected when you edit the selection. Because of that, sometimes the selection area will present a new size, and in some cases can even become invisible. For details see **File | Preferences | Selections Marquee**.

To change the selection border
Sometimes after you define the selection, you need to move the selection border. You can perform this using a graphic interface from one of the following tool bar buttons:

  Free Transformation
  Free Deformation

The Free Transformation tool allows you to drag the sides and the corners op the selection. It also allows you to rotate the selection.
The Free Deformation tool allows you to change the shape of the selection border.

For details with these commands, see Graphical Image Transformation (Free Transformation) and Image deformation.

Commands for editing selections

For more information, see :
[Select None](#)
[Invert Selection](#)
[All Similar](#)
[Anti-Alias](#)
[Grow similar](#)
[Soften](#)
[Cut from image](#)
[Copy from image](#)
[Paste to image](#)
[Replace image](#)
[Copy to Editor](#)
[Edit | Boundary](#)
[Edit | Change Opacity](#)
[Edit | Colorize](#)
[Edit | Drop Shadow](#)
[Edit | Expand / Contract](#)
[Edit | Feather](#)
[Edit | Get From Editor](#)
[Edit | Remove Transparent](#)
[Edit | Threshold](#)
[Re-using selections](#)

Select None

Use the menu command **Selections | Select None** to remove the current selection, if one is defined.

Invert Selection

Use the menu command **Selections | Invert Selection** to invert the current selection: selected areas become de-selected and de-selected areas become selected.

All Similar

Use the menu command **Selection | All Similar** to enlarge the selection by including image pixels that are similar to current pixels of the selection. The criteria used for the inclusion of pixels is defined by the setting on the [Selection Fill tool](#) (see [Advanced Color Matching](#)). It will include pixels throughout the image, not only adjacent ones (as in the Selection Fill tool when used with the button not depressed). Most important, it will use the **average color information** from the current selection to qualify pixels (not the information of a **single pixel**, like the Selection Fill Tool).

Anti-Alias

Use the menu command **Selections | Anti-Alia**s to smooth the jagged boundaries of a selection.

Grow similar

Equivalent to the menu command **Selections | All Similar**, except that it will include only pixels that are adjacent to the current selection.

Use the menu command **Selections | Grow similar** to enlarge the selection by including image pixels that are similar to current pixels of the selection. The criteria used for the inclusion of pixels is defined by the setting on the [Selection Fill tool](#) (see [Advanced Color Matching](#)). It will include only pixels that are adjacent to the current selection (as in the Selection Fill with the button not depressed). However, like the **Selections | All Similar** command, it will use the average color information from the current selection to qualify pixels (not the information of a single pixel, like the Selection Fill Tool).

Soften

Use the menu command **Selections | Soften** to create a soft boundary transition around the selection, with variable opacity. The result will be a softened selection.

Cut from image

Use the menu command **Selections | Cut From Image** to cut the current selection from the active image. The selection becomes floating (see [Floating and Non-Floating selections](#)), and the image under the selection is painted with the background color. You can achieve the same effect by clicking the primary mouse button on a non-floating selection.

Copy from image

Use the menu command **Selections | Copy from image** to copy the current selection from the active image. The selection becomes floating, and the image under the selection is preserved. You can achieve the same effect by clicking the secondary mouse button on a non-floating selection.

Paste to image

Use the menu command **Selections | Paste to Image** to copy the current selection to the image at its current position. The selection becomes non-floating.

Replace image

Use the menu command **Selections | Replace Image** to replace the active image with the current selection. The selection may be floating or not.

Copy to Editor

Use the menu command **Selections | Copy to Editor** to copy the current selection to a new document. A new window will be crated. You can see the selection opacity in details on this newly created window. You can work on this copy of the selection will all the resources available for a regular image. You can return this edited image as the current selection with the menu command **Selections | Edit | Get From Editor**.

Edit | Boundary

Use the menu command **Selections | Edit | Boundary** to create a selection frame using the number of pixels on the dialog.

Edit | Change Opacity

Use the menu command **Selections | Edit | Change Opacity** to change the opacity of the current selection. For instance, if the opacity of the current selection is not high enough to allow the selection marquee to be displayed, you can increase the opacity of all points in order to make it visible (and consequently, increase the opacity). The opacity is increased in terms of a percentage of the opacity. There are two options:
Absolute
All the points in the selection will have its current opacity replaced by an absolute value of opacity, defined in terms of a percentage of the average opacity of the selection.
Relative
Each point in the selection will have its current opacity value replace by a percentage of its original value. You can increase the opacity with values above 100% and reduce it with values below 100%.

See also the menu command **Selections | Edit | Threshold**.

For details, see Semi transparent selections.

Edit | Colorize

Use the menu command **Selections | Edit | Colorize** to colorize the selection. The brightness of the pixels in the area is used, together with the color options. You can specify the color using the YUV or HSL color modes A vertical bar showing the possible colors resulting from the selection of options, from darkest to lightest color, is also displayed, together with a preview of the image.

Method

YUV or HSL. For details, see [Color Models](#).

U (or Hue) value

Enter the desired amount of the U (or Hue) component.

V (or Sat) value

Enter the desired amount of the V (or Sat) component.

Click on the apply button to preview the effect on the active image. Click on OK to submit the effect.

Edit | Drop Shadow

Use the menu command **Selections | Edit | Drop Shadow** to create a shadow for the current selection. The shadow is created using the current background color.

You have the following options for this command:

Horizontal and Vertical offsets
Select the offsets of the shadow from the selection area. A value of 0 and 0 places the shadow directly under the selection area. Positive values move the shadow to the right and down. Negative values move the shadow to the left and up. You can also set this property by dragging the squares on the Thumbnail preview.

Opacity
Select the opacity level of the shadow. Higher values make the shadow more opaque while lower values make it more transparent, combining the shadow with the image.

Blur
Select the blur level of the shadow edges. Select 0 for no blurring. Lower values result in crisp, well-defined, edges. Higher values increase blurring.

Thumbnail preview
Shows the relative position of the shadow to the selection area, using the selected Horizontal and Vertical offsets.

Edit | Expand / Contract

Use the menu command **Selections | Edit | Expand / Contract** to expand and contract the selection area. The command options are:
- Number of pixels
- Option to expand or contract
- Setting for expanded area.
- Setting for contracted area.

The choices for setting opacity of the expanded area are:
- Similar to original selection
- Maximum of current selection
- Average of current selection
- Maximum of current selection boundary
- Average of current selection boundary

The choices for setting opacity of the contracted area are:
- Make contracted selection similar to original
- Preserve original opacity on remaining selection

Edit | Feather

Use the menu command **Selections | Edit | Feather** to increase the current selection feather. Increasing the selection feather makes the selection edges advance outward, resulting in smoother edges.

Edit | Get From Editor

Use the menu command **Selections | Edit | Get From Editor** to replace the current selection (or to implement a new selection) from one of the current open documents. A list of available open documents is displayed. This command is usually used with the **Selections | Copy to Editor** command.

Edit | Remove Transparent

Use the menu command **Selections | Edit | Remove Transparent** to eliminate from the selection pixels that are painted with the transparent color. The transparent color is the color on the rightmost paint box on the Color Selection dialog bar.

See [Creating Transparent Images](#).

Edit | Threshold

This menu command **Selections | Edit | Threshold** allows you to change the threshold of the opacity of the selection. It provides a way to remove opacity information that is below one level and re-map the remaining opacity information into a new range, resulting in a more detailed opacity information, with a wider distribution and more variations. You can also use the command with only one of the options selected.

It has two options:
De-select areas that are less than one percentage value
When you select this option, you change the selection by removing from it opacity pixels that are below the percentage specified on the dialog. This will reduce the selection size.

Scale remaining transparency between a minimum and maximum value
When you select this option, the opacity of the selection will be re-mapped to a new range. The original minimum opacity of the selection will be assigned the new minimum (defined in terms of percentage of the average image opacity). The original maximum opacity of the selection will also be assigned to the new maximum (also defined in terms of percentage). The resulting opacity will be greater than the original one, and with more transitions (more opacity levels).

Re-using selections

LView Pro allows you to save selections to disk files, and to read them back whenever needed, even when editing a different image. This is useful when you define a complex selection that can be used in more than one image. It is also useful when you are not quite done defining a selection but must interrupt your work.

Open

Use the menu command **Selections | Open** to read a previously saved selection from the disk. If there is a current selection, the new selection read from disk will replace the current selection.

Save as

Use the menu command **Selections | Save As** to save the current selection to the disk.

Paths

A path is a combination of curves and shapes that is draw using the Path Tool. Unlike the other painting tools, the bits that belong to the path are not painted into the image, they are stored in a separate area. They are also not stored as a bitmap, but as a set of points and lines. Some of the uses for paths are:
- Draw precise selections
- Create flexible free hand images
- Store the text outline and perform text deformations and transformations.

The path can be created from scratch, from a selection, from text, retrieved from disk, saved, converted to a selection, filled, stroked, deformed, and transformed.

The current path from an image file can be composed by one of more *sub-paths*.

For more information, see :
Understanding the path tool
Path components
Creating free-hand paths
Creating paths using the magnetic pen
Path settings
Creating paths with the normal pen
Editing paths
Paths as a drawing tool
Paths as a selection tool
Saving and retrieving paths from the disk

Understanding the path tool

To select the path tool, click on the button.

The draw options bar for the path is composed by the following buttons:

 Normal pen
  Creates paths as straight lines or bezier curves

 Magnetic pen
  Creates paths snapping to edges

 Free hand pen
  Create free-hand paths

 Add pen
  Add anchor points to the path

 Subtract pen
  Delete anchor points to the path

 Select/move tool
  Select points or segments and move

 Angle conversion tool
  Convert anchor-points' from corner to smooth

 Display / hide the path
  Click on this button to toggle the path visibility.

 Rubber band
  Connects the new anchor point to the previously the previous one.

Free hand tolerance and Magnetic contrast gauges
  Display the tolerance for the magnetic pen

 Paint the path with the paintbrush tool
  Paint the path using the current settings (brush, application options, etc) of the paint brush tool.

 Fill the path with the fill tool
  Fill the path using the current settings of the fill tool.

 Stroke path with the line tool
  Stroke the path using the current settings for the line tool.

 Paint the path with selection brush
  Convert the path to a selection by painting it with the Selection Brush tool.

 Fill the path with selection fill
  Fill the path area with the Selection Fill tool.

 Stroke the path as selection
  Stroke the path as a selection by drawing a selection line with the same shape as the path

 Crete a path from selection

Convert a selection into a path

Read paths from disk
Read paths previously saved on disk.

Save paths to disk
Save the current path to disk

Path options
Opens the path options dialog

Magnetic pen radius and contrast
Associate radius size and contrast of the magnetic pen with the tablet pressure.

Path components

A path is composed by **sub-paths**. A sub-path is composed by **anchor points**, **direction lines**, **direction points**, and **segments**. A sub-path can be a closed sub-path or an opened sub-path.
A segments is a line (straight or curved) connecting two anchor points.
An anchor point is composed by direction lines (the direction line is only visible when the anchor point has at least one curved segment).
A direction line defines on curved segments the angle and size of the curve.
A direction point is the editing point of a direction line, where you can edit the angle and size of curved segments by dragging it.

An anchor point can have two different concordances for the lines that arrive at it: **cornered** or s**moothed.**

Creating free-hand paths

The free-hand path tool allows you to draw a path as you move along the cursor. It will place as many anchor points as needed to represent the path.

1) Click on the Path Tool on the Draw tool bar.
2) Make sure that the draw options bar is displayed (use the shortcut key **O** to toggle visibility.)
3) Make sure the path is visible by depressing the Display/Hide path button.
4) Select the free hand path tool, by clicking on
5) Move the mouse to a starting point and start drawing the path.
6) When you reach the ending point or want to stop, release the mouse button

If you press the CTRL key while drawing the path, when you release the mouse (with the CTRL key still depressed), the end point will be connected to the starting point with a straight line.

If you click the mouse again on another area, a new free hand sub-path will be created.

If you want to continue the drawing of an existing sub-path, click the mouse at one of the ends of the existing sub-path. When you are positioned exactly over an existing terminal anchor pointing, the cursor will display a straight line. Otherwise, it will display a + sign, representing that it will add an anchor point to the existing sub-path.

If you want to close the path, drag to the initial point over the path. Notice that when you reach the correct point, the cursor will display a circle.

Creating paths using the magnetic pen

The magnetic tool of the path tools is a very useful tool for drawing paths along edges of figures. As you drag the mouse close to the edge, the magnetic tool lays the path closer to the edge.

To use the magnetic tool:
A good example for the use of the magnetic tool is a photo with a person over a background, and you want to draw a path around the person to copy only the person as a selection. The existing edge between the person and the background is where we want the path drawn. The resulting path is a very well defined border and can then be converted to a selection. For details, see Creating selections from paths.

1) Click on the Path Tool on the Draw tool bar.

    Make sure that the draw options bar is displayed (use the shortcut key **O** to toggle visibility.)

    Make sure the path is visible by depressing the Display/Hide path button.

2) Select the magnetic path tool, by clicking on

3) Position the mouse over any point on the edge area of the area and click to create a starting point.

4) Drag the mouse close to the edge and notice that a path will be drawn as you move the mouse, snapping to the edge.

5) You can terminate the path at any point, or you can continue and close the path

As you move the mouse, a wider area is also dragged around the path, as if you were using a very wide marker. The size of this radius is defined on the Path Settings dialog. How the edge is identified is also specified on the Path Settings dialog.

As the path is being laid, sometimes you may want to lay an anchor point manually. This is necessary when you are having a perfect edge defined, and suddenly, a small area of the image has an edge that produces a path that is clearly not adequate. To do this, **click the mouse on a last good position** where the path was close to the edge and continue from there. You can add as many points as needed to make small segments on the areas where the edge is not well defined.

You can also press the **Enter** key to place the path and fix it. This is useful when you are using the pressure pen and need to confirm the anchor location.

For more information, see :
Using a pressure tablet with the Magnetic Path tool

Using a pressure tablet with the Magnetic Path tool

You can assign the settings of the magnetic tool to the pressure tablet.

When you assign the pressure sensitivity to radius , more pressure on the stylus will produce a straighter line, because the radius will be reduced in size as you increase the pressure. This is very helpful in areas where the path is generating a too irregular path due to weak edge definition.

When you assign the pressure sensitivity to the contrast , also, the harder you press, the straighter the path will be, in this case because the contrast information will be less considered as you increase the pressure.

Path settings

To open the Path Settings dialog:

1) Click on the pen tool on the draw toolbar
2) Make sure that the draw options bar is displayed (use the shortcut key **O** to toggle visibility.)
3) Click on the Path Options button () on the draw options bar.
4) Edit the settings you want.

The Path Settings dialog has settings for the magnetic tool, free-hand tool and for converting paths from selection.

For more information, see :
[Path settings for the Magnetic tool](#)
[Path settings for the Free Hand tool](#)
[Path settings for converting selections to path](#)

Path settings for the Magnetic tool

Search Radius for magnetic pen
>   This option defines the radius along the direction line of the drag where the edge must be searched. A small size results requires more precise cursor movement, a larger size allows a coarser search, however, may considers more points as being members of an edge.

Free hand and Magnetic pen fit tolerance
>   This option defines the number of pixels that will be considered for laying anchor points while laying the path (and by consequence, the detail level of the path). A high number on this field will ignore small displacements of the mouse. It ranges from 2 to 10 pixels.

Magnetic pen contrast threshold
>   This option defines the contrast percentage for the edge detection. A low contrast will assume that the edge is between areas of small contrast and will try to locate the edge that fits this condition (e.g. an edge line between two gray scale areas). A high contrast value will indicate to the magnetic pen that the edge searched is between areas of extreme contrast (e.g. an edge line between a black and a white area). A high contrast value may result in a straighter line, while a low contrast value will result in noise or a straighter line also, if it cannot identify the edges.

Magnetic pen pixel isolation threshold
>   This option specifies an extra criterion for validating a pixel as a member of an edge. If the pixel identified as belonging to an edge does not have any other pixel that is also member of an edge within a distance defined by the *pixel isolation threshold*, the pixel will not be considered an edge pixel. A low value will result in less jagged edges.

Show preview of magnetic pen edge fitting
>   This option allows you to hide/display the path being laid as you drag the magnetic tool along the edge.

Snap magnetic pen to edges closer to the direction line
>   When this option is checked, the magnetic tool will search the edge and lay the path closer to the direction line. This is useful when you have more than one edge being identified inside the radius area and you want to use the direction line to specify which edge to use. When unchecked, it will lay the path on the most noticeable edge enveloped by the search radius. When checked, it will lay the path on the first edged located closer to the direction line.

Path settings for the Free Hand tool

Free hand and Magnetic pen fit tolerance

This option defines the number of pixels that will be considered for laying the anchor points that will be used while laying the path (and by consequence, the detail level of the path). A high number on this field will ignore small displacements of the mouse. It ranges from 2 to 10 pixels.

Path settings for converting selections to path

When you convert a selection to a path, you can specify the tolerance for creating the path. A high tolerance will produce a path with less anchor points.

The options are:

When creating a path from a selection

- Always prompt for path fit tolerance
- If the CTRL key is depressed, prompt for tolerance, otherwise, use a default value.

If you select the second option, when you press the CTRL key while clicking on the convert path to selection button (), a tolerance value will be asked. A high tolerance will result in a path that will ignore details from the path shape. See [Creating paths from selections](#).

Creating paths with the normal pen

The normal pen allows you to draw paths using straight line and curves. You drag around the image as you drag with the free hand pen, but the resulting path will be much more precise and with less points than when using the free hand tool.

For more information, see :
Creating straight line paths
Creating curved paths

Creating straight line paths

With the normal pen tool selected ():
1) Click on the starting point at the image
2) Release the mouse button and move to the next point

> If the Rubber band () button is depressed, as you move the mouse to the next point you will have the path draw as a straight line. If it is not depressed, you will move the mouse and no path will be draw.

3) Click the mouse button at the point where you want to place the new anchor. The path will then be laid as a straight line.

You can combine straight and curved path during the same operation.

Creating curved paths

With the normal pen tool selected ():
1) Click on the starting point at the image
2) DO NOT RELEASE the mouse button and move the mouse to the direction where you want the curve draw.
The mouse pointer will change to a solid arrowhead.
Two directions lines will be draw (and two direction points)
3) Drag the mouse until you have the direction lines with the angle and dimension that you consider reasonable.
4) Release the mouse and go to the next point A curved path will be draw as you move (if you have the Rubber band () button depressed)
5) Position the mouse at the next point, press the mouse button and without releasing, move it. Another set of direction lines will be draw. Move to the next location and depending on the direction adopted, the curve will have an inflection point or not.

The SHIFT key constrains the angles of the direction lines to multiples of 45 degrees.

You can combine straight and curved path during the same operation.

Editing paths

Once the path is created, you can edit it using the following tools:

 Use this pen to add points to the path

 Use this pen to delete points on the path

 Use this pen to select the path, sub-path, or anchor points

 Use this pen to change the anchor angles

For more information, see :

[Selecting the path](#)
[Selecting path segments](#)
[Selecting anchor points](#)
[Adding sub-paths or continuing an existing path](#)
[Adding and deleting anchor points](#)
[Converting anchor points](#)
[Moving sub-paths](#)
[Duplicating paths](#)
[Deleting paths](#)

Selecting the path

Click on the select tool.
Move the mouse to the image and click on start point outside the path. Drag the mouse around, a dashed square will be created. Any part of the path that is included into this square area will become selected.

The selected anchor points will be solid squares and the other anchor points not selected, but belonging to the same sub-path, will be hollow squares.

CTRL key
You can also select the path using any of the path tools, while pressing the CTRL key and dragging the mouse using the same procedure as with the selection tool.

If you click on any point that does not belong to the path, all anchor points and directions points will be hidden.

Selecting path segments

Click on the select tool.
Move the mouse over one path and click on it with the select tool.

A selected segment is represented by displaying its anchor points (as hollow squares) and also the direction lines on the anchor points that control that segment.

It will display all the other anchor points on the same sub-path (also as hollow squares = not selected, but visible).

If you click on any point that does not belong to the path, all anchor points and directions points will be hidden.

You can also select only part of the path using the CTRL key and dragging any of the path tools.

If you press the ALT key while using the select tool, and encloses only part of the path with the marquee, the whole path will be selected, with all anchor points displayed as solid squares. No direction line will be displayed using this method.

If you want to select another sub-path while preserving a previously selected path, use the select tool and press ALT and SHIFT while dragging. This will select all the anchor points of the new sub-path and will display both sub-paths as selected.

Selecting anchor points

Click on the select tool.
Move the mouse over any part of the sub-path where you want to select the anchor point and click on it. It will select a segment but it will also display all anchor points as hollow squares on that sub-path.

Then, click on the anchor point that you want to select. The anchor points will be displayed as a solid square, denoting that it is selected.

Adding sub-paths or continuing an existing path

You can add a sub path by choosing one of the path tools (Normal pen, magnetic pen, or free-hand pen) and start drawing the new path. See each pen for details.

If you want to start from one of the existing ending points of a sub-path, positing the mouse pointer over one the end points and it will display the continuing information, as listed below:
- For the normal pen, an arrow will be displaying indicating that the continuing segment will be one with direction lines.
- For the free hand tool, a line will be displayed, indicating that you will continue the sub-path as a free-hand line.
- For the magnetic pen, a line will also be displayed, indicating that it will continue like the free hand tool, except that it will be using the magnetic tool properties.

