

# MANUAL



## KCC software Software Manual

BV Korthofah  
Lageweg 39  
NL-2222 AG Katwijk  
The Netherlands

**kortho**  
— coding & marking —

This Software Manual is a “Translation of the original Software Manual” of the KCC software.

Rev. no.	Description	Date	Check
0.1	Draft 1	18/08/2020	Kortho
0.2	Added X-series + layout change	07/09/2020	ATG
0.3	Software update added X and TT	03/03/2022	Kortho



## Our History

Kortho was founded in Amsterdam in 1926 and is still a Dutch and 100% family owned company today. Because of our long history we were able to witness the evolution of Coding & Marking from the beginning. Naturally our machines also evolved along the way. From stencilling and the standalone mechanical stamping machines in the early days. To the network connected Industry 4.0 printers of today.

## Our technologies

Next to still offering our mechanical hotfoildprinters, rollcoders and touch-dry marking systems, Kortho also specializes in Thermal Print as well as Hi-res Inkjet systems. Two core technologies that stand at the base of our new generation printers: Consisting of TIJ and Piezo inkjets on one end, and Label and TTO printers on the other. This makes us the widest multi-technology oriented specialist in the market today. Furthermore as all products have been fully developed in-house our printers and software have a highly integrated and standardized design between them.

## Our values

As an independent and longtime family owned business Kortho has always been able to stay true to itself. Firstly by remaining a specialist. Hence, we will only develop a printer if we can make it best in its kind. Never shall we launch an average product just to widen our offering. And secondly by staying transparent. Basing our pricing on manufacturing cost and obvious value only. Never on marketing, strategy or artificial product differences. These principals not only guarantee technologically dominant and best valued priced printing systems, but also a loyal partner that will always choose long term relationships over short term results.

## Our mission

As early as 2007, and with our first network controlled TTO launched in 2009, Kortho saw clearly that high automation and centralized (human-free) printer control was the future in coding. Winning OEM's and dealers would not just have to offer good printers, but also be able to integrate them into any smart customized coding solution. Something that just very recently became known as Industry 4.0. As a result Kortho has focused its development in this direction ever since. First by implementing the needed functionalities. And now, through our SLIMLINE concept, by making them easy, quick and cheap to implement. Our mission: Making smart, tailored and error free coding into the new global standard. And thus turning Industry 4.0 into a turn-key available commodity.

**INDUSTRY 4.0 IS NOW A TURN-KEY  
AVAILABLE COMMODITY!**

**SLIMLINE™**

SLIMLINE printers are all about bringing Industry 4.0 within reach. To achieve this we specifically designed this new line of equipment to excel in an IoT network environment. On the software side by making any tailored printer control solution easy and quick to implement. And on the hardware side by re-using as much as possible of existing network and IT infrastructure. Allowing for significant savings on printer hardware. Something that's an absolute first in Coding & Marking.

**For this, Kortho's SLIMLINE concept  
is based on the following principles:**

### **LESS CODING ERRORS**

The biggest savings in coding are not found in the cost per print, maintenance costs nor equipment price. Because although these costs are still very important, they are insignificant in comparison to the costs of a product recall or factory downtime due to coding errors. This is why SLIMLINE printer control is specifically designed to address coding errors. Be it human, mechanical or process related.

### **LESS SOFTWARE LICENSE FEES**

The costs of IT solutions traditionally start with license fees. In order for SLIMLINE to work Kortho took the strategic decision to offer our own Kortho Control Center software for free. This label design and network control platform can operate the entire range of SLIMLINE printers from one central GUI. And with more than a decade of IoT oriented development will cover 95% of all smart coding requirements. Straight out of the box, free of charge and with all features unlocked. Effectively turning our software into a service product without profit motive.

## **SLIMLINE CONCEPT**

### **LESS PROGRAMMING TIME**

Second cost component in IT is the need for extended scripting. Which at the same time is also the main reason for complexity. To address these issues we designed SLIMLINE printers to be open and omnicompatible to other third party software as well. The idea behind this is simple: The more software that supports our printers, the bigger our offering in turn-key software solutions. And with the world as our IT supplier there's always going to be an existing specialist for each application. Because of this with SLIMLINE printers you no longer need to script every new or exotic requirement from scratch. Nor conform to the capabilities of just the printer manufacturer's software. Instead, our printers will allow you to use to best suited and already proven software for the application. Something that, with no financial incentive to sell our own software, will always be enabled and promoted by Kortho objectively.

### **LESS HARDWARE INVESTMENTS**

Just like with software the key to reduce hardware costs lies in needing as little as possible. This as Kortho will never make concessions on equipment build quality in order to lower its price. Luckily in centralized control this is not needed as equipment savings can also be found by re-using existing infrastructure. This is why SLIMLINE printers are designed to operate without each needing an individual HMI. Everything you need is in the printer itself so that up to 250 different systems can be operated from one single terminal. Even across different production plants. Naturally each printer can still be equipped with its own HMI, but this is optional. Meaning that the more the control is centralized, the bigger the savings will be on controllers. On top, SLIMLINE printers can also be controlled from any previously purchased HMI. Allowing for further hardware savings by re-using already present servers, PC's, tablets or other devices to control the printers from.

**Smart coding  
Less license fees  
Less coding errors  
Less programming time  
Less hardware investments**

**SLIMLINE: Smart Less Is More**

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2021.09 subject to change without notice

# Preface

*This is the preface to the KCC Software Manual.*

This software manual informs the user about the use of the Kortho Control Center software (abbreviated to: KCC software).



***Make sure that this software manual is always available near the KCC software.***

Read this software manual carefully before first using the KCC software or before carrying out any operating activities.



***The KCC software may only be used by sufficiently qualified personnel.***

## Appendices

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The following appendices have been added to this Software Manual:

- Appendix 1 'Software specifications'.
- Appendix 2 'List of faults'.



