

**hp designjet  
815mfp**

**hp designjet  
scanner 4200**

**user's  
reference  
guide**



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# welcome to the hp designjet 815mfp/scanner 4200

In this guide we present all you need to know to use your HP Designjet 815mfp or Scanner 4200.

Information is organized in three major categories.

## **how do I...?**

...helps you carry out procedures, like loading media, making copies, or maintaining your scanner.

## **the problem is...**

...helps you solve problems that may occur while copying/scanning.

## **tell me about...**

...contains reference information about your scanner.

For user information on your HP Designjet printer refer to the documentation that came with the printer.


# how do I make copies?

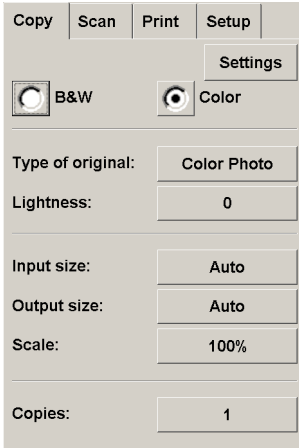
## quick copying

If you are copying a freshly printed plot, make sure that it has dried completely before placing the document in the scanner insertion slot. If it is not dry, you could damage your plot and dirty the glass plate on your scanner.

Remember to set your printer media width in your copy system software. See *how do I set the printer media width?* on page 3.

### to make copies...

1. Place the document face down with the intended top edge forward in the scanner insertion slot. You can load your original into the scanner from the scanner's center or right-hand side (whichever is set in Setup > Scan Options > Load).
2. Slide the document gently into the insertion slot until you feel it pulled into the start position.
3. In the Copy tab, select Color or B&W (black and white) copying—this determines the Type of original.
4. Select your Type of original template.
5. Set the Input size.  
Usually this will be equal to the size of your original. You can let the scanner detect the document's size.
6. Set the intended Output size of your copy.  
For making one-to-one copies, this will be the size of your original.  
You can also use Scale to determine the copy's size.
7. Press the Copy button. 



The screenshot shows the HP scanner control panel with the 'Copy' tab selected. The 'Settings' button is visible in the top right. Below it, there are two radio buttons: 'B&W' (selected) and 'Color'. The 'Type of original' is set to 'Color Photo'. The 'Lightness' is set to '0'. The 'Input size' is set to 'Auto', and the 'Output size' is also set to 'Auto'. The 'Scale' is set to '100%'. The 'Copies' field is set to '1'.



If a new Account has been created, every time you press:



the Copy button,





the Scan to file button, or




the Collate copy button

the Account dialog list opens for you to select an account. See *tell me about accounting* on page 69.

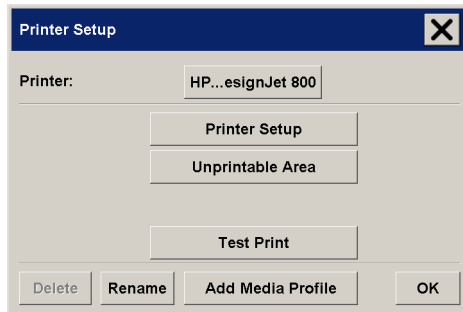
You can preview the image before printing. The preview will give you a “What You See Is What You Get” (WYSIWYG) picture of your copy. Press the Preview button  to load a preview of your copy.


Use the Stop button  to cancel the current copy process. You can also use it to cancel a preview of an image file while it is being loaded.

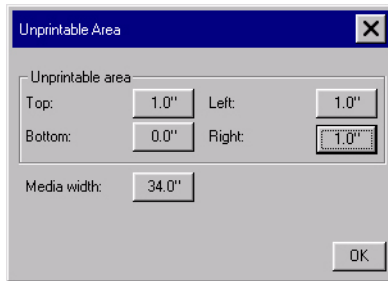
Press the Reset button  to clear your own settings and reset the application to all of the scanner software’s default values.

## how do I set the printer media width?

1. Select the Setup tab.
2. Select the Printer button.



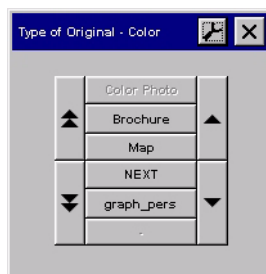
3. Select the Unprintable Area button (or the Tool button  and then the Unprintable Area button if Setup tab > Options > Quick select lists is selected).



4. Press the Media width button to enter a new value and press the Enter key to confirm.
5. Select OK to finish.

## how do I select an original template?

1. Press the Type of original button in the Copy tab dialog.
2. Select from the list a Type of Original template that best describes your current input.



### see also

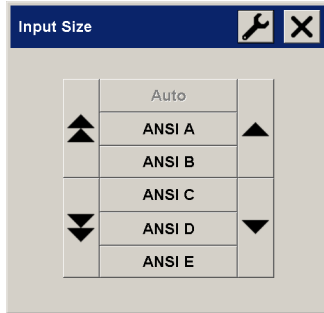
*tell me about original templates on page 74*

*how do I define an original template? on page 31*

## how do I set the input size?

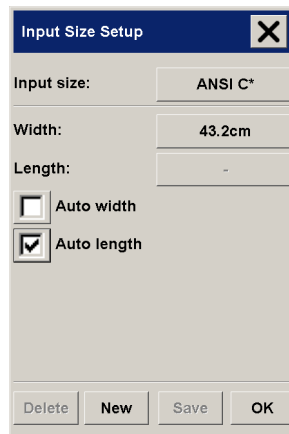
1. Press the Copy tab.

2. Press the Input size button to open the input size menu.



You can use Auto size detection for input size, standard sizes or custom size presets. Press the dialog's Input size button to display the list of available sizes.

3. Select an input size or use the Tool button  to open the Input size setup dialog.



4. To set the input size you can:

- Specify the width and length. The original's width can be read off the ruler at the scanner's insertion slot.
- Select Auto Width and/or Auto Length to let the scanner detect the physical input width and/or length of the inserted document.
- Press the dialog's Input size button to display the list of available sizes.

Both Auto Width and Auto Length can be applied for total input size detection. Automatic size detection works through a

prescan of the original and copying thus requires more time than with manual size settings.

5. Press OK to return to the Copy tab.

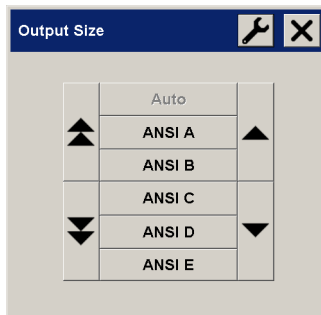
### see also

*tell me about the copy size on page 73*


*how do I set the output size? on page 6*

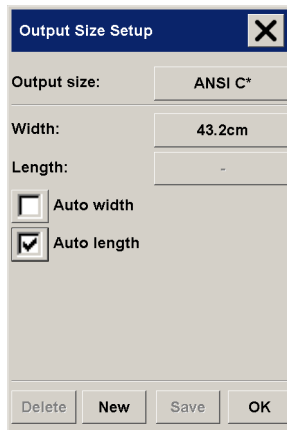
## how do I set the output size?

1. Press the Copy tab.
2. Press the Output size button to open the Output size menu.



You can use Auto size detection for output size, standard sizes or custom size presets.

3. Select an output size or use the Tool button  to open the Output size setup dialog.



4. To set the output size you can:

- Specify the width and length. The original's width can be read off the ruler at the scanner's insertion slot.
- Select Auto Width and/or Auto Length to let the scanner detect the physical input width and/or length of the inserted document.
- Press the dialog's Output size button to display the list of available sizes.

Both Auto Width and Auto Length can be applied for total output size detection. Automatic size detection works through a prescan of the original and copying thus requires more time than with manual size settings.

5. Press OK to return to the Copy tab.

You can also use a scale factor to determine the output size. See *how do I scale copies?* on page 11.

### **see also**

*tell me about the copy size* on page 73

*how do I set the input size?* on page 4

## **how do I copy thick media?**

Scanning thick media can require enlarging the insertion slot and this can affect the scanner's automatic control of border lines between the cameras—called Stitching.

First you must adjust the insertion slot to accommodate your thick media. See *how do I change the insertion slot height?* on page 8.

### **to copy thick media...**

1. Load the thick original you wish to scan.

Center loading is recommended with thick originals. The scanner's transport rollers grip more evenly with center loading.

2. Make a test scan.

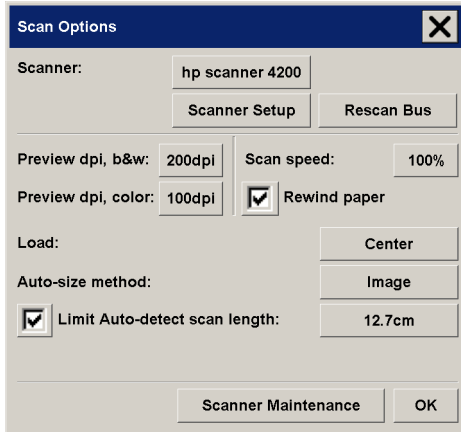
Bulky thick media need to be supported with both hands both into and out of the scanner.

Stitching errors will be easiest to see on an image with one or more clear diagonal lines.

Normally, only stiff media will affect stitching. Flexible media will usually be stitched correctly regardless of thickness.

If the lines seem uneven, do the following:

3. Select the Setup tab.
4. Select the Scan Options button.



5. Select Scanner Setup.
6. Select the Extended Thickness tab.
7. Check the box labeled Use extended thickness paper handling.
8. Change the value for each of the scanner's cameras—normally, only positive values should be used.
9. Make test scans and readjust the values until you are satisfied that the lines are stitched correctly.
10. Click OK to accept your settings.
11. Repeat the above steps until you are satisfied with the results.

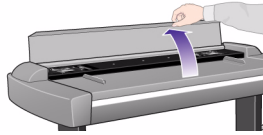
## how do I change the insertion slot height?

When the insertion slot height is not in the Normal position, the following warning is displayed below the preview window on your touch screen:

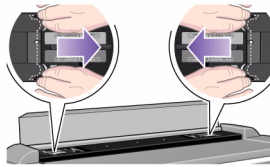
*Paper Guide in Extended Position*

## to change the insertion slot height...

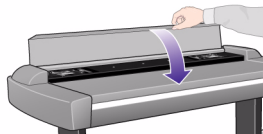
1. Open the insertion slot cover.



2. Press down on the platen as you pull first one slider and then the other (left and right) towards the scanner's center until the media thickness adjustment sliders found at each side are the same setting.



3. Close the cover.



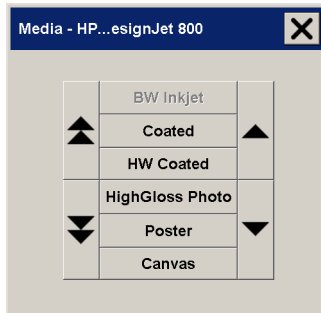
To return the insertion slot height to its Normal position:

1. Press down on the platen as you push first one slider and then the other (left and right) towards the sides of the scanner.
2. When the platen is returned to its Normal position, the message Paper Guide in Extended Position will be replaced by the Load option: Center or Side.

## how do I select a media profile?

1. Select the Setup tab.
2. Select the Media profile button.

3. Select the media profile from the list.

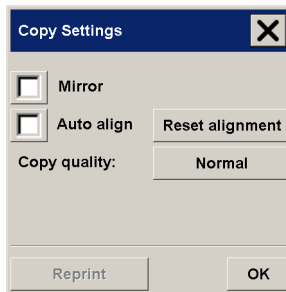


**see also**

*how do I create a new media profile? on page 33*

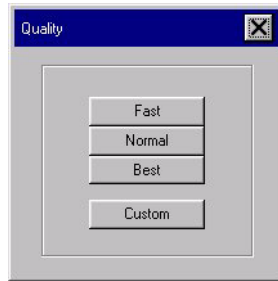
## how do I set the output quality?

1. Press the Copy tab.
2. Press the Settings button.
3. Press the Copy Quality button.

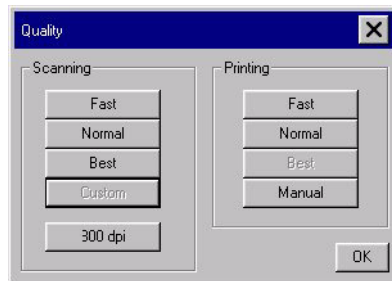




4. Select an output quality or select the Custom button to define a new one.



5. For scanning, select an output quality or press the Custom button to define a dpi setting for your scanner output or, if one is active, press the dpi button to change the dpi setting.
6. For printing, select an output quality or press Manual to let the printer control output quality.



7. Enter a value and press the Enter key.
8. Press OK to finish.

## how do I scale copies?

When you select Auto for the Input Size and a specific Output Size, the Scale value will be set to Auto by the scanner software until the first preview after which the calculated Scale value percentage will be displayed.

### to scale copies...

1. After making your input setting, in the Copy tab press the Scale button.

2. Press the Scale button to display the list of standard or customized scaling factors predefined in your system.
3. Select the Scale value that fits your copy intentions. A Scale factor of 100% makes a 1:1 duplicate. Below 100% reduces the image in the copy and above 100% magnifies it.
4. Press OK to return to the Copy Tab.

### tip

Make a fast miniature version of your big copy by setting the Scale factor to 25%.

You can set the system to bypass the Input, Output and Scale Setup dialogs and go straight to the predefined value lists. Select Setup tab > Options > Use quick select lists.

## how do I scan to a file?

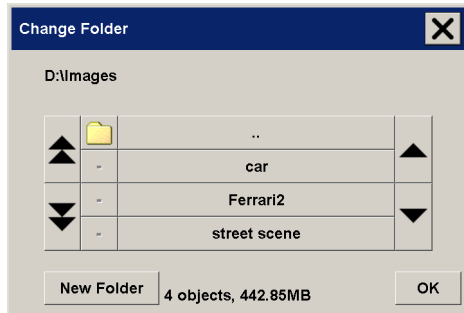
1. Select the Scan tab and set the various characteristics of the scan: the type of original, the lightness, the size, and the scan resolution.

Output settings such as margins, layout, and media profile can be made later when you print from the file.

Copy	Scan	Print	Setup
			Settings
<input checked="" type="radio"/>	B&W	<input type="radio"/>	Color
Type of original:	Color Photo		
Lightness:	0		
Size:	Auto		
Scan resolution:	Normal		
File name:	20021212-123502		
File format:	Tiff		
File folder:	D:\Images		

2. The default filename is composed of the current date and time. To change:
  - the default name, press the File Name button and enter a new name.


