# Adagio Range Selection Script

## Menu location

The menu location of the script after installation is: <image>/Selection/Adagio Range Selection.

## Introduction

The range selection script is a tool for automatic creation of selections and layer masks with Gimp.
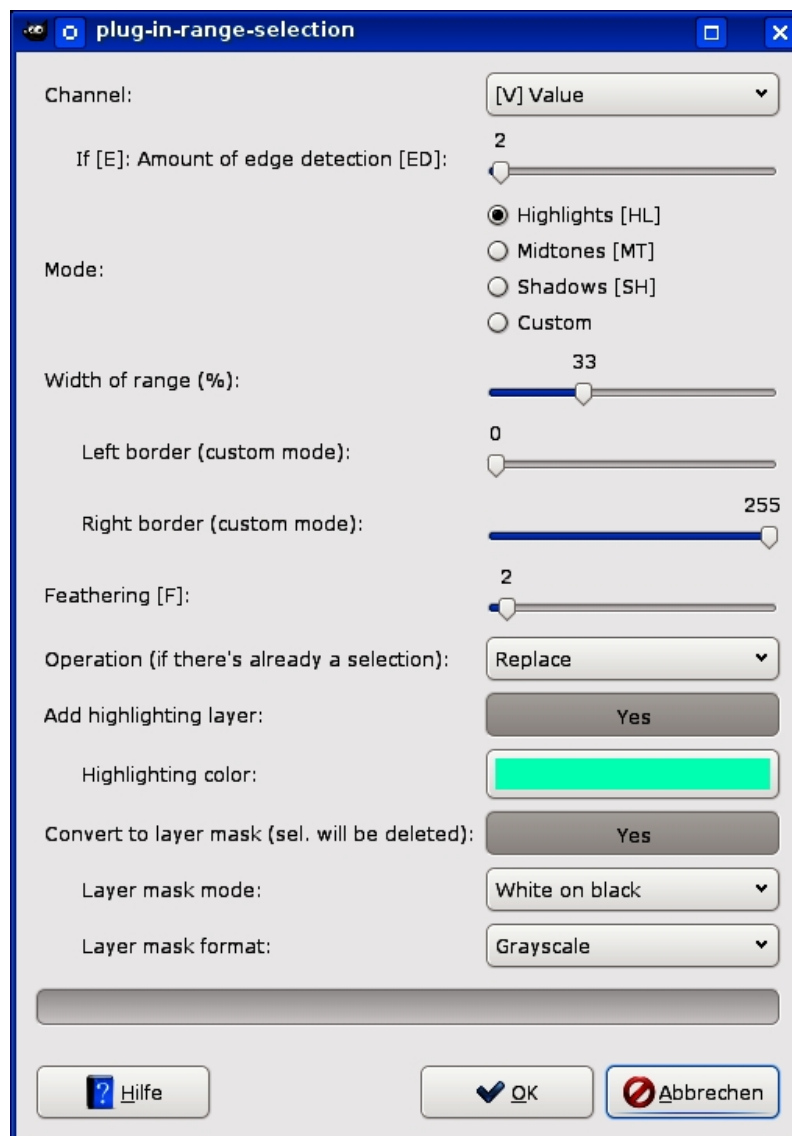


Figure 0.1 **Plug-in user interface.**

The selections or masks include all parts of the image that are situated within a defined range of tonal values, colours, saturation or edges.

The width of the range can be set by defining a percentage range of highlights, mid-tones or shadows. Alternatively in custom mode exact borders of the desired range can be set from 0 to 255.

The selection or layer mask is based on one of 16 channels. In addition to usual channels (*Value, Luminance, Saturation, Red, Green, Blue, Cyan, Magenta, Yellow*) the script offers virtual channels including *Edges* and *Saturation channels for each basic colour*.

## Options

Several options can be set as it is shown in the screenshot of the user's interface (figure 0.1). In this manual examples for the following options are illustrated:

