

## **SPLIT Index**

The Index contains a list of all main help topics available for the SPLIT program.

For information on how to use Help, press **F1** or choose **Using Help** from the Help menu.

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## Licensing, registration and evaluation information

SPLIT is distributed as "**Shareware**" or "User Supported Software" and is fully copyrighted. If you register the program you will receive these benefits:

- 1)** The latest version of SPLIT.
- 2)** A printed user's manual.
- 3)** A printed technical reference which describes all plotter instructions supported by SPLIT.
- 4)** An end to the nag screens and opening banners.
- 5)** Deep discounts on the next major versions.

These are three type of license:

- 1)** A single user license permits a single user to use SPLIT only on a single computer at a time.
- 2)** A multi user license permits to simultaneously use more SPLIT copies on more computers at a time according to the licensed number of users. The unlimited license (with no limitation on simultaneous use) is also available and it is equal to the licensing of **50** users.
- 3)** A multisystem site license is designated especially for use on computer networks with a dedicated server from which the network users can run SPLIT on workstations and so it permits simultaneous use on one network. Only one copy of the SPLIT executable file can exist in whole network and must be situated on the dedicated server. Generally the multisystem site license can be used on any multiuser environment as long as only one copy of the SPLIT executable file exists in that environment. However note that this license cannot be used on peer-to-peer networks (use multi user license for that purpose). You can also order a mutisystem license for more sites (servers). The unlimited multisystem site license (with no limitation to number of sites) is also available and it is equal to the licensing of **20** sites.

The single user registration fee for SPLIT for Windows is **\$65.00** (US funds). The multisystem site fee for SPLIT is **\$140.00**. Users outside of Europe should include an additional **\$5.00** for international airmail.

Since the SPLIT program is always distributed with a DLL library (libraries) adapted for a certain plotter type, do not forget to mention the plotter type with which you want to use the SPLIT program. A list of plotters you can choose from is given in the PLOTTERS.TXT file. In this file there are also given the parameters of these plotters together with a list of supported instructions. It makes possible to choose a suitable plotter type even if your plotter is not listed (most plotters are compatible with some plotter from the list). Of course, you can order SPLIT program with more DLL libraries for different plotter types. In this case the single user registration fee for any further DLL library is \$20.00 (+ \$5.00 outside Europe) and the multisystem site fee is \$40.00 (+ \$5.00 outside Europe). This principle is also valid for an upgrade. If you have registered at least one SPLIT program version at the full price of \$65.00 (\$140.00), now and in the future only \$20.00 (\$40.00) is to be paid for all other versions.

Special offer:

Registered users of the MS-DOS version of the SPLIT program can order the MS-Windows version for **\$45.00** only (**\$95.00** for the multisystem site license) (+ \$5.00 outside Europe). In this case fill out your serial number in order form and mark it as 'upgrade from DOS version'.

Note: The latest MS-DOS version of the SPLIT program is available on all SIMTEL20 archives in <MSDOS.GRAPHICS> directory as SPLTXXX.ZIP file (recently SPLT251.ZIP).

The price for multi user license is a corresponding multiple of the single user registration fee reduced by a graduated discount. The discount is graduated according to the number of users:

Number of users	Discount [percent]
2 - 10	20 %
11 - 20	25 %
21 - 30	30 %
31 - 40	35 %
41 - 50	40 %

The number of 50 or more users equals to the unlimited license.

The price for more multisystem sites is a corresponding multiple of one multisystem site license price reduced by a graduated discount. The discount is graduated according to the number of sites:

Number of sites	Discount [percent]
2 - 10	20 %
11 - 20	25 %

The number of 20 or more sites equals to the unlimited license.

If you will order a multi license, you will normally receive only one master copy of the SPLOT files on diskette and only one printed manual for each ordered plotter type along with permission to make its own copies of diskettes and manual. The number of these copies is limited by the number of licensed users/sites. If you want to receive a diskette or manual with each ordered copy, you should pay additional **\$1.00** (**\$2.00** outside Europe) per diskette or **\$3.00** (**\$5.00** outside Europe) per manual (includes diskette already). The number of diskettes/manuals for which you should pay is determined by the following expression:

$$n = (nu-1)*np$$

where  $nu$  is number of users/sites and  $np$  is number of ordered plotter types.

To calculate correct registration price, please use the [Calculate SPLOT registration fee](#) dialog, which will help you namely for multi license order.

Author can accept payment in these four ways:

- 1)** In cash (money enclosed) - this is the most quick method, but at your risk.
- 2)** Credit card - **MasterCard, VISA** and **American Express** are accepted. Please, fill out carefully the credit card information in the [Registration / Order Form](#).
- 3)** Bank or travelers cheque enclosed - please make a cheque payable in US funds.
- 4)** Author can send to you first an invoice with an account number. Then you will receive the SPLOT program as soon as your payment will be done to this account number.

To register, please use the [Registration / Order Form](#) supplied with this package (also provided in the file ORDER.TXT). Please send the completed form along with a payment to:

Alexandr Novy  
Havlickova 2209  
390 01 TABOR  
Czech Republic

NOTE: Czech users of SPLOT should contact a Czech distributor:

PESKA & BRTNA Computer Service  
Krakovska 2805

390 05 Tabor  
Czech Republic  
Tel./Fax 0042-361-262138

or

SOFTECH  
P.O. Box 69  
323 00 Plzen 23  
Czech Republic  
Tel./Fax 0042-19-726294

A special Czech language version of the package is available from them as well.

## **EVALUATION AGREEMENT**

SPLIT is not and has never been public domain software, nor is it free software.

Non-licensed users are granted a limited license to use SPLIT on a 14-day trial basis for the purpose of determining whether SPLIT is suitable for their needs. The use of SPLIT, except for the initial 14-day trial, requires registration. The use of unlicensed copies of SPLIT by any person, business, corporation or any other entity is strictly prohibited.

No one may modify or patch the SPLIT executable file in any way, including but not limited to decompiling, disassembling, or otherwise reverse engineering the program.

A limited license is granted to copy and distribute SPLIT only for the trial use of others, subject to the above limitations, and also the following:

- 1)** SPLIT must be copied in unmodified form, complete with the file containing this license information.
- 2)** The full machine-readable SPLIT documentation must be included with each copy.
- 3)** SPLIT may not be distributed in conjunction with any other product without a specific license to do so from author.
- 4)** No fee, charge, or other compensation may be requested or accepted, except as authorized below:
  - a)** Operators of electronic bulletin board systems (sysops) may make SPLIT available for downloading as long as the above conditions are met. An overall or time-dependent charge for the use of the bulletin board system is permitted as long as there is not a specific charge for the download of SPLIT.
  - b)** Vendors of user-supported or shareware software may distribute SPLIT after obtaining written permission from author. Such permission is usually granted. Vendors may charge a reasonable disk duplication and handling fee.

## **LICENSING AGREEMENT**

Licensed user are bound to the following licensing agreement.

You may not transfer your license without written permission from author. A single user license permits a user to use SPLIT only on a single computer at a time.

This product is distributed AS IS. The author specifically disclaims all warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose with respect to defects in the diskette and documentation, and program license granted herein, in particular, without limiting operation of the program license with

respect to any use or purpose. In no event shall the author be liable for any loss of profit or damage including but not limited to special, incidental, consequential or other damages.

By licensing SPLOT you agree to the above licensing agreement.

## **How to register**

To register, study [Licensing, registration and evaluation information](#), calculate the correct registration price with the [Calculate SPLOT registration fee](#) dialog and send completed [Registration / Order Form](#) (also provided in the file ORDER.TXT) along with payment to:

Alexandr Novy  
Havlickova 2209  
390 01 TABOR  
Czech Republic

If you experience any problems, please let me know.

# Order Form for SPLIT - The Pen Plotter Simulator for Windows

Select "File-Print Topic" from the menu bar to print this form.

Your Name: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Prov/State: \_\_\_\_\_

Country: \_\_\_\_\_ ZIP/Postal: \_\_\_\_\_

If you are registered user already, your serial number: \_\_\_\_\_

Licence:             single user             multiuser             multisystem site

Number of users / sites : .....             unlimited licence

Include     diskette         manual    with each additional copy

Disk:             5 1/4 inch         3 1/2 inch

Payment:         Cash (money enclosed)  
                   Credit card (fill out credit card information below)  
                   Bank or travelers cheque (payable in US funds)  
                   Send me an invoice first

I'd like to order the SPLIT program for the following plotter type(s):

HP-GL/2 pen plotter ..... \_\_\_\_\_ US\$

HP 7470A ..... \_\_\_\_\_ US\$

HP 7475A ..... \_\_\_\_\_ US\$

HP 7440A ColorPro ..... \_\_\_\_\_ US\$

HP 7550A ..... \_\_\_\_\_ US\$

HP DraftPro ..... \_\_\_\_\_ US\$

HP DraftMaster ..... \_\_\_\_\_ US\$

Roland DXY ..... \_\_\_\_\_ US\$

Roland GRX 300/400 ..... \_\_\_\_\_ US\$

Shipping and handling ..... \_\_\_\_\_ US\$

TOTAL AMOUNT ..... \_\_\_\_\_ US\$

I hereby authorize the above amount to be charged to my

MasterCard             VISA             American Express

Name as it appears on card: \_\_\_\_\_

Credit card number: \_\_\_\_\_ Expiration date: \_\_\_\_\_

Signature: \_\_\_\_\_

Your comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(add any additional comments you wish separately)

Mail this form to:

Alexandr Novy  
Havlickova 2209  
390 01 TABOR  
Czech Republic



## **Calculate SPLOT registration fee**

This dialog helps you calculate a correct SPLOT registration fee namely for multi license order.

To activate this dialog select the **Registration Fee...** menu item in the menu bar **Help** topic.

## Introduction

The SPLOT program is a highly effective tool intended for simulating the pen plotter on the display of an IBM PC. The SPLOT program is the very thing you need to make your work with the plotter more effective. The SPLOT program will give you a guarantee you will always draw on your plotter what you really want. That is why it will save your nerves, your time, your plotter, pens and paper, that means your money.