# Contents

## Preface

## 1 Introduction

1.1	Note.....	11
1.2	Manufacturer .....	11
1.3	Service life.....	12
1.4	Liability.....	12
1.5	Copyright.....	12

## 2 Safety

2.1	Symbols .....	13
2.2	User .....	14
2.3	Safety regulations .....	14
2.3.1	General safety instructions .....	14
2.4	Function of the KCC software.....	15

## 3 Installation

3.1	Safety regulations .....	17
3.2	Installation procedure.....	17

## 4 TT series software description

4.1	Function.....	21
4.2	HMI KCC TT series .....	21
4.2.1	Print .....	23
4.2.1.1	Select label .....	23
4.2.1.2	Local files .....	24
4.2.1.3	Printer files .....	25
4.2.1.4	Edit label.....	25
4.2.1.5	Create label.....	25
4.2.1.6	Preview .....	26
4.2.2	Settings .....	27
4.2.2.1	System.....	27
4.2.2.2	Printer .....	32
4.2.2.3	Signal .....	35
4.2.2.4	Network .....	37
4.2.2.5	Label.....	40
4.2.2.6	Print .....	41

4.2.3	Service and diagnostics .....	43
4.2.3.1	Test labels .....	43
4.2.3.2	Test .....	44
4.2.3.3	Printer .....	45
4.2.3.4	Diagnostics .....	47
4.2.4	Information .....	48
4.2.4.1	General .....	48
4.2.4.2	Health .....	48
4.2.4.3	Backup .....	49
4.2.4.4	System info .....	49
4.2.4.5	Report .....	49
4.2.4.6	Upgrade .....	50
4.2.5	Label creator .....	51

## 5 X-series software description

5.1	Function .....	59
5.2	KCC X-series HMI .....	59
5.2.1	Print .....	61
5.2.1.1	Select label .....	61
5.2.1.2	Local files .....	62
5.2.1.3	Printer files .....	63
5.2.1.4	Edit label .....	63
5.2.1.5	Create label .....	63
5.2.1.6	Preview .....	64
5.2.2	Settings .....	65
5.2.2.1	System .....	65
5.2.2.2	Printer .....	71
5.2.2.3	Signal .....	73
5.2.2.4	Network .....	78
5.2.2.5	Label .....	81
5.2.2.6	Print .....	83
5.2.3	Service and diagnostics .....	86
5.2.3.1	Test labels .....	86
5.2.3.2	Test .....	87
5.2.3.3	Printer .....	88
5.2.3.4	Diagnostics .....	90
5.2.4	Information .....	91
5.2.4.1	General .....	91
5.2.4.2	Health .....	92
5.2.4.3	Backup .....	92
5.2.4.4	System info .....	92
5.2.4.5	Report .....	93
5.2.4.6	Upgrade .....	93
5.2.5	Label creator .....	94

## 6 Operation

6.1	Safety regulations .....	103
-----	--------------------------	-----



6.2	Operational actions .....	103
6.2.1	Connecting with printers .....	103
6.2.2	Selecting a printer .....	105
6.2.3	Selecting a label .....	106
6.2.4	Editing labels .....	107
6.2.5	Creating labels .....	108
6.2.6	Drop and Print .....	109
6.2.7	Printing database data .....	113
6.2.8	Defining database fields in the label .....	115
6.2.9	Selecting a database label .....	117
6.3	Software settings.....	118
6.3.1	Settings .....	120
6.3.2	Drop and Print .....	121
6.3.3	Whitelist .....	122
6.3.4	Multiple labels .....	123
6.3.5	Scan and Print .....	124
6.3.6	Security .....	126

## 7 Malfunctions

7.1	Safety regulations .....	129
7.2	Finding faults.....	129

## A1 Software specifications

## A2 List of malfunctions



# 1 Introduction

*This chapter provides general information about the KCC software and this accompanying software manual.*

## 1.1 Note

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Optimal safety can only be guaranteed if you read this software manual carefully before using the KCC software.

## 1.2 Manufacturer

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The KCC software was developed by:

**BV Korthofah**

Lageweg 39

2222 AG Katwijk (NL)

The Netherlands

Phone: +31 (0) 71 40 60 470

Fax: +31 (0) 71 40 32 807

Web: [www.kortho.com](http://www.kortho.com)

Email: [info@kortho.nl](mailto:info@kortho.nl)

## 1.3 Service life

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The KCC software can be upgraded. This extends the service life of the KCC software for as long as BV Korthofah supports the software.



**Check the KCC software for any upgrades at regular intervals. Check the website for this: [www.kortho.com/faq](http://www.kortho.com/faq).**

## 1.4 Liability

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KCC-Software is not liable for any dangerous situations, accidents, damage or loss caused as a result of:

- Improper use of the KCC software.
- Using KCC software for applications or under conditions other than those specified in this software manual.
- Ignoring safety warnings or safety instructions as stated on the KCC Software or in this software manual.
- Making changes of any kind to the KCC software.
- Insufficient maintenance of the KCC software.

The manufacturer cannot be held liable for consequential damage, such as damage to products, interrupted operations, loss of production, etc., resulting from machine malfunction.

## 1.5 Copyright

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All rights are expressly reserved. Reproduction, adaptation and translation without the prior written permission of BV Korthofah is prohibited, except as permitted by copyright.

BV Korthofah reserves the right to improve its products at any time without informing its customers. The contents of this software manual are subject to change.

Every care has been taken in the writing of this software manual. BV Korthofah cannot be held liable for errors in this publication or for any consequences thereof.

This software manual was drawn up by BV Korthofah. Address information see cover page.

# 2 Safety

*This chapter contains general safety instructions. Please carefully read this chapter before using the KCC software.*

## 2.1 Symbols

---

The following symbols are used in this Software Manual:



***A tip or hint.***



***Draws your attention to possible problems.***



***Draws your attention to any risks for or near printers caused by the KCC software if the instructions are not followed carefully.***



***Draws your attention to the risk of users becoming seriously injured if the instructions are not followed carefully.***

## 2.2 User

---

The KCC software may only be used by properly qualified personnel.