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## Highlighting Selections

The script adds a new layer on top of the layers stack (figure 0.2). This layer highlights the selected parts of the image. You can change the default colour for highlighting. The opacity of the highlighting layer is set to 50. Thus the selected parts of the image shine through. Adjust the opacity if the highlighting is not clear enough.
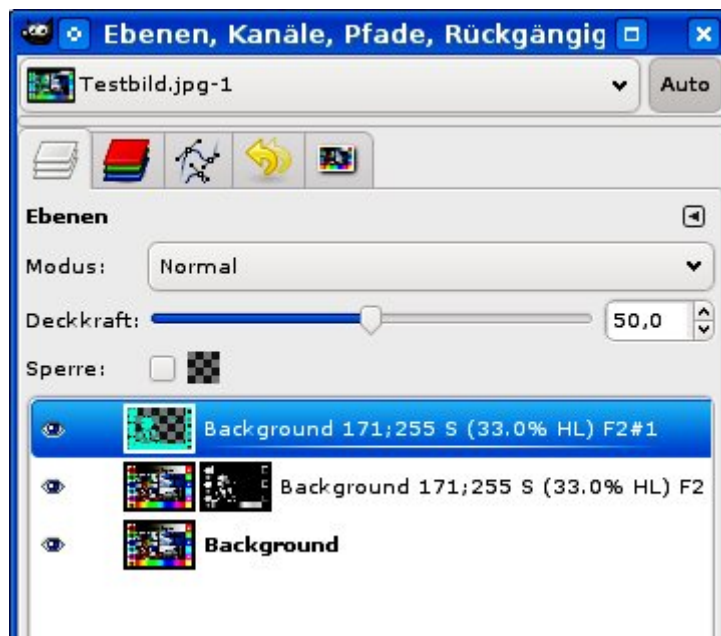


Figure 0.2 **Layer stack** after running the range selection script.
33% highlights (this correspondents the range from 171 to 255)
of the saturation channel was selected. Feathering was set to 2.

Look at the name of the highlighting layer to read the chosen settings for the selection (figure 0.2). To find out the meaning of the abbreviations used in the layer names look at the bracketed capitals in the script's dialogue (figure 0.1).

The highlighting layer is just for information. You can make it invisible or delete it if it is not used any more. Deleting of the highlighting layer won't delete the selection or the layer mask. If you don't want to get a highlighting layer from the outset just deactivate the option "Add highlighting layer".

## Layer Masks

The script adds another layer that consists of a copy of the current layer and a layer mask if the option "Convert to layer mask" is activated. In this case the selection is replaced by the layer mask!

## Test Chart Used for Illustration

Figure 0.3 shows the test chart used to illustrate different script options. In the circles on the left side of the image the *values* of the colours were reduced from border to centre in steps of 10. In the squares on the right side of the image the *saturation* of the colours were reduced from border to centre in steps of 10.



Figure 0.3 **Test chart**

## Acknowledgement

July 2009, Bert ("rayadagio")

# 1.	Channels

In the following samples the selected parts of the image are highlighted by turquoise colour for *Value*, *Luminance* and *Edges*. For *colours* and *saturation* channels you can directly see the selected colours whereas the unselected parts are desaturated.

For almost all samples 25% highlights of the chosen channel were selected. Exception: For the *Blue* channel (figure 1.5) 50% highlights were selected to show an example of sky selection. For *edges* (figures 1.16 and 1.17) both highlights and shadows were selected. As you can see for the *Edges* channel *highlights* select edges whereas *shadows* select non-edges.



