



# Reference Manual

For Version 1.3.0

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The End

## Introduction

TweakPDF is a workflow-oriented processor for Portable Document Format (PDF) files. In this version, it features the ability to:

- set or change the PDF file's viewer preferences
- add, set or change Information Dictionary entries
- set presentation options such as transitions and slide timings
- set or change page attributes including bounding boxes and rotation

## Platforms Supported

TweakPDF is available for the Mac OS and for Windows. For Macintosh, it is provided as a classic (MacOS 8 or 9 PowerPC) application, and as a Mac OS X Carbon application. The Windows version has been run on Windows 98 and Windows NT, and should run on other newer versions of Windows, including Windows XP.

## Installation

TweakPDF runs as a stand-alone executable. You can install and run it in any folder on your system. Because there is not installer application to configure the system, on Windows systems you may need to manually associate the “.pwf” file extension with TweakPDF.

By default, TweakPDF will write a log file to its application directory and a preferences file to the appropriate system-specific directory (“System Folder:Preferences” on the Macintosh and “c:\Windows” on Windows). The location of the log file can be changed from the File Menu. On Windows NT or Mac OS X, you should ensure the user running the application has Write privileges for the log file directory and any directories in which processed files will be saved.

## Application Design

TweakPDF is designed to serve as a stage in an automated workflow that accepts input files, processes them according to the workflow's settings, and then saves the resulting modified PDF file. The settings for a workflow can be saved as a file (with a “.pwf” extension on Windows) and reopened later. A workflow can be fully automatic, that is, watch for, process and save files without interaction. Or it can accept manually selected files or save results to a user-specified file. Each workflow is executed as a separate thread, meaning multiple workflows can be run or edited simultaneously.

## Creating a Workflow

You can start TweakPDF by double-clicking its icon or the icon(s) of any saved workflow files. If you start it without specifying an existing workflow file, a new, untitled workflow is automatically opened. If you open one or more existing files, they are opened and, if they so specify in their workflow configurations, are automatically run (this is a useful capability in an unattended server environment). On Windows, TweakPDF can be started from to command line and one or more workflow files specified as arguments.

A workflow window is divided into two sections. The top section displays the current status (stopped, watching a folder or processing a file) and provides controls to start and stop the workflow. There is a small disclosure triangle between the top section and bottom section along the left side of the window; clicking this will alternately hide or display the bottom section – this setting is remembered from the last time the workflow file was saved and restored when it is reopened, as is the position of the workflow window.

The bottom section of the workflow window contains the settings on a series of panels. These panels are reached by selecting the appropriate panel name from the drop-down listbox at the top of the section. The last panel displayed is remembered when the workflow is saved.

Each panel works the same way. Along the left is a list of properties, and their settings are along the right. Some properties can be selected from a popup list, which is indicated by a small arrow to the right of the property. Some properties can also be edited or have special selection dialogs; this is indicated by three dots at the right of the property's entry. Clicking the arrow or the dots will display the appropriate menu or dialog for selecting and editing.

In this version, there are five panels: Workflow Settings, Info Dictionary Entries and Viewer Preferences, Page Settings and Presentation Settings.

## **Workflow Settings Panel**

This panel is where the basic operation of the workflow is configured. The settings are:

**Autostart Workflow:** check this box if you want the workflow to start automatically when it is opened. This is not available if the workflow only accepts manually selected files for input.

**Open input file by:** the source of input for the workflow. If “Choosing manually” is selected, PDF files selected from the Open command in the File menu will be processed. If “Watching folder” is selected, then the folder specified will be checked continuously while the processor is running looking for PDF files to process. These will be processed one-at-a-time. If you select this option, you should also ensure “Delete input file” is selected for After processing; this will delete the input file to prevent an unending reprocessing of the file. If there is an error during processing and the output file cannot be written, the input file will not be deleted, but will be renamed with the extension “.err” so that it will not be reprocessed. All processing errors are written to the log file which is stored in the same folder as the TweakPDF application, or at another location specified by the “Choose Logfile...” command in the File menu.

**Process subfolders:** when checked, all of the folders beneath the selected watch folder (or folder selected for manual processing) are also processed. This allows you to maintain a directory structure. Use the **Mirror subfolder structure** in the **Output File** section to replicate the folder hierarchy at the destination, as well.

**After processing:** This section determines what happens to the input file after it has been processed. There are four choices in the dropdown menu: Delete, Rename, Move or Do Nothing.

*Delete input file* is the default and should be selected for automated workflows; if it is not, TweakPDF will automatically change the input file name by adding the extension “.done” to prevent the file from being reprocessed. If you are manually processing files, you may want to change Delete to Do Nothing to preserve the input file.

