



# HP Designjet Accounting Guide

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# Introduction

## HP Accounting Solutions

Some HP Designjet products include advanced accounting features with which you can monitor the usage of your printers, including such statistics as the amount of paper and ink per job and per user. You can either retrieve this information directly from the printer, or instruct the printer to send it to you automatically by e-mail at regular intervals.

The HP Designjets with these features are listed in Appendix A: Supported HP Designjet products.

The free HP Designjet Excel Accounting Report helps to generate accounting spreadsheets, so you can easily invoice or cross-charge departments, projects or clients at periodic intervals for the correct amount of printer usage.

## HP Certified Accounting Solutions from third parties

To track the usage of a wider variety of HP Designjet products, you may want to use one of the HP Certified third-party solutions that offer accounting or cost tracking.

The HP Certification program includes a comprehensive set of compatibility criteria, to make sure that the software takes advantage of the unique capabilities of the HP Designjet printers.

The third-party solutions that have been awarded the status of HP Certified Accounting Solution have demonstrated compatibility with the HP Designjet Accounting SDK (Software Development Kit) and use the advanced accounting features of the supported HP Designjet products.

The following HP Certified Accounting Solutions are currently available:

- » Sepialine Argos ([www.sepialine.com](http://www.sepialine.com))
- » Capella MegaTrack([www.capellatech.com](http://www.capellatech.com)) »
- » Technesis([www.technesis.com](http://www.technesis.com))

Figure 1. HP Designjet accounting workflow

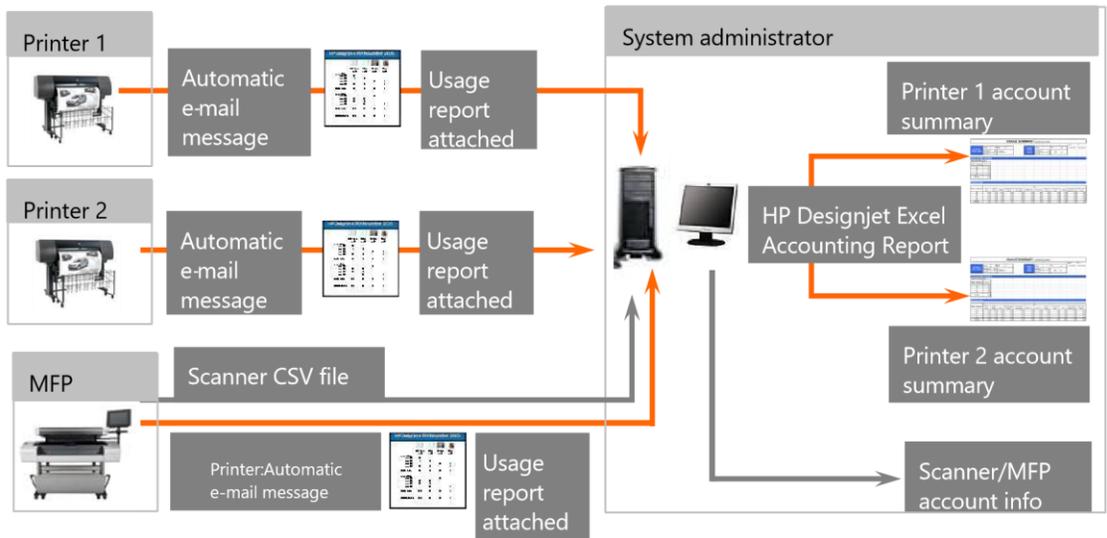
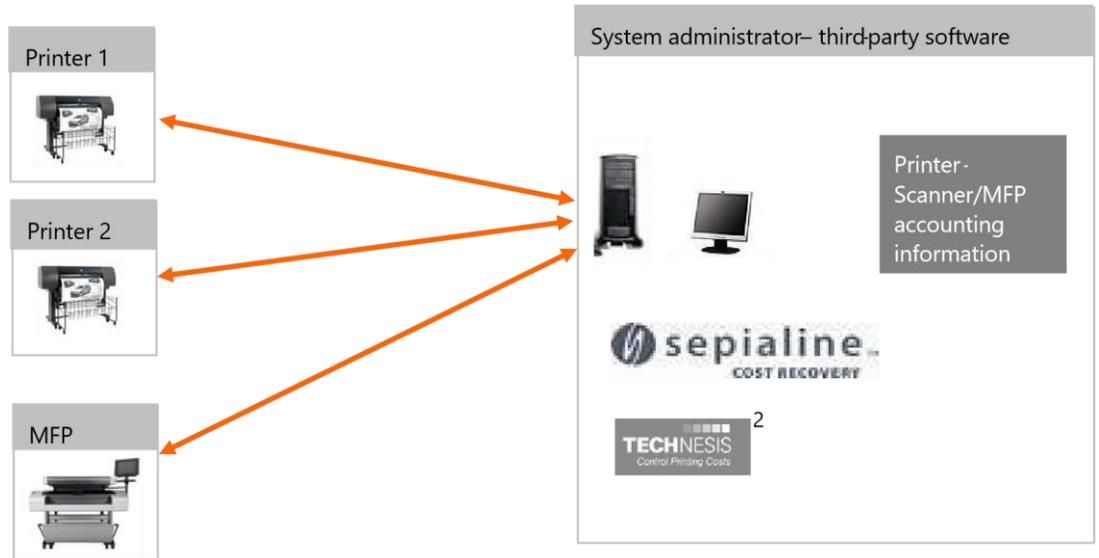


Figure 2. Advanced accounting workflow – thirdparty software



## Efficient monitoring and account generation methods

The accounting features of the supported HP Designjet products enable you to monitor usage and to view accounts quickly and easily. For printers, once you receive an automatically generated e-mail message, you can simply import the attached accounting file into the HP Designjet Excel Accounting Report designed to receive it. This tool, which you can freely download from the HP Designjet Web site, generates accounting spreadsheets that are easy to understand. (Figure 3 shows just one of these spreadsheets.) The procedures to set up printers and scanners to send you e-mail messages, and to import and view accounting files, are described in this guide.

Figure 3. Sample printer usage summary in Excel

USAGE SUMMARY <small>(automatically generated)</small>												
<b>HISTORICAL TOTAL USAGE</b>		Media:	2036.7	m <sup>2</sup>	<b>PERIOD TOTAL USAGE</b>		Media:	808.8	m <sup>2</sup>	From:	To:	
		Ink Mono:	430.0				Ink Mono:	157.3		1/11/2005	30/11/2005	
		Ink CMY:	1568.9	1998.9 ml			Ink CMY:	615.1	772.4 ml			
TOTALS BY PRINT CATEGORY <small>(data from imported jobs)</small>												
Print Category	Total m <sup>2</sup>											
A	563.8											
B	185.3											
C	43.6											
D	16.2											
<b>TOTAL</b>	<b>808.8</b>											
Totals per media												
Print Category	m <sup>2</sup>											
	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	328.51	221.42	15.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	100.58	72.19	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25
C	0.00	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.33	0.00
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.20	0.00
<b>TOTAL</b>	<b>427.07</b>	<b>293.61</b>	<b>26.32</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>58.53</b>	<b>3.25</b>

<sup>2</sup> Partners mentioned are examples only

**Figure 4.** Sample scanner usage summary

Account	StartDate	StartTime	StopDate	StopTime	Scan ft <sup>2</sup>	Print ft <sup>2</sup>	Paper ft <sup>2</sup>	Printer	Media Profile
marketing	27/09/2007	2:52:01	27/09/2007	2:52:13	1,42	2,83	2,90	HP DJ T1100ps	1000
marketing	27/09/2007	2:52:53	27/09/2007	2:53:03	1,36	2,72	2,83	HP DJ T1100ps	1000
marketing	27/09/2007	2:55:15	27/09/2007	2:55:26	1,36	5,43	5,60	HP DJ T1100ps	1000
marketing	27/09/2007	4:33:05	27/09/2007	4:34:24	0,00	22,79	12,48	HP DJ T1100ps	1000
engineering	27/09/2007	5:52:39	27/09/2007	5:52:48	2,78	0,00	0,00	HP DJ T1100ps	1000
-	27/09/2007	5:53:45	27/09/2007	5:53:54	2,70	0,00	0,00	HP DJ T1100ps	1000

