

Photoshop Styles File Format

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Contents

This document provides information about the (undocumented yet) format of styles files in Photoshop.

Note: all multi-byte values, i.e., integer numbers (including C-style 4-character constants), floating-point (double) numbers, and Unicode characters are coded in [big-endian](#) format.

Styles file format

Styles file

Name	Type	Kind	Description
*.asl	'8BSL'	Styles file	Adobe Photoshop styles file; generally produced by saving a selected set of styles from the Preset Manager, or all styles from the Styles Palette.

Length (in bytes)	Description	Comments
2	Styles file version (= 2)	16-bit integer.
Variable	Styles	Styles format.

Styles palette file

Name	Type	Kind	Description
Styles.psp	'8BPF'	Styles palette file	Adobe Photoshop preferences file containing all the styles listed in the Styles Palette. Warning: like most preferences files, the styles palette file is not updated in real-time: it is read by the application only once at start-up (launch) time and written back at shut-down (quit) time.

Length (in bytes)	Description	Comments
Variable	Styles	Styles format.

Styles

Length (in bytes)	Description	Comments
4	Magic number (= '8BSL')	C-style 4-character constant.
Variable	Set of embedded patterns	Patterns format.
4	Number of styles	32-bit integer.
Variable	Sequence of styles	Each in Style format.

Patterns

Set of patterns referenced by styles contained in the file, more precisely by three kinds of layer effects:

- Bevel and Emboss: Texture
- Pattern Overlay
- Stroke (Fill Type: Pattern)

Length (in bytes)	Description	Comments
2	Sub-version (= 3)	16-bit integer.
4	Length (in bytes) of remaining patterns data	32-bit integer.
Variable	Sequence of patterns	Each in Pattern format.

Pattern

Length (in bytes)	Description	Comments
4	Length (in bytes) of remaining pattern data	32-bit integer.
4	Pattern version (= 1)	32-bit integer.

4	Image mode	32-bit integer: <ul style="list-style-type: none"> • 0 (Bitmap) • 1 (Grayscale) • 2 (Indexed) • 3 (RGB) • 4 (CMYK) • 7 (Multichannel) • 8 (Duotone) • 9 (Lab)
2	Pattern height	16-bit integer.
2	Pattern width	16-bit integer.
Variable	Pattern name	Unicode string format.
1 + 36	Pattern ID (UUID)	Pascal-style string format.
Variable	Image data	Image data format (opaque for the time being).
0 to 3	Extra null padding	The total number of bytes, i.e., the above-mentioned length of remaining pattern data plus the length of this padding, must be a multiple of 4.

Cf. [Additional Layer Information](#) of the page [Adobe Photoshop File Formats Specification](#) for more details about the way patterns are stored in a Photoshop document.

Unicode string

Length (in bytes)	Description	Comments
4	Number of Unicode characters	32-bit integer.
Variable	String of Unicode characters	Two bytes per character; includes terminating null.

Pascal-style string

Length (in bytes)	Description	Comments
1	Number of characters	8-bit integer (unsigned).
Variable	String of characters	One byte per character; no terminating null.

Style format

Style

Length (in bytes)	Description	Comments
Variable	Style identification: name and ID	Style identification format.
Variable	Style information: document mode, layer effects, blending options	Style information format.

Both style identification and style information are actually serialized action descriptors that match the serialized format expected by the `ActionDescriptor.fromStream` method (in JavaScript), or the `HandleToDescriptor` routine of the `ActionDescriptor` suite (in C/C++), i.e. prefixed by a 32-bit integer equal to 16. They will be described below by detailing the structure of their respective action descriptors.

Style identification

Key	Type	Value	Comments
'Nm '	String	Style name	Unicode string.
'Idnt'	String	Style ID (UUID)	Unicode string.

Style information

Key	Type	Value	Comments
"documentMode"	Object	Document mode (color space and depth)	Document mode object format.
'Lefx'	Object	Layer effects	Layer effects object format.
"blendOptions"	Object	Blending options	Blending options object format.