*Rename input file* changes the input file’s name but leaves it in the same folder; the name is specified in the “Move/rename to:” box and may be an expression. Warning: on Macintosh, PDF files are identified by their file type, not their extension. TweakPDF will reprocess a file if it is simply renamed, even if the extension is not “.pdf”. To prevent this, use the extension “.done”; any file (on Macintosh or Windows) with this extension is ignored.

*Move input file* moves the file to a different folder, but leaves the name the same. One possible use for this is to create a fork in a workflow where the same file can be processed in two or more different ways. Select a folder in the “Move/rename to:” entry.

*Do Nothing with input file* leaves the file as it was. As noted above, in an automatic workflow, TweakPDF will rename a file with a “.done” extension to prevent a processing loop if this option is selected.

**Output File** determines how the resulting processed file should be handled. If Save output to is set to *Ask for each file*, then the user will be prompted when an input file is ready for processing. If it is set to *Destination folder*, a preset folder to which all output will be saved can be selected for the Destination folder entry. If “Mirror subfolder structure” is checked, output files will be placed in folders with the same hierarchy beneath the selected destination folder as the source files had beneath the source folder. Note that this is only available when “Process subfolders” is checked under Input File. The “Save as:” field allows you to specify a name for the output file; this will default to the same name as the input file if left blank. This field can contain an expression (see Expressions below). The output folder should not be the same as the input folder, if one has been selected, to prevent the file from overwriting the input and being repeatedly processed (or deleted).

## Info Dictionary Entries Panel

The Info Dictionary is a component of a PDF file in which information about the PDF file, or metadata, is stored. This is normally automatically created when the PDF file is generated, but different generators provide varying levels of support for setting this information. TweakPDF allows you to set these values, as well as add new entries. This may be useful for record-keeping or providing automated cataloging tools with information.

The panel presents a list of dictionary keys which initially is simply the list of those defined by the PDF 1.3 standard. Click to the right of a key to enter its value. A value can be a text string,

a string with substitution sequences, or an expression (which can include substitution sequences, too). Keys with values in the list will be added to the output file or will update an existing value for the same key in the input file. Any key which does not have a value assigned will either not be added to the output file, or will not be updated in the output file if it exists in the input file. Any keys in the input file which do not have a corresponding key in the listbox will be copied with their current values through to the output file. Keys are never removed, although you can cause one to have a blank value by using the empty string (“\$”) substitution sequence below.

To add a new key, select “Add” from the Edit menu. A dialog will appear allowing you to enter the name for the key (it may not contain spaces or certain other characters; the system will beep if you type one of these characters). Note that you do not need to enter a leading “/” character as would appear internally in the PDF file; this is done automatically. You also need to select the type for the value. Generally, a string is sufficient for textual data. Other types are only necessary if the file will be processed by a particular application requiring that type.

Any key you have added can be deleted by selecting it and choosing “Delete” from the Edit menu. Note that you cannot delete the basic PDF 1.3 keys.

## **Viewer Preferences Panel**

The items on this panel control how the PDF file is displayed when it is first opened with a viewer application. Note that these are only suggestions for the viewer application and it does not need to implement or adhere to any of them. Some viewer settings are automatically overridden by user preferences.

The settings are:

**Page mode:** one of Normal (just the document), Outlines (bookmarks tab opened), Thumbs (thumbnails tab opened) or Fullscreen (presentation mode). If Fullscreen is selected, then Non-Full Screen Mode will be enabled, from which you can choose any of the remaining options to be used if the user exits presentation mode.

**Page Layout:** how the pages are displayed in the viewer: Single (one page at a time), 1 Column (as a continuous column of pages) or 2 Column with either even or odd pages on the left-hand side of the display.

**Hide toolbar:** don’t display the toolbar in the viewer when checked

**Hide menubar:** don’t display the menubar in the viewer when checked

**Hide window user interface:** don’t show window controls

**Fit page to window size:** scale the page to fit in the window, whatever its size

**Center window:** move the viewer window to the center of the display

**Open action:** execute an Open Action, as described below

Open Actions are functions which are executed when the document is opened. TweakPDF allows you to specify a basic open action to go to a particular page in the document, and scroll and zoom it. When you check “Open action:”, you will be able to enter a number in the “Page”

box; this number is the absolute page number in the document starting from 1, not the page number printed on a page or specified as a page label. You then need to select a Destination from the popup; the destinations are Fit, FitH, FitV, FitR, FitB, FitBV, FitBH and XYZ. Some of these have parameters associated with them that must be supplied in the “Parameters” line; you can see the list of parameters by pointing at the field. Enter each parameter in the field separated by a single space from the parameter before it. For example, if you choose XYZ, you are prompted for “left top zoom”, for which you would enter the left-hand coordinate to display, a space, the top coordinate, a space, and the zoom factor.

