

HP-GL/2 Export Filter (Plug-In EXPHPGL)

This plug-in can only be used if you have purchased a personal unlock code. You can order the unlock code for this plug-in directly from TommySoftware®. For further information see [Order & Unlock](#).

Information

This HP-GL/2 export filter offers a maximum of output flexibility, while at the same time uses only a few HP-GL instructions to avoid incompatibilities with the various output devices, like for example pen plotters, cut plotters, and milling machines, that use this format.

You can edit ([General](#)) the instructions used to initialize the output device as well as the instructions that are sent at the end of the output. The type of HP-GL objects to be exported can also be specified ([Objects](#)). By activating the corresponding setting the filter exports only lines, lines and circular arcs, or lines and circular arcs and Bézier curves. And you can also scale, rotate, and move the objects before they are exported. The HP-GL data can either be exported to a file or you can send the HP-GL data to the output device directly ([Send To](#)).

It's also possible to assign a line color, drawing layer, or drawing pen to a plotter pen ([Plotter Pens](#)). This allows you for example to plot all objects that have a black line color with pen 1. You can also specify a default plotter pen which is used to plot all objects that are not explicitly assigned to a certain plotter pen by means of their line color, drawing layer, or drawing pen.

In addition to the editable initialization and exit instructions ([General](#)) the export filter generates only the following HP-GL instructions: SP (Select Pen), PU (Pen UP), PD (Pen Down), PA (Plot Absolute), AT* (Absolute Arc Three Point), AA* (Arc Absolute), and BZ* (Bezier Absolute). All instructions marked with the '*' sign are exported only if the corresponding output setting is activated ([Objects](#)). Due to the limitations of the HP-GL/2 format all object fillings are ignored. Of course hatchings of objects as well as of areas are exported.

Options

[General](#)

[Plotter Pens](#)

[Objects](#)

[Send To](#)

To display the "Options" dialog click the "Options" button in the file selection dialog.



If you use the object's line color (which is the default setting, see [Plotter Pens](#)) to determine the plotter pen which is to be used to plot the object please make sure that the option "Use Screen Properties" in the dialog of [Configure>Settings>Output](#) is marked. Because otherwise the object's *output* line color and not the *screen* line color is used to determine the plotter pen which could result in a wrong plotter pen selection. To permanently activate this option please run the command [Configure>Save Settings as Default](#). That ensures that this option is also turned on if you start CAD/DRAW again or if you choose the command [File>New Drawing](#). Alternatively you can also activate the check box "Properties for Output and Screen Identical" in the dialog boxes of the commands [Configure>Layers>Edit](#) and [Configure>Pens>Edit](#). To permanently save these settings run the command [Configure>Save Elements as Default](#).

