User manual

Akaba – New Concept

for Casablanca Avio, Prestige and Kron

MACRO SYSTEM

Safety notices

To avoid making mistakes during operation, we recommend that you carefully follow the instructions provided in this manual.
We would also like to point out that **Akaba – New Concept** has been designed with the hobby enthusiast in mind.
We have taken a great deal of care while programming and checking this software.
Nevertheless, since it is not possible to guarantee totally error-free software applications in all environments and at any time, we unfortunately cannot rule out the possibility that some errors may have crept in. If, contrary to all expectations, this is indeed the case, we shall remedy any errors in the program and supply the affected customers with the new software free of charge. We cannot, however, accept any liability for loss of data/time or any consequential damages that may occur as a result, particularly since we have no influence over correct software installation and operation by the customer. **MacroSystem Digital Video AG** and its dealers therefore cannot be held liable for any defects or unintentional damage in connection with the installation or use of **Akaba – New Concept**.
MacroSystem Digital Video AG and its dealers do not guarantee error-free use of the software or complete flawlessness of the program.
Any implied guarantee is null and void, including guarantee of suitability of the software or operating instructions for a particular purpose.
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1. General

1.1 General

Thank you for buying **Akaba – New Concept**!

We thank you for your trust and hope that this product will meet your expectations.

Akaba – New Concept will let you get more use out of your Casablanca than ever before.

We are at your disposal for any questions or suggestions you may have.

You will find addresses and telephone numbers in the Casablanca manual.

Please have your device's serial number or your customer number ready when contacting us.

1.2 What is Akaba – New Concept?

Akaba – New Concept is a completely new program for manually editing single frames or video scenes. You can retouch, modify or extend your own individual frames in many ways.

Three different operating modes give Akaba a wide range of possiblities that are easy to use and implement.

Draw mode (drawing and animation mode) features all the usual possibilities for drawing. Lines, circles, polygons and surfaces can be drawn with widely varying pencils and attributes. You can create graphic images or extravagant titles. The drawing you create can be moved during the course of the scene, (as is done in the program **PIP Studio**).

Retouch lets you select and manually edit each individual scene frame. The supplied tools let you easily conceal small dropouts or other undesired elements. You will find special copy stamps in addition to the normal drawing tools.

Gamma lets you correct brightness, contrast, saturation, RGB, etc. - and not just for the entire frame, but also separately for self-defined areas, even with variable intensity.

For example, say the image in the lower area is too dark, but the sky is appropriately exposed. Normally the video would be unusable, but correcting it is no problem for the mask function of **Akaba – New Concept** (see application example 5.3 **Partial brightness correction**.).

Akaba – New Concept saves all settings, pencils and brushes for each of the three operating modes.

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2. Installation and Starting the Program

In order to install **Akaba – New Concept** you will need the SMART EDIT system software (at least version 2.3).
The system version is displayed in the information field of the **System Settings** menu (lower left).

Leave your Casablanca turned on and select the **Install Product** button in **System Settings**. After the corresponding window has appeared, insert the installation SmartMedia card into the Casablanca SmartMedia reader so that the gold contacts are facing down and the folded corner is pointing forward to the left (in the direction of the Casablanca).

After you have inserted the card, you will see the software **Akaba – New Concept** displayed in the window. Select it in the list and click on **Activate**. A number block is displayed for entering the enable code you have obtained from your dealer. After that, a message is displayed indicating that installation is finished. You can then remove the SmartMedia card.

If you want to install the program as a demo version, click **Activate**, and then click **Cancel** in the number code window. The word **demo** now appears after the program name. Click on **OK** to close the window and then remove the SmartMedia card. **Akaba – New Concept** is now installed as a demo version.

Notes on other products:
Akaba – New Concept supports the **Power Key option**. Separate instructions for keyboard control of this program are not available - press the **F2** key to see the possible key abbreviations. Read also section **3.4 Notes on the Power Key option**.

Note: Because of possible software modification after this manual has gone to print, some of the function representations and descriptions in this manual may differ slightly from the actual software.

After you have installed **Akaba – New Concept**, you will see it listed alphabetically in the **Edit** menu under **Special**. After selecting **Akaba – New Concept** you will see the three possible operation modes displayed to the right (effect options):
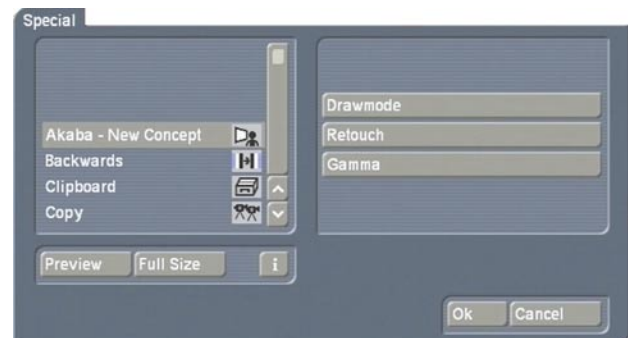
You initiate a mode by clicking on the corresponding button.

Akaba – New Concept always operates on the activated scene in the scene bin. As long as the same scene is always active when the program starts, **Akaba – New Concept** automatically saves all modifications so that you can always continue your interrupted work.

If you select a scene other than the scene that was active during your previous session with **Akaba – New Concept**, then the system warns you that if you continue, all changes made to the previous scene will be lost. With **Cancel** you can prevent this and then select the previous scene.

Within a scene you can switch among the three modes **Draw mode**, **Retouch** and **Gamma**. **Akaba – New Concept** saves all three modes independently of each other. The most recently used mode is always used for calculation. Modes are never superimposed!

The operation panel is displayed after you have started the program and selected an operation mode. You will then see the first frame of your video scene in the background.

3. Operation

This chapter first discusses the functions generally available in all three operating modes. The individual buttons are described in sequence, and then the differences of the three operating modes are explained.

3.1 Operation controls

The operation panel of the main menu is divided into five subpanels, each of which contains several buttons and functions.

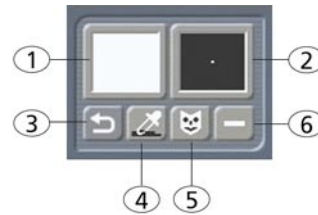
3.1.1 General buttons
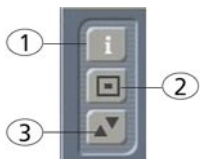
1.) The **Info** button opens a window displaying data on the program version.

2.) This button minimizes the menu panel, as you already know from Casablanca.

3.) This button is used to move the panel to the opposite screen edge.

3.1.2 Palette, pencils and brushes

1.) Palette
Clicking on this button activates the **Palette** window. **Akaba – New Concept** lets you use an extended palette allowing a choice of color, pattern and color gradient. The selected color and pattern are then displayed within the palette button. Further details are explained in section 3.5.1 **Palette**.