The Page and Parameters entries can both accept substitution sequences and expressions. Substitutions are useful for setting the parameters since you may want to use an open action which sets the display to the top of a particular page. The coordinate system in PDF, however, is Cartesian, i.e. the lower-left corner is 0,0, making the upper-left corner 0,pageHeight. While you could enter a set page height in points (if you know it), this would only work properly for documents with that page height rather than being general.

## **Page Settings Panel**

The options on the Page Settings panel allow you to modify the page dimensions and rotation for every page in the document. The five bounding boxes, the MediaBox, CropBox, BleedBox, TrimBox and ArtBox, define the sizes for each page in a document. If you leave these entries blank, the input document settings will be left unchanged. To change one, you must specify a string containing four numeric values: the left, bottom, right and top coordinates of the bounding box, each separated by a space. These entries will accept substitution sequences and expressions, so they can be dynamically managed. If you use an expression, be sure the resulting string is in the proper format. The input values for the current page are available as substitution sequence variables.

You can also set the page rotation. You can either choose to leave it as set in the input file (Don't Change), or to a particular 90° increment (all clockwise from 0 which is the default).

## **Presentation Settings**

The Presentation Settings panel affects the settings for each page when it is viewed as a presentation (i.e. Fullscreen). A presentation consists of transitions (how one slide is changed to the next) and a Transition Interval (the time one slide is visible before the presentation advances to the next slide).

If you don't want to change transition settings, select “Don't Change” from the Transition type dropdown menu. To remove transitions that may be in the file, select “None.” All other settings will provide a transition effect. If you select “Random,” TweakPDF will choose a transition while processing the file. Note that this selection is then permanent (non-changing) in the file. Enter a duration for the transition effect in the “Duration:” box; this is the amount of time (in seconds) the effect itself will last and can be an expression. The Dimension, Motion and Direction dropdown menus apply to some of the transition types and are enabled as appropriate.

Enter a time (in seconds) for the “Time between slides” box; this is the time a slide is visible before the presentation advances and may be an expression.

## Substitution Sequences

There are several special substitution sequences you can enter into the edit fields on several of the panels that will automatically substitute system-generated text for the sequence when the file is processed. Note that although these sequences can be used in any field, they may not be applicable or appropriate for certain types of entries. TweakPDF does not perform any type-checking on the values entered into these fields; although illegal values are unlikely to cause problems with the PDF file itself, they may cause some applications to be unable to read the affected object in the PDF file.

All substitution sequences begin with the dollar sign (“\$”) and are followed immediately by another single character which determines which sequence will be substituted. In the case of the “v” substitution, “\$v” is immediately followed by the variable name as listed below. These sequences are case-sensitive. In the event a single “\$” is encountered, no substitution is made, so this is effectively the empty string. Substitutions are performed before expressions are evaluated, so they can be used in conjunction with expressions. Remember that these are simple text substitutions, so if the result is a string in an expression, it needs to be enclosed in quotation marks.

The substitution sequences are:

<b>\$\$</b>	adds a single “\$” to the string; use to include a literal “\$” in the string
<b>\$F</b>	the full input file name, including its extension, if any
<b>\$f</b>	the input file name without its extension
<b>\$A</b>	the long date formatted as specified on the current system
<b>\$a</b>	the short date formatted as specified on the current system
<b>\$T</b>	the long time formatted as specified on the current system
<b>\$t</b>	the short time formatted as specified on the current system
<b>\$Y</b>	the year in 4-digit format
<b>\$M</b>	the month in 2-digit format
<b>\$D</b>	the day in 2-digit format
<b>\$H</b>	the hour in 24-hour format
<b>\$m</b>	the minutes in 2-digit format
<b>\$S</b>	the seconds in 2-digit format
<b>\$d</b>	the date in PDF internal format (without the Universal Time suffix)

The last of these, **\$d**, substitutes the date in a format defined in the PDF Reference Manual (see section 3.8.2) with the exception of the optional offset from Universal Time. This date is valid, but not universal. To add the Universal Time offset, follow the substitution sequence immediate with the appropriate sign (“+” or “-”), the hours offset in 2-digit format, a single-quote (’), the minutes offset, and another single-quote. The current Eastern Standard Time would be expressed as this: **\$d-05’00’** .