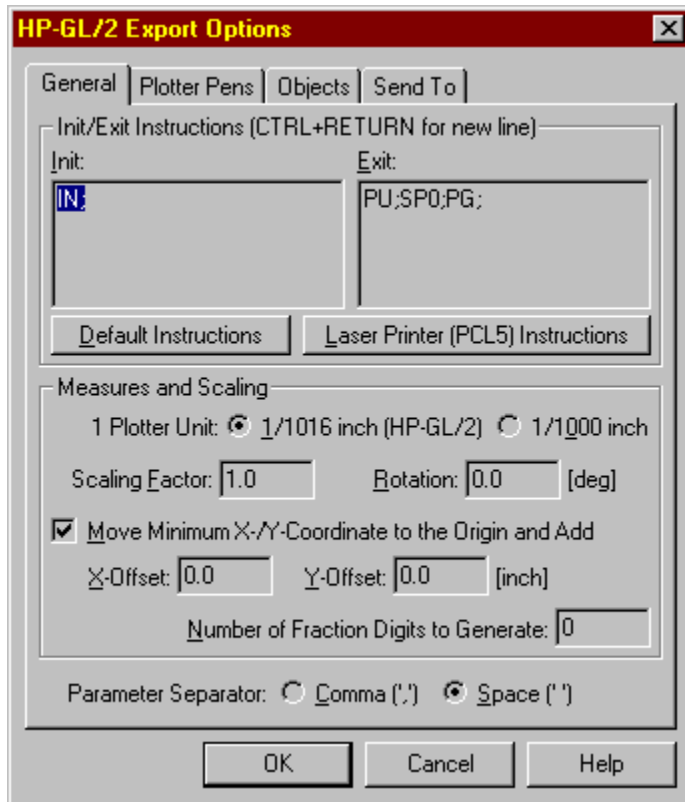
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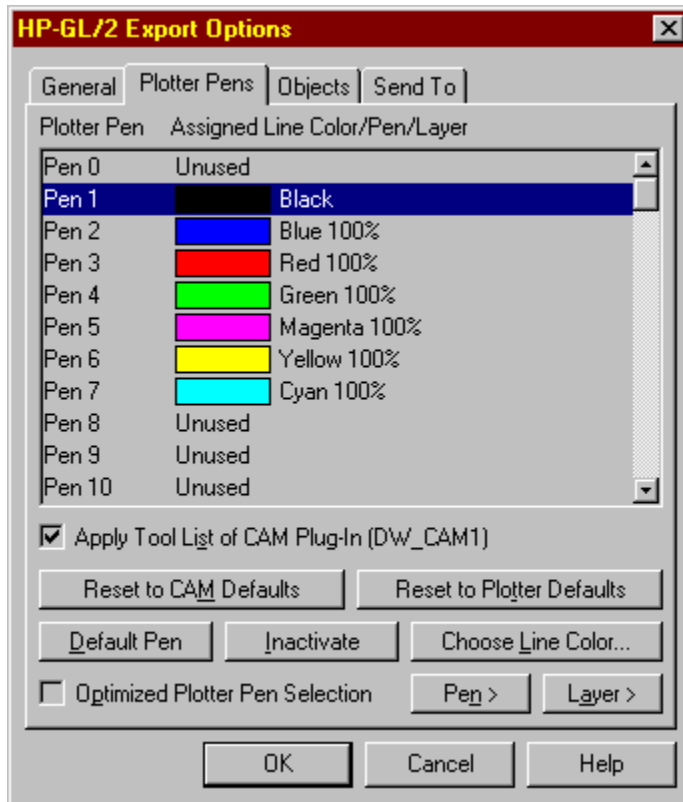
General (Options)

How can I access information on this dialog?



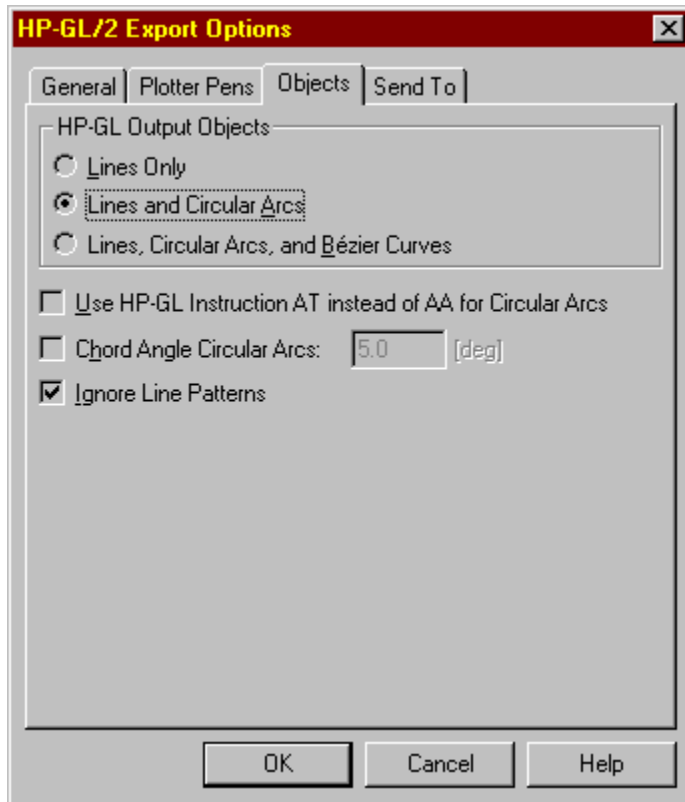
Plotter Pens (Options)

How can I access information on this dialog?



