

PPA

version 11

pass4press

Creating print-ready
PDFs for magazines

**PREPARE
CREATE
CHECK**

THE GUIDELINES

Prepare. Create. Check. These three words are the mantra for version 11 of PPA's Pass4press, which contains the latest settings and information to help you create print-ready PDFs that will keep printers happy and give you the results you expect. They are based on using PDF/X-1a: this is a subset of the PDF family geared specifically towards printing, so it can't contain things like movies, links or other nasty objects that can cause PDFs to fail or corrupt during the print production process. Pass4press follows international guidelines on creating print-ready PDFs, specifically the work of the Ghent Workgroup (GWG). They've done the hard work and established the most reliable and consistent way to make a PDF: pretty much all major publishers base their specifications on the GWG's work. Simply put, these settings work. This brochure concentrates on the tools available in the newest applications from Quark and Adobe. More in-depth information, along with settings for older versions of XPress and InDesign and other applications capable of creating PDF/X-1a files are available on the pass4press.com website.



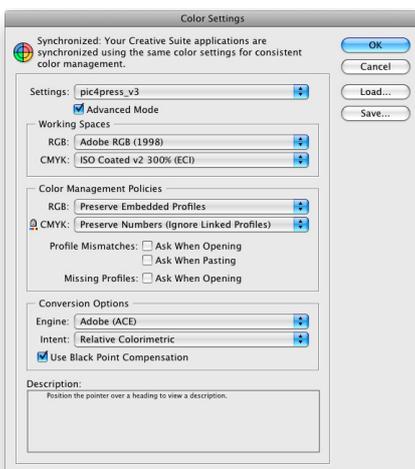
When you see this icon in the margin:
...it means there are downloadable presets available online. Where possible, use these presets as a starting point.



When you see this icon in the margin:
...check the [pass4press](http://pass4press.com) website for more detailed information. A single-page Pass4press Recommended Workflow diagram is also available from the site.

APPLICATION SET-UP

Go through your application preferences and make sure they're set up appropriately for your job. To make sure the final result looks exactly as expected, it's crucial that the correct colour profile is used as a reference from the beginning of the process through to the creation of the final, flat CMYK PDF/X-1a file. Colour profiles don't exist to make your life more complex: quite the reverse. They provide a colour-accurate framework for you to create your job. Use the wrong profile and there's a big chance your page will produce unexpected results when printed.



In your Adobe applications, set up a Colour Settings File (CSF) from the Edit menu. Use Adobe Bridge to synchronise the settings across additional Adobe applications. In QuarkXPress, set up Output Styles. Once these



colour settings are saved, configure your PDF export presets. Use the downloadable settings available from pass4press.com as a starting point, modifying profile information as necessary according to publishers' specifications, or use the screen grabs from relevant section



below as a reference. Setting your Transparency Flattener preset (Edit menu) is crucial: see example below.



If you're going to trust the colour on your display, take some basic measures to improve accuracy. Ideally use a calibration tool, such

MENU SHORTCUTS

-  Edit>Colour Settings
-  InDesign>Prefs>Appearance Of Black
-  File>Adobe PDF Presets
-  Edit>Transparency Flattener Presets
-  Edit>Colour Setups>Source
-  Edit>Colour Setups>Output
-  QuarkXPress>Preferences>Job Jackets
-  Edit>Output Styles
-  QuarkXPress>Preferences>PDF

as an i1 Display or Spyder, or at the very least use the ColorSync calibration utility on a Mac. The quality of your monitor will have an effect, as will your surroundings. Reflections and bright colours dramatically affect what's seen on screen.

As sad as it may seem, you'll also need to remove the office party snap used as your desktop pattern and replace it with a neutral grey. This will mean less extraneous colours distracting your eyes from the colours on your page. In Photoshop, use the full screen mode (press the F key) to help isolate images.

CREATE

CHECK

Bleed, Trim and Type areas

BLEED

Extra space around the edge of a page to allow for movement on press.

TRIM

The final trimmed size of the magazine.

TYPE

The 'safe' area that you should keep to for important text or images.



PAGE CREATION

At the absolute minimum, ensure the publisher has supplied you with the  **mechanical sizes (trim, bleed and type), print resolutions and target CMYK profile.** Always set up your document to reflect the trim size of the publication. You can set the bleed as part of the document set-up in InDesign or with the Guide Manager Pro XTension in Xpress, which will give you a visual cue as to how far you need to extend elements off the page to compensate for any movement on-press. Bleed will be incorporated as part of the PDF export process, as will crop marks. All colours in your document must be CMYK. Check your Swatch palette to make sure no RGB or Spot colours are present: convert them as necessary. Note that placed graphics can import swatches with them. **Transparency effects require proper layering to avoid the introduction of artefacts** by the flattening process as part of the PDF/X-1a file creation. Layering is particularly important if the effects overlap text. The flattening resolution (see App Set-up) will solve most problems, but keep objects with transparency on separate layers to help the process work properly.