**Where:-**

- Account: Account selected on the scanner front panel for the job. If the account field is empty ("-"), no account has been specified.\*
- StartDate, StartTime, StopDate, StopTime give the time and date when the job started and finished.
- Scan ft<sup>2</sup>: Square feet scanned for this job. If the field is 0 then the job is a "print from file" without scanning.
- Print ft<sup>2</sup>: Total size of the job sent to the printer, taking into account the no. copies and scaling factor. E.g. if you are scanning 1 ft<sup>2</sup> and you scale 300% you will get 9 ft<sup>2</sup> sent to the printer. If you are sending several copies to the printer this number will be increased accordingly. If the field is 0, the job is a "scan to file" without printing. If Scan ft<sup>2</sup> and Print ft<sup>2</sup> are both greater than 0 it means that this job is a "copy" job.
- Paper ft<sup>2</sup>: Amount of paper used by the printer. It takes into account the roll size loaded on the printer.
- Printer: Name of the printer used for the job.
- Media profile: Name of the media profile (paper preset) used on the scanner for Designjet 4500, 800, 500, 105x and 5x00 series. For Z series and T series it's the media id.

\*Please note that the number separator is always either a dot (".") or a comma (","), depending on your region. Make sure that your spreadsheet program interprets it correctly. The default value is ",".

## Advanced accounting software

If you manage many HP Designjet products, you may prefer to use more advanced accounting software available from HP software development partners (for example, Sepialine or Technesis) instead of importing usage information into the HP Designjet Excel Accounting Report. These software packages generate a complete overview of the usage level of all printers, scanners and MFPs. To find out more about HP Designjet accounting solutions, visit

[www.hp.com/go/designjet/accounting](http://www.hp.com/go/designjet/accounting).

## Grouping jobs by project or client

Whenever employees perform a scan, print or copy job related to a given project, they can enter that project's account ID, resulting in grouping of costs by project in the usage reports you generate. In this way, costs can be accurately attributed to the different projects. Alternatively, account IDs can be associated with different clients of your company so that costs can be accurately included in invoices sent to the clients.

# HP Designjet accounting features

## Ink usage per print

The supported HP Designjet printers produce various types of output, from line drawings and maps to renderings and photographs. Cost per print varies not just by the amount of paper used but also by paper type and ink coverage. For this reason, the accounting files provided by the printer contain detailed information on each print, including ink volume, paper type and paper area used.

## Ink usage per print type

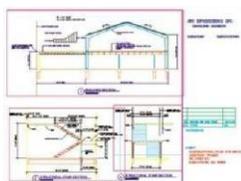
The accounting files also categorize prints into four groups according to the amount of ink used per unit area of paper. Typically, plans and line drawings consume less ink than maps and posters do. Categorization enables you to simplify your accounting procedures. You could, for example, charge one set price for the ink used on low-coverage line drawings, another price for that used on high-coverage line drawings, a third price for maps and renderings, and a fourth for photographs, instead of a different price for every single print produced.

The four categories are labeled A, B, C and D, and ink coverage increases in steps as you go from one category to the next. For example, for the HP Designjet 4xx0 printer series:

- Category „A“ prints are those that use less than 0.5 milliliters of ink per square meter (less than 0.046 milliliters per square foot). Low-coverage color line drawings typically fall into this category.
- Category „B“ prints have ink coverage between 0.5 and 2.0 ml/m<sup>2</sup> (between 0.046 and 0.185 ml/ft<sup>2</sup>). These typically include high-coverage line drawings.
- Category „C“ prints have ink coverage between 2 and 5 ml/m<sup>2</sup> (between 0.185 and 0.464 ml/ft<sup>2</sup>). These typically include maps and low-coverage renderings.
- Category „D“ prints have ink coverage between 5 and 10 ml/m<sup>2</sup> (between 0.464 and 0.929 ml/ft<sup>2</sup>). These typically include photographs.

**Figure 5.** Examples of the four print categories for HP Designjet 4xx0 printer series

**A.** Low-coverage lines:  
less than 0.5 ml/m<sup>2</sup>  
(less than 0.046 ml/ft<sup>2</sup>)



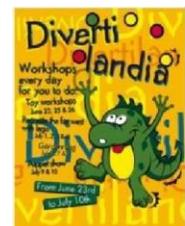
**B.** High-coverage lines:  
0.5 to 2 ml/m<sup>2</sup>  
(0.046 to 0.185 ml/ft<sup>2</sup>)



**C.** Maps and low-coverage renderings:  
2 to 5 ml/m<sup>2</sup>  
(0.185 to 0.464 ml/ft<sup>2</sup>)



**D.** Photographs and full-coverage posters:  
5 to 10 ml/m<sup>2</sup>  
(0.464 to 0.929 ml/ft<sup>2</sup>)



## Costs based on print categories

Two sets of cost results are generated by the HP Designjet Excel Accounting Report, one based on the exact amount of ink used in producing each print, the other based on a fixed quantity of ink per print category. You can choose to use one set of results or the other. Note that the fixed quantity of ink chosen to represent each category is in fact the maximum level for that category.

	ml/m <sup>2</sup>			
	Category A	Category B	Category C	Category D
HP Designjet 4xx0	0.5	2	5	10
HP Designjet Z2100/Z3x00/Z5200	1	4	9	20
HP Designjet Z6100	1	3	8	20
HP Designjet Z6200	0.9	2.5	7	20
HP Designjet T1xx0/Txx0/T2300	0.5	3	5	15
HP Designjet T7100	0.7	2.5	5	20
HP Designjet Z2600/Z5600	1	4	9	20
HP Designjet T15X0/T25X0/T35X0	1	4	9	20

	ml/ft <sup>2</sup>			
	Category A	Category B	Category C	Category D
HP Designjet 4xx0	0.046	0.185	0.464	0.929
HP Designjet Z2100/Z3x00/Z5200	0.093	0.372	0.836	1.858
HP Designjet Z6100	0.093	0.279	0.743	1.858
HP Designjet Z6200	0.084	0.232	0.650	1.858
HP Designjet T1xx0/Txx0/T2300	0.046	0.279	0.465	1.394
HP Designjet T7100	0.065	0.232	0.465	1.858
HP Designjet Z2600/Z5600	0.093	0.372	0.836	1.858
HP Designjet T15X0/T25X0/T35X0	0.093	0.372	0.836	1.858

So, for example in HP Designjet 4500 series, the cost of any print that uses **less than** 0.5 ml/m<sup>2</sup> (less than 0.046 ml/ft<sup>2</sup>) of ink will be calculated as if the print has used **exactly** 0.5 ml/m<sup>2</sup> (0.046 ml/ft<sup>2</sup>) of ink.

## Estimating the number of ink cartridges required

Categorization of prints into the four groups also simplifies estimation of the number of ink cartridges the printers will need. For example, in the HP Designjet 4500 series, with one set of four 400-ml cartridges (1600 ml in total), you can print **at least**:

- 3,200 m<sup>2</sup> (34,400 ft<sup>2</sup>) of low-coverage line drawings or
- 800 m<sup>2</sup> (8,600 ft<sup>2</sup>) of high-coverage line drawings or
- 320 m<sup>2</sup> (3,400 ft<sup>2</sup>) of maps and renderings or
- 160 m<sup>2</sup> (1,700 ft<sup>2</sup>) of photographs

## Scanner usage

The accounting features on your supported HP Designjet scanner or MFP keep track of the amount of scans, copies and prints you perform. If you require detailed accounting information on printing from your MFP, such as ink usage, printing costs etc., we recommend that you use the printer's accounting features.