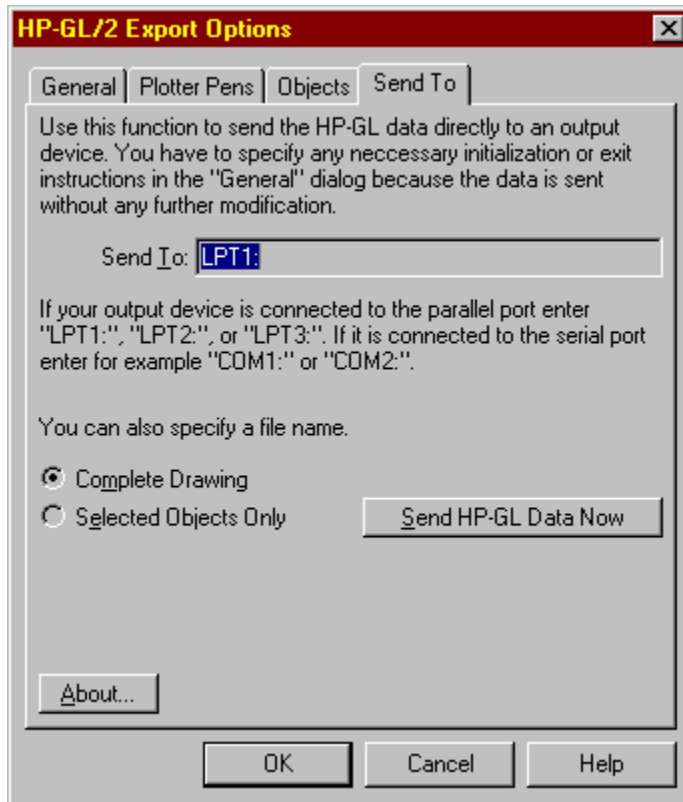
Objects (Options)

How can I access information on this dialog?



Send To (Options)

How can I access information on this dialog?



Clicking on this button will close the dialog accepting all changes.

Clicking on this button will close the dialog, without accepting any changes.

Clicking on this button displays the help text for this dialog window.

This text field contains the initialization instructions. These instructions are placed at the beginning of the export file. Normally they are used to initialize the output device. If you edit this setting please make sure to place a ';' after each HP-GL instruction. Typical initialization instructions are:

`IN;` Initialize Plotter (HP-GL instruction)

`PW0;` Pen Width (HP-GL instruction)

`\xdd` Hex value, e.g. `\x1b` (escape) is converted to the byte value 27 (dec) / 1b (hex). You always have to specify both hex digits (`dd`). To export a backslash type `\\`.

`\x1b%0B` Switch to HP-GL/2 mode (PCL5 instruction)

Please refer to the HP-GL/2 instruction manual or to your laser printer's user manual for details.

This text field contains the exit instructions. These instructions are placed at the end of the export file so they are sent to the output device at the end of the plot. If you edit this setting please make sure to place a ';' after each HP-GL instruction. Typical exit instructions are:

`PU;` Pen Up (HP-GL instruction)
`SP0;` Select Pen 0 (HP-GL instruction)
`PG;` Page Advance (HP-GL instruction)
`\xdd` Hex value, e.g. `\x1b` (escape) is converted to the byte value 27 (dec) / 1b (hex). You always have to specify both hex digits (`dd`). To export a backslash type `\\`.
`\x1b%0A` Switch to PCL5 mode (PCL5 instruction)
`\x1b&10H` Form feed (PCL5 instruction)

Please refer to the HP-GL/2 instruction manual or to your laser printer's user manual for details.