Document mode format

Document mode object

Class	Descriptor			
"documentMode"	Key	Type	Value	Comments
	'ClrS'	Enumerated	Color space: <ul style="list-style-type: none"> 'ClrS', 'ECMY' 'ClrS', 'Gryc' 'ClrS', 'LbCl' 'ClrS', 'RGBC' 	Color Mode: <ul style="list-style-type: none"> CMYK Color Grayscale Lab Color RGB Color
	'Dpth'	Integer	Depth	8 or 16.

Layer effects format

Layer effects object

Class	Descriptor			
'Lefx'	Key	Type	Value	Comments
	'Scl '	Unit double	Scale (in '#Prc' units)	100% by default.
	"masterFXSwitch"	Boolean	Master FX switch	Enable All Layer Effects.
	'DrSh'	Object	Drop shadow effect	Drop shadow object format.
	'IrSh'	Object	Inner shadow effect	Inner shadow object format.
	'OrGL'	Object	Outer glow effect	Outer glow object format.
	'IrGL'	Object	Inner glow effect	Inner glow object format.
	'ebbl'	Object	Bevel emboss (Bevel and Emboss) effect	Bevel emboss object format.
	'ChFX'	Object	Chrome FX (Satin) effect	Chrome FX object format.
	'SoFi'	Object	Solid fill (Color Overlay) effect	Solid fill object format.
	'GrFL'	Object	Gradient fill (Gradient Overlay) effect	Gradient fill object format.
	"patternFill"	Object	Pattern fill (Pattern Overlay) effect	Pattern fill object format.
	'FrFX'	Object	Frame FX (Stroke) effect	Frame FX object format.

Drop shadow object

Class	Descriptor			
	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Drop Shadow effect.
	'Md '	Enumerated	Blend mode	Among Blend modes

'DrSh'	'Clr '	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'uglg'	Boolean	Use global angle	Use Global Light.
	'lagl'	Unit double	Local lighting angle (in '#Ang' units)	Angle: -180° to 180°.
	'Dstn'	Unit double	Distance (in '#Px1' units)	0 to 30000 pixels.
	'Ckmt'	Unit double	Choke matte (in '#Px1' units)	Spread: 0 to 100.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'Nose'	Unit double	Noise (in '#Prc' units)	0% to 100%.
	'AntA'	Boolean	Anti-alias	Anti-Aliased.
	'TrnS'	Object	Transparency shape (Contour)	Shaping curve object format.
"layerConceals"	Boolean	Layer conceals	Layer Knocks Out Drop Shadow.	

Inner shadow object

Class	Descriptor			
	Key	Type	Value	Comments
'IrSh'	'enab'	Boolean	Enabled	Apply Inner Shadow effect.
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Clr '	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'uglg'	Boolean	Use global angle	Use Global Light.
	'lagl'	Unit double	Local lighting angle (in '#Ang' units)	Angle: -180° to 180°.
	'Dstn'	Unit double	Distance (in '#Px1' units)	0 to 30000 pixels.
	'Ckmt'	Unit double	Choke matte (in '#Px1' units)	Choke: 0 to 100.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'Nose'	Unit double	Noise (in '#Prc' units)	0% to 100%.
'AntA'	Boolean	Anti-alias	Anti-Aliased.	
'TrnS'	Object	Transparency shape (Contour)	Shaping curve object format.	

Outer glow object

Class	Descriptor			
	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Outer Glow effect.

'OrGl'	'Md'	Enumerated	Blend mode	Among Blend modes
	'Clr'	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format
	'Grad'	Object	Custom stops gradient object or Color noise gradient object	Custom stops gradient object format or Color noise gradient object format.
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'GLWT'	Enumerated	Glow Technique: <ul style="list-style-type: none"> • 'BETE', 'PrBL' • 'BETE', 'SfBL' 	Technique: <ul style="list-style-type: none"> • Precise • Softer
	'Ckmt'	Unit double	Choke matte (in '#Px1' units)	Spread: 0 to 100.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'Nose'	Unit double	Noise (in '#Prc' units)	0% to 100%.
	'ShdN'	Unit double	Shading noise (in '#Prc' units)	Jitter: 0% to 100%.
	'AntA'	Boolean	Anti-alias	Anti-Aliased.
	'TrnS'	Object	Transparency shape (Contour)	Shaping curve object format.
	'Inpr'	Unit double	Input range (in '#Prc' units)	Range: 1% to 100%.

