EUROSYSTEMS

User Manual

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Important Information for CoCut Clients

Please check the merchandise after the reception upon completeness and announce possible absence of single parts immediately to your trader.

The **scope of delivery** of a CoCut version includes:

- Program CD (apart from download version)
- Manual on CD or as PDF file

Code number

The sticker is on the inner side of the manual cover. In case of online buy code number is delivered via email.

System requirements

- Pentium 4 or newer with min. 1 GB RAM
- Windows 7 / 8 / 10 (32 or 64 bit)
- Minimum graphic resolution: 1024 x 768 pixels
- Host program: Inkscape

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under the category **Support** / **FAQ**

Our support staff members only give information to **registered** users. Therefore, please give following information upon each call:

- Version-No.: e.g. CoCut Professional 17.002
- Dongle or serial number of respective product

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CoCut uses the OpenCV

(Open Source Computer Vision Library)

CoCut uses the OpenCV

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CoCut uses NLog

NLog is a free logging platform for .NET, Silverlight and Windows Phone with rich log routing and management capabilities. It makes it easy to produce and manage high-quality logs for your application regardless of its size or complexity.

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About This Manual

With this manual you receive CoCut. This manual is divided in *8 chapters*.

In chapter ***„Quickstart and installation“*** the installation of CoCut on your Windows computer will be explained. Please follow the installation instruction carefully as the correct installation is the basic for the smooth usage of CoCut.

The chapter ***„How to work with CoCut?“*** is an introduction in handling, tools and functions. The functional principle will be concretized by means of practical examples.

In chapter ***„Reference part“*** all menus and their menu items in their chronological order are explained. This chapter is thought of as *reference book* and should be used in case of doubts about the exact functioning of a command.

In chapter ***„Reference part display preview“*** all menus and their menu items in the display preview in their chronological order are explained. As chapter "Reference Part" it is thought of as *reference book* and should be used in case of doubts about the exact functioning of a command.

In the next chapter all ***„Tools“*** are described.

In chapter ***„Tips and Tricks / Trouble Shooting“*** we have explained a selection of daily problems from our hotline and support experience and give you information for dealing with technical problems.

Typographical Orientation Guides

Display	Meaning
Bold	**Headlines**
Italic	*Indications, accentuations*
Bold, italic	Menus, fields, options e.g. ***new***-command
CAPITAL LETTERS	Name of keys on the keyboard e.g. INS, SRTG, …
KEY1+KEY2	The plus (+) between the key names means that the first key must be kept pressed while pressing the second key. Afterwards, let go the two keys.
KEY1,KEY2	A comma (,) between the key names means that you press the keys one after the other and let them go. Shortcuts and hotkeys
…	Three dots after menu entries and commands always mean that, when activating, a dialog window will be opened.

1 Quickstart and Installation

1.1 Quickstart

1.1.1 How to Install CoCut?

1.1.1.1 Step 1: Connection

Cutter control via USB

Install cutter USB drivers, which were delivered by the cutter manufacturer. Please use the instructions given by cutter manual.

Cutter control via COM port (serial)

Make sure, that cutter and serial Windows port are configured **identically**.

You´ll find this port configuration in the system *Control Panel* under: *System/Hardware/Device Manager/Ports/Communications Port*. Select via double click the respective port (e. g. COM1) and activate *Port Settings.*

Default settings are: Bits per second: 9600 or 19200, Data bits: 8, Parity: None, Stop bits: 1, Flow control: Hardware

Check also Resources: COM 1: I/O Range 03F8 and IRQ 4 and COM 2: I/O Range 02F8 and IRQ 3 respectively

1.1.1.2 Step 2: Installation

Insert the CoCut installation CD. With the ***Autorun*** function switched on following dialog opens. If the ***Autorun*** function is deactivated open the Windows Explorer and start the file ***install.exe*** in the main directory of the CD. Select product CoCut Starter 2017 and start installation.

1.1.1 How to Install CoCut?

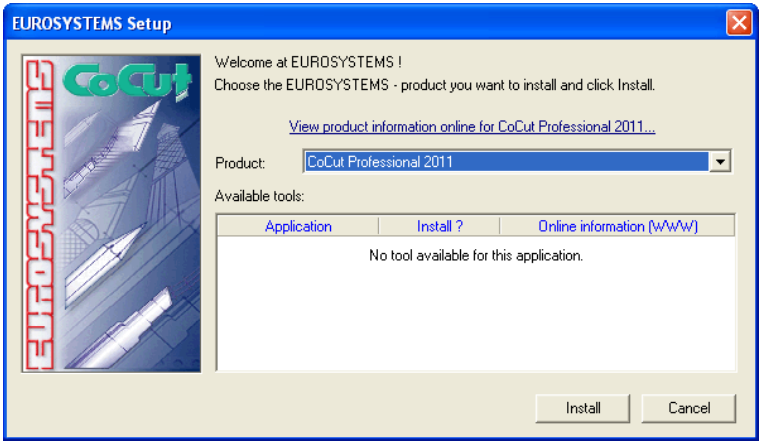

Fig. 1.1-1: Autorun window

Note: Installation process is done again for each selected application.

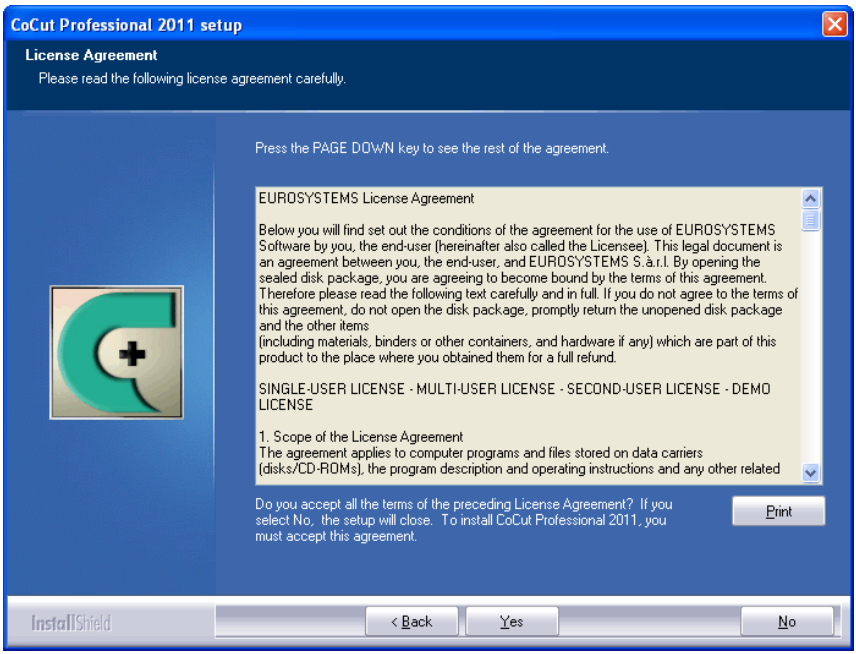

Fig. 1.1-2: EUROSYSTEMS Software License Agreement

In this dialog the installation folder for CoCut Starter 2017 is chosen. By default the folder C:\Program Files\EUROSYSTEMS\CoCut Starter 2017 is suggested.

If CoCut should be installed to another folder, please click ***Browse*** button and select the desired destination folder.

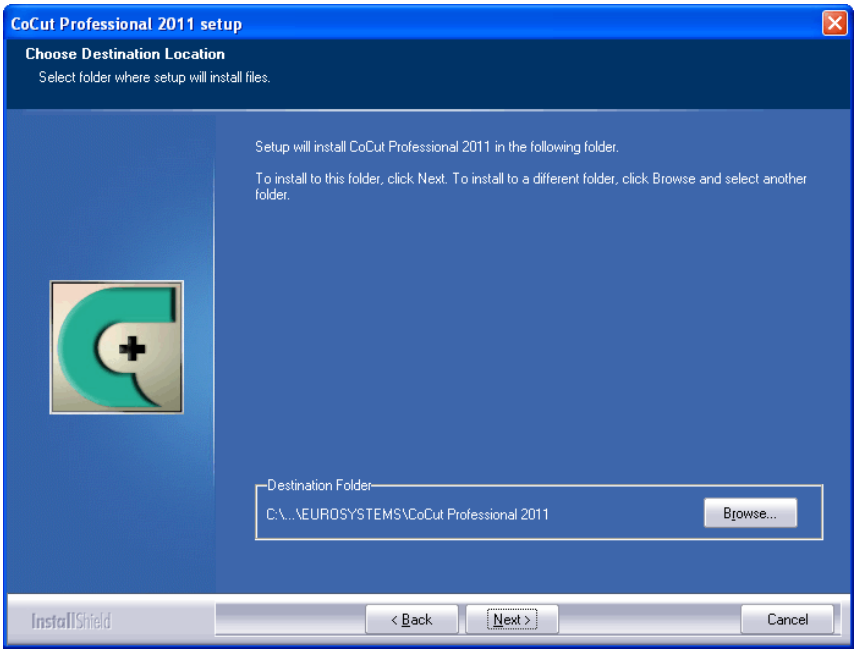

Fig. 1.1-3: Selection of destination folder

Hint: To install additional drivers select custom setup.

1.1.1 How to Install CoCut?

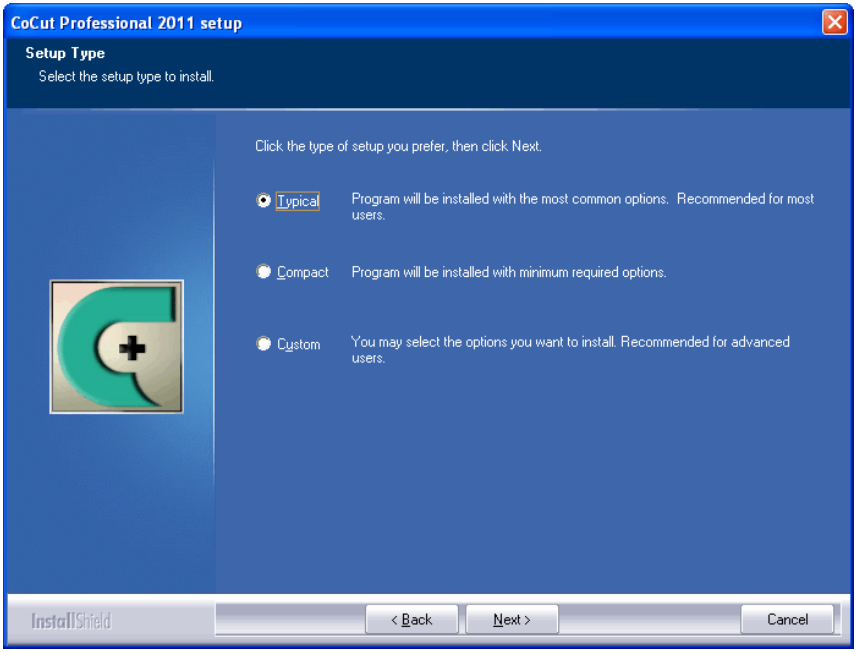

Fig. 1.1-4: Selection of setup type

Default program folder in the start menu is EUROSYSTEMS\CoCut Starter 2017.

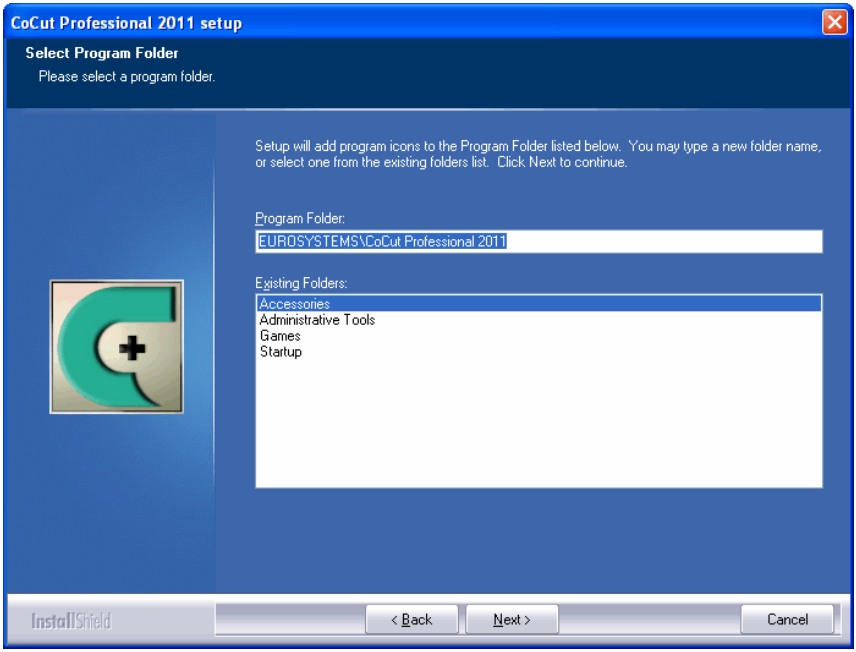

Fig. 1.1-5: Position in start menu

1.1.2 Enter License Data (without Dongle)

1.1.2.1 Use .ecfn file: Recommended, if license data was sent via email.

In the eMail with license data you´ll find an attached file with the extension .ecfn.

A double click on this file will license your software automatically!

1.1.2.2 Manually, if license data is printed on a sticker, which is located in the package (inner left hand side).

On this sticker you´ll find information about program version, serial number, user data and the code itself.

Important! All license data must be entered exactly how printed!

1.1.2 Enter License Data (without Dongle)

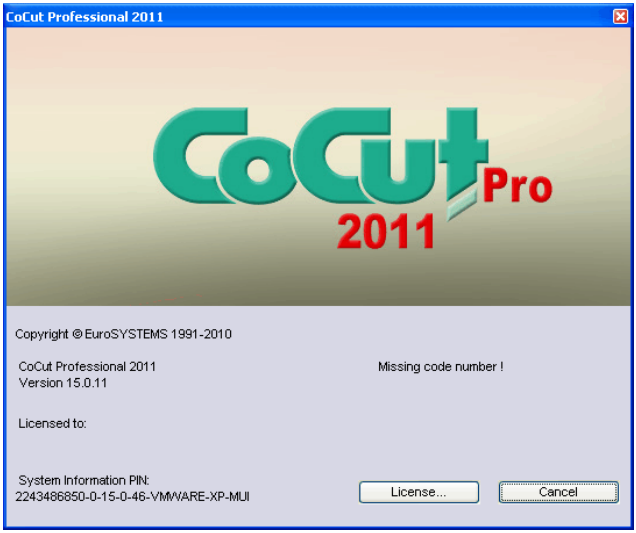

Fig. 1.1-6: Start window with invalid code

By clicking "***License...***" button following dialog is opened.

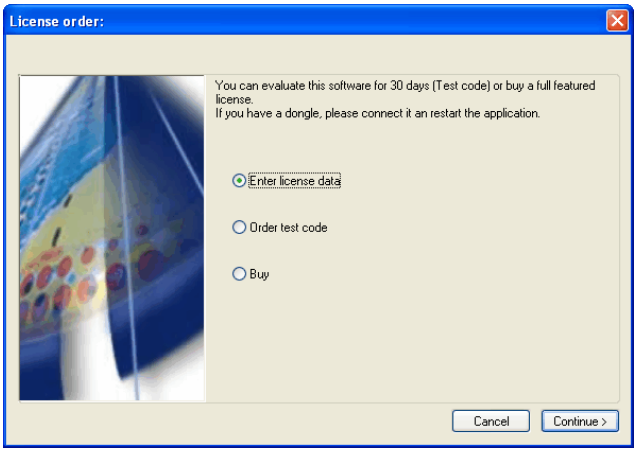

Fig. 1.1-7: Option for first installation of CoCut Starter 2017

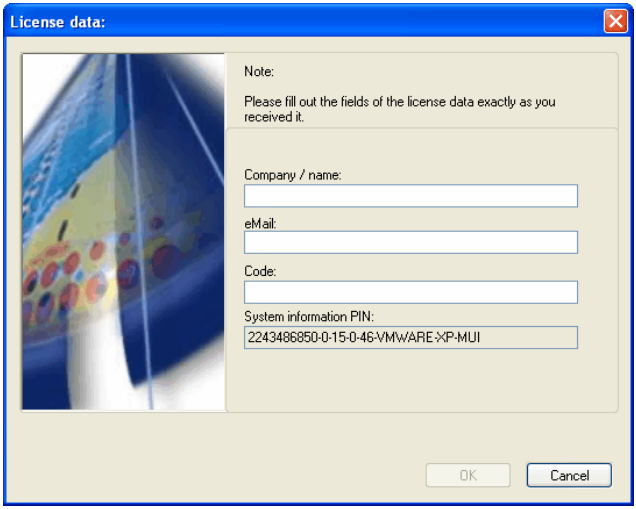

Fig. 1.1-8: These fields have to be filled with license data

1.1.3 Enter License Data (with Dongle)

If copy protection is realized using a dongle  (frequently in case of upgrades), don´t forget to connect the dongle with a port on your PC.

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On this sticker you´ll find information about program version, serial number and the code itself.

Important! All license data must be entered exactly how printed!

1.2 Autoexport - Scripts

Autoexport means that data from external programs (CorelDRAW, CorelDesigner, Illustrator, Freehand, Inkscape, InDesign) are imported automatically into CoCut - quasi at the push of a button. To do this the scripts are either integrated into the external program's menu structure or toolbar.

1.2.1 Corun Installer

With the Corun Installer you can install CoCut the plugins. In the *Name* column all host programs are listed, in which the plug-ins can be implemented. In the *Plugin path* column is displayed in which the folder the plug-in files are located after installation. In the *Eurosystem software* list all programs are listed that have a plug-in functionality. Select the appropriate program from the list. Activating the *Install* button starts the process.

Note: The Corun Installer is required if the host application was installed BEFORE the EUROSYSTEMS program or if plugins must be re-installed.

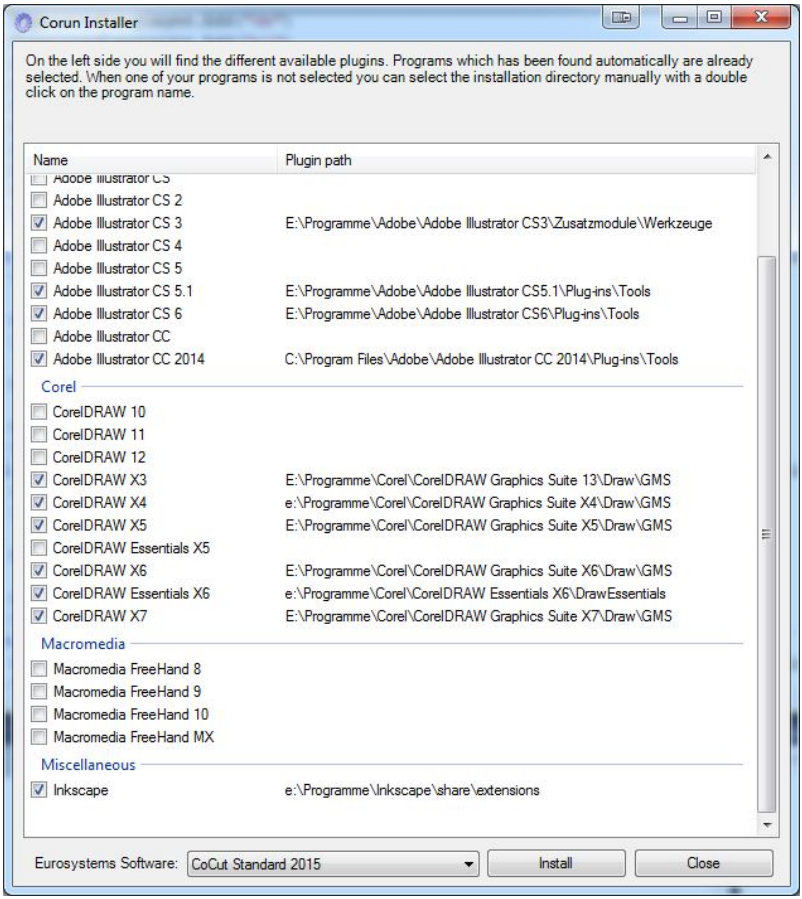


Fig. 1.2-1: Corun Installer dialog window with detected host programs and path indicators.

1.2.2 CoCut Script in Inkscape

The CoCut - script for Inkscape is located in the ***Extensions*** menu. The output routine is activated using the ***cutting*** menu entry in the CoCut Starter 2017 sub menu.

Important note: The plugin only works with the non-portable version of Inkscape.

1.3 Selection of The Device Driver

Please, select first your output device from the list ***driver***. In the field ***name of device*** the identical name for the selected device that is shown in the cutting dialog appears. This name can be changed individually in this field. After the selection of the driver please select - in the area ***type of connection*** - the ***device type*** with which the device is connected to the computer.

Tip: If the driver you search for is not in the list you can try another driver from the same manufacturer.

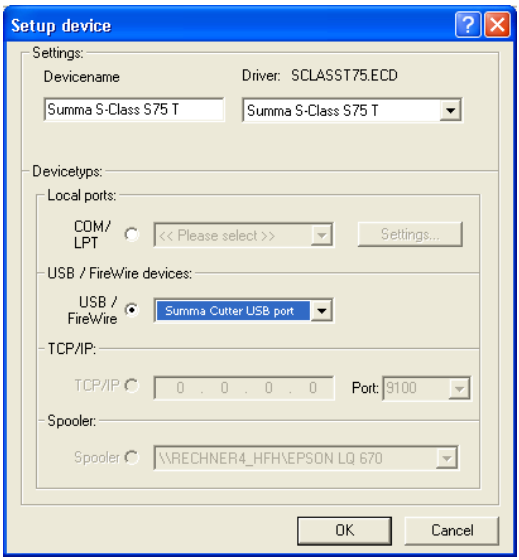


Fig. 1.3-1: Dialog for the selection of the device driver

Detailed information for the setting of the ***local interface*** is here: **please refer to 2.5: Cutting - Milling - Creasing - Drawing ...**

2 How to work with CoCut

2.1 Desktop and Working Sheet

2.1.1 I. Desktop

The so-called Desktop means the whole visible program window including **Toolbars, Working Sheet** and **Desktop** background.

Note: On the background can be placed any desired number of objects. The size of the background is limited only by the resources of your computer. Thus the layout can be done basically in 1:1 scale.