If you click this button the fields above are initialized with the default HP-GL init/exit instructions.

If you click this button the fields above are initialized with the HP-GL and PCL5 init/exit instructions required to directly send the exported file or the HP-GL data respectively (click the "Send HP-GL Data Now" button in the "Send To" dialog) to a PCL5 compatible laser printer (e.g. HP LaserJet).

If this field is marked then the export filter assumes that 1 plotter unit equals 1/1016 inch. Or in other words: 1016 plotter units equal 1 inch, or 40 plotter units equal 1 mm. This field must be marked if the exported file is to be sent to an HP-GL/2 output device (all modern HP-GL output devices use this format) because otherwise the objects won't appear on the output device in their correct size.

If this field is marked then the export filter assumes that 1 plotter unit equals 1/1000 inch. Or in other words: 1000 plotter units equal 1 inch, or 39.37 plotter units equal 1 mm. Mark this field only if the exported file is to be sent to an HP-GL output device (only old HP-GL output devices still use this format) because otherwise the objects won't appear on the output device in their correct size.

The value you enter here is used to scale the objects before they are exported to the file, i.e. the scaling is not achieved by using the HP-GL instruction SC or any other HP-GL instruction but by transforming the objects' coordinates. Enter values between 1.0e-10 and 1.0e10.

The value you enter here is used to rotate the objects before they are exported to the file, i.e. the rotation is not achieved by using the HP-GL instruction RO but by transforming the objects' coordinates.

If this check box is marked the export filter determines the minimum X-coordinate and the minimum Y-coordinate of all objects to be exported. Then the minimum X-/Y-coordinate is subtracted from the X-/Y-coordinate of all objects. This aligns the objects with the X-axis and the Y-axis (the origin).

This value is added to the X-coordinate of all objects. This allows you to move the objects in X-direction. The addition is only carried out if the check box above is marked.

This value is added to the Y-coordinate of all objects. This allows you to move the objects in Y-direction. The addition is only carried out if the check box above is marked.

This value determines the number of fraction digits to generate. Enter values between 0 and 10.

If this option is specified a comma (',') is used as parameter separator, e.g. "PA1000,2000;".

If this option is specified a space (' ') is used as parameter separator, e.g. "PA1000 2000;".

If you click this button the plotter pen list is initialized with the CAM default settings.

If you click this button the plotter pen list is initialized with the plotter default settings.

The plotter pen list shows all available plotter pens. If a plotter pen is default then all objects of which line color, drawing layer, or drawing pen is assigned to none plotter pen are plotted using the default plotter pen. "Unused" means that this plotter pen is not used at all. If a line color, drawing layer, or drawing pen is assigned to a plotter pen then this plotter pen is used to plot all objects with that line color, drawing layer, or drawing pen. The line color has priority, i.e. if an object's line color as well as an object's drawing layer or drawing pen is assigned to a plotter pen then the object is plotted using the plotter pen to which the line color is assigned to.

If an object's line color, drawing layer, and drawing pen are not assigned to any plotter pen and no default plotter pen is specified then this object is not exported, i.e. it is not plotted.

Plotter pen 0 has a special function. If a pen plotter selects pen 0 this actually means that the current pen is stored back in the carousel, i.e. all subsequent plotting instructions are not drawn. For raster devices (e.g. laser printers) pen 0 means printing using the color white. So normally it makes no sense to plot an object with pen 0.



If you use the object's line color (which is the default setting, see [Plotter Pens](#)) to determine the plotter pen which is to be used to plot the object please make sure that the option "Use Screen Properties" in the dialog of [Configure>Settings>Output](#) is marked. Because otherwise the object's *output* line color and not the *screen* line color is used to determine the plotter pen which could result in a wrong plotter pen selection. To permanently activate this option please run the command [Configure>Save Settings as Default](#). That ensures that this option is also turned on if you start CAD/DRAW again or if you choose the command [File>New Drawing](#). Alternatively you can also activate the check box "Properties for Output and Screen Identical" in the dialog boxes of the commands [Configure>Layers>Edit](#) and [Configure>Pens>Edit](#). To permanently save these settings run the command [Configure>Save Elements as Default](#).