The SPLOT program can offer:

- support of HP-GL/2 language.
- active support of about 50 HP-GL instructions (according to the type of simulated plotter).
- active support of 20 DXY-GL instructions (for ROLAND plotters).
- possibility of exporting a picture to the printer and in this way to obtain an output of a high quality. In this way the SPLOT program will make a fast and excellent plotter of your printer.
- exporting a picture to the HP-GL, DXY-GL and DXF formats.
- possibility of making picture cuts (the TRIM function). In this way you can scan, draw on the plotter or print only the selected part of the picture.
- the ZOOM and PAN functions.
- to teach your plotter the advanced instructions you would get only if you buy a more expensive plotter or additional hardware (e.g., the SPLOT program can simulate connecting an additional HP 17440A graphics enhancement cartridge to the HP 7440A ColorPro plotter).
- possibility of processing a HP-GL text including multilingual characters - in this way the SPLOT program will teach your plotter German (Spanish, French, etc.) easily and quickly without complicated switching between character sets!

The SPLOT program can be used by:

- anybody who wants to work with his plotter in the WYSIWYG style (What You See Is What You Get).
- anybody who wants to develop his own plotter program applications. You can reach it with the SPLOT program easily even if you do not own the plotter at all!
- anybody who wants to use his printer as a plotter occasionally or constantly. In many cases using a printer may be faster and moreover, this may be an alternative of a high quality.
- anybody who wants to program a printer in graphics mode and at a high level and who does not want to develop complicated software which would enable it. In these cases using the HP-GL language in connection with the SPLOT program seems to be very advantageous for creating own graphics outputs. The HP-GL language can be learned very easily and in addition, it offers unexpected possibilities.

The SPLOT program is available for various plotter versions. This means that there are provided DLL modules designated for a certain plotter type. This principle gives the maximum reliability of simulation of the given plotter type. At present the DLL modules for the following plotter types are at your disposal:

(Plotter type / Plotter syntax / Module name)

- HP-GL/2 pen plotter / HP-GL/2 / HPGL2.DLL
- HP 7470A / HP-GL / HP7470.DLL
- HP 7475A / HP-GL / HP7475.DLL
- HP 7440A ColorPro / HP-GL / HP7440.DLL
- HP 7550A / HP-GL / HP7550.DLL
- HP 7570A/7575A/7576A DraftPro DXL/EXL / HP-GL / HP7570.DLL
- HP 7595A/7596A DraftMaster I/II / HP-GL / HP7595.DLL
- ROLAND DXY 1100/1200/1300 / DXY-GL / RD-GL I / ROLDXY.DLL

- ROLAND GRX 300/400 / RD-GL II / ROLGRX.DLL

An UNREGISTERED COPY of the program is available only in the version for the HP-GL/2, HP 7475A and HP DraftMaster pen plotters. The versions for other plotter types can be received only on the basis of a regular registration. See the [Licensing, registration and evaluation information](#).

## **SPLIT Working Principles**

The plotter simulation consists in interpreting plotter instructions contained in a disk file. The SPLIT program reads these instructions from the file and plots them on the screen of the computer in the same way as the plotter would do on paper. The file is plotted in the window (drawing area) which represents the plotting paper of the plotter. The boundaries of this drawing area normally correspond to the hard clip limits of the plotter (i. e., to the physical limits in which a plotter pen can move for the selected paper size - see the Paper Size dialog). If the TRIM function is used, only the chosen plotting area is displayed in this drawing area.

In the Microsoft Windows environment the size of the drawing area can differ from the size of the client area. If any dimension of the client area is larger than those of the drawing area, the superfluous area of the client area is gray colored. The color of the drawing area (paper) is always white. If any dimension of the client area is smaller than those of the drawing area, one or two scroll bars appear on the edge of the client area, which allow you to scroll through the contents of the drawing area. Use the Resize menu command to cause the equality of the client and drawing areas. This equality is maintained automatically if the Dynamically Resize item in the Options menu is checked. If the Proportional Aspect Ratio item in the Options menu is checked, the aspect ratio of the drawing area is maintained to be identical to the original aspect ratio of the corresponding plotting area. Otherwise there can be any aspect ratio of the drawing area which can lead to the deformation of the image.

## Command Line Parameters

The SPLOT command line (as it can be used in the Program Manager's Program Item Properties) has the following syntax (items inside square brackets are optional):

```
SPLOTW.EXE  [/device_name]  [startup_directory_name]  [plot_filename]
```

where:

SPLOTW.EXE is the SPLOT executable file name,

and the optional parameters are:

### *device\_name*

is the name of the plotter device which will be simulated after program startup. It must be preceded by slash. The following names are allowed:

HPGL2 for the HP-GL/2 pen plotter (requires HPGL2.DLL library),  
HP7470A for the HP7470A plotter (requires HP7470.DLL library),  
HP7475A for the HP7475A plotter (requires HP7475.DLL library),  
HP7440A for the HP7440A ColorPro plotter (requires HP7440.DLL library),  
HP7550A for the HP7550A plotter (requires HP7550.DLL library),  
HP7570A for the HP7570A DraftPro plotter (requires HP7570.DLL library),  
HP7575A for the HP7575A DraftPro DXL plotter (requires HP7570.DLL library),  
HP7576A for the HP7576A DraftPro EXL plotter (requires HP7570.DLL library),  
HP7595A for the HP7595A DraftMaster I plotter (requires HP7595.DLL library),  
HP7596A for the HP7596A DraftMaster II plotter (requires HP7595.DLL library),  
RDXY1100 for the ROLAND DXY 1100 plotter (requires ROLDXY.DLL library),  
RDXY1200 for the ROLAND DXY 1200 plotter (requires ROLDXY.DLL library),  
RDXY1300 for the ROLAND DXY 1300 plotter (requires ROLDXY.DLL library),  
RGRX300 for the ROLAND GRX 300 plotter (requires ROLGRX.DLL library),  
RGRX400 for the ROLAND GRX 400 plotter (requires ROLGRX.DLL library).

Example:

The command line

```
SPLOTW.EXE  /HP7595A
```

starts the SPLOT program with simulating of the HP7595A DraftMaster I plotter.

If you don't use this command line parameter, the SPLOT program uses a default device name which depends on plotter type for which you ordered the SPLOT program. If you ordered SPLOT program for more than one plotter type you will receive more SPLOT executable files (which will vary by the default startup plotter type) along with corresponding DLL libraries. However, you can copy to your disk only one SPLOTW.EXE instance with all needed plotter DLL libraries. Then you can create more SPLOT program items in Program Manager which will vary by the *device\_name* command line parameter.

After program startup you can change simulated plotter type through the Plotter Type Menu.

### *startup\_directory\_name*

is the name for the current working directory immediately after the program startup. You can set this directory name in the Program Manager's Program Item Properties too. The setting of the startup directory is important because the SPLOT program searches for the Configuration Files first in this directory.

*plot\_filename*

is the name of the file which will be plotted immediately after program startup (if it exists).

## **Zooming**

Zooming serves for enlarging or reducing of the drawing area. By means of the Zoom command the drawing area can be even larger than the screen size. It enables you to browse your plots more in detail by scrolling through it.

Notice: Creating of large drawing area is limited by Windows limitations and by your system configuration. Generally the more colors you use in video configuration, the more memory you need for creating of a drawing area with certain size. Note that by creating of very large bitmaps you may easily overload your system if it uses virtual memory.

Notice for users of SPLOT ver. 2.21 or older: The previous functionality of the zoom command is preserved and enhanced through the Trim command.

## Trimming

With the mouse cursor you can make the chosen cuts of the plotted image. By pressing the left mouse button in the drawing area you define first corner of the trimming box. The next mouse movement expands and contracts the trimming box around the area you desire to enlarge. The colors of the trimming box area are inverted. If you press the right mouse button with the left mouse button simultaneously or the **Shift** key is pressed, the box moves as a whole. Until you have the left or right mouse button depressed, you are in the trimming box definition mode in which you define the size and position of the trimming box. As soon as the trimming box of any size is defined you can use the Trim menu command to start trimming. If you have a three button mouse with appropriate mouse driver installed, you can use the middle button to start trimming too. The trimming starts automatically if the Dynamically Trim item in the Options menu is checked.

The trimming is performed so that the selected trimming box is enlarged to the entire drawing area (note that the size of the screen drawing area can be changed through the Zoom or Resize menu command or automatically with the change of the size of the client area if the Dynamically Resize item in the Options menu is checked).

If the Proportional Aspect Ratio item in the Options menu is checked, you can choose from two trim types: Exact or Proportional to Paper Size. If you choose Proportional to Paper Size trim type then the aspect ratio of the displayed cut is identical to the aspect ratio of the currently selected paper size (see the Paper Size dialog), regardless of the aspect ratio of the selected cut. To ensure such proportional aspect ratio of the displayed cut, the size of the displayed cut area is usually larger than the size of the selected cut area. The selection of the trim type is made either in the trim command menu (if the Dynamically Resize menu item is checked) or is determined by the Prefer Exact Trim menu item switch (if the Dynamically Resize menu item is not checked).

If the Proportional Aspect Ratio item in the Options menu is not checked, the selected cut area is always identical to the displayed cut area (conforms to Exact trim type) and is fitted to the entire drawing area. This usually leads to the deformation of the displayed image.

To expand the picture into the original size press the **Tab** key or use the Expand menu command or press the middle mouse button if you have any.

You can change the size and position of the already defined trimming box if the Dynamically Trim menu item is not checked. To do this press the right mouse button in the drawing area. Then you can change the position of the trimming box. To change the size of the trimming box press simultaneously the left button and then release right button.

Another purpose of the trimming box is to select a part of the picture for printing or exporting (see the Print or Export dialog for details) or for copying to clipboard (see the Copy Image to Clipboard command). Note that the Dynamically Trim menu item must not be checked for that purpose.



**Exact Trim Type**

Use this trim type if you want to exactly cut the selected area. Note that this trim type is automatically used if the Proportional Aspect Ratio item in the Options menu is not checked.