There are also several substitution sequences which are only valid while processing a page (i.e. for the Page Settings and Presentation Settings panels). These are:

**\$h** the height of the current page (in default units for the PFD file, normally points)

**\$w** the width of the current page in default units

**\$vvarname** substitute a named variable. Valid variables are:

page	current page number
title	document title
subject	document subject
author	document author
openname	name of the file as opened (same as \$F)
savename	name of the output file
mboxt	page's mediabox top coordinate
mboxl	page's mediabox left coordinate
mboxb	page's mediabox bottom coordinate
mboxr	page's mediabox right coordinate
cboxt	page's cropbox top coordinate
cboxl	page's cropbox left coordinate
cboxb	page's cropbox bottom coordinate
cboxr	page's cropbox right coordinate
bboxt	page's bleedbox top coordinate
bboxl	page's bleedbox left coordinate
bboxb	page's bleedbox bottom coordinate
bboxr	page's bleedbox right coordinate
tboxt	page's trimbox top coordinate
tboxl	page's trimbox left coordinate
tboxb	page's trimbox bottom coordinate
tboxr	page's trimbox right coordinate
aboxt	page's artbox top coordinate
aboxl	page's artbox left coordinate
aboxb	page's artbox bottom coordinate
aboxr	page's artbox right coordinate

The variables title, author and subject are loaded from the input file at the start of processing and may be changed by settings on the Info Dictionary Entries panel. Note that \$h and \$w are always the same as \$vmboxt and \$vmboxr, respectively.

## Expressions

Several of the fields on the panels described above can accept an expression. This is a string that is evaluated during the processing of the file and can therefore be dynamically generated. An expression is identified by starting the field entry with an equals sign (=) followed by the expression's code. An expression is a fragment written in the RBScript language, which is based on RealBasic (see the RealBasic Language Reference, RBScript object). The expression must result in a string (i.e. an assignment to a string variable) and can use any of the legal operators and built-in functions of RBScript. The string containing an expression is first processed to replace any substitution sequences, so you can use that mechanism as a means

for providing input to the expression (string values should therefore be quoted). Since the entire result must be a string (even for fields which take numeric values, such as the OpenAction page number), be sure to convert numeric results to strings with the `str()` function.

## Examples

1. This expression for the output file name on the Workflow Settings panel names the output file based on the file's author name and date:

```
=left("$vauthor-",19)+"$D$M$Y.pdf"
```

The built-in `left()` function is used to ensure the author's name is not more than 19 characters in order to allow 12 characters for the date and extension and not exceed the 31-character limit for file names on MacOS 9 and earlier (it is unlikely that the limit for Windows or MacOS X would be exceeded, but a similar statement could be used to ensure this).

2. To crop every page by 1/2 inch (36 points) on the left and right, enter the following in the CropBox field on the Page Settings tab:

```
=str($vmbboxl+36)+" $vmbboxb "+str($vmbboxr-36)+" $vmbboxt"
```

In this expression, the first part takes the current value for the page's left margin (`mboxl`) and adds 36 points, moving it to the right. Since the result is a number, it is converted to a string with `str()`. This is concatenated (with the "+" operator) to the current value for the bottom of the page (`mboxb`). Note that this is part of a string, so is included in quotation marks. Also note there is a space before and after `$vmbboxb` to delimit the preceding entry from the next entry. The next two entries in the expression take similar forms.

## Menu Commands

Most items on TweakPDF's menus are the standard commands found in all applications. However, the following are unique or act differently in TweakPDF:

**File > Open...** Opens a workflow, or, if a workflow is currently open, also allows a PDF file to be selected to process with the workflow manually.

**File > Process File...** Choose a single PDF file to process immediately with the current workflow settings.

**File > Process Folder...** Select a folder to process immediately with the current workflow. If "Process subfolders" is checked in the workflow settings, all folders beneath the selected folder will also be processed.

**File > Choose Logfile...** Selects the name and location for TweakPDF's logfile. Errors are written to this file during automatic processing. If there is a problem preventing a file from being processed, the file will have ".err" appended to its name and an entry will be made in the logfile.

**Edit > Add...** Adds an entry to the Info Dictionary list.

**Edit > Delete.** Deletes the selected entry in the Info Dictionary list.

**Edit > Edit Text...** Selecting this when the cursor is in an edit field causes the text in the field to be displayed in a larger editing dialog. Click OK to save any changes or Cancel to revert to the original text in the field.

**Edit > Preferences...** (Preferences... in the application menu on Mac OS X) Opens the preferences dialog which has two options:

*Show script and expression errors* causes a dialog to display if an error is encountered in a script or expression. If unchecked, no error is displayed.

*Process jobs in a separate thread* allows jobs to be processed in a separate thread of execution. If this is not checked, jobs process in the same thread as the application window, meaning you will not be able to interact with the window during processing. In this mode, processing is slightly faster, so may be appropriate in a server environment where user interaction is not necessary.

*Reset all warnings* clears any warnings you have disabled (by checking the “Don’t tell me about this again” box in the warning dialog).