Note: Color ('Clr') and Gradient ('Grad') are mutually exclusive.

Inner glow object

Class	Descriptor			
	Key	Type	Value	Comments
'IrGl'	'enab'	Boolean	Enabled	Apply Inner Glow effect.
	'Md'	Enumerated	Blend mode	Among Blend modes
	'Clr'	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format
	'Grad'	Object	Custom stops gradient object or Color noise gradient object	Custom stops gradient object format or Color noise gradient object format.
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'GLWT'	Enumerated	Glow Technique: <ul style="list-style-type: none"> • 'BETE', 'PrBL' • 'BETE', 'SfBL' 	Technique: <ul style="list-style-type: none"> • Precise • Softer
	'Ckmt'	Unit double	Choke matte (in '#Px1' units)	Choke: 0 to 100.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'ShdN'	Unit double	Shading noise (in '#Prc' units)	Jitter: 0% to 100%.
	'Nose'	Unit double	Noise (in '#Prc' units)	0% to 100%.

'AntA'	Boolean	Anti-alias	Anti-Aliased.
'glwS'	Enumerated	Inner glow source: <ul style="list-style-type: none"> 'IGSr', 'SrcC' 'IGSr', 'SrcE' 	Source: <ul style="list-style-type: none"> Center Edge
'TrnS'	Object	Transparency shape (Contour)	Shaping curve object format.
'Inpr'	Unit double	Input range (in '#Prc' units)	Range: 1% to 100%.

Note: Color ('Clr ') and Gradient ('Grad') are mutually exclusive.

Bevel emboss object

Class	Descriptor			
	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Bevel and Emboss effect.
	'hg1M'	Enumerated	Highlight blend mode	Among Blend modes
	'hg1C'	Object	Highlight color object: <ul style="list-style-type: none"> Book color object CMYK color object Grayscale object HSB color object Lab color object RGB color object 	Among: <ul style="list-style-type: none"> Book color object format CMYK color object format Grayscale object format HSB color object format Lab color object format RGB color object format
	'hg1O'	Unit double	Highlight opacity (in '#Prc' units)	0% to 100%.
	'sdwM'	Enumerated	Shadow blend mode	Among Blend modes
	'sdwC'	Object	Shadow color object: <ul style="list-style-type: none"> Book color object CMYK color object Grayscale object HSB color object Lab color object RGB color object 	Among: <ul style="list-style-type: none"> Book color object format CMYK color object format Grayscale object format HSB color object format Lab color object format RGB color object format
	'sdwO'	Unit double	Shadow opacity (in '#Prc' units)	0% to 100%.
	'bv1T'	Enumerated	Bevel Technique: <ul style="list-style-type: none"> 'bv1T', 'SfBL' 'bv1T', 'PrBL' 'bv1T', 'Slmt' 	Technique: <ul style="list-style-type: none"> Smooth Chisel Hard Chisel Soft
	'bv1S'	Enumerated	Bevel style: <ul style="list-style-type: none"> 'BES1', 'OtrB' 'BES1', 'InrB' 'BES1', 'Embs' 'BES1', 'PlEb' 'BES1', "strokeEmboss" 	Style: <ul style="list-style-type: none"> Outer Bevel Inner Bevel Emboss Pillow Emboss Stroke Emboss
'ebbl'	'uglg'	Boolean	Use global angle	Use Global Light.
	'lagl'	Unit double	Local lighting angle (in '#Ang' units)	Angle: -180° to 180°.
	'La1d'	Unit double	Local lighting altitude (in '#Ang' units)	Altitude: 0° to 90°.
	'srgR'	Unit double	Strength ratio (in '#Prc' units)	Depth: 1% to 1000%.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'bv1D'	Enumerated	Bevel direction: <ul style="list-style-type: none"> 'BESs', 'In ' 	Direction: <ul style="list-style-type: none"> Up