**Proportional to Paper Size Trim Type**

Use this trim type if you want to keep aspect ratio of the selected cut identical to the aspect ratio of the current paper size. To ensure such proportional aspect ratio of the displayed cut, the size of the displayed cut area is usually larger than the size of the selected cut area.

Note that this trim type cannot be used if the Proportional Aspect Ratio item in the Options menu is not checked.

## **Printing**

The SPLOT program enables to print the opened file using an installed Windows printer driver. Note that drivers for commonly used printers are supplied directly with your Windows package. Contact your printer vendor if you don't have a driver for your printer. Note that the printer term represents any output device (printer, plotter).

To start printing use the Print dialog which allows you to set final properties for a individual print job. You can set the other properties in the Print Setup dialog.

## Exporting

The SPLOT program enables to export the opened file to the following formats:

- HP-GL** - Hewlett-Packard Graphics Language - the commonly used plotter format,
- DXY-GL** - the format specific to ROLAND DXY plotters,
- DXF** - the AutoCAD's drawing interchange file format.

The **HP-GL** format can be employed, for example, for plotting a picture cut on the plotter, for the output of a multilingual text on the plotter (see the [About Text Filter](#) topic), or in case your plotter does not support all the HP-GL commands supported by the SPLOT program. The last case is characteristic especially of the situation you own the HP ColorPro 7440A plotter and you have not the additional graphics enhancement cartridge HP 17440A. Note that you can use a Windows HP-GL printer driver to produce a HP-GL output too (see the [Printing](#) topic), but this is usually slower method.

The **DXY-GL** format realizes the export of a picture to the DXY plotter (usually the ROLAND plotter).

The **DXF** format converts a picture to a form applicable by the AutoCAD program. From AutoCAD you can read this DXF file via the DXFIN command. The exported picture is written in the form of LINES where each pen of the plotter has its own LAYER. Pen 1 has a layer with the name PEN1, pen 2 has a layer with the name PEN2, etc.

To start and configure exporting use the [Export](#) dialog box.

## About Text Filter

The SPLOT program is able to process a multilingual text in your HP-GL (or DXY-GL) files. As known, plotters receive only the ASCII characters in the range of 0 to 127. Therefore, if the instruction for the output of the text (LB at HP-GL and P at DXY-GL resp.) contains the ASCII characters with the value higher than 127, the plotter will not draw them or will ignore the highest bit of characters and will draw the corresponding characters from the lower half of the ASCII table. For example, if you use the following statement in GW-BASIC (handle #1 represents the plotter),

```
PRINT #1, "LBGröße";CHR$(3)
```

the plotter will draw only the text

Gre or Grae respectively.

If you want to draw the text correctly, you have to use the following statements, e.g.:

```
PRINT #1, "CS0;CA33;SS;LBGr";CHR$(3)
PRINT #1, "SA;LB|~";CHR$(3)
PRINT #1, "SS;LBe;CHR$(3)
```

However, e.g., if you own the HP ColorPro 7440A plotter without an additional HP 17440A graphics cartridge, it will not help you either.

The above mentioned example concerns the use of a German text, but similar problems occur also in other languages which use the ASCII characters from the upper half of the table.

Therefore, the SPLOT program offers the Text Filter function. You switch on this function by checking the Text Filter item in the Options menu. Then all the ASCII characters from the value of **128 to 175** and **ß** character will be plotted according to the selected Code Page. And it does not matter what character set of the plotter is just set. This will enable to write multilingual texts in your HP-GL (DXY-GL) files directly without complicated switching of character sets. The HP-GL (DXY-GL) file created in this way must be exported to a new HP-GL (DXY-GL) form through the HP-GL (DXY-GL) export with the Text Filter switched on, and only such a newly originated file can be drawn on the plotter. Or you can print the image directly to the plotter if you have an appropriate Windows plotter driver installed. (For details about exporting and printing see the Exporting and Printing topics or the Export and Print dialogs).

To demonstrate using this method of writing multilingual texts we recommend you to study over the enclosed demonstration file ASCII.PLT and display it at first with the Text Filter being switched **off** and then **on**.

## Pen Identification

The identification of pens serves to emphasizing parts of the picture drawn with the same pen and to informing about the number of pens used during drawing the given picture. This information is useful namely for the correct loading of the plotter pens in case you decide to draw the given picture on the plotter.

The following conditions must be accomplished if you want to emphasize a part of the picture drawn with the same pen:

- the installed Windows video driver must support a logical palette with at least 16 items (usually a Super VGA video driver for a 256 colors mode),
- the Use Logical Palette item in the Options menu must be checked and must not be disabled (it is disabled if the preceded condition is not valid),
- the Pen Panel window must be opened (i.e., the Pen Panel item in the View menu must be checked).

Then if you click on the desired Pen Icon on the Pen Panel, a part of the picture drawn by the corresponding pen will begin to flash and it will be flashing until you click another pen icon or if you do not cancel the identification by clicking the same pen icon. Note that a double-click on a pen icon invokes the Pen Colors dialog for editing of the corresponding pen color.

The another purpose of the Pen Panel is to identify the numbers of pens used during drawing the picture. At the beginning of drawing all the pen numbers are grayed, during drawing the number corresponding with the pen just being used is highlighted, after finishing drawing all the numbers corresponding with all the used pens are highlighted so that all the unused pen numbers remain grayed.

## Configuration Files

The SPLOT program can save all the important options parameters (a palette of colors for pens, pen widths, etc.) in a SPLOT configuration file (named SPLOTW.CFG). The plotter device dependent parameters (e.g. paper size) can be saved to a plotter configuration file (named XXXXX.CFG, where XXXXX is the base name of the plotter DLL library; e.g. HP7475.CFG for the HP7475.DLL). If these configuration files are found, they are loaded on program startup. The SPLOT program first searches for these configuration files in the startup directory, then in the program directory.

The options parameters are saved automatically after program exit if the Auto Save Options switch in the Options menu is checked.

You can also use the Save Options Dialog in the Options menu to create the configuration files in any directory.

The existence of more configuration files in different directories is useful namely in the multi-user environment.

## Notes

When the SPLOT program is started, it is in the state corresponding with the state of the simulated plotter just switched on. When coming to plotting a new file, the program performs only the operation of changing paper. In this case the program (plotter) is in the state in which it has been left by the commands of the previous file. That is why it is generally recommended to place an initiating command sequence to the beginning of each file. It will bring the plotter to the well known state. Otherwise it can happen that the same file can be drawn in another way every time, dependently of the contents of the previous plotted files. The author recommends to use the initiating sequence **IN;RO;IP;IW;** (in some plotters the **IN** command does not influence the setting of rotation). For HP-GL/2 plotters you should also include the **BP** (begin plot) instruction before the **IN** instruction.

In other cases the program is brought to the state corresponding with the switching off and on the plotter in these cases:

- at change of plotter type,
- at any change of the format or the paper size,
- at any change of any parameter in the Plotter Specific Options... dialog



## **File Menu**

The File menu includes commands that enable you to open and view a plotter file and to print or export the opened file.

Open...

Redraw

Close

Start Demo/End Demo

Print...

Print Setup...

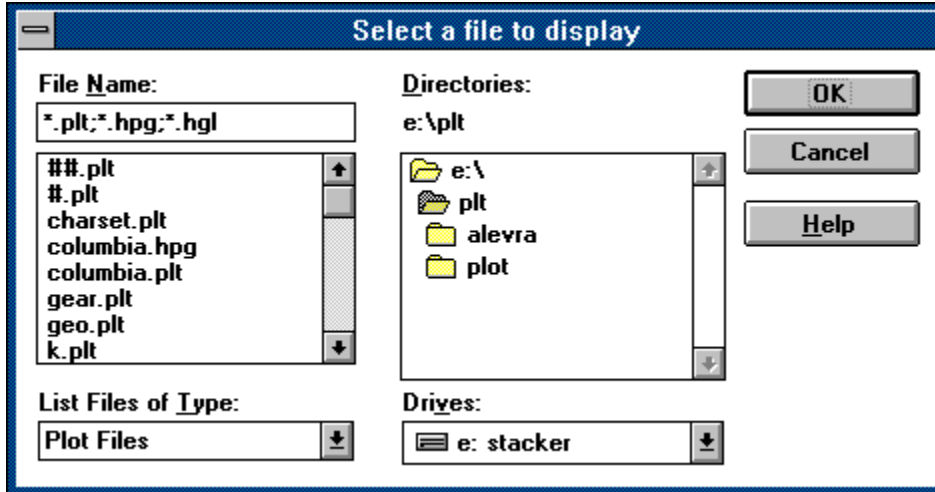
Export...

Exit

## Open Dialog

This dialog serves for opening a desired plot file. Once a new file is opened the SPLOT program closes a previous plot file (if any) and begins drawing with new plot file. The opened file is drawn until the end of file is reached or another new file is opened.

Click on an individual control to get more information about the Open dialog:



**OK Dialog Button**

Closes the dialog and initiates an associated action. All made changes are accepted.

**Cancel Dialog Button**

Closes the dialog and no action is taken. All made changes are cancelled.

**Help Dialog Button**

Provides help information about this dialog (same as pressing F1 key).

**File Name Text Box Control**

You can type here a file name, a filter, a drive, a directory or a complete path.

**File Name List Box Control**

This list box shows the existing files of the desired type in the current working directory. Selecting from the list replaces the contents of the text box. Selecting via double-click causes plotting of the selected file.




**Directory Tracking Text**

This static text shows the complete path name of the current working directory.



## Directories List Box






The directories list box displays:

- the parent directories, preceded by  icon,
- the current directory, preceded by  icon,
- the child directories of the current directory, preceded by  icon.

The directory icons and names are displayed according to their depth in the directory tree. To move to a directory, double-click the directory name or icon, or select it and then choose OK button (or press ENTER key).

## Drives List Box

This drop-down list box displays the current drive letter followed by the volume name. The drive name is preceded by an appropriate drive icon:

-  floppy disk drive,
-  hard disk drive,
-  RAM disk drive,
-  network drive,
-  CD-ROM drive.