2.) Pencils and brushes
Clicking on this button activates the **Pencils and Brushes** window. Various predefined pencils can be used (and changed). The currently selected drawing pencil is displayed in the button. Brushes you cut out yourself cannot be used for drawing.
You can find more information in section 3.5.2 **Pencils and brushes**.

3.) Undo
Clicking on this button causes the previous drawing operation to be discarded. It is usually possible to undo several operations, but the specific number of undoable operations cannot be known ahead of time because it it determined by the surface size of previously made changes.

4.) Eyedropper
An eyedropper is used to select a color present in the frame that can then be used for further drawing operations. Position the eyedropper at the desired spot in the video frame and press the left trackball key. You will see that the selected color is then displayed in the most recently active color field of the palette.

Assuming you have not previously set the option **Solid** in the **Palette** window, the color is nevertheless used and appears in the **Palette** button.

5.) Mask mode

This button is used to switch to mask mode. You can read more about this powerful tool in section 3.5.4.

6.) Activate mask

Here you choose whether the current mask should be used when drawing. If the checkmark is visible, then the mask is used. If a dash is visible then it is not used. We recommended that you use the mask mode after you have become acquainted with **Akaba – New Concept**.

3.1.3 Tools
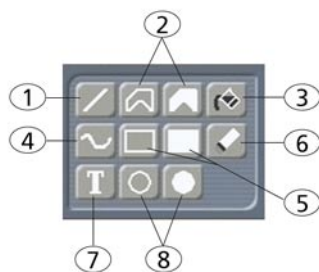
1.) Line

Clicking on this button causes the menu panel to disappear, allowing you to draw a line in the video material. A diagonal line segment (45°) is displayed so that you can precisely position the line.

The cursor is positioned to the upper-left end and the point can now be positioned. A click on the left trackball key sets the start point of the line.

Now the cursor changes to the other end of the line and you can set the end point of the line with a second click.

Clicking on the left trackball key without having moved the trackball itself causes a diagonal line (45°) to be set.

In order to freely draw the line simply change the position of the trackball before you confirm the end point by clicking on the left key.

During the entire time, the line is displayed as it will appear using the current pencil and color.

The next line can be drawn immediately after setting the end point. Clicking on the right trackball key returns you to the operating panel.

Optically vertical, horizontal or diagonal lines (45°) are indicated during drawing by a change in the trackball cursor (dash next to the symbol).

2.) Polygon (unfilled, filled)

Either a filled or unfilled closed polygon can be drawn. Do the same as when drawing a line; with the first click you set the start point and with every additional click you add a line segment.

To close the polygon and terminate the drawing operation move the trackball cursor over the start point. The start point is indicated by a change in the cursor and you can click to finish the polygon.

Depending on the pencil, the corner points may show minor discrepancies during drawing but will appear correctly after the polygon is finished.

If you are drawing the polygon with a color gradient and a selected color, then the polygon is shown as a single color until it is closed, at which time the color changes again.

3.) Fill

A certain region of the frame is filled with a color (like from a paint bucket). This is a complicated operation that requires you to make several settings under **Fill options** in order to obtain the desired result. More on this in section 3.5.3 **Fill options**.

The fill operation is started by clicking within the desired region. The object is filled with the color defined in the active "color field" according to the fill options you have set.

4.) Freehand

Clicking on this symbol starts the drawing mode. Move the trackball cursor to the desired start position and click on the left trackball key.

Do **not** hold down the trackball key!

Move the trackball to draw under the cursor. A second click with the left key terminates the operation.

Large pencils and fast movement might result in drawing individual points and not continuous lines.

So don't move the drawing pencil with the trackball too quickly!

5.) Rectangle (unfilled, filled)
Drawing is done as with **Line**. A filled or unfilled rectangle can be drawn by selecting first the upper-left and then the lower-right corner. The cursor changes if the rectangle is optically a square.

6.) Eraser
By clicking on this button you can delete your drawings in the video frame. The currently selected pencil is used. The video background is not affected.

Operation is the same as described for the **Freehand** tool.

The thickness of the eraser depends on the current alpha value for the pencil color. An alpha value of 100% causes everything under the eraser to be removed. Smaller alpha values result in only a partial erasure.

7.) Text
Clicking on this well-known symbol calls up the Casablanca text-entry menu. The text created with the titler is inserted into the **Akaba – New Concept** drawing with all panels and backgrounds. Only one page is supported. Effects are not supported.

After the text has been inserted into **Akaba – New Concept**, it is a normal part of the drawing. If the titler is activated again, it contains the most recently entered text, which can be deleted or modified, but does not change the text already inserted into Akaba. Modification is possible only if you delete the text with **Undo** immediately after inserting the text, and then activate the titler again.

8.) Ellipsis
The ellipsis is created in the same way as a rectangle, but the center point is specified first, then the width and height of the ellipsis. If you have optically drawn a circle, then this is indicated by the cursor.

Note: If you draw a line, rectangle, or an ellipsis, the cursor changes form to indicate when any of

the following special cases occur:
• horizontal, vertical or diagonal line (45°)
• a square
• a circle.
But this is different according to screen format (4:3, 16:9, PAL/NTSC). The program uses the TV standard. But depending on the setting, there may be deviations from one TV to another. For example, a rectangle with equal sides of 100 * 100 pixels is not a square.

3.1.4 Editing functions
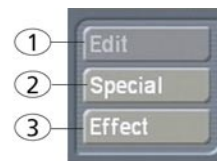
1.) Edit
The most recent draw operation can be edited after having been made. You can roughly draw an object (line, rectangle, etc ...) and then edit it in this submenu. You can move the object, deform it, and/or change the pencil and color. The **Edit** button is active if an object has been drawn, but only if the object is not a freehand object.
If you click the button after having drawn a filled or unfilled polygon, then you will see two buttons and a slider bar serving to move the polygon. By clicking on the **Move Polygon** button, you can move the entire polygon anywhere on the screen and set the final position with the left trackball key. The **Move Point** button allows you to move just one point of the polygon on the screen. You can achieve this also directly in the drawing by moving the cursor over one of the points. The cursor changes its form when it is moved over the a point. The slider bar jumps to the position of the actual point. Now you only have to press the **Move Point** button or click where the cursor has changed form.
If you have just used another tool to draw an object and you then click on **Edit**, you will see a representation of your drawing tool in the operating panel (line, circle, rectangle). In this representation the active points of your

object are marked and you can click on them to move them in the drawing. To move individual points or the entire object you can either use these buttons or click the corresponding point directly in the drawing.

In the second case the trackball pointer displays the possible functions.

Note: Some tool functions cannot be edited, such as **Freehand**, **Fill** and **Erase**.