CONTENT PREPARATION

Most pages will contain some form of external file – an image or imported text. Making sure these files are correctly prepared is a fundamental part of creating your page. When importing text, look for unexpected style sheets which can add rogue fonts or characters into your document. All fonts used in a document should be available on your system, licensed and in an accepted format (most commonly PostScript pairs, TrueType or modern OpenType). Fonts used in document will be embedded in the final PDF.

 **There are plenty of image formats that can be used** (compressed JPG, various types of TIFF or native Photoshop PSD files) but all are subject to the same rules. You can use the PDF export process to convert images to CMYK, but you could be disappointed with the results. With photographic images, work in Photoshop with your colour management settings correctly set for the job in hand and use its soft-proofing option (View>Proof Colours) to see how the image will look when converted to CMYK, before carrying out the final conversion.

 **Certain colours which look good in RGB on your screen will simply never print with the same vibrancy when converted to CMYK,**

CHECK

Have you got the target profile?

MENU SHORTCUTS

-  Window>Swatches
-  Type>Find Font...
-  Window>Links
-  Window>Layers
-  Window>Colours
-  Utilities>Usage
-  Window>Layers

particularly neons, deep blues and bright reds. You will have to colour retouch these images to achieve the result you want. The recommended workflow is to only place converted CMYK images, unless you've already previewed the result in Photoshop (or using InDesign's own View>Proof Colours option) and are satisfied with the result.

Vector images, normally originated in an application like Illustrator, need to be carefully handled. They should be created in the correct CMYK space (File>Document Colour Mode) and have the relevant raster effects settings (File>Document Setup) set to the print resolution of the publication.



Be wary of spot colours and placed images; **make sure the effective resolution of the latter is still high enough.** Illustrator can also be used



to create and output pass4press-compliant PDFs directly: all the guidelines for InDesign apply. **Presets and an export settings guide are available online.**

When using 1-bit images, make sure the image is very high resolution for the optimal results: normally 2400dpi. **Both XPress and InDesign handle basic overprint and trapping needs.** There's usually no need to change any settings unless you've been advised to as part of the publication specification. It's unusual to want a placed object to appear only on the black channel, as the result will usually look 'washed out'. If making a 'rich' black, don't overdo the percentage of additional colours used to achieve this effect. Remember, most magazines aim for a maximum ink percentage of 300-320% for Web Offset work, or 340-360% for Gravure: ink limits are in place to prevent too much ink soaking the paper as it's printing, causing web breaks: an expensive problem to have. If you're using the correct profile for the job, this will prevent these ink limits being exceeded.

CHECK

Is your content prepared in the correct CMYK colour space



1: PREVIEW

Proof the image using the target profile in Photoshop. Retouch the image as necessary.

2: CONVERT

Convert the image to the target CMYK profile and save it down.

3: PLACE/UPDATE

Place the image on your page, or update the link if it's already been positioned

LIVE PREFLIGHT

The latest versions of Adobe InDesign and QuarkXPress have built-in methods of verifying your content as the document is being created. This means you can pick up on potential problems as soon as they occur. Under InDesign CC's Output menu there are four tools you can use to check your layout: Flatten Preview, Preflight, Separations Preview and Trap Presets. A basic Preflight is turned on by default; the Preflight panel provides a comprehensive set of dynamic tools to check almost every aspect of your document, from font usage through images, resolutions and print settings. Feedback is displayed

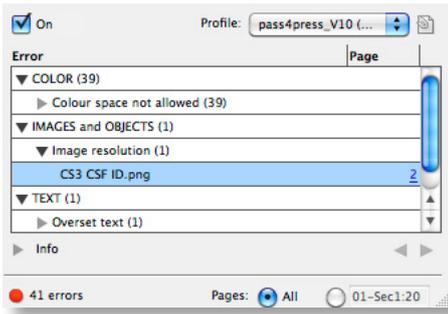
via a simple traffic light icon: green means your page is good to go, red means



that errors have been detected. Preflight is on by default, but use the downloadable pass4press preflight profile to give your document a

thorough check. Preflight profiles can also be embedded into the document itself, to ensure consistent checking as pages are passed around.

QuarkXPress introduced its 'Job Jackets' feature in version 7, and it's been further refined in later versions. Job Jackets are based on JDF, a form of XML created specifically for print, and allow you to create and monitor a job according to the instructions contained in the Jacket. XPress' soft proof option is under View>Proof Output. This uses the Output style you have selected as the basis for an on-screen preview of the target colour space. For an accurate view of placed images turn on Full Res Previews from the View menu.

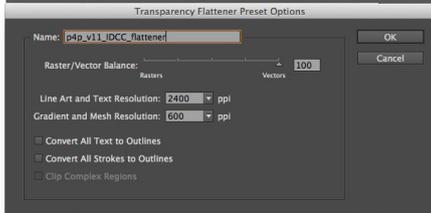


To proof colours in InDesign, choose View>Proof Setup to select either the profile embedded in the document or the application's defaults – these may be the same if you originated the document. Check the View>Proof Colours option to turn on or off soft proofing dynamically. Overprint Preview can be turned on from the View menu, which will give you an idea of any overprint problems where objects could be accidentally hidden. Display Performance must be set to High Quality Display to enable accurate viewing of placed images.