You can select another drive as the current drive from this list.

## **File Type List Box**

This drop-down list serves for selecting a desired type of files. Selecting a type modifies the contents of the files list box so that only files of the selected type are displayed.

These types of file are provided:

**Plot Files** Lists all files in the current directory with a .PLT, .HPG and .HGL extensions.

**All Files (\*.\*)** Lists all files in the current directory.

## **Redraw Command**

This command starts the redrawing of the opened plot file from its beginning.

**Close Command**

This command closes the currently opened file and frees all memory allocated to this file.

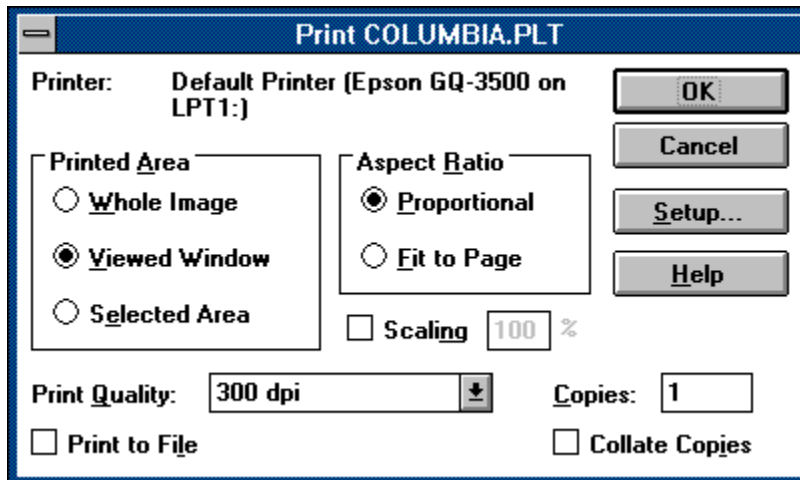
### **Start Demo/End Demo Command**

This command starts/ends a demonstrative drawing of all files with the .PLT extension in the current working directory.

## Print Dialog

The Print dialog allows you to set final properties for a individual print job and start it. You can set the other properties in the [Print Setup...](#) dialog.

Click on an individual control to get more information about the Print dialog:



**Target Printer**

This text informs you about the printer on which the printing will be performed.



**Printed Area**

This control determines which part of the drawing area will be printed:

**Whole Image** - the entire drawing area will be printed.

**Viewed Window** - only the intersection of the drawing and client areas will be printed (can be checked only when any dimension of the drawing area is larger than those of the client area).

**Selected Area** - the inverted area (area marked for trimming) will be printed.

**Aspect Ratio**

This control determines the aspect ratio of the printed image:

**Proportional** - the aspect ratio of the printed image will be identical to the original aspect ratio (based on the original plotter page, not on the screen view) of the selected printed area. This option is checked by default if the scaling is **on**. If the scaling is **off**, the maximum possible area size of the printer page will be used. To do this proportionally one of the dimensions (X or Y) is usually reduced.

**Fit to Page** - the printed image will be fitted to the entire area of the printer page. This can lead to the deformation of the image. This option can be checked only if the scaling is **off**.

## Scaling

These controls serve for switching scaling **on** or **off** and for editing the scaling value. Switching the scaling **on** enables you to print in a desired scale; e.g., if you set the scale factor to 100%, the printed output will be in 1:1 scale to the original plotter size. This assumes that the size of the printer page is large enough to hold the scaled image. Switching the scaling **on** automatically switches **on** the proportional aspect ratio of the printed image (see the Aspect Ratio controls). If the scaling is switched **off**, the printed image will be fitted (proportionally or completely) to the maximum possible area size of the printer page.

**Print Quality**

The Print Quality drop-down list box allows you to choose from the list of printing resolutions provided by the printer device driver. This box may be disabled if you use an old version of the printer device driver. In this case use the Options button in the Print Setup dialog (note that old versions of printer device drivers can be set up globally only, i.e., they cannot be set up for one program instance only).

**Number of Copies**

You can specify the desired number of print copies only if the printer device driver supports multiple copies. If the printer device driver does not support multiple copies, the number of copies is set to one and this edit control is disabled.

**Print to File**

If the Print to File check box is checked, a new dialog appears after you press OK and asks for the name of the file to which the print output should be sent. A file created in this way will print properly only on the printer for which it was generated - it is a device-dependent file, not a metafile.

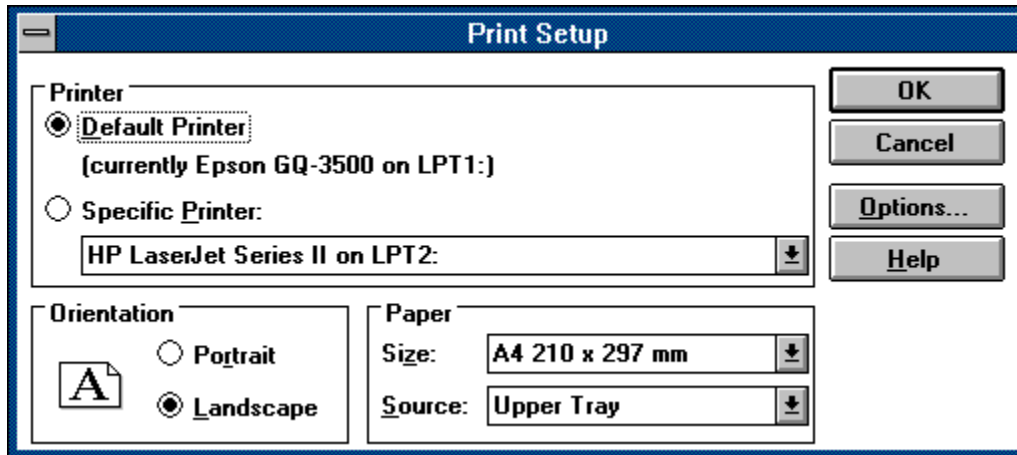
**Collate Copies**

This option is meaningless in SPLOT program because of the print output is designated for one physical page only (this may be changed in future versions of SPLOT).

## Print Setup Dialog

The Print Setup dialog allows you to set printing properties for a subsequent print jobs. These settings are valid only in the SPLOT instance in which they were made. At the start of the SPLOT program a system default printer and its settings are used. Note that certain properties are set in the Print... dialog.

Click on an individual control to get more information about the Print Setup dialog:





**Printer Selection**

The Printer Selection controls allow you to choose a printer on which the plotted file will be printed. The Default Printer button selects the printer established as the default by the system Printer Setup dialog (from Control Panel program). The Specific Printer button along with associated drop-down list box allow you to select another printer for a subsequent print jobs. You can choose only from printers correctly installed in your system. At the start the SPLOT program selects a system default printer for a subsequent print jobs.

**Orientation Selection**

The Orientation Controls allow you to choose portrait or landscape printing. In portrait mode the tops of the graphics are parallel to the short edge of the page. In landscape mode they are parallel to the long edge. If one of the modes is not available for the current printer and paper type, the label and button for that mode are dimmed, and the button for the available mode is selected.

Note that for older versions of printer device drivers this controls may be disabled. In this case use the Options button (note that old versions of printer device drivers can be set up globally only, i.e., they cannot be set up for one program instance only).

**Paper Size and Source Selection**

The Paper Size drop-down list allows you to choose from the list of paper sizes provided by the printer device driver. This list specifies the paper sizes that can be loaded into the printer, not the sizes that are actually loaded at the time of printing.

Note that for older versions of printer device drivers this controls may be disabled. In this case use the Options button (note that old versions of printer device drivers can be set up globally only, i.e., they cannot be set up for one program instance only).

**Options Button**

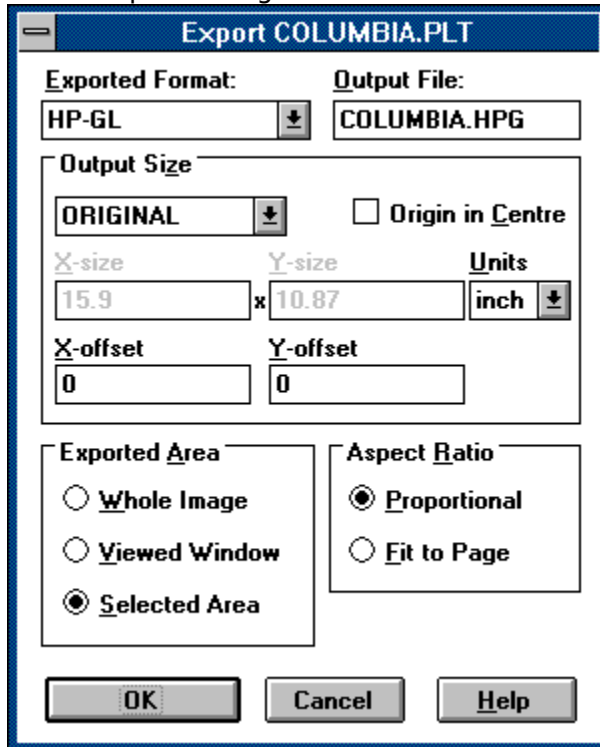
The Options button leads to a dialog that allows you to select additional driver-supplied printing options. This button is disabled if no such options are provided.

## Export Dialog

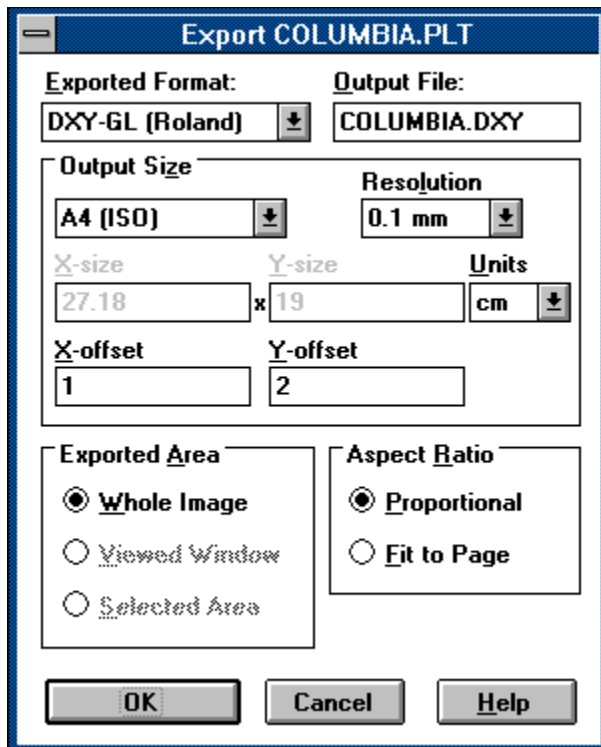
Use the Export dialog to start and configure exporting. See the [Exporting](#) topic for additional information.