- to another Folder group, press the File Folder button.






In the Change Folder dialog you can:

- use the arrows to select the folder on your disk.
- use the folder up button (marked "..") to move up a level.
- create a new folder in the current folder with the New Folder button.
- press a folder name to move your search to that folder's level.

Click OK in the Change Folder dialog when you have selected the destination folder for your file.

3. Press the Scan to file button  to start the scan-to-file process and save the image.

If a new Account has been created, every time you press:


-  the Copy button,
-  the Scan to file button, or
-  the Collate copy button

the Account dialog list opens for you to select an account. See *tell me about accounting* on page 69.

Each file will be saved with the Scan tab settings that applied when you pressed the Scan to File button.


# how do I use copy options and tools?

## how do I use the previewing tools?


The Preview button  loads a fresh preview of the copy each time it is selected.

The loaded image always uses the last settings made and the effects of the settings will be visible in the new preview. This feature allows you to fine-tune your settings as you watch them take effect before committing the copy to print.


### to display the whole image

 You can use the Zoom All tool to view large format originals in the preview window. No matter what zooming level you start from, the Zoom All tool resizes the image so that it exactly fits in the preview window.


### to zoom in on a specific area

 Use the Zoom In tool when you need to view details for making enhancement settings and for aligning. Zooming takes place immediately with the zoom axis in the center of the preview window. If you need to enlarge the image further, then continue to press the Zoom In button until you get the required level of detail in the view.

### to zoom out from a selected area

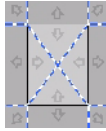
 The Zoom Out tool decreases the image size in the preview window. If you need to decrease the image further, then continue to press the Zoom Out button until you get the required field of view.

### for one-to-one pixel viewing

 Use the 1:1 tool to view the image with one scanned pixel shown as one screen pixel.

### to resize the paper frame

 The resize paper frame tool lets you resize the paper frame interactively in the preview window.



When activated, the Resize Paper Frame Tool partitions the areas around the paper frame into sections. When a section is touched, the closest frame side or corner is resized to the new position.

## to move the image



There are two ways to use the move image tool:

- Dragging: Dragging anywhere in the image window. Imagine you are gripping hold of the image and dragging it around inside the window.
- Centering: Touch a point on the screen and that point will then be centered in the preview window. The image shifts so that the point you selected becomes repositioned in the center of the screen. This method is especially useful when zooming in on image details. It lets you pick out important spots and center on them before zooming in.

## to position the paper frame

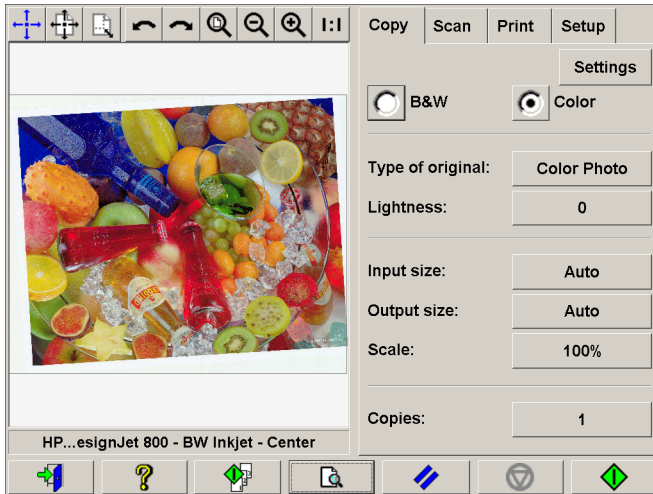


There are three ways to use the position paper frame tool:




- Dragging: Dragging anywhere on the screen. Imagine you are gripping hold of the frame and dragging it around over the image.
- Centering: Touch a point on the screen and that point becomes the new center for the paper frame. The frame shifts so that it positions itself with the point you selected directly in its center. This method is especially useful when you are making spot test strips for outputting on the printer. It lets you continuously and rapidly reposition the frame on important areas that you want tested.
- Dragging the edges: This will resize the paper frame and is an alternative to the Resize Paper Frame tool.

## to align the image

The original may have been inserted slightly off balance and appears crooked in the preview window. Correcting this does not mean you have to reload the original and start again.



Use the perfectly aligned sides of the paper frame as references when realigning.

-  Press the Align Left tool to tilt the image left.
-  Press the Align Right tool to tilt the image right.
-  Press the Copy button to output the image as you realigned it in the preview window.

## how do I set the number of copies?





Wide-format copy jobs can be time-consuming. This option allows you to leave the system working overnight or frees you to take care of other tasks.

1. Press the Copies option if you want to make more than one copy of the loaded original.
2. Enter the number of copies in the edit field.

## how do I collate copies—create copy sets?




The Collate Copy function allows you to group your copies into sets, and then output a selected number of these sets on your printer. All the previewing and enhancement options available for single document copying are also available when using Collate Copy.

### collate copy—copy sets

1. Insert the first document of your set into the scanner.
2. Make your copy settings in the Copy tab dialog.  
If you wish, you can press the Preview button  and make on-screen adjustments and tests.
3. Press the Collate Copy button.   
The original will then be input (captured) as with single-sheet copying, but it will be put on standby inside your system instead of going to the printer.
4. Continue inserting originals that belong to the set and press the Collate Copy button  for each one until all the originals that are part of the set have been scanned.  
You can adjust each copy in the set just as you can with single document copying.
5. Set the number of sets by pressing the button labeled Copies in the Copy tab.  
The number of copies indicates how many sets, each containing all the input originals, will be output on your printer.
6. Press the Print button  to activate the whole copy job.

You can cancel the Collate session at any time by pressing the Reset button.

If a new Account has been created, every time you press

-  the Copy button,
-  the Scan to file button, or
-  the Collate copy button

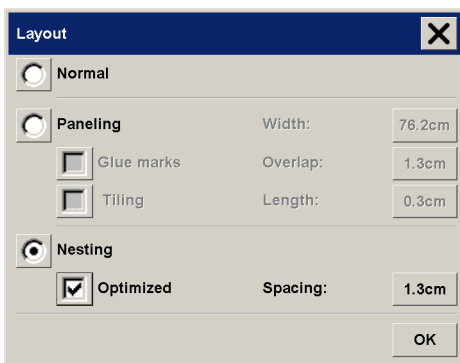
the Account dialog list opens for you to select an account. See *tell me about accounting* on page 69.



## tip

For jobs that require a high level of control and flexibility, use the Scan tab and Print tab to create and print your copy sets.

## how do I use nesting?

1. Select the Setup tab.
2. Select the Layout button.



3. Select the Nesting option.
4. Make your nesting settings.
5. Make your Copy tab and Setup tab settings (such as Type of original, Margins, Lightness, Media profile) as with normal copies, or else select the files for copying from your print list.  
For nesting to have a purpose, you will have chosen one of the multiple copy output functions:
  - Copy tab: copies set to more than 1 copy
  - Collate Copy
  - Printing multiple files/sets from the Print tab
6. Press the Copy button  (Print button  when printing from file) to output your Nested copies.

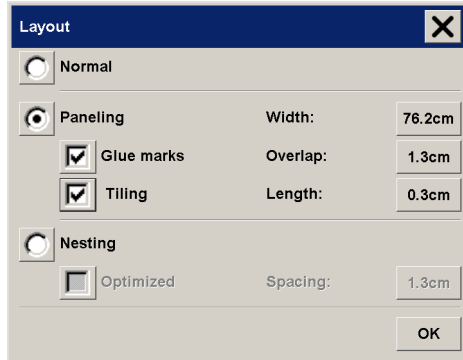
When printing multiple sets, nesting is performed within each set but not between the sets. Each new set will be started on a new strip and thereafter nested individually.



See *tell me about nesting* on page 85.



## how do I use paneling?

1. Select the Setup tab.
2. Select the Layout button.



3. Select the Paneling option.
4. Make your paneling settings.
5. Set your large Output size in the Copy tab. Your Output size value is set to the size you want for the end result: that is, the size of the total image after the panels are assembled.
6. Make your Copy tab and Setup tab settings (such as Type of original, Input/Output Size, Margins, Lightness, Number of copies, Media profile) as with normal copies.
7. Press the Copy button  (Print button  when printing from file) to output your panels.

### note

Your Margins setting in the Setup tab will apply for the whole image after you connect the panels and not for each individual panel. Paneling can be used with both Scan-to-print copying and with Print-from-file copying through the Print tab.

See *tell me about paneling and tiling options* on page 82.

## how do I set up a print list?

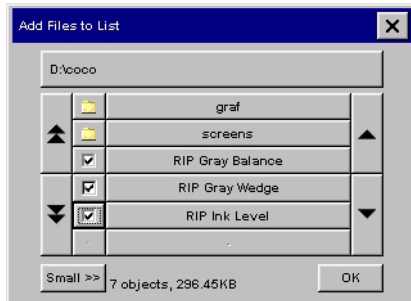
Printing your files is set up and controlled through a convenient Print List you access through the Print tab. See also *how do I maintain the print list?* on page 22.

## setting up the print list

1. Press the Print tab.

You can use the Clear List button to start afresh with an empty list.

2. Press the Add to List button to reach the Add Files to List dialog shown below:



Only a folder's image files will be shown.

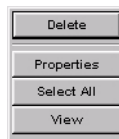
Select files for the Print List by checking the box to the left of the file name.

The folder up button (marked "..") will move you up a level.

Clicking on a folder name will move you onto its level.

Pressing the current folder button on top (in the figure above it is labeled "D:\coco") will give you the options to either rename the current folder or delete it from your disk. Only empty folders can be deleted.

Pressing a file name will display the following context menu:



- Delete will (after confirmation) permanently delete the file from your disk.
- Properties will display the full path, format, size and creation date.
- Select All will select all the files in the current folder for addition to the list. You can then go through the list manually and unselect unwanted files.

- View will display the file's image in the preview window. Previewing can be canceled by pressing the Stop button.
3. Press OK when you have selected the files you want in your Print list. You can also put only one file in your list if you want to print a single file.

You can always go back and add more files from another folder with the Add to List button.

## how do I print from files?

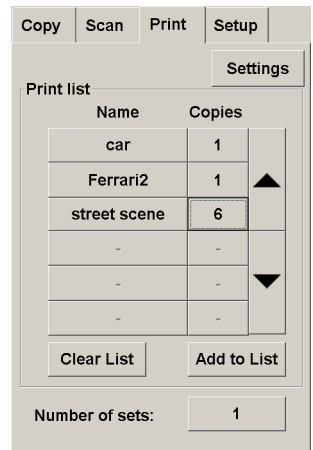
Printing your files is set up and controlled through a convenient Print List.


### to print from files

1. Press the Print tab.

Whenever you enter the Print dialog, the Copy button  changes to the Print button. 

The Print list group displays the files currently selected for printing. If the list is empty or it needs changing, then you will have to select files and build your list. See *how do I set up a print list?* on page 19.



2. Check or change your current Setup tab settings. The current Setup tab settings such as Margins, Layout, Printer and Media Profile will apply to the whole print job.
3. Press the Print button  to send the listed files to the printer.

If a new Account has been created, every time you press



the Print button,



the Copy button,



the Scan to file button, or



the Collate copy button

the Account dialog list opens for you to select an account. See *tell me about accounting* on page 69.

The scanner software's print from file functionality is designed specifically for printing files created with the scanner software's Scan tab and is not recommended for outputting files from other sources.

## how do I maintain the print list?


In the Print tab dialog, you can make settings that apply to the files in your list and the whole print job before committing the job to printing.

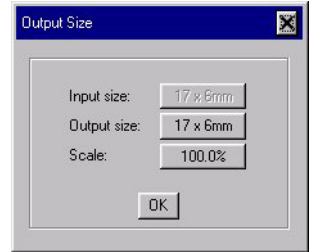
Copy	Scan	Print	Setup	
				Settings
Print list				
Name		Copies		
car		1		
Ferrari2		1 ▲		
street scene		6 ▼		
-		-		
-		-		
-		-		
Clear List		Add to List		
Number of sets:		1		

1. Set the number of copies for an individual file by pressing the Copies button to the right of the file name.
2. Set the number of times you want your whole list printed with the Number of sets button.

3. Select (press) a file name in the list to change the file's settings. The following context menu appears.



- Remove: removes the selected file from the list (not from your disk).
- Output Size: selecting this option takes you to a dialog similar to the Input Size, Output Size and Scale button group found on the Copy Tab. The file's Input size is retrieved from information in your file and you have the option to rescale the original size in the output copy. Use Output size or Scale to resize the copy.
- Properties: displays the file's properties—full path with name, size, type, and creation date. You can change the order of the file in the print list by pressing the dialog's Move up and Move down buttons. Check the Delete after print option if you want the scanner software to delete the file from your disk automatically.
- View: sends a preview of the file to the preview window. Previewing can be canceled midway by pressing the Stop button. 



# how do I maintain/recover my system?

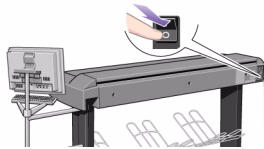
## maintenance procedures

Maintenance procedures should all be performed in a single maintenance session, starting with Cleaning the scan area and ending with Camera alignment and calibration.

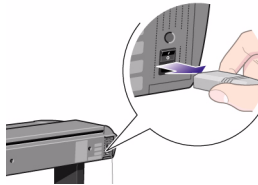
The scanner maintenance procedure should be performed once per month.

### cleaning the scan area

1. Turn the scanner power off.

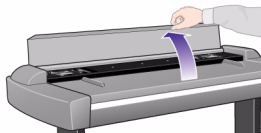


2. Disconnect the scanner power cable.



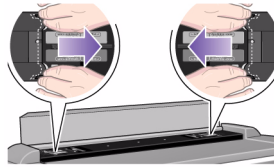
3. Open the scanner cover.

Place your fingers just inside the insertion slot and flip the cover upwards to expose the scan area.

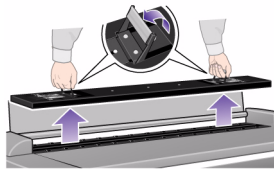


4. Remove the pressure platen.

Press down on the platen as you pull the left and right sliders towards the scanner's center until the metal safety buttons on each side of the scanner, pop up.



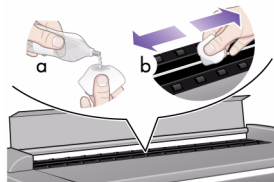
5. Use the two handles to lift out the pressure platen as soon as you feel the sliders disengage.