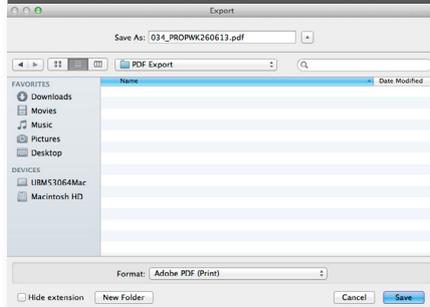
INDESIGN export PDF

Recommended settings for exporting a PDF/X-1a from InDesign CC (v9) or higher. This example was created on Mac OS X 10.8.4 using InDesign CC (v9.2.1).

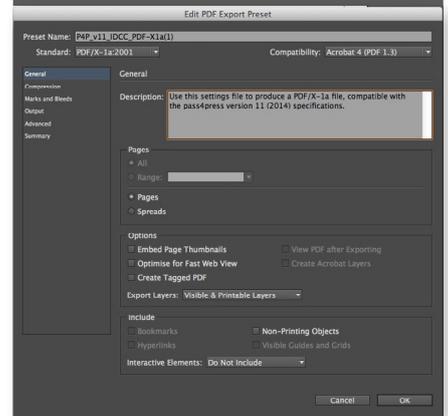
1 Create a **Transparency Flattener Preset** from the **Edit** menu, using the settings below – this will be selected in the Advanced tab (see step 8)



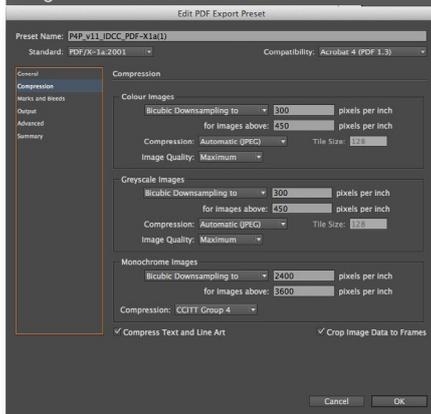
2 Select **File>Export**, then in **Format** choose **Adobe PDF**. Name the file, select the folder where you want to save it and click **Save**



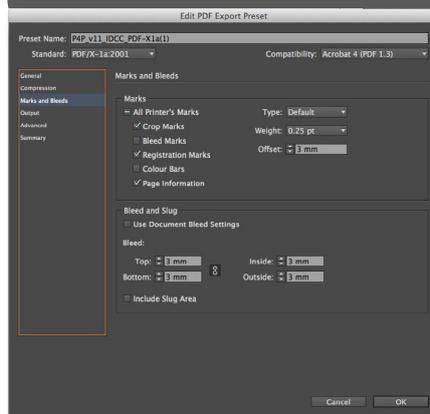
3 In **General** select the single page to print. Set the **Compatibility** to **Acrobat 4 (PDF 1.3)** and deselect all of the listed **Options** and **Include** checkboxes



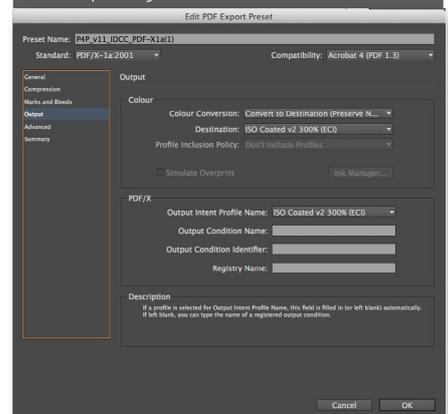
4 The **Compression** tab sets the options for how the PDF will handle resolutions for placed colour, greyscale and monochrome images



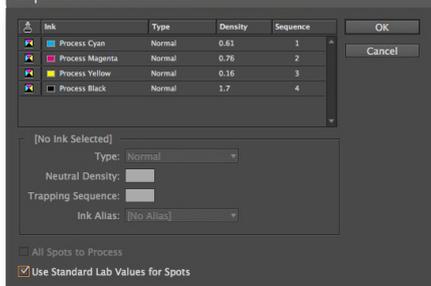
5 The **Printer's Marks** should be enabled as below. Set the **Weight** to 0.25pt, the **Offset** set at 3mm and the **Bleed** to 3mm all round



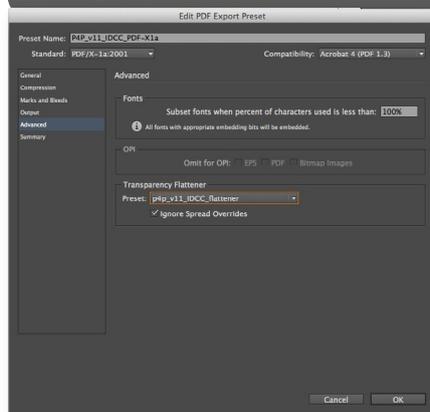
6 Use the **Destination** and **Output Intent Profile Name** relevant to the publication. ISO Coated V2 300 is used here as an example only