Click on an individual control to get more information about the Export dialog:

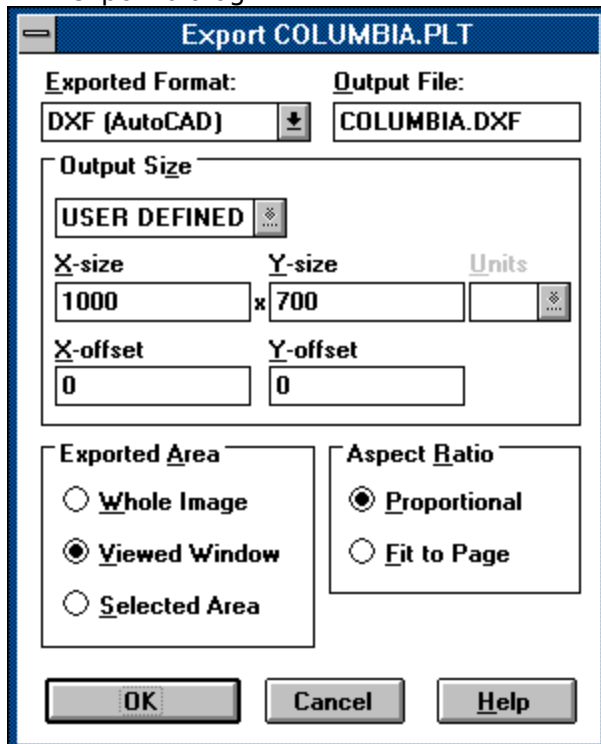
HP-GL export dialog:



DXY-GL export dialog:



DXF export dialog:



**Exported Format**

The Exported Format drop-down list allows you to choose from the list of export formats provided by the SPLOT program:

**HP-GL** - Hewlett-Packard Graphics Language - the commonly used plotter format,

**DXY-GL** - the format specific to ROLAND DXY plotters,

**DXF** - the AutoCAD's drawing interchange file format.

For more information see the [Exporting](#) topic.

**Output File**

Type here the name of the file to which the export will be performed.



## **Output Size**

You can select a predefined size or a user defined size. When you select the user defined size you must specify its X and Y dimensions.

The predefined output size **Original** is equal to the original plotter paper size (as specified in the Paper Size dialog). If you use this size for exporting a non-trimmed image, you ensure the 1:1 scale for that export. Note that for the **DXF** export only user defined size is provided. For all sizes you can specify an offset from the left margin (on the X axis) and from the bottom margin (on the Y axis).

**Origin in Centre**

Check this option only if the resultant HP-GL file is designated for the plotter in which the origin of the coordinate system is situated in the centre of the plotting area (it is usual with large paper size plotters, e.g. HP DraftPro or HP DraftMaster).

**Resolution**

This drop-down list box serves for selecting a plotter unit size for the DXY-GL format. It can be 0.1 or 0.025 mm. Note that for the HP-GL format the plotter unit size is always 0.025 mm.

**Units**

This drop-down list box serves for selecting a desired unit used for the output size measurement. It can be cm (centimetre) or inch. Note that the DXF format is an exception - here the output size is understood in units to be defined in AutoCAD.

**Exported Area**

This control determines which part of the drawing area will be exported:

**Whole Image** - the entire drawing area will be exported.

**Viewed Window** - only the intersection of the drawing and client areas will be exported (can be checked only when any dimension of the drawing area is larger than those of the client area).

**Selected Area** - the inverted area (area marked for trimming) will be exported.

**Aspect Ratio**

This control determines the aspect ratio of the exported image:

**Proportional** - the aspect ratio of the exported image will be identical to the original aspect ratio (based on the original plotter page, not on the screen view) of the selected exported area. To do this one of the dimensions (X or Y) is usually reduced.

**Fit to Page** - the printed image will be exactly fitted to the selected output size. This can lead to the deformation of the image.

**Exit Command**

This command exits the SPLOT program.

## Options Menu

This menu provides access to the SPLOT options. All changed options can be saved in the SPLOT Configuration Files.

Plotter Type  
Paper Size...  
Pen Colors...  
Pen Widths...  
Plotter Specific Options...

Language  
Text Filter  
Code Page  
Sound  
Use Logical Palette

Proportional Aspect Ratio  
Dynamically Resize  
Dynamically Trim  
Prefer Exact Trim

Minimize on Drawing  
Active at End of Drawing

Save Options...  
Auto Save Options

Copy Image to Clipboard



## Plotter Type Menu

The Plotter Type menu serves for selecting a desired plotter type for simulation. You must have the corresponding DLL module:

Plotter type	Module name
HP-GL/2 pen plotter	HPGL2.DLL
HP 7470A	HP7470.DLL
HP 7475A	HP7475.DLL
HP ColorPro	HP7440.DLL
HP 7550A	HP7550.DLL
HP DraftPro	HP7570.DLL
HP DraftMaster	HP7595.DLL
ROLAND DXY	ROLDXY.DLL
ROLAND GRX	ROLGRX.DLL

An UNREGISTERED COPY of the program is available only in the version for the HP-GL/2, HP 7475A and HP DraftMaster pen plotters. The versions for other plotter types can be received only on the basis of the regular registration. See the [Licensing, registration and evaluation information](#).

## About Paper Sets

A paper set is a group of maximum 30 paper sizes from which you can select default paper size (plotter hard-clip limits) in the Paper Size dialog. The number 30 has origin in combination of 3 possible norms (ANSI,ISO,Architectural), 5 possible formats (A,B,C,D,E for ANSI or ARCH norm; A4,A3,A2,A1,A0 for ISO norm) and 2 possible modifiers (named NORMAL and EXPAND). You must define at least one valid paper size to create a valid paper set.

The SPLOT program searches for user defined paper sets in the PAPERS.INI file which conforms to Windows initialization file format. Each found section defines a new paper set (if it is valid) except the **[PAPERS]** section which defines paper set assignments to individual Plotter Types. The SPLOT program first searches for the PAPERS.INI file in the startup directory, then in the program directory.

Because of the present version of the SPLOT program has not a paper set edit dialog built in, you should edit directly the PAPERS.INI file to create, redefine or delete any paper set. The paper set assignment to the current Plotter Type can be done in the Paper Size dialog.

The general syntax for defining a paper set is:

```
[PAPER_SET_NAME]
keyword1 = ...
keyword2 = ...
.
.
.
```

The valid paper size is defined by its X and Y dimensions expressed in plotter units and is identical to plotter hard-clip limits (see your HP-GL or HP-GL/2 reference for description of plotter hard-clip limits). The one plotter unit is equal to 0.025 mm. The larger dimension of the paper size always represents the X axis in non-rotated state (see your HP-GL or HP-GL/2 reference for description of RO instruction). These plotter types do not accept a plotter size dimension greater than 32767 plotter units: HP7470A, HP7475A, HP7440A, HP DraftPro 7570A and Roland DXY. You can define only the dimensions of the paper size. The origin of plotter coordinates is determined by plotter type. These plotter types have origin always in lower-left corner of the hard-clip limits: HP-GL/2 plotter, HP7470A, HP7475A, HP7440A and HP7550A. These plotter types have normally origin in center of the hard-clip limits, although the SPLOT program enables you set origin also in lower-left corner: HP DraftPro, HP DraftMaster, Roland GRX 300/400.

Syntax for paper size definition:

PKEYWORD = Xdimension x Ydimension

or

PKEYWORD = Xdimension,Ydimension

where PKEYWORD identifies the defined paper size (see the list bellow).

Examples:

ANSI\_A=10170 x 7840

ISO\_A4=2\*4820 x 2\*3560

Note that you can use simple multiplication in dimension definition. It facilitates you to enter dimensions if your plotter has origin of plotter coordinates in center of hard-clip limits and you know hard-clip limits coordinates (e.g. -4820,-3560, 4820,3560).

List of all paper size keywords:

ANSI\_A - defines dimensions of ANSI A NORMAL paper size  
 ANSI\_AE - defines dimensions of ANSI A EXPANDED paper size  
 ANSI\_B - defines dimensions of ANSI B NORMAL paper size  
 ANSI\_BE - defines dimensions of ANSI B EXPANDED paper size  
 ANSI\_C - defines dimensions of ANSI C NORMAL paper size  
 ANSI\_CE - defines dimensions of ANSI C EXPANDED paper size  
 ANSI\_D - defines dimensions of ANSI D NORMAL paper size  
 ANSI\_DE - defines dimensions of ANSI D EXPANDED paper size  
 ANSI\_E - defines dimensions of ANSI E NORMAL paper size  
 ANSI\_EE - defines dimensions of ANSI E EXPANDED paper size  
 ISO\_A4 - defines dimensions of ISO A4 NORMAL paper size  
 ISO\_A4E - defines dimensions of ISO A4 EXPANDED paper size  
 ISO\_A3 - defines dimensions of ISO A3 NORMAL paper size  
 ISO\_A3E - defines dimensions of ISO A3 EXPANDED paper size  
 ISO\_A2 - defines dimensions of ISO A2 NORMAL paper size  
 ISO\_A2E - defines dimensions of ISO A2 EXPANDED paper size  
 ISO\_A1 - defines dimensions of ISO A1 NORMAL paper size  
 ISO\_A1E - defines dimensions of ISO A1 EXPANDED paper size  
 ISO\_A0 - defines dimensions of ISO A0 NORMAL paper size  
 ISO\_A0E - defines dimensions of ISO A0 EXPANDED paper size  
 ARCH\_A - defines dimensions of ARCH A NORMAL paper size  
 ARCH\_AE - defines dimensions of ARCH A EXPANED paper size  
 ARCH\_B - defines dimensions of ARCH B NORMAL paper size  
 ARCH\_BE - defines dimensions of ARCH B EXPANED paper size  
 ARCH\_C - defines dimensions of ARCH C NORMAL paper size  
 ARCH\_CE - defines dimensions of ARCH C EXPANED paper size  
 ARCH\_D - defines dimensions of ARCH D NORMAL paper size  
 ARCH\_DE - defines dimensions of ARCH D EXPANED paper size  
 ARCH\_E - defines dimensions of ARCH E NORMAL paper size  
 ARCH\_EE - defines dimensions of ARCH E EXPANED paper size

Along with a paper size you can define default scaling points for this paper size. The scaling points are used in the SC (scale) instruction and can be redefined by the IP instruction (see your HP-GL or HP-GL/2 reference for details). You can define default scaling points as relative or absolute. If you do not define any default scaling points for a paper size, the default scaling points are always identical to hard-clip limit corners.

