SIZING PROJECTED DIGITAL IMAGES FOR COMPETITIONS AND COMPLETION OF FILE PROPERTIES FOR INTERNAL COMPETITION ENTRIES

Updated August 2023

1600 PIXELS WIDE - MAXIMUM



MAXIMUM DIMENSIONS – LANDSCAPE FORMAT

These are the maximum dimensions. If the image size is below these dimensions a canvas can be added to bring the image to the maximum dimensions. The use of a canvas is optional.

Colour space sRGB

Max File Size 3MB.

1600 PIXELS WIDE



1600 PIXELS WIDE

CANVAS ADDED TO LANDSCAPE FORMAT

A black canvas added to bring the image to the maximum dimensions.

Colour space sRGB

Max File Size 3MB.

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MAXIMUM DIMENSIONS – PORTRAIT FORMAT

These are the maximum dimensions. If the image size is below these dimensions a canvas can be added to bring the image to the maximum dimensions. The use of a canvas is optional.

Colour space sRGB

Max File Size 3MB.

CANVAS 1600 PIXELS WIDE



CANVAS ADDED TO PORTRAIT FORMAT

A canvas added to bring the image to the maximum dimensions.

Colour space sRGB

Max File Size 3MB.

IMAGE 840 PIXELS WIDE

1600 x 1200 image @ 100% on 1920 x 1200 screen



ADOBE LIGHTROOM EXPORT SCREEN

File Settings			
Image Format:	JPEG ~	Quality:	100
Color Space:	sRGB ~	🗹 Limit File Size To:	3000 K 🚯
Image Sizing			
Resize to Fit:	Width & Height	∨ □ Don't Enlarge	
w:	1600 H: 1200 pixels	 Resolution: 240 	pixels per inch \sim

If portrait orientation image (i.e. height > width) exported with these parameters the 1200 pixel height will limit the width of the image

Lightroom export of 701 x 526 pixel image

banded demoiselle low res (1 of 1),jpg	Q\$ Q 团 Q D B	ړ× ⊑ ∈ فر ۱۵۵% [–] [©] ×	▼ File Settings
			Image Format: JPEG V Quality:
			Color Space: sRGB \checkmark Limit File Size To: 3000 K
			▼ Image Sizing
			Resize to Fit: Width & Height 🗸 Von't Enlarge
			W: 1600 H: 1200 pixels \checkmark Resolution: 240 pixels per inch \checkmark
Partly sunny	📕 🔍 Search 🖬 💭 📜 🗃 💬 💽 💷 🖾 🖾 🦉 🧐 💆	^ C < ENG UK < C < 1517 09/11/2022 < ○	

Significant crop on original image to just show Banded Demoiselle resulted in an image size of 701 x 526 pixels.

If Resize to Fit is unchecked the exported image will be 701 x 526 pixels but it will appear as a small image on a 1920 x 1200 screen

Alternatively if Resize to Fit is checked and Don't Enlarge selected the image will again be exported at 701 x 526 pixels with no reduction in quality but it will appear as a small image on a 1920 x 1200 screen

Lightroom export of 701 x 526 pixel image enlarged to 1600 x 1200 pixels



File Settings	
Image Format:	JPEG V Quality: 100
Color Space:	sRGB V Limit File Size To: 3000 K
Image Sizing	
Resize to Fit:	Width & Height \checkmark Don't Enlarge
W:	1600 H: 1200 pixels \checkmark Resolution: 240 pixels per inch \checkmark

Don't Enlarge **NOT** selected so image exported at 1600 x 1200 pixels with a reduction in quality because Lightroom interpolates the original image to the selected size. The increase size is over twice the original image size. The image fills the screen

