

# Resolution



**Managing images and colour**

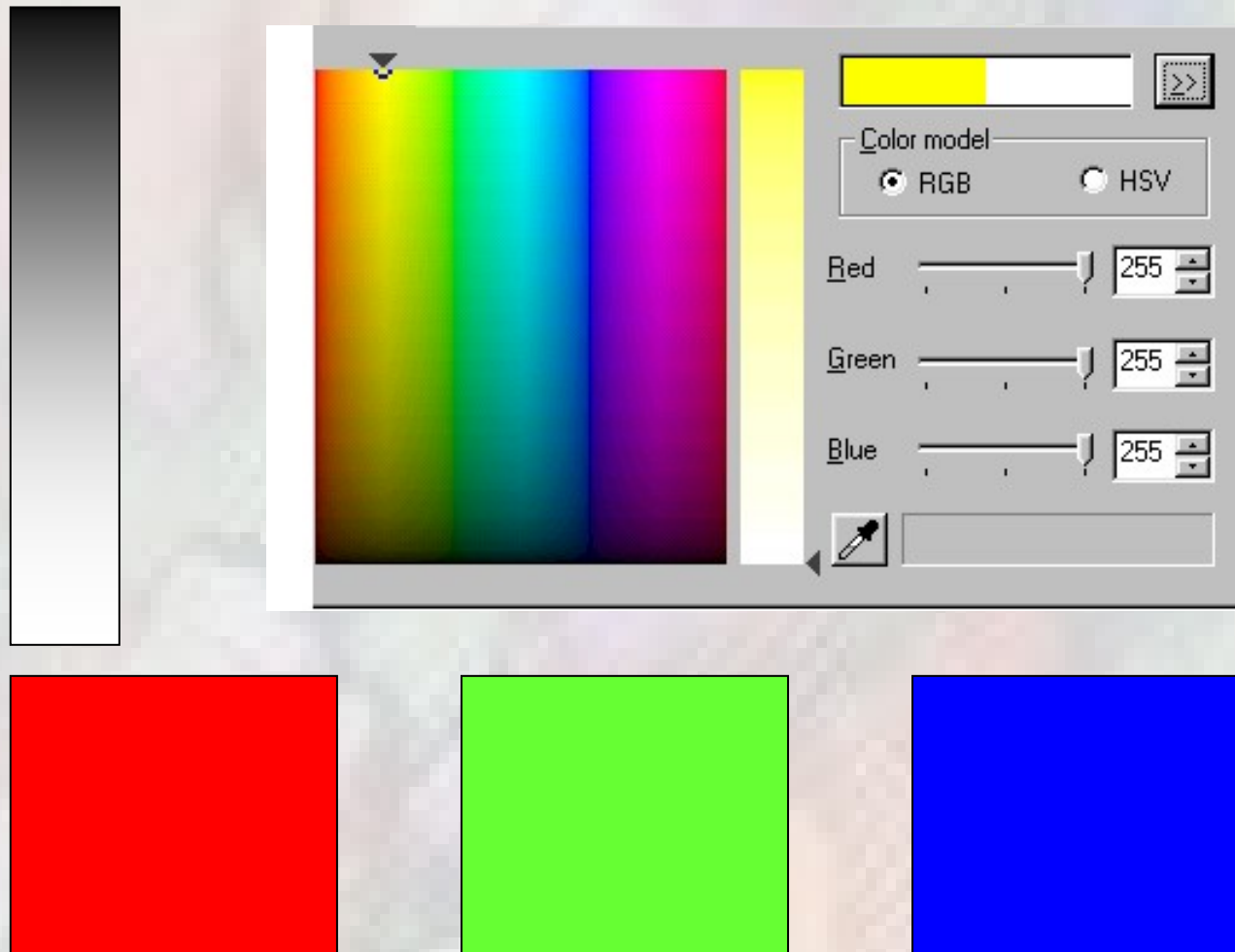
# Digital Cameras

- Similar to a film camera
- Film replaced by a light sensitive screen
- Screen has up to 10 million pixels (or many more for pro cameras)
- Small computer in the camera
- Saves each image as pixels
- Many different methods
- But all images saved using three colours

# Resolution

- Resolution is measured in dots or pixels per inch or per cm
- Print requires high resolution for good results - 600ppi or better
- Screens require a much smaller resolution 100 ppi is more than enough, 72ppi will do
- The web requires even less information to keep file sizes small

# RGB - Red Green Blue



# Colour information

- True colour: 16.7 million colours
- Web palette: 256 colours
- System palette: selected colours to suit your composition, screen or computer
- Grey scale : black, white and shades of grey
- Bitmap: black and white

# File sizes

- Chose your image size and resolution for the purpose
- Print: high for clarity and quality (big and very big files - many megabytes)
- Screen : medium size to suit your purpose especially presentation or picture show
- Web or email : small size for ease of use and to keep your costs down

# BIG!!! Files

a typical camera image is a big file

- 10MB 3872 by 2592 pixels =10M pixels
- A4 high quality print image
- Screen size 137cm by 96cm
- Up to 4mb per image
- Print uses 300ppi (300 pixels per inch)
- Screens use 72ppi (72 pixels per inch)

# Small files ..fast loading

- Screens and web sites require small files for fast loading
- A 4 by 5 inch image (10 by 15cm) usually suffices
- i.e at 72 ppi 430 by 288 pixels (100kb)

# Many colours

- Web files usually use limited (256) colours
- Camera files are usually 16 million colours or more
- Use black & white, monotone or web palette
- Quick fix use Picasa

# File formats

- Many, many different formats
- .tif – *most often used for high printout quality*  
- *big files* **ARCHIVE!!!!**
- .jpg – most often used for photographic images,
  
- .psp – paintshop pro file.. multiple layers
- .psd –photoshop file.. multiple layers
- .raw –specialist camera file..saves all information.

# Supported by most browsers

- .gif – most often used for artwork or web images with few colours or requiring transparent backgrounds or small size compressed images. Small files but limited to 256 colours.
- .jpg – most common share format (0000.jpg), most often used for photographic images, to provide compressed images, preserving 24 bit colour and variations in hue and tone. (Do make sure you keep a copy of your original image as shot on camera; images sized for quick email will not produce good quality A4 prints) If you are emailing for high quality prints do make sure they are sent at high resolution... usually at least 1 Mb file size and often much more!!)
- .png – latest web format but more suitable for artwork and drawings

# Emailing low resolution images

## Quick results

**Picasa 3;** select image and place in selection tray, then select email.

This will open Outlook Express or your preferred email program with the image automatically formatted to a small size .jpg

**Adobe Elements 9;** open in Organise, select image, choose Share, then select Photomail (this allows you to drag and drop images for mailing) or Email Attachments. This will open up Outlook Express or your preferred email program.. with the ready formatted image attached.

# Contact

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