***Observe the safety instructions in this Software Manual. Failure to observe the safety instructions may cause unacceptable risks.***



***The KCC software may only be operated by one person at a time.***

Users must familiarise themselves with Chapters 1 to 6 of this Software Manual and the safety regulations below before using the KCC software or performing any operation on the KCC software.

## 2.3 Safety regulations

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This means that printers can be operated safely using the KCC software if all safety instructions are carefully observed. However, improper or careless use can create dangerous situations.



***Observe the safety instructions in this Software Manual. Always remain alert to dangerous situations and avoid any improper or careless use.***

### 2.3.1 General safety instructions

---

Observe the following general safety instructions:

- Tie back long hair when you are near printers.
- Do **not** wear any loose-fitting clothes or jewellery when you are near printers.
- Check the general operation of the KCC software and the printer(s).
- Check that the KCC software is up to date.
- Keep your hands away from dangerous parts of printers.



***Keep bystanders at a distance. DO NOT allow any unauthorised personnel to operate the KCC software.***

- Never start the KCC software while people are working on the printer.
- Modifications to the KCC software may only be made with the express written permission of BV Korthofah.

## 2.4 Function of the KCC software

---

The function of the KCC software is:

- Facilitating the design and maintenance of labels for printers with (variable) codes.

The KCC software has been developed specifically for this function and may not be used for other purposes.



***The only way in which the KCC software is to be used is as described in Chapter 4. Any other use of the KCC software is NOT permitted.***

Before using the KCC software the first time, the operator and maintenance engineer should be instructed in how to use the KCC software.





# 3 Installation

*This chapter describes the installation procedure for the KCC software.*

## 3.1 Safety regulations



**Installation must be carried out by qualified staff.**

## 3.2 Installation procedure

To install the KCC software, perform the following operations:

1. **Open** the website of BV Korthofah:  
WWW.KORTHO.COM.



2. **Click** on FAQ.



A list of different software options will open. In this case:

3. **Click** KORTHO CONTROL CENTER (-VERSION X-).  
- The version may differ from the picture.

4. **Select** the desired folder where the installation folder can be downloaded.  
- The installation folder is a .zip file.

5. **Unpack** the zip file to a USB memory stick.

6. **Double click** the file:KCC\_PC\_INSTALL.EXE  
- The installation program opens.

#### FAQ

Where can I download Kortho software and drivers?

##### Labeldesign Software

- [Tic8.OIC.Draw.download \(only for thermal printers\)](#)
- [Tic12.OIC.Draw.download](#)
- [Tic26.OIC.Draw.download \(only for thermal printers\)](#)
- [Nicolabel.download](#)
- [KIGS.Download](#)

##### Network Drivers

- [Tic8.Driver.download](#)
- [Tic12.Driver.download](#)
- [Tic20.Driver.download](#)
- [Tic26.Driver.download](#)
- [RAC.Download](#)

##### Kortho Control Center

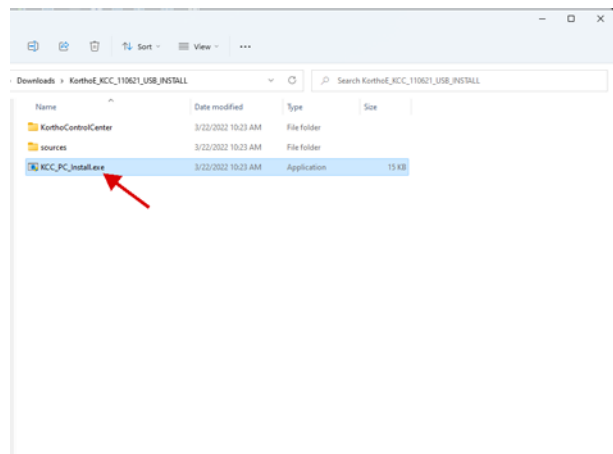
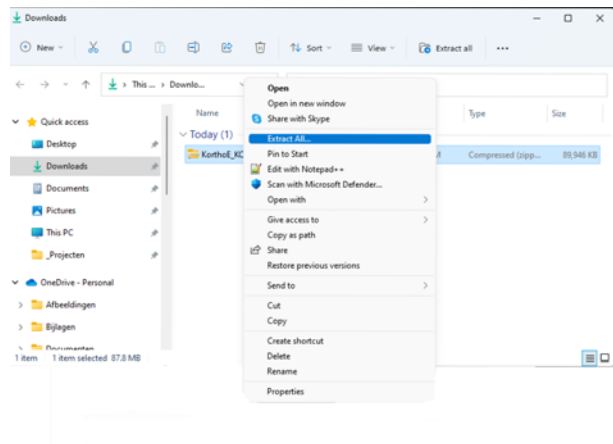
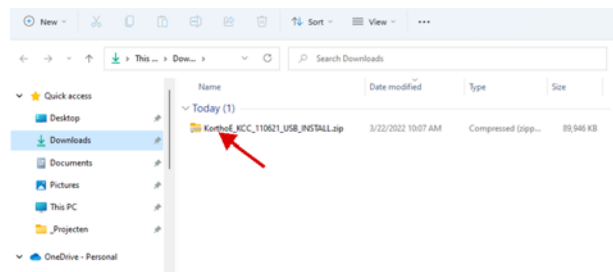
- [Kortho Control Center 01-2021 - USB install -](#)

##### Firmware

- [Tic12.firmware.TY1.0-170206A/03-2017](#)
- [Tic12.firmware.TY1.0-170607a - X.O.I/USB.upgrade1](#)
- [Tic20.firmware.Tic2012082021a](#)