Figure 1.1 **Value [V]**
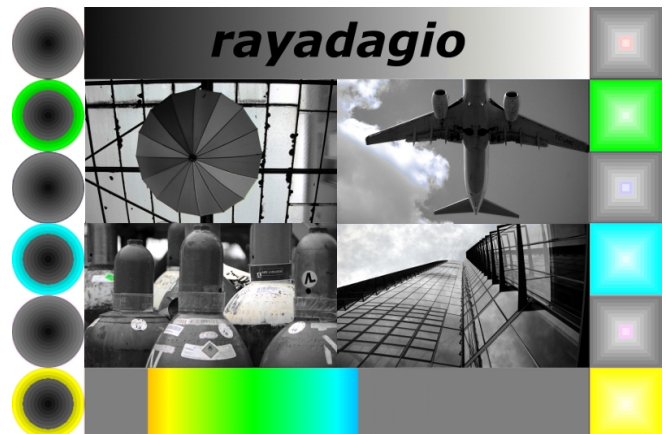


Figure 1.4 **Green [G]**
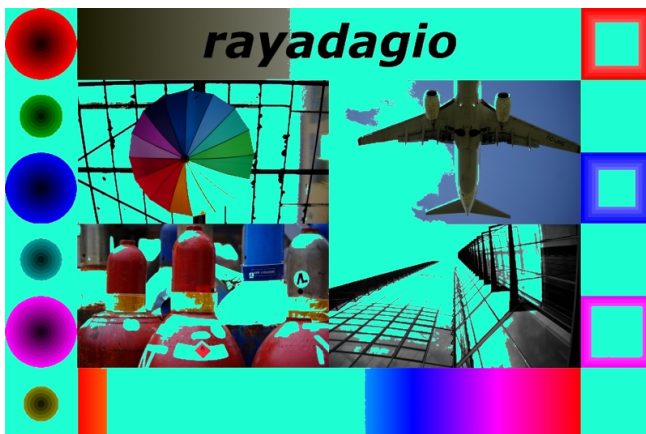


Figure 1.2 **Luminance [L]**



Figure 1.5 **Blue [B]**
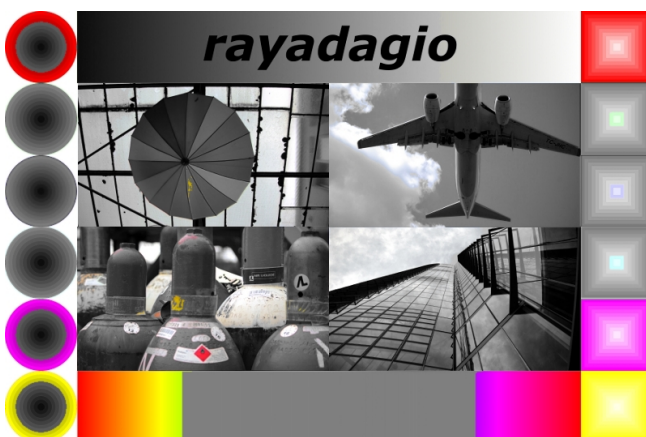


Figure 1.3 **Red [R]**



Figure 1.6 **Cyan [C]**
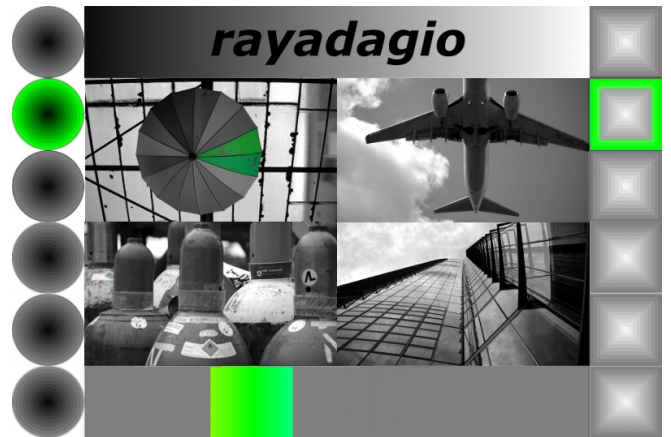
Figure 1.7 **Magenta [M]**
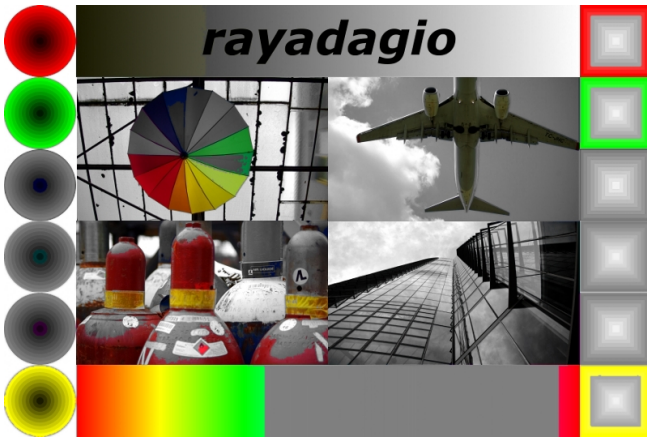