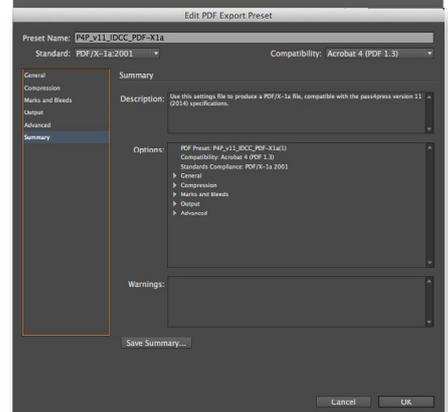
7 Ensure there are only process inks and no **Spot** colours. Converting colours to CMYK at the PDF creation stage can give unpredictable results



8 Select the **Transparency Flattener** previously created, **OPI** should be disabled. Here is also where you can opt to create a **JDF** file



9 Make sure all the options in **Security** are disabled. **Summary** lists all the settings that will be applied: it can be saved as a text file for reference



QUARKXPRESS export PDF

Recommended settings for exporting a PDF/X-1a from QuarkXPress 9 or higher. This example was created on Mac OS X 10.8.4 using QuarkXPress 9.

1 Open **QuarkXPress>Preferences** and choose the **PDF** tab; change the setting to **Direct To PDF**

2 Choose **File>Export>Layout As PDF**. Choose a location to save the file. In **PDF Style** choose a relevant preset or click **Options** and enter the details as shown

3 **Metadata** can be entered as required. **Hyperlinks** must be disabled. Use the **Compression** options to set how placed images will be handled

4 In **Colour** make sure there are only the four process colour plates, with no RGB or spot colour separations, and set the **Mode** to **Composite**

5 Set all fonts to download using the **Select All** button

6 In **Marks** set the **Mode** to **Centred**, with a **Width** of 0.25pt (or 0.088mm), a **Length** of 5mm and an **Offset** of 5mm

7 The **Bleed** should be **Symmetric** at 3mm distance. Using **Clip At Bleed Edge** means matter outside the bleed isn't included in the PDF, reducing its size

8 Set the **Transparency** options as below. When outputting a PDF a **Layers** tab will also be visible; ensure all the relevant layers are set to output

Item	Resolution
Vector Images	600 dpi
Blends	300 dpi
Drop Shadows	150 dpi

Upsample Rotations: To 300 dpi for images less than 225 dpi

Flattening Resolution: 300 dpi

9 **OPI** must be disabled. **JDF** information can be added to the PDF using a job ticket. **Summary** shows all the settings used for the PDF

MENU SHORTCUTS

-  Acrobat>Preferences>Advanced>Print Production>Output Preview
-  Acrobat>Advanced>Print Production>Print ProductionToolbar>Advanced>Preflight
-  Acrobat>Tools>Analysis>Measuring Tool

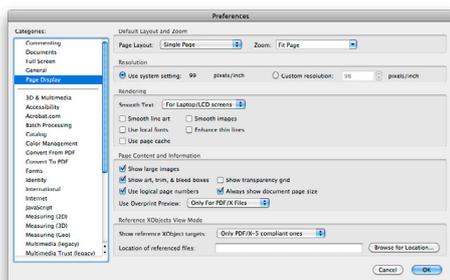
ACROBAT SET-UP

Every PDF should be verified before being passed down the chain, using flightcheck software along with a visual check. Even if all the guidelines for document creation and preflight are followed, there is always the possibility of something slipping through. There are many large server-based systems available in the marketplace, such as Dalim Twist, One Vision Asura and Enfocore Pitstop Server, plus client applications like Markzware Flightcheck and Pitstop, all capable of processing anything from individual PDFs to entire catalogues. Evaluate and choose the software that is right for your needs.



Preconfigured settings files for most of these systems are available from www.gwg.org.

Adobe Acrobat Pro includes a flightcheck and two other useful tools that you should always use: Output Preview and the Print Production Toolbar. There are some key preferences to set in Acrobat before you commence any print production work, specifically in the Page Display and Colour Management tabs.



PAGE DISPLAY: DEFAULT LAYOUT AND ZOOM

This is purely aesthetic, but setting it to Single Page and Fit Page means every PDF will open fitting to the window.

PAGE DISPLAY: RESOLUTION

This must be set to the System Setting to ensure accurate display of pixels on the page.

PAGE DISPLAY: RENDERING

All boxes should be unchecked to make sure the PDF is rendered accurately using fonts from the file and without artificial smoothing. Having these switched on can typically show up misleading thin white lines which aren't actually there – they are minute artefacts from transparency flattening when a PDF is exported. If these options are off and lines are still visible it means the document wasn't layered properly or the flattening resolution wasn't sufficient – the PDF will need to be re-exported.