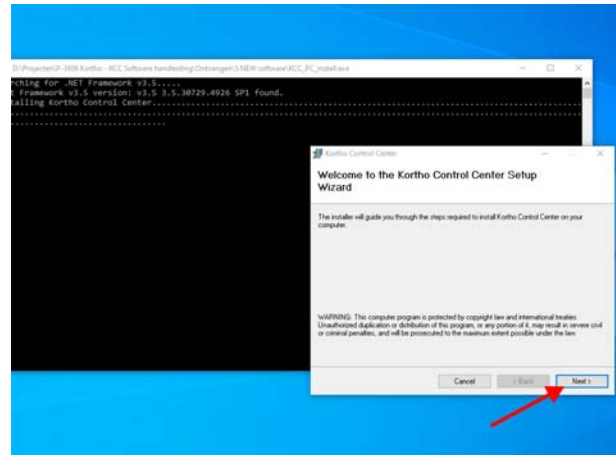
##### Third party tools

- [Multi file port](#)



Follow the steps in the installer:

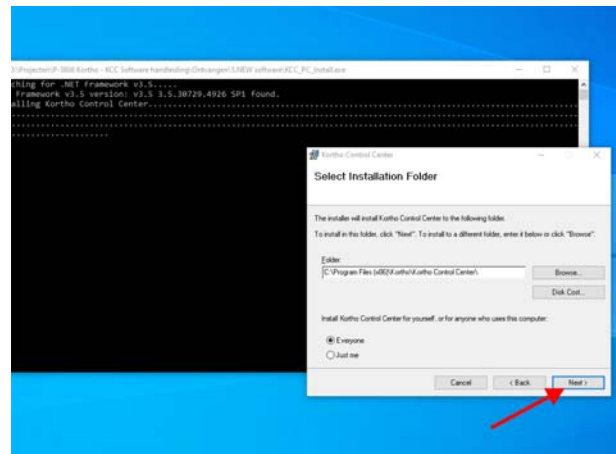
**7. Click on NEXT.**



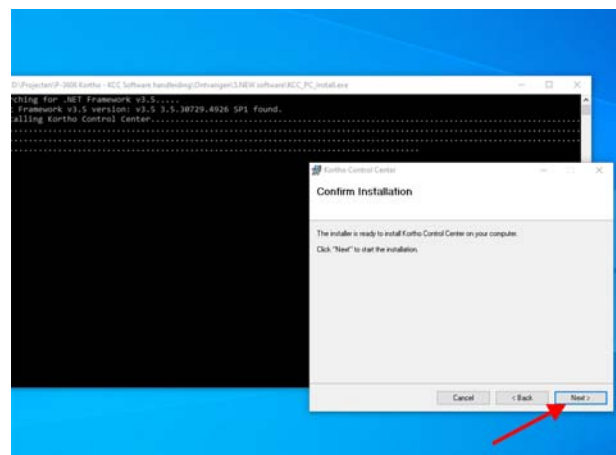
**8. Select** the file location where the program should be installed.

**9. Select** whether the program on this computer is intended for everyone or just for yourself.

**10. Click on NEXT.**



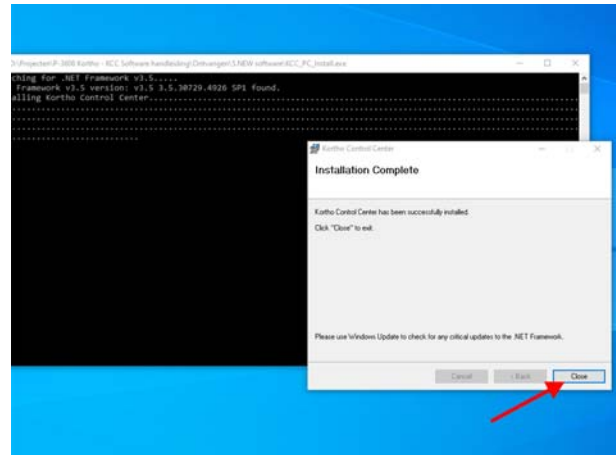
**11. Click on NEXT** to start the installation.



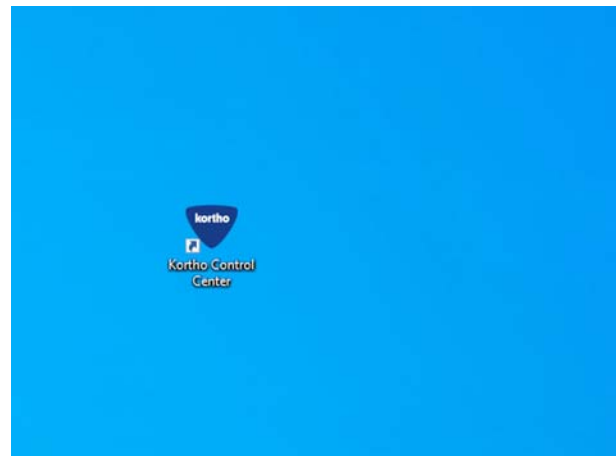
Upon successful installation:

**12.** Click on CLOSE to close the installer.

- If necessary, run a manual Windows update to check the computer for critical updates to the .NET Framework.



A shortcut to open the Kortho Control Center will appear on the desktop.



# 4 TT series software de- scription

*This chapter describes the main components, function and operation of the KCC software.*