Figure 1.11 **Saturation Green [Sg]**



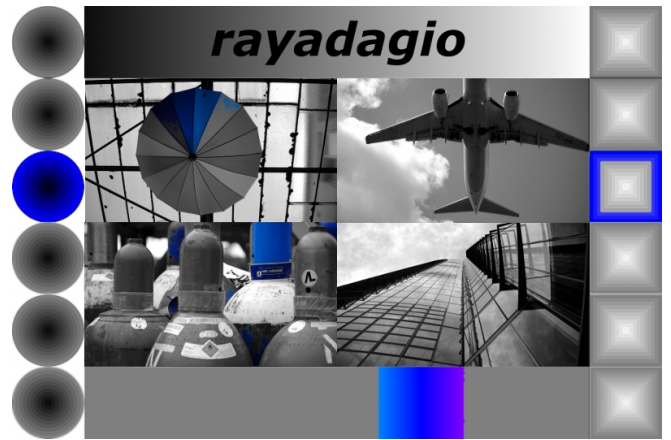Figure 1.8 **Yellow [Y]**



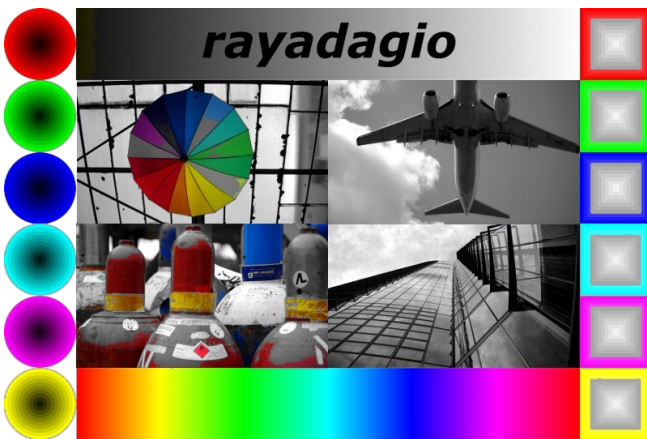Figure 1.12 **Saturation Blue [Sb]**


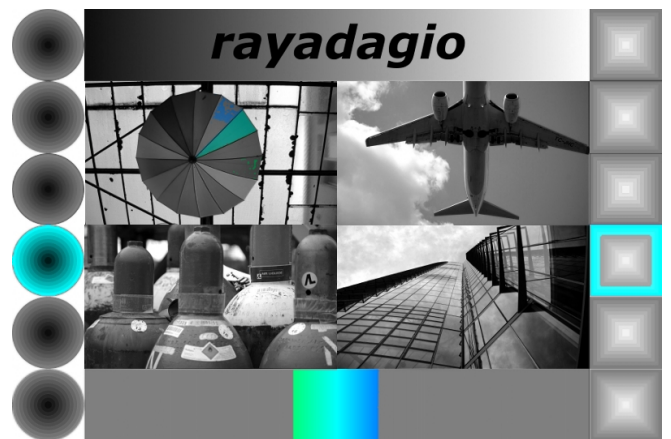
Figure 1.9 **Saturation [S]**



Figure 1.13 **Saturation Cyan [Sc]**



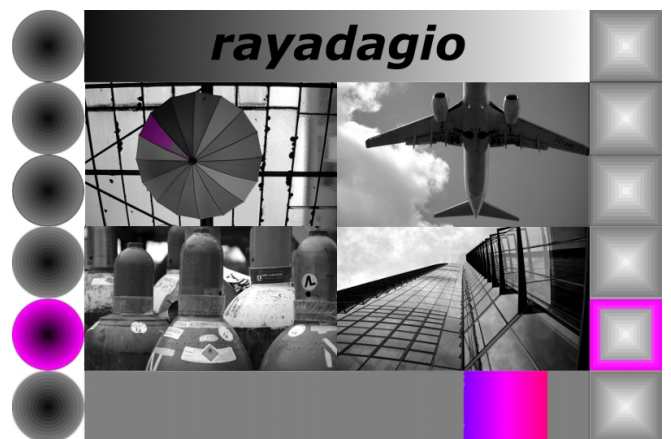Figure 1.10 **Saturation Red [Sr]**



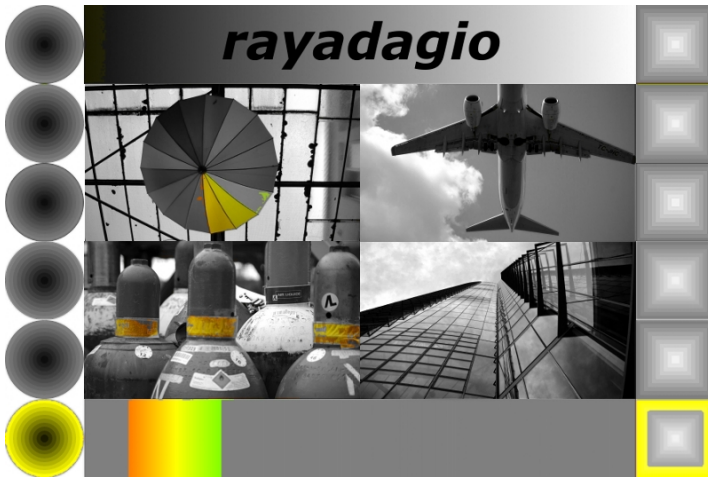Figure 1.14 **Saturation Magenta [Sm]**

Figure 1.15 **Saturation Yellow [Sy]**



Figure 1.16 **Edges [E]** (highlights)



Figure 1.17 **Edges [E]** (shadows)

You can change the amount of edge detection in the second line of the user's interface (look at figure 0.1).