The relative scaling points are determined relatively to lower-left and upper-right corners of paper size and are expressed in plotter units. When you define relative scaling points, they are defined for entire paper set and all absolute scaling points definitions in this paper set are ignored. These plotter types use only relative scaling points: HP DraftPro, HP DraftMaster, Roland GRX 300/400 and HP-GL/2 plotter. For the HP-GL/2 plotter the default scaling points are always identical to hard-clip limit corners (they are zero relative), so it ignores all default scaling points definitions.

Syntax for relative scaling points definition:

```

IP_REL = P1X_REL,P1Y_REL,P2X_REL,P2Y_REL
where default scaling points are computed as follows:
P1X_DEF=MIN_PLT_X+P1X_REL
P1Y_DEF=MIN_PLT_Y+P1Y_REL
P2X_DEF=MAX_PLT_X-P2X_REL
P2Y_DEF=MAX_PLT_Y-P2Y_REL
  
```

Example:

```

IP_REL = 600,600,600,600 ; default for HP DraftMaster, DraftPro and Roland GRX
  
```

The absolute scaling points are determined in absolute plotter coordinates and can be defined separately for non-rotated and rotated states (see your HP-GL or HP-GL/2 reference for description of RO instruction). If the rotated scaling points are not separately defined, they are created by rotation of non-rotated scaling points. Note that if you define relative scaling points, they are defined for entire paper set and all absolute scaling points definitions in this paper set are ignored. Also note that these plotter types use only relative scaling points and ignore all absolute scaling points definitions: HP DraftPro, HP DraftMaster, Roland GRX 300/400 and HP-GL/2 plotter.

Syntax for absolute scaling points definition:

IP\_PKEYWORD = P1X\_ABS,P1Y\_ABS,P2X\_ABS,P2Y\_ABS

for non-rotated absolute scaling points

IPR\_PKEYWORD = P1RX\_ABS,P1RY\_ABS,P2RX\_ABS,P2RY\_ABS

for rotated absolute scaling points

where PKEYWORD identifies the corresponding paper size (see the list above) and P1X(R)\_ABS < P2X(R)\_ABS and P1Y(R)\_ABS < P2Y(R)\_ABS.

Examples:

IP\_ISO\_A4=603,521,10603,7721

; non-rotated absolute scaling points for ISO A4 NORMAL paper size

IPR\_ISO\_A4=0,610,7200,10610

; rotated absolute scaling points for ISO A4 NORMAL paper size

For more examples study the PAPERS.INI file included in the SPLOT package.

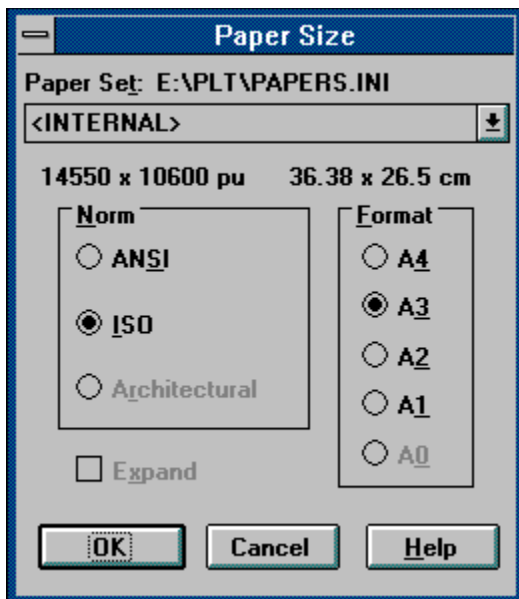
## Paper Size Dialog

This dialog serves for selecting one of the internally supported or user defined paper sizes of the just simulated Plotter Type. Each paper size is given by a combination of the Paper Norm, Paper Format and optionally Expand modifier. The user paper sizes are defined in user defined Paper Sets.

Note that the selected paper size is represented by the SPLOT drawing area (see the SPLOT Working Principles topic).

Also note that if the just simulated plotter type supports the Paper Size (**PS**) instruction and it is supported by the SPLOT program for that plotter type (e.g. HP-GL/2 plotter), then the valid occurrence of PS instruction in the plotted file will override the paper size selected in this dialog.

Click on an individual control to get more information about the Paper Size dialog:



**Paper Sets Origin**

Shows the full pathname of the PAPERS.INI file from which the Paper Sets are loaded.

**Paper Set**

Select here the desired Paper Set from which you will select a paper size. The internal paper set contained in a plotter type DLL library is named as **<INTERNAL>**. If the PAPER.INI file cannot be found or opened or no user paper set is defined, only the internal paper set is offered.

**Paper Size**

Shows the selected paper size expressed in plotter units (usually 1 plotter unit = 0.025 mm).



**Paper Size**

Shows the selected paper size expressed in centimeters (for ISO norm) or in inches (for ANSI and ARCH norms).

**Paper Norm**

One of these paper norms can be selected for the desired paper size:

**ISO** - International Standards Organization's norm

**ANSI** - American National Standards Institute's norm

**ARCH** - architectural norm

Note that some plotter types do not support internally all the paper norms. However, if you select a user defined Paper Set, the accessibility of each norm is defined by this paper set. The unavailable paper norms are disabled.

## **Paper Format**

According to the selected paper norm one of these paper formats can be selected for the desired paper size:

**A4, A3, A2, A1** and **A0** formats for the **ISO** norm,

**A, B, C, D** and **E** formats for the **ANSI** and **ARCH** norms.

Note that some plotter types do not support internally all the paper formats. However, if you select a user defined Paper Set, the accessibility of each format is defined by this paper set. The unavailable paper formats are disabled.

**Paper Expand**

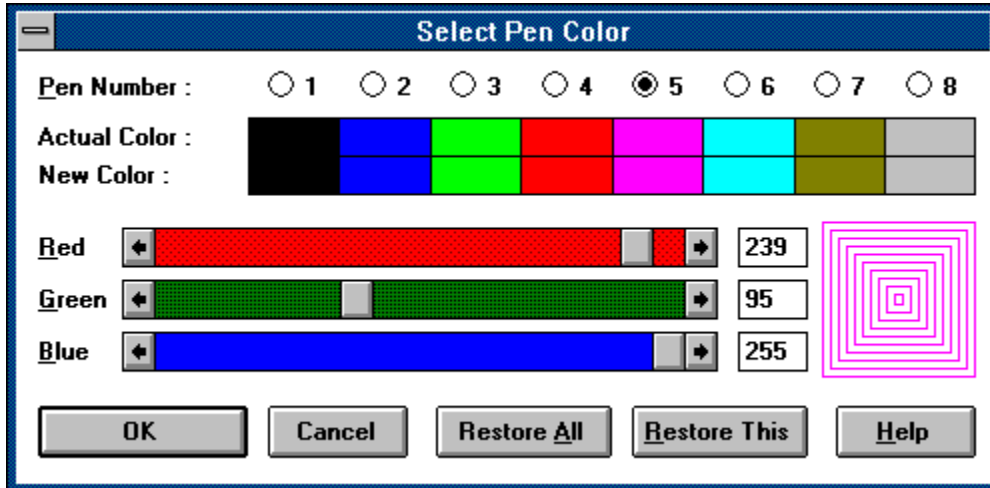
The Paper Expand check-box switches **on** or **off** using of the expanded form of selected paper size. Note that some plotter types do not support internally the expand modifier. However, if you select a user defined Paper Set, the accessibility of expand modifier is defined by this paper set.

## Pen Colors Dialog

Use the Pen Colors dialog to change the associated pen colors.

In SPLIT program each pen is associated with certain color. These pen colors are used for screen drawing in color video modes and for printing on a color device. For monochrome video modes all pens are displayed black and the associated colors can take effect only for printing on a color device. In the same way on a monochrome printer all pens colors are black.

Click on an individual control to get more information about the Pen Colors dialog:



**Pen Number**

Use this radio button control to select a pen number its color you want to edit.

**Actual Color**

Shows the actual pen colors (before editing).

**New Color**

Shows the new pen colors.



**Red Scroll**

Use this scroll bar to set a value of the red color component.

**Red Edit**

Use this control to edit a value of the red color component in range 0 to 255 inclusive.

**Green Scroll**

Use this scroll bar to set a value of the green color component.

**Green Edit**

Use this control to edit a value of the green color component in range 0 to 255 inclusive.

**Blue Scroll**

Use this scroll bar to set a value of the blue color component.

**Blue Edit**

Use this control to edit a value of the blue color component in range 0 to 255 inclusive.

**Pen Sample**

A screen sample of the just edited pen color.

**Restore All**

Restores all pen colors to their actual values.



**Restore This**

Restores just edited color to its actual value.

## Pen Widths Dialog

The Pen Widths dialog enables you to manage a variable pen widths feature provided by the SPLOT program.