ADOBE PHOTOSHOP IMAGE – IMAGE SIZE SCREEN



ADOBE PHOTOSHOP IMAGE – CANVAS SIZE SCREEN

Image Size		× Canvas Size	×
Image Dimens Fi W € He Resolu	ize: 3.09M (was 57.7M) ons:	Current Size: 3.09M Width: Height: New Size: 5.49M Width: Height: Re Anchor:	900 Pixels 1200 Pixels Cancel 1600 Pixels Pixels Pixels elative
	ок Cancel	Canvas extension color:	White ~

Portrait format image which is 900 pixels wide has a white canvas added to make it 1600 pixels wide (see next slide)

CANVAS 1600 PIXELS WIDE



CANVAS ADDED TO PORTRAIT FORMAT

A canvas added to bring the image to the maximum dimensions.

Colour space sRGB

Max File Size 3MB.

IMAGE 900 PIXELS WIDE

MICROSOFT PHOTOS - IMAGE RESIZING





FASTSTONE PHOTORESIZER 4.4

	Input List: 1 Files Sort Files By	/: No Sort 🗸	Advanced (Options										\times
Add	_5290287-Edit.tif		Resize	Rotate	Crop	Canvas	Color Depth	Adjustments	DPI	Text	Watermark	Border		
Add All			_											
Remove			Resize											
Clear					🔘 In Pi:	xels	🔿 In Per	rcentage	0	In Print Si	ze	O Resize based on one s	ide	
					Ne		1600							
					INE	w widen:	1000 ▼	<pick a="" standard<="" th=""><th>d Size></th><th></th><th>\sim</th><th></th><th></th><th></th></pick>	d Size>		\sim			
					Nev	v Height:	1200							
						Filter:	Lanczos3 (Defa	ault)	~					
							Switch Width	and Height to m	atch long	g sides				
							Preserve As	pect Ratio						
							Smart-Cropp	ing (Result in exa	act width	and heig	ht)			
							Smart-Filling	(Result in exact	width and	d height)				
							Do not resize	e if image is alrea	dy smalle	er than re	quested size			
Output Format:	JPEG Format (*.jpg)	 ✓ Settings 												
Output Folder:	Η: \resized advanced dpi	Browse												
	Use Advanced Options (Resize)	Advanced Options												
Preview	Rename Use UPPERCASE for file extension													
	Keep original date / time attributes													
1841 x 1381	 Ask before overwrite Display error messages 	Convert												
14.7 MB 2022-05-30 19:36:23		Close	Rese	et all		Load Op	tions from File		Save C	Options to	File	<u>à</u>	ОК	Cancel

AFFINITY PDI IMAGE EXPORT (1)



Under the File tab select Export then select JPEG. Then Select More...

AFFINITY PDI IMAGE EXPORT (2)



Under the ICC Profile select sRGB IEC61966-2.1

	Export Settings	×
Preset:		•
File format:	JPEG	•
Pixel format:	Use document format	•
Resampler:	Bilinear	•
Matte:		
ICC Profile:	sRGB IEC61966-2.1	•
	Embed ICC profile	
Include ble	eed	
Quality:	100 -	
Progressiv	e	
Convert cl	ips to paths	
0	Embed metadata	
Manage Pr	esets	Close

SIZING IMAGES FOR PRINTING

MAXIMUM MOUNT DIMENSIONS – LANDSCAPE FORMAT



40 cm HIGH MAX

MAXIMUM MOUNT DIMENSIONS – PORTRAIT FORMAT

40 cm WIDE - MAX



50 cm HIGH MAX

What is PPI?

The word "pixel" means a picture element. Every photograph, in digital form, is made up of pixels. They are the smallest unit of information that makes up a picture. Usually round or square, they are typically arranged in a 2-dimensional grid

PPI stands for pixels per inch. PPI describes the resolution of a digital image, not a print. PPI is used to resize images in preparation for printing.