PAGE DISPLAY: PAGE CONTENT & INFORMATION

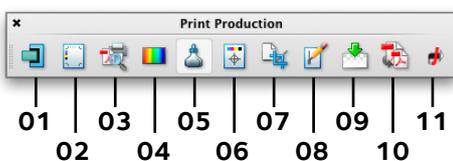
Turn on the options you want: they all make useful details about a PDF immediately apparent as soon as you open a file.



COLOUR MANAGEMENT

Ensure your settings are in sync with your other applications.

PRINT PRODUCTION TOOLBAR



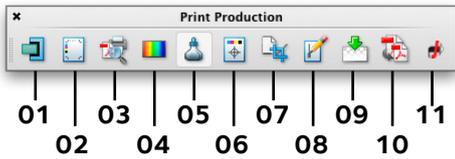
This toolbar (Advanced>Print Production>Show Print Production Toolbar) gives quick access to a range of tools for checking and correcting PDF files. It is best practice to correct errors on the original document rather than a PDF, but these tools can still help with file checking. The toolbar can be floating or docked to the toolbar of any PDF so it will open automatically.

01 TRAP PRESETS

Allows you to create and apply trap settings for later execution by a PostScript 3 RIP.

02 OUTPUT PREVIEW

The most useful tool. Another way to open the Output Preview – see below for details.



03 PREFLIGHT

See below for more details.

04 CONVERT COLORS

Converts RGB, CMYK and Grey colour spaces to a target colour space. Normal procedure would be to carry out all conversions prior to the PDF creation and supply flat CMYK files ready prepared the destination space.

05 INK MANAGER

Modifies the way separations are treated while the current PDF is open.

06 ADD PRINTER MARKS

Adds standard printer marks to a PDF page for positioning which are embedded in the PDF.

07 CROP PAGES

Crop Pages allows you to quickly see the size of all the embedded page boxes, such as Trim, Type and Bleed, without manually measuring objects. Just choose the box from the menu and set your measurement unit: the dimensions will be shown by the page thumbnail, with guides showing its location.

08 FIX HAIRLINES

Identifies hairlines.

09 TRANSPARENCY FLATTENING

Controls rasterisation during print output. Correctly-created PDF/X-1a files cannot contain transparent elements.

10 PDF OPTIMIZER

Provides many settings for inspecting, analysing, and repairing documents.

11 JDF JOB DEFINITIONS

Allows you to create custom job definitions. The JDF file may also include information necessary for the creation of PDFs, including PDF conversion settings and preflight profiles.

OUTPUT PREVIEW

Output Preview is your friend. The Simulation Profile pop-up at the top of the window will display the profile that the PDF/X-1a was created with (ie, its Output Intent), so straight away tells you if it's been created to the correct CMYK. If you want to preview the PDF in a different colour space, choose the another profile from the pop-up list. At the top of the palette you can also turn on additional options:

SIMULATE BLACK INK

This makes blacks look realistically grey, making rich blacks or show-throughs more visible.

SIMULATE PAPER COLOR

The paper simulation used in a profile can be enabled to get an idea of the paper colour.

SIMULATE OVERPRINTING

Overprints will be simulated – this should always be on (it's enabled by default in Acrobat).

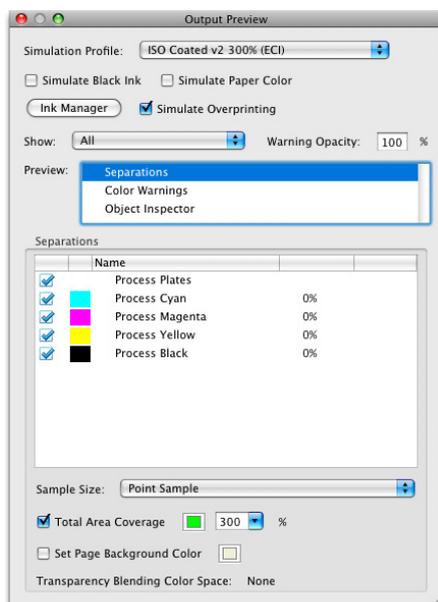
SHOW

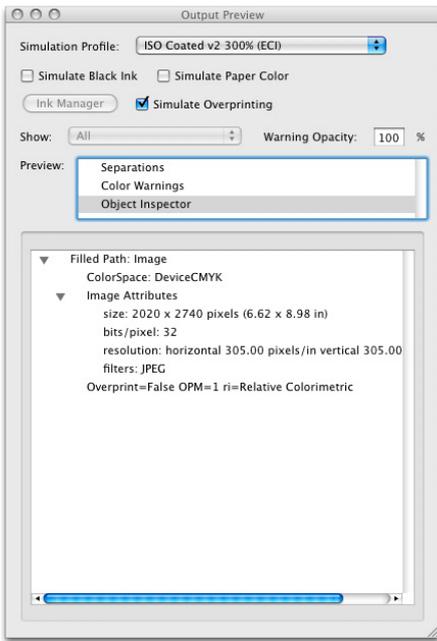
The Show pop-up allows you to quickly isolate and view certain types of content. Need to see just the text that uses embedded fonts, just the images or only the RGB elements? Use Show.