		• 'BESS', 'Out '	• Down
'TrnS'	Object	Transparency shape (Gloss Contour)	Shaping curve object format.
"antialiasGloss"	Boolean	Anti-alias gloss	Anti-Aliased.
'Sftn'	Unit double	Softness (in '#Px1' units)	Soften: 1 to 16 pixels.
Only if "useShape" is true:			
"useShape"	Boolean	Use shape	Apply Contour.
'MpgS'	Object	Mapping shape (Contour)	Shaping curve object format.
'AntA'	Boolean	Anti-alias	Anti-Aliased.
'Inpr'	Unit double	Input range (in '#Prc' units)	Range: 0% to 100%.
Only if "useTexture" is true:			
"useTexture"	Boolean	Use texture	Apply Texture.
'InvT'	Boolean	Invert texture	Invert.
'Algn'	Boolean	Align	Link with Layer.
'Scl '	Unit double	Scale (in '#Prc' units)	1% to 1000%.
"textureDepth"	Unit double	Texture depth (in '#Prc' units)	Depth: -1000% to +1000%.
'Ptrn'	Object	Pattern	Pattern object format.
"phase"	Object	Phase (Snap to Origin, or drag to position with mouse down)	Phase point object format.

Chrome FX object

Class	Descriptor			
'ChFX'	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Satin effect.
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Clr '	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format
	'AntA'	Boolean	Anti-alias	Anti-Aliased.
	'Invr'	Boolean	Invert	Reverse effect.
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'lagl'	Unit double	Local lighting angle (in '#Ang' units)	Angle: -180° to 180°.
	'Dstn'	Unit double	Distance (in '#Px1' units)	1 to 250 pixels.
	'blur'	Unit double	Blur (in '#Px1' units)	Size: 0 to 250 pixels.
	'MpgS'	Object	Mapping shape (Contour)	Shaping curve object format.

Solid fill object

Class	Descriptor			
	Key	Type	Value	Comments

'SoFi'	'enab'	Boolean	Enabled	Apply Color Overlay effect.
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'Clr '	Object	Color object: <ul style="list-style-type: none"> • Book color object • CMYK color object • Grayscale object • HSB color object • Lab color object • RGB color object 	Among: <ul style="list-style-type: none"> • Book color object format • CMYK color object format • Grayscale object format • HSB color object format • Lab color object format • RGB color object format

Gradient fill object

Class	Descriptor			
'GrFl'	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Gradient Overlay effect.
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'Grad'	Object	Custom stops gradient object or Color noise gradient object	Custom stops gradient object format or Color noise gradient object format.
	'Angl'	Unit double	Angle (in '#Ang' units)	-180° to 180°.
	'Type'	Enumerated	Type: <ul style="list-style-type: none"> • 'GrdT', 'Lnr ' • 'GrdT', 'Rdl ' • 'GrdT', 'Angl' • 'GrdT', 'Rflc' • 'GrdT', 'Dmnd' 	Style: <ul style="list-style-type: none"> • Linear • Radial • Angle • Reflected • Diamond
	'Rvrs'	Boolean	Reverse	Reverse direction of gradient.
	'Algn'	Boolean	Align	Align with Layer.
	'Sc1 '	Unit double	Scale (in '#Prc' units)	10% to 150%.
	'Ofst'	Object	Offset (drag to position with mouse down)	Offset point object format.
	'Dthr'	Boolean	Dither	Only from CS6.

Pattern fill object

Class	Descriptor			
"patternFill"	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Pattern Overlay effect.
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'Ptrn'	Object	Pattern	Pattern object format.
	'Sc1 '	Unit double	Scale (in '#Prc' units)	1% to 1000%.
	'Algn'	Boolean	Align	Link with Layer.
	"phase"	Object	Phase (Snap to Origin, or drag to position with mouse down)	Phase point object format.