You can also add a sub-path from disk of from a selection.

For more information, see :
Adding a sub-path from disk
Adding a sub-path from a selection

Adding a sub-path from disk

If you click on the **Read Path From Disk** button () while pressing the SHIFT key, the path that will be retrieved from disk will be added as a sub-path. You only need to depress the SHIFT key while clicking on the button. If you do not press the SHIFT key, the path retrieved from disk will replace the existing path.

Related items:
[Adding a sub-path from a selection](#)

Adding a sub-path from a selection

If you click on the **Create path from selection** button ( ) while pressing the SHIFT key, the path that will be created based on the selection will be added as a sub-path. If you do not press the SHIFT key, the path created from the selection will replace the existing path. For details, see [Creating paths from selections](#).

Related items:
[Adding a sub-path from disk](#)

Adding and deleting anchor points

Click on the Add Pen..
Move the mouse over the segment where you want to add the anchor point and click it. You can make sure that you are over a path segment when the mouse pointer displays the + sign together with the pen pointer. If you are not over a path segment, the mouse pointer will be the same as one the selection modes.

Click on the segment and release the mouse if you just want to add a point or click and drag the mouse if you want to change the segments connection at that new anchor point.

If you press the ALT key while using the Add Pen tool, the tool will delete the point, behaving as the Subtract Pen tool.

Click on the Subtract Pen to delete points from the path. If you press the ALT key while using the Subtract Pen, the Subtract Pen tool will behavior as the Add Pen.

If you are not over a path anchor point, the mouse pointer will be the same as one the selection modes.

Converting anchor points

Click on the angle button.

If you click on a smooth anchor point, it will be converted to a cornered anchor point. If you click on a cornered anchor point, you will be able to convert it to a smooth point by dragging the direction lines. Right after the conversion to a smooth point the direction lines are reduced to their direction points.

You can also click and drag any of the direction points of an anchor point to change the concordance of the segments on that anchor point. You can select and drag a visible direction line with the Angle Button or with the Select Button.

Moving sub-paths

Select the sub path or the whole path with one of the selection methods. See [Selecting the path](#).

Click on the Free Transformation tool.

Drag the path using the mouse. The cursor will be displayed as a four arrows pointer, with a rectangle.

When you reach the correct location, press the Enter key, to confirm the positioning.

Duplicating paths

You can duplicate the whole path or a sub-path by selecting it with the select tool ()
while pressing the ALT key. Drag the duplicated path before releasing the mouse,
otherwise the new path will be draw over the source path.

Deleting paths

You can delete any part of the path (anchor points or segments) using the selection methods and the DEL key.

Paths as a drawing tool

You can use the path to be the frame wire of any drawing. You can draw with extreme precision and by using the Paint, Fill, and Stroke path tools, you can transform the path into a drawing. The settings for the path painting tools are the setting used for the corresponding painting tools on the draw toolbar.

For more information, see :
[Painting the path](#)
[Filling the path](#)
[Stroking the path](#)

Painting the path

This button will paint the selected sub-path with the *Paintbrush* Tool.
The procedure for painting a path is:

1) Click on the *Paintbrush* Tool on the draw tool bar.
2) Define the settings for the *Paintbrush* Tool (brush to be used, application options, etc.) For details, see [Using the Paint brush tool](#).
3) Click on the *Path Tool* on the draw tool bar.
4) Select the sub-path you want to paint. For details, see [Selecting the path](#).
5) Click on the *Paint Path* button on the draw options bar.

The path edge will be painted with the options defined on the *Paintbrush* tool. If you press the SHIFT key while clicking on the *Paint Path* button, the path will be painted with the background color.

Filling the path

This button will fill the selected sub-path with the options defined on the Fill Tool. If the sub-path is not closed, it will fill until a straight line connecting the ends of the sub-path.

The procedure for filling a path is:
1) Click on the *Fill* Tool on the draw tool bar.
2) Define the settings for the fill tool (color, opacity, fill style, application options, etc.) For details, see Using the fill tool.
3) Click on the *Path* Tool on the draw tool bar.
4) Select the sub-path you want to fill. For details, see Selecting the path.
5) Click on the *Fill Path* button on the draw options bar.

The path will be filled according to the options defined on the *Fill* tool.

If you press the SHIFT key while clicking on the *Fill Path* button, the path will be filled with the background color.

Stroking the path

![icon]

This button will stroke the path using the settings for the *Line* tool on the draw tool bar. The procedure for stroking a path is:

1) Click on the *Line* Tool ![icon] on the draw tool bar.
2) Define the settings for the line tool (color, width, etc). For details, see [Drawing with the Line Tool](#).
3) Click on the *Path* Tool ![icon] on the draw tool bar.
4) Select the sub-path you want to fill. For details, see [Selecting the path](#).
5) Click on the *Stroke Path* button ![icon] on the draw options bar.

If you press the SHIFT key while clicking on the *Stroke Path* button, the path will be stroked with the background color.

Paths as a selection tool

Paths can be used as a precision tool for defining borders around areas of the image. Because of the different options for defining a path, you can have a very precise and detailed path surrounding any part of the image, and you can then convert that path to a selection.

You can also define a selection, convert it to a path, for edition, and then convert the path back to a selection.

For more information, see :
[Creating paths from selections](#)
[Creating selections from paths](#)

Creating paths from selections

The **Create Path from selection** button allows you to convert any existing selection into a path. The new path will be created based on the selection marquee.

When the selection is being converted to a path, there is one setting that can be defined on the Path Settings dialog (see [Path settings](#)). This setting define how precise will be the conversion from the selection marquee to the path.

By pressing the CTRL key while clicking on this button, a tolerance will be asked. A low value will result in a path with more anchor points, while a high value will result in a path with less anchor points.

Notice that the path will be created as close as possible to the selection, and visibility may be compromised. You have the following options to display only the path:

- Use the menu command **Selections | Select None**, that will erase the selection
- Use the menu command **Selections | Save As**, to preserve the selection on disk and then erase it with the command **Selections | Select None**.

For more information, see :
[Adding existing selections to the path](#)

Adding existing selections to the path

By pressing the SHIFT key while clicking on this button, the selection will be converted to a path and added as a sub-path if there is already a path defined. If not pressed, the path created from the selection will replace any existing path.

Creating selections from paths

Because of the magnetic tool, the path is a perfect tool for defining precise borders around objects. You can convert a path to a selection to benefit from this precise defining tool.

For more information, see :
[Creating a selection from a path using the Selection Brush tool](#)
[Creating a selection from a path using the Selection Fill tool](#)
[Creating a selection from a path using the Stroke Selection tool](#)

Creating a selection from a path using the Selection Brush tool

Click on this button to paint the path line with the **Selection Brush** tool from the draw tool bar. A selection will be created using the settings of the **Selection Brush**.

The procedure for converting a path to a selection using the Selection Brush is:
1) Click on the *Selection Brush* Tool on the draw tool bar.
2) Define the settings for the *Selection Brush* (brush to be used, application options, etc.) For details, see Selection Brush tool.
3) Click on the *Path Tool* on the draw tool bar.
4) Select the sub-path you want to paint. For details, see Selecting the path.
5) Click on the *Paint the path with selection brush* button on the draw options bar.

A selection will be created around the path.

The selection will be represented by its selection marquee, but the best way to visualize the created selection is by copying it to the editor with the command SHIFT + E (or the menu command **Selections | Copy to Editor**)

Related items:
Creating a selection from a path using the Selection Fill tool
Creating a selection from a path using the Stroke Selection tool

Creating a selection from a path using the Selection Fill tool

Click on this button to convert a path to a selection area. If the path is not closed, the tool will connect the ending points with a straight line. The resulting selection will be created will all the transparency settings defined on the Selection Fill tool.

The procedure for converting a path to a selection using the Selection Fill tool is:
1) Click on the *Selection Fill* Tool on the draw tool bar.
2) Define the settings for the *Selection Fill* tool (color, opacity, fill style, application options, etc.). For details, see the [Selection Fill tool](#).
3) Click on the *Path* Tool on the draw tool bar.
4) Select the sub-path you want to fill. For details, see [Selecting the path](#).
5) Click on the *Fill Path with the Selection Fill* button on the draw options bar.

The path will be filled according to the options defined on the *Selection Fill* tool.

The selection will be represented by its selection marquee, but the best way to visualize the created selection is by copying it to the editor with the command SHIFT + E (or the menu command **Selections | Copy to Editor**)

Related items:
[Creating a selection from a path using the Selection Brush tool](#)
[Creating a selection from a path using the Stroke Selection tool](#)

Creating a selection from a path using the Stroke Selection tool

This button will create a selection by stroking the path using the settings for the *Line* tool on the draw tool bar.

The procedure for creating a selection using the settings of the line tool is:
1) Click on the *Line* Tool on the draw tool bar.
2) Define the settings for the line tool (color, width, etc). For details, see [Drawing with the Line Tool](#).
3) Click on the *Path* Tool on the draw tool bar.
4) Select the sub-path you want to fill. For details, see [Selecting the path](#).
5) Click on the *Stroke Path as selection* button on the draw options bar.

The selection will be represented by its selection marquee, but the best way to visualize the created selection is by copying it to the editor with the command SHIFT + E (or the menu command *Selections | Copy to Editor*)

Related items:
[Creating a selection from a path using the Selection Brush tool](#)
[Creating a selection from a path using the Selection Fill tool](#)

Saving and retrieving paths from the disk

You can save and retrieve paths from disk for later use. One good example of use for this feature is when you are using text as a path and you want to use the same text on other images. You can save paths by clicking on the button and you can read saved paths by clicking on the button
, both on the Path tool option bar.

For more information, see :
[Reading a path from disk and adding it to the current path](#)

Reading a path from disk and adding it to the current path

If you press the SHIFT key while clicking on the button on the Path tool option bar, the retrieved path will be added as sub-path if any other path already exists. If you do not click, it will replace the current path. For details, see [Adding a sub-path from disk](#).

Editing and Re-touching

LView Pro provides many ways to edit an image. You can select part of an image and copy it to other image, you can deform and transform part of the image, you can apply special effects to the image, and many more resources.

For more information, see :
[Multiple levels of Undo and Redo](#)
[Image information](#)
[Duplicating images](#)
[Image transformations](#)
[Image deformation](#)
[Image filters](#)
[Creating special effects in images](#)
[Operating images](#)
[Combining Color Channels](#)
[Performing precise editing operations](#)

Multiple levels of Undo and Redo

LView Pro provides a powerful way for you to return to a previous state of the image after editing it. You can return to the original state, or you can return to any intermediate state. Because of that, one of the best ways to understand what can be done with LView Pro is to do it, and then undo it, or redo it, using the undo/redo buttons and the Undo/Redo History Palette.

For more information, see :
[Setting the number of undo/redo levels](#)
[Undo/Redo History Palette](#)
[Correcting the last operation](#)
[Re-doing the last operation](#)

Setting the number of undo/redo levels

Use the menu command **File | Preferences | Undo/Redo levels**. You can specify the maximum number of undo (and redo) actions, per image frame.

Undo/Redo History Palette

The Undo/Redo History Palette provides a list of the actions performed on each image. When the image becomes active, the Undo/Redo History Palette displayed is the one associated with that image.
The Undo/Redo History Palette is a floating window. You can move it to any area of the screen, without dockage.

The commands for the Undo/Redo History Palette are:

Keep Palette visible
Define if the palette will be always fully visible or be visible by the caption only.

Collapse actions by same brush
When depressed, all strokes of the brush are represented by a single entry on the palette.

Undo the last action

Redo the previously undone action

Undo all listed actions

Redo all listed actions

Clear all listed actions

Open the commands menu for the Undo/Redo History Palette

The Undo/Redo History Palette list, that displays a list of all the last actions being performed.

For more information, see :
To hide/display the Undo/Redo History Palette
Defining the Undo/Redo History Palette visibility mode
Reverting to a previous state using the Undo/Redo History Palette
Reverting to the initial state
Emptying the Undo/Redo History Palette

To hide/display the Undo/Redo History Palette

Use the menu command **View | Undo Palette** or its keyboard shortcut U.

Related items:
[Defining the Undo/Redo History Palette visibility mode](#)
[Reverting to a previous state using the Undo/Redo History Palette](#)
[Reverting to the initial state](#)
[Emptying the Undo/Redo History Palette](#)

Defining the Undo/Redo History Palette visibility mode

The Undo/Redo History Palette can be visible in two modes:
- Full visibility
- Caption visibility

You select the full visibility mode by clicking on the Keep Windows Visible () button.

When the palette is in **full visibility** mode, as another window becomes active, the palette remains displayed in full, with its caption, the buttons, and the brush area.

When the palette is in **caption visibility** mode, as another window becomes active, the palette is reduced to its caption only and the caption is reduced in width. Based on its location in reference to the center of the work area, the caption is reduced to the left or to the right of the palette. You can display its full information by just moving the mouse over any part of the caption, and after you perform the actions, as soon as another window becomes active, the palette returns to the caption visibility mode.

Related items:
To hide/display the Undo/Redo History Palette
Reverting to a previous state using the Undo/Redo History Palette
Reverting to the initial state
Emptying the Undo/Redo History Palette

Reverting to a previous state using the Undo/Redo History Palette

Identify the state on the list of actions of the Undo/Redo History Palette and click on that state. The image will be modified in order to achieve that state. You can go to a previous state and perform some new actions.

You can also revert to any state by repeated clicks on the *undo button* on the main toolbar.

Related items:
[To hide/display the Undo/Redo History Palette](#)
[Defining the Undo/Redo History Palette visibility mode](#)
[Reverting to the initial state](#)
[Emptying the Undo/Redo History Palette](#)

Reverting to the initial state

You can do one of the following:

- Click on the Undo All button ( ) on the undo / redo palette commands
- Click on the entry on the listed states of the palette that say "*Initial state*".

The Initial State may not be the original image as it was when first displayed, because the number of levels of undo/redo may not be enough to revert all the operations performed to the original image. In this case, the initial state will be the oldest state still available. You can increase the number of undo/redo levels. For details see **File | Preferences | Undo/Redo Levels**.

Related items:
To hide/display the Undo/Redo History Palette
Defining the Undo/Redo History Palette visibility mode
Reverting to a previous state using the Undo/Redo History Palette
Emptying the Undo/Redo History Palette

Emptying the Undo/Redo History Palette

You can empty the list of states on the Undo/Redo History Palette by doing one of the following:

- Click on the Clear All button () on the Undo/Redo History Palette commands.
- Use the menu command *Edit | Clear Undo*

Use this procedure to clear (empty) all undo buffers, for all image frames. Undo and Redo actions will become unavailable.

Related items:
To hide/display the Undo/Redo History Palette
Defining the Undo/Redo History Palette visibility mode
Reverting to a previous state using the Undo/Redo History Palette
Reverting to the initial state

Correcting the last operation

You can undo the last operation using one of the following options:

- Use the menu command **Edit | Undo** (or its keyboard shortcut CTRL + Z)
- Click on the Undo button (🔲) on the main tool bar.
- Open the Undo/Redo History Palette and click on the Undo button (🔲)

Re-doing the last operation

0   After you undo one operation, you may want to redo it again. You can do that using one of the following options:

- Use the menu command **Edit | Redo** (or its keyboard shortcut CTRL + Y)
- Click on the Redo button (⊞) on the main tool bar.
- Open the Undo/Redo History Palette and click on the Redo button(⊞)

Image information

LView Pro provides the following information about the active image:

- The image dimension, in pixels, displayed on the Status bar. For details, see [Status Bar](#).
- The number of colors used. For palette based images, see [Counting the number of colors used](#).

To display the number of color used on the image, use the menu command **Image | Count Colors**.

Duplicating images

For information about Duplicating images please read the following topics:

[To make a copy of an image as a new window](#)
[Copying and pasting images and selections](#)

To make a copy of an image as a new window

Use the menu command **Window | New Window**.

This command will create a new window to display and edit the active document (image or catalog). New windows can be created and closed individually. The document is closed only when the last window associated with it is closed. See [Multiple windows viewing options](#).

Copying and pasting images and selections

For information about Copying and pasting images and selections please read the following topics:

[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To copy an image or selection to the clipboard

Use the menu command **Edit | Copy.**

This command is available when the active editor is the Image Editor.

One of the following actions is performed:
- If there is no defined selection: The active image is copied to the clipboard.
- If a selection is defined: The selected area is copied to the clipboard.

Copying data to the clipboard replaces the contents previously stored there.

Related items:
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To cut an image or selection to the clipboard

Use the menu command **Edit | Cut**.

This command is available when the active editor is the Image Editor.

One of the following actions is performed:
- If there is no defined selection
  Edit | Cut copies the active image to the clipboard and then paints it with the currently selected background color.
- If a selection is defined, but is non-floating
  Edit | Cut copies the selected area to the clipboard and paints the selected area with the current background color.
- If a floating selection exists
  Edit | Cut copies it to the clipboard and eliminates the selection.

Cutting data to the clipboard replaces the contents previously stored there.

Related items:
[To copy an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To paste the clipboard contents as a new image

Use the menu command **Edit | Paste as a New Image**.

This command is available when there is image data on the clipboard. Use this command to create a new image and initialize it with a copy of the image on the clipboard.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To paste the clipboard contents as a new selection

Use the menu command **Edit | Past as a New Selection**.

This command is available when the active editor is the Image Editor, and when there is image data on the clipboard. Use this command to create a new floating selection and initialize it with a copy of the image on the clipboard.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To paste the clipboard contents into an existing selection

Use the menu command **Edit | Past into Selection**.

This command is available when the active editor is the Image Editor, when there is image data on the clipboard, and a selection is defined on the active imag**e.**
Use this command to replace the contents of the selection with the image on the clipboard. The image is sized to fit inside the current selection.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To paste the clipboard contents as a selection area

Use the menu command **Edit | Past as a Selection Area**.

This command is available when the active editor is the Image Editor, and when there is image data on the clipboard. Use this command to create a new selection area based on the selection that is stored on the clipboard. The selection will be pasted with all its transparency settings. It will be pasted as a NON-FLOATING selection, on the upper left area of the image. Use the menu command **Selections | Copy from image** to make it a floating selection and position it at the desired location.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To clear an image or a selection](#)
[To empty the contents of the clipboard](#)

To clear an image or a selection

Use the menu command **Edit | Clear**

One of the following actions is performed:
- If there is no defined selection
  The active image is painted with the current background color.
- If a selection is defined
  The selected area is painted with the current background color.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To empty the contents of the clipboard](#)

To empty the contents of the clipboard

Use the menu command **Edit | Empty clipboard**

This command is available when there is image data on the clipboard. Use this command to clear (empty) the clipboard contents. This can be useful if the system is running low in memory.

Related items:
[To copy an image or selection to the clipboard](#)
[To cut an image or selection to the clipboard](#)
[To paste the clipboard contents as a new image](#)
[To paste the clipboard contents as a new selection](#)
[To paste the clipboard contents into an existing selection](#)
[To paste the clipboard contents as a selection area](#)
[To clear an image or a selection](#)

Image transformations

LView Pro transformation operations do not change the color of pixels, but their position. A Transformation is a function from the 2-dimensional plane into the 2-dimensional plane that associates a new position to every existing position in the image, current selection, or path.

For more information, see :
[Graphical Image Transformation (Free Transformation)](#)
[Pre-defined image transformations](#)
[Understanding user-defined Transformation operations](#)
[Creating, Editing, and Deleting user-defined Transformation operations](#)

Graphical Image Transformation (Free Transformation)

LView Pro provides a very fast way to transform images, selections or paths trough a graphic interface, the Free Transformation tool (). Click on this button on the draw tool bar to active the Free Transformation tool.

The Free Transformation tool evolves the image, selection, or path with a rectangular envelope. It then allows you to drag the corners, the segments, and rotate the envelope, creating all possible plane transformations. It is the perfect tool for resizing and for performing geometric transformations.

For more information, see :
Free transformation elements
Moving a path or selection with the Free Transformation tool
Rotating a path or selection with the Free Transformation tool
Changing a path or selection dimensions with the Free Transformation tool
Confirming the free transformation operation
Free Transformation draw option bar
Numeric Transformation Dialog

Free transformation elements

The surrounding rectangle is composed by **four corners** and **four midpoints**, one on each **side**. There is also a **center point**, used as the reference for rotation operations.

Related items:
[Moving a path or selection with the Free Transformation tool](#)
[Rotating a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Confirming the free transformation operation](#)
[Free Transformation draw option bar](#)
[Numeric Transformation Dialog](#)

Moving a path or selection with the Free Transformation tool

To move the area, place the mouse the inside the area, and the mouse pointer becomes a four arrow heads cursor with a rectangle on its side. You can now move the image by dragging it.

Related items:
[Free transformation elements](#)
[Rotating a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Confirming the free transformation operation](#)
[Free Transformation draw option bar](#)
[Numeric Transformation Dialog](#)

Rotating a path or selection with the Free Transformation tool

To rotate the area, place the mouse on the outside area, and the mouse pointer will become a double arrow curved segment, curving ''around'' the center point. Drag the mouse and it will rotate in relation to the center point. If you press SHIFT while rotating, the **rotation will be constrained to multiples of 15** degrees.

To move the **center point**, place the mouse over the center point mark. The mouse pointer will change to a solid arrow with the four arrow heads cursor and will allow you to drag the center point. All further rotations will be performed related to this new center point.