In the CSV file created by your HP Designjet Scanner or MFP, for each account created, you can determine the usage time of your scanner and the types of jobs performed.

**Scanner start time and stop time**      **Square feet scanned**

Account	StartDate	StartTime	StopDate	StopTime	Scan ft <sup>2</sup>	Print ft <sup>2</sup>	Paper ft <sup>2</sup>	Printer	Media Profile
marketing	27/09/2007	2:52:01	27/09/2007	2:52:13	1,42	2,83	2,90	HP DJ T1100ps	1000

If the type of job is a "print from file" then the "Scan ft<sup>2</sup>" field is 0 and means that the job did not require scanning.

If the type of job is a "scan to file" job then the "Print ft<sup>2</sup>" field is 0 and means that the job did not require the MFP printer.

If the type of job is a "copy" job, then both "Scan ft<sup>2</sup>" and the "Print ft<sup>2</sup>" fields will be greater than 0.

# How to set up your printer

## HP Designjet 4000/4020/4500/4520

To set up a printer to send e-mail messages:

1. Obtain the IP address of the outgoing e-mail server (SMTP). This can be obtained from the customer's IT department; it is needed to enable the printer to send messages using the customer's e-mail server. Also ensure that the outgoing e-mail server is configured to enable relaying of messages from the printer.
2. Open your Web browser and connect to the printer's Embedded Web Server.
3. Click on the **Settings** tab.
4. From the **CONFIGURATION** menu in the left-hand column, select **Date & Time**.

The screenshot shows the 'Date & Time' configuration page in the HP Embedded Web Server. The left-hand navigation menu is expanded to show 'Date & Time' under the 'CONFIGURATION' section. The main content area displays the current device time as 'May 19, 2005 09:08:36 PM'. Below this, there are fields for 'Date' (Month: May, Day: 19, Year: 2005) and 'Time' (Hour: 9, Minute: 06, Second: 36, AM/PM: PM). A 'Time zone' dropdown menu is set to '(GMT+1:00) - Europe/Madrid'. At the bottom right, there are 'Apply' and 'Cancel' buttons.

5. Ensure that the printer's date and time have been set correctly.
6. From the **ALERTS** menu, select **E-mail server**.

The screenshot shows the 'E-mail server' configuration page in the HP Embedded Web Server. The left-hand navigation menu is expanded to show 'E-mail server' under the 'ALERTS' section. The main content area has a blue header 'Outgoing e-mail'. Below this, there are fields for 'SMTP server' (IP address: 15 . 180 . 0 . 241) and 'Printer e-mail address' (gwpty@bpo.hp.com). At the bottom right, there are 'Apply' and 'Cancel' buttons.

7. For **SMTP server**, enter the IP address of the outgoing mail server (SMTP) as provided by the IT department.
8. For **Printer e-mail address**, enter a name to help identify the printer. It must be in the form of an email address, e.g. [T1100CADdept@customer.com](mailto:T1100CADdept@customer.com).
9. From the **CONFIGURATION** menu, select **Device setup**.

10. In the **Accounting** section, if you select **Require account ID**, then every time a user sends a print job to the printer, he or she must provide an account ID (for example, an ID corresponding to his or her department or to a specific project or client).

- With this option selected, if a user does **not** provide an account ID, the printer will hold the unidentified job in the queue without printing it until an account ID is provided.
- With this option unselected, the printer will print all jobs whether or not they have an account ID.

11. Select **Send accounting files to:** and enter one or more e-mail addresses to which you want the accounting information sent.

12. Enter the frequency at which you want the information sent, choosing a specific number of days or prints.

**Note:** Entering a lower number of days or prints means you get a better insight into how the printer is being used, but this involves more work on your part as you have to import accounting files more often. A weekly update may provide a good balance between insight and work level.

13. Set **Exclude personal information from accounting e-mail** to **On**, to be sure that the accounting emails will not contain personal information (user name, job name, account ID will be left blank in the accounting file sent by email). If set to **Off** this information will not be excluded.

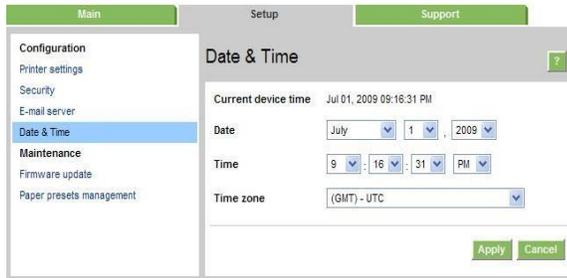
- For the 4000/4500 this requires firmware 14.1.1.X (released Aug 2009) or later.
- If you have an HP Designjet 4020/4520 series printer and would like to use these accounting features in future, please contact the HP channel manager for your country.

14. Click **Apply** to apply changes.

## HP Designjet T1100/T1120/T770/T1200/T790/T1300/ Z2100/Z3200/Z5200/Z6100

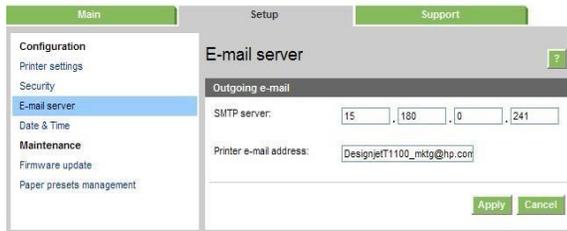
To set up a printer to send e-mail messages:

1. Obtain the IP address of the outgoing e-mail server (SMTP) from the IT department of the customer site; it is needed to enable the printer to send messages using the customer's e-mail server. Also ensure that the outgoing e-mail server is configured to enable relaying of messages from the printer.
2. Open your Web browser and connect to the printer's Embedded Web Server.
3. Click on the **Setup** tab.
4. From the **Configuration** menu in the left-hand column, select **Date & Time**.



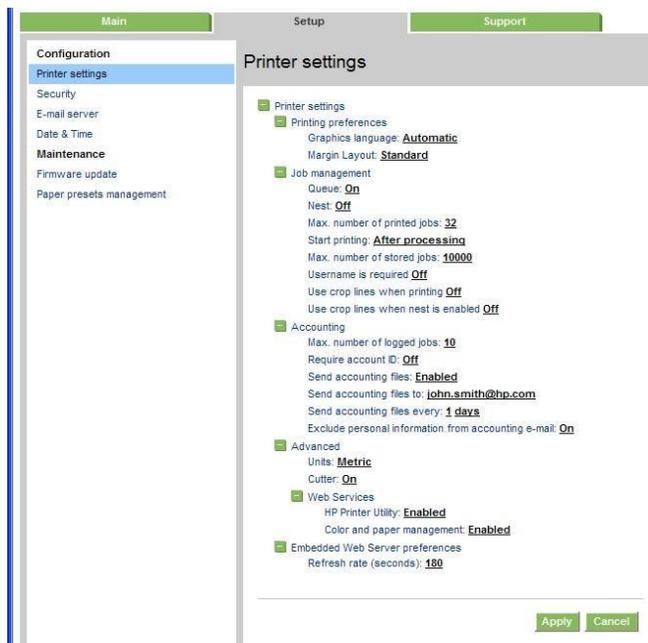
The screenshot shows the printer's Embedded Web Server interface. The 'Setup' tab is selected. In the left-hand 'Configuration' menu, 'Date & Time' is highlighted. The main area displays the 'Date & Time' configuration page. It shows the current device time as 'Jul 01, 2009 09:16:31 PM'. Below this, there are dropdown menus for 'Date' (July, 1, 2009), 'Time' (9:16:31 PM), and 'Time zone' (GMT - UTC). 'Apply' and 'Cancel' buttons are at the bottom right.

5. Ensure that the printer's date and time have been set correctly.
6. From the **Configuration** menu, select **E-mail server**.



The screenshot shows the printer's Embedded Web Server interface. The 'Setup' tab is selected. In the left-hand 'Configuration' menu, 'E-mail server' is highlighted. The main area displays the 'E-mail server' configuration page. It shows the 'Outgoing e-mail' section with fields for 'SMTP server' (15.180.0.241) and 'Printer e-mail address' (DesignjetT1100\_mkty@hp.com). 'Apply' and 'Cancel' buttons are at the bottom right.