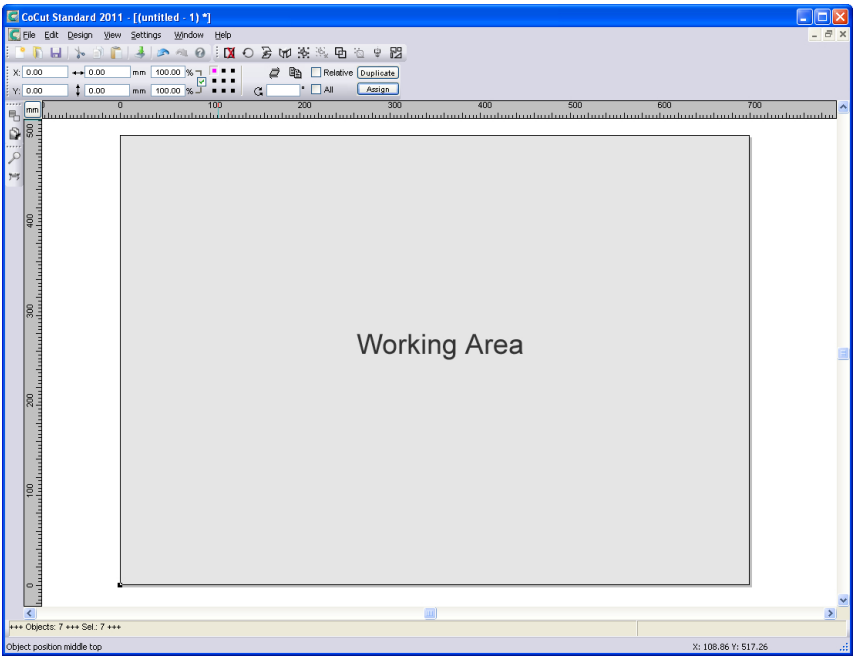


Fig. 2.1-1: Desktop with working sheet (here: gray), Background (here: white), Toolbars, Sidebar, Rulers, Statusbar

2.1.2 II. Working Area

The workspace is a subset of the CoCut desktop. The workspace is usually in the format that will later be output on a machine. In addition to the known DIN formats, any formats can be applied, e.g. for different table sizes.

Note: The working area is used primarily for guidance. The format of the working area has no influence on the output on a connected device. The output preview window displays what is given out.
please refer to 2.5: Cutting - Milling - Creasing - Drawing ...

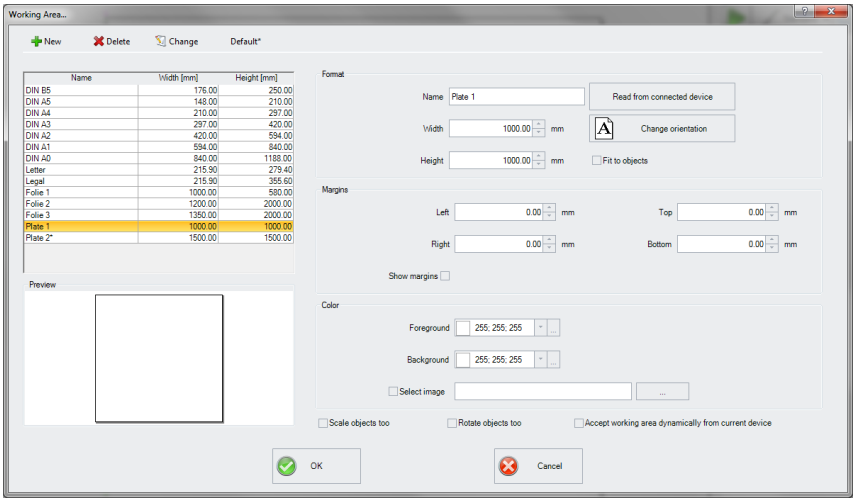


Fig. 2.1-2: The Working Area Dialog

2.1.2.1 The Buttons

The *New* Button

The ***New*** button creates a new format. The values for width and height of the selected line are transferred to the new row.

The *Delete* Button

The ***Delete*** button removes the marked row.

The *Change* Button

This button saves all changed parameters and options.

The *Default** Button

This button marks the name with a * (star). The star-marked format is used every time CoCut is started.

The *Read from connected device* Button

By means of this button - if the read-out command of the driver is processed by the machine controller - the width value can be read from the connected device and inserted into the width field.

The *Change orientation* Button

This button changes the orientation of the working space from portrait to landscape and vice versa.

The *OK* Button

The OK button accepts the changed values and closes the dialog.

The *Cancel* Button

This button closes the dialog without saving any changes.

2.1.2.2 The Areas

The *Preview* Area

In this area, the worksheet, the desktop background, their colors, as well as the orientation are displayed proportionally reduced.

The *Format* Area

Name

The name of the format is entered in this field and the name of the selected one is displayed.

Width

In this field, the width of the format is determined.

Height

In this field, the height of the format is set.

The *Margins* Area

Left, Right, Top, Unten

These 4 fields define the distance of the borders from the edge of the working area.

Note: Negative values are also allowed.

The *Color* Area

Foreground

Here, the color of the worksheet can be defined as RGB value.

Background

Here the color of the background desktop can be defined as RGB value.

2.1.2.3 The Options

The *Fit to objects* Option

This option captures the objects outside the working sheet and extends the sheet by the amount necessary to accommodate all the objects on the working sheet.

The *Show margins* Option

This option displays the defined borders as dashed lines in front of the working sheet.

The *Select image* Option

This option displays the selected bitmap in the preview and later on the working sheet. The ... button opens the file dialog for selecting the desired bitmap.

The *Scale Objects too* Option

If the height or width of the working sheet is changed, all objects on the working sheet are reduced or enlarged by the same amount.

The *Rotate Objects too* Option

This option determines whether the objects on the working sheet and on the desktop background will also be rotated when the orientation is changed.

The *Accept working area dynamically from current device* Option

This option ensures that the width and height values of the working area are read from the connected device and used. For each device, a format is created with the name of the device in the list.

2.2 Job Preparation

2.2.1 Import

With this command the graphics that have *not* been saved in the CoCut-job-format are transfered to the working surface.

The functionality of this dialog box corresponds to the ***open file*** command. Differences are only due to the possibility to change the size of the data to be imported by means of the parameter ***X-*** and ***Y-factor***. The desired file is chosen respectively specified via the ***name of file, type of file*** and ***directories*** (search in).

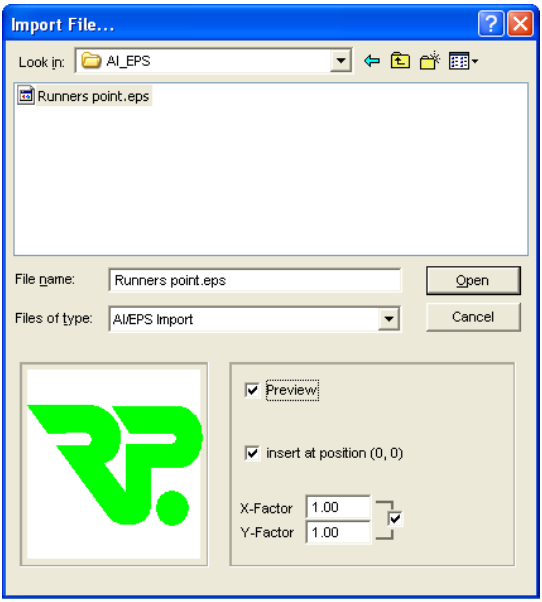


Fig. 2.2-1: Import window with preview

With the preview window in the import dialog all following **formats** can be displayed.

*.ai/eps, *.pcx, *.jtp, *.tif, *.bmp, *.wmf, *.emf, *.dxf, *.gif, *.hpgl, *.gtp, *.ik, *.svg

Indication: With text files (*.txt) the preview window is switched off.

2.2.1.1 Import Presettings

For many import operations, **constraints** can be defined to be taken into account **before**, **during** or **after** importing the data. Constraints can effect the DXF or HPGL import or all import operations.
Also for export constraints are definable in this window. Thus, a special option on job files can be activated, for example, the PDF export. The **constraints** are extensively recorded

in the following article. **please refer to 3.5.1.4: The *Import* Setup**

2.2.1.2 PDF Import

2.2.1.2.1 Additional Options

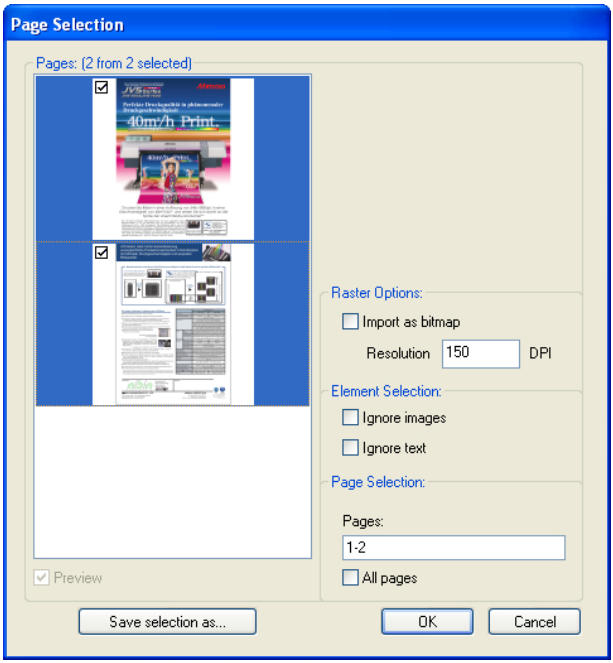


Fig. 2.2-2: Options concerning import of data

Integrated Job File

The ***Extract*** Button

Enabling the ***Extract*** ... button ensures, that the import function loads the integrated job file on the desktop, while extracting the PDF file.

Note: A prerequisite for this is that when you export the appropriate option in the preferences (see above) was made.

Raster Options

Import as Bitmap Option

If the ***Import as Bitmap*** option is enabled, then all vectors will be rastered into a bitmap before the import.

Resolution

The value in dpi

Element Selection

Ignore Images Option

If the ***Ignore Images*** option is enabled, then no images will be imported.

Ignore Text Option

If the ***Ignore Text*** option is enabled, then no texts will be imported.

Page Selection

In the **input field** the page number can be entered, which should be imported.

All Pages Option

If the ***All Pages*** option is enabled, then all pages of the document will be imported.

Search in

In the row ***Search in*** the path can be set that shall be searched.

File name

If the file name is know it can be entered into this field

Type of file

Here, you have to choose the format of the file to be imported in order to activate the corresponding import filter

Preview

The activation of this option draws a preview of the file content to the left preview window

Insert at Position (0,0)

This option inserts the objects at the 0 (zero) position of the CoCut-working surface.

X Factor, Y Factor

With these two factors the data can be scaled (increased or decreased) during the import. The scale can be proportional or unproportional.

2.3 The CoCut Layer dialog

In the layer-settings dialog the parameters necessary for the output are set and attributed to an object, a color respective a layer. The dialog opens by a right mouse click on the CoCut layer-toolbar in the main window.

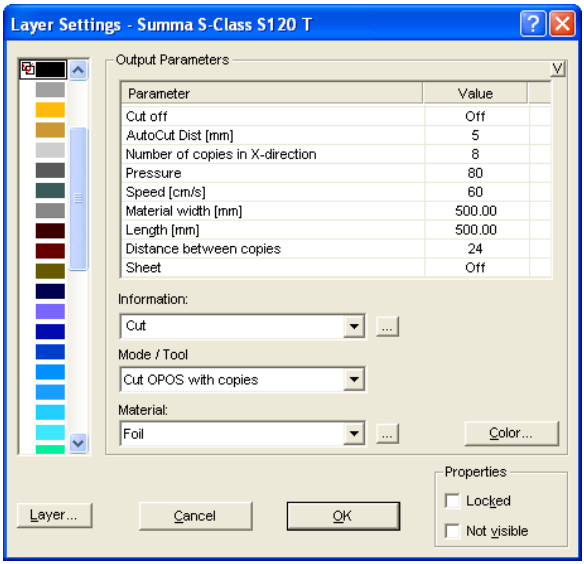


Fig. 2.3-1: Layer setup with adjustment of output parameters

In the ***Information*** field a name for the layer can be entered. This name is shown later in all dialogs in which the colors of the objects are needed.

In the ***Mode / Tool*** field the output tool can be selected from a list. The tools shown here depend on the used output driver.

In the ***Material*** field already saved material-configuration can be called up. The material-configuration can be created, saved or deleted with the button right of the selection box.

Indication: By clicking with the left mouse button on another color the settings are saved and the values of another layer can be edited.

2.4 The Output

2.4.1 Device Setting - Interface Setup (Local Device)

The CoCut output

With this command you activate the module for *cutting, milling, creasing* and *drawing* of your data.

You activate this function via the button in the ***tools*** toolbar or via the ***file*** menu, menu entry ***output...*** **S**

Fig. 2.4-1: The output button

When *first* opening another dialog will be opened before in which the *driver of the device* as well as the *connection* has to be defined.

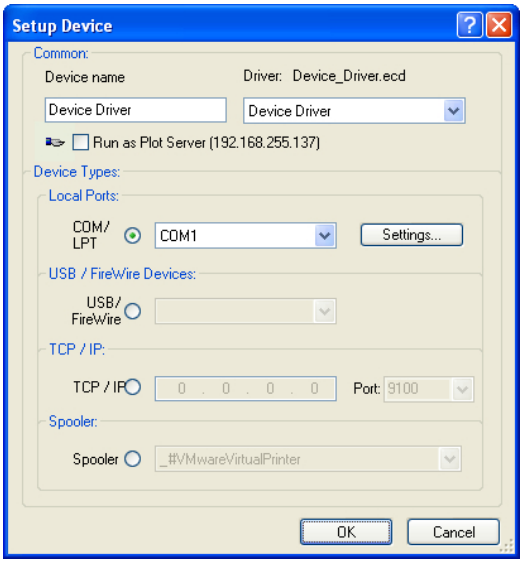


Fig. 2.4-2: Driver and selection of the connection

General

Under the part of the dialog named ***General*** you select the ***driver of the device***.

In the right list all device ***drivers*** are listed that are available in CoCut. In the left list an individual name for the driver can be distributed. This name will be used in the output dialogs of CoCut.

Enable as server

Requirements are at least 2 licenses of CoCut.

If the option ***enable as server*** is activated the output device will be marked as ***plot server*** and can be used by another ***Plot Manager*** for the output.

The characteristic features of an output device are that a driver for the processing of the data has to be distributed to this output device. On the computer on which the Plot Manager is running the job data for the output are transformed into device data by means of a driver. The output of the device data can be done in several ways:

Types of connection

Local interfaces

Local interfaces are the interfaces (COM1, COM2, ..., LPT1, LPT2, ...) that are directly on your computer.

The activation of the ***settings*** button opens a dialog for the configuration of the interface. These settings that are done here apply for the whole system.

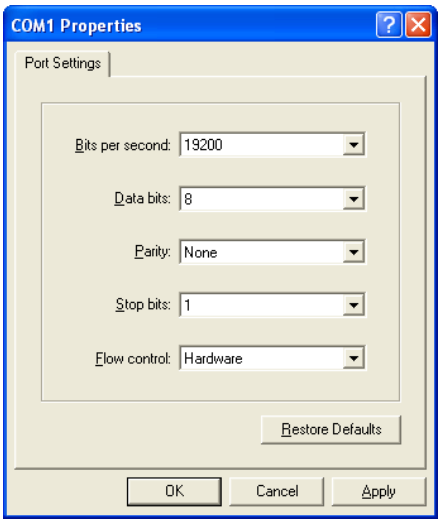


Fig. 2.4-3: Dialog for the setting of the interface parameters

Indication: When steering serially you have to pay attention that all settings on the side of the computer as well as on the side of the output device correspond. Otherwise there is no or faulty communication between them.

USB / Firewire Devices

Here, all momentarily connected ***USB / Firewire devices*** are listed.

TCP / IP

Here, you have to enter the TCP / IP address and the port number to which shall be output.

Spooler

Here, you can select a Windows printer driver.

When opening the ***output*** dialog again it will be opened *directly* with the previously set device driver.

2.4.2 Device Setting (Network Device)

When selecting the menu item ***create network device ...*** following dialog will be opened:

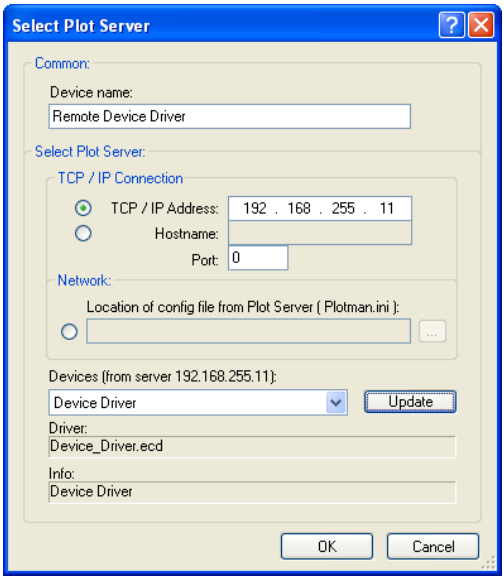


Fig. 2.4-4: Dialog for the configuration of a plot server

A ***network device*** enables the output of CoCut jobs on a Plot Manager that runs on *another* computer. Contrary to a "normal device" the data are not locally transformed into device data but transferred unchanged to the plot server for the further processing.

Device name

In the entry line enter the name of the device.

Server selection

In the area named ***server selection*** enter the ***TCP/IP address*** if you use a TCP / IP connection or the ***name of the computer*** that is used.

Network

If a connection shall be done via a ***network*** the configuration file of the plot server, the ***plotman.ini***, must be selected.

Devices (of server)

If the ***actualize*** button is pressed the ***devices*** of the server are read.

Indication: The device of the server can only be read if the server was selected as only then, the devices of the server are available.

Driver

In the field ***driver*** the device driver is entered that the server uses for *this* device.

Indication: This driver must also be created locally, which means as local device.

2.4.3 Start Output from the CoCut Working Surface

The output is started using the plotter icon  .

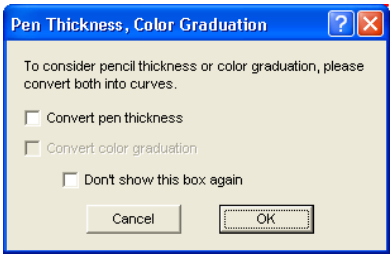


Fig. 2.4-5: Pre-processing line weight and color gradient

If a CoCut job contains objects with the attributes ***pen thickness*** and/or ***color graduation*** a preceding dialog appears. The object attributes can be transformed into vectors so that they are taken into consideration at the output. After clicking on the ***OK*** button the object attributes are transformed into curves.

2.4.3.1 Output to Device

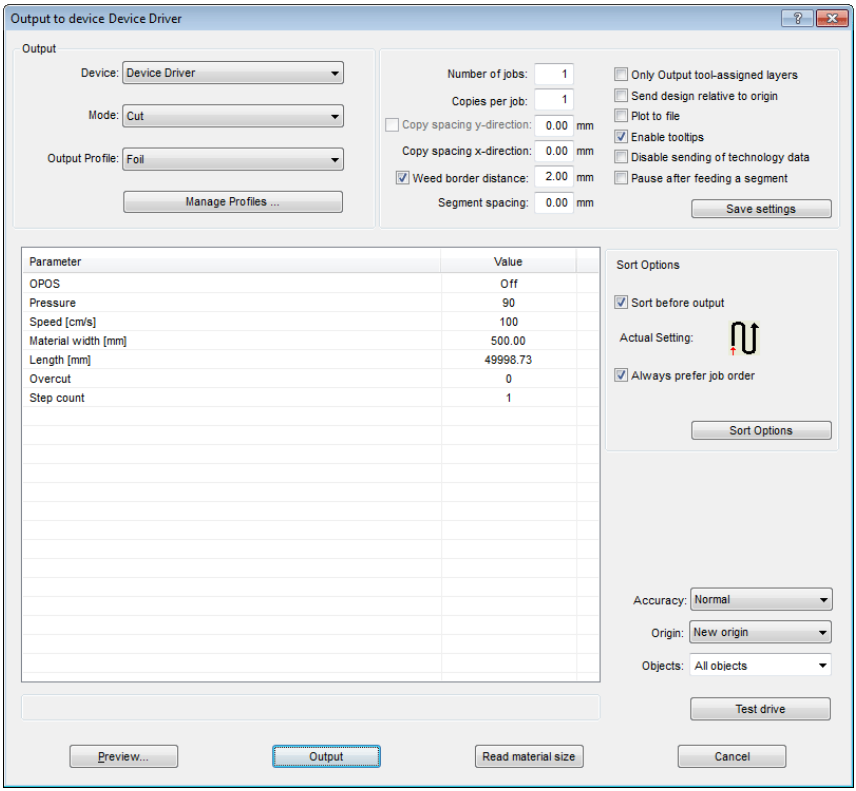


Fig. 2.4-6: Output dialog

Output

In the area named ***output*** of the ***output to device*** dialog you can control most of the parameters that are directly or indirectly in contact with the output device.

Device

In the ***device*** field the previously defined output device is shown.

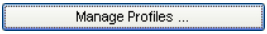
Mode

In the ***mode*** field the required output mode is preset.

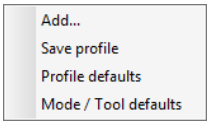
Output Profile

In the field ***output profile*** the required profile with individual settings and values is selected.

Manage Profiles Button

Clicking on the 

button opens the following popup menu:



Add

Activating the ***Add*** menu item writes a new data record into the profile database.

Save Profile

Selecting the menu item ***Save profile*** the prior to this edited and changed values are written into the profile database.

Profile Defaults

Activating the menu item ***Profile defaults*** resets all **Values** to the default value. The profile values are reread.

Mode / Tool Defaults

Activating the menu item ***Mode / Tool defaults*** resets all **Parameters** to the **internal driver values**.

Number of Jobs

The value in the field ***number of jobs*** repeats the last output *without* the reading of the video marks with identical output parameters such as scaling, etc. Only layers with tools are given out. This variant protects against the fact that layers are output with no tool assignment. This means that there is no error output due to the use of the last active tool.

Copies per Job

In the field ***copies per job*** you define how often the *selected* objects shall be cut. After the cutting this value is automatically reset to 1.

Copy Spacing Y-Direction

The value in the field ***Copy spacing y-direction*** defines if the copies shall be stacked vertically and which space has to be kept between the copies. Pre-condition for the activation of this option is that the selected object can be cut more than one time on top of each other!

Indication: In the preview the first object is shown „normally“. Each further object of the stack is shown dashed in blue.

Copy Spacing X-Direction

The value in the field ***Copy spacing x-direction*** defines the space between the copies that were entered in the field ***Copies per job***.

Weed Border Distance

With the option ***Weed border distance*** it is defined if and with which space a rectangle is cut around the plot that facilitates the weeding of the foil. In the ***output preview*** the frame - if activated - is shown *dashed in blue*.

Segment Spacing

The ***segment spacing*** defines the horizontal space between the single segments. Segments always occur if the job has to be sectioned which means divided.