In the main window are three more Preview tools: click on them to select these options:

SEPARATIONS

View all separations and use the tickbox to look at them individually or in combinations. Set a value, checking the TAC box to highlight 'hot' areas,





using the different sample sizes to reduce overly sensitive warnings. Click Ink Manager to see the separation ink densities and their order.

COLOR WARNINGS

Turn on Overprinting or Rich Black warnings to highlight potential problem areas.

OBJECT INSPECTOR

This allows you to easily access details on images and objects embedded in a PDF. Click on any element, such as an image, to show detailed information about that object. You'll see the colour space, pixel and print size, resolution, overprint setting and original rendering intent. Resolution can be a bit confusing; if you've set Acrobat's Units & Guides preferences to Metric then the resolution will be displayed in Dots Per CM rather than Per Inch. It can



be useful to leave your guides as Metric and **create a conversion table with relative DPCM and DPI values to use as a reference.**

MEASURING

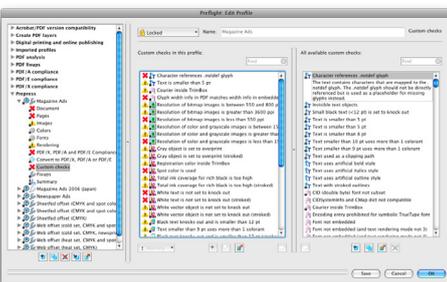
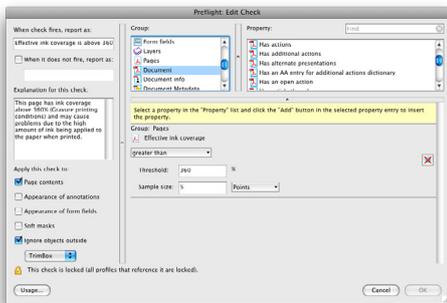
By default Acrobat's Measuring Markup and Snap tools are turned on, which can make things a bit frustrating as they try to snap to everything in sight: turn them off in Preferences>Measuring (2D). Select the ruler tool from Tools>Analysis> Measuring Tools or click the ruler icon in the toolbar. Click the first point, holding down the Shift key to constrain the ruler in a straight line. The distance will be shown at the end of the line and additionally in the floating Distance Tool window.

FLIGHTCHECK

Acrobat Pro comes ready-installed with a flightcheck profile created by the Ghent Workgroup. You can use this as-is or as a base for creating your own custom profile for a particular set of printing conditions. Open it up from Tools > Print Production > Preflight, select the MagazineAds profile under the Prepress heading and click Edit. Duplicate the setting using the icons in the left-hand corner and then work through the settings, checking against your job requirements. There are a selection of main headings checking major issues, but there's also a Custom Checks section where incredibly detailed additional checks can be added. Useful things like trim size, bleed measurements, TAC, hairlines and resolutions can all be checked.

USING THE ADOBE ADOBE PRO FLIGHTCHECK

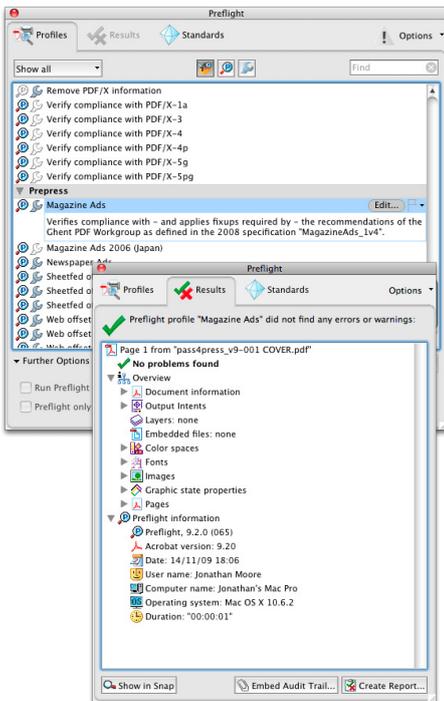
From the Tools Menu choose Print Production > Preflight (or press Apple-Shift-X) to bring up the flightcheck panel. There are three kinds of check available from the icons along the top of the panel, next to the Show All pop-up: Profiles, Single Checks and Fix-ups. Profiles are the most useful, but single checks can be used if you need to quickly check just one thing. Try and avoid using Fix-ups: it really is better and safer to go back to the original document, especially if it has been supplied to you by a client.



There are plenty of profiles built-in, but the Magazine Ads spec (or ones based on it) is the most relevant to magazines. Select the flightcheck setting and then click Analyse. Wait for the file to process and then check the results window. If the PDF has failed you can save a record of the problems for further analysis by clicking Create Report. Select the Details>Problems Highlighted By Layers option, then Save.