Frame FX object

Class	Descriptor			
	Key	Type	Value	Comments
	'enab'	Boolean	Enabled	Apply Stroke effect.
	'Styl'	Enumerated	Style: <ul style="list-style-type: none"> 'FStl', 'OutF' 'FStl', 'InsF' 'FStl', 'CtrF' 	Position: <ul style="list-style-type: none"> Outside Inside Center
	'PntT'	Enumerated	Paint type: <ul style="list-style-type: none"> 'FrFL', 'SCLr' 'FrFL', 'GrFL' 'FrFL', 'Ptrn' 	Fill Type: <ul style="list-style-type: none"> Color Gradient Pattern
	'Md '	Enumerated	Blend mode	Among Blend modes
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'Sz '	Unit double	Size (in '#Px1' units)	1 to 250 pixels.
	Color Fill Type only:			
	'Clr '	Object	Color object: <ul style="list-style-type: none"> Book color object CMYK color object Grayscale object HSB color object Lab color object RGB color object 	Among: <ul style="list-style-type: none"> Book color object format CMYK color object format Grayscale object format HSB color object format Lab color object format RGB color object format
	Gradient Fill Type only:			
'FrFX'	'Grad'	Object	Custom stops gradient object or Color noise gradient object	Custom stops gradient object format or Color noise gradient object format.
	'Angl'	Unit double	Angle (in '#Ang' units)	-180° to 180°.
	'Type'	Enumerated	Type: <ul style="list-style-type: none"> 'GrdT', 'Lnr ' 'GrdT', 'Rdl ' 'GrdT', 'Angl' 'GrdT', 'RFlc' 'GrdT', 'Dmnd' 'GrdT', "shapeburst" 	Style: <ul style="list-style-type: none"> Linear Radial Angle Reflected Diamond Shape Burst
	'Rvrs'	Boolean	Reverse	Reverse direction of gradient.
	'Scl '	Unit double	Scale (in '#Prc' units)	10% to 150%.
	'Algn'	Boolean	Align	Align with Layer.
	'Ofst'	Object	Offset (drag to position with mouse down)	Offset point object format.
	'Dthr'	Boolean	Dither	Only from CS6.
	Pattern Fill Type only:			
	'Ptrn'	Object	Pattern	Pattern object format.
	'Scl '	Unit double	Scale (in '#Prc' units)	1% to 1000%.
	'Lnkd'	Boolean	Linked	Link with Layer.
	"phase"	Object	Phase (Snap to Origin, or drag to position with mouse down)	Phase point object format.

Offset point object

Class	Descriptor			
	Key	Type	Value	Comments
'Pnt '	'Hrzn'	Unit double	Horizontal (in '#Prc' units)	Horizontal offset.
	'Vrtc'	Unit double	Vertical (in '#Prc' units)	Vertical offset.

Phase point object

Class	Descriptor			
	Key	Type	Value	Comments
'Pnt '	'Hrzn'	Double	Horizontal	Horizontal phase.
	'Vrtc'	Double	Vertical	Vertical phase.

Shaping curve object

Class	Descriptor			
	Key	Type	Value	Comments
'ShpC'	'Nm '	String	Name	Contour name.
	'Crv '	List	List of curve points	Each in Curve point object format.

Curve point object

Class	Descriptor			
	Key	Type	Value	Comments
'CrPt'	'Hrzn'	Double	Horizontal	0 to 255.
	'Vrtc'	Double	Vertical	0 to 255.
	'Cnty'	Boolean	Continuity	Non-Corner (true by default).

Blending options format

Blending options object

Class	Descriptor			
	Key	Type	Value	Comments
"blendOptions"	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.
	'Md '	Enumerated	Blend mode	Among Blend modes
	"fillOpacity"	Unit double	Fill opacity (in '#Prc' units)	0% to 100%.
	"blendClipped"	Boolean	Blend clipped	Blend Clipped Effects as Group
	"blendInterior"	Boolean	Blend interior	Blend Interior Effects as Group
	"knockout"	Enumerated	Knockout: • "knockout", 'None' • "knockout", "shallow" • "knockout", "deep"	Knockout: • None • Shallow • Deep
	"transparencyShapesLayer"	Boolean	Transparency shapes layer	Transparency Shapes Layer

"layerMaskAsGlobalMask"	Boolean	Layer mask as global mask	Layer Mask Hides Effects
"vectorMaskAsGlobalMask"	Boolean	Vector mask as global mask	Vector Mask Hides Effects
'Blnd'	List	List of blend ranges	Each in Blend range object format.
"channelRestrictions"	List	List of enumerated channels	Each among Channels .