7. For **SMTP server**, enter the IP address of the outgoing mail server (SMTP) as provided by the IT department.
8. For **Printer e-mail address**, enter a name to help identify the printer. It must be in the form of an e-mail address, e.g. [T1100CADdept@customer.com](mailto:T1100CADdept@customer.com).
9. From the **Configuration** menu, select **Printer Settings**.



10. In the **Accounting** section, if you set **Require account ID** to **On**, then every time a user sends a print job to the printer, he or she must provide an account ID (for example, an ID corresponding to his or her department or to a specific project or client).

– With this option selected, if a user does **not** provide an account ID, the printer will hold the unidentified job in the queue without printing it until an account ID is provided.

– With this option unselected, the printer will print all jobs whether or not they have an account ID.

11. Select **Send accounting files:** and set it to **Enabled**.

12. Select **Send accounting files to:** and enter the e-mail address (or addresses) to which you want the accounting information sent.

13. Enter the frequency at which you want the information sent, choosing a specific number of days or prints.

**Note:** Entering a lower number of days or prints means you get a better insight into how the printer is being used, but this involves more work on your part as you have to import accounting files more often. A weekly update may provide a good balance between insight and work level.

14. Set **Exclude personal information from accounting e-mail** to **On**, to be sure that the accounting emails will not contain personal information (user name, job name, account ID will be left blank in the accounting file sent by email). If set to **Off** this information will not be excluded.

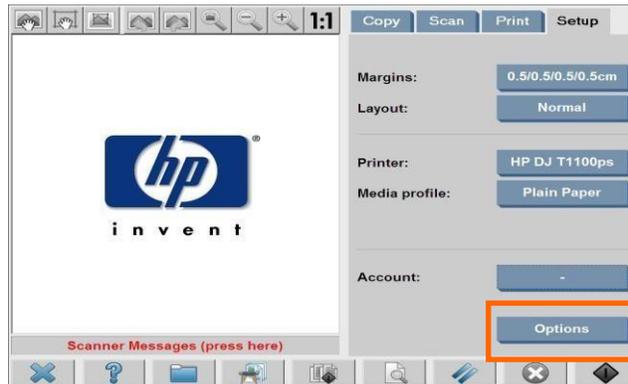
- For T1100 this requires firmware [9.0.0.2](#) (released July 2009) or later.
- For T1120 this requires firmware [8.0.0.3](#) (released Jun 2009) or later.
- For Z6100 this requires firmware [10](#) (to be released Dec 2009) or later.
- This option is not available for Z2100/Z3200/Z5200.

15. Click **Apply** to apply changes.

## How to set up your scanner

To set up a scanner to track accounting data by account:

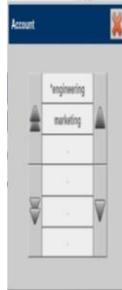
1. Go to the Setup tab and then click on the "Account" button.



2. Then click on the  icon and in the accounting dialog box add accounts. For instance, in the example below, "engineering".



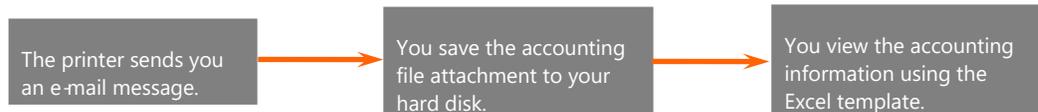
3. From now on, every time you use the scanner to make a copy, a scan or a print, the system will request the account to be used.



## How to use the HP Designjet Excel Accounting Report

The following figure shows the basic steps involved in using the printer accounting features with the HP Designjet Excel Accounting Report. More detailed instructions are provided in the sections below. The reports do not apply to scanner accounting. All of the scanner accounting information is stored on the hard drive as a CSV file and can be accessed through a URL ([http://your\\_ip\\_address/accounting/Total.csv](http://your_ip_address/accounting/Total.csv)). The CSV file can be imported into any spreadsheet software, such as Microsoft Excel.

**Figure 5.**Printer accounting workflow



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## Software requirements

The HP Designjet Excel Accounting Report, enabling you to view accounting information from the supported HP Designjet printers, requires the following software:

- Microsoft Windows 2000, XP or Vista
- Microsoft Office 2003 or 2007
- The macro security level in Microsoft Excel set to **Medium** or **Low**  
(If you do not know how to set the macro security level, see *Appendix B: Setting the Excel macro security level to Medium or Low*, at the end of this guide.)

**Note:** The HP Designjet Excel Accounting Report is **not** compatible with Mac OS.

## Downloading the HP Designjet Excel Accounting Report

You can download the HP Designjet Excel Accounting Report without charge from [www.hp.com/go/designjet/accounting](http://www.hp.com/go/designjet/accounting).

## Saving an accounting file to your hard disk

The printer sends you an accounting file in XML format, zipped and attached to an e-mail message.

1. If this is the first time you have received an e-mail message from this printer, do the following:

Create a new folder on your hard disk and give it a name identifying the printer (for example, *DJ4500\_building2*).

Make a copy of the HP Designjet Excel Accounting Report that you downloaded from the HP website and save it to the new folder, giving it a name, e.g. *DJ4500\_building2.xls*.

2. Unzip the accounting file and save it to the printer's folder, renaming it. It could indicate the printer and the date of the e-mail message (*DJ4500\_building2\_061031.xml*).

**Note:** It is important to give the accounting file a meaningful name because all files are sent using the same name: *accounting.xml*.

## Importing an accounting file into HP Designjet Excel Accounting Report

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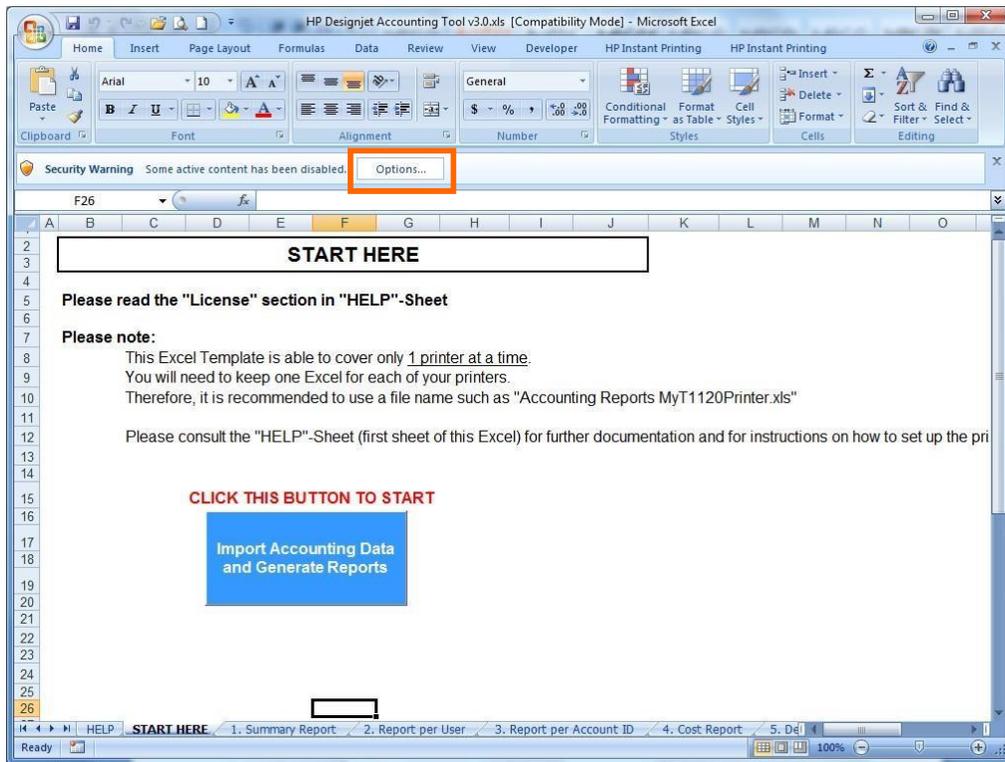
### Caution

Obey the following rules when you open the HP Designjet Excel Accounting Report; otherwise you risk corrupting its report generation capabilities.