Related items:
[Free transformation elements](#)
[Moving a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Confirming the free transformation operation](#)
[Free Transformation draw option bar](#)
[Numeric Transformation Dialog](#)

Changing a path or selection dimensions with the Free Transformation tool

To change the area dimensions you have the following options:
* To resize both dimensions, drag one of the **corners.**
* To resize both dimensions preserving the same proportion, press **SHIFT** and drag one of the **corners.**
* To resize only one dimension, drag on one of the **midpoints**.
* To move only the corner, press the **CTRL** key and drag one of the **corners**.
* To move only the side, press the **CTRL** key, and drag on of the **midpoints.**

To change path or selection dimensions, while creating a **perspective** (symmetric drag), you have the following options:
* To move a **corner** and at the same time, move an **adjacent corner** by the same amount, press **SHIFT + CTRL + ALT** while dragging the **corner**. The adjacent corner moved will depend on the direction of the drag.
* To move a **corner** and at the same time, move the **opposite corner** by the same amount, press **CTRL + ALT** while dragging the **corner**.
* To move **one side** and at the same time, move the **opposite side** by the same amount, press **ALT** while dragging one of the **midpoints**.

Related items:
Free transformation elements
Moving a path or selection with the Free Transformation tool
Rotating a path or selection with the Free Transformation tool
Confirming the free transformation operation
Free Transformation draw option bar
Numeric Transformation Dialog

Confirming the free transformation operation

When you complete the transformation, confirm it by pressing *Enter* or clicking on the confirmation button on the draw option dialog (this is only required if you have the **Confirm** box checked).

Related items:
[Free transformation elements](#)
[Moving a path or selection with the Free Transformation tool](#)
[Rotating a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Free Transformation draw option bar](#)
[Numeric Transformation Dialog](#)

Free Transformation draw option bar

You have the following commands on the Free Transformation draw option bar:

Confirmation button

Cancel the free deform

Undo all the transformations

Redo all the transformations

Open the numeric free transformation dialog

Confirm check box: when you try to use another tool, the program prompts for confirmation on the transformations performed.

Draft check box: when checked, the image inside the transformation area is painted with a faster method during edition.

You can also open the numeric Free Transformation dialog by clicking the secondary mouse button at any time.

Related items:
[Free transformation elements](#)
[Moving a path or selection with the Free Transformation tool](#)
[Rotating a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Confirming the free transformation operation](#)
[Numeric Transformation Dialog](#)

Numeric Transformation Dialog

This dialog allows you to enter numeric values that represent all possible transformations on a plane. The numeric fields are:
Position, scale, skew, and rotate
You can select any of these properties while changing only the others. You can also enter the rotation information by dragging the radius of the rotate graphic interface.

Related items:
[Free transformation elements](#)
[Moving a path or selection with the Free Transformation tool](#)
[Rotating a path or selection with the Free Transformation tool](#)
[Changing a path or selection dimensions with the Free Transformation tool](#)
[Confirming the free transformation operation](#)
[Free Transformation draw option bar](#)

Pre-defined image transformations

Most of the pre-defined Transformation operations have self-explanatory names, and the best way to describe what they do is by using them on a number of images.

Available pre-defined transformations include Mosaic, Ellipse, Pinch, Punch, Horizontal or Vertical Concave or Convex Cylinders, Horizontal or Vertical Perspectives and Skews, and the Spinning Wheel. The effect of these transformations is best described by seeing their results.

You can also perform similar and complex transformations by using the Free Transformation and the Free Deformations tool.

For more information, see :
Using pre-defined image transformations
Using the Rotate command
Using the Flip command

Using pre-defined image transformations

1) Use the menu command **Image | Transformations | Pre-defined**.
2) Select the transformation. A preview of the resulting transformations is immediately available on the preview window.
3) Adjust the transformation, using the Adjust box.
4) Click on the **Apply** button to submit the modifications to the active image or selection.
5) Click on **Close** button to close the Dialog and keep changes made.

If you check the ***Revert before apply*** option, LView Pro will change the image using only the currently selected operation. If this option is unchecked, operations will modify the image data maintaining all modifications made by previously selected operations.

If you need to revert to a previous state, click on the *Revert* button. It will revert the image to the state it was when the dialog was started. This button can undo changes even when the Revert before apply option is not selected (as you may notice, the usual Undo button is not available).

For details on this dialog, see Using Multiple Operation Dialog.

Related items:
Using the Rotate command
Using the Flip command

Using the Rotate command

Use the menu command **Image | Rotate** to activate the Rotate Image dialog to rotate the active image or current selection. When a True Color image is rotated by an arbitrary angle, LView Pro applies a color averaging algorithm to reduce jagged lines and image artifacts.

Note: Display coordinates grow left to right, and top to bottom. The origin of an image (point 0, 0) is at the left and top position. Therefore, positive angle rotations (between 1 and 359 degrees) are performed in the clockwise direction.

Dialog box options:
Right (clockwise)
Check this option to rotate the image in the same direction as the rotating hands of a clock. This is equivalent to rotating the image by an angle of 90 degrees.
Left
Check this option to rotate the image in the opposite direction that the Right option would. This is equivalent to rotating the image by an angle of 270 degrees.
Upside down
Check this option to rotate the image upside down. This is equivalent to rotating the image by an angle of 180 degrees.
Angle (1.00-359.00 degrees)
Check this option to rotate the image by the specified angle, in degrees. You can enter values with decimal points.
Graphical Rotate control
Click and drag the radial indicator to rotate the image using a graphic interface.

Related items:
Using pre-defined image transformations
Using the Flip command

Using the Flip command

Use the menu command **Image | Flip Horizontal** to horizontally flip the image, resulting into a mirrored image on the horizontal.

Use the menu command **Image | Flip Vertical** to vertically flip the image resulting into a mirrored image on the vertical.

Related items:
Using pre-defined image transformations
Using the Rotate command

Understanding user-defined Transformation operations

The following text assumes that you are familiar with LView Pro expression. For details, see [Understanding Expressions](#).

You can create new Transformation operation by teaching LView Pro new ways to re-position pixels. The Transformation Specification dialog (accessible from the User-defined Transformations dialog) allows you to do just that. New operations are defined by two required expressions (one for the new column and another for the new row of each pixel) and one optional initialization expression. Some of the pre-defined Transformation operations have one option that can be adjusted during the execution of the operation. User-defined operations can also use one adjusting factor.

The variables are:

I	Column being computed
J	Row being computed
X	Column normalized to [0..1]
Y	Row normalized to [0..1]
W	The image (or selection) Width
H	The image (or selection) Height
A	Adjustment factor [0..100]

If you use the adjustment factor in any or all the expressions, LView Pro will display it and allow it to be modified in the User-defined Transformations dialog. The adjustment factor can be set to values in the range [0..100]. You can transform it into another range, in the Initial Expression. For instance, if you would like to have an adjustment factor in the range [0..pi], you could use the initial expression: A1=A1/100*pi.

For example, a transformation that would act like LView Pro's Flip Horizontal command, could be defined as follows:

Initial Expression	**not needed, leave blank**
New Column Expression	**W - I – 1**
New Row Expression	**J**

The new row expression is set to J (the row being computed), because Flip Horizontal does not change the row of any pixels. The new column expression is set to W - I - 1, because we want to invert the horizontal position of pixels. When the new position of a pixel in the first column (column 0) is computed, the result is: W - 0 - 1, which is equal to W - 1 (the last column, since columns are numbered from 0). When the new position of a pixel in column W - 1 is computed, the result is W - W + 1 - 1, which is equal to 0 (the first column).

All of LView Pro's pre-defined Transformation operations can be described in terms of an Initial Expression, New Column Expression and New Row Expression. The specification of one of the pre-defined Transformation operations, the Spinning Wheel, is added by default to the list of user-defined Transformation operations.

Creating, Editing, and Deleting user-defined Transformation operations

Open the user defined transformation dialog using the menu command **Image | Transformations | User defined**.

To create a new transformation

Click on the *New* button.

To Edit an user-defined transformation

Select the transformation by clicking on it or using the keyboard arrow keys.
Click on the *Edit* button.

To delete an user-defined transformation

Select the transformation by clicking on it or using the keyboard arrow keys.
Click on the *Delete* button.

For more information, see :
[Understanding the Transformation Specification dialog](#)

Understanding the Transformation Specification dialog

Dialog box options:

Name

Use this box to select the name of the operation. This name is displayed in the list of operations in the User-defined Transformations dialog.

Message

This box displays a message about the expressions that are typed in the following options. The message helps you find errors and correct the expressions.

Initial Expression

Type an expression that will be executed once, in the beginning of the operation. This expression is useful to initialize variables for use on the other expressions.

New Column Expression

Type an expression to specify how columns are transformed. This expression is evaluated for each pixel of the image.

New Row Expression

Type an expression to specify how rows are transformed. This expression is evaluated for each pixel of the image.

Options for the operations in the Select list of the User-defined dialog will appear under the Preview window, when the selected operation accepts optional parameters. When a the user defined image transformations dialog box displays user-defined operations, optional parameters will appear when the selected operation uses any of the adjustment factor variables available for their expressions.

Image deformation

LView Pro provides a way for you to deform images, selections, or path. As with image transformations, LView Pro deformations operations do not change the color of pixels, but their position. However, the free transformation is limited to planar transformations. With the free deformation tool, you can deform any of the sides of the enveloping line.

For more information, see :
[Graphical image deformation (Free Deformation)](#)

Graphical image deformation (Free Deformation)

LView Pro has the Free Deformation tool, that modify the location of the image pixels from an image, selection, or path, but does not constrains the deformation to the plane only, as in the Free Transformation tool.

The Free Deformation tool evolves the image, selection, or path with an envelope composed by a path. This envelope can have different shapes (for details, see Free Deformation specification Dialog). As a path, this envelope is composed by anchor points and segments (for details, see Paths). The same editing resources available for paths are also available for the envelope of the Free Deformation tool. You can, for instance, drag one segment, drag an anchor point, add new anchor points, change the direction lines, etc.

For more information, see :
Deforming the image, path, or selection with the Free Deformation tool
Free Deformation draw option bar
Free Deformation specification Dialog
Creating and saving Free deformations

Deforming the image, path, or selection with the Free Deformation tool

Click on this button on the draw tool bar to active the Free Deformation tool.

For a description of anchor point, segment, direction lines, and direction points, see Path components.

To move an anchor point, place the mouse over the anchor point and drag it.

To move a segment, place the mouse over the segment while pressing the CTRL key.

To add an anchor point, place the mouse over the segment and click at the point where you want the new anchor point.

To move the direction lines, place the mouse over one of the direction points and drag it.

When you complete the deformation, confirm it by pressing *Enter* or clicking on the confirmation button on the draw option dialog (this is only required if you have the **Confirm** box checked).

Related items:
Free Deformation draw option bar
Free Deformation specification Dialog
Creating and saving Free deformations

Free Deformation draw option bar

You have the following buttons on the Free Deformation draw option bar:

Confirmation button

Cancel the free deform

Undo all the deformations

Redo all the deformations

Open the Free Deformation specification dialog

Confirm check box: when you try to use another tool, the program prompts for confirmation on the transformations performed.

Draft check box: when checked, the image inside the transformation area is painted with a faster method during edition.

You can also open the Free Deformation specification dialog by clicking the secondary mouse button at any time.

Related items:
Deforming the image, path, or selection with the Free Deformation tool
Free Deformation specification Dialog
Creating and saving Free deformations

Free Deformation specification Dialog

You can open the Free Deformation dialog by clicking on the [icon] on the draw options bar of the Free Deformation tool or by clicking the mouse secondary button.

The Free Deformation specification dialog allows you to define how the points will be re-positioned along the area and which shape will be used when evolving the area.

Select distance to edit
> Defines if the changes on the pixels re-mapping will be performed on the vertical or on the horizontal.

Distance
> Provides a graphic interface for the curve of pixel re-mapping, where you can define how the points will be re-positioned along the horizontal or vertical. A linear curve will result in equally spaced points along the deformed area. For instance, if you change the curve inclination in a way that the left point is at the top and the right point is at the bottom, you will have created a deformation that produces a mirrored deformation. If you deform the curve, you will notice that the deformation will no longer be linear inside the deformed area. You can create a deformation that concentrates deformed pixels in one area.

> To add new points on the curve, press the Convert to Curve button [icon] and click on the curve.

To move the curve points, position the mouse over the point and the mouse pointer will change to a four arrows shapes, Drag the point.

Click on the curves free hand [icon] button to draw any deformation curve that you want. A free hand curve will be created, replacing the original curve. The free hand curve does not need to touch the current curve

You can also click on the **Smooth** button to smooth the curve. You can also click on the Convert to curve [icon] button to terminate any abrupt curve discontinuity.

> There are also two numeric boxes providing the input and output values of the curve.

Measure from center
> **Horizontal distances**
> By checking this option, the re-mapping of the pixels will be performed symmetrically on the right and left areas of the image, in relation to a horizontal center point.
> **Vertical Distances**
> By checking this option, the re-mapping of the pixels will be performed

symmetrically on the top and bottom areas of the image, in relation to a vertical center point.

Reset to linear distances button

Makes the deformation curve a straight line.

Select shape

Defines the shape of the envelope when you apply the Free Deformation tool. It will surround the area with the envelope line based on paths with as many anchor points and segments as required to create the desired shape. The available shapes are: Same shape, Rectangular, Pentagonal, Hexagonal, Octagonal, Octagonal 2, Oval, Oval 2, Drop, Double Drop, Heart, 4-Pointed Star.

 Save transformation to disk

Save the transformation curve to disk.

 Load transformation from disk

Read the transformation curve from disk.

Related items:
[Deforming the image, path, or selection with the Free Deformation tool](#)
[Free Deformation draw option bar](#)
[Creating and saving Free deformations](#)

Creating and saving Free deformations

After you create a deformation curve, using the <u>Free Deformation specification Dialog</u>, you can save the curve to disk for use with other images. To do that, click on the button on the Free Deformation specification dialog.

Related items:
<u>Deforming the image, path, or selection with the Free Deformation tool</u>
<u>Free Deformation draw option bar</u>
<u>Free Deformation specification Dialog</u>

Image filters

LView Pro Filters are operations that change the color of all pixels in the active image or the color of all pixels in the current selection (when a selection is defined and the image is in True Color format).

In a Filter operation, the new color of a pixel is determined by the current color of the pixel and its neighbors, and the type of color filter operation. Unlike in a Transformation or Deformation operation pixel positions are not changed.

Using Filter operations is a matter of understanding how to work with a Multiple Operation Dialog, selecting the desired operation from the list and adjusting the options of the operation while previewing its effects. For details, see [Using Multiple Operation Dialogs](#). Most of the pre-defined Filter operations have self-explanatory names, and the best way to understand what they do is by using them on a number of images.

For more information, see :
[Using Pre-defined filters](#)
[Understanding User-defined filters](#)
[Specifying user-defined filters](#)

Using Pre-defined filters

Use the menu command **Image | Filters | Pre-defined**. The filter will be applied into the whole image or in a selection, if any defined.

1) Select the filter you want to use
   Available pre-defined filters include: Edge Enhance, Edge Enhance More, Find Edges, Find Vertical Edges, Find Horizontal Edges, Trace Contour, Blur, Blur More, Soften, Soften More, Sharpen, Sharpen More, Emboss, Despeckle, Median, Erode, Dilate, Add Random Noise, Add Uniform Noise.
2) Select a blending mode. For details, see [Blending mode](#).
3) Select an opacity value.
   Low values for the opacity will result in smaller effects of the filter. The resulting filter operation is only partially blended with the image.
4) You will be able to see the preview of the action over the active image or selection on the preview window.
5) Choose one of the following:
   - Click on Apply to perform the action on the active image or selection
   - Click on Revert to revert the action of the previously applied action.
   - Click on Close to leave without changing
   - Select another options and proceed as above.

At any time, after applying the changes, you can use the Undo command or the Undo/Redo History Palette to revert to the previous state. The best way to understand the filter results is by applying them to the image.

Understanding User-defined filters

You can create new filter operations by teaching LView Pro new ways to compute colors from groups of pixels. The Filter Specification dialog (accessible from the User-defined Filters dialog) allows you to do just that. New operations are defined by a matrix called the Kernel, one Divisor factor, one Bias factor, and the option to perform the filter operation over RGB values (as opposed to grayscale values).

Kernel, Divisor, Bias, and RGB

The Filter operation works by sliding the Kernel over each pixel in the image or each pixel in the current selection. The new color of the pixel is computed by multiplying the elements on the Kernel by the color of pixels covered by it. The results of these multiplications are added together, then divided by the Divisor factor, and finally added to the Bias factor to obtain the new color.

When the Filter operation is performed over RGB values, the whole operation is repeated once for each component (Red, Green, and Blue). Alternatively, the Filter operation may be performed over the corresponding grayscale value of each pixel. This is equivalent to transforming the image into grayscale format, and then using the same Kernel, Divisor, and Bias over RGB values.

Specifying user-defined filters

Use the menu command **Image | Filters | User-defined**
Click on a filter from the list, to modify or click on *New* to create a new filter.
Click on the E*dit* button to open the **Filter Specification dialog**.

Filter specification dialog options:

Name

Use this box to select the name of the operation. This name is displayed in the list of operations in the User-defined Filters dialog.

Kernel

Enter the multiplication factors that compose the Kernel matrix.

Divisor

Select the global division factor to be applied after multiplication by the Kernel matrix.

Bias

Select the global additive factor to be applied after division.

RGB

Check this option if the filter should be applied over color components. If this option is unchecked, the image or selection is converted to grayscale prior to applying the filter.

Creating special effects in images

For information about Creating special effects in images please read the following topics:
[Add Borders](#)
[Buttonize](#)
[Gray palette](#)
[Motion Blur](#)
[Seamless pattern](#)

Add Borders

Use the menu command **Image | Special Effects | Add Borders**.

Use this effect to add borders to the active image. Borders are painted with the currently selected background color.

Options:
Left, Top, Right, and Bottom
    The desired size, in pixels, of the border at each side of the image.
Use same size on all sides
    Check to use the same size on all sides.

Buttonize

Use the menu command **Image | Special Effects | Buttonize**.

Use this effect to create a Windows rectangular button effect around the active image, or current selection. LView Pro uses the currently selected Foreground and Background colors to paint the edges of the button.

Options:
Edge Size
> Select the percentage of the image that should be included in the border of the button. The smallest allowed percentage 1%. Use 50% to include all image in the border.

Transparent Edge
> Check this option to create a transparent edge. The edge is created opaque if this option is unchecked.

Image Preview
> Click this button to preview the button on the active image.

Thumbnail preview
> A small size preview of the results of this operation is exhibited on this window.

Gray palette

Use the menu command **Image | Special Effects | Gray palette.**

Use this effect to transform the active image into gray palette format. The image will be transformed into palette based grayscale format, with an associated color palette with entries ranging from pure black to pure white.

Motion Blur

Use the menu command **Image | Special Effects | Motion Blur**.

Use this effect to create a motion blur effect on the active image or current selection.

Options:
Direction
Select the direction of the motion, in degrees.
Intensity
Select the intensity of the motion, in pixels.
Image Preview
Click on this button to view the results of the above options on the active image.
Thumbnail preview
This window displays a small size preview of the motion blur effect.

Seamless pattern

Use the menu command **Image | Special Effects | Seamless pattern.**

Use this command to create a new image from the active image, or current selection. LView Pro will create an image suitable to be used as a pattern with the Fill Tool, in the sense that it can be tiled without showing seams.

The image created with this command can now be saved or used directly with the fill command as a pattern. The pattern will be used as specified on the Fill Tool options.

For details on the Fill command, see [Using the fill tool](#).

Operating images

LView Pro allows you to create a new image as result of an operation between two images being edited by LView Pro. The resulting image is created in True Color format.

Use the menu command **Image | Operate** to activate this command.

Options:
Select Source Image 1
> Select the first source image for the operation. Image selection order matters for pixel operation Subtract.

Select Source Image 2
> Select the second source image for the operation.

Select Pixel Operation
> **Add**   Pixels are added.
> **Multiply**   Pixels are multiplied.
> **Darker**   Darker pixel is selected.
> **Lighter**   Lighter pixel is selected.
> **Subtract**   Pixels in the first image are subtracted from pixels in the second image.
> **Difference** Resulting pixel is the absolute value of the difference from pixels in the two images

Divisor
> Resulting pixel is divided by the value you select for this option.

Bias
> Resulting pixel is added to the value you select for this option (after applying divisor).

When Over/Underflow Occurs
> Truncate Result to [0..255] Range
>> Check this option to truncate resulting pixel to the range. For instance, if pixels are added, and the resulting color component is 256, it will be truncated to 255.
>
> Let Result Wrap Around [0..255] Range
>> Check this option to let results wrap around the range. For instance, if pixels are added, and the resulting color component is 256, it will be wrapped around to 0.

Combining Color Channels

You can combine color channels (RGB or YUV separations) into a single image. This command is only available when Windows is set to use a True of High color mode. This command is used when you have for instance, the 3 image components separated with the menu command **Image | Color Channels | Separate RGB** or **Image | Color Channels | Separate YUV**.

Use the menu command **Image | Color Channels | Combine** to open the dialog.

Dialog box options:
Extract First Color Component From
> Select the image containing the first color component (Red or Y) from the list.

Extract Second Color Component From
> Select the image containing the second color component (Green or U) from the list.

Extract Third Color Component From
> Select the image containing the third color component (Blue or V) from the list.

Color Components are
> Red, Green, and Blue
> Check this option if the source images contain Red, Green, and Blue components.
> Y, U, and V
> Check this option if the source images contain Y, U, and V components.