ANALYSING FLIGHTCHECK RESULTS

The report PDF contains a first page that summarises any problems that have been found with the page and then a copy of the original PDF with the



problem elements highlighted using layers. A list of common errors is on the next page. The report page contains three sections:

- RESULTS

This lists the errors the flightcheck process has picked up. This can contain errors (which denote the PDF needs fixing and should not be used), warnings (where visual checking may be needed, such as using a font too small or a hairline that's too thin) and information (for instance, where non-standard compression has been used), all based on the settings of the flightcheck profile used.

- DOCUMENT INFORMATION

This lists the details on the version and creator of the PDF, which can help in identifying problems.

- ENVIRONMENT

The version of Acrobat and operating system used to carry out the check.

Errors listed in the report can be isolated on the second page (where possible) using layers. Select View>Navigation Panels>Layers: error layers are shown at the top. Click the eye icon on or off to enable or disable layer visibility, so you can show just the problem object. In the lower portion are temporary, visual-only backgrounds that can be turned on and off to help identify objects. For instance, turn on a black background to make a white object easier to spot. Use the Output Preview>Object Inspector tool to list specific details about problem objects.

SOLVING PROBLEMS

COMMON ERRORS

Most PDF errors can be easily avoided by following the pass4press guidelines. Utilise the downloadable presets in combination with the correct colour profile for the job. Even though pass4press v11 concentrates on InDesign CC and QuarkXPress 9, older versions of both can export PDF/X-1a files, as can Illustrator – and even Photoshop with a bit of tweaking. You can also make a PDF/X-1a file from a PostScript file – something that can be created on any computer with a PostScript driver and a copy of Adobe Distiller installed. If you're using a non-standard application, try and match the guidelines in this brochure as closely as you can. Be realistic about the software you're using: no matter how hard you try, a print PDF is going to be difficult to create from some packages.

PDF/X ERRORS

If you have a PDF which hasn't been output to the PDF/X-1a standard it can look like it's riddled with problems. Just re-exporting with the PDF/X-1a box ticked will usually remove most of the errors. The Output Intent is a key part of creating a PDF/X-1a and has to be there for the file to be valid, even though it is in effect just informational. A PDF/X-1a contains 'flat' CMYK: the Output Intent field tells the receiver what profile you used to export the PDF and how its content was theoretically prepared; it demonstrates that you've followed the correct spec. The Output Intent is set in the Output tab in InDesign or via the Output Colour Setup in XPress. When you open the PDF/X-1a in Acrobat and view the Output Preview, the Output Intent profile is displayed by default at the top of the window (see the Check pages).

DOCUMENT CREATION

- INCORRECT PAGE SIZE INFORMATION

A fundamental problem: the page size must be accurate from the start. Bleed must be set to allow for movement on press: extend out elements around the edge of the page into the bleed area to avoid unseemly white edges should a shift occur at trim stage.

- INSUFFICIENT OFFSET OF CROP MARKS

Crop marks should be set well outside the bleed area to avoid them becoming visible.

- STROKES ARE TOO THIN

Most presses are simply unable to print very thin lines, so pay attention to publishers' specs.

- GRADIENT RESOLUTION TOO LOW

Gradients in vector illustrations or effects like drop shadows need to be of sufficient resolution to avoid a 'stepped' effect. Again, check publishers' specs for guidance.

FONTS

- FONTS NOT EMBEDDED

The smooth output of text is always better when produced from the original font rather than the rasterised text (ie, turned into a bitmap image). For licensing reasons fonts can't be freely transferred in an extractable format; embedding fonts in a PDF is a one-way method of making sure all the fonts used on a page are available for reproduction at maximum quality. If fonts are missing or unavailable, they are typically exchanged for Courier, which will not only ruin a design, but upset designers.

- OVERPRINT/KNOCKOUT OBJECTS

Be sure to use the tools in XPress and InDesign to check for these problems, which can typically cause text to disappear (or appear). The best approach is to avoid altering trapping options, but rather let experts at the printers handle it.

DIGITAL IMAGES

- TOTAL AREA COVERAGE (TAC) MAXIMUM EXCEEDED

This is where the total amount of ink laid down is more than the maximum allowed by the publication's printing conditions. It's another easy one to solve. The colour profile used when exporting a PDF controls the colour across the output CMYK separations: use the correct profile and you'll never exceed the TAC. Remember that you need to consider the content origination as well: convert your images, logos and illustrations to the correct destination profile before creating the PDF, rather than letting the export process handle it.

- PLACED IMAGE RESOLUTION TOO LOW

Low-resolution images will look pixellated and low quality. Even if you start with a 300dpi image, make sure that resizing it hasn't reduced the effective resolution.

- TOO MUCH COMPRESSION APPLIED

Overly compressing JPG images may give small file sizes but will also introduce visible artefacts into the image and degrade quality.