- Do not move cells.
  - Do not delete or add rows.
  - Do not delete or add columns.
  - Do not change the order of the sheets.
-

To import the accounting file into the HP Designjet Excel Accounting Report, do the following:

1. Open the HP Designjet Excel Accounting Report located in the printer's folder.
2. If you are using Microsoft Office 2007, you may see a security warning bar as follows. Click the **Options** button and choose "**Trust all documents from this publisher**" to avoid this warning in the future.

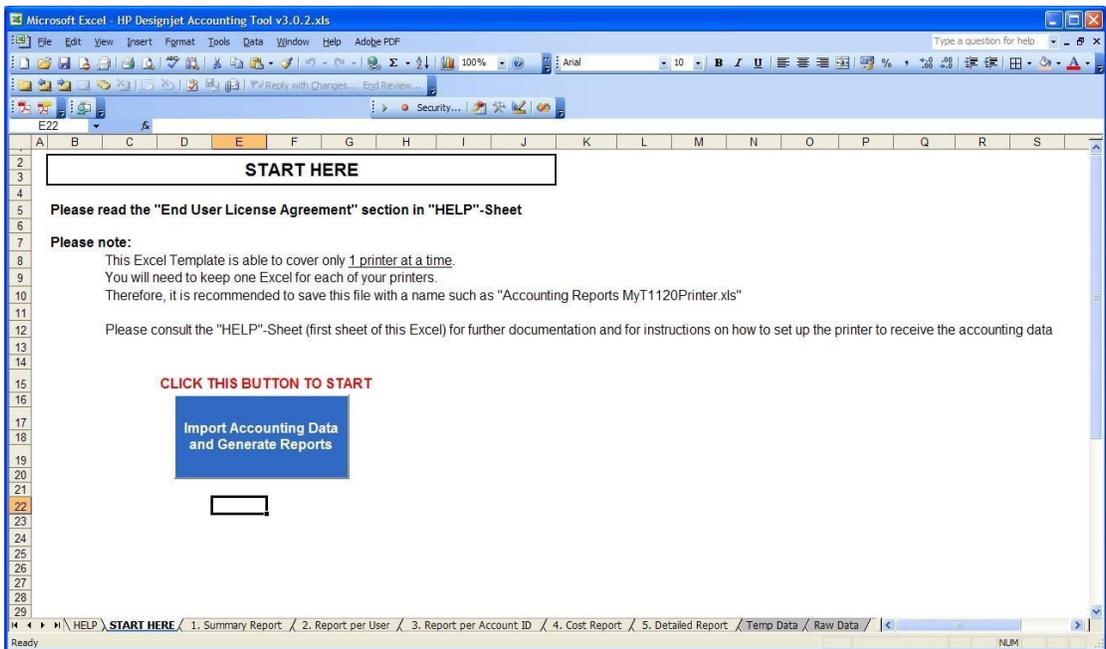


If you are using Microsoft Office 2003, you may see a security warning window as follows.

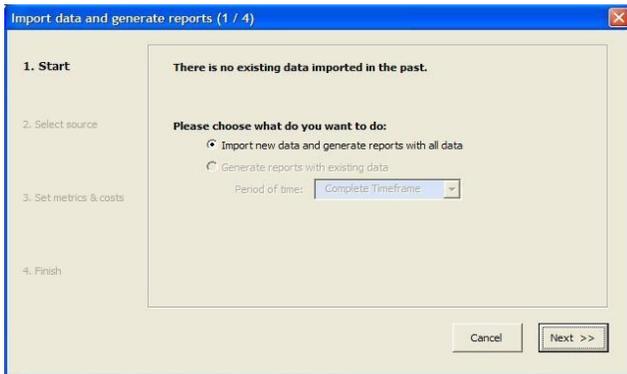
Choose **Enable Macros**



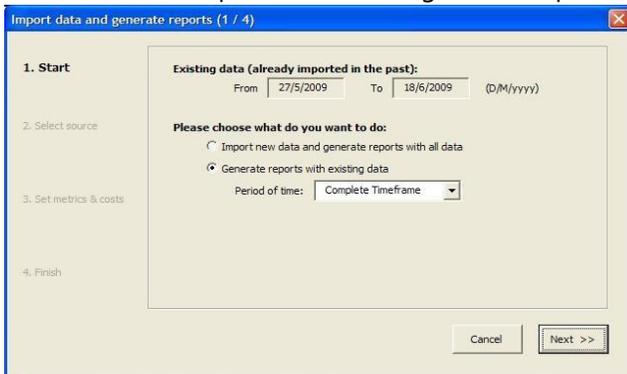
3. The file opens; it displays introductory information and a start button.



4. After clicking the blue button, you will see the following window if you have never before imported data for this printer.



If data have previously been imported for this printer, you will see the following window. Choose whether to import new data or generate reports from existing data.



5. You will be asked to select the source only if you chose to import new data in the previous step. You may wish to delete the old data when starting with a new printer or a new customer.

1. Start

2. Select source

3. Set metrics & costs

4. Finish

Import file from printer accounting email:

File: C:\Documents and Settings\carolcar\My Documents\\_Main\

Import data directly from printer:

IP:

Start date: 1/1/2009 D/M/yyyy

End date: 3/9/2009 D/M/yyyy

Delete all previous accounting data before importing new data

6. You can choose the units of measurement and change cost information, if you wish.

1. Start

2. Select source

3. Set metrics & costs

4. Finish

Choose units of measurement

Metric units (m<sup>2</sup>, mm)  Imperial units (ft<sup>2</sup>, inch)

(Optional) Cost information

If you decide to change cost information, click the corresponding button, choose the printer family if necessary (after the first time, it will be remembered), and fill in the costs.

1. Start

2. Select source

3. Set metrics & costs

4. Finish

Choose units of measurement

Metric units (m<sup>2</sup>, mm)  Imperial units (ft<sup>2</sup>, inch)

(Optional) Cost information

Choose printer family: HP DesignJet T1100/T1120/T720/T1200

Currency

€  \$  Other:

Ink costs (€/ml)

Gray:  Photo Black:

Matte Black:  Yellow:

Magenta:  Cyan:

Media Costs (€/m<sup>2</sup>)

HP Coated Paper:

HP Universal Bond Paper:

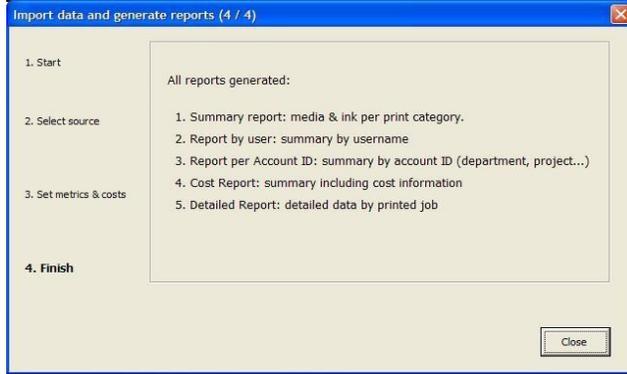
Photo Gloss Paper:

Plain Paper:

(blank):

If you click **Finish**, no reports will be generated, but the imported data won't be removed: it will be kept in "Raw data" so you can generate reports in the future. If you want to generate reports now, click **Generate Reports**. Depending on the amount of imported data, it can take several minutes.