Only Output Tool-Assigned Layers

By activating this option, only objects from a layer with an assigned tool are transferred to the **Plot-Manager**.

Send Design Relative to Origin

Via this option the zero point (0/0) of the cutter can be moved. If this option is **not** active CoCut selects automatically the physical zero point as starting point for the cutting.

If the ***Send design relative to origin*** option is active the physical zero point is moved relatively to the offset coordinate of the reference point. The coordinates of the reference point corresponds to the position of the down left corner of the object to be cut on the CoCut working surface.

Plot to File

If the option ***plot to file*** is active all output data are directed to a file you have named and written onto the hard drive.

Enable Tool Tips

If this option is enabled, explanatory texts regarding parameters, values or options are displayed, if the mouse cursor is located directly above.

Pause after Feeding a Segment

Sectioning / Segmentation: If a job is too big for the output CoCut separates the job automatically in so many parts **(segments)** that are necessary for the complete output of the job.

If the option ***Pause after feeding a segment*** is active the output is interrupted after each segment and the material can be re-adjusted if necessary.

Save Settings Button

By activating the ***Save settings*** button all values that have previously been entered in the ***output*** dialog are stored and assigned to the currently active output device.

2.4.3.2 Sort Options

Sort before Output

If the option ***Sort before output*** is activated all objects in the working surface are sorted 1. in *head direction* and 2. in *transport direction*.

Actual Setting


Fig. 2.4-7: Main direction icon

The icon shows which **main direction** is selected in the ***output to device*** dialog.

Always Prefer Job Order

This option ensures, that the sorting that was made before, is not changed through an alternative sortation.

The Sort Options **Button**

The ***sort options*** button opens the ***output settings*** dialog.

Accuracy

The ***Accuracy*** field offers the following settings: ***very low, low, normal***, ***high*** and ***very high***. As default, the value ***normal*** is set.

The accuracy defines of how many vector parts an object should consist. This is only relevant with objects whose size range in ten thousands of a millimeter. Other object sizes are calculated *automatically* by CoCut.

Feed / **Origin**

Depending on the selected driver the field name is either ***feed*** or ***origin.***

Friction Feed Cutter

With ***origin*** the options are ***new origin*** or ***don't set.*** If the option ***new origin*** is selected the device goes into X-direction at a fix set value behind the last cut object and this position is then the new origin. If ***don't set*** is activated the physical zero point is the new origin after the output.

Flatbed Cutter

With ***feed*** the options are ***feed*** or ***no feed.*** If the option ***feed*** is activated the material feed is carried out with the sectioning and with the output from the roll if the flatbed cutter has an automatic material feed.

Objects

The field ***Objects*** allows the selection of the objects to be output. Besides the modes ***all objects*** and ***selected objects*** CoCut also allows the cutting of ***color sequences*** or of ***single color layers***. The two last named are explained more in detail in the chapter „***color separation when cutting***".

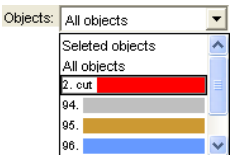


Fig. 2.4-8: List field objects with selection modes.

2.4.3.3 *Parameter* / *Value* Table

The table ***Parameter*** / ***Value*** allows the access to the parameters of device and driver. The area is divided in ***parameter*** and ***value***. The width of the display can be changed by moving the vertical line between the areas with the mouse. Whenever **Edit…**

is displayed in the ***value*** column a double-click opens the corresponding window for the setup of a ***group of parameters***.

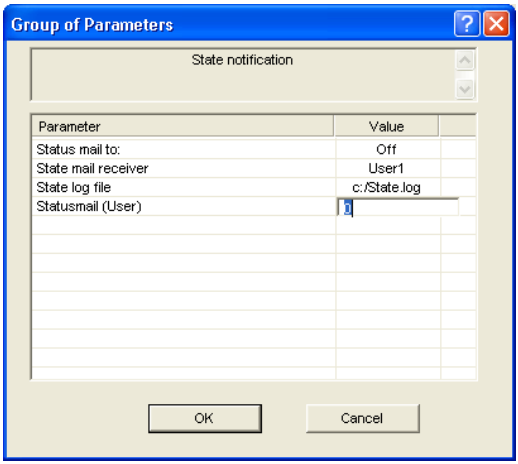


Fig. 2.4-9: Example for an opened parameter group

Info Line

In the ***Info Line*** information relating to the output process is displayed additionally, e. g. "Job will be sectioned".

Test Drive

If the ***test drive*** button is activated the connected device drives along the ***weeding frame*** with the tool head lifted. This also happens if the option ***weeding frame*** is not active.

Preview or **Direct Output**

The ***Preview*** button opens the ***output*** preview. **Direct output** suppresses the **preview** window. After pressing the output button, the plotter commands are transferred to the plotter together with the data.

Output

The ***Output*** button transfers the data directly to the ***Plot Manager*** and to the connected device.

Read Material Size

The ***Read material size*** button delivers back to all connected devices the height of the area to be plotted if an accordant command is intended in the firmware for the device. Devices that do not offer this option no value respective zero is delivered back.

2.4.3.4 Color Separation when Cutting

Each layer color used in the draft appears again in the ***objects*** list with the number that clearly defines each layer color. In addition, in this list field *two horizontal color bars* appear. After having transferred the data of a color layer, in the info area of the Windows status bar the ***Plot Manager*** icon ( ) appears.

Double clicking on this icon activates the Plot Manager ***job control***. If the mouse cursor is positioned on the icon and the right mouse button is pressed, a pop up menu appears in which the **Plot Manager** can be closed or the program ***version*** can be shown. In the ***layer selection*** the color layers that have not been processed yet occur in the order in which they had been selected. The order in the stack can be changed at any time.

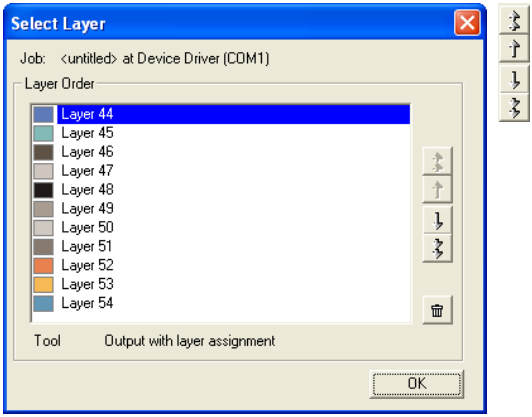


Fig. 2.4-10: Definition of the order in which the single layers shall be processed by up / down buttons

The order is defined via the ***up / down*** buttons. Layer colors that are not necessary are deleted from the list with the button.

Tip: For the color separated cutting use the register marks from the draw tool. Register marks are cut at the same place on the foil independently from the used color.

2.5 Cutting - Milling - Creasing - Drawing …

2.5.1 The Output Preview

The ***output preview*** is automatically started if you press the ***preview*** button in the ***output*** dialog.

Closing the ***output*** preview and returning to the working surface of CoCut 

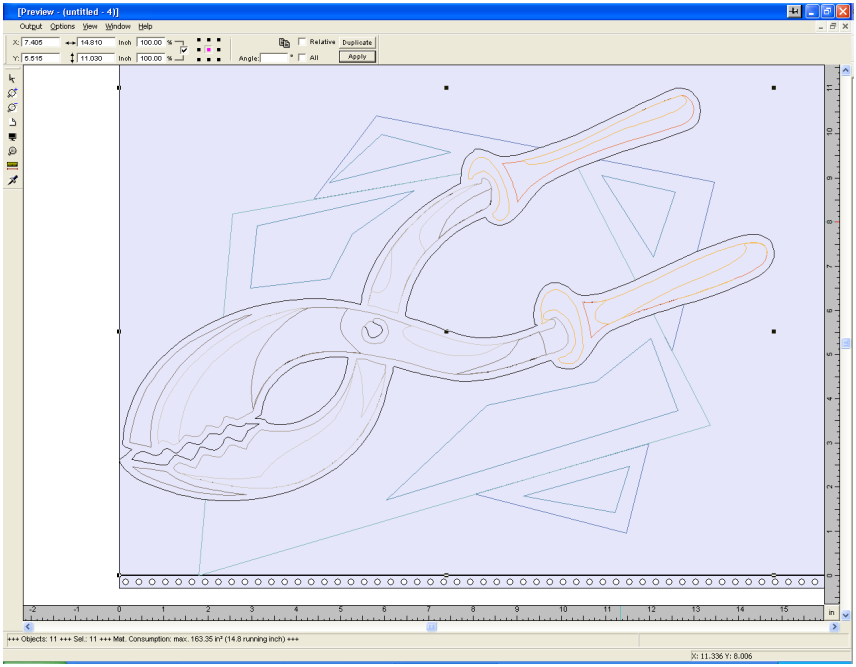


Fig. 2.5-1: Output preview with toolbars, status line and output objects

In the status line of the cutting preview the following information is shown: ***contour***, ***filling***, ***width*** and ***height***, ***group*** or ***combination***, the ***max. foil consumption*** in square meters and running meter (rnm) as well as selected ***object features***. If the ***output*** menu is activated the data are transferred to the output device.

Indication: If the job to be cut is left, underneath or above the material- or table preview and the output -menu is activated you will automatically be reminded that the objects to be cut are out of range of the output.

Detailed description:
please refer to 2.5.7: The *Preview Tools* Toolbar
please refer to 2.5.8: The *Preview Object Parameters* Toolbar

2.5.1.1 Foil optimization

The material consumption can be reduced by using the module ***foil optimization***.

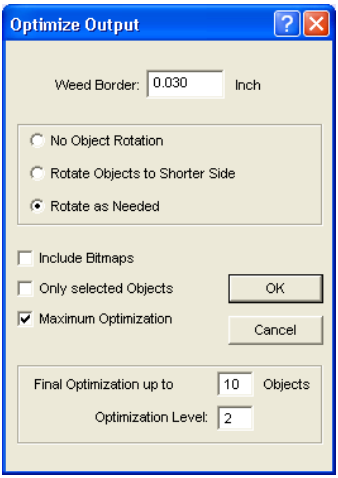


Fig. 2.5-2: Parameter dialog for the material optimization

The ***foil optimization*** takes care that all objects are arranged in a way that they take the least space on the material.

Indication: Groups and combinations are each regarded as an optimization object. If this is not desired the grouping must be interrupted and the combination cancelled.

Following options are available:

Weed border distance

In this field the desired distance between the optimization objects, the so called ***weed border distance*** can be set.

Rotate objects to shorter side

All objects are rotated so that the shorter side is downwards.

Rotate as needed

During the optimization all objects are rotated so that they can be arranged saving the most space.

Include bitmaps

If this option is activated, bitmaps and groups that contain bitmaps are also optimized.

Only selected objects

Only the selected objects are considered. With this option you can for example optimize according to layers (colors).

Maximum optimization

If this option is activated two more fields are shown in the foil optimization dialog. The option ***maximum optimization*** calculates all possible combinations the can arise from the fields ***end optimization up to maximum ... objects*** and ***permutation depth***. The calculation can take much time depending on the size of the here set values as all possible combinations that arise from the two values are calculated and compared. Therefore, you should usually not set more than 20-30 objects with a permutation depth of max. 5.

Indication: An optimization always leads to the rotation of one or several objects.

2.5.1.2 Weeding lines

Weeding lines serve for the better procession of large jobs. Material length or width of several meters are difficult to handle, therefore, you can insert weeding lines during the foil cutting that divide the job into smaller parts that are more easy to handle.

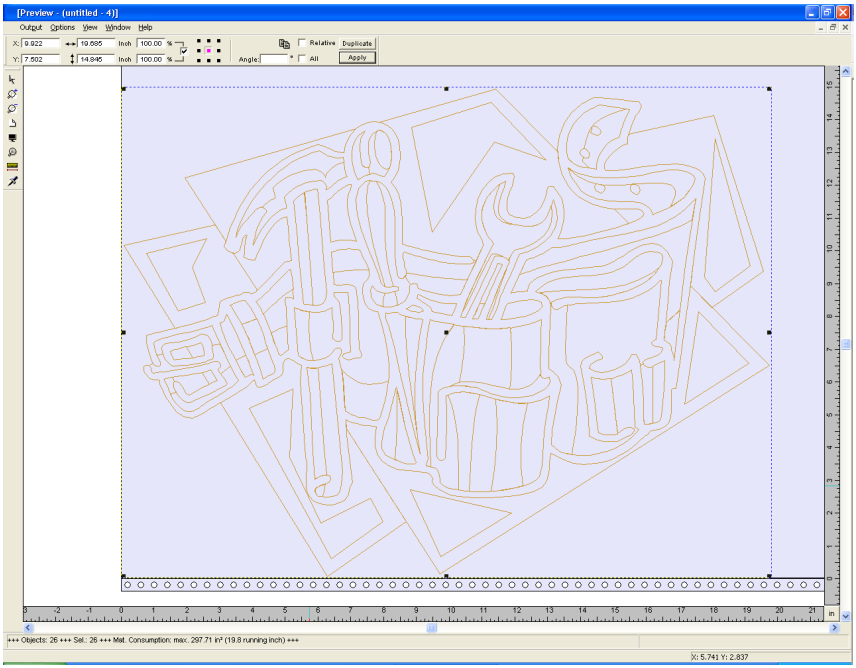


Fig. 2.5-3: Output job with weeding frame (dashed in blue) without weeding lines

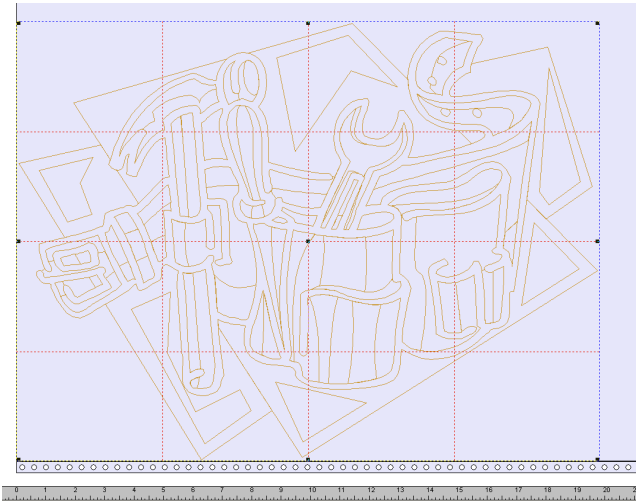


Fig. 2.5-4: Example with 3 horizontal and 3 vertical weeding lines (dashed in red)

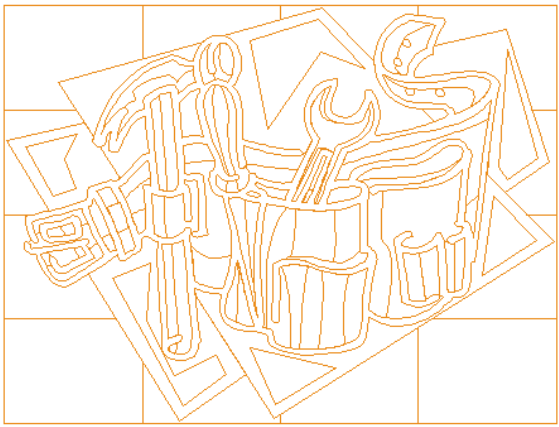


Fig. 2.5-5: Result of the output with weeding lines - objects not! cut

In the ***output preview*** there are 3 possibilities to insert horizontal and vertical weeding lines.

Indication: Weeding lines can only be inserted if the option weeding frame has been activated in the output dialog.

1. Manually

Position the mouse cursor on the weeding frame *dashed in blue* around the objects. The mouse cursor changes into a double-headed arrow. Now draw a horizontal or vertical

weeding line to the position where it should be segmented. Repeat the process until all necessary weeding lines are inserted.

2. Via the menu *options*

Open the menu ***options*** and activate the menu item ***horizontal weeding line*** or ***vertical weeding line***.

The first weeding line is inserted in the middle of the objects to be cut. The second call up of the function bisects the two halves in two more halves and so on.

3. Via the shortcuts h or v

An „**h**" or „**v**" directly entered via the keyboard generates the respective weeding lines - as described in 2.

Tip: Single objects can be provided additionally with a separate weeding frame via the right mouse menu.

2.5.1.3 Job Sectioning

Sectioning is the division of a job in so many parts (sections) that are necessary for the complete output of the job.

If the job to be output is bigger than the set or the available output width (***output*** dialog, field ***width of material***) of the output device in the information area of the ***output*** dialog the indication „***job will be sectioned***" is shown.

Indication: The terms sectioning and segmentation are used as synonyms.

The activation of the ***output*** menu then opens the following dialog **before** the transfer to the device:

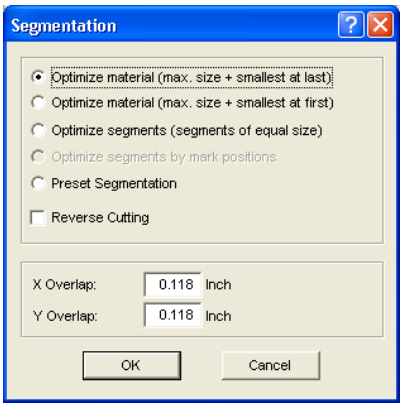


Fig. 2.5-6: Sectioning dialog with overlapping of 3 mm

Optimize material (max. size + smallest at last)

Optimize … smallest at last) causes CoCut to create segments in the maximum permitted size. The size of the last segment usually differs from the others

Optimize material (max. size + smallest at first)

Only active with flatbed cutters. If the last segment was also cut as last the plate could not be processed until the end. Therefore, the remainder is cut as first so that the plate lies on the table until the end.

Segment optimization (segments of equal size)

If the option **segment optimization** is activated always segments *of the same size* are created.

Optimize segments by mark posiions

This option is activated as default with CoCut if ***video markers*** exist in the Job. The above dialog is skipped and the preview of the dynamic segments is shown. The reason of this optimization is that always at least 3 video markers are necessary. Depending on the location of the video markers CoCut "searches" up to 30% next to the segment line if there is a video marker. If yes, the respective segment is adjusted ***dynamically***.

Preset segmentation

The last used setting is automatically saved. When loading the job again this sectioning can be accessed.

Reverse cutting

The option ***reverse cutting*** indicates that the objects are cut as „negative“ for example for the use as template for the screen printing.

X-overlap and Y-overlap

Segmentation with overlapping - In the fields ***X- and Y-Overlap*** you can define how much the segments shall overlap. The vectors are enlarged accordingly at the cutting points.

2.5.1 The Output Preview

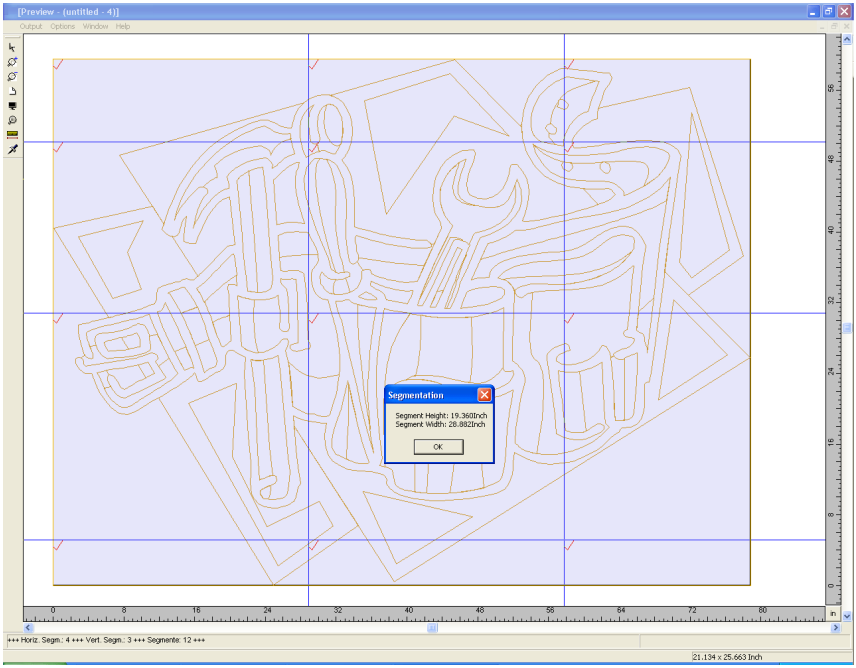


Fig. 2.5-7: Foil optimization in the sectioning preview with 8 segments and information on segment sizes

Selection and deselection of the segments

Selection and deselection of the segments is done by clicking into the segment. The red checkmark ✓ indicates which segment is active and being output.

Changing the suggested sectioning

You can change the sectioning by clicking on the blue section lines and move them to the desired position with the mouse. If necessary CoCut inserts automatically new sections.

In the status line of the segmentation preview the size of the job to be cut in X- and Y-direction and the number of segments are shown.

3 Reference Part

The menu items in chronological order:

3.1 The *File Menu*

3.1.1 The *New…* Command

With the ***New*** command a new job is opened. **CTRL+N**

3.1.2 The *Open…* Command

With this command the files that were stored on your hard drive or another data carrier in the CoCut JOB file format are brought onto the current screen / desktop. You can further edit this file. Jobs can be deleted after a safety query. **CTRL+L**

3.1.3 The *Save C*ommand

With this command you save the current job. If the respective job has already been stored before, the given file name and the directory are kept. The older version of the job is overwritten so that the old version can not be restored any more. **CTRL+S**
If you have created a new job that has not been saved before, the program, if you have clicked the ***save*** command in the ***file*** menu, goes automatically to the command ***save as…*** .
First, the ***job info*** dialog is opened where you can enter more information about the job. Then, the real dialog for saving your job is opened and you are asked to enter the file name and select the directory.

3.1.4 The *Save as…* Command

With this command you save a new job under a file name chosen by you in a directory to be selected. This command is also for changing the file name and / or directory of already existing files. If for example you want to save a job that is build up on an older one without losing the old version then you select the command ***save as ...*** and you can save the new job under another name in a new directory if you wish to. **SHIFT+ CTRL+S**

The command ***save as...*** is also to be selected if you want to save the current job onto another data carrier. To do so, select the appropriate disk drive.

3.1.5 The *Import…* Command

With this command files are imported into CoCut. Known file formats are shown in a list.

 **CTRL+I**

3.1.6 The *Output…* Command

With this command you call the output module (Plot Manager) for cutting, drawing or milling.

 **S**

3.1.7 The *Quit* Command

With this you terminate CoCut and return to the Windows desktop. If you have not saved the job that is currently being edited, you will be asked if you want to do so.

 **CTRL+Q**

3.1.8 The *Job History*

The ***Job History*** function facilitates the loading of the 4 last jobs without having to pass via the directory tree. At the end of the menu list of the ***file*** menu the names of the 4 last edited jobs appear. Click with the mouse button on the desired job name. Then, the selected file will be loaded on the working surface.