While a point or all points of a polygon are being moved, the display will not be exactly correct, especially if thick, blurred lines are involved. But after the operation is finished, the display will once again be correct.

2.) Special

This menu item offers some rarely required functions and settings.

- Clear image

All drawing operations performed are deleted. In retouch mode this affects only the current drawing!

- Set image

The entire screen is filled with the currently selected color. Any drawing operations already made are lost.

- Fill options

An additional window is called up in which you have diverse options for the automatic fill function (see section 3.5.3 **Fill options**).

- Grid

You can choose the size of the grid for the drawing functions (see section 3.1.5 **General**, **Grid**).

3.) Effect

Akaba – New Concept encloses the drawing with an (invisible) frame. This region, i.e. everything that was drawn, can be faded and animated with the functions from the program **PIP Studio**.

In the **Effect** window you first see the buttons **IN** and **OUT**. The button you click is activated and is displayed in blue. An active **IN** button means that all further settings relate to fading-in the drawing. An active **OUT** button means the that following settings refer to the fade-out.

Under **Effect** you have the possibility of choosing fade-in or fade-out from twelve different effects.

The first eleven settings work as the name implies - the setting **Custom** means that you can set your own values. If you have chosen another fade and are doing effect editing, then the setting is automatically set to **Custom**.

The button **Fade time** uses a slider bar to let you specify the duration of the fade-in or fade-out. The highest value you can set is the length of the entire video scene.

For example, if your scene is six seconds long, then you can choose two seconds for fade-in and two seconds for fade-out. The remaining two seconds are calculated as full display time, i.e. the time the drawing appears in the scene without a fade effect. After the full display time elapses the drawing is faded out.

If you set path points during editing (see below), then the picture position is affected during the full display time. The last path point of the fade-in is also the first path point of the fade-out, and determines the position of the picture during the full display time.

The **Edit effect** button opens a new operating panel. In this menu you can insert path points that determine the movement of the drawing.

An additional path point is positioned when you click on **Insert**. The newly inserted path point is the active path point, displayed in green. Inactive points are yellow. The new point is always inserted in back of the currently active path point. If the active path point is not the last one, then it is inserted exactly between the current and the next path point on the curve (of course, two path points define a line segment, not a curve).

Note: A path-point segment consists of two to ten path points together, whereby the path point for the full display time is always displayed as a large octagon. The drawing moves at steady velocity from the first to the last path point of the curve. If two path points are near to each other, then the drawing is on the corresponding curve segment for a shorter time then when the two points are further apart from each other. (You should remember this note when you want to change certain values of the drawing between path points.)
If two path points exist and one path point lies exactly on top of the other, then the drawing does not move. But parameters of the drawing can still be modified and take effect for the entire fade time. For example, a fade can be created at that point. If there are more that two path points, and one point lies exactly on top of its neighboring path point, then the first point has no duration and is skipped.

Clicking on the **Delete** button removes the currently active path point so that the previous path point becomes the currently active path point.

Clicking on the **Position** button causes the active path point to turn blue. It can now be moved with the trackball. During this process you can view the position coordinates at the screen edges. You confirm the new position with the left trackball button, or cancel with the right button.

The **Position** button does not necessarily have to be used. You can click directly on an active path point once or on a non-active path point twice (to make it active) and then drag the path point. If you would like to put the point outside of the video frame, then simply by dragging the point out of the frame causes a representation of the relevant region beyond the visible surface to become visible.

The meaning of the path-point colors is summarized below:
Note: "Interpolation" means the automatic calculation of values between given control points.

yellow: a non-active control point without particular characteristics. Clicking on the point causes it to turn green (active).

red: a non-active control point for which settings have been made manually under **Edit**. This means that at least one checkmark was set manually (no interpolation). Clicking on the point causes it to turn green.

green: the currently active point. The operations Position, Edit and Delete refer to this point. Clicking on the point causes it to turn blue.

blue: This point can be dragged to a new position. After being clicked again the point turns green.

When you click on **Edit**, a window appears in which you can specify the size and the alpha value of the active path point.

If you click on **Size**, the window disappears and the path point becomes active so that its size can be changed. The size is displayed at the screen edge. A click on **Alpha** activates the slider bar to the side, with which you can set the transparency value of the drawing between 0 and 100%.

You can disable the buttons **Size** and **Alpha** by clicking on the corresponding check boxes so

that a checkmark appears instead of a dash. Disabled buttons occur when you have set intermediate points whose sizes and alpha values have been calculated automatically using the start and destination points. The checkmarks for the first and last points cannot be reset. In this case a value must be given because interpolation is not possible.

If a checkmark is visible, then the value specified to the left is used at this path point. If a dash appears, then the corresponding value is interpolated using the neighboring path points. The interpolated value is displayed. You can change the desired state at any time.

If the **slider bar** is completely filled, then there currently exists just one path point. If it is possible to click and move the slider bar, then there are several path points in your video material that you may activate. You can use the individual buttons to the right of the slider bar to exactly pick one path point after another.

IN/OUT: With these two buttons you can choose whether your settings refer to fade-in or fade-out.

Simply click on the desired button so that it turns blue (active) and is selected.
If you would like to switch from fade-in to fade-out and make further settings (such as e.g. changing the fade time or the effect), then you must go to the **Effect** window.

Each fade has its own curve and of course its own parameters. It is important to know that changing the parameters of the large path point (last point for fade-in, first for fade-out) always affects the large path point of the other effect. The point displayed in large is the one at which the drawing stands still during fade-in and fade-out.

If you click on the dash next to the **Image** button, then it is changed to a checkmark (activated). This means that you now see displayed not only a green path point, but also your drawing at the position of the currently active point.

However, if you have chosen a small size or a small alpha value, then only a green point is displayed.
The fully displayed drawing may be distracting, so you should make it visible only to check that everything is OK.

In this menu it is also possible to see a **Preview**. With the **Ok** button you confirm your settings, exit the menu and return to the **Effect** menu.

Here the **Preview** button lets you see the preview in a small window. This function lets you view the preliminary result in this menu.

3.1.5 General
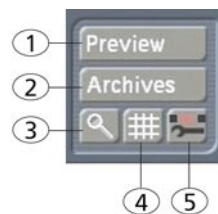
1.) Preview
Here you can let a preview be displayed without having to exit the program.

2.) Archive
The finished drawing (without video frame) can be archived and later reused (even in other scenes). The size of the archive is limited to about 10 to 12 frames. An attempt to archive more frames results in a warning message.

3.) Magnifying glass
A magnifying glass can be used whenever you need to draw precisely. Clicking again on this button turns off the magnifying glass.
The magnifying glass always shows an are around the cursor position. You can specify the magnification (factor 4 to 32) at the lower left. To the right below you see the cursor coordinates displayed.