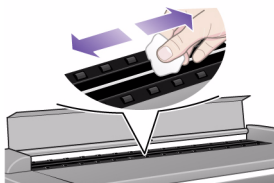
6. Gently wipe the glass plate.

Caution: do not use abrasives, acetone, benzene or fluids that contain these chemicals. Do not spray liquids directly onto the scanner glass plate or anywhere else in the scanner.

Clean the glass with a lint-free cloth and a mild, streak-free, glass cleaner.



Dry the glass completely using a separate clean, dry lint-free cloth like the one provided with the maintenance kit.



The white scanning area background platen is on the backside of the pressure platen you removed.

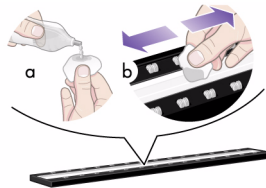
7. Turn the pressure platen, which was removed in step 4, upside down.



8. Clean the white platen.

Caution: do not use abrasives, acetone, benzene or fluids that contain these chemicals.

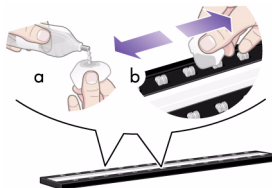
Wipe the white metal area with a lint-free cloth and a mild, streak-free, glass cleaner.



9. Clean the platen rollers.

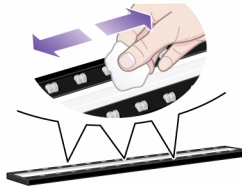
Caution: do not use abrasives, acetone, benzene or fluids that contain these chemicals.

Wipe the rollers with a lint-free cloth and a mild, streak-free, glass cleaner.





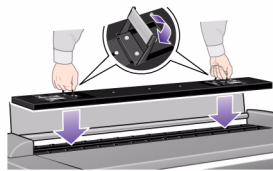
10. Dry the platen and rollers completely using a separate clean, dry lint-free cloth.



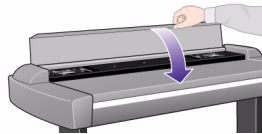
11. Replace the pressure platen.

Lift the pressure platen into its original position.

Press down on the metal safety buttons to let the two sliders move back and lock the platen into place.



12. Close the scanner cover.



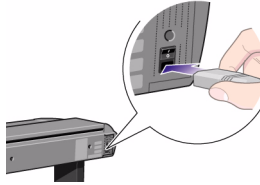
Now continue with the camera alignment and calibration procedure.

## camera alignment and calibration

Before you align and calibrate the cameras, make sure that you have gone through the first process in scanner maintenance: cleaning the scan area. An unclean scanning area will give you imprecise calibration results.

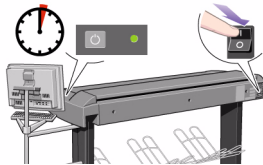
Camera alignment and calibration is a fully automatic process that you only need to activate through the wizard and then leave to run on its own.

1. Connect the scanner power cable.

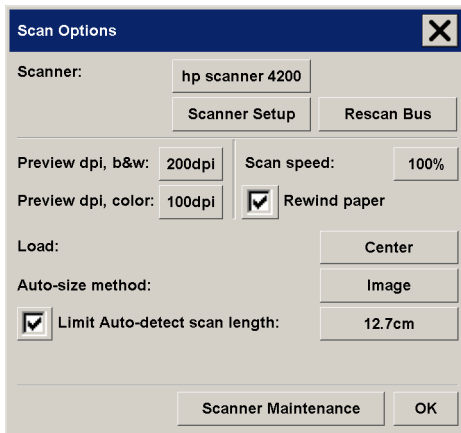


2. Power ON the scanner.

The scanner should be warm. Make sure that the scanner has been turned on for at least one hour prior to camera alignment and calibration. Slight light intensity changes and camera shifting can occur just after turning the scanner on and the warm-up time will ensure that light conditions and camera heights have stabilized.



3. Select the Setup tab.
4. Press the Scan Options button.



5. Press the Scanner Maintenance button to start the Scanner Maintenance wizard.

The maintenance wizard will guide you step by step through the whole maintenance process: Camera Alignment, Stitching, and Calibration.

6. Insert the Maintenance Sheet that came with your system.


The wizard will ask you to insert the Maintenance Sheet that came with your scanner. The sheet's printed side must be inserted face down. Align the midpoint arrow with the scanner's midpoint arrow and feed the sheet into the scanner.



7. When maintenance is completed, remove the Maintenance Sheet from the scanner and return it to its protective cover and then place it in the storage folder. Store the folder in a dry place and out of direct light.

See also *tell me about scanner maintenance* on page 57.

## how do I upgrade the scanner firmware?

1. Press the Quit button  and select Exit to exit your scanner software.
2. Insert your firmware upgrade floppy disk into the floppy drive or the firmware CD into the CD reader.
3. Press the System Setup button and then the Upgrade System button to start the upgrade process.
4. When the process is completed, remove the floppy disk or CD.
5. Select the Designjet Scan button to restart your scanner software.

## how do I recover the system?

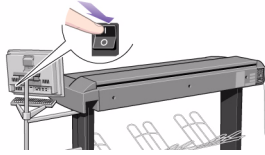
You need the System Recovery CD that came with your scanner.

This procedure will not affect your own data or settings.

### to recover your scanner system...

1. With the system ON, load the System Recovery CD into the touch screen CD drive.



2. Power OFF your touch screen and then power ON again.




Once recovery has started, it is automatic. A menu will appear providing options—you must ignore it.

3. When recovery is complete, remove the System Recovery CD.
4. Power OFF your touch screen and then power ON again.
5. Perform System Maintenance. See *maintenance procedures* on page 24.

## how do I calibrate my touch screen?


1. Press the Quit button  and select Exit to exit your scanner software.
2. Press the System Setup button.
3. Press the Calibrate Touch Screen button  and follow the instructions on the screen.

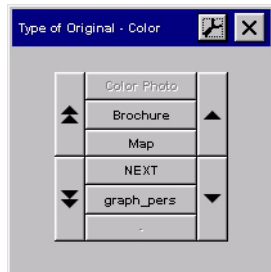
## how do I shut down my system?

1. Press the Quit button. 
2. Press the System Shutdown button.
3. When you read the ready to power off message on your touch screen, power OFF the touch screen.
4. Power OFF the scanner.

# how do I customize my copy tools?

## how do I define an original template?

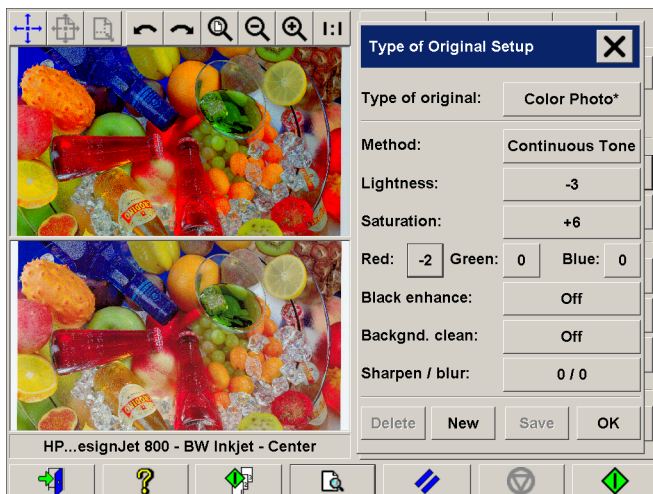
1. Press the Copy tab.
2. Set the copy mode to Color or B&W.
3. Press the Type of original button to open the Type of original (template) menu.
4. Use the Tool button  to open the Type of original Setup dialog.



If a preview of the copy is currently loaded, the Type of original Setup dialog will start up with the Image Filter Preview and split screen for on-line assessment of your change's effects.

5. After having made your settings and ensuring that they work well with the current original, press the New button.

For information on template settings, see *tell me about original template settings* on page 75.



The top preview panel illustrates changes to the image after modifying your template settings.


6. Enter the name for your new template. Select a name that represents the type of copy job you are working with, such as "Fruit Photos".
7. Press the Save button to create the new Type of Original template.  
Your new Type of Original template will be added to the list of those already available. You can start with one of the predefined Type of Original presets that is closest to your original, save it under a new name and then change it to fit your specific needs. Use the preview to test your settings.  
If you have changed your settings for the current Type of Original template pressing the OK button will accept the values but they will only be used for the current copy job. The next time you call up the template, it will have regained its old settings.
8. Press the Save button when you are finished.
9. Press OK to confirm.

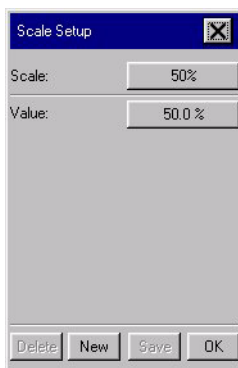
**see also**

*how do I select an original template? on page 4*

*tell me about original templates on page 74*

## how do I create a custom scale size?

1. Press the Copy tab.
2. Press the Scale button (or the Tool button  if Setup tab > Options > Quick select lists is selected).
3. In the Scale Setup dialog, press the New button.




4. Set a name for your new scale.
5. Press the Value button and set the scale value.
6. Press the Save button and then OK to confirm.

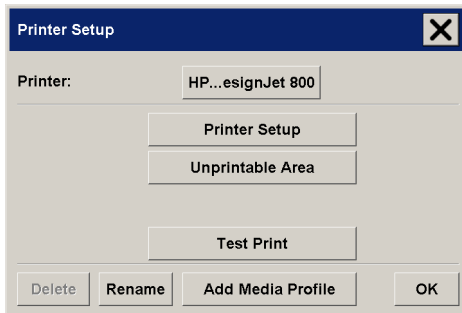
Your new scale will join the standard scales in the Scale presets list.

## how do I create a new media profile?

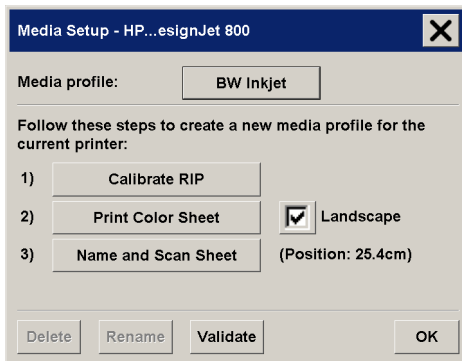
Before starting the following procedure, make sure that you have color-calibrated the scanner, and make sure that the media profile you intend to create is not there in the list already.

### to create a new media profile...

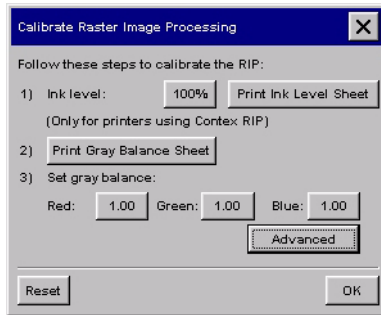
1. Press the Setup tab.
2. Press the Printer button. If Setup tab > Options > Quick select lists is selected, then press the Tool button. 



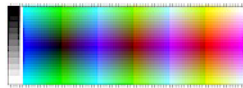
3. Press the Add Media Profile button.



4. Press the Calibrate RIP button.



5. Set the ink level and the gray balance, then press OK to return to the Media Setup menu. For details, see *tell me about calibrating RIP settings* on page 97.
6. Press the Print Color Sheet button to print a color patch reference sheet.



7. Load the color sheet into the scanner face down, aligning the arrow to the 10.5-inch mark (26.7 cm) measured from the right side of the scanner.
8. Press the Name and Scan Sheet button to assign a name to your new media profile.
9. Press the Enter key to accept the new name and initiate a scanning of the color sheet.

The media profile is now in the list of available media profiles.

You can use the Delete button to delete media profiles. Only user created profiles can be deleted.

You can use the Rename button to rename media profiles if needed.

You can use the Validate button to check that the media profile is valid for your combination of scanner and printer.



# how do I set up the system?

## how do I connect to a network?


1. Connect the RJ45 network cable to the Ethernet port at the back of your touch screen.
2. Check your TCP/IP settings.
3. Create a workgroup on the network.
4. Share the Images folder in your touch screen so that it can be accessed by other computers on the network.

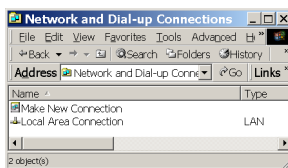
You will probably want to connect your printer to the same network. See your printer's documentation for further information.

## how do I configure TCP/IP settings?

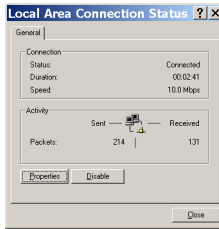
You may need to change your TCP/IP settings in order to connect successfully to a network.

### to check your TCP/IP settings...

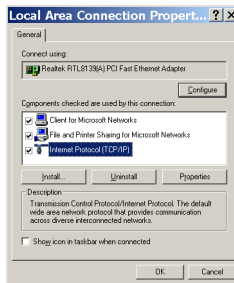
1. Press the Quit button  and select Exit to exit your scanner system software.
2. Press the System Setup button.
3. Press the Network Connection button. The Network and Dial-up Connections window will appear.



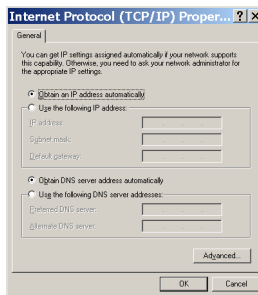
4. Double-click on Local Area Connection. The Local Area Connection Status dialog box will appear.



5. Click the Properties button. The Local Area Connection Properties dialog box will appear.



6. Select (single-click) Internet Protocol (TCP/IP), and click the Properties button. The Internet Protocol (TCP/IP) Properties dialog box will appear.



7. If you know that your network has a DHCP or BOOTP server, you can select "Obtain an IP address automatically" and "Obtain DNS server address automatically". Otherwise, ask your network administrator for the correct settings.

If you have no administrator available, copy the settings from a computer connected to the same network. You can access the Network and Dial-up Connections window from the Control

Panel. But, in this case, add 50 to the fourth (final) part of the IP address. If the resulting number is greater than 255, change it to 255.


8. Click OK until all dialog boxes have closed.

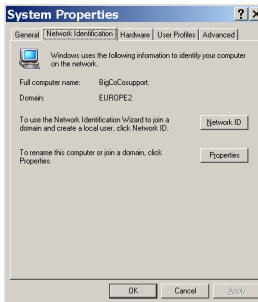
You have now configured your TCP/IP settings.