The size at which an image appears on your screen depends only on two things the pixel dimensions of the image and the display resolution of your screen. As long as you've set your screen to its native display resolution then an image will be displayed pixel-for-pixel. In other words, each pixel in the image will take up exactly one pixel on your screen. For example, a 1600 x 1200 pixel image would fill a 1600 x 1200 pixel area of a 1920 x 1200 pixel screen (WUXGA). No more, no less. And no matter what you set the image's resolution to in Photoshop, Affinity etc, whether it's 72 ppi, 300 ppi or 3000 ppi, it will have no effect at all on how large or small the image appears on the screen

1600 x 1200 image @ 100% on 1920 x 1200 screen



PPI Print Standards

When setting an image to be printed, it's best to use the correct pixels per inch.

A number between 200 and 300 is generally accepted to represent "photographic quality" at an arm's length viewing distance.

If an image has a resolution of < 200 PPI, it just shouldn't ever hit a printer for club images which are viewed at arm's length.

The optimal printing resolution to get the most out of your printer is likely to fall within the range of 240-360ppi.

Most printing laboratories advise JPEG images at 300 PPI.

DPI Print Standards

In printing, DPI (dots per inch) refers to the output resolution of a printer. Photographic printers such as the Canon Pixma Pro 100 offer a resolution of 4800 X 2400dpi On the Canon printer you can change the DPI by selecting the Print Quality from High, Standard, Fast and Custom.

CALCULATION OF PRINTED IMAGE SIZE FROM PIXEL DIMENSIONS



Image size = 1600 x 1200 pixels Print size @ 300ppi = $\frac{1600}{300} \times \frac{1200}{300} = 5.3 \times 4.0$ inches Print size @ 200ppi = $\frac{1600}{200} \times \frac{1200}{200} = 8.0 \times 6.0$ inches

Paper size = 16 ins x 12 ins Print resolution = <u>1600</u> x <u>1200</u> = 100 ppi UNACCEPTABLE QUALITY FOR VIEWING AT ARMS LENGTH 16 12

CALCULATION OF PRINTED IMAGE SIZE FROM PIXEL DIMENSIONS





Picture size = $\frac{5184}{300} \times \frac{3888}{300} = 17.3 \times 13.0$ inches Alternatively you can change the units from Pixels to Inches and you will obtain the size.

Common photo print sizes in inches	Photo print sizes in centimetres	Required Image size in pixels @ 300 PPI resolution
10x8	25.4 x 20.32	3000 x 2400
A4	29.7 x 21.0	3508 x 2480
12x8	30.48 x 20.32	3600 x 2400
12x10	30.48 x 25.4	3600 x 3000
14x10	35.56 x 25.4	4200 x 3000
15x10	38.1 x 25.4	4500 x 3000
16x12	40.64 x 30.48	4800 x 3600
A3	42.00 x 29.70	4961 x 3508
18x10	45.72 x 25.4	5400 x 3000
18x12	45.72 x 30.48	5400 x 3600

Lightroom export of 4640 x 3480 pixel image for Printing



File Settings				
Image Format:	JPEG	~	Quality:	100
Color Space:	sRGB	\sim	Limit File Size To:	3000 K
Image Sizing				
🖌 Resize to Fit:	Width & Height		🗸 🔽 Don't Enlarge	
w:	16.000 H: 12.000 in	```	 Resolution: 300 	pixels per inch \sim

If Don't Enlarge is CHECKED image will be 15.5 x 11.6 inches on 16 x 12 inch paper. The file is 16.5 MB so the Limit File Size To box is not checked and the Quality is selected as 100%. Therefore for printing from Lightroom ensure that the Limit File Size To box is unchecked. Note: If Don't Enlarge is NOT CHECKED the image would have been increased by just over 1% so the reduction in quality would not have been noticeable.