It is also possible to move the magnifying window to the opposite side of the screen and to turn off the cross hairs.

4.) Grid
This button is used to toggle a global grid on and off. You can set the raster size under **Special** (in section 3.1.4 **Edit functions**). When the button is active, then all drawing functions operate on an invisible raster so that you can position objects at exact distances to each other. This makes it easier, for example, to position objects or to create tables.

5.) Menu symbol
Here you exit **Akaba – New Concept** and return to the Casablanca **Edit** menu. **Akaba – New Concept** saves all settings so that you may continue editing later.

3.2 Margin areas
Akaba – New Concept allows you to move the displayed frame automatically to the side whenever you hit the screen edge with the cursor. This lets you work in the otherwise inaccessible margin areas of the video frame.

3.3 Display

The video frame is generally displayed as a half-frame, i.e. line pairs are identical. Drawings however are displayed in full resolution so that you can immediately see how the result will appear (exception: Retouch).
The full-frame display lets you see when drawing whether the edited video material (e.g. when using very thin lines) will flicker after calculation.
Of course, after calculation a full-frame version of the video portion is also made. No resolution is lost.

3.4 Notes on the Power Key option

Akaba – New Concept supports the **Power Key Option**. Pressing **F2** displays the available key shortcuts.

The possibility to position with the help of the **Power Key** is particularly useful. You can

roughly position the cursor by pressing and holding down the **Navigation** key (to the left of **Ctrl**) while you use the arrow keys. You achieve a fine, pixel-wise movement by simultaneously holding down the **Ctrl** and **Navigation** keys while you use the arrow keys. This fine positioning is especially useful when creating tables or exact vertical lines.

3.5 Individual buttons / functions

3.5.1 Palette
If you click on the palette button the **Palette** window appears. It is divided into the three areas **Solid**, **Texture** and **Bleed**.
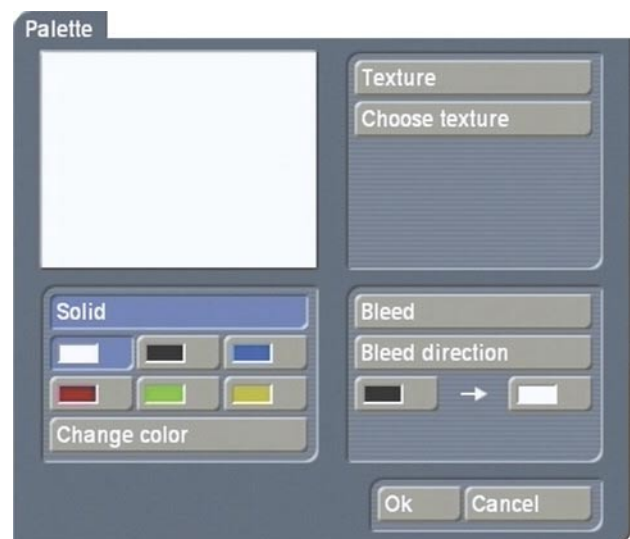
You can toggle between these operations by using the correspondingly named buttons above in the appropriate area. The currently active button is displayed in blue. Toggling occurs automatically when a corresponding control is selected.

The preview window at the upper left displays the currently selected result.

Note: After initial installation of **Akaba – New Concept**, no texture has yet been selected. When you click for the first time on the **Texture** button in the **Palette** window, an image pool is called up from which you can select a texture.
After you have selected a texture for the very first time, the **Texture** button toggles the preview

window. You now access the image pool with the **Choose texture** button.

- Solid

At first you can select one of the six color fields so that it is easy to switch frequently between the colors used most often. The button **Change color** is used to define a new color. Clicking on **Ok** in the **color box** causes the color in the current color field to be replaced with the color you have just defined.

- Texture

You use the **Choose texture** button to call up the image pool from which you can select a texture.

- Bleed

Here you can set a color gradient, such as is also possible in the image pool. In addition, you can specify a direction by clicking on **Bleed direction**. You specify the direction by setting a helping line in the video image. This enables the direction to be adapted to certain parameters.

Any color and alpha transparency can be used for the beginning and end color.

3.5.2 Pencils and brushes

This window brings together pencil selection and work with brushes. It is divided into four areas:
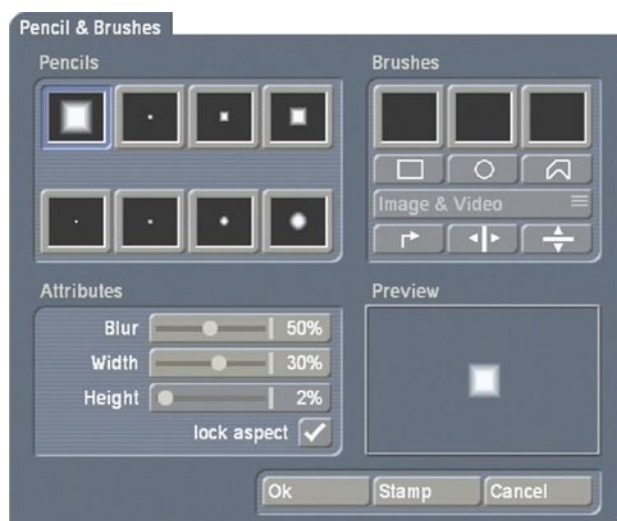
- Pencils

Pencils are used for the various drawing operations. Some predefined pencils are offered (four square and four round) whose size and sharpness can be set.

After selecting the desired pencil, you close the window by clicking on **Ok**.

- Brushes

Akaba – New Concept supports three brushes that can be used independently of each other. As soon as a brush has been selected, the operating controls and enabled:

Cut

In the second button row you will find three possibilities to cut a brush out of the frame: rectangle, ellipse or polygon. These functions are carried out analogously to the corresponding draw functions, but do not change the image content.

The cut-out brush is displayed in magnified form in the preview area (below right). The preview shows the brush in original size, if possible. If the brush does not fit into the preview area, then it is reduced in size, and this is indicated by an inserted magnifying-glass symbol.

Immediately after being cut out the brush is given the blur that has been set. This value can be changed at any time. For real video it is usually important that the brush has some blur in order to create a realistic impression without a sharply defined edge.

Mode

Here you choose whether the brush is cut out only from the data of your drawing (**Image**) or from the drawing and the background video image (**Image & Video**). Please note that the vertical resolution of the video frame (not the resolution of the drawing) is halved.

Edit

With the help of these three buttons the current brush can be rotated 90° to the right (more than once: 180°, 270°), and mirrored either horizontally or vertically.

- Attribute
Pencils and brushes can be changed in this subpanel. For all changes, even concerning the brushes, there is no additional quality loss when different functions are used repeatedly.