For more information, see :
[Separating color channels](#)

Separating color channels

LView Pro can split images into their color components (channels) in two modes: Red, Green, and Blue, and Y, Cb, Cr. In either case, three images are created, each composed of a single color channel of the original image. You can edit these images as individual images, and then use the Combine Channels dialog to re-create the original image with the changes made. The resulting images are in grayscale palette, one for each channel.

Performing precise editing operations

Sometimes it may seem hard to perform precise editing operations on small areas of an image. This topic shows a strategy you may use to achieve more precision on these operations.

1. Use the menu command **Window | New Window**.
   This will make LView Pro exhibit the active image in two separate windows.

2. Set each window to a different level of zoom
   You can take advantage of that to help you perform difficult editing operations. On one window, zoom into the image until you can see individual pixels. Depending on the size of your display and the resolution of your screen, a zoom level between 1:8 to 1:12 should be sufficient.

3. Arrange both windows so that you can get a good, comfortable view of the image on them
   You can use menu command *Window | Tile Vertically* to accomplish that, or manually move and resize them.

4. Optionally, turn on the Pixel Grid to see a boundary around each pixel, on the zoomed image.

5. Now, proceed to edit the image using the zoomed image.
   The effects of each editing command you perform will also be displayed on the other window, the one displaying the image without zoom. That way, you can monitor the effects of changes you make at pixel level.

6. If you make a mistake, use one of the undo methods below to return the image to the state it was before that mistake:
   - Use the menu command Edit | Undo, or
   - Click on the Undo button ![icon] on the Main Toolbar, or
   - Use the Undo/Redo History Palette.

7. If you are not sure if you really like one particular editing command, use the menu commands *Edit | Undo* (![icon]) and *Edit | Redo* (
![icon]) to compare the previous state of the image with the one after the editing command.

Painting, Drawing, and Text

The painting tools of LView allow you to paint the active image reproducing the behavior of real word painting tools.

One of their most realistic characteristics is the optional capability of "not building ink". For example, if you apply the paint brush many times over an area without releasing the mouse button, it will not "saturate" the drawing (assuming that it has its opacity set to less than 100%). It is a real implementation of a paintbrush, where the amount of ink that you collected when you insert the brush into the ink (when you click the mouse) is limited, and will not completely cover the area used. On the other hand, the airbrush will behave as in real word, where multiple strokes will add more ink to the drawing, reaching a saturation point.

Because of the flexibility of the painting tools, many of the resources found in one tool can be found in other. All painting tools can interpret information from pressure sensitive pads, or tablets. They also have different blending modes (available for all painting tools).

The painting tools are:
 Pencil tool
 Paintbrush tool:
 Air brush tool
 Fill tool
 Clone brush tool

LView Pro provides the following drawing resources:
- Line tool
- Shape tool
- Paths as a drawing tool.

LView Pro provides the text tool to place text information on the image. The text can be placed in a separate part of the image as a path, preserving the original image and allowing later edition and manipulation. The text can be transformed and deformed, resulting in incredible effects.

For more information, see :
Using the painting tools
Using the drawing tools
Working with text

Using the painting tools

The basic steps for using the painting tools are:
- Choosing the paint colors
- Using the paint colors
- Choosing the paint tool
- Choosing the application choices
- Moving the mouse to the image and drag it over the area that you want to paint.

For more information, see :
Choosing the paint colors
Using the paint colors
Choosing the paint tool
Choosing the application choices
Examples of use of the paint tools:

Choosing the paint colors

The first step in using a painting tool is to define where the ink will come from.

You have the following options to select the painting colors:
- Choose the painting colors with the Color Selection dialog bar
- Choose the painting colors with the color dropper

There is also a special tool (The Clone brush) where the source for the paint is another image. See the Clone Brush for details.

For more information, see :
Choosing the painting colors with the Color Selection dialog bar
Choosing the painting colors with the color dropper

Choosing the painting colors with the Color Selection dialog bar

The Color Selection Dialog Bar is initially displayed across the right side of the LView Pro window (for details, see Color Selection).

The three boxes on the top of the Color Selection dialog bar represent the three basic paint colors:

The box on the left is the **Foreground color**.
The box on the center is the **Background color**.
The box on the right is the **Transparent color**.

For more information, see :
Specifying the paint colors

Related items:
Choosing the painting colors with the color dropper

Specifying the paint colors

You can specify the colors that will be loaded on the paint colors boxes using one of the two methods below:

Selecting the paint colors from the Color Palette Area
1) Position the mouse over the color palette area
2) Use one of the following procedures to define the paint colors:
To define the **Foreground color:** click the **primary** mouse button on the color
To define the **Background color:** click the **secondary** mouse button on the color
To define the **Transparent color:** click either mouse button on the color, while pressing the **Alt** key.

Selecting the paint colors using the color specification dialog
1) Click the primary mouse button on one of the three color boxes (Foreground, Background, or Transparent)
2) This will display a color selection dialog, where you can specify the color attributes for the color box you clicked. On this color selection dialog, you can also **define up to 16 custom color combinations**. LView Pro remembers these custom colors between sessions.

When the active image is in palette based format, LView Pro automatically finds and uses the palette entry containing the color specification that is closer to the one you selected.

Choosing the painting colors with the color dropper

 Color dropper

The color dropper allows you to sample a color from the image. When you select the Dropper tool the mouse pointer takes the shape of a dropper. Move the dropper over the active image, or current selection, and the color of the pixel exactly underneath the dropper is displayed on the Color Selection dialog bar (in RGB or HSL format). For palette based images the palette index of the color is also displayed.

When you detects the color you would like to paint with, select it to be the new Foreground, Background or Transparent color using a mouse click:
- **Foreground color**: click the primary mouse button
- **Background color**: click the secondary mouse button
- **Transparent color**: click either mouse button, **while pressing the Alt** key.

You can select painting colors from the active image or selection while using other painting tools, **without having to switch to the Dropper tool**. When you press the **Control** key, the mouse pointer temporarily switches into the shape of the Dropper, and allows you to select colors. This feature is available when you use most of the painting tools.

Related items:
Choosing the painting colors with the Color Selection dialog bar

Using the paint colors

After you specify the paint colors, you can use then during any of the painting and editing operations. To use one of the three colors from the Color Selection dialog bar you can do one of the following:

- To use the **Foreground color**
  Click the primary mouse button when using the command.
- To use the **Background color.**
  Click the secondary mouse button when using the command.
- To use the **Transparent color**: (instead of using the Foreground color).
  Click either mouse button, **while pressing the Alt** key.

The commands that have transitions from foreground to background color will use the colors as follow:

Using the command by clicking the primary button:
> The command will be initiated with the foreground color and will be terminated with the background color.

Using the command by clicking the secondary button:
> The command will be initiated with the background color and will be terminated with the foreground.

Using the command by holding down ALT while clicking any of the mouse buttons:
> The command will be initiated with the transparent color and will be terminated with the background color. The only exception is the gradient fill style option for the Fill Tool that does not recognize the ALT key to use the transparent color.

Choosing the paint tool

With the painting colors defined, you can now select the painting tool. Select one of the following tools on the Draw Tool bar, by single clicking on the tool button with the mouse:

Pencil tool
Paintbrush tool:
Air brush tool
Fill tool
Clone brush tool

When the paint tool is selected, the Tool Options dialog bar is displayed with the available options for the tool.

For more information, see :
Draw Options for the Pencil tool
Draw Options for the Paintbrush tool
Draw Options for the Airbrush tool
Draw Options for the Clone brush tool
Draw Options for the Fill tool
Brush palette
To Show / Hide the brush palette
Defining the Brush palette visibility mode
Using a pressure sensitive tablet with the painting tools

Draw Options for the Pencil tool

For details on how to use the Pencil Tool, see <u>Using the Pencil tool</u>.

Brush Palette
Click on this button to show / hide the **<u>Brush palette</u>**.

Color Replacer tool
Activate the color replacer option.
Paint replacing Foreground, Background or Transparent colors for another color. Replace colors throughout the whole image or selection. See <u>Using the Color Replacer option for the Pencil Tool</u>.

Dynamic Color Match
Change the base pixel of the color match to dynamically use the center of the brush as the base pixel for the match criteria. See <u>Using the Color Replacer option for the Pencil Tool</u>.

Blending mode
> Allows you to select how the paint is going to be applied to the image. For more details, see <u>Blending mode</u>.

Opacity
> Defines the intensity of ink that will be transferred to the image. See <u>Opacity</u>.

Match mode and **Tolerance**
> Define how the Color Replacer tool will be applied. See <u>Using the Color Replacer option for the Pencil Tool</u>.

Auto Fading and **Steps**
> Define how the painting tool fades out, simulating the actual behavior of a painting brush. See <u>Auto fade</u>.

Tablet options
> Define the type of effect that you want associated with the pressure information that is provided by pressure-sensitive tablets. See <u>Using a pressure sensitive tablet</u>.

Paper texture
> Paper textures alter the way the paint mixes with the paper (the image being painted). See <u>Paper texture</u>.

Related items:
<u>Draw Options for the Paintbrush tool</u>
<u>Draw Options for the Airbrush tool</u>
<u>Draw Options for the Clone brush tool</u>
<u>Draw Options for the Fill tool</u>
<u>Brush palette</u>
<u>To Show / Hide the brush palette</u>
<u>Defining the Brush palette visibility mode</u>
<u>Using a pressure sensitive tablet with the painting tools</u>

Draw Options for the Paintbrush tool

For step by step instructions on how to use the Paintbrush tool, see [Using the Paint brush tool](#).

Brush Palette

Click on this button to show / hide the **Brush palette**.

Blending mode

> Allows you to select how the paint is going to be applied to the image. For more details, see [Blending mode](#).

Opacity

> Defines the intensity of ink that will be transferred to the image. See [Opacity](#).

Auto Fading and **Steps**

> Define how the painting tool fades out, simulating the actual behavior of a painting brush. See [Auto fade](#).

Wet edges

Click on this button to turn on / off the Wet Edges option

Allow the paint tool to accumulate ink along the edges of the brush. See [Wet Edges](#).

Build Ink

Click on this button to simulates the ink build resulting from successive brush strokes. See [Build Ink](#).

Tablet options

> Define the type of effect that you want associated with the pressure information that is provided by pressure-sensitive tablets. See [Using a pressure sensitive tablet](#).

Paper texture

> Paper textures alter the way the paint mixes with the paper (the image being painted). See [Paper texture](#).

Related items:
[Draw Options for the Pencil tool](#)
[Draw Options for the Airbrush tool](#)
[Draw Options for the Clone brush tool](#)
[Draw Options for the Fill tool](#)
[Brush palette](#)
[To Show / Hide the brush palette](#)
[Defining the Brush palette visibility mode](#)
[Using a pressure sensitive tablet with the painting tools](#)

Draw Options for the Airbrush tool

For step by step instructions on how to use the Airbrush tool, see Using the Air Brush tool.

Brush Palette

Click on this button to show / hide the **Brush palette**.

Blending mode

Allows you to select how the paint is going to be applied to the image. For more details, see Blending mode.

Opacity

Defines the intensity of ink that will be transferred to the image. See Opacity.

Auto Fading and **Steps**

Define how the painting tool fades out, simulating the actual behavior of a painting brush. See Auto fade.

Wet edges

Click on this button to turn on / off the Wet Edges option

Allow the paint tool to accumulate ink along the edges of the brush. See Wet Edges.

Build Ink

Click on this button to simulates the ink build resulting from successive brush strokes. See Build Ink.

Tablet options

Define the type of effect that you want associated with the pressure information that is provided by pressure-sensitive tablets. See Using a pressure sensitive tablet.

Paper texture

Paper textures alter the way the paint mixes with the paper (the image being painted). See Paper texture.

Related items:
Draw Options for the Pencil tool
Draw Options for the Paintbrush tool
Draw Options for the Clone brush tool
Draw Options for the Fill tool
Brush palette
To Show / Hide the brush palette
Defining the Brush palette visibility mode
Using a pressure sensitive tablet with the painting tools

Draw Options for the Clone brush tool

For step by step instructions on how to use the Clone brush tool, see [The clone brush tool](#).

Brush Palette

Click on this button to show / hide the **Brush palette**.

Aligned and stationary mode

> For details, see [The clone brush tool](#).

Blending mode

> Allows you to select how the paint is going to be applied to the image. For more details, see [Blending mode](#).

Opacity

> Defines the intensity of ink that will be transferred to the image. See [Opacity](#).

Auto Fading and **Steps**

> Define how the painting tool fades out, simulating the actual behavior of a painting brush. See [Auto fade](#).

Wet edges

Click on this button to turn on / off the Wet Edges option

Allow the paint tool to accumulate ink along the edges of the brush. See [Wet Edges](#).

Build Ink

Click on this button to simulates the ink build resulting from successive brush strokes. See [Build Ink](#).

Tablet options

> Define the type of effect that you want associated with the pressure information that is provided by pressure-sensitive tablets. See [Using a pressure sensitive tablet](#).

Paper texture

> Paper textures alter the way the paint mixes with the paper (the image being painted). See [Paper texture](#).

Related items:
[Draw Options for the Pencil tool](#)
[Draw Options for the Paintbrush tool](#)
[Draw Options for the Airbrush tool](#)
[Draw Options for the Fill tool](#)
[Brush palette](#)
[To Show / Hide the brush palette](#)
[Defining the Brush palette visibility mode](#)
[Using a pressure sensitive tablet with the painting tools](#)

Draw Options for the Fill tool

For step by step instructions on how to use the Fill tool, see [Using the fill tool](#).

Blending mode
> Allows you to select how the paint is going to be applied to the image. For more details, see [Blending mode](#).

Opacity
> Defines the intensity of ink that will be transferred to the image. See [Opacity](#).

Feather
> Determines the increment amount that is automatically applied to the selection being filled. Together with the opacity option it allows the edges to advance outward, which may make the edges smoother. See [Feather](#).

Wet edges
Click on this button to turn on / off the Wet Edges option
Allow the paint tool to accumulate ink along the edges of the brush. See [Wet Edges](#).

Anti-alias
Click on this button to turn on / off the Anti Alias option. See [Anti Aliasing](#).

Unrestricted fill
Click on this button to fill non adjacent areas. See [Using the fill tool](#).

Match mode and **Tolerance**
> Define how the pixels will be selected to be included on the fill area. See [Using the fill tool](#).

Fill Style
> Determines the style of the fill tool. See [Fill Style](#).

Fill Style options
Opens the fill style options dialog that allows you to edit the fill style. See [Fill Style](#).

Paper texture
> Paper textures alter the way the paint mixes with the paper (the image being painted). See [Paper texture](#).

Related items:
[Draw Options for the Pencil tool](#)
[Draw Options for the Paintbrush tool](#)
[Draw Options for the Airbrush tool](#)
[Draw Options for the Clone brush tool](#)
[Brush palette](#)
[To Show / Hide the brush palette](#)
[Defining the Brush palette visibility mode](#)
[Using a pressure sensitive tablet with the painting tools](#)

Brush palette

The Brush palette holds the different brush sizes, shapes, and properties available for the tools where a brush can be used (Pencil, Paintbrush, Airbrush, and Clone brush and Selection Brush). LView Pro also allows you to create custom brush shapes based on an image. Each set of brushes can hold an unlimited number of brushes, and you can have unlimited sets by loading them from disk.

It is a floating palette, and it can be placed at any location on the screen. It is also an auto-hide palette.

Related items:
Draw Options for the Pencil tool
Draw Options for the Paintbrush tool
Draw Options for the Airbrush tool
Draw Options for the Clone brush tool
Draw Options for the Fill tool
To Show / Hide the brush palette
Defining the Brush palette visibility mode
Using a pressure sensitive tablet with the painting tools

To Show / Hide the brush palette

Use the menu command **View | Brush palette**.

Use the short cut key U to toggle the brush palette display.

Related items:
[Draw Options for the Pencil tool](#)
[Draw Options for the Paintbrush tool](#)
[Draw Options for the Airbrush tool](#)
[Draw Options for the Clone brush tool](#)
[Draw Options for the Fill tool](#)
[Brush palette](#)
[Defining the Brush palette visibility mode](#)
[Using a pressure sensitive tablet with the painting tools](#)

Defining the Brush palette visibility mode

The Brush Palette can be visible in two modes:
- Full visibility
- Caption visibility

You select the full visibility mode by clicking on the Keep Windows Visible () button.

When the palette is in **full visibility** mode, as another window becomes active, the palette remains displayed in full, with its caption, the buttons, and the brush area.

When the palette is in **caption visibility** mode, as another window becomes active, the palette is reduced to its caption only and the caption is reduced in width. Based on its location in reference to the center of the work area, the caption is reduced to the left or to the right of the palette. You can display its full information by just moving the mouse over any part of the caption, and after you perform the actions, as soon as another window becomes visible, the palette returns to the caption visibility mode.

Understanding the Brush palette components
The brushes are displayed in their actual size, when they fit on the slot. If the brush is too large to fit on the slot of the brush palette, it will be displayed as a smaller size with a number representing the brush wide diameter in pixels.

Keep Palette visible
Set the brushes for use in normal mode.
Set the brushes for use in threshold mode
Set the brushes for use in outline mode.
Display the brush settings.
Create a new brush.
Define a brush from an image selection.
Delete the selected brush.
Select the type of mouse pointer to use.
Open the Brush Palette menu.

All these commands are also available from the Brush Palette menu.

The bottom caption of the Brush Palette displays the settings of the selected brush.
> **#** brush number
> **h** brush edge opacity (or hardness)
> **a** brush angle
> **r** brush roundness
> **d** brush density
> **s** brush spacing

The Brush Palette menu is composed by:
Normal, Threshold, or Outline mode selector, New brush, Delete Brush, Brush Settings, Define Brush, Restore Brushes, Load Brushes, Replace Brushes, Save Brushes, and Mouse Pointers

For more information, see :
[Selecting a brush](#)
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Creating a brush](#)
[Relocating a brush inside the brush palette](#)
[Deleting a brush](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Related items:
[Draw Options for the Pencil tool](#)
[Draw Options for the Paintbrush tool](#)
[Draw Options for the Airbrush tool](#)
[Draw Options for the Clone brush tool](#)
[Draw Options for the Fill tool](#)
[Brush palette](#)
[To Show / Hide the brush palette](#)
[Using a pressure sensitive tablet with the painting tools](#)

Selecting a brush

1) Select the paint tool that you want to use.
2) If the Brush Palette is not displayed (at least as caption visibility mode), display by using the keyboard shortcut **B**.

You can also click on the show/hide brush palette () on the tool options dialog.
3) Click on the brush that you want to use.
4) Click on the brush mode (Normal, Threshold, or Outline)

Related items:
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Creating a brush](#)
[Relocating a brush inside the brush palette](#)
[Deleting a brush](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Defining the brush mode

LView Pro allows you to use the brushes in the following modes:

Normal

    The brush is applied with the edge opacity and density settings as defined on the brush setting dialog.

Threshold

    The brush is applied with a 100% of edge opacity and a 100% of density. In other words, the edge opacity and density settings for the brush are not used. Keep in mind however that the opacity settings defined on the Tool options will still used.

Outline

    The brush is applied using only the outline of the brush shape

You can select any of these modes for any of the brushes for any of the painting tools. You select the mode by clicking on the mode buttons above.

Related items:
Selecting a brush
Defining the mouse pointer for the brushes
Creating a brush
Relocating a brush inside the brush palette
Deleting a brush
Creating a brush from an image
Understanding the Brush Settings options
Load, save, and replacing brushes

Defining the mouse pointer for the brushes

Click on the button or use the Brush Palette menu (
) command *Mouse Pointers.*

Related items:
[Selecting a brush](#)
[Defining the brush mode](#)
[Creating a brush](#)
[Relocating a brush inside the brush palette](#)
[Deleting a brush](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Creating a brush

1) Do one of the following:

- Click on the **Create new brush** button (📊), or
- Click on an empty area of the Brush Palette that has no brush defined, or
- Use the Brush Palette menu (📗) command *New Brush*.

  If there is a brush selected, the new brush will use the settings of the selected brush as the initial settings for the new brush. If there is no brush selected (or if the selected brush is a brush created from an image) the new brush will be created using the settings of the *default brush*. You cannot use this method to create another brush from an image or selection.

2) The New Brushes settings dialog will be displayed.

3) Click *Ok*. The new brush will be created at the end of the brush palette.

Related items:
[Selecting a brush](#)
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Relocating a brush inside the brush palette](#)
[Deleting a brush](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Relocating a brush inside the brush palette

You can move a brush inside the brush palette by doing the following steps:

1) Select the brush that you want to move, by single clicking on it.

2) SHIFT click on a destination brush where you want to move to selected brush to.

3) The selected brush will be moved before of after the destination brush, depending from where the selected brush is being moved.

Related items:
[Selecting a brush](#)
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Creating a brush](#)
[Deleting a brush](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Deleting a brush

Do one of the following:

- Press and hold the CTRL key and click on the brush
- Select the brush and use the Brushes Menu () command *Delete Brush*.

Related items:
[Selecting a brush](#)
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Creating a brush](#)
[Relocating a brush inside the brush palette](#)
[Creating a brush from an image](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Creating a brush from an image

LView Pro allows you to create custom brushes shapes based on an image selection. The color information is replaced by gray scale information. The custom brush can also be used in the Normal, Threshold, and Outline modes. The maximum selection size is 200 x 200 pixels.