3.2 The *Edit* Menu

3.2.1 The *Undo* Command

 **F5**

With this command it is possible to undo the last done operations and functions. The default setting is 5 steps. This default value can be changed via the ***settings*** menu, menu entry ***standard settings*** / ***miscellaneous*** and here ***undo levels***. The maximum value is 100 steps.

Indication: This setting can only be changed with a new file (file menu, menu item new)!

3.2.2 The *Redo* Command

 **F6**

This command is the reverse command to undo. It restores the status that was there **before** the undoing.

3.2.3 The *Cut* Command

 **CTRL+X**

With this command objects are copied to the Windows clipboard and deleted from the working surface. Via the clipboard objects can be inserted at another place or in another program.

Indication: For the transport of your data you can also use the export command. This is always necessary if your data shall be transferred to another computer.

3.2.4 The *Copy* Command

 **CTRL+C**

With this command marked objects are copied to the clipboard without deleting them from the working surface.

3.2.5 The *Paste* Command

 **CTRL+V**

This command inserts graphics and objects from the clipboard to your job. The mouse cursor changes to a right angle in which *insert* is written.

Now point the tip of the right angle to the point on your working surface where the graphic or the object shall be inserted.

3.2.6 The *Paste Special...* Command

Via this menu item "pictures" can be imported from the clipboard to CoCut.

Indication: If in CoCut objects are copied this menu item is not active.

3.2.7 The *Select All* Command

With this command all objects of the active job which means all objects on the working surface and also outside the working surface are marked. The selected objects can then be grouped, combined or moved.

 **CTRL+A**

3.2.8 The *Reverse Selection* Command

With this command all non-selected objects are selected. Already selected objects will be unselected.

 **SHIFT+E**

3.2.9 The *Multi Copy…* Command

This command serves the generation of any number of object copies (duplicates) on the working sheet. Number, Offset and more can be set in a dialog.

Detailed description: **please refer to 5.4: The *Object Parameter* Toolbar**

3.3 The *Design* Menu

3.3.1 The *Rotate Axis C*ommand


A

This command rotates the marked objects at 90° counter-clockwise. This option is always necessary if you want to adjust your objects fast to the rolling direction of the foil without having to go via the ***rotate*** function.

3.3.2 The *Rotate Axis With Page* Command


SHIFT+A

This command rotates the marked objects with page at 90° counter-clockwise.

3.3.3 The *Horizontal Mirror* Command


X

The selected object is mirrored at its horizontal through its center point. If several objects are marked, the center point of the virtual checkbox whose edge is limited by the 8 black dots with the corresponding horizontal is taken as axis of reflection. If no objects are marked all objects are mirrored.

3.3.4 The *Vertical Mirror* Command


Y

The selected object is mirrored at the vertical through its center point. If several objects are selected the center point of the checkbox with its corresponding vertical is used as axis of reflection. If no objects are marked all objects are mirrored.

3.3.5 The *Delete* Command


Del

Pressing the DEL key executes the ***delete*** command. In order to delete particular objects from your graphic they must be marked.

3.3.6 The *Mirror on the X Axis* Command


SHIFT+ X

All selected objects will be mirrored at the ***visible X-coordinate axis***.

3.3.7 The *Mirror on the Y Axis* Command


SHIFT+Y

All selected objects will be mirrored at the ***visible Y-coordinate axis***.

3.3.8 The *Duplicate* Command


CTRL+D

In order to use this command the object to be duplicated must be marked before. Now click with your left mouse button on the ***duplicate*** command or activate it via the hotkey. The marked objects are now doubled.

The positioning is done according to the values that you have entered in the ***settings*** menu, menu item ***standard settings / miscellaneous***.

Indication: You can also duplicate an object by first marking it, moving it with the left mouse button kept pressed and then press the right mouse button once at the position where the duplicate shall be created. The displacing values are entered automatically with this procedure.

3.3.9 The *Group* Command

 **CTRL+G**

This command allows combining several objects to a group in order to edit them together. This can be wise if for example you want to move several objects without changing their position to each other. To do this, first mark all objects that you want to move together, select the ***group*** command and then move the newly created group to the desired place. Now, it is not possible any more to change the single objects that form the group independently from each other.

In order to make this possible again the grouping must be broken with the ***break group*** command.

Indication: Grouped objects cannot be treated with the node editing tool. The grouping must be broken before. In order to differentiate between the grouped and ungrouped objects they are shown dashed in blue.

3.3.10 The *Break Group* Command

 **CTRL+B**

This command is used to divide a group of objects again into single object. Each object can then be edited individually.

3.3.11 The *Combine* Command

 **SHIFT+K**

This command combines like the grouping several objects to one. The difference to the ***group*** command is that the selected objects are not regarded as single isolated objects lying next to another anymore.

Let us explain this fact with an example.

You have created two squares with different sizes, the smaller one lying completely within the bigger one. In order to obtain that in the full-color-mode the area of the smaller square is transparent you combine the two squares after having marked them before. The size of the bigger square is now interpreted as outer edge and the smaller one as inner edge. The area between the two edges is filled with the color selected in the layer box. In the middle, a hole with the size of the smaller square remains.

3.3.12 The *Break Combination* Command

With this command you cancel a combination. Now, the program treats the combination objects as single objects again.

 **SHIFT+L**

3.3.13 The *Align…* Command

With this function marked objects are aligned. You can align the objects horizontally or vertically. The objects are arranged in that way that they are either centered or aligned at the desired side.
In addition, the objects can be aligned with the same distance so that a steady appearance is obtained. It is also possible to center all objects horizontally or vertically on the working surface.

 **R**

Indication: This option can only be activated if you have marked at least 2 objects.

3.3.14 The *Weeding Border* Command

This command generates a so-called weeding border or frame around one or more selected objects. A weeding border facilitates weeding of the vinyl from the carrier.

3.4 The *View* Menu

3.4.1 The *Zoom In* Command

If you select this function the mouse cursor changes into a lens with a plus inside. You can now select an area that shall be zoomed by keeping pressed the left mouse button. The selected area will then be shown increased to the maximum in the program window.


+(NUM)
or F2

Indication: A beep of the computer loudspeaker informs you that the maximum zoom is reached.

3.4.2 The *Zoom Out* Command

This function decreases the working surface gradually. If it had been zoomed repeatedly before, the single zoom steps are carried out backwards.


-(NUM)
or F3

3.4.3 The *Full Page* Command

Select the function so that the whole available working surface is shown.


B

3.4.4 The *Show All* Command

This function changes the display of the vector drawing in this way that all objects can be seen in the program window. The section is chosen in that way that it is the biggest possible display of the graphic showing all objects.


F4

Indication: If you keep pressed the SHIFT key while doing this command only the marked objects are zoomed to maximum.

3.4.5 The *Show Selected Objects* Command

If this command is activated only the objects marked on the working surface are displayed as big as possible.


SHIFT+F4

3.4.6 The *To Front* Command

If you have arranged several objects on top of each other the following commands enable you to modify the location of the objects to each other. With the ***to front*** command the marked object is set on the top place above the others.


CTRL+O

3.4.7 The *To Back* Command

With this command you set the marked object underneath respective behind all other objects. **CTRL+U**

3.4.8 The *Forward One* Command

This command sets the marked objects further front in the display. **PgUp**

3.4.9 The *Back One* Command

With this command you set the marked object further down and thus further back in the display. **PgDn**

3.4.10 The *Reverse Order* Command

The order of the objects in the stack is reversed. What was lying on top then lies at the bottom and vice versa. This also applies for all objects in-between. **U**

3.4.11 The *Change Order* Command

With this command you can change the order of the objects in the display interactively by clicking the object contours one after another in the desired order. **SHIFT+R**

Note: If all contours are to be taken into account, the grouping of the objects must be broken or the combination of the objects must be broken as well.

3.4.12 The *Contour View* Command

This command switches the display of the working surface to the contour mode which means that only the contours of the objects are shown. **F9**

3.4.13 The *Enhanced View* Command

With this command you can obtain the best possible display of the objects (smoothened contours). **SHIFT+F9**

Indication: It slows down the speed of processing and should therefore only be used for the last check or presentation.

3.4.14 The *Always on top* Command

The CoCut window remains always in the foreground.  **CTRL+Y**

Indication: This menu item is only active if the CoCut window is in the window mode.

3.4.15 The *Refresh Screen* Command

With this function the content of the visible window is build up again without changing the size or the selected section.  **CTRL+W**

Indication: Use this command if objects on the screen are visible that cannot be accessed by the arrow tool or if display errors of another kind occur.

3.5 The *Settings* Menu

3.5.1 The *Standard Settings* Menu

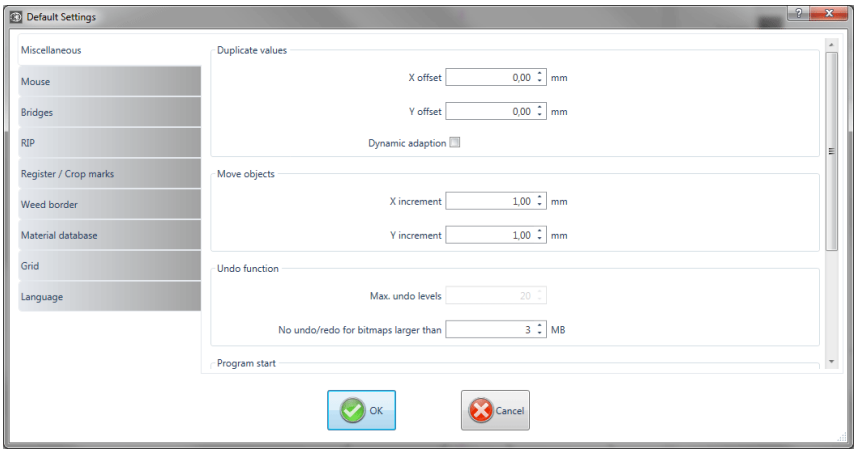


Fig. 3.5-1: Default Settings dialog - here: Miscellaneous tab is active

3.5.1.1 The *Miscellaneous...* Setup

CTRL+J

3.5.1.1.1 Duplicate values

- X offset

Indicates the value that remains between the original and the duplicate (in X-orientation) after the creation of a duplicate.

- Y offset

Indicates the value that remains between the original and the duplicate (in Y-orientation) after the creation of a duplicate.

- ***Dynamic adaptation*** **Option**

This option takes care of the switching on or off of a function that automatically enters and uses the duplication values as X- or Y- orientation when duplicating with the right mouse button.

3.5.1.1.2 Move objects

- X increment

Indicates the value how much the marked objects are moved or displaced when pressing the arrow keys on the keyboard.

- Y increment

Indicates the value in Y-orientation how much the marked objects are moved or displaced when pressing the arrow keys on the keyboard.

Indication: If you keep pressed the SHIFT key during the movement, the value of the displacement is reduced to a tenth part. If you keep pressed the SHIFT + CTRL key the displacement is a hundredth of the set step size.

3.5.1.1.3 Undo function

- Max. undo levels

Refers to the undo function in the ***edit*** menu.

Indication: This option can only be set if no job is loaded.

- No undo / redo for bitmaps larger than ... MB

For bitmaps that are bigger than the value set in this field the undo/redo-function is automatically **switched off** which means that the operations on this bitmap cannot be made undone.

Advantage: saving of time.

Reason: The expenditure of time (computational expenditure) for bitmaps from a specific size onwards becomes too big as for every undo / redo step a copy of the original (initial state) must be created.
The value that is entered in this field should be between 5-10% of the RAM available in the computer.

3.5.1.1.4 Program start

- Info window

When the program is started, an information window is displayed in front of the workspace, which informs about news, updates, etc., if there is a connection to the Internet.

The 3 options are: **Display always, Do not show again, Only display when new.**

Recommendation: With „Only display when new" you do not miss any important information regarding CoCut.

3.5.1.2 The *Mouse…* Setup

3.5.1.2.1 Mouse action

- <Ctrl> + right mouse button assigned with:

Here, you can define the assignment of the right mouse button. To do this, open the selection list and select the command that shall be carried out when clicking once with the right mouse button.

- Click Delay

This option increases the accuracy when selecting objects. The default value is 100; the unit is millisecond. The higher this selected value the longer it takes until the object follows the mouse cursor. An accidental displacement of the objects is thus decreased.

Note: Users that are not so sure with the handling of the mouse should increase this value.

- Scroll window automatically Option

This option is switched on by default and takes care that whenever an object is moved above the edge of the working surface with the mouse, the working surface automatically is moved, scrolled.

3.5.1.2.2 Mouse Wheel

These options ease the navigation on the CoCut desktop with computer mice, which are equipped with a mid-wheel button.

- <Shift> toggles these modes

Two modes are possible: **Zoom** or **Vert. Scroll**.

Zoom

This option - starting from the cursor position - increases or decreases the working area when turning the mouse wheel: according to the direction of rotation.

Scroll vert.(ical)

This option - starting from the cursor position - moves the working area horizontally (Wheel + CTRL key) or vertically when turning the mouse wheel. According to the direction of rotation the movement is done to the left, top or bottom or to the right, top or bottom.

- Resolution

The sensitivity of the wheel can be adapted to individual requirements. The range is from 1 (coarse) to 10 (fine).

3.5.1.3 The *Output Devices…* Setup

This category of the basic settings allows the definition of important parameters for the output on the output device. The default settings correlate with the information in the output dialog before the output of the job data to the connected device.

Current output device

All currently connected output devices can be selected in this window. The **driver** name, **file** name, and the **port** interface are displayed. **Mode** and **material** from the material database can be determined.

The **…** button enables the creation, modification and deletion of the settings.

Port

Indicates with which computer interface the output device is connected.

Default Settings

Keep reference point

This option takes care that no new origin is set after the output of a job. The next output is done at the same coordinates as the previous.

Stack processing

This option enables an uninterruptible output without an interaction of the Plot Manager.

Wait after segment

Waiting after segment indicates if the cutter shall remain at this position after the output of a cut segment. This option is typically needed with flatbed devices without integrated automatic foil transportation.

Segment thus indicates the maximum addressable area that can be processed in one piece.

After the segment the foil is forwarded by hand to the correct position.

Sort before output

Sort means that all inner objects are processed before the outer objects and that a sortation is done in x-axis-orientation. This switch takes care that the

foil is moved as little as possible in order to maintain the repeat accuracy as high as possible. This option is especially necessary with cutters with friction roll drive or when milling.
The output speed is slightly reduced with this setting.

Plot to file

This option does not lead the output of the data to the connected device but opens a dialog in which the path and the name of an output file can be given that will be saved to the hard disk.

Read out automatically

This option can be activated if a device is connected and "online" and a read out command for this device exists in the driver.

Output only tool-assigned layers

This option takes care that only objects are output where a tool assignment to a layer was done.

Weeding border

This option defines if and with which distance a weeding frame is cut around the output objects. This option facilitates the weeding of foil.

Overlap

It defines the overlapping of two segments. This value takes for example care of the compensation for the shrinking that occurs with foils.

Copy spacing

Copy distance defines the distance of copies on the output medium.

Segment spacing

Segment distance defines the distance between single segments of a job.

Stack spacing

Stack distance defines if copies shall be stacked vertically. Requirement for the activation of this option is that the selected object can be output more than once on top of each other.

Indication: In the output-preview the first object is shown "normally". Each further object of the stack is shown with a black square filled with an X.

No tooltips

This option takes care that no tooltips that were entered in the device driver are shown in the output dialog.

Enable output for objects larger than page size

This option causes objects to be passed to the output module that are larger than the dimensions of the working area.

3.5.1.4 The *Import* Setup

The ***setup import*** **dialog** is used to preset all import filters implemented in CoCut. The settings are divided into 4 categories for the sake of clarity. Settings made in the ***General*** **tab** apply to all import filter file formats listed in the left column. ***Default*** **settings** are already activated. Settings other than the standard can be activated by clicking on the respective ***file format*** **tab**. The ***filter-specific*** **settings** can be activated or deactivated as required.

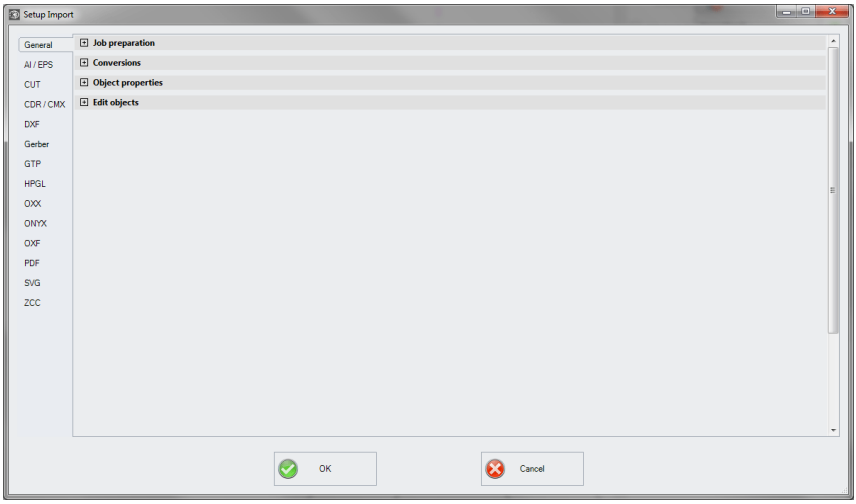


Fig. 3.5-2: Import dialog with closed category structure and import filter file formats

Fig. 3.5-3: Plus sign control

Fig. 3.5-4: Minus sign control

Fig. 3.5-5: Check control

A click on the ***plus sign* control** opens the desired **category**. A click on the ***minus sign* control** closes the desired **category**. Clicking on the ***check* control** activates or deactivates the corresponding option.

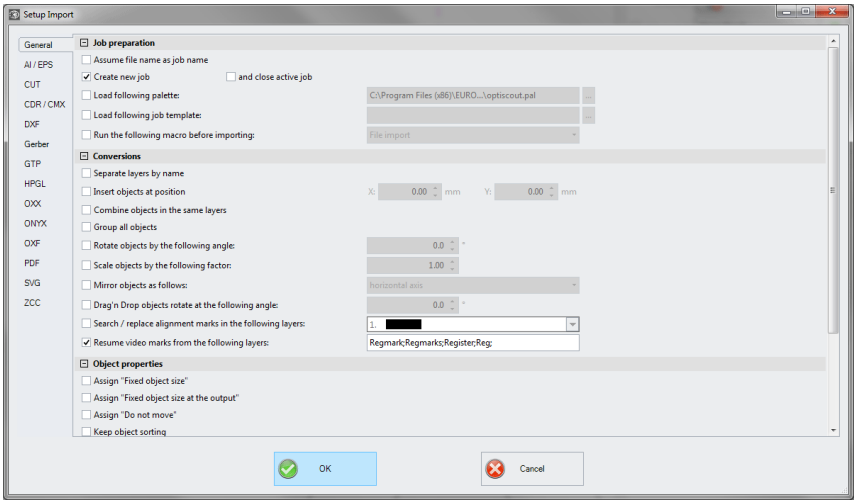


Fig. 3.5-6: Import dialog with opened category structure - here: General tab active

3.5.1.4.1 The Settings

3.5.1.4.1.1 Job preparation

- Assume file name as job name

This option takes the name of the **import file** for the job file. This makes it easier to assign source file to job file.

- Create new job

(Default: set) - When importing foreign data, the data is imported into a job without a name (untitled.job).

and

- close active job

The active job is closed during import. This prevents the job history becoming very large and confusing when importing many files.

- Load following palette:

Enabling this option allows you to load a color palette with the *.PAL file extension.

- Load following job template:

Enabling this option allows you to load a template with the file extension *.JTP.

- Run the following macro before importing:

This option lists all available macros. This option allows data operations to be performed before importing, such as 90° rotation, sorting with simulation, etc.

3.5.1.4.1.2 Conversions

- Separate layers by name

When importing external data, it may happen that several layers have an identical color value. If they are assigned different names, CoCut can separate them during import and place the corresponding objects in separate layers.

- Insert objects at position

If this option is activated, it is possible to determine the position in X and Y in which the data is stored on the work surface.

- Combine objects in the same layers

If this option is activated, all closed objects that are in the same layer are combined during the import.

- Group all objects

If this option is activated, all objects are grouped during import. *Advantage*: The position of the objects remains unchanged when the objects are moved because only one group object is moved.

- Rotate objects by the following angle:

The value specifies the angle at which the objects are rotated when they are imported. Negative values are allowed.

- Scale objects by the following factor:

The value specifies the extent to which the objects are scaled, i.e. enlarged or reduced, during import. Negative values are allowed.

- Mirror objects as follows:

This option allows the objects to be mirrored when they are imported: Possible settings are: **horizontal axis, vertical axis, both axes.**

- Drag'n Drop objects rotate at the following angle:

If objects are dragged to the CoCut work surface, they are rotated by the entered value when released.

- Search / replace alignment marks in the following layers:

This option searches in the selected layer for vector objects that have the size of the alignment marks (see Standard Settings / Register / Crop Marks / Size) and convert them into alignment mark objects, that is, these objects get the object attribute: **alignment mark**.

- Resume video marks from the following layers:

(Default: set) This option takes the objects from the layers with the layer name, e.g. **Regmark; Regmarks; Register; Reg;** and regards them as video marks, that is, these objects get the **object attribute video mark**.

3.5.1.4.1.3 Object properties

- Assign "Fixed object size"

If this option is activated, all imported objects are marked with the **object attribute** "*fixed object size*"; Thus size change is deactivated

- Assign "Fixed object size at the output"

If this option is activated, all imported objects are marked with the **object attribute** "fixed object size at the output". If this option is active, then no size compensation takes place during output. The objects are placed and rotated only after the marks have been imported.

- Assign "Do not move"

If this option is activated, all imported objects are marked with the **object attribute** *"Do not move". The **Do not move*** option prevents the selected object from being moved. The position is locked.

- Keep object sorting

If this option is active, the object sorting is not changed during the import. The sequence of objects will remain.

3.5.1.4.1.4 Edit objects

- Reduce nodes

Enabling this option removes all superfluous nodes. The vector object is reduced by those nodes whose removal does not influence the curve trajectory.

- Remove duplicate lines with the following tolerance automatically:

If this option is activated, all identical, overlapping lines are automatically removed.