AFFINITY IMAGE – VIEW SIZE OF IMAGE IN INCHES



	Resize Document	x
Size:	15.467 in 11.6 in	
Units:	Inches -	
DPI:	300 -	
Resample:	Bilinear 🔹	
	Resample	
Description:	15.467 in × 11.6 in @ 300DPI (4640 px × 3480 px)	
	Resize Cancel	

To check the size of the image in inches under the Document tab in the Photo Persona select Resize Document which shows the image is 15.5×11.6 inches. To print on 16×12 paper Under the Document tab in the Photo Persona select Resize Canvas and enter 16×12 inches. Ensure the Anchor point is the middle for the image to be placed in the middle of the canvas.

AFFINITY IMAGE – CANVAS SIZE SCREEN





To print on 16×12 paper Under the Document tab in the Photo Persona select Resize Canvas and enter 16×12 inches. Ensure the Anchor point is the middle for the image to be placed in the middle of the canvas. A transparent canvas is added

AFFINITY IMAGE – CHANGE CANVAS COLOUR



D	ocument	Layer	Select	Arrange	Filters	View
	Add Snaps	hot				
	Restore Sn	apshot				•
	Convert Fo	ormat / ICC	Profile			
	Assign ICC	Profile				4.
	Resize Doo	ument		Ctrl+Alt	:+1	
	Resize Can	vas		Ctrl+Alt	:+C	
	Margins					
	Resize Pixe	l Art Docu	ment			
v	Transparer	nt Backgrou	und			
	Clip Canva	s				
	Unclip Car	was				
	Rotate 90°	Clockwise		Ctrl+Alt	+Shift+Up	
	Rotate 90°	Anticlockv	vise	Ctrl+Alt	+Shift+Do	wn
	Flip Horizo	ontal		Ctrl+Alt	+Shift+Lef	t
	Flip Vertica	al		Ctrl+Alt	+Shift+Rig	ht
	Flatten					

To change the colour of the canvas from Transparent to White go the Document tab in the Photo Persona and uncheck Transparent Background

Affinity export of 16 x 12 image for Printing (1)



Under the File tab select Export then select JPEG. Then Select More...

Affinity export of 16 x 12 image for Printing (2)



	Export Settings		×
Preset:		-	
File format:	JPEG	•	
Pixel format:	Use document format	•	
Resampler:	Bilinear	-	
Matte:			
ICC Profile:	sRGB IEC61966-2.1	•	
	Embed ICC profile		
Include bl	eed		
Quality:	100 -		
Progressiv	e		
Convert cl	ips to paths		
0	✓ Embed metadata		
Manage Pr	resets	Close	

Under the ICC Profile either select your printer made and model or sRGB IEC61966-2.1 if using an external printer.

RESIZING IMAGES (i.e. Resample box unchecked)



 Image Size:
 39.2M
 *.

 Dimensions:
 4785 px × 2866 px
 *.

 Dimensions:
 4785 px × 2866 px
 *.

 Width:
 19.938
 Inches
 *.

 Width:
 19.938
 Inches
 *.

 Resolution:
 240
 Pixels/Inch
 *.

 Resample:
 Preserve Details (enlargement)
 0K
 Cancel

Resizing the image does not affect the number of pixels, but rather the print output. The image dimensions are 4785 pixels by 2866 pixels and at 240 PPI this measures 19.9 x 11.9 inch. When *resized* to 72 PPI the number of pixels are unchanged and image is resized to 66.5 x 39.8 inches



RESAMPLING [(INTERPOLATION) i.e. Resample box checked]



Image Size X Image Size: 39.2M ٥. Dimensions: 4785 px × 2866 px Fit To: Original Size Width: 19.938 Inches Height: 11.942 Inches Resolution: 240 **Pixels/Inch** Resample: OK Cancel

Resampling (Interpolation) an image refers to adjusting the amount of pixels in an image to retain the same printed height and width. The output size of this image is 19.9 x 11.9 inches. At 240 PPI the image dimensions are 4785 pixels by 2866 pixels and file size 39.2M, but when *resampled* to 72 PPI the number of pixels is reduced to 1436 pixels by 860 pixels and the file size is reduced to 3.5M.