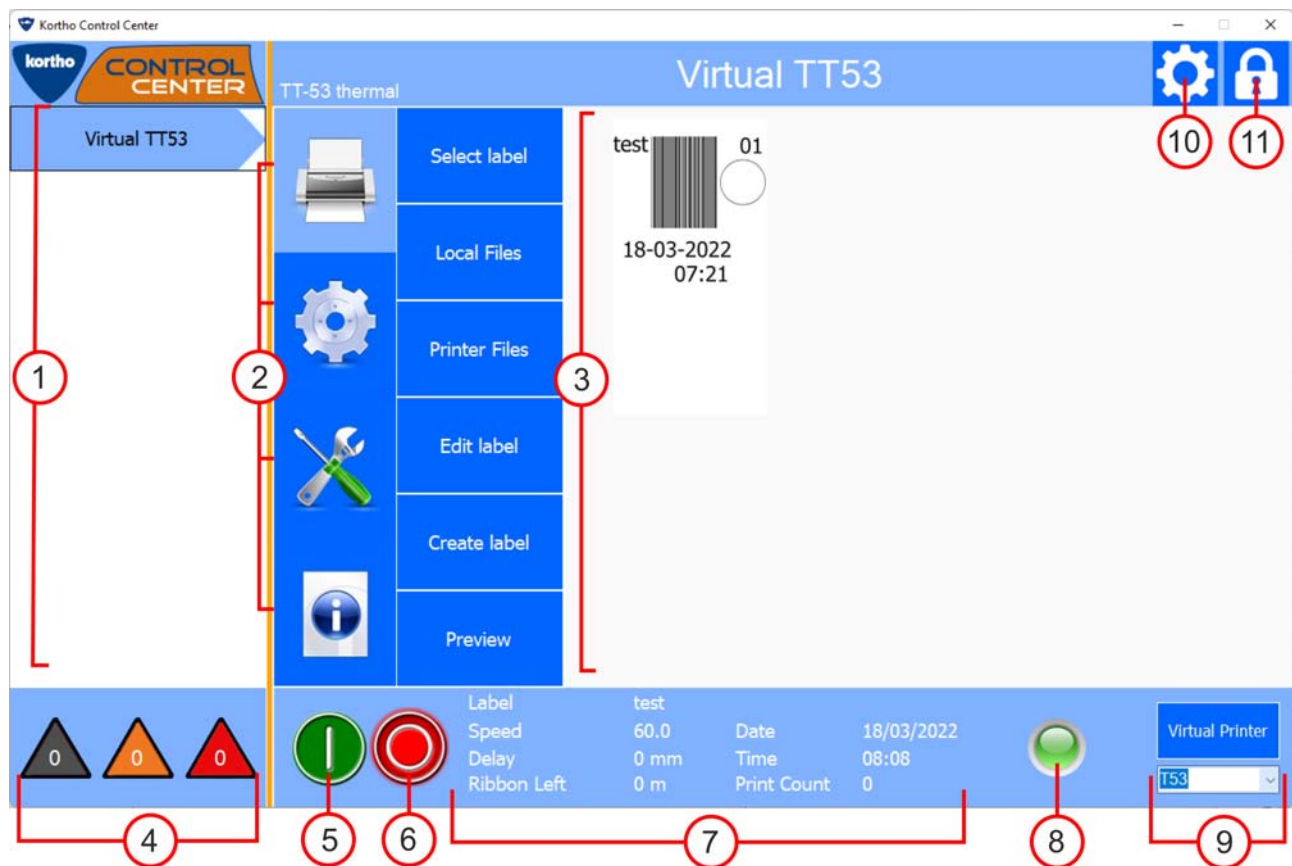
## 4.1 Function

The function of the KCC software is:

- Facilitating the design and maintenance of labels for printers with (variable) codes.

## 4.2 HMI KCC TT series

The KCC software interface, also referred to as the Kortho Control Center ('KCC software' from now on), consists of the following elements:



No.	Description
1	<p>PRINTER LIST</p> <p>Displays a list of all network-connected printers.</p> <ul style="list-style-type: none"> <li>- Active printers are marked in blue, orange or red.</li> </ul>
2	<p>PRINTER SELECTION MENU</p> <p><b>Press</b> one of the four buttons to expand the menus.</p> <p>The four buttons are:</p> <ul style="list-style-type: none"> <li>• Print (label selection and label management). §4.2.1.</li> <li>• Settings (printer and interface settings). §4.2.2.</li> <li>• Service and diagnostics (service and diagnostics functions). §4.2.3.</li> <li>• Information (system information). §4.2.4.</li> </ul>
3	<p>ACTIVE MENU SCREEN</p> <ul style="list-style-type: none"> <li>- Displays the selected menu. In this example: 'Select label'.</li> </ul>
4	<p>PRINTER STATUS TRIANGLES</p> <p>Displays the status of all active printers on the printer list.</p> <ul style="list-style-type: none"> <li>• Grey = no connection.</li> <li>• Orange = warning.</li> <li>• Red = error message.</li> <li>- The number in the triangle indicates the number of printers with the relevant status.</li> </ul>
5	<p>START BUTTON</p> <p><b>Press</b> this button to start the printer.</p> <ul style="list-style-type: none"> <li>- The printer will wait for a signal from the production line.</li> </ul>
6	<p>STOP BUTTON</p> <p><b>Press</b> this button to pause the printer.</p> <ul style="list-style-type: none"> <li>- The printer will not print, regardless of the message from the production line.</li> </ul>
7	<p>GENERAL PRINTER INFO</p> <p>Displays the name of the selected label, speed, delay, date, time and print quantity.</p> <ul style="list-style-type: none"> <li>- This data is also visible on the display of the printer proper.</li> </ul>
8	<p>STATUS LED</p> <p>Displays the status of the printer selected in the printer list.</p> <ul style="list-style-type: none"> <li>• Blue = voltage present.</li> <li>• Green = ready.</li> <li>• Orange = warning.</li> <li>• Red = error message.</li> <li>• Pink = update software.</li> <li>- Pink is only visible on the LED strip of the printer itself.</li> </ul>
9	<p>VIRTUAL PRINTER</p> <p>To carry out tests and design labels.</p>
10	<p>SOFTWARE SETTINGS</p> <p><b>Press</b> this button to open the Software settings menu.</p>
11	<p>SCREEN SECURITY</p> <p><b>Press</b> this button to lock the screen.</p>

### 4.2.1 Print

The PRINT menu contains the following menu items:



A description of each menu item is given below:

#### 4.2.1.1 Select label

Shows the folders with labels followed by the labels in the folder in question.

**Click** a folder and then click SELECT to open the folder.

**Click** a label and then click SELECT to select a label.

**Click** CANCEL to undo a selection and return to the Print menu.



#### 4.2.1.2 Local files

Displays, on this computer, all:

- Labels.
- Fonts.
- Graphics.

**Click** on LABELS.

##### Labels

The options offered by this menu are:

- List labels.
- Add labels.
- Delete labels.
- Move labels.
- Create Folder.