Click on an individual control to get more information about the Pen Widths dialog:

Pen	Color	PT Instruction	Custom Width	Unit	Restore
Pen 1	Black	<input checked="" type="radio"/>	0	mm	Restore
Pen 2	Blue	<input checked="" type="radio"/>	0	mm	Restore
Pen 3	Green	<input checked="" type="radio"/>	0.5	mm	Restore
Pen 4	Red	<input type="radio"/>	0.2	mm	Restore
Pen 5	Magenta	<input checked="" type="radio"/>	0	mm	Restore
Pen 6	Cyan	<input checked="" type="radio"/>	0	mm	Restore
Pen 7	Olive	<input type="radio"/>	1	mm	Restore
Pen 8	Grey	<input checked="" type="radio"/>	0	mm	Restore

Use Pen Widths On Screen  
 Use Pen Widths On Printer  
 Zoom Pen Widths

Pen Widths On Printer  
 Absolute  
 Relative

OK Cancel Set All To... Restore All Help

**Pen Icon**

A graphical representation of a pen.

**PT Instruction**

Check this radio button to set the **PT Instruction** pen width type to the corresponding pen. Then the line width of this pen will be determined by the PT (pen thickness) instruction. The line width is controlled by the HP-GL instructions and will vary according to value issued in the PT instruction. Note that each SP (select pen) instruction resets the pen thickness to its default value (mostly 0.3 mm).

**Custom Width**

Check this radio button to set the **Custom Width** pen width type to the corresponding pen. Then the line width of this pen will be determined by the user defined pen width value defined in the associated edit control.

**Custom Width Edit**

Define here a user defined pen width value for the corresponding pen. This pen width value is used only if the **Custom Width** option is checked for that pen. Note that the pen width is always expressed in millimeters (mm).

**Restore**

Use this button to restore the pen width options and value for an individual pen.

**Use Pen Widths on Screen**

Check this option if you want to use variable pen widths for screen drawing.



**Use Pen Widths on Printer**

Check this option if you want to use variable pen widths for Printing.

**Zoom Pen Widths**

Check this option if you want to enlarge the pen widths along with enlarging an image cut by the Trim command (see the Trimming topic). Note that when you enlarge the drawing area by the Zoom command, the pen widths on screen are zoomed naturally.

### **Pen Widths on Printer**

Select here a mode for use of the pen widths when printing. It can be:

**Absolute** - a real printed line width will be absolutely equal to the specified pen width.

**Relative** - a real printed line width will be computed from the specified pen width relatively to the original plotter page size (or its printed cut).

Only checking of the relative mode can ensure printing in the WYSIWYG style. However by checking the absolute mode along with **PT** width type for all pens you get a native plotter simulation.

Note that on screen the pen widths are always displayed in relative mode.

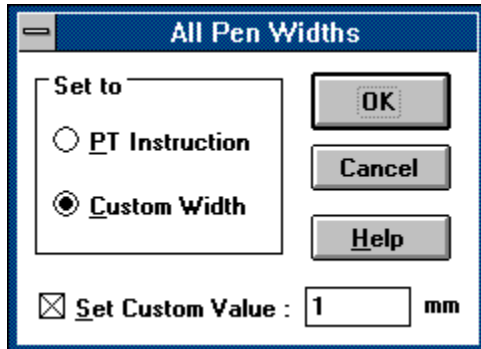
**Restore All**

Use this button to restore all the pen width options and values for all pens.

## Set All Pen Widths Dialog

This dialog enables you to set a desired pen width type or user defined value to all pens. This dialog is started from the [Pen Widths Dialog](#).

Click on an individual control to get more information about the Set All Pen Widths dialog:



Select here a pen width type (**PT Instruction** or **Custom Width**) which you want to set to all pens. If you don't check any option, all the pen width types remain unchanged.

**Set Custom Value**

Check this option to define an user defined pen width value for all pens. Use the associated edit control to specify this value. If you don't check this option, all the user defined values remain unchanged even if you specify some value in the edit control.

### **Plotter Specific Options Dialog**

Opens a dialog for setting of options specific to just simulated Plotter Type. This option is disabled if there are not specific options for this plotter type.



## **Language Menu**

This menu serves for selecting a language in which the SPLOT program communicates with you. You must have the corresponding DLL module and help file for the desired language.

## **Text Filter Switch**

This menu item switches **on** or **off** the use of the Text Filter functionality.

See the [About Text Filter](#) topic for more information.

## **Code Page Menu**

This menu serves for selecting the desired code page for the Text Filter function. At present these code pages are provided:

- United States
- German
- Portugal
- Canada - French
- Norway

Note that these are DOS code pages.

See the [About Text Filter](#) topic for more information.

## **Sound Switch**

This menu item switches **on** or **off** the use of sounds for certain events (e.g., error, end of drawing, etc.).

## Use Logical Palette Switch

This menu item switches **on** or **off** the use of the logical palette of the just active video driver. This option is disabled if the video driver does not have a logical palette. Using the logical palette enables the full functionality of the Pen Identification. However using the logical palette may influence another application that uses logical palette when it is not on top.

### **Proportional Aspect Ratio Switch**

If this menu item is checked, the aspect ratio of the drawing area is maintained to be identical to the aspect ratio of the selected paper size (see the Paper Size dialog). Otherwise there can be any aspect ratio of the drawing area which can lead to the deformation of the image.

For more information see the SLOT Working Principles topic.

## **Dynamically Resize Switch**

Check this menu item to automatically maintain the equality of the client and drawing areas. If this menu item is not checked you can use the Resize menu command to cause this equality.

For more information see the SPLIT Working Principles topic.

## **Dynamically Trim Switch**

Check this menu item to start the trimming as soon as the trimming box is defined. If this menu item is not checked you must issue the Trim command to start trimming. If the Proportional Aspect Ratio item in the Options menu is checked, the trim type (Exact or Proportional to Paper Size) is determined by the Prefer Exact Trim menu item switch.

For more information about trimming see the Trimming topic.



## **Prefer Exact Trim**

This menu item determines which trim type (Exact or Proportional to Paper Size) will be used if the Dynamically Trim menu item is checked. If this menu item is checked, then the Exact trim type will be used for dynamic trimming. Otherwise the Proportional to Paper Size trim type will be used.

For more information about trimming see the Trimming topic.

### **Minimize on Drawing Switch**

Reduces the SPLOT program window to an icon whenever you start drawing (by opening a new file in the Open dialog or by issuing the Redraw command). Double-click the SPLOT icon placed on the desktop to switch back to the SPLOT program.

**Active at End of Drawing Switch**

Activates and brings on top the SPLOT program window at each end of drawing.

## **Save Options Dialog**

This dialog serves for saving of the options parameters to the configuration files to the desired directory.

Note: The options parameters are saved automatically after program exit if the Auto Save Options Switch is checked.

### **Auto Save Options Switch**

Check this menu item to automatically save SPLOT option parameters to the disk configuration files when the SPLOT program terminates. The SPLOT program first attempts to save these parameters to the original configuration files (i.e. configuration files from which the parameters are loaded). When this fails, it attempts to save these parameters to the startup directory.

## **Copy Image to Clipboard Command**

This command copies part of the drawing area to the Windows clipboard in the bitmap format. The part to be copied is identical to the inverted area (i.e., area of the trimming box; see the [Trimming](#) topic for details). If there is not a trimming box defined, the entire drawing area will be copied into the clipboard.

The copied image can be pasted and used in a bitmap oriented program such as PaintBrush.

## **View Menu**

This menu provides access to several Information Panels and to their arrangement:

- Cursor Position
- Pen Panel
- Plotter State
- Plotter Instructions
- Event Log
  
- Arrange Panels
- Auto Arrange
- Auto Hide

## **Information Panels**

These information panels are provided in the SPLOT program:

Cursor Position

Pen Panel

Plotter State

Plotter Instructions

Event Log



## Cursor Position Panel

The Cursor Position panel shows the mouse cursor coordinates in the drawing area expressed in plotter and user units. Note that the plotter and user coordinates do not differ if the plotter scaling (relevant to **SC** plotter instruction) is **off**.

Click on an individual control to get more information about the Cursor Position panel:

Cursor Position	
Plotter Units	
X= 2045	Y= 1093
User Units	
X= 88.761	Y= 72.4204

**Plotter Units**

This control shows the mouse cursor coordinates expressed in plotter units.

**User Units**

This control shows the mouse cursor coordinates expressed in user units.

## Pen Panel

This panel serves via its [Pen Icons](#) for information about pens used during the drawing process (for more information see the [Pen Identification](#) and [Pen Colors](#) topics). Through this panel you can also enable or disable individual pens, so you can exclude certain pens from drawing.



**Pen Icon**

A graphical representation of a pen. A single-click on the pen icon starts the Pen Identification of the corresponding pen. A double-click on the pen icon invokes the Pen Colors dialog for editing of the corresponding pen color.

**Enable/Disable Pen**

Use this check box to enable (checked) or disable (unchecked) an individual pen. This allows you to create a drawing which will contain only parts drawn by desired pens. Note that after opening a new file all pens are always enabled. After disabling certain pen(s) you should start redrawing (by selecting Redraw command in File menu) to fully reflect that disabling.

## Plotter State Panel

The Plotter State panel shows the most important parameters describing the state of the plotter. For more information see the SPLOT Reference Guide supplied with a registered version.

A parameter control is grayed if it is in the **off** status or it is not supported by the just simulated plotter type.

Click on an individual control to get more information about the Plotter State panel:

Plotter State								
SP 0	PUA	RO	LT DF,4	VS 0	LB	LO	DT ETX	
IP	-6680,-4700,6680,4700			SM	SS	CS 0	CA 0	SL 0
SC				SI 0.285,0.375	DI	1,0		
Iw	-7280,-5300,7280,5300			PT 0.3	FT	BISOLID,PT,0		

Shows the just selected pen number.



Shows the current **U**p/**D**own and **A**bsolute/**R**elative pen status.

Shows the current rotation status (0 or 90 degrees rotation for HP-GL plotters, 0, 90, 180 or 270 degrees for HP-GL/2 plotter).

Shows the current line type status (**DF** means default line type).

Shows the current velocity speed value.