Technical note: The brushes remain stored in the background in their original size and are used as a basis for different actions (e.g. when reducing in size). In this way full quality is guaranteed (e.g. after a renewed magnification).

Blur
It is recommended to always work with a little blur (e.g. 10-20%) in order to attain softer forms that can be displayed well on a television set, especially for video editing.

Width
Here the complete size of pencils is determined. Pencils are always round or square.
The complete brush size can be changed (**Lock aspect** on) or only the width can be changed (**Lock aspect** off).

Height
For brushes the height can be set independently of the width when the **Lock aspect** button is deactivated.

Lock aspect
This mode can be set only for brushes. Normally this function should always be on so that the aspect ratio of cut-out objects remains the same in all cases. In special cases it can be shut off so that width and height can be set independently of each other.

- Preview
Here you obtain a preview of the active pencil/ brush with the current settings (e.g. blur, mirror).

Stamp
With this button (at the lower window edge) you close the window and stamp the brush (or pencil) one or more times directly into the video frame. By clicking the right trackball key you come back to the window **Pencils & Brushes**. Painting (line, circle) with self-made brushes

is not possible. In this case you should use the pencils.

Ok
After selecting a pencil you usually exit the window with **Ok** so that you can use the pencil. You again see the operating panel, and you can select a tool.
Cancel
Most of the changes (pencil or brush selection, attributes, ...) made since the **Pencils & Brushes** window was opened are undone when you click on **Cancel**. Cut-out brushes and any stamps in the video, though, remain as they are.

3.5.3 Fill options
Filling surfaces in video frames is very difficult because there are only fluid transitions and no explicit borders. Because of this, it is necessary to set a number of different parameters (threshold values) to obtain acceptable results.

- Color
In order that filling continues from the start position, the color replaced with the fill color must agree with the start color to the degree given by this parameter. For 100% the colors must be identical, for 90% there can be minor differences between the colors. For a setting of 0% the color is ignored.

- Hue
Setting the hue is done in the same way as with setting color.

- Alpha
Here the alpha value (transparency) is important.

For this function the button **Reference** (see below) must be set to **Image**, because only those drawings you have made yourself can have an alpha value that deviates from 100%. If you fill your object after you have selected an alpha value, the object is only filled to a certain percentage (the alpha value) with the active color. For every click you obtain a different color intensity.

- Reference
Here you have the choice between two options. If you have set **Image**, only the drawing operations made are considered, i.e. the video picture is ignored. In contrast, the mode **Image & Video** takes account of both the drawing and the video.

The reference can only be switched in **Draw mode**. For **Retouch** it affects the unity of drawing and video, because separate work is not possible.

Note: It may happen that, while a black object in your video material is being filled, another black object is also filled. The reason for this is that the video frame is surrounded by a black frame that you can see if you move the screen cursor outside of the video material (see section 3.2 **Margin areas**). The black frame connects the objects contiguous with it in your video material.

3.5.4 Mask
One thing gives **Akaba – New Concept** additional possibilities. A mask is supported for practically all operations. This gives you the possibility to restrict drawing operations to certain, freely definable picture regions. You can even specify how strong an effect should be at a given position.

The mask is fixed, i.e. not connected with movement in the course of the video scene. A mask can be drawn in mask mode.

The mask appears in gray on top of the video picture. The greater the amount of gray, the more the video picture is overlaid (masked) and the weaker the drawing operations will be. No changes will be possible where gray completely hides the video picture. The clearer the video is (the gray mask is more or less transparent), the more visible the drawings will be.
You can use several masks, even while you are drawing, because the mask is used only for drawing.

The following table presumes that the **Show BG** function (see below) is deactivated.

| Mask mode	Draw mode, Retouch, Gamma
The video picture is completely visible.	All operations are completely visible.
The video picture is covered with an opaque, gray mask.	No further drawings can be made.
The video picture can be seen through the half-transparent gray mask more or less clearly.	Drawing operations are weakened (depending on the level of mask transparency).

Drawing tools
The most frequently used drawing tools can be used as usual when drawing the mask.

Transparency
In this window, which you recognize as the **Palette** window from the other menus, you can specify the mask transparency.
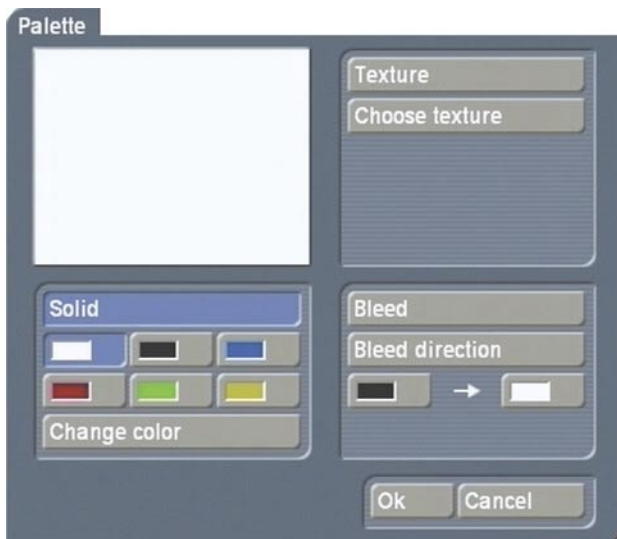
You can set the transparency of the mask with one of the predefined six gray levels. In addition, you can modify the gray value with values of 0 to 100 using the **Change Transparency** button.

The following table describes how the mask transparency is displayed according to the gray levels.

Palette color	Mask
white	completely transparent, not present
gray	half-transparent gray, the mask has some effect
black	gray, the video is completely covered by the mask

Show BG
This button causes the drawn mask itself to become half-transparent. This enables you to see the video picture even behind completely opaque regions, thus giving you the necessary orientation when you adapt the mask to a scene.

Archive
Masks that have been created can be saved in the archive for later use.

4. The Three Operating Modes

4.1 Draw mode

In this mode you will find all buttons and functions that were explained in the previous chapter.

4.2 Retouch

This mode serves mostly for manual editing of the individual frames of a scene. For example, dropouts (image distortion) can be corrected. A scene can be of any length, but you are limited to editing a maximum of 150 half-frames (3 seconds) from the video material. These half-frames may be at any position within the scene, i.e. they don't have to be contiguous.

In the fourth subpanel there are three buttons at the lower edge:

You can move through the scene with the two outer buttons. With the middle button you can make a user-friendly selection: Here, in contrast to all other places in Casablanca (trim, preview, etc ...), you can select any half-frame. You can determine which half-frame is displayed by the small E (even) or O (odd) to the right of the frame number.

All operations made affect only the frame displayed, (in contrast to draw mode).

Copy stamp
In addition to the usual drawing functions, retouch supplies two copy stamps.