**Click** CANCEL to undo a selection and return to the Print menu.

**Click** on FONTS.

##### Font

The options offered by this menu are:

- List fonts.
- Add fonts.
- Delete fonts.

**Click** CANCEL to undo a selection and return to the Print menu.

**Click** GRAPHICS.

##### Graphics

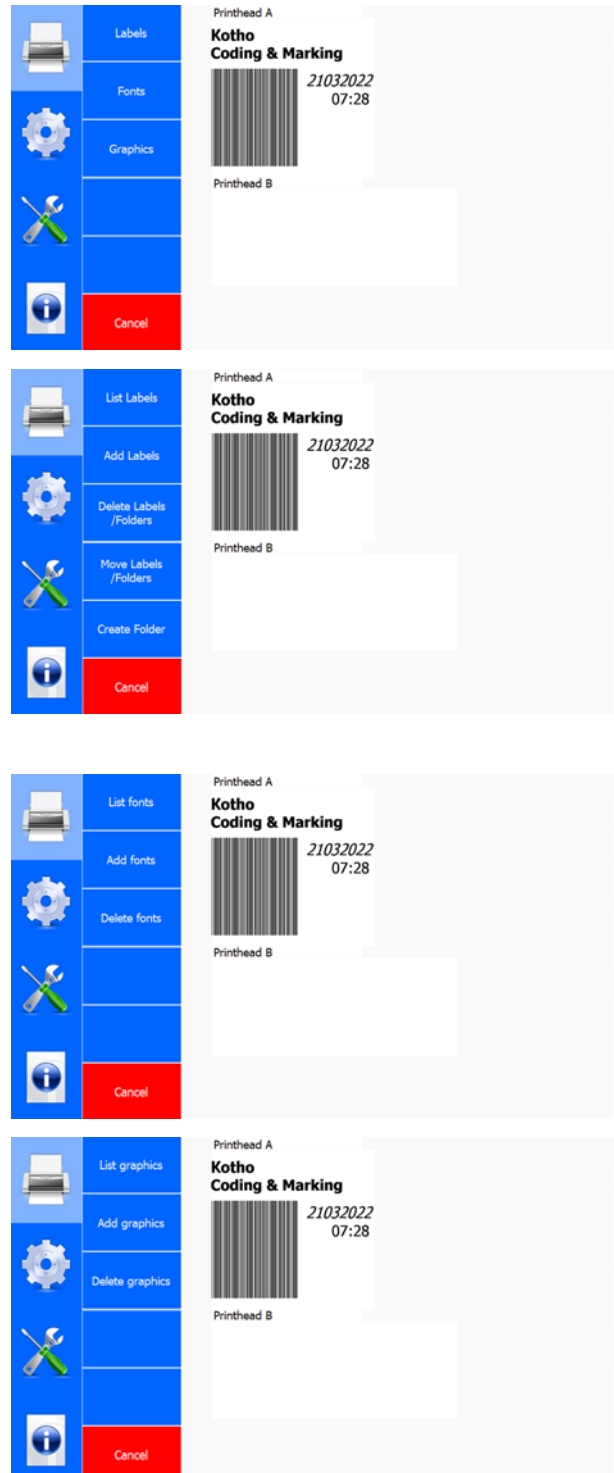
The options offered by this menu are:

- List graphics.
- Add graphics.
- Delete graphics.

**Click** CANCEL to undo a selection and return to the Print menu.



**Place graphics, i.e. images, in PNG format in the graphics folder of the KCC software in order to be able to select them.**



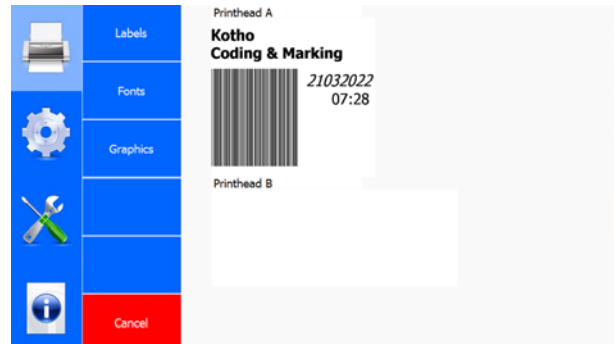


#### 4.2.1.3 Printer files

Shows, for the selected printer, all:

- Labels.
- Fonts.
- Graphics.

These sub-menus have the same structure and functionalities as the LOCAL FILES.



#### 4.2.1.4 Edit label

Shows the folders with labels followed by the labels in the folder in question which can be edited.

**Click** a folder and then click SELECT to open the folder.

**Click** on a label and then click SELECT to select the label which you want to edit.

- This opens the pop-up menu of the LABEL CREATOR. This enables you to edit labels. See section 4.3.5.

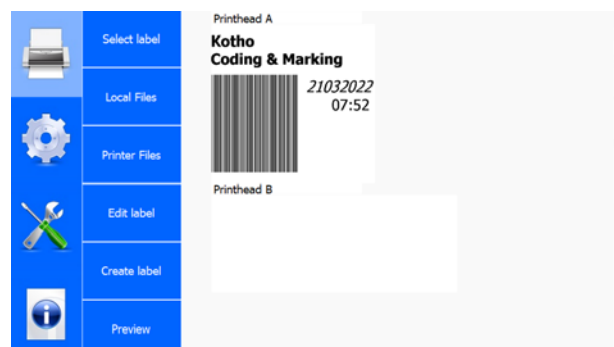
**Click** CANCEL to undo a selection and return to the Print menu.



#### 4.2.1.5 Create label

Opens the pop-up menu of the LABEL CREATOR. Here you can create a new label according to your wishes.

See section 4.3.5 for the possibilities offered by the LABEL CREATOR.