## how do I create a workgroup?

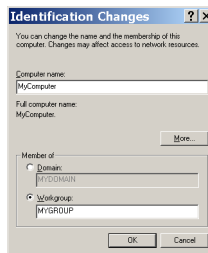
You need to create a workgroup in order to Scan to Network.

### to create a workgroup...

1. Press the Quit button  and select Exit to exit your scanner system software.
2. Press the System Setup button.
3. Press the Network Domain button. The System Properties window will appear. Select the Network Identification tab.



4. Click the Network ID button. The Identification Changes window will appear.




5. Enter the name of your domain, and the name of the workgroup you wish to create, then click OK.

## how do I automatically log in (in network configuration)?

This procedure must be performed by System Administrators only, and is applicable to the scanner in network configuration.

### to log in automatically...

1. Press the Quit button  and select Exit to exit your scanner software.
2. Press the Start button on the Windows taskbar, and select Run.
3. Type **regedit** and then press the OK button.
4. In the Registry Editor, navigate to HKEY\_CURRENT\_USER \Software\Microsoft\Windows\Windows NT\CurrentVersion \Winlogon.
5. Check that the following entries and their values are present as described in the table below. If they are not present you can add them by selecting New from the Edit menu. If they are present and you need to modify the value data, select the value and Modify from the Edit menu.

<b>value</b>	<b>value data</b>
DefaultUserName	MyUserName
DefaultPassword	MyPassword
DefaultDomainName	MyDomainUser
AutoAdminLogon	1

where Myxxxxxx are the domain data, user name and password to use in the automatic login.

6. Exit the Registry Editor to return to your Active Desktop.


The next time you restart your system the login will not be requested.

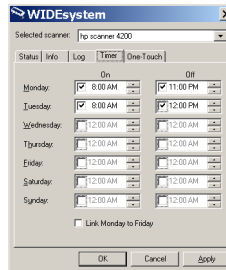
## how do I set the scanner system power up/down timer?

If a scan is being done when power off time is reached, automatic power off is delayed by 15 minutes.

If the scanner is manually started, 3 hours will have to pass before it goes into standby.

## to set the scanner system power up/down timer...

1. Press the Quit button  and select Exit to exit your scanner system software.
2. Press the System Setup button.
3. Press the WIDSystem button.
4. Select the Timer tab.



5. To activate the automatic power on, in the On column select the check box for the day.
6. To modify the time, select the hours digits and press the up or down buttons and then select the minutes digits and repeat the process.
7. Select AM or PM, and press the up or down buttons.
8. To activate the automatic power off, in the Off column select the check box for the day and then set the off time as described in steps 6 and 7 above.
9. Press the Apply button to confirm your changes and continue or press the OK button to confirm changes and exit WIDSystem.

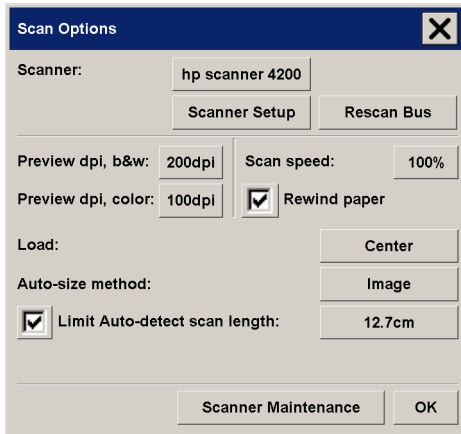
See *tell me about WIDSystem* on page 71.

## how do I define scanner setup options?

### to access the scanner setup options...

1. Press the Setup tab.

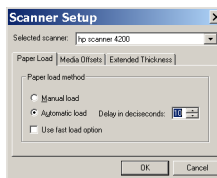
2. Press the Scan Options button.



3. Press the Scanner Setup button.

## paper load

1. Select between Manual load or Automatic load.

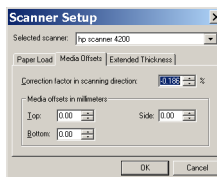


2. Set the delay factor for automatic paper loading to give you time to position the original correctly.

See *paper loading* on page 81.

## media offset

To get very high accuracy, modify the vertical precision from zero to a value between -1% and 1%.



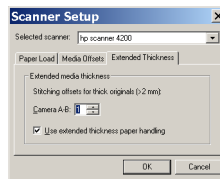
Positive settings mean that the distance between scan lines will be increased, and negative settings mean that the distance between scan lines will be decreased.

When you exit the Scanner Setup dialog, the modified value is stored in non-volatile memory in the scanner and can only be changed by re-doing the setup.

See *correction factor in scanning* on page 81.

## extended thickness settings

Normally, only stiff media will affect stitching. A flexible media will usually be stitched correctly regardless of its thickness.




1. If the lines seem uneven, check the box labeled Adjust for extended media thickness.
2. Change the value for each of the scanner's cameras. Normally, only positive values should be used.
3. Make test scans and readjust the values until you are satisfied that the lines are stitched correctly.
4. Click OK to accept your settings.

See *extended thickness paper handling* on page 80.

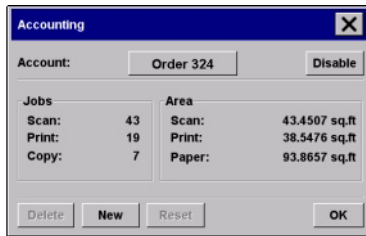
## how do I create/delete/disable an account?

The Accounting feature helps keep track of your copy activities. Only one account (besides the Total account) can be active at a time.

### to create a new account...

1. Press the Setup tab.
2. Press the Account button. If Setup tab > Options > Quick select lists is selected, then press the Tool button. 

3. In the Accounting dialog, press the New button.



4. Enter and accept a name for your new account.

The new account will automatically become the currently active account. Every time you press



the Copy button,




the Scan to file button, or

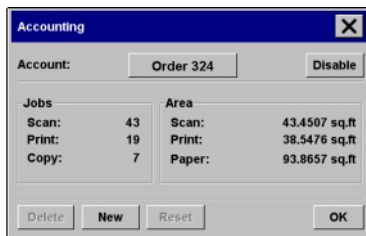


the Collate copy button

the Account dialog list opens for you to select an account.


### to delete an account...

1. Press the Setup tab.
2. Press the Account button. If Setup tab > Options > Quick select lists is selected, then press the Tool button. 
3. In the Accounting dialog, press the Delete button.



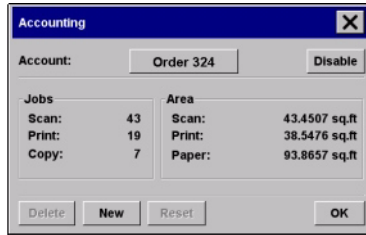
4. Confirm deletion by pressing OK.

### to disable an account...

1. Press the Setup tab.
2. Press the Account button. If Setup tab > Options > Quick select lists is selected, then press the Tool button. 



3. In the Accounting dialog, press the Disable button.



4. Select the Disable button and press OK.

## how do I select/activate an existing account?

Only one account (besides the Total account) can be active at a time.

### to activate/select an existing account...

1. Press the Setup tab.
2. Press the Account button.
3. In the Accounting dialog, press the Account you want.

A list of existing accounts appears. Use the arrows to scroll through the list and press on an account name to select it.

4. In the Accounting dialog, press OK to accept the account as the active account.



Every time you press



the Copy button,



the Scan to file button, or



the Collate copy button

the Account dialog list opens for you to select an account.

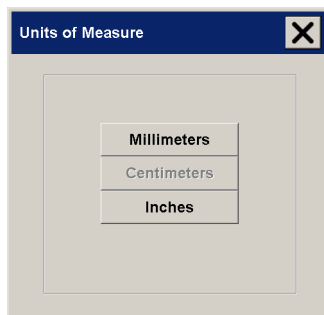
# how do I set preferences?

## units of measurement

Before setting any size parameters, you should determine the unit of measurement (millimeters, centimeters, or inches) you prefer to use throughout the application.

To set your preference of size measurement units:

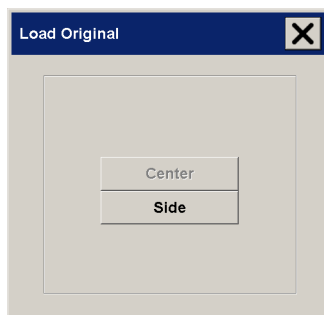
1. Press the Setup tab.
2. Press the Options button and then the Units of Measure button.
3. Select the preferred units:  
millimeters, centimeters, or inches.



## loading preferences

To set loading preferences:

1. Press the Setup tab.
2. Press the Scan Options button and then the Load button.
3. Select Center or Side loading:
  - Center loading: an arrow on the scanner marks the center point. Insert your original so that its center is aligned with the arrow. Standard sizes are marked along the insertion slot.
  - Side loading: the edge of the document is inserted so that it is aligned with the zero point (marked '0' on the ruler) at the right-hand side of the scanner's insertion slot.



**see**

*paper loading* on page 81

*how do I define scanner setup options?* on page 39

## scan and user interface options

1. Press the Setup tab.


2. Press the Scan Options button or the Options button.

**see**

*tell me about the scan options on page 65*

*tell me about the user interface options on page 66*

## how do I change the scanner system interface language?

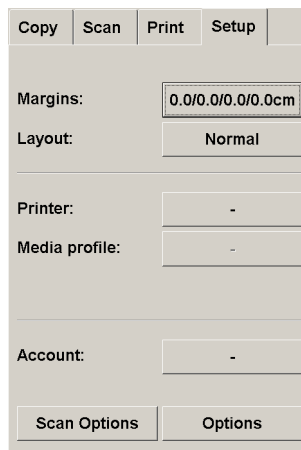
1. Press the Quit button  and select Exit to exit your scanner software.
2. Press the System Setup button.
3. Press the Change Language button.
4. Select the language from those available.

## how do I set up my printer in my scanner system software?

You should not normally need to use this procedure—the setup of your printer should be automatic when you install the system. Follow this procedure only if no printer is available in your Setup tab.

### to set up your printer...


1. Select the Setup tab.

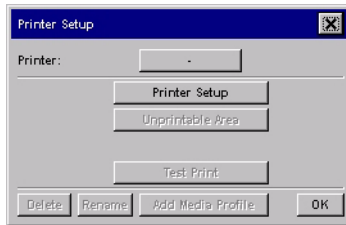


The screenshot shows the 'Setup' tab of the scanner software interface. At the top, there are four tabs: 'Copy', 'Scan', 'Print', and 'Setup'. The 'Setup' tab is selected. Below the tabs, there are several settings:

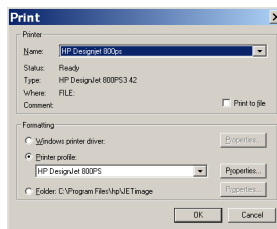
- Margins:** A text box containing '0.0/0.0/0.0/0.0cm'.
- Layout:** A dropdown menu set to 'Normal'.
- Printer:** A dropdown menu set to '-'.
- Media profile:** A dropdown menu set to '-'.
- Account:** A dropdown menu set to '-'.

At the bottom of the window, there are two buttons: 'Scan Options' and 'Options'.

2. Select the Printer button.
3. Select the Printer Setup button (or the Tool button  and then the Printer Setup button if Setup tab > Options > Quick select lists is selected).



4. Check the Printer profile radio button in the formatting part of the window.



5. Select OK to finish.

# the problem is with the scanner

## the problem is the diagnostics light is flashing



An error is detected by the built-in diagnostic.

1. The scanning area needs cleaning. For cleaning instructions see *maintenance procedures* on page 24.
2. If the Diagnostic light continues to flash after maintenance, then there may be camera position errors. See *tell me about hp customer care* on page 90.

## the problem is the wait light is flashing

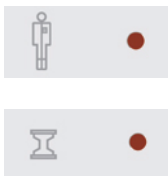


When the Wait light is flashing (and the Diagnostics light is off) re-adjusting is needed, but not possible.

1. Remove any original in the scanner.
2. Return the Original Pressure Platen to the normal position (also in this situation a scan may be issued, but the quality will be compromised).

When adjusting is again possible, the Wait light stops flashing, but continues to be on until the self-adjust is complete.

## the problem is the wait and diagnostics lights are flashing



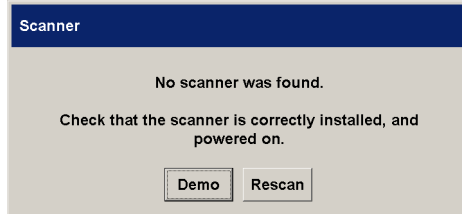
Simultaneous flashing by both the “Diagnostic” and the “Wait (Warm-up)” lights may mean that that the scanning area needs cleaning.

1. For cleaning instructions see *maintenance procedures* on page 24.
2. Restart the scanner after cleaning.

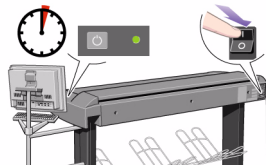
If the Diagnostic and the Wait lights continue to flash after cleaning and restarting, then there may be camera position errors. See *tell me about hp customer care* on page 90.

# the problem is a software system error

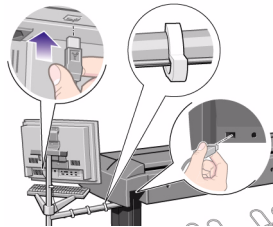
## the problem is no scanner was found



1. Check that the scanner power is ON.



2. Check that the FireWire cable between the scanner and the touch screen is inserted correctly.



3. Press the Rescan button.

## the problem is an error message and error code

The following table lists error messages, error codes, and the recommended course of action in each case. If the recommendation does not solve your problem, try restarting the system.

If you see an error code with no error message, then you must contact HP Support.

<b>message</b>	<b>code</b>	<b>recommendation</b>
No scanner was found.	none	Check that the scanner is powered on, and that the FireWire cable between the scanner and the touch screen is correctly connected at both ends. Then press the Rescan button.
The printer cannot be detected.	none	Check that the name of the printer is displayed on the printer button in the Setup tab, that the printer is powered on, and that the printer is connected to the scanner.
When combining thick media handling (paper guide in extended position) with auto-size detection, the size detection must be done separately by running a preview scan before the final copy or scan operation.	-19	Perform a preview scan, reloading the original into the scanner.
The folder must be empty	-11	Check that the folder is empty before deleting it.
The currently selected printer is not installed on the system.	-9	Install a Windows printer driver for the currently selected printer.
No scanner selected or selected scanner not present	-6	Check that the scanner is turned on. Check that the scanner is selected.
No media profile selected for current printer	-2	OK and run operation without media profile. Cancel and prepare a media profile before performing operation.
No printer selected	-1	Check that the printer is connected. Check the printer's configuration.
Invalid scan coordinates. The paper frame was placed fully outside the scan image.	2	The paper frame was placed fully outside the scan image. You can reposition the paper frame so it covers some of the scannable area.
Not enough disk space for spool file	6	Make sure the environment variable TEMP (or secondary TMP) points to a folder with plenty of space.