1) Create a selection around the part of the image that you want to use as the custom brush.
2) If not displayed, open the Brush Palette (use the keyboard shortcut B)
3) Click on the Define brush button ( ) or use the Brushes Menu (
) command *Define Brush*.

> If none of these options is available is because there is no selection defined. The new brush will be created at the end of on the Brush Palette.

4) Double click on the new brush or select it and click on the Brush Settings button ( ) to open the Brush Settings dialog.

Related items:
[Selecting a brush](#)
[Defining the brush mode](#)
[Defining the mouse pointer for the brushes](#)
[Creating a brush](#)
[Relocating a brush inside the brush palette](#)
[Deleting a brush](#)
[Understanding the Brush Settings options](#)
[Load, save, and replacing brushes](#)

Understanding the Brush Settings options

LView Pro allows you to set the following options for the brushes on the brush palette: Wide Diameter, Density, Edge Opacity, Spacing, Angle and Roundness (form factor). For the brushes defined from an image, the options are Density, Spacing, and Threshold (the Auto button sets an optimized value to the Threshold).

To open the Brush Settings dialog, use one of the following methods:
- Double click on a brush
- Select the brush and click on the Brush Settings button ()
- Select the brush and use the Brushes Menu () command *Brush Settings.*

A preview of the brush is available. You can change the settings to better understand their actions and leave the dialog with cancel.

Wide Diameter
Define the dimension of the brush, in pixels.

Edge Opacity
Define the opacity of the edge. An edge opacity value of 100% will maintain the same opacity along the brush, while any other value will result in a differential opacity between the edges and the center of the brush.

Density (or hardness)
Define the density of the brush. A density of 100% results in a solid brush, while any other value generates a sparse brush (like a chalk or a crayon).

Spacing
Define the distance (in terms of brush size- Wide Diameter) between the brush occurrences during a single stroke. The spacing can be up to 1000% the size of the brush. You can enable/disable this option by selecting/deselecting the *Spacing* check box.

Angle
Define the angle of the horizontal axis of the circle (or ellipse) that envelops the brush. Can be entered as a number or you can select the horizontal axis anchor and drag it.

Roundness
Define the relation between the horizontal and vertical axis of the ellipse that envelops the brush. A circle has a roundness of 100%. You can change the roundness by entering a numeric value of by dragging the points on the ellipse or circle.

Related items:
Selecting a brush
Defining the brush mode
Defining the mouse pointer for the brushes
Creating a brush
Relocating a brush inside the brush palette

Load, save, and replacing brushes

The Brush Palette allows you to customize different palettes. You can have many different palettes, for instance, to be used with different kinds of images. Besides that, you can have as many brushes as you want into one brush palette.

The following Brush Palette menu () commands are available for brushes' disk operations:

Restore Brushes

> This option opens a dialog that has the following options:
> **Yes** To append the default brushes to the current brush palette.
> **No** To replace the current brushes on the brush palette with the default brushes.

Load Brushes

> This option opens a dialog that allows you to load a new brush palette. It will add the loaded brushes to the current brush palette.

Replace Brushes

> This option opens a dialog that allows you to replace the current brush palette with a new set of brushes form disk.

Save Brushes

> This option opens a dialog that allows you to save the current brush palette to the disk.

Related items:
Selecting a brush
Defining the brush mode
Defining the mouse pointer for the brushes
Creating a brush
Relocating a brush inside the brush palette
Deleting a brush
Creating a brush from an image
Understanding the Brush Settings options

Using a pressure sensitive tablet with the painting tools

LView Pro supports pressure sensitive tablets for the painting tools operations. For details on installation and setting of the pressure sensitive tablet, consul the tablet manufacturer documentation.

Whenever the tablet information can be used to create a more realistic effect, LView allows you to quickly interact with the tablet options trough the above three buttons displayed on the Tool options dialog. Using a single mouse or stylus click you can define the type(s) of effect(s) that you want associated with the pressure information that is provided by pressure-sensitive device.

For more information, see :
Tablet Options

Related items:
Draw Options for the Pencil tool
Draw Options for the Paintbrush tool
Draw Options for the Airbrush tool
Draw Options for the Clone brush tool
Draw Options for the Fill tool
Brush palette
To Show / Hide the brush palette
Defining the Brush palette visibility mode

Tablet Options

You can associate the following effects with the pressure information:

Associates pressure with the painting tool size or diameter.

Associates pressure with the opacity of the paint being applied.

Associates pressure with the color transition from foreground color to background color.

LView Pro allows you to associate any combination of the effects with the pressure at any time. For instance, you can have the pressure defining the opacity and the brush size at the same time.

Choosing the application choices

LView Pro enables you to select many different ways to apply the ink for the painting tools. The following options are available for the way you apply the painting tools:

- Blending modes
- Opacity
- Auto Fade
- Wet Edges
- Ink Build
- Paper texture
- Feather
- Anti-Aliasing
- Fill Style

All these options can be combined to produce many effects.

For more information, see :
Blending modes
Opacity
Auto fade
Build Ink
Wet Edges
Feather
Anti Aliasing
Fill Style
Paper texture

Blending modes

LView Pro painting tools have an option for you to define how the pixels of the image will be affected by the application of the painting tool. The intensity of the application is defined by the opacity of the brush being used and by the global opacity of the painting tool as defined on the Draw Options tool bar.

For more information, see :
Retouching images by defining the blending mode
Blending modes description

Related items:
Opacity
Auto fade
Build Ink
Wet Edges
Feather
Anti Aliasing
Fill Style
Paper texture

Retouching images by defining the blending mode

Blending modes can be interpreted as retouching tools for the image. While applying the painting tool, you are performing a retouch operation. Instead of painting with colors, it performs retouch effects on the active image or current selection. For instance, the *Sharpen* blending mode will sharpen the image using the properties of the painting tool (density, edge, etc).

Related items:
[Blending modes description](#)

Blending modes description

There are three elements on the blending mode operation:
- The original pixel of the image
- The paint color being applied
- The resulting pixel of the image, after the application of the paint color using the blending mode.

The paint color being applied is the current color being used with the paint tool. For details, see [Choosing the paint colors](#).

Normal
Applies the paint color using just the brush properties (opacity, etc) and the other application choices, if any (paper texture, etc). For extreme cases, such as when using 100% opacity, the original pixel is replaced by the paint color.

Dissolve
Similar to the Normal blending mode, however not all original pixels are painted, resulting in a random application of the paint color.

Multiply
Multiplies the original pixel color information of the image by the paint color information of the brush, resulting into a dark color. Multiplication by black results in black, multiplication by white leaves resulting pixel unchanged.

Screen
Similar to the Multiply mode, but using the inverse of the pixel color information. The result is a lighter color.

Overlay
The paint color is added to the original pixel in order to reflect the color component of the paint color, while preserving the tone information of the original pixel.

Soft Light
The Soft Light simulates the use of a soft and homogeneous light source with the color of the paint color. If the paint color is totally black, with will darken the image in a diffuse way. Using a pure white will lighten the image. All other gray scales will produce proportional results.

Hard Light
Analog to the Soft Light method, but using a light source that is less soft and homogenous.

Color Dodge
This mode *increases the brightness* of the image pixel based on its color information in

order to accentuate the paint color being applied.

Color Burn

This mode *decreases the brightness* of the image pixel based on its color information in order to accentuate the paint color being applied.

Darken

This mode *decreases the brightness* of the image pixel by replacing the original pixel with the paint color if the brightness of the original pixel is greater than the brightness of the paint color.

Lighten

This mode *increases the brightness* of the image pixel by replacing the original pixel with the paint color if the brightness of the original pixel is less than the brightness of the paint color.

RGB Darken

This mode *decreases the brightness* of the image by subtracting a constant value from the brightness of the original pixel. It does not depend on the color being applied.

RGB Lighten

This mode *increases the brightness* of the image by adding a constant value to the brightness of the original pixel. It does not depend on the color being applied.

Difference

This mode calculates the positive difference between the brightness of the original pixel and the brightness of the paint color, and replaces brightness information of the original pixel with this difference.

Exclusion

Similar to the Difference mode, with a less intense effect

Hue

This method replaces the *Hue* information of the original pixel with the *Hue* information of the paint color. It preserves the *Saturation* and *Color* information of the original pixel.

Saturation

This method replaces the *Saturation* information of the original pixel with the *Saturation* information of the paint color. It preserves the *Hue* and *Color* information of the original pixel.

Color

This method replaces the *Color* information of the original pixel with the *Color* information of the paint color. It preserves the *Hue* and *Saturation* information of the original pixel.

Luminosity
This method replaces the *Luminance* information of the original pixel with the Luminance information of the paint color. It preserves the *Hue* and *Saturation* information of the original pixel.

Saturate
This method increases the *Saturation* information of the original pixel. It does not consider the saturation information of the paint color.

De-Saturate
This method nullifies the *Saturation* information of the original pixel, resulting into a gray scale pixel. It does not consider any information of the paint color.

Emboss
This method simulates a *surface texture* based on the image edges. It does not consider any information of the paint color.

Sharpen
This method enhances the edges of the image. It does not consider any information of the paint color.

Soften
This method softens the edges of the image. It does not consider any information of the paint color.

Blur
This method simulates a blur effect by modifying the edges. It does not consider any information of the paint color.

Smudge
This method simulates the effect of sliding a finger while the paint is still wet. It does not consider any information of the paint color.

Related items:
Retouching images by defining the blending mode

Opacity

You can specify the opacity of the painting tool, in addition to the opacity of the brush being used (when a brush is in use). For a very thin layer of ink (or a smaller action of the painting tool), select a small percentage for the opacity. For a thicker layer (or a stronger action of painting tool), select a high percentage.

Related items:
[Blending modes](#)
[Auto fade](#)
[Build Ink](#)
[Wet Edges](#)
[Feather](#)
[Anti Aliasing](#)
[Fill Style](#)
[Paper texture](#)

Auto fade

You can specify how the paint tool will fade This will bring a more realistic behavior to the brush being used, simulating the stroke of a brush. You have the following options:

- **Don't Fade**
  No fading occurs.
- **Transparent**
  The paint color being applied will fade to the **no color**. Do not confuse this transparent concept with the **transparent color** that is on the 3rd box on the Color Selection dialog.
- **Background**
  The color being used will fade to the background color.

If you select Transparent or Background, the fading will occur based on the value of the *steps* option.

Related items:
Blending modes
Opacity
Build Ink
Wet Edges
Feather
Anti Aliasing
Fill Style
Paper texture

Build Ink

When this button is depressed, it simulates the ink build resulting from successive brush strokes.

Related items:
[Blending modes](#)
[Opacity](#)
[Auto fade](#)
[Wet Edges](#)
[Feather](#)
[Anti Aliasing](#)
[Fill Style](#)
[Paper texture](#)

Wet Edges

 When this button is depressed, the ink builds up along the edges of the painting tool. Applying during the same stroke pushes the edge even further.

Related items:
[Blending modes](#)
[Opacity](#)
[Auto fade](#)
[Build Ink](#)
[Feather](#)
[Anti Aliasing](#)
[Fill Style](#)
[Paper texture](#)

Feather

This option determines the increment amount that is automatically applied to the area being created. For instance, for a fill area, the filled area will be increased by the number of pixels defined on this option (the opacity of the feather is variable).

Related items:
[Blending modes](#)
[Opacity](#)
[Auto fade](#)
[Build Ink](#)
[Wet Edges](#)
[Anti Aliasing](#)
[Fill Style](#)
[Paper texture](#)

Anti Aliasing

 Minimize the effect of jagged lines on the filled area.

Related items:
[Blending modes](#)
[Opacity](#)
[Auto fade](#)
[Build Ink](#)
[Wet Edges](#)
[Feather](#)
[Fill Style](#)
[Paper texture](#)

Fill Style

The Fill Style of the fill tool allows you to specify how the paint should be applied to the image. In some cases, instead of the ink, an image or pattern is used.

You can set the properties for each of the fill styles above by using the Fill Options dialog. You can invoke this dialog by clicking on the Fill Tool options ().

The only mode that works with palette based images is **Solid**.

The options are:
Solid
> Fill the area with a solid area using the color selected.

Pattern
> Fill the area using one of the patterns available from the drop list box. The available patterns are on the Patterns folder of the LView Pro program folder. The colors used are the colors of the pattern, not the selected color. For details, see [Creating New Patterns for the fill tool](#).

Image
> Fill the area using an image from the currently open images. The colors used are the colors of the image, not the selected color. One of the special effects that can be created with a selection is the creation of a seamless pattern that can be used with this option. The resulting filled area will be based on this image and it will not show the seams when tiling the image. See [Seamless pattern](#).

Linear gradient
> Applies the foreground color from the lightest points of the gradient changing to the background color as it moves to the darkest points of the gradient over a straight line. You can define the angle of the linear gradient in relation to the vertical.

Rectangular gradient
> Same as the linear gradient, except that the gradient is over a rectangular area.

Diamond gradient
> Same as the rectangular gradient, except that the gradient is over a diamond area.

Cross gradient
> Same as the diamond gradient, except that the gradient is over a crossed area.

Oval gradient
> Same as the cross gradient, except that the gradient is over an oval area.

Radial gradient
> Same as the oval gradient, except that the gradient is over a radial area.

For more information, see :
[Fill Style – Gradients](#)

Related items:
[Blending modes](#)

Fill Style – Gradients

Gradients are painted with color tones that vary from the background to the foreground color. If the fill command is issued by clicking the primary mouse button, the foreground color is painted on the lighter area of the gradient, changing to the background color as the gradient darkens. If the secondary mouse button is used, the foreground will be painted on the dark areas, changing to the background color as the gradient lightens.

The ALT key (that selects the active color as the transparent color) does not work with gradients

If you press the SHIFT key while using one of the fill tools, the location where you click the mouse becomes the center of the gradient for the ones that have a central location (all, except the linear).

You can edit the gradients by clicking and dragging the gradient on the preview windows or by entering the numeric values that are available for each of the gradients of the Fill Tool fill style options.

The best way to understand the gradient options is to see them on the preview window.

Paper texture

This option allows you to specify a texture for the paper. For instance, when you select triangles, it simulates the painting over a surface that is covered by triangles, reflecting the saliences of the texture being used.

For more information, see :
[Creating New Paper Textures](#)

Related items:
[Blending modes](#)
[Opacity](#)
[Auto fade](#)
[Build Ink](#)
[Wet Edges](#)
[Feather](#)
[Anti Aliasing](#)
[Fill Style](#)

Creating New Paper Textures

You can add new textures for use with LView Pro painting operations.

Paper textures are stored in texture files, in the Textures folder, located in the folder where LView Pro was installed. Texture files are in Windows Bitmap format, using the extension "tex". LView Pro can read these files for viewing or editing, although it is not recommended that you change them directly or their original contents will be lost.

In addition to being stored in Windows Bitmap files, texture images must be in palette based format. Their color palette must contain 256 grayscale entries ranging from Black - palette entry 0 with RGB (0, 0, 0) - to White - palette entry 255 with RGB (255, 255, 255). Pixels in Texture images vary in transparency according to their color. White pixels are completely opaque, and Black pixels are completely transparent.

To create a paper texture, follow the steps below:
1) Create the Texture image
   You can use LView Pro to paint it from scratch, to read it from an existing image file, or to scan it (or otherwise obtain it from a TWAIN compatible device). Once the image is available, you must prepare it to be used as a Texture. Because of the way transparency in Textures is implemented, you may want to use the Negative pre-defined Color Adjustment operation, if your texture is defined using dark pixels. Then, use the Gray Palette Special Effect to transform the Texture image in palette based format with the color palette described above.
2) Store the Texture and instruct LView Pro to use it
   Once the Texture image is ready, follow the same steps as you would to create a new Pattern (see Creating New Patterns for the fill tool). The differences are:
   - Textures are stored in the Textures folder (not in the Patterns folder)
   - The text file to edit is named Textures.txt (not Patterns.txt).

Examples of use of the paint tools:

For information about Examples of use of the paint tools: please read the following topics:

Using the Paint brush tool

1) Select the paint color as explained in [Choosing the paint colors](#).
2) Select the paintbrush tool. (click on the button on the tool bar)
3) Specify the [Blending mode](#), [Opacity](#), [Auto fade](#), [Wet Edges](#), [Build Ink](#), [Tablet Options](#), and [Paper texture](#).
4) Select the brush size, from the [Brush palette](#).
5) Move the mouse to the image and drag it over the area that you want to paint.

SHIFT KEY
If you click on a point, release the mouse button, move it, then depress the SHIFT key and click on the new point, a straight line will be draw connecting both points.

Related items:
[Using the Air Brush tool](#)
[Using the fill tool](#)
[Creating New Patterns for the fill tool](#)
[Using the Pencil tool](#)
[The clone brush tool](#)
[Using the clone brush tool to copy parts of another image](#)
[Using another image as continuous source for the paint (rubber stamp)](#)

Using the Air Brush tool

1) Select the paint color as explained in [Choosing the paint colors](#).
2) Select the Air Brush tool. (click on the button on the tool bar)
3) Specify the [Blending mode](#), [Opacity](#), [Auto fade](#), [Wet Edges](#), [Build Ink](#), [Tablet Options](#), and [Paper texture](#).
4) Select the brush size, from the [Brush palette](#).
5) Move the mouse to the image and drag it over the area that you want to paint.

SHIFT KEY
If you click on a point, release the mouse button, move it, then depress the SHIFT key and click on the new point, a straight line will be draw connecting both points.

Related items:
[Using the Paint brush tool](#)
[Using the fill tool](#)
[Creating New Patterns for the fill tool](#)
[Using the Pencil tool](#)
[The clone brush tool](#)
[Using the clone brush tool to copy parts of another image](#)
[Using another image as continuous source for the paint (rubber stamp)](#)

Using the fill tool

The Fill Tool operates in two steps:
(1) First, it determines which pixels will be painted in the fill operation, using the Advanced Color Matching, during steps 3) and 4).
(2) Then, it paints these pixels according to options set in the Fill Options dialog, set on step 5).

1) Select the paint color as explained in Choosing the paint colors.
2) Select the Fill tool. (click on the button 🔲 on the tool bar)
3) Define the Match mode (RGB, Hue, Brightness, none) and the Tolerance.
   Increase the tolerance in order to fill larger areas (be careful with this method, the resulting area can be much larger than the expected one).
4) Define the enclosure range of the fill operation
   • Select the Unrestricted Fill button 🔲 to fill areas with pixels that match the same criteria even if they are not contiguous to the area where you clicked the mouse.
• Deselect the Unrestricted Fill button 🔲 to fill only areas that have pixels that matches the criteria and are contiguous to the to the area where you clicked the mouse.
5) Specify the Blending mode, Opacity, Feather, Wet Edges, Anti Aliasing, Fill Style, and Paper texture

6) Click and release a mouse button while the mouse pointer is on the active image, or current selection.

The color of the pixel underneath the mouse pointer is compared to neighboring pixels, in a search for matches using the Advanced Color Matching algorithm. Every time a color match is successful, neighbor pixels of the newly matched pixel are added to the search. In other words, it is the color of the pixel under the mouse pointer that, together with color matching options, determines which pixels will be painted. For details, see Advanced Color Matching.

Related items:
Using the Paint brush tool
Using the Air Brush tool
Creating New Patterns for the fill tool
Using the Pencil tool
The clone brush tool
Using the clone brush tool to copy parts of another image
Using another image as continuous source for the paint (rubber stamp)

Creating New Patterns for the fill tool

One of the Fill Styles available for the LView Pro Fill Tool is Pattern. All patterns are stored in pattern files in the Patterns folder, located in the folder where LView Pro software was installed. Pattern files are in Windows Bitmap format, using the file extension "pat". LView Pro can read these files for viewing or editing, although it is not recommended that you change them directly or their original contents will be lost.

You can add new patterns for use with the Fill Tool. Follow the steps below.

1) Create the file containing the new pattern
    Must be a file containing an image in Windows Bitmap format. Use LView Pro to create the image, or to read it from an existing image file, or use the Seamless pattern effect. Then, use the menu command **File | Save As** to save the file into the Patterns folder.
2) Instruct LView Pro to use the new pattern
    You must edit the file named Patterns.txt, located in the Patterns folder. This file can be edited using the Windows Notepad application. This file contains 2 lines of text for each pattern:
    • The name of the pattern (displayed in the list of available patterns).
    • The filename where the pattern image is stored.

    Type a name for the new pattern, and the name of the file where you saved the pattern image (no path, just the filename and extension). Make sure to enter information in that order, and not to disturb existing information. The best way to enter the new information is by adding two new lines of text at the end of the file. The next time you execute LView Pro, the new pattern will be added to the list of available patterns.

Related items:
Using the Paint brush tool
Using the Air Brush tool
Using the fill tool
Using the Pencil tool
The clone brush tool
Using the clone brush tool to copy parts of another image
Using another image as continuous source for the paint (rubber stamp)

Using the Pencil tool

The pencil tool is similar to the brush tool. The pencil tool does not have Wet Edges and the Build Ink options.

However, the pencil tool has a unique tool option that is the Color Replacer Tool ().

For more information, see :
Understanding the Color Replacer option for the Pencil Tool
Using the Color Replacer option for the Pencil Tool

Related items:
Using the Paint brush tool
Using the Air Brush tool
Using the fill tool
Creating New Patterns for the fill tool
The clone brush tool
Using the clone brush tool to copy parts of another image
Using another image as continuous source for the paint (rubber stamp)

Understanding the Color Replacer option for the Pencil Tool

The Color Replacer option of the Pencil Tool is very similar to the Paintbrush, except that it only paints over pixels whose color matches one specific criterion.