7. When finished, click **Close**.



## Reading usage reports and cost results in HP Designjet Excel Accounting Report

### Summary Report tab

USAGE SUMMARY (automatically generated)												
<b>HISTORICAL TOTAL USAGE</b>		Media:	2036.7	m <sup>2</sup>	<b>PERIOD TOTAL USAGE</b>		Media:	808.8	m <sup>2</sup>	From:	To:	
		Ink Mono:	430.0	1998.9	ml			Ink Mono:	157.3	1/11/2005	30/11/2005	
		Ink CMY:	1588.9		ml			Ink CMY:	615.1			
<b>TOTALS BY PRINT CATEGORY</b> (data from imported jobs)												
<b>Print Category</b>	<b>Total m<sup>2</sup></b>											
A	563.8											
B	185.3											
C	43.6											
D	16.2											
<b>TOTAL</b>	<b>808.8</b>											
<b>Totals per media</b>												
<b>Print Category</b>	m <sup>2</sup>											
	Plain / Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	326.51	221.42	15.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	100.56	72.19	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25
C	0.00	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.33	0.00
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.20	0.00
<b>TOTAL</b>	<b>427.07</b>	<b>293.61</b>	<b>26.32</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>58.53</b>	<b>3.25</b>

In HP Designjet T7100 color printer there is a new category called "A mono" which tracks all "A" category drawings that have been printed in "mono", so all "A" color drawings are tracked in "A" category. Other categories (B, C and D) do not split drawings in color or mono. This category is not used in any other printer model (neither HP Designjet T7100 monochrome, where obviously all prints are printed in mono).

## Color/mono split in Summary Report tab

Total mono (*)				From	To
m <sup>2</sup>					
Print Category	HP Coated Paper	Photo Gloss Paper	(blank)		
A	1.95	0.00	0.00		
B	0.47	0.00	0.00		
C	0.00	0.00	0.00		
D	0.00	0.00	0.00		
<b>TOTAL</b>	<b>2.41</b>	<b>0.00</b>	<b>0.00</b>		

Totals color (*)				From	To
m <sup>2</sup>					
Print Category	HP Coated Paper	Photo Gloss Paper	(blank)		
A	0.58	0.00	0.00		
B	5.19	2.37	0.00		
C	3.11	0.87	0.00		
D	0.81	0.00	0.00		
<b>TOTAL</b>	<b>9.68</b>	<b>3.24</b>	<b>0.00</b>		

(\*) Totals split by mono/color are only reliable in Designjet T1x0 and 4xx0

The color/mono split is reliable only when you have chosen in the driver to use black ink only. In HP Designjet 4000/4500 printers, this can be done by selecting, in the driver's Color tab, the option Print in Grayscale > Black Ink Only. When choosing Grayscale > High quality, the printer uses color inks to create the grayscale, so the Excel spreadsheet will report it as a color print.

In HP Designjet T1100/T770/T1200/T790/T1300/T2300, you can choose only Grayscale, but it is correct because the printer will use gray and black inks to print, so the Excel spreadsheet will report it correctly.

In HP Designjet Z printers there is no way to know whether a print has been printed in monochrome or color, so these color/mono split tables are not reliable.

## Report per user tab

USERS SUMMARY (automatically generated)													
													From 1/11/2005 to 30/11/2005
Username: john		← This sheet shows printer usage per individual user											
Ink Coverage Category	m <sup>2</sup>												
	TOTAL	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	14.76	2.43	0.00	12.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	2.08	0.65	0.59	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51	0.00
D	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00
<b>TOTAL</b>	<b>20.93</b>	<b>3.07</b>	<b>0.59</b>	<b>13.19</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.08</b>	<b>0.00</b>
Username: admin													
Ink Coverage Category	m <sup>2</sup>												
	TOTAL	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.96	0.50	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	0.00
D	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.20	0.00
<b>TOTAL</b>	<b>10.10</b>	<b>3.00</b>	<b>0.00</b>	<b>0.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.64</b>	<b>0.00</b>

To simplify accounting procedures, you may decide to set a fixed price for ink in each of the four categories, „A“ to „D“. As well as providing the real cost of ink used in producing the prints, the Excel spreadsheet also generates totals based on a fixed cost of ink per category. It does this by assuming that the category's upper limit of ink is reached by all prints in the category.

## Report per Account ID tab

ACCOUNTS SUMMARY <small>(automatically generated)</small>													
												<i>From 1/11/2005 to 30/11/2005</i>	
Account ID: Project14		This sheet shows printer usage per account ID (for example per project or department)											
Ink Coverage Category	m <sup>2</sup>												
	TOTAL	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	11.00	0.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56	0.00
D	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00
<b>TOTAL</b>	<b>14.37</b>	<b>0.00</b>	<b>0.00</b>	<b>11.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.37</b>	<b>0.00</b>
Account ID: ABF456													

## Cost Report tab

COST RESULTS <small>(automatically generated)</small>													
<b>CATEGORIES INFO</b>													
Print Category	ml/m <sup>2</sup>	ml/ft <sup>2</sup>	max ink cost (\$/m <sup>2</sup> )	max ink cost (\$/ft <sup>2</sup> )									
A	0 - 0.5	0 - 0.046	0.20	0.02									
B	0.5 - 2.0	0.046 - 0.185	0.78	0.07									
C	2.0 - 5.0	0.185 - 0.464	1.95	0.18									
D	5.0 - 10.0	0.464 - 0.923	3.90	0.36									
Totals per media <b>(real cost: ink + media)</b>													
Print Category	TOTAL	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	620.15	359.16	243.56	17.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	240.83	130.73	93.85	12.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.23
C	83.30	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.20	0.00
D	48.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.60	0.00
<b>TOTAL</b>	<b>992.87</b>	<b>489.89</b>	<b>337.41</b>	<b>31.55</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>129.80</b>	<b>4.23</b>
Totals per media <b>(max based on categories: ink + media)</b>													
Print Category	TOTAL	Plain/Bond	Bright White	Coated	Heavyweight Coated	Super Heavy Plus Matte	Matte Film	Clear Film	Natural Tracing	Translucent Bond	Vellum	Productivity Photo Gloss	High-Gloss Photo
A	681.97	394.90	267.91	19.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B	266.95	143.26	104.60	14.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.65
C	99.96	0.00	0.00	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.44	0.00
D	53.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.46	0.00
<b>TOTAL</b>	<b>1102.34</b>	<b>538.16</b>	<b>372.51</b>	<b>36.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>150.90</b>	<b>4.65</b>

### Example

For HP Designjet 4500 printers, Category „A“ includes all prints that use less than 0.5 ml/m<sup>2</sup> (less than 0.046 ml/ft<sup>2</sup>) of ink. In the result set based on categories, all prints in this category are assumed to have used exactly 0.5 ml/m<sup>2</sup> (0.046 ml/ft<sup>2</sup>) of ink. With this assumption, the cost of ink for any print in category „A“ is fixed: approximately \$0.20/m<sup>2</sup> (\$0.02/ft<sup>2</sup>).

As well as ink costs, there are paper costs (combined with ink in the tables above) and printhead costs (which add about 20 percent to the ink costs).

## Detailed Report tab

The spreadsheet contains a list of all print jobs imported from the XML file(s). This spreadsheet includes the following information for each print job:

1. User name
2. Account ID, if any
3. UUID: Job ID
4. Job name
5. Ink info:
  - Print type: Mono/color (only applicable to Designjet T1100/T1120/T1200/T770/T1300/T790 and 4000/4020/4500/4520, and if setting "Black inks only" in the driver).
  - Ink  $\mu$ l
  - Print category (A/B/C/D as explained in page 5)
6. Media info:
  - Name (paper name)
  - $m^2/ft^2$  (total paper used, not only image size)
7. Image size:
  - Width
  - Length
8. Pages: number of printed pages
9. Copies: number of copies
10. Print quality
11. Job status:
  - Completed
  - Cancelled
12. Printing time: duration of printing
13. Timestamp: date and time of submittal
14. Printing timestamp: date and time of printing
15. Source: driver/EWS/scanner
16. Cost

## Other spreadsheets contained in the HP Designjet Excel Accounting Report

The Temp Data and Raw Data spreadsheets should not be edited. They are reference sheets with temporary data to create all reports. Changing any part of them may cause a malfunction.