Shows the label instruction activity and a just drawn character.

Shows the current label offset value.

Shows the current label terminator character.

Shows the current scaling points coordinates (always in plotter units).



Shows the scaling instruction status and its values.

Shows the current input window coordinates (in plotter units).

Shows the symbol mode instruction status and its character value.

Shows the use of the standard (**SS**) or alternate (**SA**) character set.

Shows the current value of the standard character set (for HP-GL/2 plotter based on SD instruction).

Shows the current value of the alternate character set (for HP-GL/2 plotter based on AD instruction).

Shows the current character slant value.

Shows the use of the absolute (**SI**) or relative (**SR**) character size and its values.



Shows the use of the absolute (**DI**) or relative (**DR**) character direction and its values.

Shows the current value of the pen thickness for HP-GL plotters or the current pen width for HP-GL/2 plotter.

Shows the current values of the fill type setting (type,spacing,angle).

## Plotter Instructions Panel

This information panel gives you the ability to trace individual commands of the opened file. The tracing is started by opening of this panel. You must close this panel to stop tracing.

Click on an individual control to get more information about the Plotter Instructions panel:



**Instruction**

This text control shows the just made plotter instruction.

**Next Button**

Press this button to perform and view the next instruction.

**Auto Button**

Press this button to start automatic (continuous) tracing.

**Manual Button**

Press this button to stop automatic tracing.



**Redraw Button**

Press this button to start redrawing of the opened file from its beginning.

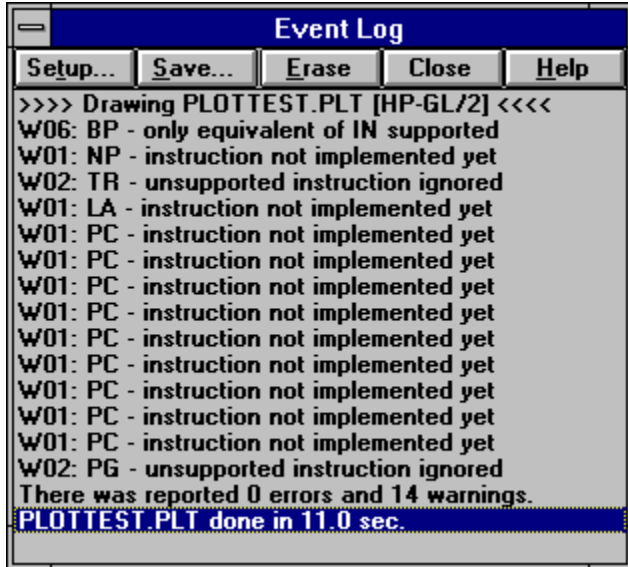
**Cancel Button**

Press this button to close the Plotter Instruction panel and to stop tracing.

## Event Log Panel

This window collects various types of events (errors, warnings, messages) which might occur during HP-GL or HP-GL/2 interpreting and are recognized by the SPLIT program.

Click on an individual control to get more information about the Event Log panel:



## **Event Types**

This section lists some event types collected in the [Event Log Panel](#).

Notice: only general errors and warnings are listed. There may be various number of specific errors, warnings and messages for individual plotter types and/or instructions. This number will probably grow in future versions of the SPLIT program.

### **Errors:**

E01: unknown instruction

E02: invalid instruction mnemonic

E03: instruction not supported for current driver configuration

E04: unknown escape sequence

E05: unknown instruction or instruction not supported in polygon mode

E06: instruction not supported in polygon mode for current driver configuration

E07: instruction ignored in picture body state - use it before any drawing instruction

E08: download buffer overflow

E09: polygon buffer overflow

E10: not enough memory to fill polygon

### **Warnings:**

W01: instruction not implemented yet

W02: unsupported instruction ignored

W03: instruction disabled by user configuration

W04: no operation (NOP) instruction ignored

W05: output instruction ignored

**Event Log List Box**

This list box collects all incoming events (errors, warnings, messages).

**Save Event Log Contents**

Enables you to save contents of event log list box to selected file.

## **Save Event Log Dialog**

This dialog enables you to save contents of Event Log Panel to selected file.

**Erase Event Log Contents**

Erases contents of event log list box.

Note that the contents of event log list box is automatically erased at start of each drawing when the Auto-Erase check box item is checked in the Event Log Setup dialog.



**Close Event Log Panel**

Closes Event Log panel and erases contents of event log list box.

## Event Log Setup Dialog

This dialog setups how will be managed the Event Log Panel.

Click on an individual control to get more information about the Event Log Setup dialog:



**Display Event Type check boxes**

These check boxes define which event types you want to display.

**Auto Open check boxes**

When checked, the Event Log panel is automatically opened if any error or warning (along checking) occurs. However, if you close the Event Log panel after it is auto opened, it will not be auto-opened already until you will draw the same file.

**Auto Erase check box**

When checked, the contents of event log list box is automatically erased at start of each drawing.

**Stop error reporting after N errors**

Defines the maximum number of reported errors. When set to zero, no limitation occurs.

**Stop warning reporting after N warnings**

Defines the maximum number of reported warnings. When set to zero, no limitation occurs.

## **Arrange Panels Command**

This command arranges position of all the Information Panels so that all these panels lie within the SPLOT client area.



## **Auto Arrange Switch**

Checking this menu item causes the automatic rearrangement of all the Information Panels whenever the size or position of the SPLOT program window is changed or when a information panel window is opened or closed (see the Arrange Panels command).

## **Auto Hide Switch**

Temporarily closes all the Information Panels whenever the SPLOT program loses input focus. This option is useful namely if two or more SPLOT instances are opened to avoid confusion among panels.

## **Rotation Command**

This menu command serves for right-angled rotation of the screen drawing area and so enhances the SPLOT browsing capabilities (namely along with the Zoom command). The rotations are absolute, however you can rotate relatively from separate menu. You can also lock the rotation direction for permanent use by checking the **Lock Rotation** menu item. If this menu item is not checked, the rotation is turned off after each new file open.

Note that this command serves only for screen view rotation, it does not affect rotation of printed or exported image.

## **Zoom Command**

This menu command starts the Zooming. You can zoom the drawing area **two, three** or **four** times directly from menu or by setting **user** zoom factor in dialog box. The **Horizontal to window** menu item searches the maximum possible zoom without horizontal scroll bar, the **Vertical to window** menu item searches the maximum possible zoom without vertical scroll bar (Notice: These two menu items can be used only if you have checked the Proportional Aspect Ratio item in the Options menu).

Notice for users of SPLOT ver. 2.21 or older: The previous functionality of the zoom command is preserved and enhanced through the Trim command.

## **Resize Command**

Use this menu command to cause the equality of the client and drawing areas. This menu item is disabled if there is already this equality or if you have checked the Dynamically Resize item in the Options menu.

Note that using this command may change the size of the client area to ensure proportionality if you have checked the Proportional Aspect Ratio item in the Options menu.

For more information see the SPLIT Working Principles topic.

## Trim Command

This menu command starts the Trimming.

If the Proportional Aspect Ratio item in the Options menu is checked, you can choose here from two trim types: Exact or Proportional to Paper Size. If you choose Proportional to Paper Size trim type then the aspect ratio of the displayed cut is identical to the aspect ratio of the currently selected paper size (see the Paper Size dialog), regardless of the aspect ratio of the selected cut. To ensure such proportional aspect ratio of the displayed cut, the size of the displayed cut area is usually larger than the size of the selected cut area. Note that if the Dynamically Trim item in the Options menu is checked, the trim type (Exact or Proportional to Paper Size) is determined by the Prefer Exact Trim menu item switch.

If the Proportional Aspect Ratio item in the Options menu is not checked, the selected cut area is always identical to the displayed cut area (conforms to Exact trim type) and is fitted to the entire drawing area. This usually leads to the deformation of the displayed image.

To expand the picture into the original size press the **Tab** key or use the Expand menu command or press the middle mouse button if you have any.

## **Expand Command**

Use this menu command to expand a trimmed image into the original size, i.e. the currently selected paper size (see the [Paper Size](#) dialog).

For more information about trimming see the [Trimming](#) topic.

## Help Menu

The help menu in SPLOT provides access to the Windows Help program and to an **About** box which gives information about the program.



## Keyboard Shortcuts

The following keys may be used in the SPLOT program:

<b>F1</b>	Help
<b>F2</b>	<u>Open...</u>
<b>F3</b>	<u>Redraw</u>
<b>F4</b>	<u>Pen Colors...</u>
<b>F5</b>	<u>Paper Size...</u>
<b>F6</b>	<u>Pen Widths...</u>
<b>F8</b>	<u>Print...</u>
<b>F9</b>	Open/Close the <u>Plotter Instructions</u> panel
<b>Ctrl-C</b>	Open/Close the <u>Cursor Position</u> panel
<b>Ctrl-P</b>	Open/Close the <u>Pen Panel</u>
<b>Ctrl-S</b>	Open/Close the <u>Plotter State</u> panel
<b>Ctrl-E</b>	Open/Close the <u>Event Log</u> panel
<b>Tab</b>	<u>Expand</u>

## **Glossary**

The *command* term.

The *dialog* term.

The *switch* term.

The *menu* term.

The *panel* term.

**startup directory**

The current working directory immediately after the program startup. You can set this directory in the Program Manager's Program Item Properties or on the SPLOT Command Line.



**program directory**

The directory in which the SPLOT executable and/or DLL files reside.

Error 01: unknown instruction

Error 02: invalid instruction mnemonics

Error 03: instruction not supported by current driver configuration

Error 04: unknown escape sequence

Error 05: unknown instruction or instruction not supported in polygon mode

Error 06: instruction not supported in polygon mode for current driver configuration

Error 07: instruction ignored in picture body state - use it before any drawing instruction



Error 08: download buffer overflow

Error 09: polygon buffer overflow

Error 10: not enough memory to fill polygon

Warning 01: instruction not implemented yet

Warning 02: unsupported instruction ignored

Warning 03: instruction disabled by user configuration

Warning 04: no operation (NOP) instruction ignored

Warning 05: output instruction ignored