There are two colors involved in the color replacing process:
- The Paint Color
- The Replaced Color

The **Replaced Color**, together with the Match Mode, defines the criterion for which pixels will be painted with the **Paint Color**, respecting the brush settings and the Draw options (opacity, blending mode, etc).

You have two choices to define the color that will be replaced (Replaced Color):

- Static definition
- Dynamic definition

With the static definition, the Replaced Color does not change after you select the color and start using the pencil tool. You define the Replaced Color before applying the tool.

Using the dynamic definition, the Replaced Color is constantly changing. Instead of being pre-defined as in the static definition, the Replaced Color is the color of the pixel that in underneath the center of the brush being used while you apply the Pencil tool with the Color Replaced option set.

To select which color to paint with (Paint Color) and which color to replace (Replaced Color), use one among the possible combinations of keyboard and mouse buttons summarized below. The replaced Color column is only constant when the Dynamic Option is not selected otherwise it will be the color of the pixel underneath the center of the brush being used.

Mouse Button	Keyboard	Paint Color	Replaced Color
Primary	---	Foreground	Background
Secondary	---	Background	Foreground
Primary	Alt	Transparent	Background
Secondary	Alt	Transparent	Foreground
Primary	Alt+Shift	Foreground	Transparent
Secondary	Alt+Shift	Background	Transparent

The Color Replacer option uses the Advanced Color Matching algorithm to match image colors to the Replacing Color. See [Advanced Color Matching](#), for details.

Note that the *None* Color Matching mode is not intended to be used with the Color

Replacer option. When this mode is selected, the Color Replacer automatically uses the *Red, Green and Blue* mode instead.

Related items:
[Using the Color Replacer option for the Pencil Tool](#)

Using the Color Replacer option for the Pencil Tool

To use the Pencil Tool with the Color Replacer option:
1) Select the paint color as explained in [Choosing the paint colors](#).
2) Select the pencil tool 🔲 on the draw tool bar
3) Select the Color Replacer option, by depressing the Color Replacer button (🔲)
4) Specify the [Blending mode](#), [Opacity](#), [Auto fade](#), [Tablet Options](#), and [Paper texture](#).
5) Select the brush size, from the [Brush palette](#).
6) Define if the replaced color will be static or dynamically changed.

> De-select the Dynamic Color Match 🔲 button to keep the Replaced Color always the same color (foreground, background, or transparent)

Select the Dynamic Color Match 🔲 button to change the Replaced Color as you move the brush.
7) Define the Match mode and Tolerance
6) Click a mouse button on the active image, or current selection and drag it to replace colors.

> If the Dynamic Color Match is not selected:
> - Clicking on the Primary mouse button:
>   Replaces pixels that have color matching based on the background color with the foreground color
> - Clicking on the secondary mouse button
>   Replaces pixels that have color matching based on the foreground color with the background color
> - Clicking with any mouse button while using the ALT key depressed:
>   Replaces pixels that have color matching based on the background color with the transparent color
> - Clicking on the Primary mouse button with the ALT and SHIFT keys depressed:
>   Replaces pixels that have color matching based on the transparent color with the foreground color
> - Clicking on the Secondary mouse button with the ALT and SHIFT keys depressed:
>   Replaces pixels that have color matching based on the transparent color with the background color

> If the Dynamic Color Match is selected:
> - Clicking on the Primary mouse button:
>   Replaces pixels that have color matching based on the center of the brush with the foreground color
> - Clicking on the secondary mouse button
>   Replaces pixels that have color matching based on the center of the brush with the background color
> - Clicking with any mouse button while using the ALT key depressed:
>   Replaces pixels that have color matching based on the center of the brush with the transparent color

Shortcut: To make the Color Replacer option act over the whole image or selection, painting with the Paint Color all pixels currently painted with colors that match the Replacing Color, **double click** the mouse button.

Related items:
Understanding the Color Replacer option for the Pencil Tool

The clone brush tool

With the Clone brush you can paint one image over another image, with variable opacity. The Clone Brush operates over one Source Image (the image that is to be cloned), one or more Target Images (images over which the Source Image is painted) and a choice of Clone Mode.

It also allows you to use as source a constant area, with the size of the brush. The resulting effect is the same as if a rubber stamp were being used.

There are three Clone Modes:
Non-aligned:
Every time you click a mouse button to start a cloning operation, the cloning anchor point of the source image is aligned with the point where the mouse is clicked on the target image. This is useful to clone the area around the anchor point on the source image over different areas on the target image.
Aligned:
The first time you click a mouse button to start a cloning operation, the cloning anchor point of the source image is aligned with the point where the mouse is clicked on the target image. Subsequent mouse clicks do not change that alignment. This is useful to keep source and target images aligned while performing more than one cloning operation.
Stationary:
The anchor point at the source image becomes a source limited to the size of the brush. All subsequent strokes will paint the same information, like a stamp. When you apply the stationary mode, the Aligned/Non-Aligned mode defaults to Non-Aligned.

Related items:
Using the Paint brush tool
Using the Air Brush tool
Using the fill tool
Creating New Patterns for the fill tool
Using the Pencil tool
Using the clone brush tool to copy parts of another image
Using another image as continuous source for the paint (rubber stamp)

Using the clone brush tool to copy parts of another image

1) Open two images: source and target (remark: the clone brush can also be used on the same image).
2) Select the clone brush tool ( )
3) Select the Source Image for the Clone Brush

> Press and hold the Control key and click either mouse button on the source image. The selected image becomes the **source** for the Clone Brush, and the point where the mouse was clicked establishes the cloning **anchor point**. You can change the Source Image at any time, by repeating this operation.

4) Select a brush from the brush palette.

5) Select the Aligned / non-aligned mode ( ) it will deselect the stationary button.

6) Click a mouse button on the **target** image (it will become the active image) or current selection and drag it to paint.

You can draw a straight line going from the last point you painted to the current mouse position if you press the Shift key before clicking the mouse button.

Related items:
Using the Paint brush tool
Using the Air Brush tool
Using the fill tool
Creating New Patterns for the fill tool
Using the Pencil tool
The clone brush tool
Using another image as continuous source for the paint (rubber stamp)

Using another image as continuous source for the paint (rubber stamp)

You can make a brush with the same shape of the image that you want as stamp. To do that, do the following.

1) Open two images: source and target (remark: the clone brush can also be used on the same image).

2) Select the area on the source image that you want to be the stamp.

> You can use any of the methods for defining a selection (for details, see Working with Selections)

3) Create a new brush with the brush palette command Define Brush. (🖼)

> For details, see Creating a brush from an image. The resulting brush will be in the shape of the selection.

4) Select the clone brush tool (🖼)

5) Select the new brush as the clone brush.

> You may want to set the threshold of this new brush (double click on it) to a low value (1%) and select the Threshold mode of the brush (by clicking on the 🖼 on the brush palette).

5) Define the anchor point on the source image at the approximated center of the same area where you made the selection.

> Press and hold the Control key and click either mouse button on the source image. The selected image becomes the **source** for the Clone Brush, and the point where the mouse was clicked establishes the cloning **anchor point**. You can change the Source Image at any time, by repeating this operation.

6) Select the stationary 🖼 button. It will deselect the Aligned / non-aligned mode (🖼).

7) Click a mouse button on the **target** image (it will become the active image) or current selection and drag it to paint.

> You will notice that only the selected area and the contents of where you clicked the mouse on the source image will be transferred. If you drag the mouse, the stamp will be applied according to the spacing settings of the brush (and all other settings, like blending mode, auto-fade, etc).

You can draw a straight line going from the last point you painted to the current mouse position if you press the Shift key before clicking the mouse button.

Related items:
Using the Paint brush tool
Using the Air Brush tool
Using the fill tool
Creating New Patterns for the fill tool
Using the Pencil tool
The clone brush tool
Using the clone brush tool to copy parts of another image

Using the drawing tools

For information about Using the drawing tools please read the following topics:

[Drawing with the Line Tool](#)
[Drawing with the Shape tool](#)
[Drawing with paths](#)

Drawing with the Line Tool

To use the Line Tool, click a mouse button on the starting point of the line you would like to draw. Without releasing the button, drag the mouse pointer to the ending point of the line, and only then, release the button. To select which painting color should be used:

> **Foreground color**: click the primary mouse button
> **Background color**: click the secondary mouse button
> **Transparent color**: click either mouse button, **while pressing the Alt** key.

Options for the Line Tool are:
Line
> Select the desired line width

Connected
> Select this option to draw a line starting at the ending point of the previous line.
> This option is useful to draw a sequence of connected lines.

Anti-Aliasing
> Click on this button to drawn a smoothed line, reducing the jagged effects.

If you click the mouse, move it, and then click it again while depressing the SHIFT key, a line will be draw connecting the points.

Drawing with the Shape tool

To use the Shape Tool, click a mouse button on the active image and drag it to draw the currently selected shape. When the size of the shape is satisfactory, release the mouse button. To select which painting color should be used:

Foreground color: click the primary mouse button
Background color: click the secondary mouse button
Transparent color: click either mouse button, **while pressing the Alt** key.

Options for the Shape tool are:
Line
Select the desired line width for the shape borders
Shape
Select the shape you would like to draw, among: Rectangle, Oval, Rounded Rectangle, Square, Circle, and Round Square
Filled
Select this option to fill the shape with the same color used for the border. When this option is not selected, shapes are hollow.
Connected
Select this option to draw another shape starting at the ending point of the previous shape.
Anti-aliasing
Click on this button to reducing the jagged effects of the shape lines.

Drawing with paths

You can use paths as a drawing tool. For details, see [Paths as a drawing tool](#).

Working with text

To use the Text Tool, click the mouse on the active image, where you would like to add the text. The Add Text dialog will be displayed to allow you to type the text you would like to add. Text is created using the options currently set for the Text Tool. Use Ctrl-Enter to insert a new line into the text.

Text can be added to the image in two ways:
As a new floating selection
> The floating selection has the shape of the letters on the text you typed, and is filled with one of the painting colors. As a floating selection, the text can be moved, resized, transformed, and deformed. However, when you commit the selection, the pixels of the image are painted with the pixels of the letters.

As a path
> The path can also be moved, resized, transformed, and deformed, however, it is stored as a set of points, instead of a bit-map (like the selection). The resulting text, when manipulated in terms of physical dimensions and forms, has a much better quality than the text as a selection.

The text tool options are:
Font
Set this option to the font name you would like to use
Size
Set this option to the desired (average) size of text characters

Bold
> Click on this button to select bold characters

Italic
> Click on this button to select italic characters

Underline
> Click on this button to select underlined characters

Strikeout
> Click on this button to select strikeout characters

Left
> Click on this button to left-justify multiple lines of text

Center
> Click on this button to center multiple lines of text

Right
> Click on this button to right-justify multiple lines of text

Anti-aliasing
> This option is only effective when you add the text as a selection. Click on this button to reduce the jagged lines effect.

For more information, see :

Entering text as path

If you are going to transform and deform the text, enter the text as a path. The resulting text will still be a path after the transformations and deformations

To enter text information as path, do the following:
1) Click on the Text tool on the draw tool bar.
2) Select the text properties:
      Font, font size, bold, italic, underlined, strike, justification (left, right, or center) and Anti-aliasing (only for text entered as a selection)
3) Move and click the mouse pointer to the location where you want the text to start.
      The Add Text dialog will be displayed.
4) Select the *Add Text As* option as *Path*.
5) Type the text.
      Use Ctrl-Enter to insert a new line into the text. If you previously used the text tool, the previous text will be still available there. As you type the text, or as soon as you open the dialog with previously existing text, the text will be placed on the image. It will be displayed as solid, but when you add the text as path, only the outline of the letters is displayed.

The outline of the letters displayed is a set of many sub-paths. You can perform all editing options available for paths.

Transforming and deforming text

You can transform and deform text entered as selection or as a path. However, when you apply these operations on a text entered as a selection, the results are not the same when you use the text as a path.

Use the Free Transformation tool to transform the text on a plane, like when you perform perspective distortion.

Use the Free Deformation tool to deform the text in all possible ways. It can be used, for instance, to deform the text along a wave.

If you entered the text as a path, the text will be displayed as the sub-paths that create the outline of the letters.

To transform the text:
1) Click on the Free Transformation button () on the draw tool bar.
    Notice that a rectangular area will surround all the letters.
2) Move the mouse to the text area
    The mouse pointer will change depending on where you position it along the text.
    For details see Graphical Image Transformation (Free Transformation).
3) Transform the text as you wish.
4) Press *Enter* to confirm the transformation (in case the confirm option is checked)

The transformed text will still be a path. You can now apply it to the image.

To deform the text:
1) Click on the Free Deformation button () on the draw tool bar.
    Notice that a rectangular area will surround all the letters. This rectangular area is surrounded by a path like line, composed by anchor points, segments, etc. If you select another shape instead of the rectangular, using the Free Deformation options dialog , this will be the shape that will surround the letters.
2) Move the mouse to the text area.
    The mouse pointer will change to one of the Path pen tools when you position it over path components on rectangular area. You can now edit and deform the surrounding line as in any other path. For details, see Graphical image deformation (Free Deformation).
3) Deform the text as you wish.
4) Press *Enter* to confirm the deformation (in case the confirm option is checked)

The deformed text will still be a path. You can now apply it to the image.

Applying text entered as path by filling it with the fill tool

When you want to apply a text to the image that was entered as a path, use the same procedure for painting, filling and striking the path. For example, to lay the text by filling the letters with the Fill tool:

1) Click on the *Fill* Tool 🖼 on the draw tool bar.
2) Define the settings for the fill tool (color, opacity, fill style, application options, etc.) For details, see [Using the fill tool](#). As you can see, you can create incredible effects in the letters, for instance, by using a gradient fill.
3) Click on the *Path* Tool 🖼 on the draw tool bar.
4) Make sure that the whole path is selected. (You can also fill only some letters using this method, and then paint others using another tool, like the paintbrush tool) For details, see [Selecting the path](#).
5) Click on the *Fill Path* button 🖼 on the draw options bar.

The path will be filled according to the options defined on the *Fill* tool.

Applying text entered as path by painting the path with the paintbrush

1) Click on the *Paintbrush* Tool on the draw tool bar.
2) Define the settings for the *Paintbrush Tool* (brush to be used, application options, etc.) For details, see [Using the Paint brush tool](). You can define feather, wet edges, and many other application choices that will produce different text representation. You can use a custom brush to paint the letter outline with a special figure.
3) Click on the *Path Tool* on the draw tool bar.
4) Make sure that the whole path is selected. (You can also paint only some letters using this method, and then fill others using another tool, like fill tool) For details, see [Selecting the path]().
5) Click on the *Paint Path* button on the draw options bar.

The letters outline will be painted with the options defined.

Entering text as selection

To enter text information as a selection, do the following:

1) Click on the Text tool ![icon] on the draw tool bar.

2) Select the text properties: font, font size, bold, italic, underlined, strike, justification (left, right, or center) and Anti-aliasing (only for text entered as a selection)

3) Move the mouse pointer to the location where you want the text to start and click the mouse at that location.

4) The Add Text dialog will be displayed. Check the *Add Text As* option to *Selection.*.

5) Type the text. Use Ctrl-Enter to insert a new line into the text. If you previously used the text tool, the previous text will be still available there. As you type the text, or as soon as you open the dialog with previously existing text, the text will be placed on the image. The letters will be painted in a solid color using the foreground color.

The resulting text is a floating selection. You can move it by clicking on the any of the selection tools (the Shape Selection ![icon] or the Free Selection ![icon] tool) and moving the text to any location you want.

You can also use the Free Transformation and Free Deformation tools to change the text appearance. However, the best results are achieved when using text entered as path.

When you reach the correct location, you must apply the text to the image, using the menu command *Selections | Paste to image (or SHIFT + V)*. The text will be painted on the image. After that, use the menu command *Selections | None (or SHIFT + N)*.

Image Frames and Animation

LView Pro offers complete support for the creation, editing and previewing of multi-frame images, for the purpose of animation. Multi-frame images are popular on Web graphics publishing, and use the GIF89a graphics file format. At the moment of writing, GIF89a is the only multi-frame image format (aside from movie type formats, like AVI) used for image frame animation.

Animated images are often used on Internet Web pages. LView Pro can create animated images from existing image files (each image file is used to define one frame of the animation) or from scratch.

The menu command **Image | Animation** is only enabled when you have an image with more than one frame.

For more information, see :
Creating animated images
Using the frames tool
Using the Animate Command (Image | Animate)
Starting an animation
Navigating among frames
Creating a very basic animated image

Creating animated images

The basic procedure for creating animated images is:
-Create the frames with the Frames tool
-Set the global animation options with the menu command **Image | Animation**.

Clicking the button on the Draw Toolbar activates the Frames tool, which allows you to add, clone, and delete frames from the active image. A number of other operations related with image frames are also available.

The only graphics file format used for Web animation (aside from movie formats, such as AVI) is CompuServe's GIF, using its GIF89a format version. When the image frames are created, make sure to save the image using this format with the menu command **File | Save As**.

Using the frames tool

Frames Tool

Click on **Frames Tool** on the Draw Toolbar to display the **Draw Options Dialog Bar** for the frame tool. This dialog allows you to modify and execute the following Frame setting options:

Frame

Use this option to navigate among the frames of the active image you wish to view/edit. You can also change the frame number with the Goto Frame command or its keyboard shortcuts.

Left and **Top**

Set these options to the desired left and top coordinates of the current frame within the animation. Image frames do need not to have the same size. If an animation frame changes only a small part of the image, you can make that frame small and position it to cover the affected area of the image. Doing this reduces the overall image file size. The Left and Top frame positions can also be changed using the **keyboard arrow keys while pressing the Alt key.** Use the following keys combination: **Alt + Left** to move one pixel left, **Alt + Right** to move one pixel right, **Alt + Up** to move one pixel up, **Alt + Down** to move one pixel down).

Duration

Set this option to the desired duration of the current frame. When the image is animated, the current frame will be displayed for the duration you select, before advancing to the next frame. **Duration** is expressed in **100ths of a second** (i.e. use 100 to achieve a 1 second duration).

Undraw Method

Select the action that should be taken when the current frame's duration expires, and the animation advances to the next frame. Available methods are:

Undefined

This method leaves the undraw decision to the software performing the animation. That software decides what to do when advancing to the next frame. LView Pro uses the **Leave** method when the **Undraw Method** is set to for **Undefined**

Leave

The image is not changed.

Restore Background

The area painted with the current frame is filled with the selected background color

Restore Previous

The area painted with the current frame is restored to its previous contents (the image that was displayed before the current frame was painted)

T **Use Transparency**

Select this option to activate transparent color processing for the current frame. When this option is selected, transparent pixels in the current frame (pixels that

are painted with the currently selected transparent color) are not displayed during the animation. This option is useful for frames that contain non-rectangular images.

Insert New Frame

Click on this button to insert a new frame after the current frame. LView Pro displays a dialog to prompt for frame dimensions before creating the new frame.

Insert Existing Frame

Click on this button to insert a new frame, after the current frame, from the contents of an existing image file. LView Pro displays a dialog to select the image file name.

Insert Clone Frame

Click on this button to insert a new frame, after the current frame, initialized with the same image as the current frame. This option is useful when creating animations that display similar frames. You can clone frames and then edit the cloned images to introduce animation changes.

Delete Frame

Click on this button to remove the current frame from the animation. LView Pro confirms the deletion before performing it.
ATTENTION. You cannot use any of the undo methods to undo the Frame deletion.

Create Global Color Palette

Click on this button to create a global (single) color palette for all the frames in the animation. This button activates the Create Global Palette dialog. It will create a global (single) color palette for all frames in the active image. LView Pro creates a global palette, and then uses it to convert each frame to palette based format.

Animate Frames

Click on this button to animate the frames in the active image. Click on this button again to stop the animation. You can also animate frames with the menu command Image | Animation and its keyboard shortcut.

Using the Animate Command (Image | Animate)

Use the menu command **Image | Animate** to select **global** animation options for the active image. Global options are **frame relative order and looping**.

Dialog box options:
Frame
> Select which frame to move up or down from this list.

Move Up
> Click on this button to move the selected frame up (swap it with the previous frame).

Move Down
> Click on this button to move the selected frame down (swap it with the next frame).

Count
> Select the number of times the animation should loop. Select **0** to avoid looping: animation will be executed only once from the first to last frame.

Forever
> Check this option to loop forever. When this option is not checked, the image will loop **Count** times.

Starting an animation

Use the menu command **View | Animate**.

Use this command to start/stop animating the active image. Animations can also be started/stopped with the **keyboard spacebar**.

This command is available when the active editor is the image editor and when the active image has more than one frame.

Navigating among frames

Use the menu command **View | Goto Frame**.

Use this command to view or edit another frame of the active image. You can go to the first, last, next, and previous frame. You can also change the frame number on Draw Options

This command is available when the active editor is the Image Editor and when the active image has more than one frame.

Keyboard shortcuts:
Alt + PgUp: Goto previous frame
Alt + PgDn: Goto next frame
Alt + Home: Goto first frame
Alt + End: Goto last frame

Creating a very basic animated image

Animating an object over a base image:

LView Pro provides a way to move one frame over a larger frame using the tool bar hand scroller button while depressing the SHIF key.