# 2. Modes

To illustrate the different modes the value channel was chosen. For highlights, mid-tones and shadows the width of selected range was set to 25% whereas for custom mode the range was set to values from 64 to 128.



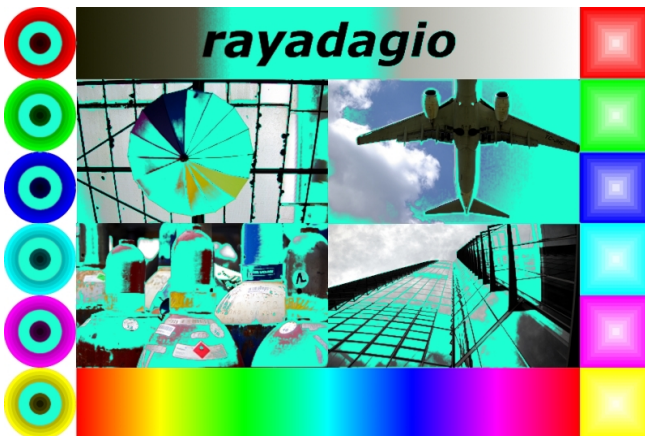Figure 2.1 **Highlights**



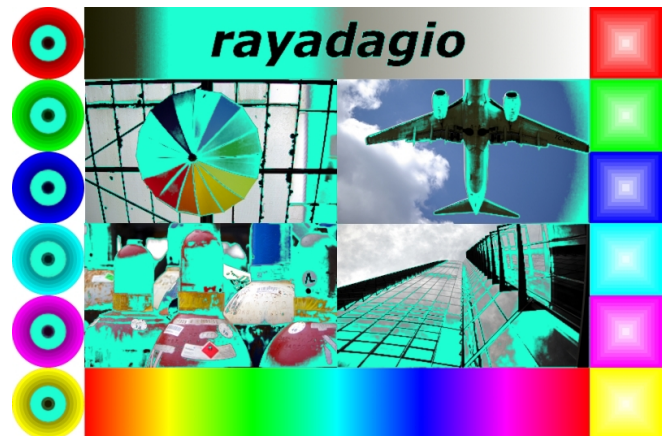Figure 2.3 **Shadows**



Figure 2.2 **Mid-tones**



Figure 2.4 **Custom Range 64-128**

# 3. Feathering

To show the effect of feathering 25% highlights of the S*aturation Red* channel was chosen.


Figure 3.1 **Feathering = 0**


Figure 3.2 **Feathering = 25**

# 4. Operations

> ***Attention**: If you intend to create a layer mask based on multiple selections and operation Add, Subtract or Intersect be sure to activate "convert to layer mask" not until you are going to create the last selection. Otherwise the former selections will be removed.*
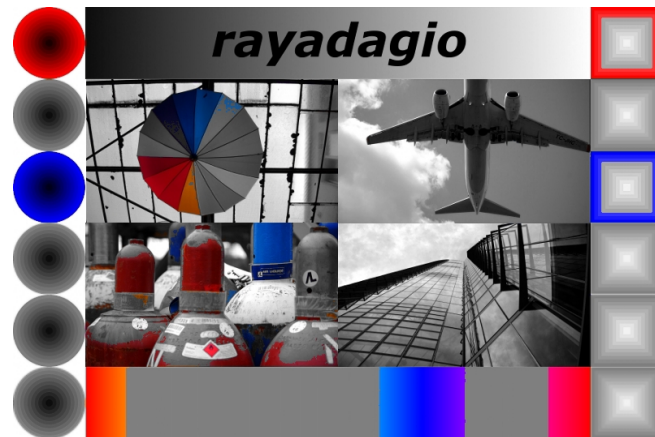