## Changing print category definitions

Although it is not recommended, it is possible for you to override the printer's four default print categories by creating your own categories (with different ink usage ranges) on the **Raw Data** sheet of the Excel template. To do so you need a good understanding of Excel macros.

## Appendix A: Supported HP Designjet products

These accounting features are supported on the following HP Designjet products:

- HP Designjet 4000<sup>1</sup>/4020/4500/4520 series
- HP Designjet T1100<sup>2</sup>/T1120/ T770/T1200/T2300/T790/T1300 series
- HP Designjet T7100 series
- HP Designjet Z2100<sup>3</sup>/Z3200<sup>4</sup>/Z5200 series
- HP Designjet Z6100<sup>5</sup>/Z6200 series
- HP Designjet Z2600/Z5600 series
- HP Designjet T930/ T1500/T1530/ T2500/T2530/ T3500 series

However, summary tables split by color/mono should be used only with HP Designjet 4xx0 and T2300/T1xx0/T770 printers.

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<sup>1</sup> The HP Designjet 4000 printer is supported by firmware version GW\_8.1.1.1 and above.

<sup>2</sup> Firmware release TJ6-TAJ6\_8.0.0.3 or above is required in order to calculate the print categories usage correctly in the HP Designjet T1100.

<sup>3</sup> Firmware release TR8-9.x or above is required in order to calculate the print categories usage correctly in the HP Designjet Z2100.

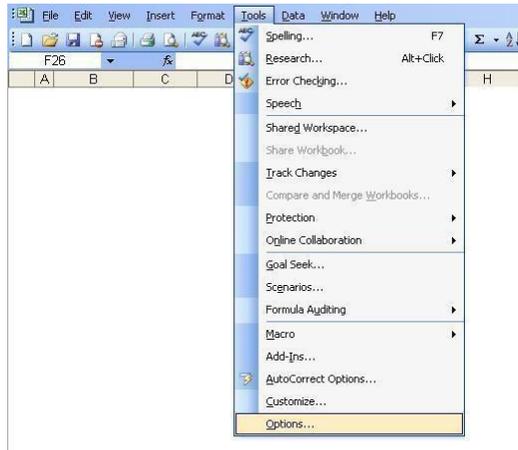
<sup>4</sup> A post-intro firmware release for the HP Designjet Z3200 is required to calculate the print categories usage correctly.

<sup>5</sup> Firmware release GG-GG\_9.0.0.4 or above is required in order to calculate the print categories usage correctly in the HP Designjet Z6100.

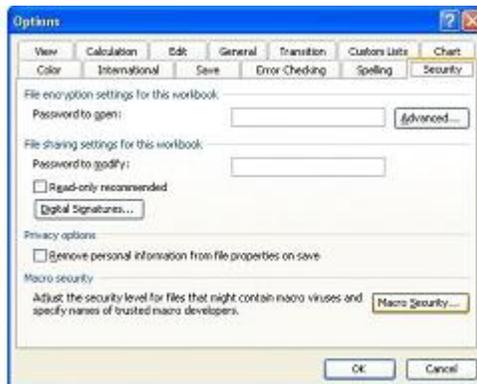
# Appendix B: Setting the Excel macro security level to Medium or Low

## Office 2003

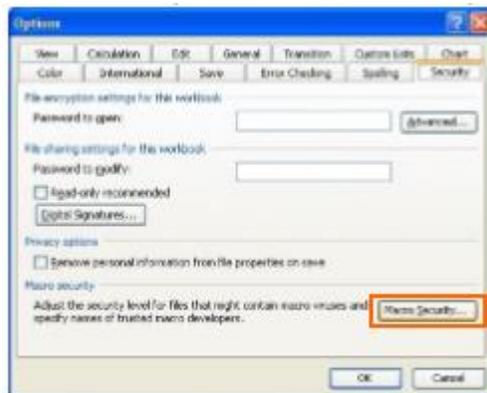
1. Open any Microsoft Excel file or create a new one.
2. From the Excel menu bar, select **Tools > Options:**



3. In the **Options** dialog box, click the **Security** tab:



4. On the **Security** tab, click **Macro Security**



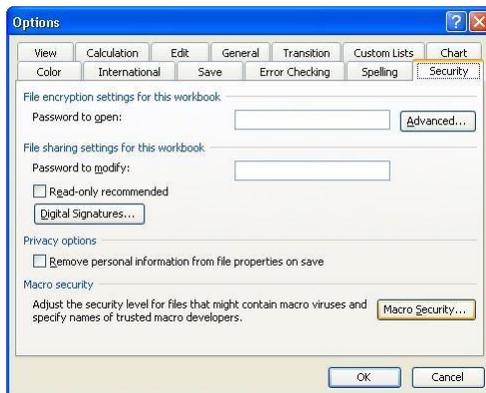
5. In the **Security** dialog box, click the **Security level** tab:



6. Choose **Medium** or **Low** security level, and click **OK**:



7. On the **Security** tab of the **Options** dialog box, click **OK**:

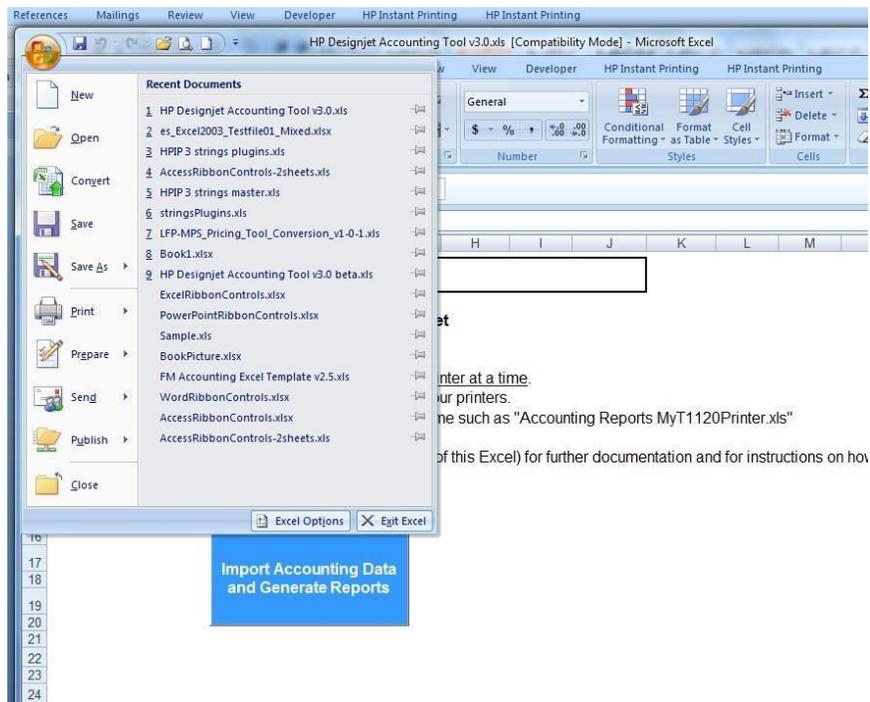


8. Close Microsoft Excel.

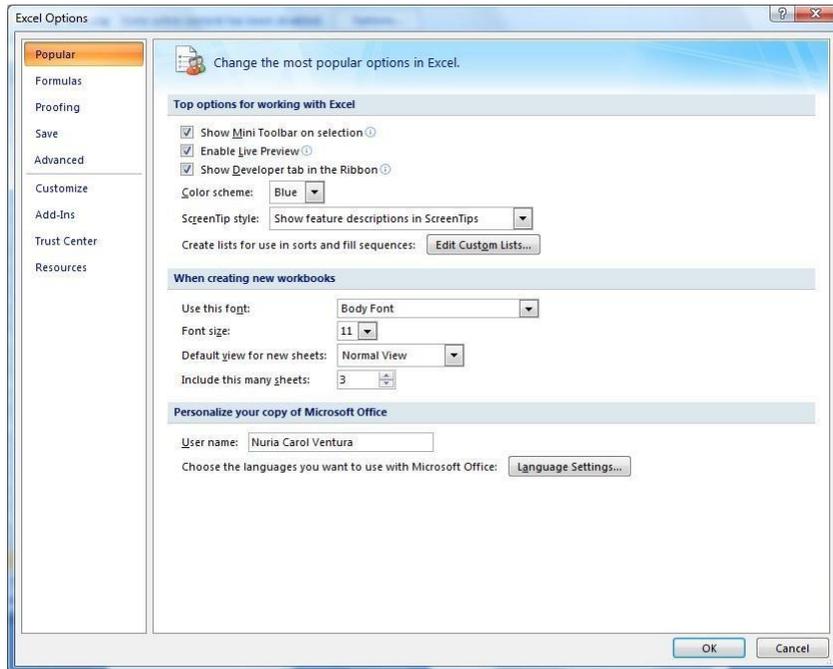
*The settings take effect the next time you open Microsoft Excel.*