- Automatically close objects with the following tolerance:

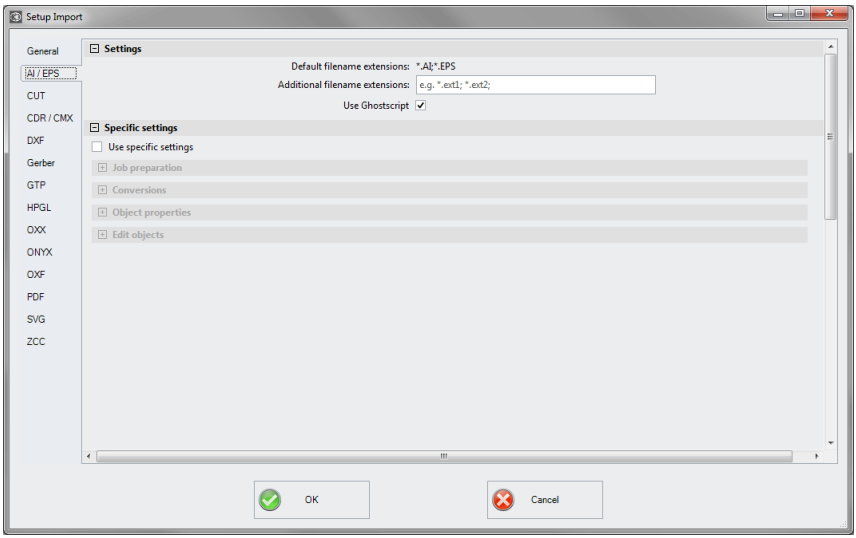
If this option is activated, all vector objects are automatically closed or connected during import, whose distance from the start and end point is within the closing tolerance.

- Run the following macro after import:

This option lists all possible macros. This option allows operations to be performed after importing, such as 90° rotation, sorting with simulation, etc.

3.5.1.4.2 The Settings

3.5.1.4.2.1 AI/EPS



Default filename extensions

here: *.AI, *.EPS

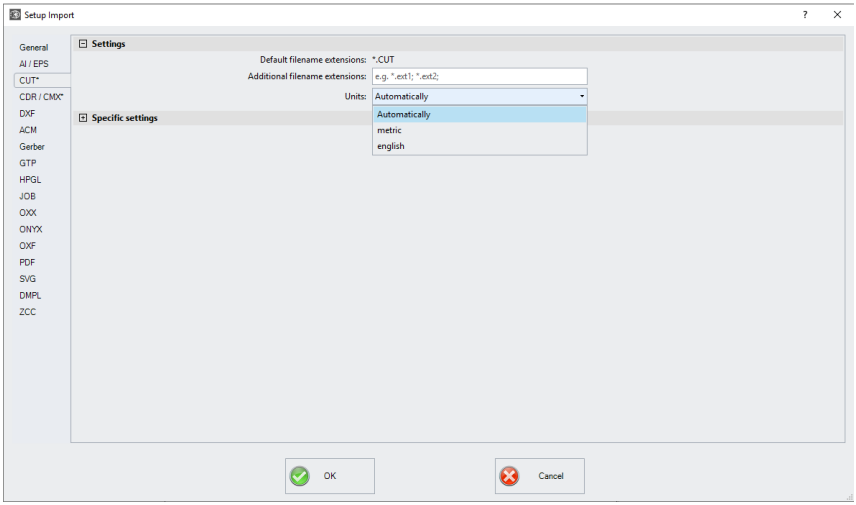
Additional filename extensions

For the standard endings, individual file extensions can be specified. The import filter is configured as in the standard version.

Use Ghostscript

If this option is activated, the open-source interpreter application named Ghostscript is used for the data preview and the import process.

3.5.1.4.2.2 CUT



Default filename extensions

here *.CUT

Additional filename extensions

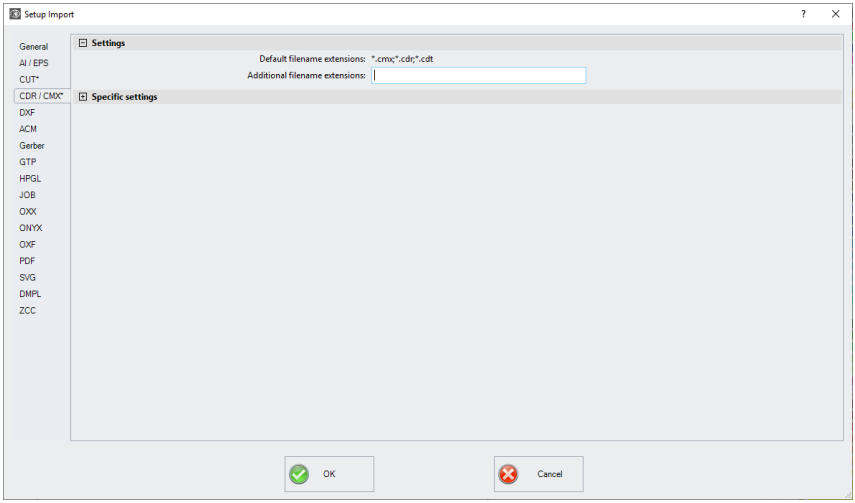
For the standard endings, individual file extensions can be specified. The import filter is configured as in the standard version.

Units

Here you define in which unit the data is imported: *automatic, metric or english.*

3.5.1.4.2.3 CDR/CMX

3.5.1 The Standard Settings Menu



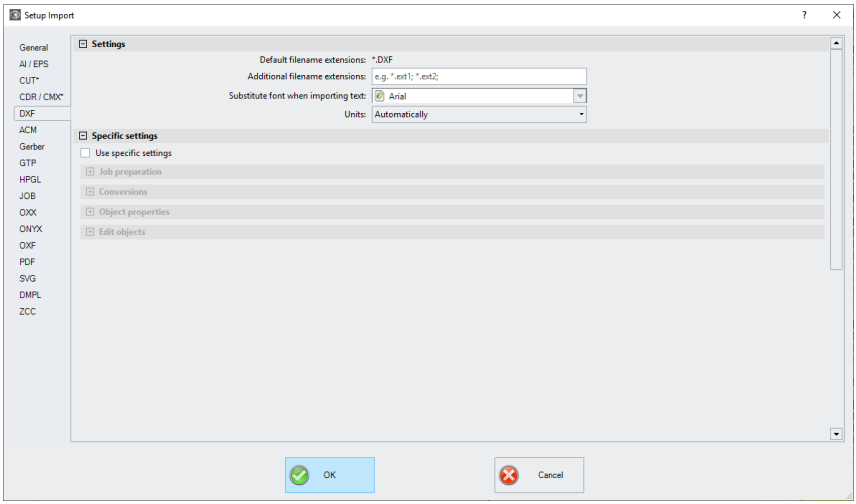
Default filename extensions

here *.CMX, *.CDR, *.CDT

Additional filename extensions

For the standard endings, individual file extensions can be specified. The import filter is configured as in the standard version.

3.5.1.4.2.4 DXF



Default filename extensions

here *.DXF

Additional filename extensions

For the standard endings, individual file extensions can be specified. The import filter is configured as in the standard version.

Substitute font when importing text

Here you can select which font is used during the text import. The selection lists all fonts installed on the import computer.

Units

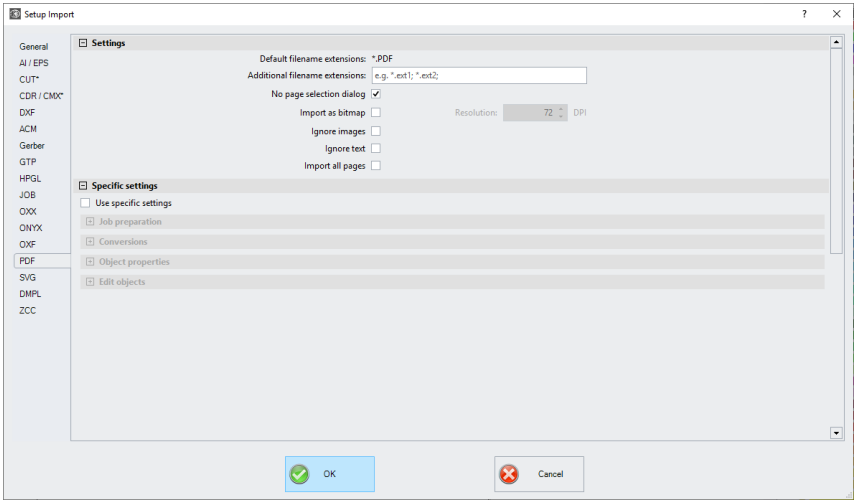
Here you define in which unit the data is imported: *automatic, metric or english.*

3.5.1.4.2.5 ACM, Gerber, GTP, HPGL, JOB, OXX, ONYX, OXF

see CDR/CMX

3.5.1.4.2.6 PDF

3.5.1 The Standard Settings Menu



Default filename extensions

here *.PDF

Additional filename extensions

For the standard endings, individual file extensions can be specified. The import filter is configured as in the standard version.

No page selection dialog

Activating this option suppresses the page selection dialog.

Import as bitmap

Enabling this option will not import the vector data contained in the PDF file, but the bitmapped image also included.

Ignore images

This option ensures that any existing photos are not imported.

Ignore text

This option ensures that any existing texts are not imported.

Import all pages

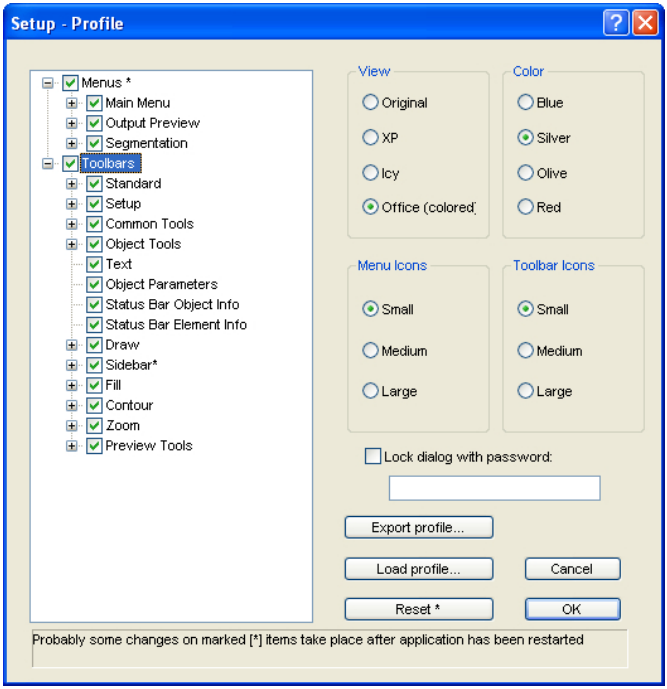
This option ensures that all page breaks are ignored and that the document is imported as a whole.

3.5.1.4.2.7 SVG, DMPL, ZCC

see CDR/CMX

3.5.1.5 The *Profile...* Setup

The ***Profile...*** setup serves the customization of the desktop. The user or administrator can adapt the CoCut interface to fit his needs or restrict it to its necessary amount. The so defined user profile can be exported or be transferred - provided with a password protection - onto other licensed client computers.



3.5.1.5.1 Presentation

The following options are possible: ***Original, XP, Icy, Office (colored)***. Changes are executed directly.

3.5.1.5.2 Color

The following options are possible: ***Blue, Siver, Olive, and Red***. Changes are executed directly.

3.5.1.5.3 Menu Icons

Possible sizes are: ***Small, Medium and Large***. A preview in the left hand area of the dialog shows, what effect the changes have.

3.5.1.5.4 Toolbar Icons

Possible sizes are: ***Small, Medium and Large***. A preview in the left hand area of the dialog shows, what effect the changes have.

3.5.1.5.5 Lock Dialog with Following Password Option

If here a password is assigned, this password is queried while the activation of the ***Profile Menu Item***. Changing the view is only possible with the known password.

3.5.1.5.6 Export Profile Button

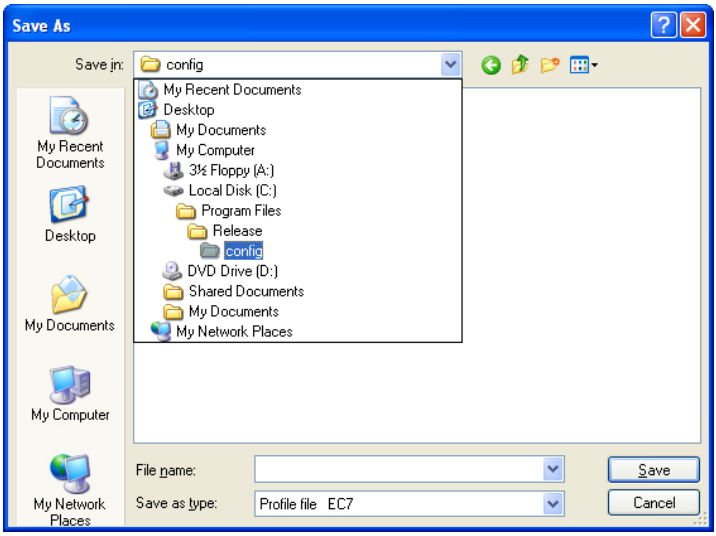


Fig. 3.5-7: Save profile dialog with default path

Enabling of the ***Export Profile*** button allows saving of customize CoCut profiles. The used file extension is *.EC7. As default *.EC7 files are saved in the folder, where the program data are located.

Note: If all menus or the settings menu were accidentally disabled, then access on the profile resp. profile file is possible using the sytem menu. The system menu is enabled with a click on the program logo, which you'll find left from the program name in the program bar.

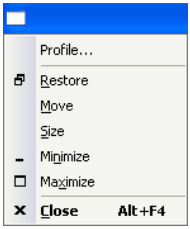


Fig. 3.5-8: System menu with *Profile… sub menu*

3.5.1.5.7 Status Area

In the ***status area*** messages and infos are displayed that explain the program's operation.

3.5.2 The *Working Area…* Command

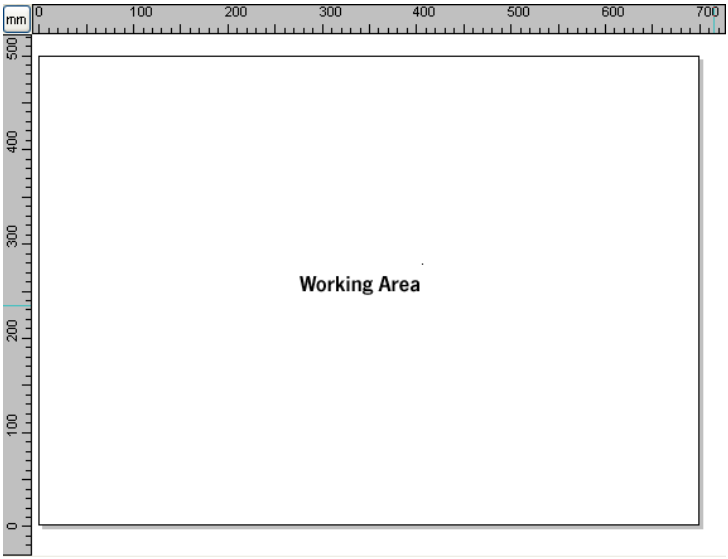


Fig. 3.5-9: Working area with shadows and rulers

Here, you can newly define the size and color of your working area. The working area is displayed as a paper frame with a gray shade on the right and bottom next to the frame (see figure above). The color of the working area is freely definable; this guarantees an optimal layout control on the screen.
Pre-defined are for example DIN-A-sizes. Besides the fix defined measures you can define any number of user-defined working area. One can be defined as *standard*. It will then be pre-set at every "file new".
This option is a very helpful function for everybody who has e. g. a milling or an engraving machine as the new entry in each case of the usable area can be omitted.

Indication: A double click on the shade right next and below the working area also opens this dialog.

3.5.3 The *Rulers…* Function

SHIFT+I

With this function you define the positions where the rulers shall be placed. Due to lack of space the display of the rulers can be abandoned. With diametric display each 5th step is drawn longer and with non-diametric each 2nd and each 4th once again.

3.5.4 The *Unit of Measurement* Function

This instruction switches the measuring unit to the preferred unit (mm, cm or inch).

Indication: The metric can also be changed directly via a button that is in the angle of both rulers.

3.5.5 The *Origin* Function

This function shows a zero point (origin) in the lower left corner or the lower right corner of the working area. It is used for orientation on the working area. Which view is preferred depends mostly on the zero point of the connected machine. The view on the working area then corresponds to the real conditions.

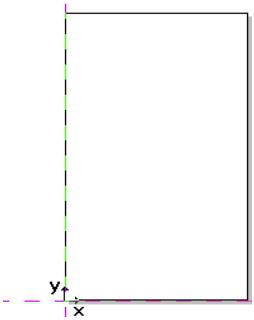


Fig. 3.5-10: Here: Origin bottom left

3.5.5.1 The *Settings Origin* Menu

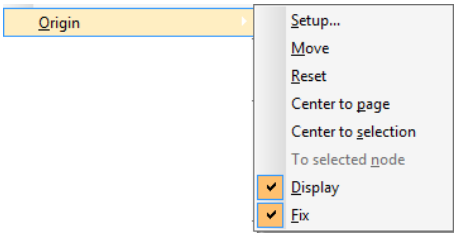


Fig. 3.5-11: The Origin Options

3.5.5.1.1 Setup...

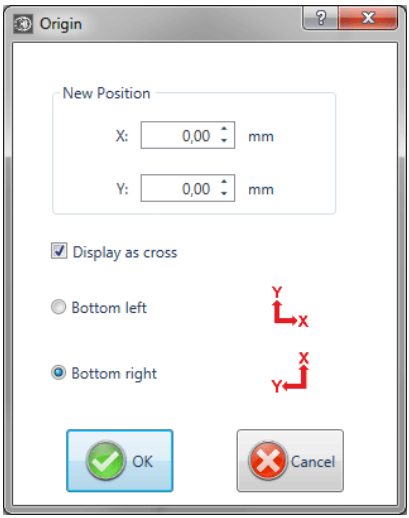


Fig. 3.5-12: The origin dialog box

New Position (X / Y)

This option allows you to set the zero point using specific values.

X Field + Measuring Unit

In the X field, the absolute coordinate of the zero point on the X-axis can be specified.

Note: The unit depends on the setting of the ruler.

Y Field + Measuring Unit

In the Y field, the absolute coordinate of the zero point on the Y-axis can be specified.

Note: The unit depends on the setting of the ruler.

***Display as Cross* Option**

If this option is activated, the origin point is represented by a dashed coordinate cross. If the option is deactivated, the position of the zero point is only taken into account in the rulers.

***Bottom Left* Option**

This option places the zero point in the lower left corner of the working area.

***Bottom Right* Option**

This option places the zero point in the lower right corner of the working area.

3.5.5.1.2 Move

This command serves to move the ruler origin. The ***Move* option** activates a crosshair as a mouse cursor. With the help of this, the zero point can be moved to any individual position.

3.5.5.1.3 Reset

The ***Reset* option** returns the zero point to the original position (lower left or lower right).

3.5.5.1.4 Center to page

This command serves to move the origin point to the center of the working area (center of page).

3.5.5.1.5 Center to selection

The ***Center to selection* option** sets the zero point to the position of the middle handle located at the center of a selected object.

Note: This command is selectable only, if one or more objects are selected on the desktop.

3.5.5.1.6 To selected node

The ***To selected node* option** sets the zero point to the position of a marked (selected) node.

Note: This command is selectable only, if one or more objects are selected on the desktop.

3.5.5.1.7 Display

This option displays the zero point or makes it invisible.

Note: Only visible, if the Display as Cross-Option is active.

3.5.5.1.8 Fix

This option makes the zero point moveable or fixes it at the current position.

3.5.6 The *Undo* / *Redo* Command

With this instruction the ***undo*** / ***redo*** function can be switched on or off.  **SHIFT+F7**

Advantages when undo / redo switched off:

With big or many objects the node processing is faster. The testing phase (initial state -> edition -> temporary final state) with several processing steps can be made undone as follows:
1. Switch off undo/redo, 2. edit objects and 3. switch on undo / redo

The selection of the ***undo*** function in the ***edit*** menu reestablishes the state before point 1.

3.5.7 The *Snap Mode* Function

The snap mode facilitates the creation of objects at the subsidiary lines. This option activates the "magnetic" effect on graphic objects and text blocks.  **P**

3.5.8 The *Choose Language…* Command

This option sets the language for **user interface** and **help file**.

3.5.8.1 Program Language

The user interface language is set here.

3.5.8.2 Language for the Help File

The language for the help is determined here.

3.6 The *Window* Menu

3.6.1 The *New Window* Command

Activating this instruction opens a new CoCut window.

3.6.2 The *Tile Horizontally* Command

The activation of this instruction places all open windows diminished - one above the other - horizontally.

3.6.3 The *Tile Vertically* Command

The activation of this instruction positions all opened windows diminished - side by side - vertically.

3.6.4 The *Cascade* Command

The confirmation of this instruction displays all windows diminished and cascaded (diagonally displaced).

3.6.5 The *Close* Command

Clicking this instruction closes the momentarily active window after prior safety query.

3.6.6 The *Close All* Command

Clicking this instruction closes all open windows after prior safety query.

3.6.7 The *Standard* Command

This command switches the ***tool***-toolbar on the desktop or makes it disappear.  **CTRL+1**

3.6.8 The *Setup* Command

This instruction switches the ***setup*** toolbar on the desktop or makes it disappear.  **CTRL+3**

3.6.9 The *Common Tools* Command

This instruction switches the ***common tools*** toolbar on the desktop or makes it disappear.  **CTRL+4**

3.6.10 The *Object Tools* Command

This instruction switches the ***object tools*** toolbar on the desktop or makes it disappear.  **CTRL+6**

3.6.11 The *Object Parameters* Command

This instruction switches the ***object parameters*** toolbar on the desktop or makes it disappear.  **CTRL+7**

3.6.12 The *Status Bar Object Info Command*

This instruction switches the ***status bar object info*** toolbar on the desktop or makes it disappear.  **CTRL+8**

3.6.13 The *Status Bar Element Info* Command

This instruction switches the ***status bar element info*** on the desktop or makes it disappear.  **CTRL+9**

3.7 The *Help* Menu

3.7.1 The *About …* Command

The selection of this menu entry opens an info window in which various information is shown. On the left part of the dialog among others the *serial number*, *version number, free disk space, co-processor,* or *type of processor* are shown. On the right down part of the dialog is a scroll window in which all the application files of the respective application version are listed. This file list can be printed via the ***print*** button.

Indication: If there should be problems with your CoCut version you can fix them the fastest, if this list is made available to our support staff.

3.7.2 The *Help…* Command

This option starts the **CoCut help**.  **F1**

3.7.3 The *Object Info…* Command

The activation of this instruction opens an info window that contains information about the objects on the desktop. These are among others the number of objects, number of selections, vector objects, text blocks, all groups and combinations or all bitmaps.  **F10**

The ***selection*** button opens the ***object manager***.

3.7.4 The *Install Autoimport Plug-Ins…* Command

Enabling this command opens the *Corun Installer* window, that lists for which programs plug-ins are available. Programs which were automatically found are marked already. Select the *target* program for the intended data exchange in the *Eurosystems Software* list field.