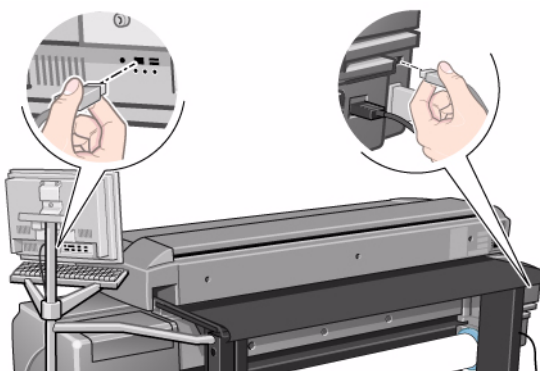
<b>message</b>	<b>code</b>	<b>recommendation</b>
The scanner is currently on standby. Please press the soft power button on the scanner to activate it.	8	Press the button.
Error printing colorsheet	1003	Check the printer.
Error detecting index-mark	1013	Reinsert the sheet and ensure it is aligned correctly and in the right position.
Sheet bad aligned	1014	Reinsert the sheet and ensure it is aligned correctly and in the right position.
Error detecting left margin	1015	Reinsert the sheet.
Error detecting right margin	1016	Reinsert the sheet.
Error reading colorsheet	1017	Check that you have inserted the correct sheet.
CLC aborted	1018	The user canceled the color map operation.
Wrong insert position?	1019	Reinsert the sheet and ensure it is aligned correctly and in the right position.
Can't find top of sheet	1020	Check that the sheet is inserted in the right position.
Can't find bottom of sheet	1021	Check that the sheet is inserted in the right position.
Does not correspond to this version of clc.dll!	1022	An incorrect version of the language resource DLL has been installed. Install a version of the DLL in the correct language.
Unable to open device for reading	2004	Check that the scanner is available.
Unable to open device for writing	2005	Check that the printer is available.
Unable to read from device	2006	Try again.
Unable to write to device	2007	Try again.
Destination already exists	2013	Use another file name.
The scanner is initializing or warming up.	13496	Wait until the power light on the scanner is on and the other lights are off.

## the problem is a printing error message

If you see a printing error message, the printer cannot be detected.

1. Select the Setup tab and check that the printer is displayed next to the printer button. If it is not, see *how do I set up my printer in my scanner system software?* on page 45.
2. Check that the printer is powered on.
3. If you have an HP Designjet Scanner 4200, check that the printer is connected to the network.

If you have an HP Designjet 815mfp, check that the printer to touch screen USB cable is correctly inserted (see below).



## the problem is a system failure

### touch screen stops responding



As a result of unusual electromagnetic phenomena, such as surges to power lines caused by lightning, you might find that the touch screen stops responding. In this case, turn off the touch screen and wait for a few minutes, then turn it on again.

### if your system does not work

When you power ON your touch screen and your scanner software does not start, you will need to recover your system using the System Recovery CD that came with your scanner. See *how do I recover the system?* on page 29.

## the problem is with the interface language

### if the user interface is not in the correct language



When you installed your scanner system, the wrong language was installed in the final step.

You need to change the interface language. See *how do I change the scanner system interface language?* on page 45.

## the problem is with the touch screen

### if you have problems pressing buttons on your screen

You need to re-calibrate your touch screen.

1. Press the Quit button  and select Exit to exit your scanner software.
2. On the active desktop, select Calibrate Touch Screen  and follow the instructions provided.

Calibrate your touch screen from the same position in which you would use it when working with your scanner system. You need to do this because the angle at which you use your screen may affect performance.

## **the problem is what is printed**

### **the problem is a cropped image**

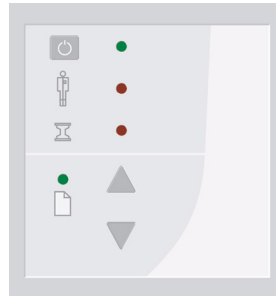
If your image is cropped and no error message was displayed, make sure that you have set the media width for your printer in the copy system software. See *how do I set the printer media width?* on page 3.

### **the problem is white space with nesting**

If there is space for another image on your media when using nesting, then make sure you have set the printer media width in your copy system software. See *how do I set the printer media width?* on page 3.

# tell me about my scanner

## tell me about my scanner operator panel and lights



The scanner's operator panel shown above is divided into two main areas:

- scanner control area with 1 key and 3 red/green indicator lights.
- paper control area with 2 keys and 1 red/green indicator light.

### scanner control area

#### power button and indicator light



When you connect the scanner to the power outlet it starts up in ON mode: the light is green. With the scanner then connected to the power outlet, you control scanner power through the power switch:

- To turn the scanner from ON to OFF, press down for 1 second until the light is red.
- To turn the scanner from OFF to ON, press down until the light is green.

#### diagnostics light



Flashes if an error is detected by the built-in diagnostic. Simultaneous flashing by both the Diagnostic and the Wait (Warm-up) lights may mean that that the scanning area needs cleaning. For cleaning instructions see *maintenance procedures* on page 24.

Restart the scanner after cleaning.

If the Diagnostic and the Wait lights continue to flash after cleaning and restarting, then there may be camera position errors that require professional service.

## **wait light**



The Wait light comes on when the scanner power is turned on, and stays on during the internal diagnostic and stabilization phase.

The Wait light reveals the status of the scanner's self-adjustment procedure, which consists of both stitching and light profile adjustment. If the scanner does not self adjust the stitching and light profiles may change over time due to thermal changes in the scanner. The Wait light works in the following way:

- When the Wait light is off, the self-adjustment is up-to-date, and the scanner is ready to scan.
- When the Wait light is on, the scanner is warming up or re-adjusting; a scan may be issued, but quality may be compromised (when adjusting is completed, the Wait light turns off). To allow the scanner to self-adjust, do not remove the original or change Original Pressure Platen position while the Wait light is on.
- When the Wait light is flashing (and the Diagnostics light is off) re-adjusting is needed, but not possible; any original in the scanner should be removed, and Original Pressure Platen should be returned to the normal position (also in this situation a scan may be issued, but the quality will be compromised). When adjusting is again possible, the Wait light stops flashing, but continues to be on until the self-adjust is complete.
- The Wait light is on during basic calibration to indicate that the original should not be removed during this procedure. The scanner keyboard is disabled during basic calibration for the same reason.

## **paper control area**

### **paper forward and paper reverse keys**



Use the Paper Control area when you insert your document.

The Paper Forward Key moves the drawing into the start-of-scan position. If the auto-load option is selected in your software, loading

will take place automatically as soon as the original enters the insertion slot. A delay factor can be set for automatic paper loading giving you time to position the original correctly.

Pressing the Paper Forward Key during scanning will stop the scanning process and the original will be fed through the scanner while the key is held down.

The Reverse key stops the current scanning process and reverses the original. The original will be fed backwards through the scanner while the key is held down.

### **paper ready light**



The Paper Ready light comes on as soon as the drawing is inserted into the original's insertion slot and correctly positioned. Then the original can be moved into the start-of-scan position either by pressing the Paper Forward Key or through automatic loading.

The Paper Ready light is green for normal thin media and yellow for thick media.

The Paper Ready light stays ON, signifying that the scanner is ready to be controlled from the computer. During scanning the Ready light will blink. At end of scanning the Ready light will stop blinking, signifying that scanning can be repeated from the computer, or else terminated by ejecting the drawing from the scanner.

## **tell me about scanner maintenance**

Keep out dust and reduce maintenance time. Cover your scanner with the plastic dust cover when not in use.



Caution: Make sure the scanner power is OFF when using the scanner dust cover.

### **about**

Scanner calibration should become a habit for those who value high quality and precision in their results. Much too often, incorrect output on expensive media would have been avoided if the scanner had recently been calibrated.

Calibration is the process of setting the scanner device to known color conditions so that it performs in accordance with an established standard. When you calibrate your scanner to the ANSI IT8 color standard, you minimize color deviations between scanned ANSI IT8 reference color patches (on the IT8 Calibration reference sheet) and known color reference values.

The calibrating wizard lets you select between sRGB and NTSC color spaces. With the sRGB standard you get optimal color matching between your touch screen, scanner and printer.

## **why?**

Scanner calibration ensures stability, reproducibility and predictability of color output. Light sources and other parts in the scanner can change over time and this affects the scanner's interpretation of colors and its linearity. Without calibration, the output produced by your scanner half a year from now will differ from output produced today and will likely be noticeably inaccurate. Some monochrome scanners support basic calibration. Basic calibration reduces noise in the dynamic area and ensures stable and clean scans. When scanning at high resolutions, even the tiniest dust particles can cause unwanted speckles in your output. Calibration can help reduce this kind of noise and ensure clean scans every time.

## **when?**

We recommend scanner maintenance once a month.

Service preventive maintenance should be performed every two years (this has to be performed by a service engineer).

By calibrating the scanner at regular intervals (once a month), you ensure that all files created are based on the same color scheme. Thus, the results you get from your system are predictable, so you don't have to waste time and money experimenting to get the right result.

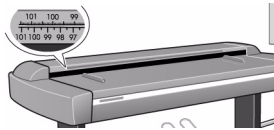
Scanner color calibration must be performed regularly and it is recommended to calibrate just before creating new Media Profiles through closed loop calibration. The scanner's calibration is crucial for the color matching process to work properly.



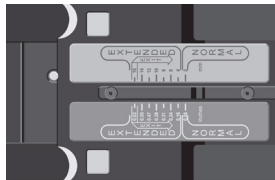
**see also**

*maintenance procedures* on page 24

## **tell me about the scanner insertion slot**



You can change the insertion slot height from 2 to 16 mm (0.08 to 0.63 inches). The Normal position (Step 0: 2 mm/0.08 in) is detected by a sensor in the scanner.



The insertion slot is marked with a measurement ruler for inches and millimeters. The ruler corresponds to right side aligned original loading. Just below the ruler are marked common standard sizes that help guide you with optional centered loading.

The loading method, right-side or centered, can be selected from your scanner software. The scan area width measured in standard units (inches or millimeters) is also set from the software.

The required setting for an original drawing can be measured with the original inserted into the scanner by using the ruler printed on top of the insertion slot. Then, you just enter your measurement in the width setting box in the current scanner application's media size setup dialogs. To change the insertion slot height, see *how do I change the insertion slot height?* on page 8.

## tell me about scanner operating modes

The scanner can work in the following operating modes:

- RGB mode
- graytone mode
- B/W modes
- 2D-sharpening, 2D-softening, and 2D-blur

### rgb mode

Full 24-bit true color mode for 16.8 million colors. Use the true color mode for precise reproduction of all color shades. This mode creates large files, especially when scanning large formats.

### graytone mode

In Graytone mode, the actual gray level of each pixel is scanned; 256 levels are recognized, corresponding to 1 byte (8 bits) per pixel. This results in graytone files that are 8 times larger than uncompressed files scanned in Line mode at the same resolution; for example, an E-Size drawing scanned in graytone mode at 300 dpi has a file size of 150 MByte, compared with typically 0.4 to 1.0 MByte for a compressed file in Line mode.

### b/w modes

In these modes, the scanner outputs each scanned pixel as a single bit, either black (1) or white (0), depending on whether its gray level is below or above the threshold.

Both fixed level and 2D-Adaptive thresholding are supported.

The copy modes incorporate Dual 2D-Adaptive processing with different combinations of ADL+ Error Diffusion Halftoning, 2D-Background suppression, 2D-Auto edge enhancement and 2D-Adaptive thresholding. The copy modes are ideal scanning wide format documents that are intended for re-printing. The ADL+ Error Diffusion Halftoning supports visibility of graytones in printed output

by adding toned shades of gray in regions between black and white. The copy modes are described in the table below:

<b>copy mode</b>	<b>image processing</b>	<b>usage</b>
B/W Copy Normal	ADL+ Error diffusion halftoning 2D-Auto edge enhancement 2D-Adaptive background suppression	Halftone copy to print of all normal originals
B/W Copy Adaptive	ADL+ Error diffusion halftoning 2D-Adaptive thresholding 2D-Adaptive background suppression	Halftone copy to print of Sepia, Blueprint and other originals with heavily distorted foregrounds and backgrounds where the shades making up the image "noise" are close to the shades making up the image's data and hard to differentiate.
B/W Copy Photo	ADL+ Error diffusion halftoning	Halftone copy to print of continuous shades of gray such as in photos.

## **2d-sharpening, 2d-softening, and 2d-blur**

Through your software, you can manually set and control sharpening, softening, and blurring filters, giving you rich possibilities for combining effects to obtain perfect enhancement results.

For example, you may have an image with details (such as text or lines) you wish to sharpen. But if the image also contains large concentrated areas of colors or graytones, sharpening will make unwanted noise to appear in the scanned image. By using the sharpen filter together with the blur filter, you can get the sharp edges you need without creating the side effect of unwanted noise. Both filters can be set at different levels for ultimate control of effects.

The B/W Copy Normal scanning mode incorporates 2D-Auto edge enhancement, with automatic, on-the-fly sharpening of your image.

# tell me about my scanner software

## tell me about the hp designjet scanner software

The application is designed to interface your scanner with your printer for large format copying. The scanner software is a powerful, professional tool enabling easy production of vivid high quality color corrected copies and also exploits the scanner's monochrome enhancement features for demanding black and white copy assignments.

### the main features of the scanner software are...

- Copy settings are stored in useful templates and presets—standardized and tested templates for different types of originals are already created and available with the application. These standard templates cover most copy needs.
- Output color quality controlled through binding the color characteristics of your scanner, printer and the type of output media you are using. These factors are stored in your system as Media Profiles.
- Standardized and tested Media Profiles fitted to the most popular wide-format printers and media are included in the application. Just select your printer and media and the underlying Media Profile parameters will be activated behind the scenes.
- You can also create your own Media Profiles for special printers or printing media and configure the Ink level and Gray balance on Context RIP renderings defined with printers using the RTL format.
- Copying color originals with advanced tonal adjustment such as black enhance, background clean, color balance, sharpening, blurring, saturation, and lightness.
- Advanced Dual 2D-Adaptive enhancement control with B/W copying. Supplies the advanced enhancement features through emulation in the software for scanner models without the hardware embedded processing.
- With on-screen previewing you can control the quality of the image with your settings before copying.
- Accounting function that enables you to keep track of copying and paper usage per user/billing account.