Blend range object

Class	Descriptor			
'Blnd'	Key	Type	Value	Comments
	'Chnl'	Reference	Channel reference	Channel reference format.
	'SrcB'	Integer	Source minimum black	0 to 255.
	'SrcL'	Integer	Source maximum black	0 to 255.
	'SrcW'	Integer	Source minimum white	0 to 255.
	'Srcm'	Integer	Source maximum white	0 to 255.
	'DstB'	Integer	Destination minimum black	0 to 255.
	'DstL'	Integer	Destination maximum black	0 to 255.
	'DstW'	Integer	Destination minimum white	0 to 255.
	'Dstm'	Integer	Destination maximum white	0 to 255.

Channel reference

Desired Class	Type	Value	Comments
'Chnl'	Enumerated	Channel	Among Channels .

Channels

EnumType	EnumValue	Comments
'Chnl'	'A '	A
	'B '	B
	'Blck'	Black
	'BL '	Blue
	'Cyn '	Cyan
	'Dtn '	Duotone
	'Gry '	Gray
	'Grn '	Green
	'Lght'	Lightness
	'Mgnt'	Magenta
	'Mntn'	Monotone
	'Qdtn'	Quadtone
	'Rd '	Red
	'Trtn'	Tritone
'Yllw'	Yellow	

Color format

Book color object

Class	Descriptor			
'BkCl'	Key	Type	Value	Comments
	'Bk '	String	Book name	Unicode string.
	'Nm '	String	Color name	Unicode string.
	"bookID"	Integer	Book ID	Signed number.
	"bookKey"	Raw data	Book key	Byte string.

CMYK color object

Class	Descriptor			
'CMYC'	Key	Type	Value	Comments
	'Cyn '	Double	Cyan	0% to 100%.
	'Mgnt'	Double	Magenta	0% to 100%.
	'Ylw '	Double	Yellow	0% to 100%.
	'Blck'	Double	Black	0% to 100%.

Grayscale object

Class	Descriptor			
'Grsc'	Key	Type	Value	Comments
	'Gry '	Double	Gray	0% to 100%.

HSB color object

Class	Descriptor			
'HSBC'	Key	Type	Value	Comments
	'H '	Unit double	Hue (in '#Ang' units)	0° to 360°.
	'Strt'	Double	Saturation	0% to 100%.
	'Brgh'	Double	Brightness	0% to 100%.

Lab color object

Class	Descriptor			
'LbCl'	Key	Type	Value	Comments
	'Lmnc'	Double	Luminance	0 to 100.
	'A '	Double	A	-128 to 127.
	'B '	Double	B	-128 to 127.

RGB color object

Class	Descriptor			
'RGBC'	Key	Type	Value	Comments
	'Rd '	Double	Red	0 to 255.
	'Grn '	Double	Green	0 to 255.
	'Bl '	Double	Blue	0 to 255.

Gradient format

Custom stops gradient object

Class	Descriptor			
'Grdn'	Key	Type	Value	Comments
	'Nm '	String	Gradient name	Unicode string.
	'GrdF'	Enumerated	Gradient form: custom stops (= 'GrdF', 'CstS')	Solid gradient.
	'Intr'	Double	Interpolation	0 to 4096 (Smoothness: 0% to 100%).
	'Clrs'	List	List of color stops	Each in Color stop object format.
	'Trns'	List	List of transparency stops	Each in Transparency stop object format.