#### 4.2.1.6 Preview

---

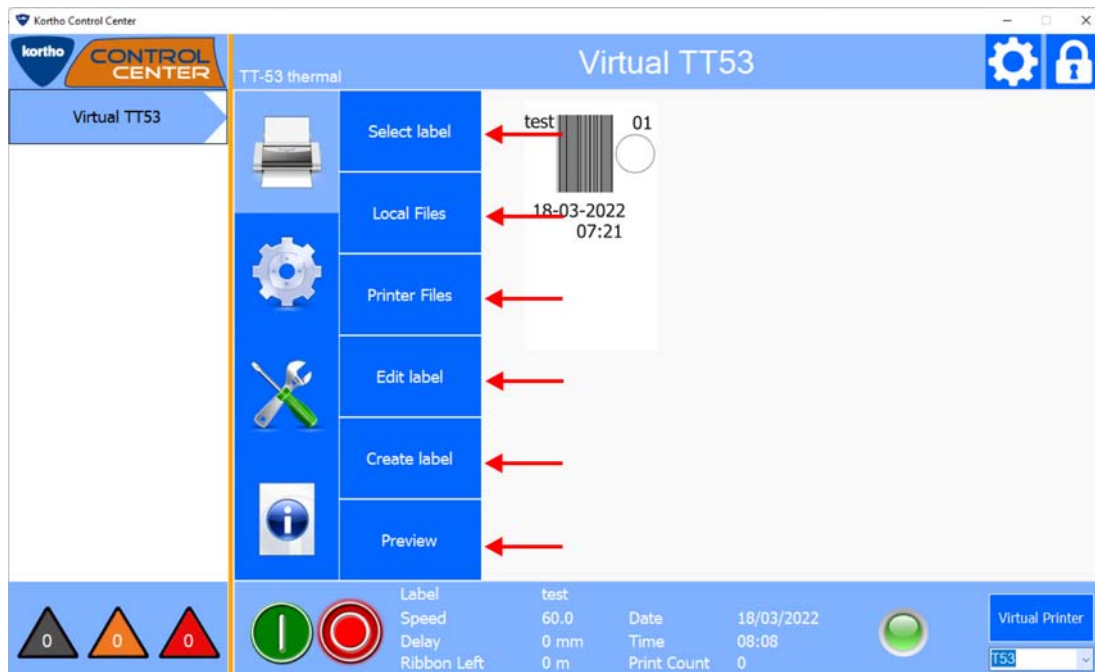
**Click** the PREVIEW button several times in order to enlarge the preview.

Shows a preview of the selected label.



## 4.2.2 Settings

The SETTINGS menu contains the following menu items:

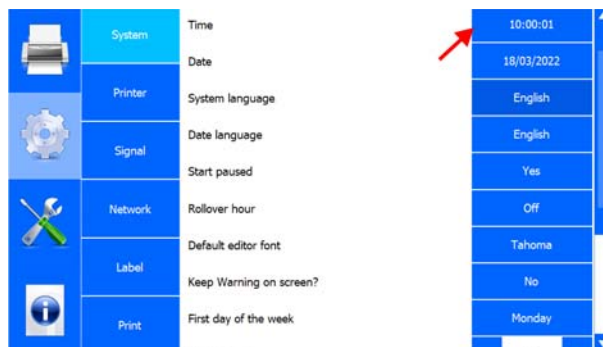


A description of each menu item is given below:

### 4.2.2.1 System

**Click TIME** to adjust the time setting.

#### Time

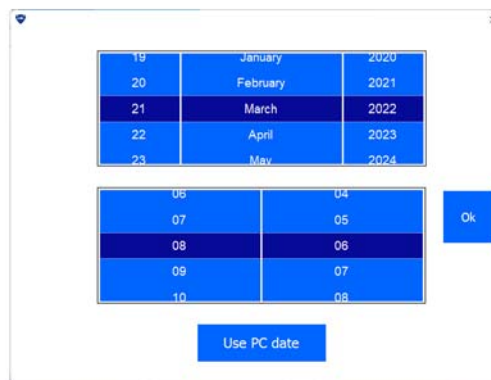


A pop-up menu will appear:

**Turn** the scroll wheels to change the time.

**Click OK** to confirm the time.

**Click USE PC DATE** to take over the current date and time from the PC.



**Click DATE** to change the date setting.

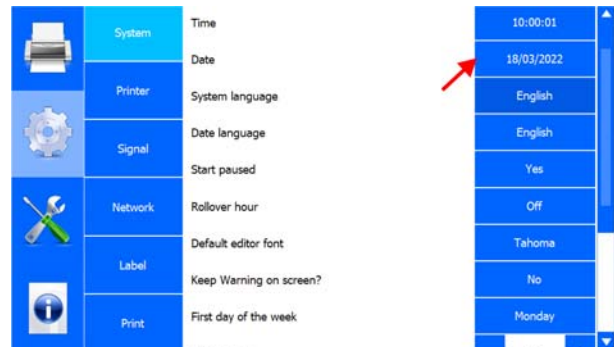
### Date

A pop-up menu will appear:

**Turn** the scroll wheels to adjust the date.

**Click OK** to confirm the date.

**Click USE PC DATE** to take over the current date and time from the PC.



**Click SYSTEM LANGUAGE** to adjust the KCC software language setting.

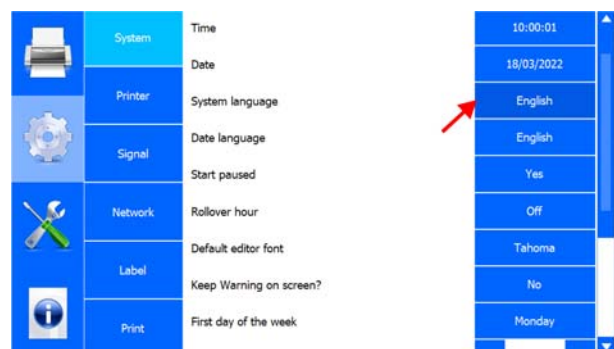
### System language

A pop-up menu with a list of languages appears:

**Select** the relevant language.

- The software will automatically restart in the desired language.