Follow the steps below to create a simple animated image and to understand the use of this option:
1) Create a new image with 400 x 400 pixels, Palette based, with 256 colors, white back ground.
2) Press the frames button on the draw tool bar.
3) Create a new white frame with a blue ball, with a white background.
    Click on the Insert New button on the draw options bar.
Specify a new frame of dimensions 50x 50, palette based, 256, white background.
The new frame (frame number 2) will be created at the upper left corner, represented by a small white square.
Set the foreground color using the Color Selection dialog bar to blue, by clicking on one of the palette entries that have a blue color.
Set the background color to White, because we are going to use the Restore Background method. Select the palette entry for white by left clicking on it with the mouse (the mouse pointer must be the dropper)
    Select the shape tool on the draw tool bar. Check *Filled* and select the circle
    shape.
Drag the shape tool over the circle, filling it. You could also have used another tool, or a selection from an image, etc.
Click on the frames tool
    Set the Duration to 100. Set the Undraw method to *Restore Background*.
4) Create a copy of the new frame

    Click on the Insert Clone button . This will create frame number 3. It will have
    the same settings (Duration, Undraw method from the source frame). If
    transparent information was set, it would also have preserved that.
5) Move to frame number 3, by pressing ALT + PgDn or type or selection 3 on the Frame box.
6) Select the hand scroller tool on the tool bar.
7) Press shift and drag the frame number 3 to another location.
    For instance, two times its dimensions to the right and to the bottom. The frame
    #3 is now in a new position in relation to the largest frame of the image, in this
    case, frame #1
8) Repeat the process (Insert Clone, drag) until you have some more frames, representing the ball jumping around the image.

7) Press the Play Animation button ( )

You can change the order of frames using the menu command **Image | Animate**.

Saving Images

For information about Saving Images please read the following topics:

[Saving an image file](#)
[Closing an image file](#)
[File Save Dialog Options](#)
[Deleting an image file](#)
[Saving an image in a different file format](#)

Saving an image file

Use the menu command **File | Save** or its keyboard shortcut ALT + F + S.

Use this command to save the active image to its current name and directory. When you save an image for the first time, LView Pro displays the Save As dialog box so you can name your image. If you want to change the name and directory of an existing image before you save it, choose the Save As menu command. You can also specify the file type, or the file format. For details, see File Save Dialog Options..

If the image file has already been saved, the next **Save** command will not prompt for a name and will overwrite the file on disk.

If you want to save the image with a different name, use the menu command **File | Save As.**

To save an image file with a different file type, see Saving an image in a different file format.

To save files when using OLE2, see Saving an image when using OLE2.

Closing an image file

Use the menu command File | Close to close all windows containing the active document, image or catalog. You can also use CTRL F4.

LView Pro suggests that you save changes to your image before you close it. If you close an image without saving, you lose all changes made since the last time you saved it.

You can also use the control menu command Close by clicking on icon of the caption bar (or title bar) and selection *close* from the list.

File Save Dialog Options

LView Pro provides the following options and commands when saving a file:

Save In
    Enter the File folder where you want to save the image.
File Name
    Enter the file name (with or without extension). LView Pro will use the file extension specified in the *Save as Type* option
Save as Type
    Select the file type extension from the drop list box. For a list of available types, see [File Formats](#).
Files list
    Display a list of the files on that folder, using the *Save As Type* option to identify which files to display, combined with the file name, when using wildcards (* and ?).
Save button
    Click on this button to save the file to the disk.
Cancel button
    Click on this button to leave the dialog without saving the file.
Preview Window
    Displays a snapshot of the file that you are saving
Preview images options
    Defines how you want to preview the image. Options are **In Color, In Grayscale**, and **No Preview**.
Next time default to the same Directory check box
    Check this box if you want LView to open the save dialog using the same folder defined on the last save operation.
Next time default to the same File Type check box
    Check this box if you want LView to open the save dialog using the same file extension on the *Save as Type option* as defined on the last save operation.
File Type Options button
    Click on this button to define options for the file type. For details, see [File Formats](#).
Color Conversion
    Open the color conversion on save dialog. For details, see [File | Preferences | Color Conversion | On Save](#)
Windows options
    Up one level
        Move the current directory up one level.
    Show desktop
        Display the machine desktop.
    Create new folder
        Creates a new folder and allows you to enter the new folder name. Click on the newly created folder to move the current directory to that folder. All

subsequent operations will be performed on the current directory that will be the new folder.

Show file names as list

Display the file names as a list. More files can be displayed using this format without the need for scrolling.

Show file names with details

Display the file name as a detailed list, including Size, Type, Date, and Attributes. You can sort the list by the caption description by clicking on any of the captions. The displayed list will be sorted using that information. Click again to revert the sort order.

Deleting an image file

Use the menu command **File | Delete**.

This command is available when editing an existing image or catalog. Use it to delete the file corresponding to the image or catalog. This command works with the file delete options set for the Windows' recycling bin.

Saving an image in a different file format

When you use the *Save* command for the first time or you use the *Save As* command, LView Pro allows you to define the file type. After the file type is defined, LView Pro performs all the necessary adjustments for saving the file with the new format. You can set the file properties for one specific file clicking on the button File Type Options. For details, see File Save Dialog Options.

Catalog Editor

LView Pro Catalogs are useful for organizing groups of image files, performing common file operations, executing slideshow, or format conversion operations.

For more information, see :
Creating a Catalog
Opening Catalog files
Saving Catalog files
Defining catalog properties
Selecting catalog records
Defining catalog records properties
Defining how to display catalog records
Catalog Navigation Commands
Updating a Catalog
Scan Folder
Sorting catalog records
Finding catalog records
Browsing a Catalog
Catalog Navigation Commands
Performing Slide shows
Converting File Formats
Removing catalog records
Performing File Operations

Creating a Catalog

Use the **File | New** command to create a new Catalog. Select LView Pro Catalog for the type of document to be created, and then select the filename where the new Catalog will be stored.

Then, fill out the *Catalog Properties* with options for the new Catalog. If you are creating a Catalog to perform a Slideshow or Format Conversion operation, you may not need to store Thumbnails. Preventing Thumbnail storage speeds up the creation process, and this option can always be changed in the future. You can add new folders to the list of folders that are automatically searched for files when the Catalog is updated.

Opening Catalog files

To open an existing catalog file use the menu command File | Catalog. It will open the existing catalog file in a new Catalog Editor window. Multiple images and catalogs can be edited, each in its own window. Use the menu command **Window | 1,2,3 …** to switch among the multiple opened documents.

Recently used catalog files may still be in the recently used document list, where they can be directly selected using the Recently used documents list.

Saving Catalog files

Catalog files do not need saving, they are automatically updated.

Defining catalog properties

Use this dialog to view/change the global properties associated with the active catalog.

The following options can be set for the catalog:

Filename

      File name where the catalog is stored. For information only, cannot be changed.

Auto Record Removal

      Select optional update removal policies for catalog records:

      When Image File is Deleted during catalog operation

            Check to delete records when you use the Delete Files command

      When Image File is not Found or unreadable during update

            Check to delete records without image when you use the Update command

Thumbnail Storage

      Select options for thumbnail (small copies of the original image file) storage on catalog records:

      Do not store (this can be changed later)

            Check to avoid thumbnail storage. This option makes the catalog file smaller, and speeds up update operations. This may be useful if you are creating a catalog for the purpose of performing slideshows or format conversion operations. You can change this option after the catalog is created.

      Store with maximum pixel Width and Height of …

            Select the maximum dimensions of a catalog thumbnail. Smaller dimensions result in smaller catalog files.

During Updates, scan these Folders for new/changed Image Files

      Select a list of folders to be automatically scanned for new or changed image files, when you use the Update command.

Add

      Click this button to add a folder to the list.

Remove

      Click this button to remove the current folder from the list.

Cycle back to first slide after last slide is shown

      Check this box to make slideshow operations restart from the beginning after the last slide is exhibited. When this box is unchecked, slideshow operations end at the last slide.

Selecting catalog records

Selecting all records on the catalog
Use the menu command **Catalog | Select All**. It will set all catalog records in selected state.

Selecting individual records on the catalog
Click with the mouse on the record.

Selecting groups of records
Click on the initial record, move to the final record and then depress SHIFT and click on the record. It will select all the records in between the initial and final record.

To add a single record to a group of records
Depress the CTRL key and click on the record. This will include this record on the group of selected records.

See [Browsing a Catalog](#).

Defining catalog records properties

Use this dialog to view or change properties for the selected records in the active catalog.

Most options in this dialog are for information only, and cannot be edited. When more than one record is selected when this dialog is activated, only the slideshow advancement options can be edited. This way, you can change slideshow advancement options for a group, or for all the records with a single operation.

Dialog box options:
Title
> The original file name associated with the catalog record.

Folder
> The folder where the original file is stored.

Size (KB)
> Size of the original file, in Kilobytes.

Type
> The graphics file format of the original file.

Dimensions
> The original image dimensions.

Description
> Type a description of the original image file. Catalog records can be sorted by description.

Slideshow Advancement
> **Interactive (after mouse click, spacebar)**
>> Select this option to make a slideshow operation stop after displaying the original image associated with catalog record. The slideshow will resume after the mouse button is clicked or after pressing the spacebar.
>
> **Timed, after delay (seconds) of**
>> Select this option to make the slideshow operation display the original image associated with the catalog record and then advance to the next record after the time delay expires. Keep in mind that there are additional delays, due to the time consumed to read an image file from the disk. When timed delay is selected, the slideshow **will still advance** if you click a mouse button or key in the spacebar.

Defining how to display catalog records

Use this command to change the way LView Pro displays catalog records. Options are:
- Both Thumbnail and Title (available for catalogs that store thumbnails)
- Thumbnail only (available for catalogs that store thumbnails)
- Title only
- Original image

Note that you can display the same catalog in more than one window, using different options in each window. To open a catalog in more than one window, use the New Window command

Catalog Navigation Commands

You can navigate trough the catalog records using the following commands:

During normal edition:
- Arrow keys
- Page up and Page down keys
- Home and End keys

During Slideshow Operations:
- Right arrow, spacebar and one mouse click advance to the next slide
- ESC key, and mouse double-clicks interrupt the slideshow

Updating a Catalog

Select the Update command. Data stored in each catalog record is compared to the current status of the image file the record represents. If the catalog stores Thumbnails, these are updated to reflect changes made to the original image files. Folders listed in the Catalog Properties dialog are searched for new or changed image files. You can stop the Catalog update operation by selecting **Stop Update** from the Catalog menu.

Scan Folder

Use this command to scan a folder for image files. New catalog records will be created to newly found files, and existing catalog records will be updated if they correspond to any files in the folder being scanned. This command is useful to introduce records for image files stored in folders that are not listed in the Catalog Properties dialog.

Several catalog operations become unavailable during the scan folder operation. While the operation is performed, the Update command in the catalog menu is renamed to Stop Update. You can the scan folder operation at anytime, by selecting Stop Update.

Sorting catalog records

Use this dialog to sort all records in the active catalog. Note that the sort order you select does not become an attribute of the catalog. In other words, the catalog may become unsorted as new records are introduced, or as changes are made to the original image attributes used as sort keys.

Dialog box options:
First, Second, and Third Keys
> Select the sort keys from these lists. The second and third keys are used to break ties, and may be set to None when not needed. Available sort keys are File Title, File Pathname, Record Description, File Size, File Date, File Type, Image Area (width multiplied by height), Image Width, and Image Height.

Ascending
> Check this option (there is one associated with each key) to instruct LView Pro to sort the associated sort key in ascending order. When this option is unchecked, LView Pro sorts the key in descending order.

Finding catalog records

Use this dialog box to find a record among all records in the active catalog. Records may be searched by the original filename or by their descriptive text.

Dialog box options:
Enter full or partial text
Type, in full or in part, the file name or descriptive text you are trying to locate.
Find by Title
Check this option to search for a file name (Title).
Find by Description
Check this option to search for a record description.
Find
Click this button to start the search.

You can repeat the find operation by using the menu command Catalog | Repeat Find. It will repeat the find operation from the current record in the catalog, using the same options as in the last Find Record command.

Browsing a Catalog

Use the **arrow keys** to move from one record to the other. Use the **PgUp** and **PgDn** keys, to advance or return one page at a time. The keys **Home** and **End** take you to the first and last records.

Selecting Records

Press the **Shift** key while browsing with the keyboard to select records visited. When the **Shift** key is pressed, you can also select groups of records by clicking the mouse button on a last record of the group. Records are selected from the current one to the one you click. Press and hold the **Control** key and click the mouse button on a record, to toggle its selected state.

Moving Records

Records may be moved within the catalog to change the order of processing for slideshows or browsing operations. Click the mouse button on selected records and drag it to the position where you would like to move them. Records are moved to the position preceding the record where the mouse button is released.

Catalog Navigation Commands

During normal edition:

- Arrow keys
- Page up and Page down keys
- Home and End keys

0   During Slideshow Operations:

- Right arrow, spacebar and one mouse click advance to the next slide
- ESC key, and mouse double-clicks interrupt the slideshow

Performing Slide shows

LView Pro performs Slide shows on the original image files associated with Catalog records. The quickest way to perform a slideshow, or to browse images in Full Screen mode, is to create a catalog without Thumbnails. Catalogs that are not required to store Thumbnails create and update quicker than those that do store them. Once the Catalog is created, use the Start Slideshow command.

Select the *Start Slideshow* command to start a slideshow. The original image associated with each catalog record is exhibited in Full Screen. Exit the slideshow with the ESC key, or by double-clicking a mouse button. The order of records in a slideshow is the same as their order in the Catalog. Each catalog record determines how the slideshow should proceed after displaying its associated image. You can change record slideshow properties with the *Record Properties* command, for a single record or for multiple records. Use the *Catalog Properties* command to select if slideshow operations should cycle back to the first slide after the last one is displayed.

You can customize slide advancement using the Record Properties command for an individual record or a group of catalog records. To change the order of slides, remove slides, etc., and for a list of navigation commands, see the topics about the Catalog Editor.

Converting File Formats

Use this command from the Catalog menu to convert the format of files in the Catalog. You must define target graphics file format.

Dialog box options:

Select Target File Format
Select the target image file format from the list. The image files associated with the selected catalog records will be converted to that format.

Options
Click to configure options for the target file format.

Overwrite Original Image Files
Select this option to overwrite the original image files with the converted files.

Store Converted Files on Folder
Select this option to store converted files on a specified folder. Original files may still be overwritten, if they reside on that folder.

Browse...
Click on this button to select the folder where converted files should be stored.

Stop on errors
Check this option to make LView Pro stop the format conversion operation if an error occurs. If this option is not checked, LView Pro will proceed to convert the next file after an error occurs.

Conversion Log
A log of the conversion operations is displayed in this window.

Save Log
This option is available after the conversion operation is completed, and allows saving the Conversion Log into a text file.

Start
Click on this button to start the conversion operation. During conversion, this button is renamed to Stop. Click on Stop anytime during the conversion operation and LView Pro will interrupt the conversion after finishing the conversion of the current file.

Removing catalog records

Use the menu command **Catalog | Remove records**.

This command will remove the currently selected records from the catalog.

ATTENTION. Once a record is deleted, it cannot be recovered using any of the undo methods. Only the record is deleted, the original image, if present, is preserved.

Performing File Operations

File **Rename**, **Move**, **Copy**, and **Delete** operations can be performed to the original image files associated with selected catalog Records. All File Operations are performed using the Windows shell functions, which allows them to be undone with the Windows Recycle Bin.

Select the records you would like to perform operations with (Rename operations can be performed to a single record at a time), and then use one of the following menu commands:

For more information, see :
Rename File
Delete File(s)
Moving Files
Copying files

Rename File

Use this command to rename the original file associated with the selected record.

This command is available when a single record is selected in the active catalog.

Dialog box options:
Current name
> Informs the current file name of the original image.

New name
> Type the new file name for the original image.

Delete File(s)

Use this command to delete the original files associated with the selected catalog records. Optionally, the records are also removed from the catalog, depending on the current settings of the Catalog Properties dialog.

This command works with the file delete options set for the Windows' recycling bin.

Do not confuse with remove records, that remove the records from the catalog, but not the files that are associated with the catalog records.

Moving Files

Use this command to move the original files corresponding to the selected catalog records into a destination folder. The catalog records are updated to reflect the change of folder.

Copying files

Use this command to copy the original files corresponding to the selected catalog records into a destination folder.

Printing

Printing an image or catalog

Use the menu command *File | Print* to print the active image or catalog. Printing is performed according to the currently selected Page Setup options. You can preview how images and catalogs will be printed using the Print Preview command.

Previewing the document before printing

Use the menu command *File | Print Preview* to preview how the active image or catalog would be printed using the currently selected Page Setup options.

Page Setup

Use the menu command *File | Page Setup* to select options for printing the active image or catalog.

Palette operations

Color Palette

A color palette is a table of RGB color descriptions. Normally, color palettes are limited to 256 entries, indexed from 0 to 255. On a palette-based image, each pixel contains a palette entry, a number from 0 to 255, which can be stored in a single computer byte.

Notes about palette based images

- Palette based images are limited to 256 colors (the max. number of palette entries).

- Because of this limitation, on the number of colors, several editing operations cannot be applied to palette based images. If you wish to perform an operation that is restricted to True Color images, use the Color Depth dialog to transform the image into True Color format. Your display mode must be a True Color mode.

- More than one palette entry can contain the same RGB color specification

- Two pixels that are painted with the same RGB combination may refer to different palette entries

- The memory, in bytes, required to store an uncompressed palette based image is roughly equal to the product of the image's dimensions (width x height) in pixels.

For more information, see :
Color Selection dialog bar palette options
Creating Optimized Palettes for Groups of Images

Color Selection dialog bar palette options

Changing the color specification of a palette entry
Available for palette based images: Double click either mouse button on the palette entry you wish to modify. Select the new color on the color selection dialog that is displayed.

Operation Buttons (available for palette based images)

 Mask
Press this button to turn on the **Mask** feature. When the Mask feature is on, clicking the dropper tool on the image or on the Color Palette Area activates a visual cue to identify pixels painted with the selected color: Pixels in the image are all painted **Black**, except pixels painted with the selected color, which are painted **White**.

 Open
Click on this button to open a previously saved color palette specification from a disk fille.

 Save
Click on this button to save the color palette specification to a disk file, for future use.

 Sort
Click on this button to sort palette entries using the Sort Palette Entries dialog.

 Swap
Click on this button to swap palette entries using the Swap Palette Entries dialog.

 Delete
Click on this button to delete palette entries using the Delete Palette Entries dialog

For more information, see :
Swap palette entries
Sort Palette Entries
Delete Palette Entries
Counting the number of colors used

Swap palette entries

Use this dialog to swap the color specification between two palette entries.

This dialog is available when the active image is in palette based format, and is accessible through a button in the Color Selection Dialog Bar.

You have the following options:

Select Entries to Swap

    Foreground with Background
    Select this option to swap the palette entries associated with the Foreground and Background colors.

    Background with Transparent
    Select this option to swap the palette entries associated with the Background and Transparent colors.

    Transparent with Foreground
    Select this option to swap the palette entries associated with the Foreground and Transparent colors.

Sort Palette Entries

Use this dialog to sort the palette entries in the color palette associated with the active image.

Dialog box options:
Sort Key
>   **Utilization**
>   Sorts entries based on the number of pixels that utilize each entry.
>   **Brightness**
>   Sorts entries based on the brightness of the color at each entry.
>   **RGB, GRB, BRG, RBG, GBR, and BGR**
>   Sorts entries based on their Red, Green, and Blue component values, in the order of the component initials, e.g. RGB means Red first, Green second, Blue third.
>   **User defined expression on Variables**
>   Sorts entries based on a user defined expression on the variables described on the dialog box. For instance, to sort entries by the sum of their Red, Green, and Blue components multiples by their utilization, you would enter: (R+G+B)*U.

Range
>   **First palette entry to sort**
>   Set this option to the index of the first entry to be included in the sort operation. For instance, to exclude the first 8 palette entries from the sort operation, set this option to 8 (palette indices start at 0).
>   **Last palette entry to sort**
>   Set this option to the index of the last entry to be included in the sort operation. For instance, to exclude the last 8 palette entries in a 256 color palette from the sort operation, set this option to 247 (palette indices start at 0, the 256th entry is numbered 255).

Order
>   Select between Ascending and Descending order.

Delete Palette Entries

This dialog is available when the active image is in palette based format.

Use this dialog to delete entries from the color palette associated with the active image. Pixels that are painted using deleted entries are re-mapped to remaining entries by a nearest color matching algorithm. This command is useful for reducing the number of colors in an image, when the image does not use (or does not need to use) a large number of palette entries. Palette based images with fewer palette entries may result in smaller files depending on the format they are saved to.

Dialog box options:
Select Entries to Delete
    Unused Entries
        Check this option to delete entries that are not used by any pixels in the image.
    Foreground Entry
        Check this option to delete the entry associated with the foreground color.
    Background Entry
        Check this option to delete the entry associated with the background color.
    Transparent Entry
        Check this option to delete the entry associated with the transparent color.
    Entries used by less than … pixels
        Check this option to delete entries that are used by less than a total number of pixels you select. Using this option with a 0 value is equivalent to selecting Unused Entries.

Counting the number of colors used

This dialog is displayed when you select the Count Colors command and the active image is in palette based format.

This dialog informs the total number of unique colors that are actually used (Colors Used) and, for each palette entry, the total number of pixels that are colored with the entry's color specification.

Creating Optimized Palettes for Groups of Images

LView Pro can create a single color palette optimized for the colors found on a group of images. The primary purpose of this operation is to find a color palette suitable to display the various frames on an animated image. This feature is also useful if you are creating a group of images to be displayed on the same Web page, or to be used by the same application, e.g. a computer game.