- Extra flexibility with 2-step copying through scan-to-file and print-from-file options.
- Advanced layout selections: paneling for combining large-format image sections to create huge enlargements and Nesting for economizing usage of expensive printing media.
- You can save time by making copies on two printers simultaneously. You define your Synchronous Printers through printer setup options.
- Image Filter Preview: with a preview of the copy loaded in the scanner software, you can adjust your primary image settings (Type of Original template parameters) while viewing the “before and after” effects of your changes through a split screen. The split screen and Image Filter Preview mode is activated immediately when you choose to edit a Type of Original template.

## **tell me about the scanner software user interface**

### **the image viewing section consists of...**

- The Image toolbar at the top with tools for moving the image, moving and resizing the paper frame, alignment and zooming tools.
- The preview window for on-screen previewing and adjusting of expected results.

See *how do I use the previewing tools?* on page 14.

### **the image control section provides the following tabs...**

- Copy: primary copy settings. The options available in the Copy tab will be sufficient for most users and common copy tasks.
- Scan: scan settings used when scanning to file rather than copying.
- Print: settings used when printing saved image files.
- Setup: printer, scanner, and job accounting settings that are likely to be changed infrequently.

The following three advanced features are available:

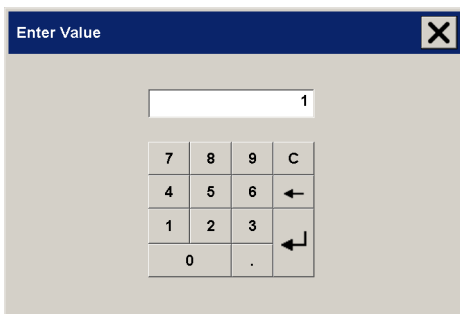
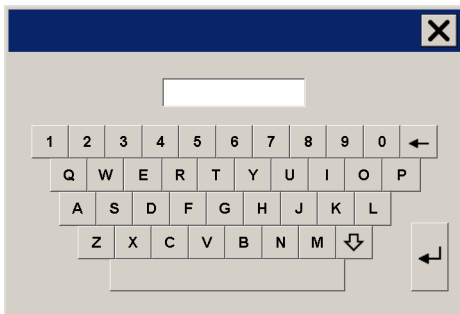
- The Layout option in the Setup tab.

- The Account option in the Setup tab.
- The Print tab.

## entering numbers and names

There are some dialogs and option fields in the scanner software that will require written values or texts. These are especially common in connection with customizing and creating new presets. The scanner software incorporates two types of on-screen keyboards: a text keyboard and a value keyboard. They appear in the touch-screen interface whenever written information is required to set the option.

The Enter key accepts your setting and returns to the previous dialog.



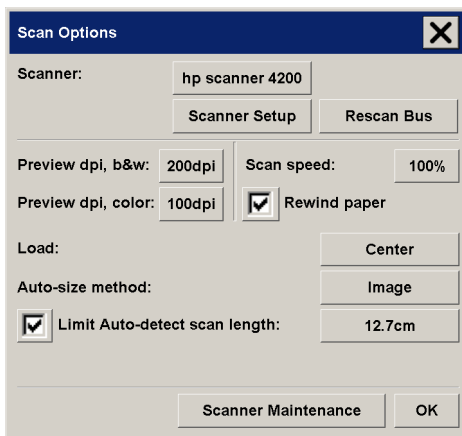
### see also

*tell me about my scanner operator panel and lights on page 55*

*tell me about the scan options on page 65*

*tell me about the user interface options on page 66*

# tell me about the scan options



## preview dpi

Determine the image resolution (between 50 and 300 dpi) for on screen previewing. Lower resolutions give faster previewing.

## scan speed

Sometimes, the performance of your workstation will cause the scanner to make repeated “back-ups” during scanning in order to ensure correct and continuous processing of scanned data. Back-ups can be avoided by reducing the maximum scanning speed thus refitting the scanner’s performance to that of your workstation.

## rewind paper

After scanning, your original will normally be found hanging at the back of the scanner. If the scanner is placed close to a wall, it may be difficult to access the original in order to remove it from the scanner. However, if the Rewind Paper option is selected, the original will be rewound back to its starting position after scanning. In this case, it can be ejected and removed from the front of the scanner.

## load

With this option you can select whether to load your original in the center of the scanner or aligned to the right. See *loading preferences* on page 44.

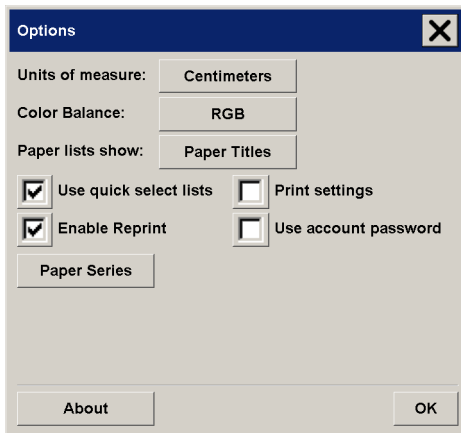
## auto-size method

There are two methods the scanner software can use to detect the length of the image: Paper detects the end of the paper by mechanical means, while Image performs a prescan of the image and uses software to work out the length of the prescanned image. The Paper method is quicker because it doesn't require a prescan; but the Image method may be more accurate (if the paper is longer than the image).

## limit auto-detect scan length

This option is provided so that you can set a maximum to the auto-detected length of an image.

## tell me about the user interface options



## units of measure

With this option you can select millimeters, centimeters, or inches as your units of measurement. See *units of measurement* on page 44.




## color balance

This option tells your scanner software whether to display color values in Cyan, Magenta, and Yellow, or Red, Green, and Blue when setting Type of Original options.

## paper lists show

This option tells the scanner software whether to display paper sizes (dimensions) or paper titles (such as E-0, A3) where possible.

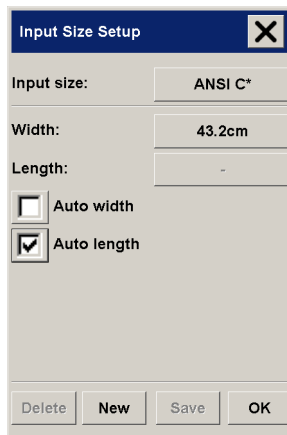
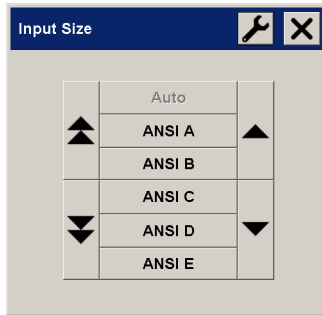
## use quick select lists

This option determines the behavior of your interface in relation to making settings for Type of original, Input size, Output size, Scale, Printer, Accounting, and Scanner. The default dialog order is that you first access a specific Setup dialog and from there a button will take you to the easy-to-use list dialog. With Quick select lists selected, you reverse this order: your interface first presents the list dialogs with current predefined and standard values for the options. From the predefined value lists, you can then choose to go to the specific (default) Setup dialog by pressing the tool button. 

Use this option if you primarily use the scanner software with standard and customized predefinitions. Leave the option empty if you primarily need to make specific adjustments and settings for your different copy jobs and usually bypass the lists with predefined values.

You can see below the Input size button behavior with and without the Quick select lists option selected: Quick select lists ON (first) and OFF (second). The Tool button on the Input Size dialog will

activate the Input Size Setup dialog, and the Input size button in the Input Size Setup dialog will activate the Input Size dialog.



## print settings

Checking this option tells the scanner software to print out an overview of all your settings together with the copy.

## enable reprint

In the Copy Settings dialog box is a Reprint button, which can be enabled or disabled here. If Reprint is enabled, it will reprint the last image printed. This is useful if you suddenly realize that you need more copies than you initially requested.

## use account password

If this option is selected, the system administrator must set an administrator password. Thereafter, only the system administrator

can create or change accounts and passwords on the system (or turn off this option). Other users must select an account and give the correct password for that account in order to use the system.

If this option is deselected, any account may be freely created or used by anyone, without giving a password.

## paper series

You can determine which types of size presets you want to appear in the size preset list through the Setup Tab dialog.

## tell me about accounting

The Accounting feature helps keep track of your copy activities. It can be used to record your copy expenses and for billing your customers. Accounting records information on your systems scans, prints, copies, and paper usage. Accounting information is stored in a simple format so it can be loaded into spreadsheets and databases.

### active account

The active account name is displayed on the Account button in the Setup tab. If a new Account has been created, every time you press



the Copy button,



the Scan to file button, or



the Collate copy button

the Account dialog list opens for you to select an account. Only one account (besides the Total account) can be active at a time. See *how do I create/delete/disable an account?* on page 41.

### total account

The built-in Total account runs constantly in the background. Its purpose is to record all your system's activities. Activities registered on a current active account will automatically be recorded in the Total account as well. The Total account cannot be deleted, reset, or disabled.

## accounting criteria

The activities that update an account are: Copy, Collate Copy, Scan to File, Print from File. The accounting system records the number of times the system scans, prints, and copies (straight-through scan and print). Scan to File updates only the scan fields, Print from File only the print fields, while Copy and Collate Copy update both. The number of square feet or square meters for scanning and printing activities are calculated from the Input size and Output size settings. The calculations for paper usage in square feet incorporate the full Media Width as set in the Setup tab > Printer > Unprintable Area dialog.

The following table shows how your scanner software actions update the Accounting fields:

action	account fields					
	jobs			area		
	scan	print	copy	scan	print	paper
copy	no	no	yes	yes	yes	yes
collate copy	yes	yes	no	yes	yes	yes
scan to file	yes	no	no	yes	no	no
print from file	no	yes	no	no	yes	yes

## accounting log files

Your scanner software creates special log files for direct integration into your invoicing and bookkeeping systems. Accounting data is organized in files for easy loading into spreadsheets or databases.

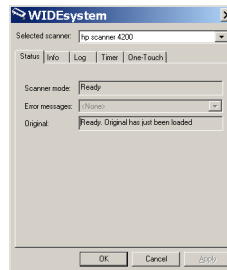
Accounting data files are stored in the scanner software Accounting file folder. There is one file for each account you create. The files are named: <account name>.csv. These (.csv) files can be viewed raw with standard text editors like MS Notepad and they can be loaded into popular spreadsheet and database applications.

The files contain lines of comma-separated fields. Each line represents a single action and a line's fields contain values recorded during the action. The actions that trigger the creation of a new line are: Copy, Collate Copy, Scan to File, Print from File.

## tell me about WIDEsystem

WIDEsystem is an application designed to monitor and control the functionality of your scanner and contains the drivers required by your system. Its main features are:

- View the scanner system's status, called the Scanner Mode, by exiting your scanner system and on the Active Desktop, selecting the WIDEsystem scanner icon on the system tray. Status messages include remaining warm-up time, interface connection errors, and an indication that the scanner is ready for scanning.

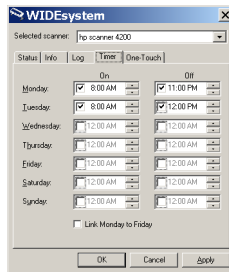


- View useful error messages that relate to the current Scanner Mode.
- View the load status of the original (media) to be scanned.

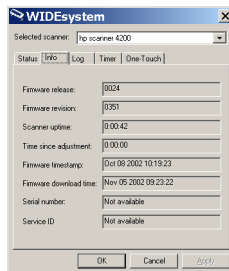
Set up the scanner system's timer to determine times for automatic power-up and power-down each day of the week. Optimum performance from your scanner is obtained when it has warmed up for an hour (may vary according to your working environment). Also, if you are printing from lists and there are a large number of copies, you may want to leave your system running in overnight or at weekends. When the power off time is reached, the scanner is set to standby mode (power light is red) and the WIDEsystem icon on your Active Desktop is yellow.

If a scan is being done when power off time is reached, automatic power off is delayed by 15 minutes. If the scanner is manually started, 3 hours will have to pass before it goes into

standby. See how do I set the scanner system power up/down timer? on page 38.



- View information on the scanner system's firmware and hardware revisions. The information helps you keep track of your upgrades and is useful for support purposes.



- Initiate a scan of the SCSI or USB interface bus.

# tell me about copy and layout features and options

## tell me about the copy size

### overview

The Input size, Output size, and Scale settings work together to determine the image capture area and the size of the resulting copy. The three are connected and changing one will automatically adjust the others following a defined order. You can select your size values from a list containing standard and custom predefined sizes. For the Input Size you can also choose to let the scanner detect the size automatically which is useful when you don't know the size offhand. Your scanner software always maintains an image's aspect ratio when input and output sizes differ.

Usually you would set the Input Size to that of the original, but you can also use small sizes to copy selected portions. With the Output size setting or Scale, you can blow up, shrink, or make one-to-one copies of the original.

### size options—relationships

The Input, Output, and Scale values are connected and changes to each automatically adjust the others.

The first time you set a size value, or just after you press reset:

- changing the Input size adjusts the Output size
- changing the Output size adjusts the Scale
- changing the Scale adjusts the Output size

You can use Auto width and length for the input size and a specified size for output. In such cases the Scale setting will be set to Auto until a first preview has detected the original's input size and thereby calculated the correct scale.

Note: your scanner software will always retain an image's aspect ratio when the input size and output size differ.

Size values will also change when you adjust the paper frame through the Resize Paper Frame tool.

## **input size/output size settings**

The Input size setting determines the scope of the scanner's image capture area.

You can use the variable Input size setting to capture selected portions of the original and thus make printed copies of specific image details. You also might want to print small strips of difficult areas for testing purposes before committing the whole copy to the printer.

The Output size setting refers to the printed result. For making a duplicate sized copy, you set both the Output size and the Input size to the size of the original, or set one of them to the size of the original and set scaling to 100%. For blowing up an original you set an output size that is larger than the input size, and the opposite for making a reduced copy. Blowing up and reduction can also be controlled through scaling.

## **using size presets**

Your scanner software covers most original and copy sizes with a wide range of predefined standard size options. But you may get an assignment in which a whole group of specially sized copies must be made, or you have a stable customer requiring a standard size of input material that is not as "standard" as the rest of the world's. In such cases you could save precious time by retaining the special size definitions in size presets that can be recalled when needed.