Pressing the ***Install*** button starts the installation.

please refer to 1.2.1: Corun Installer

3.7.5 The *Online Support* Command

The activation of this menu item establishes a direct internet connection to the support page of the EUROSYSTEMS S.à.r.l. - www.eurosystems.lu.

3.7.6 The *Remote Support…* Command

Via remote control the content of the screen of a computer can be transferred in realtime to another computer. Thus it is possible that two users who are at different places look at the same desktop. While you are on the telephone with our consultant (support) you can show each other documents or applications even if you are far apart from each other in reality. The direction of transmission respective line of vision can be changed with a mouse click. Thus you can choose if you want to look together at your screen or at the screen of your consultant.
In order to be able to use the remote support you need an active internet connection.

3.7.7 The *Live Update* Command

This instruction activates a software update via internet.

Indication: Requirement is an active internet connection on the computer where the software is installed.

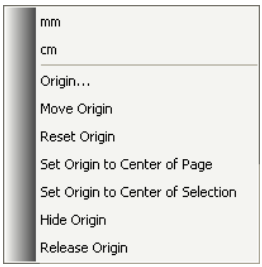
3.8 Context Menu Left Mouse Button

3.8.1 Context Menu Ruler

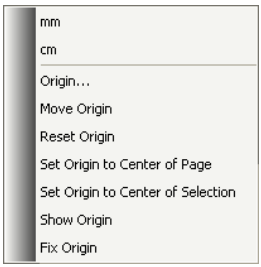
3.8.1.1 The *Unit* Button

A click on the ***Unit* button** activates one of the following context menus:

Note: Which of the two is enabled, depends on whether objects are selected on the working area and what zero point setting is active.



or



3.8.1.1.1 Origin…

please refer to 3.5.5: The *Origin* Function

3.8.1.1.2 Move Origin

This command serves to move the ruler origin to any position on the desktop.

3.8.1.1.3 Reset Origin

This command serves to move the origin point into the lower left corner of the working area.

3.8.1.1.4 Set Origin to Center of Page

This command serves to move the origin point to the center of the working area (center of page).

3.8.1.1.5 Set Origin to Center of Selection

This command serves to mirror or place objects at the coordinate axis.

Note: This command is only visible, if one or more objects are selected on the working area.

3.8.1.1.6 Hide Origin

This command serves to switch the ruler zero point to invisible.

3.8.1.1.7 Release Origin

This command serves to release the fixation of the ruler origin in order to move it with the mouse.

3.8.1.1.8 Show Origin

This command serves to switch the ruler zero point to visible.

3.8.1.1.9 Fix Origin

This command serves to anchor the ruler zero point at a definite point.

3.9 Context Menus Right Mouse Button

3.9.1 Context Menu on Empty Working Area

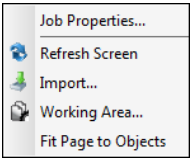


Fig. 3.9-1: This menu appears if no objects lie on the desktop

Job Properties…

This command opens the following ***Job properties*** **dialog:**

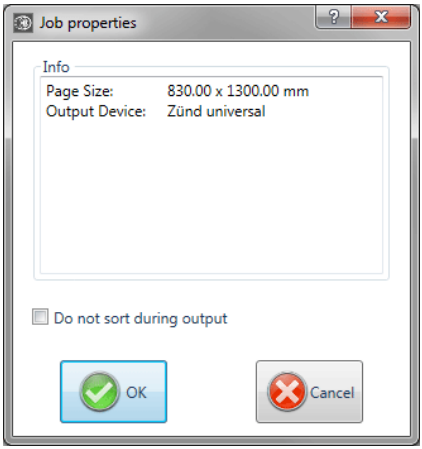


Fig. 3.9-2: Job properties dialog with job infos

Do not sort during output

This option prevents, if activated, the objects being sorted before or during output. In other words, the original object sorting is retained.

Note: If this option is activated, the "Do not sort during output" option located in the output dialog is automatically deactivated.

Refresh screen

This instruction refreshes the active window.

Import…

This menu entry opens the ***import*** dialog for the import of external file formats.

Insert

This menu entry inserts contents from the Windows clipboard to the CoCut working area.

Working area

This menu entry opens the dialog for the pre-setting of the parameters of the working area.

Fit Page to Objects

This option scales the working area proportionally in relation to the object size.

4 Reference Part Output Preview

4.1 The *Output* Menu

4.1.1 The *Output* Command

Starts the ***output*** on the connected device with the settings of the ***output to device*** dialog.

4.2 The *Options* Menu

4.2.1 The *Save As...* Command

The ***save as...*** command in the ***output*** preview ... saves the job with all changes that were done in the preview. When returning to the working surface all these settings would be lost, therefore, the job can here be saved under another name.

 **SHIFT+CTRL+S**

please refer to 3.1.4: The *Save as...* Command

4.2.2 The *Rotate Axis* Command

This command rotates the marked objects at 90° counter-clockwise.

please refer to 3.3.1: The *Rotate Axis* Command

 **A**

4.2.3 The *Horizontal Mirror* Command

The selected object is mirrored at the horizontal through its center-point.

please refer to 3.3.3: The *Horizontal Mirror* Command

 **X**

4.2.4 The *Vertical Mirror* Command

The selected object is mirrored at the vertical through its center-point.

please refer to 3.3.4: The *Vertical Mirror* Command

 **Y**

4.2.5 The *Optimization...* Command

The foil optimization takes care that all objects are arranged in a way that they take the least space on the foil. By rotation or no rotation of objects it is taken care of, that the material waste can be decreased.

please refer to 2.5.1.1: Foil optimization

4.2.6 The *Recalculate* Command

The ***recalculate*** command enables the modification of the output-parameters or of the driver settings without leaving the output routine.

 **N**

This command switches back from the ***output*** preview to the ***output*** dialog.

4.2.7 The *Initial View* Command

Puts back the output preview to the status before having pressed the ***preview*** button in the output dialog. All changes are made undone.

 **SHIFT+N**

4.2.8 The *Horizontal Weeding Lines* Command

Weeding lines serve for the better processing of big jobs. Material lengths of several meters in length or width are difficult to handle, therefore you can insert weeding lines during the foil cutting that divide the job into smaller parts that are easier to handle.

 **H**

The ***horizontal weeding lines*** are set with the hotkey "h" or drawn with the arrow from the weeding frame dashed in blue.

please refer to 2.5.1.2: Weeding lines

4.2.9 The *Vertical Weeding Lines* Command

Weeding lines serve for the better processing of big jobs. Material lengths of several meters in length or width are difficult to handle, therefore you can insert weeding lines during the foil cutting that divide the job into smaller parts that are easier to handle.

 **V**

The ***vertical weeding lines*** are set with the hot key "v" or drawn with the arrow from the weeding frame dashed in blue.

please refer to 2.5.1.2: Weeding lines

4.2.10 The *Test Drive* Command

If the ***test drive*** command is activated the connected device goes with lifted tool head along the weeding frame. This also happens if the option "weeding frame" was not activated.

Compare ***test drive*** button in the ***output*** dialog **please refer to 2.4.3: Start Output from the CoCut Working Surface**

4.3 The *View* Menu

4.3.1 The *Material Width* Command

When activating this command the section is adjusted to the values for the ***material width*** defined in the driver or set in the ***output*** dialog.


B

4.3.2 The *All Objects* Command

This function changes the display in that way that all objects can be seen on the screen. The section is selected so that it is the biggest possible display showing all objects.


F4 and SHIFT+F4

If the SHIFT key is pressed while activating this command, only the selected objects are zoomed to maximum.

4.3.3 The *Selected Objects* Command

If this command is activated only the ***selected objects*** from the ***output*** preview are displayed as large as possible.


SHIFT+F4

4.3.4 The *Total Area* Command

If this menu item is activated the preview of the whole material surface is shown.
The size of the shown surface depends on the so called frame size (foil height x foil width) of the output device to be accessed.
If in the ***output*** dialog a driver for a friction feed cutter was selected, in the preview always a material length of 30m (32,81 yd) is shown.
If in the cutting dialog a driver for a flatbed cutter was selected, the maximum width of the flatbed cutter is shown as material length.


SHIFT+B

4.4 The *Window* Menu

4.4.1 The *New Window* Command

Activating this instruction opens a new CoCut window.

4.4.2 The *Tile Horizontally* Command

The activation of this instruction places all open windows diminished - one above the other - horizontally.

4.4.3 The *Tile Vertically* Command

The activation of this instruction positions all opened windows diminished - side by side - vertically.

4.4.4 The *Cascade* Command

The confirmation of this instruction displays all windows diminished and cascaded (diagonally displaced).

4.4.5 The *Close* Command

Clicking this instruction closes the momentarily active window after prior safety query.

4.4.6 The *Close All* Command

Clicking this instruction closes all open windows after prior safety query.

4.4.7 The *Common Tools* Command

This instruction swithes the ***Common Tools*** toolbar on or off.  **CTRL+4**

4.4.8 The *Object Parameters* Command

This instruction switches the object parameters toolbar on the desktop or makes it disappear.  **STRG+7**

4.4.9 The *Status Bar Object Info Command*

This instruction switches the ***status bar object info*** toolbar on the desktop or makes it disappear.  **CTRL+8**

4.4.10 The *Status Bar Element Info* Command

This instruction switches the status bar element-info on the desktop or makes it disappear.  **CTRL+9**

4.5 The *Help* Menu

4.5.1 The *About ...* Command

The selection of this menu entry opens an info window in which various information is shown. On the left part of the dialog among others the *serial number*, *version number, free disk space, co-processor,* or *type of processor*

are shown. On the right down part of the dialog is a scroll window in which all the application files of the respective application version are listed. This file list can be printed via the ***print*** button.

Indication: If there should be problems with your CoCut version you can fix them the fastest, if this list is made available to our support staff.

4.5.2 The *Help…* Command

This option starts the **CoCut help**.  **F1**

4.5.3 The *Install Autoimport Plug-Ins…* Command

Enabling this command opens the *Corun Installer* window, that lists for which programs plug-ins are available. Programs which were automatically found are marked already. Select the *target* program for the intended data exchange in the *Eurosystems Software* list field.

Pressing the ***Install*** button starts the installation.

please refer to 1.2.1: Corun Installer

4.5.4 The *Online Support* Command

The activation of this menu item establishes a direct internet connection to the support page of the EUROSYSTEMS S.à.r.l. - www.eurosystems.lu.

4.5.5 The *Remote Support…* Command

Via remote control the content of the screen of a computer can be transferred in realtime to another computer. Thus it is possible that two users who are at different places look at the same desktop. While you are on the telephone with our consultant (support) you can show each other documents or applications even if you are far apart from each other in reality. The direction of transmission respective line of vision can be changed with a mouse click. Thus you can choose if you want to look together at your screen or at the screen of your consultant.
In order to be able to use the remote support you need an active internet connection.

4.5.6 The *Live Update* Command

This instruction activates the update of the software via the internet.

Indication: Requirement is an active internet connection on the computer where the software is installed.

4.6 Context Menu of The Right Mouse Button

4.6.1 Context Menu Output Preview

Fig. 4.6-1: Context menu of the output preview with weeding frame function

Weed border

This function creates a weeding frame around the *selected* objects in the output preview unlike the weed border option.

All other menu entries can be activated via the main menu.

5 Toolbars

5.1 The S*tandard* Toolbar

The **standard** toolbar is switched on or off via the ***window*** menu. **CTRL+1**

Fig. 5.1-1: Freely placeable toolbar - Collection of standard tools

Fig. 5.1-2: Fixed standard toolbar

BUTTONS FROM 1 TO 15

1. Create *New window*
2. *Open* job
3. *Save* job
4. *Save all*
5. Edit *job info*
6. *Cut to* Clipboard
7. *Copy to* Clipboard
8. *Paste from* Clipboard
9. *Print* objects
10. *Import* file
11. *Export* objects
12. *Scan* image
13. *Undo*
14. *Redo*
15. *Help*

5.2 The *Setup* Toolbar

The ***Setup*** toolbar is switched on or off via the ***Window*** menus. **CTRL+3**

Fig. 5.2-1: Free placeable Setup toolbar

Fig. 5.2-2: Fixed Tool Bar

BUTTONS FROM 1 TO 2

1. *Contour mode* on/off
2. *Desktop S*etup

Indication: Alternatively the work area can be defined by doubleclick on the shades beside the work surface.

5.3 The *Object Tools* Toolbar

The ***Object Tools*** toolbar is switched on or off via the ***WIndow*** menu. **CTRL+6**

Note: This is the section which in former CoCut versions (right mouse click for icon assignment) was the variable section of the object toolbar.

Fig. 5.3-1: Freely placeable toolbar - collection of objcet tools

Fig. 5.3-2: Anchored toolbar

BUTTONS FROM 1 TO 21

1. *Delete* Objects
2. Do *Axis Change* with Objects
3. *Horizontal Mirror* of Selected Objects
4. *Vertical Mirror* of Selected Objects
5. *Group* Objects
6. *Ungroup* Objects
7. Combine Objects
8. *Release Combination* of Objects
9. Generate *Block Shadow*
10. *Align* Objects
11. Close Objects
***12. Open* Objects**
***13. Round* Objects**
14. Delete Redundant Nodes
***15. Vectorize* Objects**
16.* Generate *Contour Line
17.* Start *Foil Optimization
18.* Set *Start Tool Paths
***19. Hatch* Objects**
20. Generate *Out- or Inlines*
21. *Weld* Objects

5.4 The *Object Parameter* Toolbar

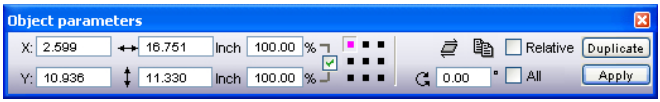


Fig. 5.4-1: Freely placeable toolbar - collection of object parameters

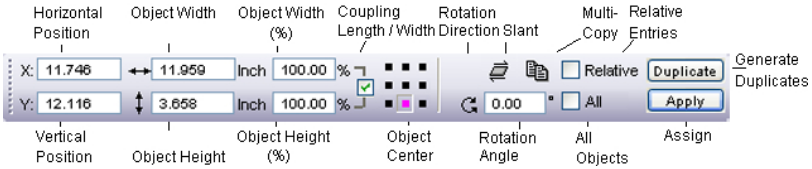


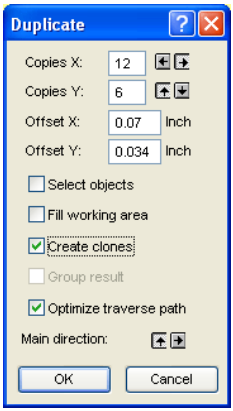
Fig. 5.4-2: Object parameters toolbar with explanations

5.4.1 The *Multi Copy* Command

Definition: Multi Copy = Multiple copies of selected objects (Duplicates)

5.4.1.1 The *Multi Copy* Button

Pressing the button opens the following dialog:



5.4.1.2 Copies X:

Using the or button the number of duplicates can be increased or decreased in increments of one. The alignment is done in the ***Main Direction***. Alternatively, any integer value may be entered in the field.

5.4.1.3 Copies Y:

Using the ↑ or ↓-button the number of duplicates can be increased or decreased in increments of one. The alignment is done in the ***Main Direction***. Alternatively, any integer value may be entered in the field.

5.4.1.4 Offset X:

This value determines the distance between the duplicates in X-Axis direction.

5.4.1.5 Offset Y:

This value determines the distance between the duplicates in Y-Axis direction.

5.4.1.6 The *Select Objects* Option

If this option is enabled, all duplicates will be selected finally.

5.4.1.7 The *Fill Working Area* Option

If this option is enabled, then the working sheet only and not the desktop is filled with duplicates.

Note: Enabling this option, de-activates the Copies X and Copies Y fields.

5.4.1.8 The *Create Clones* Option

If this option is enabled, then the selected object is uses as control object for cloning. All duplicates are generated as clone objects.

5.4.1.9 The *Group Result* Option

Enabling this option groups all duplicates finally.

5.4.1.10 The *Optimize Traverse Path* Option

If this option is enabled, duplicates are generated in meanders. This reduces the head movement of the output device and shortens the output process.

Note: The main direction option defines additionally, if meandering is done in X-Axis or Y-Axis direction.

5.4.1.11 The *Main Direction* Option

The ↑ button sorts the duplicates in Y-Axis direction - "column by column". The →-button sorts the duplicates in Y-Axis direction - "line by line".

5.5 The Status Line *Object Info*

This status line informs about the properties and attributes of objects on the CoCut desktop. This information comprises number, type of object, color model, color value and many other data important for the evaluation.

Fig. 5.5-1: Status line for the display of object properties, color spaces , etc. - free floating

Fig. 5.5-2: Status line for the display of object properties, color spaces, etc. - fixed

5.6 The Status Line *Element Info*

This status line indicates the current mouse cursor position in x/y-coordinates. In addition, in the left part next to the cursor coordinates subsidiary texts and additional texts from the layer info for example from the field *material name* are displayed. It is also possible to show driver information as for example the set tool depth for a particular layer.

Fig. 5.6-1: Status line element with subsidiary texts and element information, here coordinates

5.7 The *Preview Tools* Toolbar

The Magnifying Glass+ F2 or +(Num)

The button with the (+) plus sign increases parts of the output preview. Draw with the marking function a frame around the area that shall be increased. This function can be carried out successively several times until a beep reminds acoustically of the last possible step.

The Magnifying Glass− F3 or -(Num)

The button with the (-) minus sign decreases *gradually* parts of the desktop or of the working area.

The Sheet B

The button with the symbolic sheet of paper shows the material area increased to the maximum

The *Screen* F4

The button that symbolizes a screen displays all objects on the material area as big as possible. The section is thus selected that is it the biggest possible display with all objects visible.

The *Magnifying Glass for Selected Objects*  **SHIFT + F4**

The „dotted loupe" button displays all selected objects as big as possible.

The *Output Command*  **S**

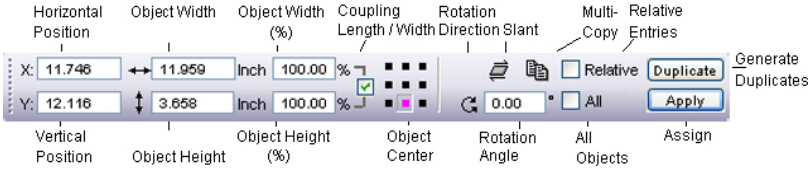
The activation of this button gives the data to the Plot-Manager for the output to the connected device.

5.8 The *Preview Object Parameters* Toolbar

The ***preview object parameters*** toolbar is activated with the following shortcut. **CTRL+7**

Indication: It is identical with not variable part of the object parameters toolbar in previous CoCut versions.

Fig. 5.8-1: Object parameter toolbar with position, size, angle, multi copy, …



Note: The display of the object parameters toolbar varies depending on how the object properties are set!

6 Tools

6.1 The *Alignment* Function

Fig. 6.1-1: The alignment button

This function aligns two or more marked objects to each other or to the working area.

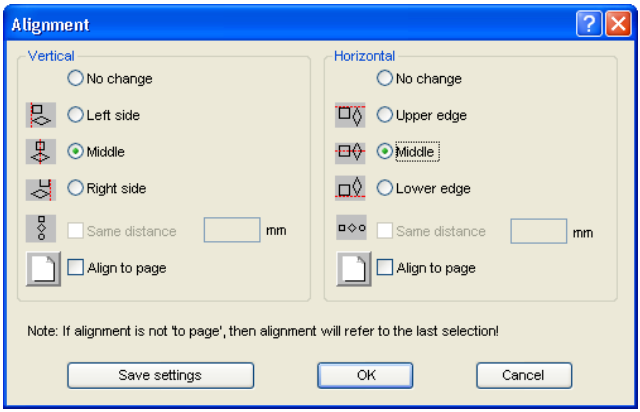


Fig. 6.1-2: The alignment dialog

Objects can be aligned horizontally or vertically. A centered alignment is also possible as the selection of the same distance between the marked objects. The type of alignment is illustrated by icons. Setting can be stored by pressing the ***Save settings*** button.

Indication: The last marked or drawn object serves for alignment as reference object, that means that all others are aligned in the same way. If alignment is not 'Align to Page', then alignment will refer to the last selection.

When outputting to a connected device, the safety instructions of the machine manufacturer must always be observed strictly.
No liability is assumed for infringement.

6.2 The *Plot Manager*

The ***Plot Manager*** has the following tasks:

6.2.1 Creation And Modification of Device Configurations

With the **Plot Manager** it is possible to create a device configuration or short, to create an output device. In a **device** all information necessary for the output of the data as for example driver and ports are summarized.

In CoCut, these devices then can be used for the output of the graphics. It is possible, to output simultaneously at several devices.

6.2.2 Monitoring the Output Processes of the Jobs

The outputs to the respective devices can be monitored with the Plot Manager, for example the output can be broken or aborted and the sequence of the jobs can be changed retroactively.

6.2.3 Output of Data to Local Ports

The serial and parallel ports of the computer are identified and can be used for the file output.

6.2.4 Administration of Hotfolders

A function independent of CoCut is the administration of Hotfolder. A Hotfolder is a directory monitored by the Plot Manager. If a file is copied to this directory the Plot Manager carries out automatically certain configurable functions.

6.2.5 Plot Server Function

The Plot Manager can enable devices so that other Plot Managers can use these enabled devices. This allows separating design and output working places.

Important note:You start the Plot Manager with a double click on the icon that is down right of the screen in the task bar.

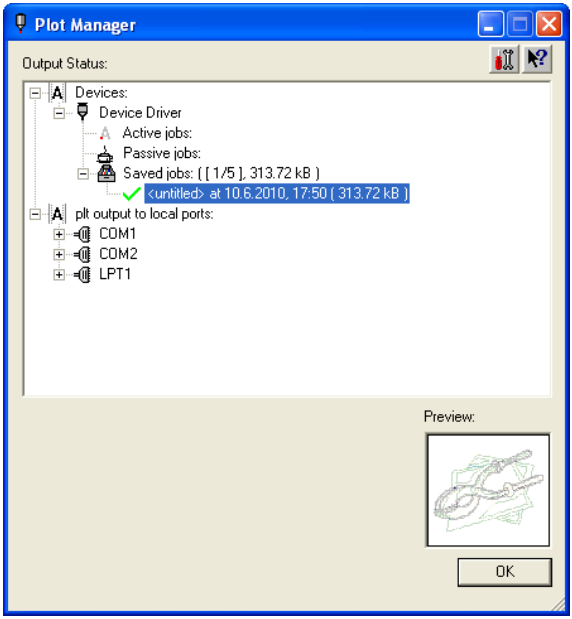


Fig. 6.2-1: Plot Manager main window with job preview down left

6.2.6 Devices Folder

Each device possesses three device folders in which the jobs are shown:

Indication: with jobs, also those output actions are meant that are carried out by Hotfolders or on local ports.