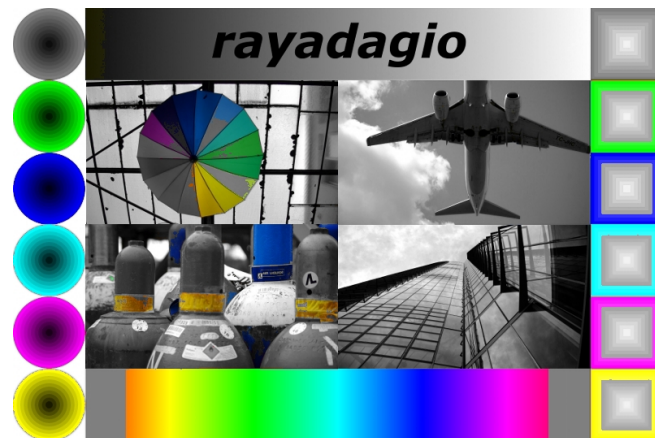Figure 4.1 **Add** ([Sr]+[Sb], 25% highlights, saturated red *and* blue parts)



Figure 4.2 **Subtract** ([S]-[Sr], 25% highlights, saturated parts *without* red)



Figure 4.3 **Intersect** ([V], [R] 10% highlights, *light red* parts)

# 5. Layer Mask Modes

The default layer mask mode is *White on black*. You can change the mode to *Black on white* to get an inverted layer mask. For the following sample 25% highlights of the *Saturation Red* channel was selected.



Figure 5.1 **White on black**



Figure 5.2 **Black on white**

# 6. Layer Mask Formats

Defining the layer mask format you can decide weather an either/or selection is done (*B&W Mask*) or if parts of the image are selected gradually (*Grayscale Mask*). For the following illustrations 25% highlights of the *Saturation* channel were selected.
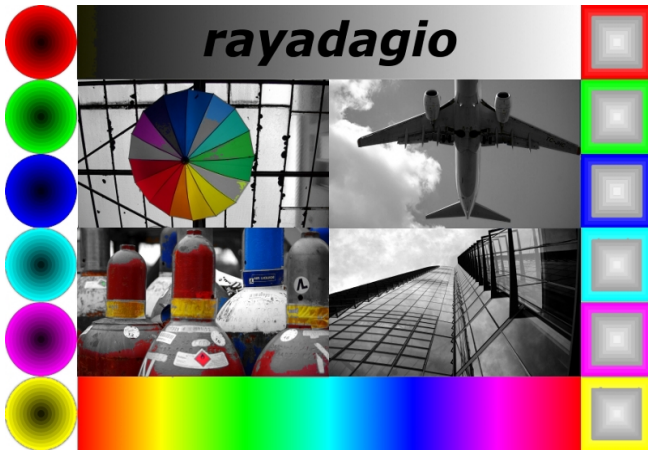

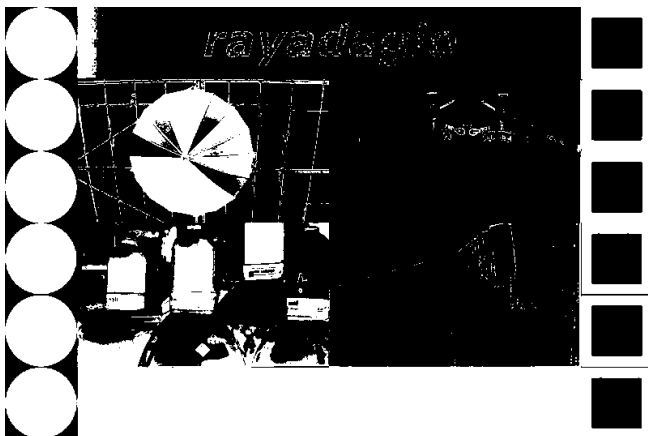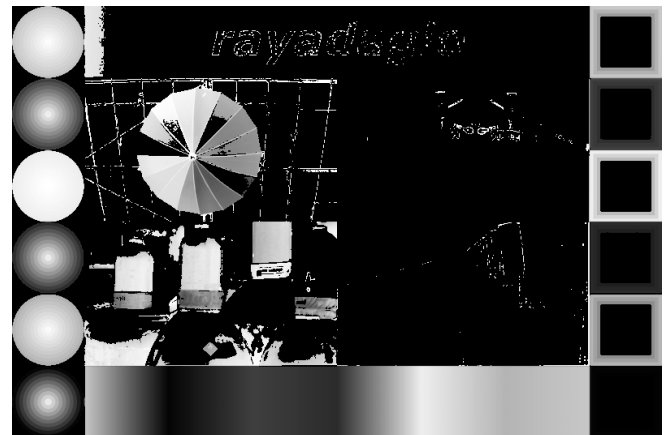Figure 6.1 **B&W Mask selection**


Figure 6.3 **Grayscale Mask selection**


Figure 6.2 **B&W layer mask**


Figure 6.4 **Grayscale layer mask**