At first you click on a position in the frame as source. Then you click on the destination point. Frame data are then continuously copied from the source position to the destination position when you move the trackball. This makes it easy, for example, to cover a dropout (garbled image data) with similar image material from another position (see application example 5.2 **Retouching a distorted image**).

Upper copy stamp
When working with the upper copy stamp, source and destination always remain at the same distance to each other. If you move the drawing position, then the source position for the copied data is moved correspondingly. In this way you can exactly copy a source region to a destination region.

Lower copy stamp
When using the lower copy stamp, the source position always remains at the selected position. The same source data is copied independently of the destination position. This mode is particularly relevant when there is only limited

source material available for filling in garbled regions. However, differing source data can quickly lead to a repeated pattern.

4.3 Gamma

In this mode you can make corrections to color and brightness. There are interesting possibilities when used in combination with a mask. The changes made are applied later during calculation to all individual scene frames.

The functions not already explained for other modes are described below:

1.) Clicking on this button displays three slider bars for setting **Brightness**, **Contrast** and **Saturation**.

2.) This button displays the control for setting the **Gamma** value.

3.) Here you can change the three basic colors **Red**, **Green** and **Blue**.

All changes that you make with these functions are combined during the calculation.

This means that for your scene you can change brightness, gamma value and the basic colors.

5. Application Examples

We recommend that you work through the following application examples in order to familiarize yourself with the way **Akaba – New Concept** works.

The exercise examples and tips do not cover all the functions available in the program, but they do provide insight so that with a little practice you will be able to easily use the other functions.

The examples are designed for the new user of the program and introduce the control elements one after another. After you have worked through the examples, we suggest that you experiment with your own ideas.

5.1 Setting sun

This exercise will show you how to draw an object in your video material and edit it afterward. You will create a sun and add it to your video, and then let it set, as it does at dusk.

At first, take a suitable video scene of about 5 seconds duration in which the sky is visible. Activate the scene in the scene bin, start **Akaba – New Concept** in the **Special** menu and go to **Draw mode**.

In the lower third of the screen you see the operating panel. The first frame of your videoscene is displayed in the background.

Call up the **Palette** window, click on the **Change color** button and select a bright yellow color in the **color box** that appears. Confirm the color selection with **Ok** and close the **Palette** window by clicking again on **Ok**.

Then click on the tool **Circle** (filled) and place the cursor at a spot in the sky, e.g. in the middle at the upper scene edge.

Confirm this position with the left trackball key and drag the circle to the desired size for your sun. The circle initially takes on an oval form. A change in cursor display lets you know when the form becomes a circle (not an ellipse).

When you are satisfied with the form and size, click on the left trackball key and then on the right key so that the operating panel again appears.

Now click on the **Edit** button so that a new operating panel appears in which you now select the **Palette** window.

Activate the **Bleed** option and click on the first color field. Set the previously selected bright yellow in the **color box** and confirm it by clicking on the second color field. Here you decide to use a strong orange. Then click on the **Bleed direction** so that a positioning line can be seen in the video material that you can freely move and position.
Click on the left key in order to position the left end of the line. Then drag the line in any

direction, e.g. to the lower right, and confirm this by clicking again on the left trackball key so that the palette window reappears.

Confirm your selection there with **Ok**. You now see that your sun has taken on a color gradient. Now call up the **Pencils & Brushes** window and in the lower window area set some blur so that the sun is not so strongly delineated against the background. This produces a more natural impression of the sun.

You can emphasize the blur even more by increasing the width of the pencil. Try out a few settings on your own and then close the **Pencils & Brushes** window with a click on **Ok**.


After you have created and positioned the sun, you can begin adding further effects.

Exit the submenu and return to the drawing-mode operating panel by clicking on the right trackball key (or on the rightmost symbol in the operating panel). Then click on the **Effect** button in order to call up the corresponding window.

In the following steps, settings are introduced that are appropriate for this exercise example. Please use them for this example, but remember: in the future, the settings will be determined by you for the particular need of your project.
In order to learn about the complete functionality of all options, please see chapter 3 **Operation**.

Click on **IN** in the **Effect** window in order to specify the fade-in of the sun.Set the effect to the setting **Hard cut** so that there is no fade-in time.
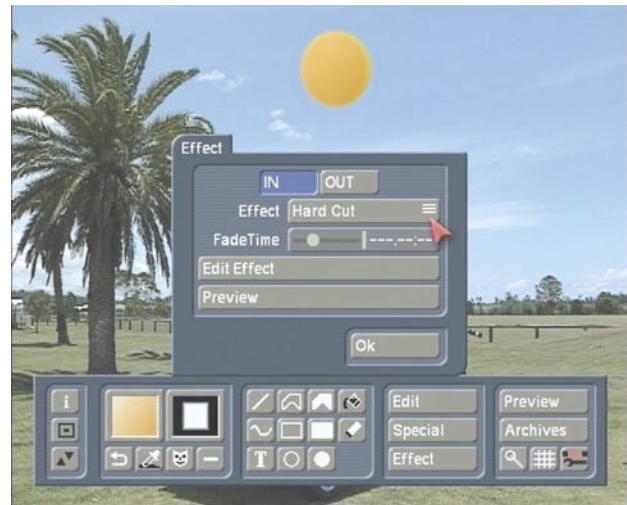
Then click on **OUT** and set the effect to **Custom**. Select 3 seconds for the fade time so that fade-out occurs during 3 seconds and the effect has a full display time of 2 seconds.

Next, click on the **Edit effect** button so that an additional menu is called up. Here you can insert path points to specify the movement of the sun. You already see a green point, the start position of the movement.
Click several times on **Insert** so that a number of path points appear. Now you can click on a desired path point so that it becomes active. Using the **Position** button place the path point until you have a route for the setting of the sun. By activating the **Image** button you can display the sun at the position of the currently active path point.

After you have set the points, click on **Ok** in the operating panel so that you are again in the **Effect** window. Confirm here with **Ok** and exit drawing mode. Click on **Ok** in the **Special** window and the calculation of the effect is automatically started.

Your finished scene is certainly no work of genius, because a setting sun implies that the sky gradually becomes darker. But with this example, we hope you have learned one of the many application areas of the program **Akaba – New Concept,** and obtained an overview of the possibilities it gives you.

5.2 Retouching a distorted image

In case your video material has dropouts, you can use **Akaba – New Concept** to repair bad frame regions without having to remove the entire frame from your video material.

For this application example take a short scene with defective frame areas and activate it in the scene bin. If you don't have any "defective" material, then you can simulate a distortion as follows:

Select a scene in the scene bin and start **Akaba – New Concept**. Go to **Retouch** mode. Select the symbol for the filled rectangle and place it near the upper-right image corner with a click on the left trackball key.