Color stop object

Class	Descriptor			
'Clrt'	Key	Type	Value	Comments
	'Lctn'	Integer	Location	0 to 4096 (0% to 100%).
	'Mdpn'	Integer	Midpoint	0% to 100%.
	'Type'	Enumerated	Color stop type: <ul style="list-style-type: none"> 'Clry', 'UsrS' 'Clry', 'BckC' 'Clry', 'FrgC' 	Type: <ul style="list-style-type: none"> User stop Background color Foreground color
	'Clr '	Object	Color object: <ul style="list-style-type: none"> Book color object CMYK color object Grayscale object HSB color object Lab color object RGB color object 	Key present only if color stop type is user stop: <ul style="list-style-type: none"> Book color object format CMYK color object format Grayscale object format HSB color object format Lab color object format RGB color object format

Transparency stop object

Class	Descriptor			
'TrnS'	Key	Type	Value	Comments
	'Lctn'	Integer	Location	0 to 4096 (0% to 100%).
	'Mdpn'	Integer	Midpoint	0% to 100%.
	'Opct'	Unit double	Opacity (in '#Prc' units)	0% to 100%.

Color noise gradient object

Class	Descriptor			
'Grdn'	Key	Type	Value	Comments
	'Nm '	String	Gradient name	Unicode string.
	'GrdF'	Enumerated	Gradient form: color noise (= 'GrdF', 'CLNs')	Noise gradient.
	'RndS'	Integer	Random seed	Randomize.
	'ShTr'	Boolean	Show transparency	Add Transparency.
	'VctC'	Boolean	Vector color	Restrict Colors.
	'Smth'	Integer	Smoothness	0 to 4096 (Roughness: 0% to 100%).
	'ClrS'	Enumerated	Color space: <ul style="list-style-type: none"> 'ClrS', 'RGBC' 'ClrS', 'HSBl' 'ClrS', 'LbCl' 	Color Model: <ul style="list-style-type: none"> RGB HSB LAB
	'Mnm '	List of Integers	Four minimum values	Three color components (0% to 100%) + transparency (0%).
	'Mxm '	List of Integers	Four maximum values	Three color components (0% to 100%) + transparency (100%).

Pattern format

Pattern object

Class	Descriptor			
'Ptrn'	Key	Type	Value	Comments
	'Nm '	String	Pattern name	Unicode string.
	'Idnt'	String	Pattern ID (UUID)	Unicode string.

Blend modes

EnumType	EnumValue	Comments
	'Nrm1'	Normal
	'Dslv'	Dissolve
	'Drkn'	Darken
	'Mltp'	Multiply
	'CBrn'	Color Burn
	"linearBurn"	Linear Burn
	"darkerColor"	Darker Color
	'Lghn'	Lighten
	'Scrn'	Screen
	'CDdg'	Color Dodge
	"linearDodge"	Linear Dodge (Add)
	"lighterColor"	Lighter Color
	'Ovrl'	Overlay

'BlnM'	'SftL'	Soft Light
	'HrdL'	Hard Light
	"vividLight"	Vivid Light
	"linearLight"	Linear Light
	"pinLight"	Pin Light
	"hardMix"	Hard Mix
	'Dfrn'	Difference
	'Xclu'	Exclusion
	'Sbtr'	Subtract
	"divide"	Divide
	'Hue'	Hue
	'Strt'	Saturation
	'Clr'	Color
	'Lmns'	Luminosity

Parsing styles files

A practical set of JavaScript functions for parsing styles files is contained in the module [jamStyles](#), which is part of the [JSON Action Manager](#) scripting library.

It uses the following simplified formats:

- [Document Mode Object Simplified Format](#)
- [Layer Effects Object Simplified Format](#)
- [Blending Options Object Simplified Format](#)

Three utility scripts are available:

- [Export Styles File Patterns](#): [Photoshop CS3 or later] export the embedded patterns of a styles file (.asl) or a styles palette (Styles.psp) into a patterns file.
- [Get Layer Style](#): [Photoshop CS2 or later] get the style (blending options and layer effects) of the current layer in JSON simplified format.
- [Parse Styles File](#): [Photoshop CS3 or later] parse a styles file (.asl) or a styles palette (Styles.psp) into a JSON text file.

All files are open-source and licensed under [GPLv3](#); the utility scripts have been successfully tested in Photoshop CS4 on Mac OS X, but should be platform agnostic.

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