Devices Folder 1

Active Jobs
All jobs that shall be output as soon as the device is ready are collected in this folder. If a job has been output completely, the next job is output. If the option „show message window before output of a job" is active, a notification dialog is shown before each output.

Devices Folder 2

Passive Jobs
If the output device is broken, all jobs to be output are moved to this folder.

Devices Folder 3

Saved Jobs
Here, all jobs that have been output are saved. The number of the saved jobs can be indicated in the options dialog of the device. If the number of the saved jobs is reached the

next one to be saved replaces the oldest existing job.

Job Functions

The functions differ according to device folder, device type and job status.

Indication: The functions can be carried out via a context menu.

6.2.6.1 Jobs at local devices

Active Jobs
If the job is being output:

Pause
The output of the data is paused. The job is marked with the symbol.

Paused Jobs

Continue
The output is continued.

Set Job to passive
The job is removed from the list of the active jobs and added to the folder of the passive jobs.

Delete Job
The job is deleted.

Passive Jobs

Activate Job
The job is removed from the list of the passive jobs and added to the folder of the active jobs.

Delete Job
The job is deleted.

User message: to this job, a notification text can be entered. This information is shown if the job shall be output respective if it is selected.

Saved Jobs

Activate Job
The job is removed from the list of the output jobs and added to the folders of the passive or active jobs depending on the setup device.

Delete Job
The job is deleted.

Plot to File
Here you can determine if the job shall be output to a file.

Save as
Save job data into file before cut data processing.

6.2.6.2 Jobs at Plot Servers

Active Jobs
No functions

Passive Jobs

Activate Job
The job is removed from the list of the passive jobs and added to the folder of the active jobs.

Delete Job
The job is deleted.

User message: to this job, a notification text can be entered. This information is shown if the job shall be output respective if it is selected.

Saved Jobs

Activate Job
The job is removed from the list of the output jobs and added to the folder of the passive or active jobs depending to the setup device.

Delete job
The job is deleted.

Save as
Save job data into file before cut data processing.

6.2.6.3 Jobs at Hotfolders

Active Jobs
No functions

Passive Jobs

Activate Job
The job is removed from the list of the passive jobs and added to the folder of the active jobs.

Delete Job
The job is deleted.

User message: To this job, a notification text can be entered. This information is shown if the job shall be output respective if it is selected.

Saved Jobs

Activate Job
The job is removed from the list of the output jobs and added to the folder of the passive or active jobs depending to the setup device.

Delete Job
The job is deleted.

Save as
Save job data into file before cut data processing.

6.2.6.4 Jobs at local ports

Active Jobs
If the job is being output:

Pause

The output of the data is broken. The job is marked with the symbol.

Paused Jobs

Continue
The output is continued.

Set Job to passive
The job is removed from the list of the active jobs and added to the folder of the passive jobs.

Delete Job
The job is deleted.

Passive Jobs

Activate Job
The job is removed from the list of the passive jobs and added to the folder of the active jobs.

Delete Job
The job is deleted.

Notification: To this job, a notification text can be entered. This information is shown if the job shall be output respective if it is selected.

Saved Jobs

Activate Job
The job is removed from the list of the output jobs and added to the folder of the passive or active jobs depending to the setup device.

Delete Job
The job is deleted.

Plot to File
Here you can determine if the job shall be output to a file.

Save as
Save job data into file before cut data processing.

6.2.7 Settings of the Plot Manager

Fig. 6.2-2: Optional parameters for the Plot-Manager

If the option is activated ***Plot Manager always on top***, the Plot Manager window remains always in the foreground.

If the option ***tooltips*** is activated, a short description to a dialog element is shown if the mouse pointer remains above the dialog element.

If the option ***view job preview*** is activated a preview of the output data is shown.

Command line parameters

If the Plot-Manager is started without parameters it checks all devices if there are jobs for processing.
If a job was found it is carried out. It stops if no jobs were found or if all jobs have been processed.

If, when calling up the parameter **!SPOOL!** is given, the Plot Manager remains active. It then has to be terminated manually with a right mouse click onto the symbol in the taskbar.

Hotfolder

With a Hotfolder a directory can be monitored. If a file is copied to the directory to be monitored one of the following actions is carried out automatically depending on the settings:

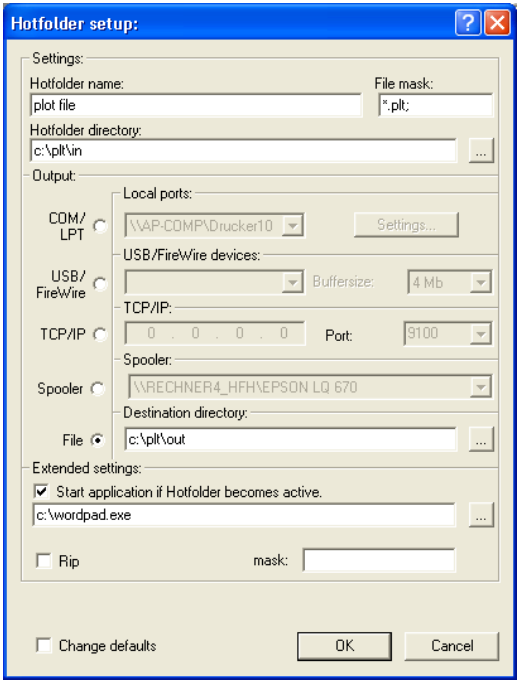


Fig. 6.2-3: Example for setup devices of a Hotfolder

Settings

Hotfolder name: here you have to enter the name of the Hotfolder

File mask: here, the file name ending are given, that shall be considered, for example *.plt.

Hotfolder directory: here, it is determined which directory the Hotfolder shall monitor.

Output

COM/LPT: the file is output to a local serial respective parallel port.

USB: the file is output to a USB device. A USB device is only shown if it is connected with the computer.

TCP/IP: the file is send to a TCP/IP address. With some addresses, you additionally have to enter the right port number.

Spooler: the file is output via a printer driver.

File: the file is copied to the output directory. An existing file with the same name is overwritten.

After having carried out the action, the input file is deleted.

Indication: if "file" is set as output, the application is started **after** *the copy. In all other cases, the application is started* ***before*** *the output.*

Extended Settings

Start application if Hotfolder becomes active: in addition, another application can be started that shall further process the input file to be processed. The file name is marked with %s.

RIP: only necessary if Pjannto RIP uses this Hotfolder as RIP Hotfolder.

*Mask: f*ormatting of the output file name: %File file name; date/time: %Y - %d_%H-%M-%S year/month/day: hour/second/minute

Change defaults: prevents that the user modifies the output parameters accidentally.

6.2.7.1 Device Options

In the ***Device Options*** window you can set - for each device which is listed in the Plot Manager - the following device options.

Note: This window will be enabled by clicking with the right mouse button on a device item and selecting the Options menu item.

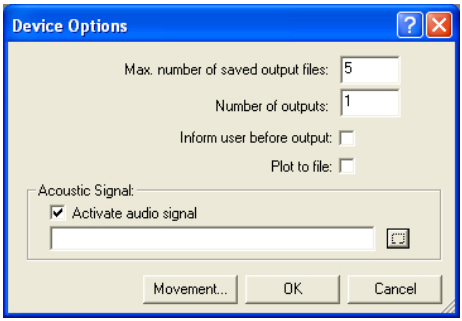


Fig. 6.2-4: Additional options for each device

Maximal number of saved output files

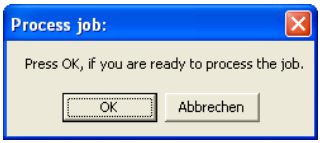
The registered value of this option limits the number of saved output jobs for this device in the history of stored files.

Number of outputs (of a Job)

The registered value of this option defines how often active Jobs will be given out.

Inform user before output

If this option is enabled, then a message window will be shown, before the outputting of each Job. This gives the user the opportunity to prepare the machine before the data output.



Plot to File

If this option is enabled, then the output is redirected to a file. Before writing the file to the ***Job Save As*** dialog is enabled.

Activate Sound Signal

If this option is enabled, then an individual sound signal will be given out before each output of a Job, in order to draw attention to the user.
A sound file in the WAV file format can be selected using the ... button.

The *Movement...* Button

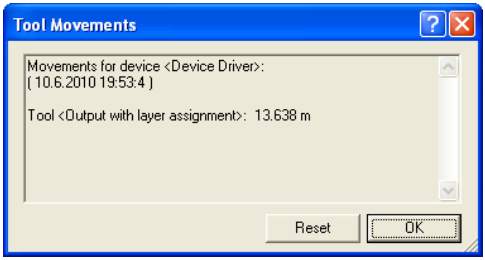


Fig. 6.2-5: Distances of the used tools

This feature tracks the distance (tool motion), from *every tool* of the activated output device in meters. In addition to the distance, date and time of each output are given.

7 Tips & Tricks - Trouble Shooting

Often, it is just a bagatelle that makes the "implementation" of new software difficult. Similar to a new machine, there are questions and problems with new software that often can be explained and solved easily. Therefore, we have explained a selection of questions that occur daily at our hotline- and support routine more closely.

7.1 Code is not accepted with Windows 7, 8, 10 or Vista (No Dongle)

Error message: Invalid code or after each program start the code must be entered again **Tip 1**

The program must be executed once with **aministrator** rights. Click with the right mouse button in the program menu on CoCut Starter 2017 and select **"E*xecute as administrator".***

Note: Don't change anything on the given activation data resp. license data.

7.2 Buffer Overflow Serial Port

The cutter cuts the first characters neatly and then starts to draw indefinable curves. **Tip 2**

With serial activation of the cutter, this is a typical buffer overflow problem and occurs if the protocol for the serial transfer is not set correctly. Most cutters are activated with the following parameters with a serial data transfer: *bits per second: 9600, data bits: 8, parity: none, stop bits: 1, protocol resp. flow control: hardware*

7.3 Output Size Mimaki

The output size on a Mimaki cutter does not correspond with the configured size but is more than twice as big. **Tip 3**

The Mimaki cutter of the CG series is delivered ex works with a plot resolution of 0.025 mm even if they can work with a resolution of 0.01 mm and do so internally. The drivers of CoCut are set to these „device”-resolution because the cutters can be activated faster and more accurate.
For the adjustment of this plot resolution you switch on the cutter, press the < button at the control panel and after the cutter has measured the roll you press the function key until "interface" appears in the display. Then, you press the ENTER key until you reach the menu item "Stepsize" and then the ^-button. The display now shows „0.01”. Confirm the selection with ENTER and END.

7.4 Output Size Graphtec

The output size on my Graphtec cutter does not correspond with the configured size but is more than twice as big. **Tip 4**

Setting the step size:

In the GP-GL mode it is possible to set the minimal distance of the cutting knife's path to one of the following widths: 0.01 mm, 0.025 mm, 0.05 mm or 0.1 mm. The default setting is 0.1 mm. This value must be changed, if your program's driver uses another step size.

Step 1: Switch into the command mode "GP-GL".

Step 2: Press the enter key; the menu step size appears.

Step 3: Press , key to select the desired value (0.100 mm, 0.050 mm, 0.025 mm, or 0.010 mm) and confirm with enter key. Press (NEXT) or (PREV.) to undo your selection.

Step 4: Press (PAUSE) key in order to cancel the PAUSE mode.

In the case of controlling the plotter from CoCut, the value of the step size must be set to 0.025. This is the resolution which is preconfigured in the drivers.

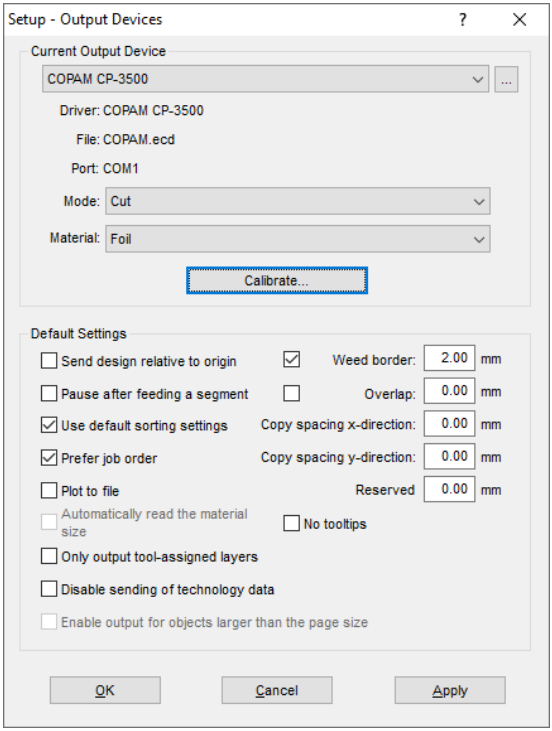
7.5 Calibration of the Output Size

Problem: The size entered in the software and the output size of the objects do not match. **Tip 5**

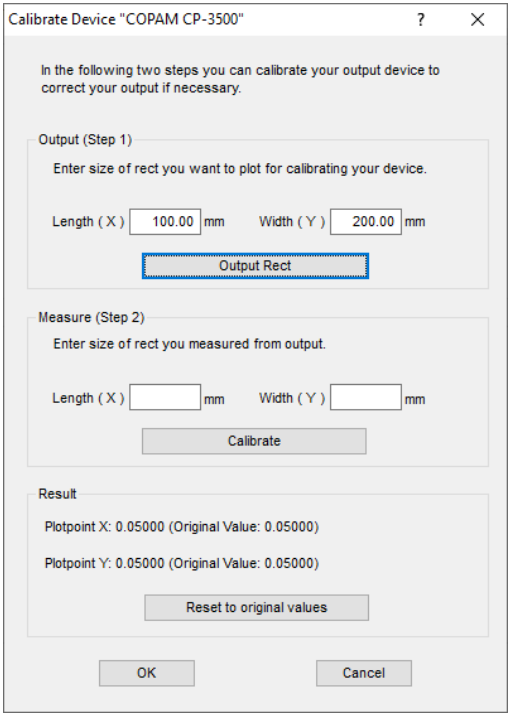
Solution: Calibration must be performed on the connected cutter. Calibration means: checking and, if necessary, changing the values stored in the driver to the values you have measured.

Method:

Activate the following dialog in the *Settings / Standard Settings / Output Devices...* menu.



Clicking the *Calibrate* button opens the C*alibrate Device* dialog.



Now carry out the **calibration** step by step.

Step 1: Specify the size of the rectangle to be output. Get the cutter ready for output. Start the output by clicking on the *Rectangle* button.

Step 2: Weed the rectangle and measure it with a ruler. Enter the measured values in the *Length* (X) and *Width* (Y) fields under *Measure (Step 2)*. Then click on the *Calibrate* button. The new values are now entered into the driver.

Note: You can repeat this process. The maximum accuracy to be achieved depends only on the connected device. Low-cost devices often only achieve an accuracy of +/- 0.5 mm. Professional vinyl cutters achieve an accuracy of ≥ +/- 0.1 mm.

7.6 Computer without serial COM port

My computer provides no serial COM port, but a USB port. How can I connect my cutting plotter, which provides only a serial interface? **Tip 6**

In this case there is a computer accessory called - USB serial adapter- that provides one or more serial COM ports on one USB port.

Note: Not all adapters offered work properly, especially the use on 64-bit operating systems is sometimes not free from errors. It may be that different adapters must be tried.

7.7 Cutter Does Not Respond!

a. First check if you have selected the correct cutter driver and the correct port: for example <device name> at COM2 in the CoCut cutting dialog **Tip 7**

b. COM connection: Check if the parameters of the port are set correctly. To do so, call up the system control of Windows. In the device manager, select the corresponding connection, for example: COM.

Popular standard parameter are: *Baud: 9600, data bits: 8, parity: none, stop bit: 1, protocol / flow control: hardware*

The settings in the system control and at the cutter must be identical otherwise no or only faulty data transfer will take place.

c. USB connection: Check if the correct USB driver is installed for the device. The settings are in the Windows device manager under USB controller. The USB driver for the cutting cutter must be entered in this list otherwise no activation is possible.
If the USB driver does not appear there, install it from the delivered data carrier of your device.

d. Original cable: Check if you use the original cable recommended by the manufacturer. If this is not the case, there might be bigger problems during the data transfer. CoCut „communicates" during the data transfer with the cutter so that missing or faulty connected data cable with the cutter lead to input or output errors.

7.8 Buffer Overflow

The cutter reports „buffer overflow" or does not cut the whole job **Tip 8**

This is often because of an incorrect setting of the used protocol of the serial (COM) port. In most cases it is sufficient to set the protocol respective the flow control of the port to *hardware*.

7.9 Data Import From Apple Computers

Data import from Apple computers in CoCut **Tip 9**

When exporting Apple data you have to pay attention to some settings to have a perfect data export. All popular Apple compatible illustration and graphic applications can export EPS data. (Illustrator, Freehand, …)

1. For the contours, as line width only hairline (0.01 mm) must be entered.
2. No fillings should be transferred.
3. All texts must be converted to graphical objects. (text in curves)
4. Grouped or combined objects must not be available. (break up before)
5. Especially with the Freehand-export the export filter for the Illustrator-format must be selected.
6. As file name extension .eps should be used and you should not use umlauts as ü, ä, ü.

7.10 Typical Sources of Errors When Cutting

a) The foil is clamped too loose **Tip 10**

Consequence: the knive moves the foil during the cutting and the contour is not closed completely.

Remedy: when inserting the foil pay attention that the foil is clamped evenly and does not undulate.

b) The speed is too high

Consequence: small foil parts especially serifs and counters are unscrewed.

Remedy: reduce speed and lower the pressure.

c) The tool pressure is too high

Consequence: the release paper is also carved, character parts are unscrewed and parts of the release material get stuck at the characters. The weeding of the foil gets more difficult.

Remedy: reduce pressure and correct the depth of the knife if necessary.

d) The tool pressure is too low

Consequence: foil and adhesive were only partly cut through. The weeding is possible only with difficulty or not at all.

Remedy: increase the pressure and correct the depth of the knife if necessary.

e) The knife is set too deep

Consequence: foil, adhesive and release material were cut. Foil cannot be used any more.

Remedy: correct the setting of the depth of your **cutting knife**.

f) The knife is used up

Consequence: only the foil and not the adhesive is cut through.

Indication: when using standard foil the using up of the knife is little. When using reflection or sandblast foil the using up is much higher.

Remedy: use new original knife.

g) The characters were unscrewed

Consequence: The weeding border is possible only with difficulty. The unscrewed parts stick to the foil and cannot be detached any more.

Generally is presumed: the smaller the font size the thinner the foil must be; the adhesive force of the gluten is higher.

Remedy: reduce the speed and if necessary the tool pressure until this effect does not occur any more.

h) The release paper is also cut

Consequence: the release material sticks to the foil. The weeding is possible only with difficulty or not at all.

Remedy: correct the setting of the depths of the cutting knife and also reduce if necessary the tool pressure.

7.11 Plotter Via USB Is Not Working!

Error message: Cannot open interface! **Tip 11**

Check first, if your cutter is listed in the ***Device Manager*** *(Control Panel / System / Device Manager).* If not, reinstall the device driver as described in the plotter manual.

Check then, if the USB port for your cutter is selected in the CoCut ***Device Settings.*** You'll find the ***Device Settings*** window in the ***Settings*** / ***Common Settings*** / ***Devices*** menu.

Note: A USB cable should be no longer than 5 m without booster.

7.12 Summa Plotter Does Not Read Out!

Error message: Waiting for response... Cannot open interface... **Tip 12**

Check, if your plotter is set on the device language DMPL. If the cutter is set to HPGL, read out via cable is not possible.

7.13 The Values for Cutting Pressure And Speed Are Not Saved

Tip 13

After changing the values it is often forgottten to confirm the values. Please press the ... button beside the *Enter Material* field and enable the ***Save Material Data*** option.

7.14 Error Message While Output into File

Tip 14

Error message: "Error for CreateFile"

This error message is given out, if the access right ***Write*** for the *program folder* of CoCut is not set.

Relief: Enable ***write*** rights for the program folder.

Annex

A Driver List

New or updated drivers can be downloaded from
www.eurosystems.lu/driver/index.dml?sprache=eng.

Anagraph

ANA Express AE-101	ANA Express AE-101e	ANA Express AE-120
ANA Express AE-120e	ANA Express AE-60	ANA Express AE-60e
ANA Express AE-70	ANA Express AE-75e	

Aristo

AG 50 Offline	AG 50 Signline	AG 600
AG 75 Signline	AG 75 Signline ABS	GL_TL

Artsign

Artsign

ASC365

ASC365

Atlas

Atlas

Automated Cutting Systems

ACS Design Studio Eagle

Cogi

CA 1300	CA 730	CP 630
CT 1200	CT 630	E 1360
E 720	E 870	

Cole

CL1100	CL1350	CL720
CL870		

COPAM

CP-2500	CP-3050	CP-3500
CP-4050	CP-4500	

Creation

PCUT CR1080	PCUT CR1200	PCUT CR630
PCUT CR900	PCUT CS1080	PCUT CS1200
PCUT CS630	PCUT CS900	PCUT CT1000
PCUT CT1200	PCUT CT1300	PCUT CT1600
PCUT CT630	PCUT CT635	PCUT CT900
PCUT CTN1080E	PCUT CTN1200E	PCUT CTN1500
PCUT CTN630	PCUT CTN630E	PCUT CTN900

PCUT CTN900E

Creation HK

King Cut KCUT A1200	King Cut KCUT A24	King Cut KCUT A36
King Cut KCUT A48	King Cut KCUT A900	King Cut KCUT B24
King Cut KCUT B48	King Cut KCUT B900	King Cut KCUT CT1200
King Cut KCUT CT24	King Cut KCUT CT36	King Cut KCUT CT48
King Cut KCUT CT630	King Cut KCUT CT760	King Cut KCUT CT900

Desay

XP-300P	XP-380P	XP-450P
XP-540P	XP-660P	

DGI

Omega OM-100	Omega OM-130	Omega OM-150
Omega OM-40	Omega OM-60	Omega OM-70
Omega OM-80		

Encad

NovaCut Series

Foison

C12	C24	C48
CT-1200	CT-630	FS-24
FS-48	S24	

GCC

AR 24	Expert 24	Expert 24 LX
Expert 52	Expert 52 LX	Expert II 24
Expert II 24 LX	Expert II 52	Expert II 52 LX
Expert Pro-132S	Expert Pro-60	i-Craft

Gerber

Sprint/4B old	Sprint/4B Fastboard	Sprint/4B new

Grafityp

CSR	CSR Ecom 92	CSRTurboDMPL

Graphtec

Craft ROBO	Craft ROBO PRO II

Helo

HSP 1360	HSP 360	HSP 720

Hengxing

Rabbit HX-1000	Rabbit HX-1120	Rabbit HX-1360
Rabbit HX-630	Rabbit HX-720	Rabbit HX-800
Rabbit HX-960		

HobbyCut

ABH-1351	ABH-361	ABH-721

Jiachen

JC-1100DS	JC-1100E	JC-1100H
JC-1350DS	JC-1350E	JC-1350H
JC-720DS	JC-720E	JC-850DS
JC-850E	JC-850H	

Kimoto

Freecut 130	Freecut 150	Freecut 60
Freecut 75		

LG Palopoli

MLP-24

Liyu

HC 1201	HC 751	HC 901
MC 631	MC 801	SC 1261
SC 631	SC 801	

Master

XP-300P	XP-380P	XP-450P
XP-540P	XP-660P	

Masterplot

Masterplot

MAX

CM-200

New Star

Omega OM-100	Omega OM-130	Omega OM-150
Omega OM-40	Omega OM-60	Omega OM-70
Omega OM-80		

ORXYZ

Elite	HX-Series	JML-Series
LX-Series	OR-Series	

Redsail

RS1120C	RS1360C	RS720C
RS800C		

Refine

EH-1101	EH-1351	EH-721
EH-871	MH-1101	MH-1351
MH-721	MH-871	

Roland

PNC 1000	PNC 1100	PNC 1200
PNC 1210	PNC 1410	PNC 1800
PNC 1850	PNC 1860	PNC 2100
PNC 2300	PNC 2700	PNC 5000
PNC 900	PNC 910	PNC 950
PNC 960		

Secabo

C120	C40	C60
C60 II	S120	S160
S60		

Seiki Tech

SK-1100H	SK-1100T	SK-1350H
SK-1350T	SK-720H	SK-720T
SK-850H	SK-850T	SK-870T

Silhouette

Cameo

USCutter

MH-1101	MH-1351	MH-721

Vinyl Express

Bobcat	Lynx	Panther I 24
Panther I 30	Panther I 40	Panther I 50
Panther II 24	Panther II 30	Panther II 40
Panther II 50	Panther III 24	Panther III 30
Panther III 40	Panther III 50	Puma I
Puma II	R Series 19	R Series 24
R Series 31	R Series 39	R Series 44
R Series 53	ULTRA 24	ULTRA 30
ULTRA 40	ULTRA 50	

VyTek

GEM40	GEM54

B Dictionary of Technical Terms

Active and Passive Jobs
Active jobs are those that are being cut. Passive jobs are waiting in the queue for output.