COMPETITION ENTRY SYSTEM

To assist the Competition Secretary in managing internal competition entries the Committee has agreed that for future internal competitions the club will use Film Free Projection Extended (FFPX) competition software. FFPX requires members to enter data into the File Properties when they submit entries.

Projected Digital Image (PDI) entries

Members entries should comply with the following:-

Projected Digital Image (PDI) entries sized at a maximum of 1600 x 1200 pixels –File name comprising Competitor Number and Image Title e.g. 03 FEMALE PIED FLYCATCHER

Before submitting entries to the Internal Competition Secretary, the member shall also enter the following data into the File Properties. From the Context menu Open the Properties section of the file.

PDI entry Properties General Tab

	03 FEMALE PIED FLYCATCHER
Type of file:	JPG File (.jpg)
Opens with:	Photos Change
Location:	H:\2022_23\Workington\2nd comp\pdi
Size:	1.17 MB (1,234,616 bytes)
Size on disk:	1.25 MB (1,310,720 bytes)
Created:	11 October 2022, 17:29:26
Modified:	11 October 2022, 17:29:28
Accessed:	11 October 2022
Attributes:	Read-only Hidden Advanced

PDI Entry Properties Detail tab

eneral Details		
Property	Value	
Description		- 11
Title	PIED FLYCATCHER	
Subject	2nd Open Comp 2023_4	
Rating	* * * * *	
Tags		
Comments		
Origin		-
Authors	03	
Date taken		
Program name		
Date acquired		
Copyright		
lmage		-
Image ID		
Dimensions	1600 x 1132	
Width	1600 pixels	
Height	1132 pixels	
Herizontal resolution	200 dei	
Remove Properties and	Personal Information	

- In the **Description** section Title field add the Image Title (no members Competition number)
- In the **Description** section Subject field add the Competition Title
- In the **Origin** section Author Field add the Members Competition Number
- Take care to remove the details in the Copyright field if they contain information can identify the author (judges can see these fields and we try to avoid 'personalities' influencing the judge's decisions)

PDI files associated with Print entries to enable digital projection of Print entries

Entries should comply with the following:-

Print PDIs sized at a maximum of 1600 x 1200 pixels - File name comprising COPYPRINT Competitor number and Image Title.

Before submitting entries to the Internal Competition Secretary, the member shall also enter the following data to the File Properties.

PDI files associated with Print entries to enable digital projection of Print entries Properties General tab

COPYPRINT	03 COMING UP FOR AIR P	roperties	×
General Detail	S		
	COPYPRINT 03 COMING UP	FOR AIR	
Type of file:	JPG File (.jpg)		
Opens with:	Photos	Change	
Location:	H:\2022_23\Workington\2nd	l comp\prints	_
Size:	1.50 MB (1,575,689 bytes)		
Size on disk:	1.62 MB (1,703,936 bytes)		
Created:	11 October 2022, 17:34:34		
Modified:	11 October 2022, 17:34:36		
Accessed:	11 October 2022		
Attributes:	Read-only Hidden	Advanced	
	ОК Са	ncel Apply	

PDI files associated with Print entries to enable digital projection of Print entries Properties Detail tab

Value COMING UP FOR AIR 2nd Open Comp 2022_3
COMING UP FOR AIR 2nd Open Comp 2022_3
COMING UP FOR AIR 2nd Open Comp 2022_3
2nd Open Comp 2022_3

03
01/07/2022 10:45
Adobe Photoshop Lightro
1600 x 1200
1600 pixels
1200 pixels

OK

Cancel

Apply

- In the **Description** section Title field add the Image Title (no COPYPRINT or members Competition number)
- In the **Description** section Subject field add the Competition Title
- In the Origin section Author Field add the Members Competition Number
- Take care to remove the details in the Copyright field if they contain information can identify the author (judges can see these fields and we try to avoid 'personalities' influencing the judge's decisions)

THE END