COLOUR AND TRANSPARENCY

- CONTAINS NON-CMYK ELEMENTS

RGB is never acceptable in a print PDF and spot colours rarely so, except on covers. If you've used reference swatches from, for instance, Pantone, convert them to CMYK before exporting the PDF.

- WRONG COLOUR SPACE ASSIGNED

Set your colour management to use the appropriate ICC profile for the job.

- FILE CONTAINS TRANSPARENT ELEMENTS

This means the file hasn't been exported as a PDF/X-1a. Live transparency is supported by the new PDF/X-4 format, but widespread usage is a long way off – it will have a big impact on existing workflows and responsibility.

- FILE USES PDF V1.4 OR LATER

It might seem like we're stuck in the past, using a 14-year old 1.3 version of the PDF format, but most of the PDF updates have added support for objects unrelated to printing.

CONTRACT HARD PROOFS

- PROOF NOT PRODUCED FROM THE FINAL PDF OR THE PROOF'S COLOUR SPACE IS TOO WIDE

Proofs must be created from the PDF/X-1a file that will be printed, using a RIP/paper combination that accurately represent the printing conditions. Check publishers' specs.

PDF/X-4

In July 2012 the Ghent Workgroup released their PDF Specification 'GWG2012_CMYK' followed by a later addendum. This replaced their previous specifications that were based on PDF/X-1a (PDF version 1.3) with a new set based on PDF/X-4. So, what are the differences and should pass4press follow suit?

PDF/X-4, launched in 2008 by the ISO (15930-7:2008), and subsequently updated in 2010, specifies the use of PDF version 1.6 for the 'complete exchange of printing data'. This format includes features added to the PDF format after version 1.3, including transparency and optional content layers. Its adoption by print-centric publishers has been slow to date, but the format offers advantages over PDF/X-1a when considering cross-media publishing. Although not currently part of the GWG's specifications PDF/X-4 allows for RGB colour to be used so that rendering occurs much later in workflows, and thus differently according to whichever media is displaying it. The next GWG specifications will almost certainly permit RGB content though there is still an issue to be overcome regarding ambiguity in the PDF/X-4 standard. This anomaly means that two RIPs can produce different colour from the same data when rendering RGB and transparency blend spaces and still be considered as PDF/X-4-compliant.

For now, pass4press will continue to advise that PDF/X-1a is still the preferred specification for UK print, reflecting the views of the PPA's members currently. Should momentum towards PDF/X-4 begin to increase then we will review the situation again and consider endorsing the GWG's latest specifications.

ECI PROFILES FOR SURFACE FINISHED PRINT



Fogra have created two sets of characterization data based on FOGRA39 for matt and glossy laminated sheet-fed offset prints using OPP films. Applying laminates can affect the visual appearance of print colours by a delta-E of 5 on average and a maximum delta-E of 10. Therefore, proofing will require special profiles to accurately render colours. FOGRA49 is based on the current ISO 12647-2:2004 standard paper type 1/2 for matt OPP film laminated sheets, and has an associated colour profile provided by the European Colour Initiative (ECI) called PSO_Coated_v2_300_Matte_laminate_eci.icc.

FOGRA50 is based on the same paper type as FOGRA49 but with glossy laminated OPP film. Its associated profile is called PSO_Coated_v2_300_Glossy_laminate_eci.icc.

However, a printer will require a normal FOGRA39-based proof of the print file to match on press which may look lighter than normal due to colour adjustments made when correcting for the laminated finishing; these surface finishing affects should not be compensated for.

ISO 12647-2:2013

Although the latest version of ISO's process control standard for offset printing has been available for some time its impact on print publishing has yet to be seen. The new version replaces tone curves designed for film-based processes with curves adjusted to CTP output, and has a new set of paper types representing a broader range of currently available coated and uncoated substrates which use optical brightening agents (OBA). There is also a new colour measurement condition called M1, published in 2009 as ISO 13655, which more closely matches the D50 standard illuminant especially in the UV range. Solid CMYK target values have been revised accordingly.

These major changes will require new characterization data and associated ICC colour profiles to be created. Work on this began at the end of 2013, undertaken by the European Colour Initiative (ECI), and research associations such as Fogra and Ugra – under the project name of 'Fred15' – see www.eci.org/en/projects/fred15. To measure and evaluate print and proofs will require new lighting, new spectrophotometers and proofing papers with OBAs.

The Fred15 group's advice is to wait until their planned 2015 launch of new data (FOGRA51/52/...) and profiles, together with tools and practical guidelines to help users implement the necessary changes.

Pass4press will be updated with respect to any changes in colour management advice and settings required as a result of these changes.



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Produced by:

Marcus Lynch, Hearst Magazines UK,
Robert Banbury, The Economist

PPA

2nd Floor, 35-38 New Bridge Street
London EC4V 6BW

T 020 7404 4166

www.ppa.co.uk

@PPA_Live

Company no. 00132310