Additional Programs
Additional programs are program modules or stand-alone programs that are part of the delivery.

Auto Import Plug-Ins
Auto import plug-ins are used to automatically import data from other programs - without intermediate steps.

Automatic Contour Pen Conversion
This feature means that before the data is transferred the software 'looks' for objects with the attribute 'contour'. If so, the user can decide whether the contour is to be converted or not. If the contour should be converted, then a vector object with the width of the contour is automatically generated!

Bitmap Functions
Bitmaps are pixel images or photos. Bitmap functions means all functions which are not vector tools like node editing, and which are only applicable on bitmaps.

By Color
This is a welding function, which deletes all surfaces, which are covered by overlying colors.

Bypass Cutting
Direct cutting - without window - before output on the cutter

CMX Data Transfer
CMX data transfer means the handing over of data using CorelDRAW's CMX data format. CorelDRAW had created this format in order to ensure the exchange of data within the Corel program families. CMX is a public data format and is used for the exchange of data. This has the advantage compared to EPS, that Corel specific types of data can be copied 1:1, without making a conversion of the format.

Cap Height Setting
Cap height is the typographical correct unit of capital letters. The text editor uses this unit by default when calculating the font size.

Circular Text
Is a special feature of the text editor with that text blocks can be placed on or in a circle.

Clipart Tab
Cliparts are job-similar files - often logos or patterns - which are useful for the design of an output job. The clipart tab is a sub-tab of the Sidebar, with that the cliparts can be managed.

Clone

This function is usually used when creating labels and series. Changes at the control object are transferred to all clone objects.

Close Objects (Automatically)

When importing DXF or HPGL data, many or all objects are not closed. On a cutter only closed objects can be processed reasonable. This function will automatically close all vector objects. In the basic settings the threshold for the closing of objects can be changed.

Contour Line (Print & Cut)

Unlike the outline / inline bitmaps are here provided with a vector contour. This function is regularly needed in the creation of labels and stickers.

Create / Edit Text Block

Text blocks are blocks of text that can be used more frequently because they appear identical or similar in many jobs - such as your address. With the PhraseWriter arbitrary blocks of text can be created and modified as needed.

Cut Out Region

Is a bitmap function which provides the tracing of parts of a bitmap. You can cut out any vector form out of a bitmap.

Device Control

This section deals with device control functions on the output side.

Digitize Mode

This feature means a drawing tool, that similar to digitizing tablet with a magnifier, draws nodes on the working sheet.

Dongle Protection

A dongle is a hardware copy protection that is stuck on the USB port of the computer to make run the software. The dongle protects producers against unauthorized copying of its software and at the same time it protects the investment of the buyer, since its competitors do not get the software free of charge. Thus from dongle protection both sides benefit - producers and buyers.

Drill Holes

Drill holes is a special drawing tool, that marks the position of a drill hole, using a crosshair cursor. If the connected machine is capable of producing drill holes, then the position is transmitted to the device driver.

Files Tab Is a sub-element of the Sidebar, with that Jobs can be managed. Job is the file extension, which is used from EuroCUT.

Flatbed Cutter All cutters that have a flatbed as a cutting surface.

Folder Monitoring This function means that the software monitors a selected folder on hard disk or network. Every time when a change in the monitored folder occurs - by saving or deleting of jobs - the thumbnail gets updated.

Fontmanager The Fontmanager manages fonts in databases. The advantage of this method is that the database can be copied from one computer to another and thus the same set of fonts is available on both computers.

Full Surface Is a welding function, which underfills objects in one color, whose surfaces overlap another. The partially hidden objects are treated in a way, that they are underlaying all overlying objects.

Hatching In this milling method the area, which should be removed, is provided with a hatching. The area gets removed along the hatching using the milling tool.

Hotfolder Management A folder can be defined as a so-called hot folder. All output jobs that are stored in this directory are supplied to the output.

Job Calculation The Job Calculation means a function with that preliminary costing can be done easily. This function is particularly well suited for calculating charges of material costs.

Job Info The Job Info can - referring to each job - save additional information such as order number, customer address, material, time spent, a. s. o..

Job Rerun Any job that is still in the job history can be cut again identically. The actual to the machine transmitted data is stored. All parameters are given out into the output file.

Laser Engraver Name for all devices which don't use an engraving needle but a laser unit.

× - This device type is supported by the software suite

	OptiScout. Full info at: www.optiscout.com
Layer Tab	Is a sub-element of the Sidebar, with that layers can be managed. Layers are color levels which determine and control output order and tool parameters - besides object position.
Material Display	Each color layer can be assigned a specific material with an exact material description. The assigned material is displayed before the output in the Job Calculation, Job Info and the layer itself.
Milling & Engraving	This rubric lists the specific functions and tools which were implemented for milling and engraving.
Monitor Output Process	With monitoring, we mean that the output process can be suspended, stopped and continued. Active jobs can be switched to passive and if necessary be re-activated.
Multi Inline	In this milling method the area, which should be removed, is provided with multiple Inlines. The area gets removed along the inlines - from outside to inside.
Multi Port Support	With this we mean that all ports on a given computer - which are suitable for the issue - can be used. Typically, these are all COM and USB ports.
Multi User Versions Available	For every main license multi-user version can be purchased. The additional versions here have the same serial number as the main license.
Multi-functional Cutter	Multi-functional cutters are devices which can use various tool heads beside a cutting tool head. They are, for example, oscillating knives, spindles, and hemming tools.
	✕ - This device type is supported by the software suite OptiScout. Full info at: www.optiscout.com
Multiple Cutting	Option to cut easier thick and resistant materials
Node Editing	Main tool for the creation and editing of vector objects.
Objects Tab	Is an sub-element of the Sidebar with that objects can be managed. A large number of object attributes such as

	visible / invisible, do not output, do not print, can be individually defined for each object.
Open Trimming	Is a welding function, which creates open vector objects, after they were separated at their intersections.
Optimization	Targets of the optimization are: diminishing of rejection rate, material saving, time saving, optimization and shortening of job preparation. The optimizing of objects can be done on the working sheet or in the output preview. The objects are sorted so that the material consumption, without nesting of objects, is minimized.
Outline / Inline	Outline is a special function, where vector object is contoured automatically with a contour in a predefined distance. In contrast to the contour line, the outline creates - in case of internal objects - so called Inlines.
Parallel Device Output	This function can simultaneously provide data on multiple machines, which are connected to a computer, if sufficient computing power on the PC is given.
PhotoCUT	PhotoCUT is a program module which can convert halftone drafts into vector stripes. The so generated vector stripes can be cutted on each usual cutting plotter and, generate - with the appropriate viewing distance - one photo-like effect.
PhraseWriter	The PhraseWriter is a program module for the management and use of text blocks. It is automatically started at startup and is accessible at any time using the right mouse button context menu. The specified text block is selected and then inserted and displayed on the desktop.
Plot Manager	The Plot Manager is a separate program module, which 'background' controls and monitors the output of the data on the selected device.
Plot Server Function (TCP/IP)	A computer at which multiple output devices are connected can act as a plot server. The data transfer can take place via the network using TCP / IP. Assuming the appropriate licenses, any number of client computers can give out on the plot server devices.
Plot to File	The output of the plot data can be redirected to a file. The user only has to activate the appropriate option in the output dialog.

Posterize

Posterize is a bitmap function which performs a reduction on any number of color hues per color layer.

Preview *.CDR and *.CMX

The files tab can display besides *.JOB also contents of *.CDR and *.CMX files (CorelDRAW formats).

Productivity Tools

Productivity tools are special tools, which - because of their workings - enhance the productivity of sign making processes. These are usually such tools, which distinguish a cutting software from illustration programs such as Illustrator and CorelDRAW.

Program Type

This section summarizes certain criteria which characterize the use of the program.

Reference Job (*.JRF)

In a so-called Reference Job the environment, the tool parameters and the device drivers are stored. In this way, it is possible to output the job in an identical manner as many times as wished.

Register Mark

Is a special drawing tool, with that marks, for the making of multi-colored foil signages, are drawn. This register marks can consist of a cut-through or a filled square and are positioned by the user to the desired position on the output job. While the output these registration marks are always cutted at the same position on the vinyl (layer independently), so then the precise assembly of various colors is possible.

Roll Cutter

Roll cutter means all cutting plotters, which can only handle material rolls.

Screen Printing

Is a welding function, which allows the changing of the color stack. Thus, the order of the colored vinyls can be re-sorted - interactively - from light to dark.

Segmentation with Overlap

Segmentation is always necessary when the job is larger i.e. longer or wider than the connected device is able to plot. The overlap is necessary when the individual segments are to be completed to a whole again. Joining otherwise would lead to undesired white gaps.

Sidebar

Sidebar means a movable control element that can be made visible on the desktop. The individual sub-elements are activated by clicking so-called 'tabs'.

Sort with Simulation

In this function, all objects are sorted according to a certain criterion. For some output devices such as lasers

	or milling machines the sequential processing of the objects is important. Therefore, the output can be simulated and the collation can be adapted to the requirements of the output device.
Space (1/1, 1/2, 1/4, 1/8)	Special function with that micro-typographical-correct spaces (keyword: em quad) and thus word / letter spacing can be generated. These special spaces can be directly entered via the keyboard.
Spool Function	When the Plot Manager is activated with the parameter !SPOOL!, it runs independently without starting the main program. Output data can be activated and given out via Drag & Drop.
Spot Colors Definable	Spot colors are color layers, which are defined in a way that color values are additionally given out. Some hybrid devices and RIPs use spot color values for the control of output processes. When printing the corresponding color plates are given out.
Stacking	Stacking means that at first as many objects are positioned adjacent as will fit on the material. The following objects are then positioned above it. This process is repeated until all objects are positioned on the material.
Stand-alone Software	"Stand-alone" means that this program can be used without any other so-called host program. It has all the tools that are needed for the design, layout, and the output of jobs.
Start Tool Paths	When milling and laser engraving it often happens that immersion traces are visible at the start point of an object. To ensure that the quality of the objects which are milled is not affected, the start point can be laid outside the object. This task is performed by so-called start tool paths.
Status Display Material Consumption	In the output preview at the bottom of the window is a status line where the material consumption of the job is displayed in square meters. Since this happens before the output, this feature can also be used to order exactly as much of a material as is required currently for the job.
Symmetrical Object	This is a tool that can create stars and polygons. With it the initial shape (circle, ellipse) and the number of edges can be specified. With its own drawing tool then the symmetric objects on the desktop are drawn.

Templates (*.JTP)	Templates or patterns are jobs which have no name (untitled) when opened. Templates can always be created if they can serve as an example for other similar jobs. The advantage is that the working sheet and layout are predefined.
Test Run	Before the actual output a so-called test drive can be carried out to examine whether, for example, the material is sufficient. During the test run the raised tool head moves along the vectors.
Text Editor	Text editor means program functions that include all the tools necessary for professional capturing and editing texts. Typographic special tools that are essential for signmaking were implemented.
Text Import (*.TXT, *.RTF, *.ECT)	External texts can be imported directly into the so-called text box, with the above formats being used. For formatted text the RTF format must be used. It can be saved from every professional word processing program.
Thumbnail Preview	Thumbnails are small low-resolution pixel previews of file contents. All in the selected folder located files will be - by means of the thumbnail preview - visible and manageable.
Tool Parametrization	Means that specific settings for a tool can be done by the user. This can be values for speed, drive, depth, angle, pressure, acceleration or other parameters. The device driver provides the parameter fields. The user can edit corresponding parameter values before the output on the device.
Tool Assignment	To each color layer a specific tool can be assigned. This makes creation and processing of jobs much easier. The selected device driver provides all possible tools. The assignment itself can be done by the user individually.
Track Logging	For each tool the distance will be recorded. In addition, the date, time and device names are stored.
Trimming	Is a welding function, which separates closed vector objects using lines or curves. The resulting partial objects are re-closed then automatically.
TrueType, OpenType, Type 1, BE Fonts	These 4 font formats can be managed with the Fontmanager i. e. add, enable and disable.

URW BE Fonts

The BE-type format was created by the company URW. The BE-format is a vector font format that was shipped with SIGNUS systems.

Vectorization, Tracing

Vectorization means the conversion of bitmaps (pixel images) to vector contours.

Video Marks (Print & Cut)

Video marks are marks that can be detected by cutters with optical sensors or cameras to compensate for inaccuracies of the print result. In the print and cut process they are used also for the contouring of print objects.

Wait After Segment

If a job has to be segmented, then the user receives this option with the ability to re-equip the machine before the next segment is processed. By means of a message window the process can be continued at any time.

Weed-Ex Driver Option

It is a specially laminated flex or flock material of Witpac GmbH. First, the actual vector lines are cut. In the second step, the components that need to be weeded, are cut out in a way, that they 'fall out' automatically at the end. So you have already reached the entire plot result after peeling off the medium and you don't have to weed manually.

Weeding Lines horiz. / vert.

In addition to the global weeding frame, which is generated around the entire output job, individual weeding lines can be added horizontally or vertically in the output preview. Large, bulky jobs can thus be divided.

Welding

Welding functions are needed for the treatment of overlapping of layers or vinyls. These functions are in the signmaking and screen printing department essential for the processing of vinyls.

C Glossary

Additive color system The ~ is based on mixing the additive, luminous spectral colors red, green and blue (RGB), for example in color TVs or color monitors

Adjustment Modification of the distance between two adjacent characters so that a harmonic type face is being created. This is reached by correcting the character - or word distance. With distances below 100% you speak of kerning and with values above 100% of spacing out.

Adjustment handles ~ are the 9 black squares that are drawn around the object and in the middle when marking objects.

Antialiasing Edge smoothing with bitmaps

Application tape Foil that is used to apply the cut foil after the weeding on the lettering area. The adhesive force must be strong enough so that the text - even the tiniest letters - can be released from the substrate without problems. After application, the ~ must also be released without problems.

Ascender Term for the part of a character that extends above the middle length.

Backup Data backup

Bit-depth also shade ~ is the mathematically possible number of colors with a specific number of bits, for example:
1 bit color depth = 2^1 = 2 possible colors (black/white)
8 bit color depth = 2^8 = 256 possible colors/shades of gray
24 bit color depth = 2^{24} = 16.8 millions possible colors

Bitmap Pixel-graphic

Bold Font that a bit thicker than the standard typeface.

Byte Smallest addressable unit in the computer memory, consisting of 8 bits.

Calibration Adaptation of printer, monitor, cutter or adaptation to desired values.

Cap height This is the height of the capital letters, the capitals. As measurement usually the height of the letter „H” from the font line to the top edge of the character is used.

Center justification A break justification where the text block is justified at the same time on the left and on the right side. To do this, the word space within a text line is varied (usually extended) so that on

	the left and right side a clean text edge is created. This is not only applied for the the last line of a break. compare also: forced block
Clipart(s)	~ are jobs or job parts that were added to the Clipart toolbar . They are saved in a separate directory. (C:\Program Files\EUROSYSTEMS\CoCut Starter 2017\CLIP)
Clipboard	~ is used for temporary storage in Windows. The ~ is used to exchange data fast between applications.
CMYK	Cyan, magenta, yellow, contrast (key, black) Standard colors for the four-color printing.
CMYK-color area	~ is the total number of colors that can be displayed by the colors used when printing (CMYK).
Color depth	~ is the number of possible color tones that can be recognized by a scanner or reproduced on a color monitor.
Container	A container - more exactly an image or text container - is a vector object, that similar to a real container can take up arbitrary image data or texts. In conjunction with macro scripts contents can be exchanged semi-automatically or automatically.
Context menu	Context menus are called so because the structure adapts and changes depending on the number and type of the selected objects (context). Context menus are always activated with the right mouse button. They serve for the faster access to important functions and tools and also to those functions that cannot be activated via the main menu.
Contrast	Contrast; range of brightness between bright and dark parts of a picture.
Cursor	~ is the blinking, vertical line in an editable field.
Decoration	Accentuation of text parts by modification of the text attributes, for example **bold**, *italic*.
Descender	This is the part of a character that protrudes below the font line.
Desktop	The area besides the working surface that can be used for the draft. It is comparable to a desk on which are the tools.
Digitalization	Conversion of a picture template into a digital form. The capture is done point for point or line by line by means of a digitalization tablet or by reading the template with a scanner.
Dongle	

	Means the copyright that is part of the scope of delivery of CoCut. It is inserted in the USB interface of your computer. Without ~ the software cannot be started.
Download	Downloading applications or files from the internet to your computer.
DPI	Acronym for **D**ots **P**er **I**nch; resolution fineness (1 inch = 2.54 cm)
EPS	Acronym for „**E**ncapsulated **P**ostscript **F**ormat". In this file format the text and picture information is saved in the page description language postscript. This format also contains besides text and raster data also a preview bitmap which allows displaying a copy of the data on the screen.
Foil	Two production processes are common: calendaring and casting. Cast foil is created without drawing frame and thus has a lesser shrinking tendency. The costs are usually higher than with calendared foil. Calendared is cheaper, has a shorter period of usage and shrinks more. Cutting foils are built in three layers: 1. Substrate; the lowest layer 2. Gluten layer; is between the foil and the substrate 3. the foil itself.
Font	Type cut within a type face in digital form. Most type faces have the fonts normal, bold, italic and bold-italic. Often, the font is used for the same type face. Correct would be that each cut is a separate font.
Font line	~ is a thought line on which the characters of a row are standing. Even if different font types and font sizes are used in a row, all characters must stand on a common font line.
Font size	~ is the size of a font. It corresponds to the block height, which means it also comprises the ascender and descender as well as a certain space above and below the characters.
Forced justification	Justification where all text lines - also the last- are adapted to the width of the column or the working area. In CoCut this justification is called „force justification".
Gamma correction	The ~ is a method for the correction of color graduation considering the perception of the human eye if there are two adjoining areas of different color.
Group	Combination of arbitrarily many objects to a group. The position of the objects itself does not change any more within the group.

Halftone image(s) ~ are pictures which contain shades of gray or hues. The tonal value between pure white and pure black is called halftone.

Hotfolder A Hotfolder is a directory monitored by the Plot-Manager. If a file is copied into this directory, the Plot-Manager carries out automatically specific configurable functions.

Inch Measurement unit for the length
1 Inch = 2.54 cm

Job File-ending of CoCut; name for CoCut file

Justification Alignment of a text block on the working area. CoCut offers justification left-aligned, right-aligned, centered, center justification, forced center justification and adjust cap height.

Kerning If two characters stand closer together than it would correspond to their standard thickness, you speak of ~. With character combinations as for example „Te" you have a balanced type face.

Laminating Covering with transparent plastic films.

Live-Update Updating of software via the internet.

Macro A ~ automates program flows. The automation can thereby be realized with the program's own commands or a macro language.

Marking function ~ means marking objects by keeping pressed the left mouse button, then drawing a frame around the objects to be marked and letting go the mouse button only if all objects to be marked are completely within the frame.

Process colors Printing scale of colors for four-color-printing with cyan, yellow, magenta and black (key). By mixing these colors, it is possible to print all colors.

Profile The appearance of program surfaces is called ~. The shown tools and menu items can be individually adjusted to the user. Intention is to simplify the user interface.

Raster Image Processor short: RIP - Software that rasterizes vector data and controls the printing on a large format printer.

Resolution Number of pixels per track unit. It is indicated in dpi (dots per inch). Laser printers have a resolution from 600 to 1200 dpi.

Scan resolution Fineness of the resolution when scanning analogue images
Formula:
Resolution (in DPI) = printing length (L/cm) x 2 (quality factor) x

	enlargement factor x 2.54 (when converting from cm into inch)
Subsidiary line	These are lines for the virtual alignment of objects on the working area or the desktop. Subsidiary lines are only visible on the monitor are neither plotted nor output on the printer.
Superscript	The characters are set higher than the characters standing on the baseline. They usually have a bit smaller font size than the basic font.
Toolbar	can be freely moved and positioned on the working area of an application. Often, also the composition of the tools can be defined.
Trapping	A small overlapping zone at the limit of superposed colored elements. This ~ guaranteed that no white gaps occur at the color borders. The overlapping can happen through overfilling or underfilling.
Upload	Upload is the sending of files or applications to a networked server
Weeding	means the removal of unnecessary foil parts after the cutting with a cutting plotter.
White gaps	~ are the gaps on the edges of overlapping or abutting color or foil areas. Disadvantageous especially with silk-screens or when printing.
x-height	Height of the lower case/character „x" respective the lower case without the ascender of a font.

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