Now you don't see the operating panel anymore. Drag to increase the box size until it is about one square centimeter in size and click again on the left trackball key to confirm the size. After clicking again, this time on the right trackball key, the operating panel reappears. Now click on the right arrow under the **Special** button.

You now see the next frame in the scene and can put the rectangle in the upper right image

area. It doesn't have to be at exactly the same position.

Do the same for the next frame so that the first three frames of your video scene have garbled data.

Exit **Retouch** mode and then click on **Ok** in the **Special** window so that the effect is calculated. Now you are in the edit menu.

The scene just calculated is now activated in the scene bin. You can play it in order to see the simulated defects.

Now that you have simulated a dropout, (or you are using pre-existing defective frames), you can begin retouching work.

Call up **Akaba – New Concept** and **Retouch** mode. You see the first frame of your "defective" video scene.

If you have simulated the distortion with **Akaba – New Concept**, you see the small block in the upper image area.

If you are using a pre-existing defective scene and the dropout occurs in another scene frame, click of the middle arrow button under the **Special** button so that a slider bar appears with which you can scroll to the first defective frame:
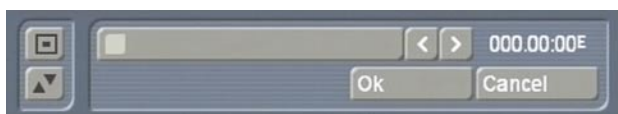
Now call up the **Pencils & Brushes** window and select the brush in the upper left corner.

Then set the **Width** and **Blur** to 50% and exit the window by clicking on **Ok**.
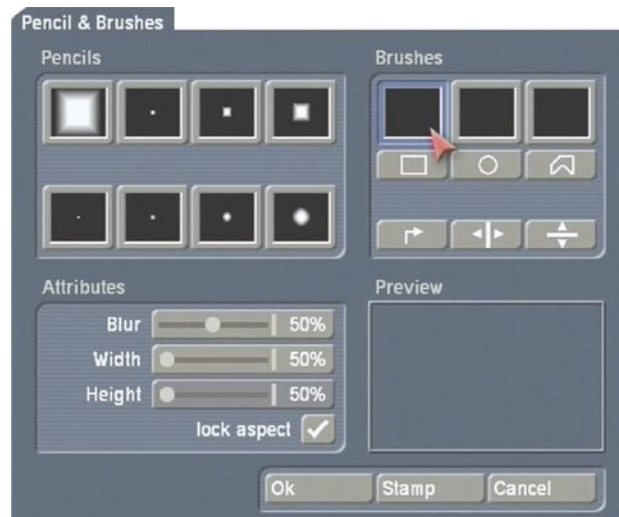
Select the upper copy stamp in the operating panel (unfilled stamp symbol) and put the green cursor frame at a position near the defective block and confirm the position by clicking on the left trackball key so that you don't see the stamp symbol within the frame anymore.

In this way you have specified the source from which the video material will be copied in order to retouch the defective area.

Now position the green frame onto the defective area. The defective block must not necessarily be exactly covered.

Click again on the left trackball key to initiate drawing, and move the (now red) frame carefully over the defective area until this area has been completely covered with video material from the previously selected source area. Confirm by clicking the left trackball key and then click the right key to return to the **Retouch** mode operating panel.

Because source and destination (defective area) are always held together at a fixed distance, the source position for the copied data is also moved whenever you move the drawing position.

After you have successfully edited the first frame, you can continue retouching the next two frames until the defect has been completely retouched.

Finally, calculate the scene so that you can observe the result in full size.

Of course, a dropout can also appear in the middle of a scene or at several places within a scene. But the procedure for retouching is the same.

5.3 Partial brightness correction

An additional way to correct your video material with **Akaba – New Concept** is to use **Gamma**.

If, for example, you have a scene in which the lower area is too dark and only the sky is correctly exposed, you can increase the brightness of the dark spots according to your taste.

Activate the scene to be altered in the scene bin, start **Akaba – New Concept** and select **Gamma** mode.

This mode allows you to make brightness and color corrections to your video material.

You see an operating panel and in the background the first frame of your video scene is displayed.

Click on the mask button to get to the mask menu. In the mask menu click first on the **Transparency** button (the same as the **Palette** button in other menus) to call up the corresponding window.

Make sure that under **Transparent** you have selected the upper-left color field (black). The color is displayed in the preview window above it.
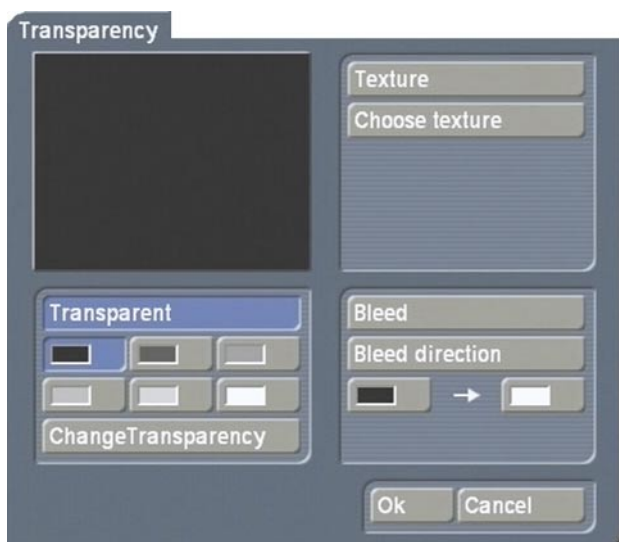
After confirming by clicking on **Ok**, select the filled polygon so that you only see your video frame. The region that is **not** to be edited must be covered with a mask.

Move the cursor, for example, to the upper-left corner and confirm the position. Now you can draw lines to close in the desired area to be masked. Enclose in this way the portion of the video frame that corresponds to the sky.

You should confirm the last line only when the cursor form has changed indicating that you are at the start point of the polygon. This guarantees that you have drawn a closed polygon.

Closing the polygon brings you back to the mask operating panel and you see that the polygon has been filled

Next, click on the right trackball key or on the symbol in the lower-right corner of the operating panel to get to the operating panel for **Gamma**.

There the mask is not visible. It operates only in the background.

Make sure that the button next to the mask symbol displays a checkmark. If not, then you must click the button to turn the dash into a checkmark. Only in this way is it certain that the mask will take effect. Finally, click on the following symbol:

After the slider bars have appeared, that (assuming you have not already made any other settings in this menu) all display a value of 100%, move the slider bar for brightness to the right, for example to the value 130%. You will see that the video image becomes brighter and that only the previously enclosed sky remains unchanged.

If you still want to make changes, you can still make corrections. For example, you can enclose the sky more precisely.

If there are still portions of the sky not enclosed by the mask, then you should increase the size of the mask.