To create the optimized color palette:

1. Use the *File | Open* command to bring one of the images into LView Pro.
2. After opening the first image click on the Frames button on the Draw toolbar to activate the Frames Draw Options dialog bar.
3. Use the Insert Existing button on the Frames Draw Options dialog bar to add each of the other images as a new frame of the active image.
4. After you are done inserting images, use the Global Palette button on the Frames Draw Options dialog bar to create the optimized color palette. A dialog box will open to allow you to set options for the palette creation.
5. After creating the optimized color palette, LView Pro will convert each image frame to use the newly created palette.
6. If you wish, you can save the optimized color palette to a palette disk file, by using the Save Palette button on the Color Selection dialog bar.

Hint: To convert other images to use the optimized palette created above:

1. Save the optimized palette to a disk file, as described in item 6 above.
2. Use the *File | Open* command to load the image you wish to convert into LView Pro
3. Use the *Image | Color Depth* command to convert the image, and select the option to read a pre-defined palette from the palette file you saved.

Miscellaneous

For information about Miscellaneous please read the following topics:

[Installing and Starting LView](#)
[Color Models](#)
[Creating Transparent Images](#)
[Understanding Expressions](#)
[Settings for LView Pro (Preferences)](#)
[OLE2](#)
[Acknowledgments](#)
[Send command](#)

Installing and Starting LView

When LView Pro evaluation version is executed, it displays the evaluation information screen.

When LView Pro full version is executed for the first time, it prompts for the username and id to activate the program.

When LView Pro (both evaluation and full version) is executed for the first time, it opens the Create Taskbar Start Menu dialog (for details, see [File | Preferences | Taskbar Start Menu](#)). After this step, LView Pro opens the File Type Association dialog (for details, see [File | Preferences | File Type Associations](#)).

You can also open the File Type Association dialog using the menu command File | Preferences | File Type associations.

You can also open the Create Taskbar Start Menu dialog using the menu command File | Preferences | Taskbar Start Menu.

Color Models

For a detailed description of color models, refer to technical documents about color representation. Our description is restricted to common color models used in computer graphics in LView Pro.

Color models are used to describe colors, breaking it down to color components. Given a set of color components and a color model, one can re-construct a color.

For more information, see :
[The RGB model](#)
[The HSL and HSV models](#)
[The YCbCr and YUV models](#)

The RGB model

The RGB model is used to specify colors in display devices. Windows bitmaps are encoded using this model and so are several other graphics file formats.

The RGB model breaks colors into three components: Red, Green, and Blue (RGB). Virtually every computer software, and so does LView Pro, encodes RGB using one byte for each component, which yields 256 values per component and nearly 17 million (256 * 256 * 256) possible color combinations.

LView Pro uses the RGB model in most occasions. The Red Green, and Blue pre-defined Color Adjustment operation, for instance, works directly with the RGB components of each pixel in the image, allowing you to add or subtract a constant value from each component. For an example of RGB encoded colors, see Computer Image Representation

The HSL and HSV models

HSL stands for Hue, Saturation, and Luminosity. HSV stands for Hue, Saturation, and Value. HSL and HSV are different but we will focus on what they have in common.

Unlike the RGB model, HSV and HSL aim to describe colors in a way that is suitable for humans to describe it. For instance, if an image looks dark, we can lighten it up by increasing the Luminosity of all pixels in the image. If an image looks too colorful, we can reduce the Saturation component. If skin looks too yellow or too green, we can adjust the Hue.

Roughly speaking, the Hue component describes the hue of the color (as expected), the Saturation component describes the amount of color, and the Luminosity and Value components describe the brightness of the color. Maximum Luminosity always produces white, and minimum luminosity produces black, no matter what the Hue or Saturation components are. Absence of Saturation produces grayscale images.

LView Pro uses HSL and HSV in a number of occasions:
• The Color Selection Dialog Bar can display colors using HSL (or RGB) components.
• The Colorize Selection Dialog accepts color descriptions using the HSL model, in addition to YUV (see below).
• The Hue, Saturation and Value Pre-defined Color Adjustments allows you to manipulate image or selection pixels in terms of HSV components.
• The Advanced Color Matching algorithm can compare colors by their Hue components.

The YCbCr and YUV models

YCbCr and YUV are different models, but again we will focus on their commonalties. The Y component represents brightness, much like the Luminosity in HSL. The Cb (U) and Cr (V) components represent color. YUV and YCbCr (or similar models) are used in a variety of occasions, including television broadcast, JPEG compression, Kodak Photo CD format, MPEG encoding, etc. YUV offers greater resolution than HSL, in the sense that changes in YUV component values are more perceptually uniform.

LView Pro uses YUV and YCbCr in the following occasions:

- The Colorize Selection Dialog accepts color descriptions using the YUV model, in addition to HSL. Using YUV in this dialog may allow you to find colors that are more precise for the image you are trying to colorize.
- LView Pro can split an image into YUV color channels, and combine YUV channels to produce an image.
- The YCbCr Pre-defined Color Adjustments allows you to manipulate image or selection pixels in terms of YCbCr components.
- The Advanced Color Matching algorithm can compare colors by their Brightness (Y) components. This is more precise than using the L component of the HSL method.

Creating Transparent Images

Images with transparent background are often used on Internet Web pages. LView Pro can save images with transparent color information in CompuServe's GIF graphics file format, using its GIF89 format version.

For more information, see :
[Transparent Color](#)

Transparent Color

Images saved into GIF file format must be in **palette-based format**. The transparent color is, in fact, one of the image's palette entries. Software that exhibits images using transparency attributes, do not display pixels that would be painted using the color specification in that palette entry. That's how the transparency effect is achieved.

Follow these steps to produce an image with transparent pixels:
1) Make sure the image is in palette based format
> Use the menu command **Image | Color Depth** to check if the image is palette based, and to change it into that format, if needed. This step must be performed before all others.

2) Select the palette entry corresponding to the transparent color
> Use either the Dropper tool or the Color Selection Dialog Bar to select the Transparent color for the image. The *Mask* feature in the Color Selection Dialog Bar helps you determine which palette entry is used to paint the pixels you would like to make transparent. If the pixels you would like to make transparent are painted using more than one palette entry, you will have to paint them all using the same entry (there can only be one transparent color - palette entry). The Color Replacer tool is very useful for this task. You can also use the menu command *Selection | Remove Transparent* to perform intermediate steps.

3) Select GIF file format options
> Use the menu command **File | Preferences | Graphics File Formats** to access the GIF options dialog. On that dialog, make sure that the options **GIF89a** and **Save Transparent Color Information** are both selected. When both these option are selected, image frames that have the "Use Transparency" attribute selected (see next step) are saved with transparent color information. When either or both of these options are not selected frames are not saved with transparent color information, regardless of their individual settings.

4) Select Frame Transparency Options
> Click on the Frames button on the Draw toolbar, and press the Use Transparency button

 on the corresponding Draw Options dialog bar. One image may contain several frames, only the frames that have this attribute selected are saved with transparent color information.

5) Save the image to a file using the GIF format
> Use the menu command **File | Save As** for that purpose, select the GIF format from the list of available formats.

Understanding Expressions

LView Pro has an embedded expression evaluator software, capable of evaluating floating point arithmetic and logic expressions over constants and variables. You can think of it as a fancy calculator.

LView Pro uses Expressions to
• Specify user-defined Color Adjustment operations.
• Specify user-defined Transformation operations.
• Specify user-defined palette entry sort keys.

For more information, see :
How to use Expressions

How to use Expressions

When a dialog box requires an expression, it displays the list of available variables and descriptions in the context. Some of the variables represent the data being manipulated, other are adjustment factors that may be changed when executing the operation. Write the expressions using these variables and the operators, functions and constants listed below.

Operators

+ - * /	Addition, subtraction, multiplication and division
%	Remainder
^	Exponentiation
( )	Grouping
=	Assignment
== !=	Equal to, different than
< > <= >=	Less than, greater than, less or equal, greater or equal
! && ||	Logical not, logical and, logical or
? :	Ternary assignment
;	Expression separator (allows you to write a sequence of expressions anywhere an expression is used)

Built-in Functions (trig functions operate with angles in radians)

Sqrt (X)	Square root of X
Abs (X)	Absolute (unsigned) value of X
Sin (X)	Sine of X
Cos (X)	Cosine of X
Tan (X)	Tangent of X
Log (X, Y)	Logarithm of X on base Y
Ln (X)	Logarithm of X on base e
Exp (X)	e raised to X
Floor (X)	X rounded down
Ceil (X)	X rounded up
CoTan (X)	Cotangent of X
Sec (X)	Secant of X
CoSec (X)	Cosecant of X
ArcTan (X)	Arc-tangent of X
ArcSin (X)	Arc-sine of X
ArcCos (X)	Arc-cosine of X
HSin (X)	Hyperbolic sine of X
HCos (X)	Hyperbolic cosine of X
HTan (X)	Hyperbolic tangent of X

Constants

Pi and e

Settings for LView Pro (Preferences)

For information about Settings for LView Pro (Preferences) please read the following topics:

[File | Preferences | Color Conversion | On Open](#)
[File | Preferences | Color Conversion | On Save](#)
[File | Preferences | Color Profiles](#)
[File | Preferences | File Type Associations](#)
[File | Preferences | Graphic File Formats](#)
[File | Preferences | Mouse Pointers](#)
[File | Preferences | Recent File List](#)
[File | Preferences | Selections Marquee](#)
[File | Preferences | Taskbar Start Menu](#)
[File | Preferences | Tool Bars & Menu Icons](#)
[File | Preferences | Undo/Redo Levels](#)

File | Preferences | Color Conversion | On Open

This command is only available when Windows is set to use a palette based display mode

Some image file formats are capable of storing images in True Color format, or images without color palettes. When such image files are opened, and Windows is set to use a palette based display mode, LView Pro automatically converts the image into palette based format. Use this dialog to select how this type of Color Depth conversion should be performed.

Color Conversion on Open is not necessary when Windows is set to use a True or High color display mode. In this case, this dialog will not be available.

File | Preferences | Color Conversion | On Save

Some image file formats are not capable of storing images in True Color format, or images without color palettes. When LView Pro is asked to save a True Color image in such image file formats, it automatically converts the image into palette based format. Use this dialog to select how this type of Color Depth conversion should be performed.

File | Preferences | Color Profiles

This command allows you to set the color management options, if supported by your system.

File | Preferences | File Type Associations

This option allows you to create or delete file type associations with LView Pro.

For more information, see :
[File Type Associations Dialog](#)
[Purpose of establishing file type associations with LView Pro](#)
[Adding new file extensions to be handled by LView Pro](#)

File Type Associations Dialog

File types (extensions)
File type means file extension. The type of a file named "**image.bmp"** is "**.bmp"**.

Automatic file association
LView Pro automatically associates itself with image file types that are **not associated with other applications**. LView Pro only changes existing associations when requested to so, through this dialog.

Other image processing applications may redirect file type associations to themselves without consulting you first. If this happens, you can return to this dialog to re-establish lost associations with LView Pro.

The following options are available on the dialog:

Types (Extensions)
　　　Lists the file types that will be associated with LView Pro if you exit this dialog with **OK**.
Add Defaults
　　　Click to add the default file types to the **Types** list.
Add Type
　　　Click to add a new type to the list. For instance, you may have files with **.jpeg** extension, and wish to associate them with LView Pro.
Remove Type
　　　Click to remove the selected type from the **Types** list.

Related items:
[Purpose of establishing file type associations with LView Pro](#)
[Adding new file extensions to be handled by LView Pro](#)

Purpose of establishing file type associations with LView Pro

- Windows Explorer
  - When you double click on a file associated with LView Pro, the Explorer automatically starts LView Pro to view/edit the file.
  - When you click on a file associated with LView Pro using the secondary mouse button, the Explorer displays a menu from where you can open or print the file
  - The Explorer menu command **File | Print** works with files associated with LView Pro
- Web, FTP, Email software
  - If the Web/FTP/Email software you are using consults the Windows Registry, it will automatically start LView Pro to view/edit images downloaded from the Internet or embedded in email messages.
- Other software
  - Any software that consults the Windows Registry will start LView Pro to view/edit files associated with LView Pro.

Related items:
File Type Associations Dialog
Adding new file extensions to be handled by LView Pro

Adding new file extensions to be handled by LView Pro

Use the menu command *File | Preferences | File Type* Associations and click on the *Add Type* button.

The dialog will ask you for the new extension.

Type the file extension you wish to add. For instance: .jpeg

Related items:
File Type Associations Dialog
Purpose of establishing file type associations with LView Pro

File | Preferences | Graphic File Formats

Use this command to activate a dialog to configure options for handling different graphics file formats.

For more information, see :
[JPG Options](#)
[BMP Options](#)
[GIF Options](#)
[TIFF Options](#)
[PBM Options](#)

JPG Options

Use this dialog to select options for the JPEG graphics file format.

Dialog box options:

Use Progressive JPEG Compression Format

    Select this option to save JPEG files using progressive compression format.

Perform Entropy Optimization

    Select this option to perform an entropy optimization algorithm when saving JPEG files. This may produce slightly smaller files.

Save in JPEG Grayscale Format

    Select this option to save JPEG files using grayscale format. Color information is lost in the process. Slightly smaller files are produced.

Compression Quality Factor

    Use this option to trade-off between image quality and compression ratio. Higher values produce larger files, preserving more image quality. Lower values produce smaller files, preserving less image quality.

Related items:
[BMP Options](#)
[GIF Options](#)
[TIFF Options](#)
[PBM Options](#)

BMP Options

Use this dialog to select options for the Windows Bitmap graphics file format.

Dialog box options:
Create Files Using Format
      Select among Windows Bitmap and OS/2 Bitmap.

Related items:
[JPG Options](#)
[GIF Options](#)
[TIFF Options](#)
[PBM Options](#)

GIF Options

Use this dialog to select options for the CompuServe GIF graphics file format.

Dialog box options:
Create Files using Version
> Select the version to use. Version GIF87a cannot be used if animations or images with transparent colors are to be created.

Use Interlaced Format
> Select this option to create interlaced GIF files.

Save Transparent Color Information (GIF89a only)
> Select this option to save transparent color information (version must be GIF89a). If this option is not selected, transparent color information is not saved.

Related items:
[JPG Options](#)
[BMP Options](#)
[TIFF Options](#)
[PBM Options](#)

TIFF Options

Use this dialog to select options for the Aldu's TIFF graphics file format.

Dialog box options:
Create File With
> Select the type of compression to be used when creating TIFF files.

Related items:
[JPG Options](#)
[BMP Options](#)
[GIF Options](#)
[PBM Options](#)

PBM Options

Use this dialog to select options for the Jef Poskanzer's Portable Bitmap graphics file formats.

Dialog box options:
Create Files In
Select between **Binary** and **Ascii** formats. Files in Ascii format can be edited using a text editor such as Windows Notepad.

Related items:
JPG Options
BMP Options
GIF Options
TIFF Options

File | Preferences | Mouse Pointers

You can specify the following options for the mouse pointers:

For Painting tools (paint brush, clone brush, air brush, etc)

While positioning the pointer:

>**Normal Pointer**: the pointer displayed changes to reflect the tool that is being used
>**Precision Pointer**: the pointer displayed is always the precision pointer.
>**Brush Image**: the pointer displayed is the actual image of the brush being used.
>**Brush Threshold**: the pointer displayed is the threshold representation of the current brush.
>**Brush outline**: the pointer displayed is the out line of the current brush.

While painting:

>**Normal**: same as above.
>**Precision**: same as above.
>**Brush Image**: same as above.
>**Brush Threshold**: same as above.
>**Brush outline**: same as above.
>**Hide Pointer**: no mouse pointer is displayed while painting.
>Select the option **Same pointer used while positioning** for displaying the same mouse pointer used while positioning.

For Other tools:
>**Normal pointer**: same as above.
>**Precision pointer**: same as above.

File | Preferences | Recent File List

Use this dialog to select the number of files that are available on the File menu, in the 1, 2, 3, 4 ... file list.
See [Opening the last files used](#).

Changes made in this dialog will only take place the next time LView Pro is started.

Dialog box options:
Number of files in the Recent File list
> Type the desired number of files.

File | Preferences | Selections Marquee

Use this dialog to specify what areas will be displayed according to the transparency of the selection. Areas with transparency below the minimum transparency will not be enclosed by the selections marquee.

Dialog options:
Minimum Transparency
>   (threshold)
>   Type the percentage that will define the opacity of the areas that will be surrounded by the selection marquee. For more details see [Semi transparent selections](#).
Display warning when no part of selection is above threshold
>   During the definition of the selection area, if this check box is checked, a warning will be displayed informing that no area of the selection will be displayed surrounded by the marquee. Keep in mind that the selection is there, but no marquee is being displayed to show it. You can see the selection by using the menu command   Selection | Copy to Editor, and then switching to the new created windows with the selection.

File | Preferences | Taskbar Start Menu

Use this dialog to create a menu for LView Pro on the Windows taskbar, accessible through the **Start** button. The menu will be created under the **Programs** submenu.

Dialog box options
Menu name (under Programs menu)
      Type the desired name for the menu.
Create Menu
      Click to create the menu and exit the dialog.
Existing folders
      If you wish to add LView Pro to an existing menu, select it from the list **(not recommended)**.

File | Preferences | Tool Bars & Menu Icons

Use this dialog to specify how LView Pro will display the buttons on the tool bars and the use of "Menumonic" icons while displaying the menu commands.

Use Flat Tool Bar buttons
Check this option to display the button on the tool bar without any line delimiting them.

Use "Menumonic" icons
Check this option to display command related icons on the menu choices of the the menu commands.

File | Preferences | Undo/Redo Levels

Use this dialog to select the maximum number of Undo commands that can be applied to image frames. Each time an Undo command is applied, the action can be re-done by applying the Redo command.

Note that some editing operations require and generate more than one undo operation. For instance, when a non-floating selection is cut from the image, and moved in a single mouse operation, there will be separate undo levels for each step of the operation:
- Moving the selection
- Painting the image with the background color
- Floating the selection

The default number of Undo/Redo levels is 64. It can be set up to 10,000 levels, limited only by disk space.

Changes made in this dialog will only take place the next time LView Pro is started.

Dialog box options:
Number of Undo/Redo Levels
Select the maximum number of undo levels. Select 0 to prevent LView Pro from storing undo or redo information. Higher values require more disk space for temporary files.
Windows Temporary file folder
This option cannot be edited, it informs the location of the temporary file folder as designated by Windows. Undo/Redo buffers are stored in temporary files on that temporary file folder. Each frame of each image has its own Undo/Redo buffers.

OLE2

LView Pro implements the **LView Pro Image** OLE2 document type. You can embed images in word processing documents, databases, and virtually any application that supports OLE2. Select the menu command **Insert | Object** on the software you are using, and select LView Pro Image from the list of available objects. LView Pro will start and create a new image that will be embedded in the document where it was inserted.

When editing an image embedded in an external OLE2 container, this command is replaced by the *Save Copy As* menu command.

To insert an OLE2 object in a Windows application, consult the documentation manual. In office application, it is usually on the *Insert* menu, item *Object*. The object type to be inserted is *LView Pro image*.

For more information, see :
Saving an image when using OLE2
File Formats

Saving an image when using OLE2

Use the menu command *File | Save Copy As*.

This command is only available when editing an image embedded in an external OLE2 container. Use it to save a copy of the active image. It replaces the menu command *Save As*.

When editing an image embedded in an external OLE2 container, the menu command *File | Save* is not available.

File Formats

It is beyond the scope of this document to provide detailed information on file formats. LView Pro supports View Pro supports the formats most commonly found on the Internet and in Microsoft Windows environments.

BMP
> Windows and OS/2 Bitmap

GIF
> CompuServe's Graphics Interchange Format, including subformats GIF87a and GIF89a. Support for transparency, interlacing, and animation.

JPG
> Joint Photographer's Experts Group, lossy compression, JFIF format. Support for progressive encoding and decoding.

PBM
> Jef Poskanzer's Portable Bitmap.

TGA
> Truevision TARGA.

PCX
> ZSoft's PCX.

TIFF
> Aldu's Tagged Image File Format.

Acknowledgments

- This software is based in part on the work of the Independent JPEG Group.

- Windows, Windows 95 and Windows NT are trademarks of Microsoft Corporation.
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- The Graphics Interchange Format (C) is the Copyright property of CompuServe Incorporated. GIF (SM) is a Service Mark property of CompuServe Incorporated.
- The PCX file format was created by ZSoft Corporation.
- Truevision, TARGA and TGA are registered trademarks of Truevision, Inc.
- TIFF (TM) is a trademark of Aldus Corporation.
- Portable Bitmap Utilites, PBMPLUS and PBM, PGM, PPM formats are the copyright property of Jef Poskanzer.

- TIFF support is based in part on Sam Leffler's TIFF library, which requires the following copyright notice:
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Send command

This command is available when the active editor is the Image Editor. The active image must have been saved to the disk, or opened from an existing file, before this command is made available.

Use this command to send the file from where the active image was read from, or saved to, through electronic mail. This command presents a mail window with that file attached to it. You may then fill out the To: field, Subject: field, etc., and add text to the body of the message if you wish. When you are finished, you may click the "Send" button to send the message.

Help Topic Not Found

Sorry! The help topic could not be found!

Please make a note on the topic you were looking for help and send an email to mmedia@lview.com reporting that.

Thank you!