If you click this button the currently selected plotter pen becomes the default plotter pen. The previous default plotter pen is set to "Unused".

If you click this button the currently selected plotter pen is set to "Unused".

If you click this button the color selection dialog appears. By choosing a color this color is assigned to the currently selected plotter pen as the new line color.

If you click this button all drawing layers are displayed in a floating pop-up menu. By clicking a drawing layer it is assigned to the currently selected plotter pen. By pressing ESC or by clicking outside the floating pop-up menu the menu is closed without assigning a drawing layer.

If you click this button all drawing pens are displayed in a floating pop-up menu. By clicking a drawing pen it is assigned to the currently selected plotter pen. By pressing ESC or by clicking outside the floating pop-up menu the menu is closed without assigning a drawing pen.

If this check box is marked an optimized plotter pen selection is used. That means all objects that are to be plotted with pen N are exported one after the other regardless of their actual position in the drawing. Because of this the plotter only has to carry out a minimum number of pen changes during plotting. This significantly reduces the time needed to plot a drawing because frequent pen changes take a lot of time.



This function changes the order of objects and that could result in unwanted side effects, especially on cut plotters and milling machines.

If this check box is marked the current tool list of the CAM plug-in (DW_CAM1) is applied. If the CAM plug-in is not installed this check box is disabled. If you make any changes to a plotter pen this check box is automatically cleared because otherwise the changes would have no effect since the current tool list would be used to initialize the plotter pen list next time you call the "Options" dialog.



If the CAM plug-in is installed you should mark this check box and use the command "CAM>Tool List" to edit the current tool list. By doing that you can be sure that the plotter pen list always matches the current tool list.

If this option is specified the only HP-GL drawing instruction used in the plotter file is PA (Plot Absolute) which is the equivalent of a line. For that all drawing objects and instances to be exported are resolved and converted to lines.

If this option is specified the only HP-GL drawing instructions used in the plotter file are PA (Plot Absolute) which is the equivalent of a line, and AA (Arc Absolute) which is the equivalent of a circular arc. For that all drawing objects and instances to be exported are resolved and converted to lines or circular arcs.

If this option is specified the only HP-GL drawing instructions used in the plotter file are PA (Plot Absolute) which is the equivalent of a line, AA (Arc Absolute) which is the equivalent of a circular arc, and BZ (Bezier Absolute) which is the equivalent of a Bézier curve. For that all drawing objects and instances to be exported are resolved and converted to lines, circular arcs, or Bézier curves.



The BZ (Bezier Absolute) instruction is not supported by every output device. So make sure that your output device supports this instruction before specifying this option.

If this check box is marked the chord angle that is specified in the corresponding edit field is appended to each AA (Arc Absolute) instruction, e.g. "AA1000,2000,270,5;". If this check box is not marked no chord angle is appended to the AA (Arc Absolute) instruction and the output device uses the default chord angle (usually the default chord angle is 5°).

Here you can enter the chord angle which is appended to each AA (Arc Absolute) instruction if the corresponding check box is marked.

If this check box is marked all line patterns are ignored, i.e. all lines are considered to be solid. If this check box is cleared line patterns are preserved by converting lines/circular arcs that use line patterns to several lines/circular arcs.



You should not mark this check box if the exported file is to be sent to a cut plotter or a milling machine.

If this check box is marked the HP-GL instruction AT (Absolute Arc Three Point) is used instead of AA (Arc Absolute) for circular arcs.

Here you can enter the parallel or serial port the output device is connected to.

If this option is specified the complete drawing is sent to the output device.

If this option is specified selected objects only are sent to the output device.

If you click this button the HP-GL data is sent immediately to the output device via the specified port.

If you click this button some informations about this export filter are displayed.