## Office 2007

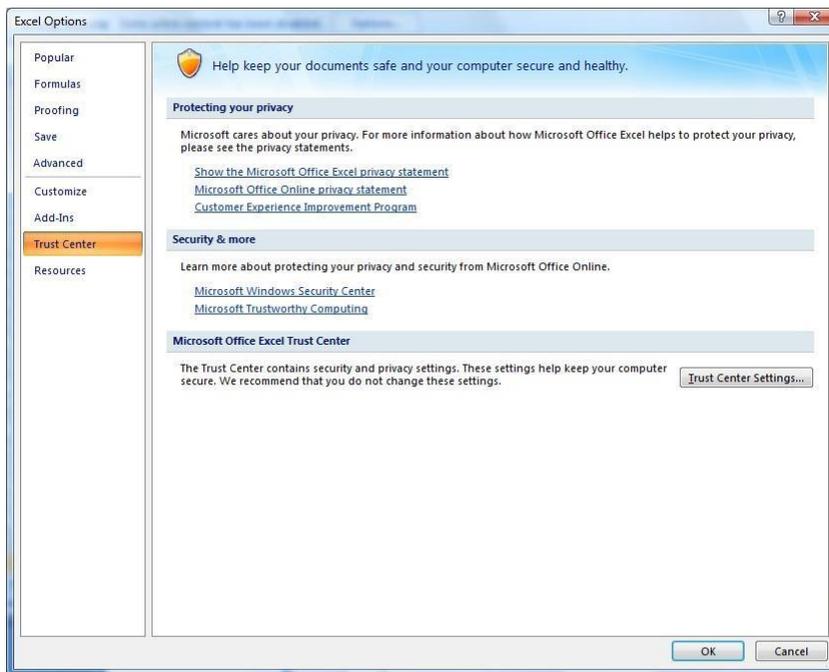
Click the **Microsoft Office Button**.



Click **Excel Options**.



In the **Trust Center** category, click **Trust Center Settings** button.

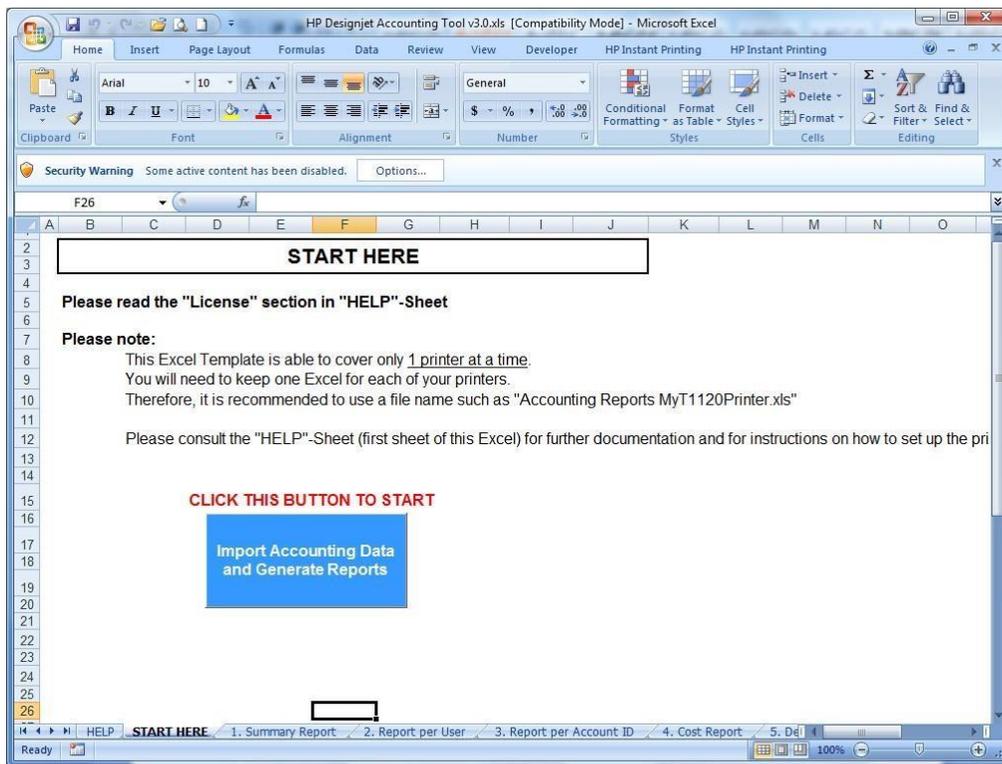


Select the **Macro Settings** category.



Choose **Disable all macros except digitally signed macros**.

When opening the file, click the '**Options...**' button in the **Security Warning** bar.



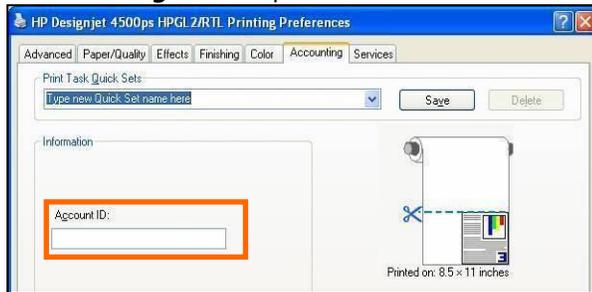
Choose "Trust all documents from this publisher" to avoid this warning in the future.



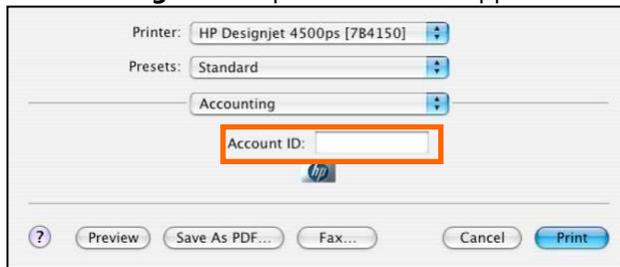
## Appendix C: How users can provide account IDs

When sending a job to be printed, users can enter an account ID using the printer driver interface or the Embedded Web Server interface. Account IDs are useful if you want to know the extent to which different departments are using the printers or if you want to incorporate printing costs into the invoices sent to clients.

- **Accounting** tab of a printer driver in Microsoft Windows®:



- **Accounting** tab of a printer driver in Apple® Mac OS:



- **Job settings** tab of the job submittal page in the Embedded Web Server:



Any account ID will be accepted by the printer. However, if a user leaves this field blank when the **Require account ID** option has been selected in the **Device settings** of the Embedded Web Server, the printer will hold the unidentified job in the queue without printing it until an account ID is provided. (See step 10 of the procedure „How to set up your printer‘, earlier in this guide.)

For more information on HP Designjet products  
[www.hp.com/go/designjet](http://www.hp.com/go/designjet)

For more information on HP Designjet  
accounting  
[www.hp.com/go/designjet/accounting](http://www.hp.com/go/designjet/accounting)



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