When you create a size preset, it becomes available both in the list of Input size presets and in the list of Output size presets because the list of preset sizes is shared by both options. This of course means that a new size preset can be created through both the Input Size and Output Size dialogs with absolutely equal results—a new size definition on the application's shared list for predefined sizes.

## **tell me about original templates**

The capture or scanning Method with relevant image enhancement settings are grouped together in a 'Type of original' template to give best results with the kind of input document to which it refers. Your selection of Color or B&W copying determines which Methods and enhancement adjustments are relevant to the template.



For most copy assignments, the HP Designjet scanner software contains standard Type of original templates with optimal default settings. For example, a brochure is typically a mix of photos and text while maps are line-oriented.

To make small adjustments to a standard Type of original template or to define one of your own, see *how do I define an original template?* on page 31.

## templates for color copying

<b>template</b>	<b>application</b>
Color Photo	Photographs and posters
Brochure	Documents containing both photos and text
Map	Maps and graphics with a high level of detail

## templates for black and white copying

<b>template</b>	<b>application</b>
Normal	Drawings, text, and documents that contain black and white together with graytones
Blueprint	Blueprints: originals with distorted foregrounds and backgrounds. The shades that create image noise are close to the shades of the image's data and are hard to differentiate.
Sepia	Sepia originals with the same foreground/background distortions as described above for blueprint
B&W Photo	Photographic images that contain many shades of gray

## tell me about original template settings

### method

The Method applies to the way the scanner captures and digitizes the image. The default Method settings for the built-in Type of original templates are optimal in relation to the kind of original in question and you shouldn't have to change them.

## **lightness**

This same setting can also be accessed directly from the Copy tab dialog. The default Lightness value is set to zero which works well with most documents. You can change this value to make the copy lighter (positive value) or darker (negative value) and compensate for dull or faded originals.

## **saturation**

Saturation indicates the intensity of a hue, or in other words the strength of a color. A high saturation makes a color's hue more intense than the same color with a low saturation value. A positive value increases saturation and a negative value decreases saturation.

## **red, green, and blue**

You can adjust your copy's color balance during image capture through separate controls for each of the three color-channels Red, Green, and Blue. Adding and subtracting an amount of a color affects the whole color balance. Often it's best to keep the three channels on the same levels. Experiment with the different effects through previewing.

Select negative values to reduce the total content of the color and select positive values to increase the total content of the color.

## **black enhance and background clean**

The black enhance option is used to change dark graytone colors to true black.

For example, if you are copying a brochure with a mixture of text and pictures, the text will often be digitized to a color that we may see as black but really is a dark graytone. When the printer digests this graytone data, it will print the original's text with a halftone pattern, meaning scattered dots instead of solid black.

By increasing the black enhance value, you can get the text to be copied in real black and it will therefore appear clearer.

Use the black enhance option with caution, because it can change other dark colors (not only grays) into black, making small dark spots appear in the picture.

Background clean is used if you have an original with a background that is not completely white. If you want your background to appear as pure white then you can increase the

background clean value. As with black enhance, background clean should be used with caution, as it can also affect some of the other light colors.

Both black enhance and background clean function as 'cutoff' values in which pixels under or over a certain value are affected by the setting. You define cutting points on a scale of low to high lightness measured in values from 0 to 255. The default value of both options is zero (no effect).

Example:

You have copied an original and want to improve it by making the text blacker and the background whiter:

- Adjust the black enhance value upwards from its default of zero (to 25, for example) and thus make pixels with low lightness values go to black.
- Adjust the background clean value upwards from its default of zero (to 25, for example) and thus make the pixels at high lightness levels go to white.

You can give your copy sharper lines with the Sharpen option. The Sharpen feature identifies edges in the image and intensifies them.

### **sharpen/blur**

The Blur feature blends colors and thus removes unwanted 'noise' during image capture. Many images are created with dithering, which is used for representing different colors in the original, and this dithering often creates unnecessary 'noise' in the image. Blurring smoothes out unwanted transitions between colors. With Black and White copying the Blur feature smoothes out gray dither by removing unwanted sharp transitions between excessive shades of gray.

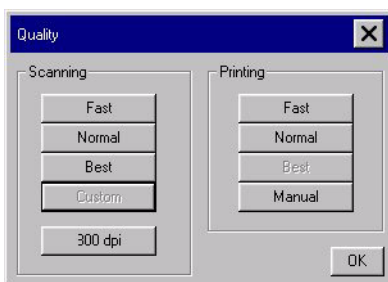
Don't think of blurring as the opposite of sharpening. Sharpening works on the image's edges only while blurring looks at whole color or graytone areas and smoothes them out.

### **tip**

Using Sharpen together with the Blur feature can often enhance image quality by first blurring away noise in the image and then sharpening the result.

## tell me about copy quality settings

This facility is available from Copy > Settings > Copy quality > Custom.



### scanning and printing quality settings

The Custom button leads to options for making scanner and printer quality settings separately. For each device you can select standard Fast, Normal, Best settings. Pressing the Custom button under Scanning lets you set the scan resolution and the Manual button under Printing stops your scanner system software from sending printing quality properties to the printer and lets you use the printer device's own quality controls without interference from the program.

## tell me about output margins

### setting the output margins

Your margin values will be deducted from the Output size you selected in the Copy tab. The effects of the margins on your copy will be displayed visually in the WYSIWYG preview window.

You can for example use margins to duplicate those of your original, crop poor quality edges, or create new white edges around copied pictures for framing. Your assignment may involve following a dictated margins standard, and this option enables you to set that standard for all your copies.

For many copy assignments, you will leave the four margins set to zero because you will want to capture the whole image without cropping off any of the original's edges. With the margins set to zero, a thin-lined frame will still outline your input and output expectations in the WYSIWYG preview.

# tell me about unprintable areas

## **'account for unprintable area' option**

The margins we set in the Setup tab dialog are the copy's 'output margins'. But the printer itself also creates margins. The size of your printer's margins or so-called 'unprintable area' depends on the printer model and cannot be changed. You should consider the printer's margins as your minimum margins and they will be in your output whether you want them to or not.

The 'Account for unprintable area' option is found in the Margins dialog and it lets you compensate for these uncontrollable margins. Selecting the option lets you economize paper usage by keeping unneeded margin space down to a minimum. Selecting the option will tell the application to deduct the printer's enforced margins from your output margins so the total margins are as you specified for the copy. For duplicating originals without margins, you would not want output margins either and thus the option should be deselected.

To use the option, you have to enter your printer's unprintable area values as specified in your printer documentation. This is done through the Setup tab > Printer > Unprintable Area button.

Here are some guidelines on using the 'Account for unprintable area' option.

If you select 'Account for unprintable area':

- You will also have selected a minimum output margin at least equal to the printer's margins. The program will automatically update the values in the Setup tab's margin values to reflect this. If you set output margins to zero or lower than the printer's, then the printer's margins are used and updated as the output margins.
- If the output margins you set are higher than the printer's, then the printer's margins are deducted from the output margins meaning the scanner software only adds on the margins that the printer is missing. This means that your total margin, measured from the paper's physical edges, will be as you specified in the Setup tab's Margins option.
- The cropping effect on the original is always determined by the value displayed on the Setup tab's Margin button whether it was automatically calculated or not. The actual cropping effect will be as displayed in your WYSIWYG preview.

If you do not select 'Account for unprintable area':

- The output margins you set will be added to the printer's and applied as if measuring inwards from the paper's physical edges.
- Only the specified output margins will crop the copy as displayed in your preview.

You would typically want to use precise margins when copying on standard-format-sized sheets manually fed into the printer. When you print on paper rolls, you will often have to cut out the copy anyway.

### **Examples**

If you are copying an original photo without margins then set your output margins to zero and uncheck the 'Account for unprintable area' option. Print the copy on a roll or a sheet larger than the specified output size to get the whole image because the printer's enforced margins will offset your copy.

Let's say you are printing a D-size poster, you want a margin of 1.5" on the copy and your printer margins are 0.5". You are duplicating the poster on a D-size sheet. Here you could select the 'Account for unprintable area' option. You can then set your output margins to 1.5" and you will also get only a 1.5" margin from the paper's physical edges. Using the 'Account for unprintable area' option saves paper for jobs when margins and slight cropping are acceptable.

## **tell me about scanner setup options**

### **extended thickness paper handling**

Scanning thick originals can give distorted results at both the top and bottom edges where the edge meets the scanner's rollers. You can omit edge distortion by letting the scanner skip the leading and trailing edges. Edge skipping is the default setting in one of the extended media positions. Use the checkbox 'Use extending thickness paper handling' to enable and disable skipping of the two edges.

## **paper loading**

### **manual/automatic**

With manual loading, you position the original in the slot and then press the down button on the scanner.

With automatic loading, the scanner detects and loads the original as soon as you insert it.

See *how do I define scanner setup options?* on page 39.

### **side/center**

You can load your original into the scanner from the scanner's center or side. Center loading is handy with standard sized originals (A4, A3, E-size, and so on). Center loading is strongly recommended when scanning thick originals such as cardboard or foam-board. Side loading is convenient when you want to use the ruler imprinted near the scanner's insertion slot to read the width.

See *how do I set preferences?* on page 44.

### **delay factor**

A delay factor can be set for automatic paper loading giving you time to position the original correctly.

See *how do I define scanner setup options?* on page 39.

## **correction factor in scanning**

This option allows you to fine-tune the scanner's vertical precision setting and mainly refers to copying where the relationship between lengths on the original must be kept in proportion. Examples are engineering drawings, maps, and perhaps even some types of art posters.

During scanning, an original image is digitized as it is propelled through the scanner. One at a time, thin strips of the image are processed as they pass the cameras. Vertical precision is directly affected by the speed in which this happens. Inaccurate vertical precision makes vertical lines in the scanned image become longer or shorter than the same lines in the original. The vertical scan accuracy is adjusted and set mechanically during production of the scanner. This setting is extremely precise and more than adequate for most purposes.

If you require very high accuracy, you can modify the vertical precision to a value between -1% and 1%. Positive settings mean that the distance between scan lines will be increased, and negative settings mean that the distance between scan lines will be decreased. When you exit the Scanner Setup dialog, the modified value is stored in non-volatile memory in the scanner and can be changed only by re-doing the setup.

The procedure for vertical precision adjustment would be to scan a precision original and measure the vertical distance between points in the image in a CAD or GIS system. Then compare those with similar physical measurements between the points on the original. You should scan at the scanning resolution you will later be using for the end result.

## **tell me about paneling and tiling options**

Paneling enables you to create huge enlargements. With paneling you print wide format sections of your image as 'panels' and then glue the panels together to reconstruct the image. In effect, the Paneling option creates a virtual printer with unlimited width capabilities. The HP Designjet scanner software makes paneling easy by supplying precisely placed cutting lines and guiding glue marks on the panel edges, so you can connect your panels with near-invisible seams.

Tiling is also paneling—but gives you the option to make your panel sections by dividing the image both horizontally and vertically.

### **options**

- **Width:** for setting the width of the panels.

The width includes the Overlap area. The panel width can at most be as wide as the printer's printable area. For maximum sized panels, set the panel width to the same value you set as the printer's Media Width (through the Setup tab > Printer > Unprintable area) minus the printer's left/right unprintable areas.

This value should correspond with the documented printable area for your printer. The scanner software will calculate the size of the last panel. When calculating special panel widths, for example for dividing the image into equally wide panels, you must remember to add extra space for panel overlap (see the example below).



- **Overlap:** determines the width of the overlap areas—that is, the edges that contain equal image data on two adjacent panels.  
Large, heavy panels will need wider overlap and gluing areas than smaller panels.
- **Glue Marks:** small gray arrows are printed on the panel's edges to help guide you when you connect the panels.  
The glue marks will hardly be distinguishable in your large copy. The arrows vary in size: the larger the Overlap width, the larger the arrows printed. Maximum arrow size is 1" high.
- **Tiling:** allows you to determine the length of your panels.  
Your sections will be connected both horizontally and vertically. Tiling is useful for single sheet printing but can also be used if you want to make small sections on rolls. With tiling turned off, the panel is output continuously on the printer from the image's top to its bottom. Each panel becomes as long as the image itself and the panels only have to be connected at the sides.
- **Length:** set the length of your tiles if tiling is used.

## **assembling the panels**

The strips or tiles representing sections of a whole image need to be connected. Unless you have a huge table, it would be best to arrange your sections on the floor in their correct order.

If you selected the Glue Marks option, the scanner software will have made your job easier by printing the following guide markings on the panels:

### **the cut line**

A line will be printed on the left side of panels that are to be joined with their left neighbor—that is, every panel but the first (leftmost) panel in a row.

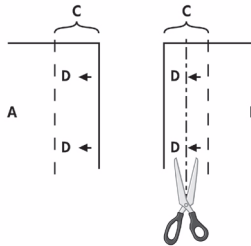
Use a sharp knife, scissors, or other cutting device to cut on the right edge of the line (to remove the line itself). The cutting line will be placed in the middle of the overlap area, so slight irregular cuts can be tolerated since cutout image data will be picked up in the overlap area of the neighboring panel.

## glue mark arrows

After cutting the edges at the cut line, bring your panels together by overlapping with the rightmost panel on top of the panel on its left.

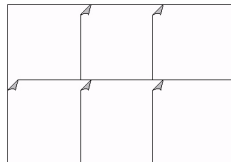
The second panel in a row overlaps the first panel, the third overlaps the second and so on. Use the glue mark arrows to fit and glue the panels together with perfect seams (see the illustration below).

You assemble the panels by bringing the arrows printed on the overlapping panel down on top of the arrows printed on the underlying panel.



If the Tiling option is selected, cut lines and glue marks (D) will be printed, both for horizontal connection (as illustrated above) and for vertical connection.

Bring your panels together by overlapping the edges with each rightmost panel (B) on top of the panel on its left (A). The second panel in a row overlaps the first panel; the third overlaps the second and so on as illustrated below. Vertical connection (tiling only) is performed with the first row at the lowest level and then each following row overlaps the bottom edges of the tiles in the row before it.



## tell me about nesting

Often you will need to make sets of copies that only take up a fraction of the full printer width. Normally, multiple printing of “not-so-wide” copies on large format media (rolls or sheets) will result in considerable paper waste as each new copy is output on a new strip starting at the left edge of the paper.

With Nesting you can fit multiple copies side by side using the roll/sheet width optimally and economically. Nesting is perfect for printing multiple copies, collated copies, and file print lists, when at least some of the copies can be fitted side by side in the output. Nesting is also useful for creating large-thumbnail collages for presenting overviews of whole sets of images.