Enter mask mode again and with the **Pencils & Brushes** button select a small pencil with a light smudge and confirm your selection by clicking on **Ok**. Now you can select the line tool so that you can put the cursor at the desired position to enlarge the mask by clicking on the left trackball key. Roll the trackball until the corresponding area is covered and confirm by clicking again on the left trackball key. Finally, click on the right trackball key in the mask operating panel to change to mode **Gamma** where you can observe the new result.

If too much sky area is covered by the mask (a tree, for example), then you can correct this later. Simply click on the mask button, select

the corresponding pencil and click on the eraser tool. Position the cursor and simply erase the superfluous area!

The changes you have made will be extended to all individual frames of the scene during calculation.

Note: Please remember that the mask is fixed and does not move with your video material!

5.4 Title with transparency gradient

In this example you will learn how to create a title with a transparency gradient.

Take any short scene that you would like to add a title to. Start **Akaba – New Concept**, enter **Draw mode** and select the mask button.

In mask mode click on the **Transparency** button (above the Undo button), then click on **Bleed** and afterward on **Bleed direction**.

Now position the screen cursor to any position, click on the left trackball key, drag a horizontal line from left to right and confirm this with a further click on the left trackball key.

After you have clicked on **Ok** in the **Transparency** window, you will again see the mask mode operating panel, in which you now choose the filled rectangle.

Now extend the mask to cover the upper third of the picture by dragging from the left to the right screen edge. You see that your rectangular mask has a color gradient from black to white.

After you have positioned the mask, return to mask mode by clicking on the right trackball key. From there you return to drawing mode. Here you don't see your mask because it operates in the background.

Note that for the mask to take effect you must activate the button next to the mask symbol so that a checkmark is visible.

Finally, select the text tool **T** in order to get to the titling menu. Write a short text, or your first name (you can freely choose font, color and font size).

Then click on the **Box Options** button and then on **Box-Background** in the window displayed in order to call up the corresponding window.

Here you activate the **Transparency** function and confirm the setting with **Ok**.

Then call up the **Box Options** again and change the panel size and position so that you are at the same place as your previously drawn mask.

After you have exited titling by clicking on Ok, select mask mode again, activate the **Bleed direction** button in the **Transparency** window, and draw a line from right to left.

Draw a mask in the lower third of the picture and then enter the titling menu. Enter your surname (for example) and follow the same steps as before.

After calculation you will see your complete name in the video scene. Your first name becomes steadily clearer while your surname becomes more and more transparent.

7.5 Cutting out a brush

In this example you will learn how to cut out a brush in order to use it at another position in the scene.

For example, you can cut out a cloud from the sky in order to insert several clouds in the same sky.

For this example take a scene that has some blue sky and a single cloud. The scene should not have much movement and the sky should always be at the same position.

Tip: Alternatively, you can take a scene with a clear, blue sky without clouds. You can draw the cloud, as explained below.

Activate the scene in the scene bin so it is the active scene. Start **Akaba – New Concept** and select **Draw mode**.

Call up the **Palette** window and choose the white color field under **Solid**.

Activate the **Pencils & Brushes** window, select a large, round pencil and set its blur to 100% and its width to 40%.

After confirming with **Ok**, select the freehand tool and draw a cloud according to your taste. Finished!

In order to cut out the cloud, call up the **Pencils**

& Brushes window and click on one of the three squares in the upper-right area so that the buttons below are activated.
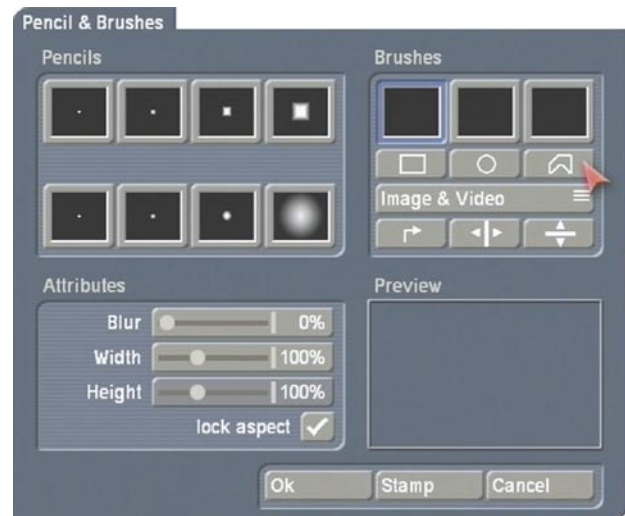

In the second button row you will find the means to cut a brush out of a picture: rectangle, circle or polygon.

The cloud is a complex form so pick the polygon so that you can draw the cloud's perimeter.

After you have selected the polygon your video frame appears in full and you can "cut out" the cloud with the help of the cursor. This action does not change your image content!

You will have to draw many short line segments to trace the curves of the cloud. Click on the left trackball key for every control point. The last line must close the polygon. When the polygon is closed the cursor changes its shape.

The cut-out brush is displayed in larger form in the preview window (below right in the **Pencils & Brushes** window). The preview shows the brush in original size, if possible. If the brush does not fit into the preview window, then it is reduced in size, which is indicated by an inserted magnifying glass.
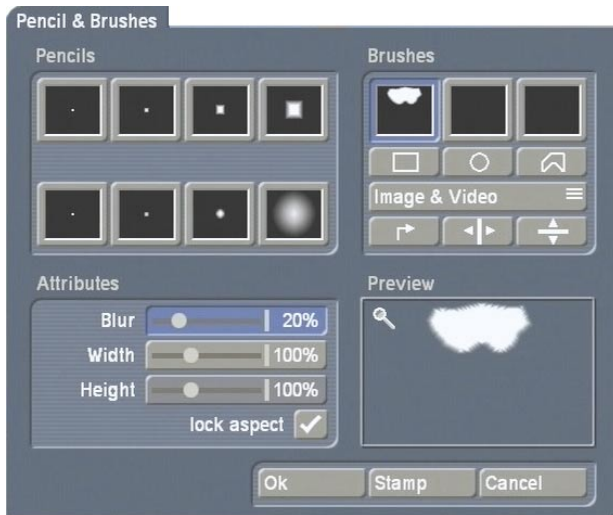
Immediately after being cut out, the brush is given the blur factor that has been previously set. This value can be changed at any time. In real video it is usually important to give the brush some blur in order to achieve a realistic effect, and to avaid sharp edges.

For the cloud you wish to insert you should set a blur factor of 20%. Be sure to select the mode **Image** under the object button row!

Now click on **Stamp** so that you see the cloud as a brush on top of your video material.

Tip: You can bring some variety to your video scene and let the clouds appear more realistically by varying the size of the cloud. To do this use the slider bars for **width** and **height**. You can also mirror the cloud brush horizontally or vertically.