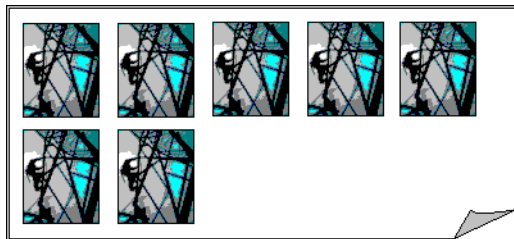
The following options are available:

- **Optimized:** your scanner software will find the best solution for Nesting with the least paper waste.

Without Optimized the copies are placed side by side in the order of input. Omitting Optimized can sometimes give a result that is easier to cut because the copies are simply lined up one after the other. The price is wasted paper. Selecting Optimized will always give a more economical result.

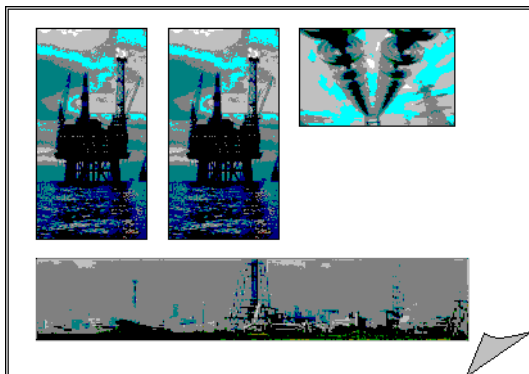
- **Spacing:** determines the minimum of empty space between each nested image.

Below, simple multiple copies were selected by setting the number of copies (Copy tab > Copies) to 7 and then selecting nesting. Both Optimized and non-optimized nesting would give the same result.



Below, optimized nesting of a set of 3 files printed from the print list (Print tab). One image was set in the list for 2 copies. Optimized

nesting will give equal results no matter how the files are ordered in the print list.



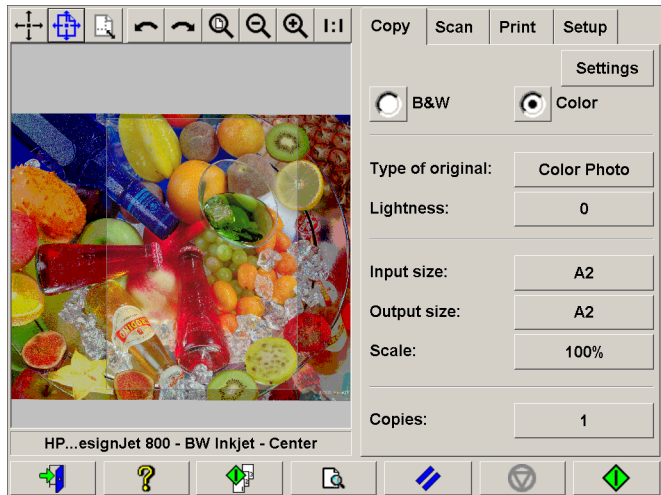
## tell me about previewing and the paper frame

### previewing

Creating a preview is not absolutely necessary. If you know your settings work well with the current original, then you can skip previewing. The Preview button can be pressed at any time, and always creates a fresh preview of the whole image while using the currently active settings. This means that you can visually control new settings online before pressing the Copy button and sending output to the printer.

With a preview of the copy loaded in the scanner software, you can adjust your primary image settings (Type of Original template parameters) while viewing the “before and after” effects of your changes through a split screen.

## the paper frame



The paper frame defines the area of the image that will be copied. Its size is determined by the size settings made in the Copy Tab dialog. Your scanner software let you position the paper frame directly in the preview and thus visually set your copy area. The paper frame in the preview window fulfills two functions:

- It frames the area in the original that will be copied.
- It shows how the margins will crop the image in the end result.

Before you can see and use the frame, you must have a preview of the copy loaded through the Copy Preview button. The paper frame's size and thickness in the preview window will be determined by the Input Size, Output Size, and Margins settings.

The paper frame gives a complete “What You See Is What You Get” (WYSIWYG) impression of your copy.



The frame’s visual outer boundaries are determined by the Input size setting. The area inside the frame shows what will be copied.

The frame’s thickness visualizes the margins in relation to the copy’s size and shows how they crop the image. With margins at the value of zero, a thin frame will still be displayed to show the capture area.

## **tell me about lists**

### **creating and printing lists**

You can select single or multiple files for printing by putting one file or many files in your list. Multiple selections enable you to use business hours to create files for copying and then let the program print your copies overnight. You can set the number of copies you want by defining the number for each file individually, by determining the number of sets (how many times the whole list will be printed), or by using a combination of both.

# tell me about hp designjet support

## tell me about hp customer care

As your strategic support partner, we make it our business to help keep your business running smoothly. HP Customer Care offers award-winning support to ensure you get the most from your HP products.

HP Customer Care provides comprehensive, proven support expertise and leverages new technologies to give customers unique end-to-end support. HP Customer Care offers a wide range of services, from onsite support to participation in online user forums, allowing you to maximize the productivity of your printing solution. To find out more about HP Customer Care, please visit us at:

<http://www.hp.com/go/support/>

## what to do before you call

1. Review 'the problem is...' section.
2. Refer to other user documentation you have:
  - If you have installed third-party software drivers refer to that user documentation.
  - If the problem appears to be related to your software application, first contact your software vendor.
3. If you still have difficulty, refer to the HP Support Services booklet shipped with this scanner. This document contains a comprehensive list of various support services available to help solve problems.
4. If you do call one of the Hewlett-Packard offices, please have the following information available to help us answer your questions more quickly:
  - The version of scanner software you are using, and the scanner's firmware version and date. You can find this information under the Setup tab by pressing the Options button and then the About button.
  - The scanner you are using (the product number and the serial number, found on the label at the back of the scanner).



- The printer you are using with your scanner (the product number and the serial number, found on the label at the back of the printer).
- Any special equipment or software you are using (for example, spoolers, networks, switch-boxes, modems, or special software drivers).
- The cable you are using (by part number) and where you purchased it.
- The software driver and version you are currently using.

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# tell me about media

## tell me about copying thick media

There are a number of factors that affect copying of thick media:

- media thickness positions
- modifying stitching parameters
- treating edge distortion
- supporting thick originals

### media thickness positions

Auto-adjustment of the scanner's light profile, stitching, and so on only takes place with the insertion slot in the Normal position. With extended media thickness positions, the last performed auto-adjustment is stored and utilized. This means that you should from time to time return to the normal position, and especially when turning the scanner on, to allow it to auto-adjust.

The Normal position also gives the highest scanning speed. In the extended media thickness positions, scanning speed is automatically reduced. See *how do I change the insertion slot height?* on page 8.

### modifying stitching parameters

Thick stiff originals will rest on top of the scanner rollers and thus raise a small distance over the glass plate, which will lead to changes in the stitching of images at points between the cameras (overlapping pixels). The stitching parameters will need to be modified in order to correct for this. You can modify stitching parameters in your application's Scanner Setup dialogs.

### treating edge distortion

Scanning thick originals can give distortions when the front edge meets the exit rollers or the trailing edge leaves the entry rollers. To omit this, the leading and trailing edges are by default skipped when in one of the extended media thickness positions.

## **supporting thick originals**

To facilitate scanning of thick originals in the extended media thickness positions it is important to insert the original center aligned and to help support the original during scanning. This should be done both at the entrance side and the exit side of the scanner. Specially designed support tables can be attached behind the scanner for those who perform a lot of thick media scanning.

### **see also**

*how do I copy thick media? on page 7*

*tell me about the scanner insertion slot on page 59*

# tell me about paper sizes

Select by:

- series
- area (size)

## series

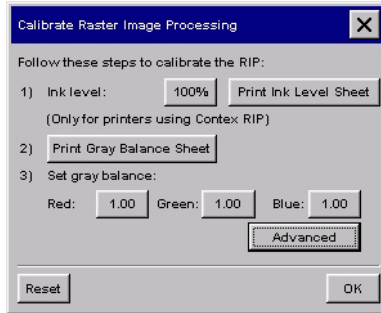
Series	Name	Size	Size	Area	Area	Aspect	Mpixels
		inches	mm	in <sup>2</sup>	mm <sup>2</sup>	ratio	300 dpi
ANSI	A	8.5×11	216×279	93.5	60322	1.29	8.03
ANSI	B	11×17	279×432	187.0	120645	1.55	16.05
ANSI	C	17×22	432×559	374.0	241290	1.29	32.10
ANSI	D	22×34	559×864	748.0	482580	1.55	64.20
ANSI	E	34×44	864×1118	1496.0	965159	1.29	128.40
ARCH	A	9×12	229×305	108.0	69677	1.33	9.27
ARCH	B	12×18	305×457	216.0	139355	1.50	18.54
ARCH	C	18×24	457×610	432.0	278709	1.33	37.08
ARCH	D	24×36	610×914	864.0	557418	1.50	74.16
ARCH	E	36×48	914×1219	1728.0	1114836	1.33	148.32
ARCH	F	30×42	762×1067	1260.0	812902	1.40	108.15
ISO A (JIS A)	A4	8.3×11.7	210×297	96.7	62370	1.41	8.30
ISO A (JIS A)	A3	11.7×16.5	297×420	193.3	124740	1.41	16.60
ISO A (JIS A)	A2	16.5×23.4	420×594	386.7	249480	1.41	33.19
ISO A (JIS A)	A1	23.4×33.1	594×841	774.3	499554	1.42	66.46
ISO A (JIS A)	A0	33.1×46.8	841×1189	1549.9	999949	1.41	133.03
ISO B	B4	9.8×13.9	250×353	136.8	88250	1.41	11.74
ISO B	B3	13.9×19.7	353×500	273.6	176500	1.42	23.48
ISO B	B2	19.7×27.8	500×707	547.9	353500	1.41	47.03
ISO B	B1	27.8×39.4	707×1000	1095.9	707000	1.41	94.06

## area

Series	Name	Size	Size	Area	Area	Aspect ratio
		inches	mm	in <sup>2</sup>	mm <sup>2</sup>	
ANSI	A	8.5×11	216×279	93.5	60322	1.29
ISO A (JIS A)	A4	8.3×11.7	210×297	96.7	62370	1.41
ARCH	A	9×12	229×305	108.0	69677	1.33
ISO B	B4	9.8×13.9	250×353	136.8	88250	1.41
ANSI	B	11×17	279×432	187.0	120645	1.55
ISO A (JIS A)	A3	11.7×16.5	297×420	193.3	124740	1.41
ARCH	B	12×18	305×457	216.0	139355	1.50
ISO B	B3	13.9×19.7	353×500	273.6	176500	1.42
ANSI	C	17×22	432×559	374.0	241290	1.29
ISO A (JIS A)	A2	16.5×23.4	420×594	386.7	249480	1.41
ARCH	C	18×24	457×610	432.0	278709	1.33
ISO B	B2	19.7×27.8	500×707	547.9	353500	1.41
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ARCH	D	24×36	610×914	864.0	557418	1.50
ISO B	B1	27.8×39.4	707×1000	1095.9	707000	1.41
ARCH	F	30×42	762×1067	1260.0	812902	1.40
ANSI	E	34×44	864×1118	1496.0	965159	1.29
ISO A (JIS A)	A0	33.1×46.8	841×1189	1549.9	999949	1.41
ARCH	E	36×48	914×1219	1728.0	1114836	1.33

# tell me about calibrating RIP settings

Use this feature if you are using media that is not available in your profile list and you wish to fine tune the output results. The Calibrate RIP dialog (available from Setup > Printer > Add Media Profile) lets you adjust two parameters: Ink level and Gray balance.



## ink level

You can adjust the ink level if you are using a printer setup with the RIP CMYK, RIP CMY, RIP CMYKcm.

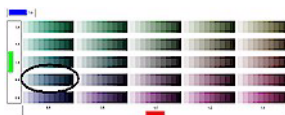
You evaluate the need for reducing the Ink Level from a sheet printed with your printer on the intended media. Your output Ink Level Sheet will be similar to the one shown below:



The sheet's color patches are different grades of complement colors to the printer's basic colors. Printing these colors will require more than one basic printer color, hereby firing a critical amount of ink onto the media. The ink level should only be reduced from 100% if any of these 3x3 patches bleed or the paper waffles too much. The 10th patch on the sheet is a straight black patch. If you lower the ink level, make sure that this black patch does not become lighter when you reprint the sheet. You can continue making adjustments and reprinting evaluation sheets until you are satisfied with the results.

## gray balance

Gray Balance configuration offers the adjustment of gamma values for red, green, and blue. The purpose is to ensure a 100% neutral appearance of printed gray. To assist you in setting the Gray Balance values for your printer, you can print out a set of gray scales with varying combinations of gamma by pressing the Print Gray Balance Sheet button. With the resulting printout you can visually determine the most neutral scale, read the gamma values off the printout and enter these values in the Gray Balance settings. The Gray Balance Sheet is shown below:



The Gray Balance Sheet displays a matrix with the red setting on the bottom axis and the green setting on the left. A single element in the matrix is a row of shades, as they look at the given gamma values. The blue value is fixed to 1.0.

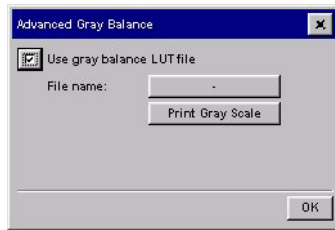
You select the best row of shades in the matrix and use the gamma values to make your settings in the dialog. Start out in the middle of the sheet (1.0, 1.0, 1.0), and step up/down or left/right. If you believe the best values lie between two patches, you are free to enter mid values like 1.1 instead of 1.0 or 1.2. In the example above, if the row that shows the best balance is the one encircled then you would set Gray Balance to red = 0.6, green = 0.8 and blue = 1.0 in the dialog.

If no satisfactory standard Gray Balance can be found, Advanced Gray Balance calibration is necessary.



## tell me about advanced gray balance

This facility is available from Setup > Printer > Add Media Profile > Calibrate RIP > Advanced.



### advanced gray balance

The Advanced Gray Balance calibration is necessary if no satisfactory standard Gray Balance can be found. While the standard Gray Balance adjusts the shape of simple gamma curves, the Advanced Gray Balance can adjust the RGB curves to any shape via the LUT file.

When doing an Advanced Gray Balance calibration, the approach is to twist the red, green, and blue curves iteratively, so that the entire printed gray scale appears neutral to the human eye.



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