**Click CANCEL** to return to the SYSTEM menu.



**Click** DATE LANGUAGE to change the date language.

## Date language

A pop-up menu similar to the list of languages is displayed.

**Click** START PAUSED to set that the printer should, or should not, start immediately after power-on.

## Start paused

**YES:** When the printer is switched on, it does not start immediately.

**No:** The printer starts immediately when it is switched on.

**Click** ROLLOVER HOUR to set after how many hours after midnight the date should change.

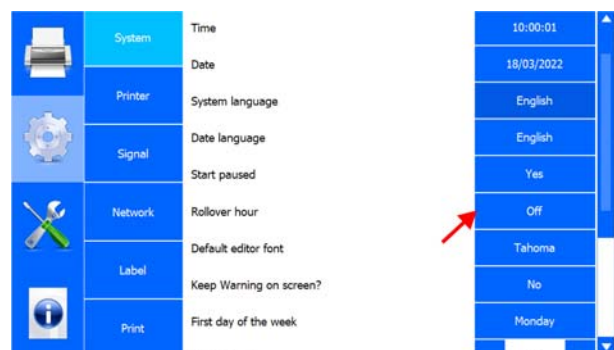
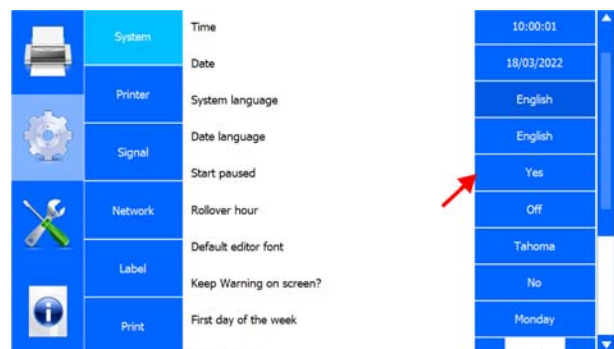
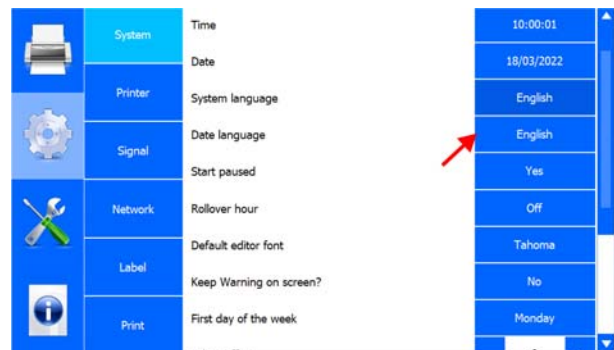
## Rollover hour

This brings up a pop-up menu with +hours:

For example: **select** +2 HOURS to have the date roll over two hours after 0:00 h.

**Select** OFF to switch off the Rollover hour.

**Click** CANCEL to return to the SYSTEM menu.



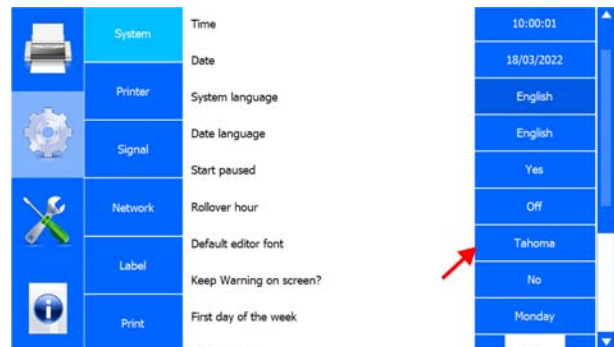
**Click** DEFAULT EDITOR FONT to adjust the default font of the LABEL CREATOR.

### Default editor font

A pop-up menu with a list of fonts appears:

**Select** the relevant font.

**Click** CANCEL to return to the SYSTEM menu.



**Click** KEEP WARNING ON SCREEN? to set whether the HMI should permanently display a warning.

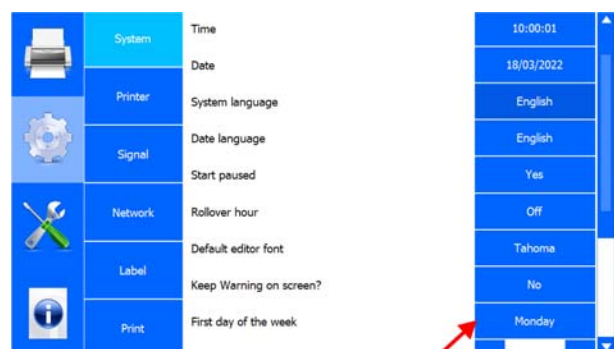
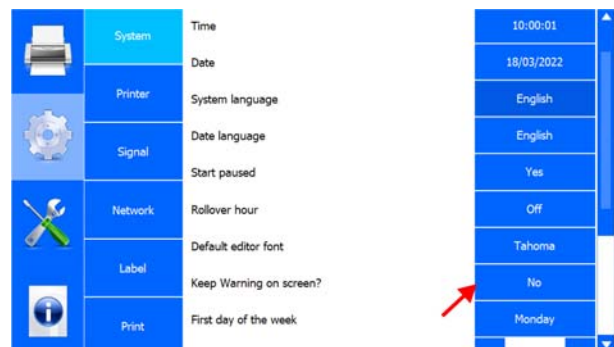
### Keep Warning on screen?

YES: The warning is displayed until the user confirms the warning.

NO: The warning is cleared after three seconds.

### First day of the week

**Click** FIRST DAY OF THE WEEK to set the first day of the week to MONDAY or SUNDAY.



**Click JULIAN OFFSET** to set the number of days of the Julian date without resetting it. This is the Julian date after 365 days.

## Julian Offset

**Click +** to add a day.

**Click -** to deduct a day

**Click DAYLIGHT SAVING** to activate or deactivate the Daylight Saving setting.

## Daylight Saving

**Click LED BRIGHTNESS** to adjust the brightness of the status LED of the printer.

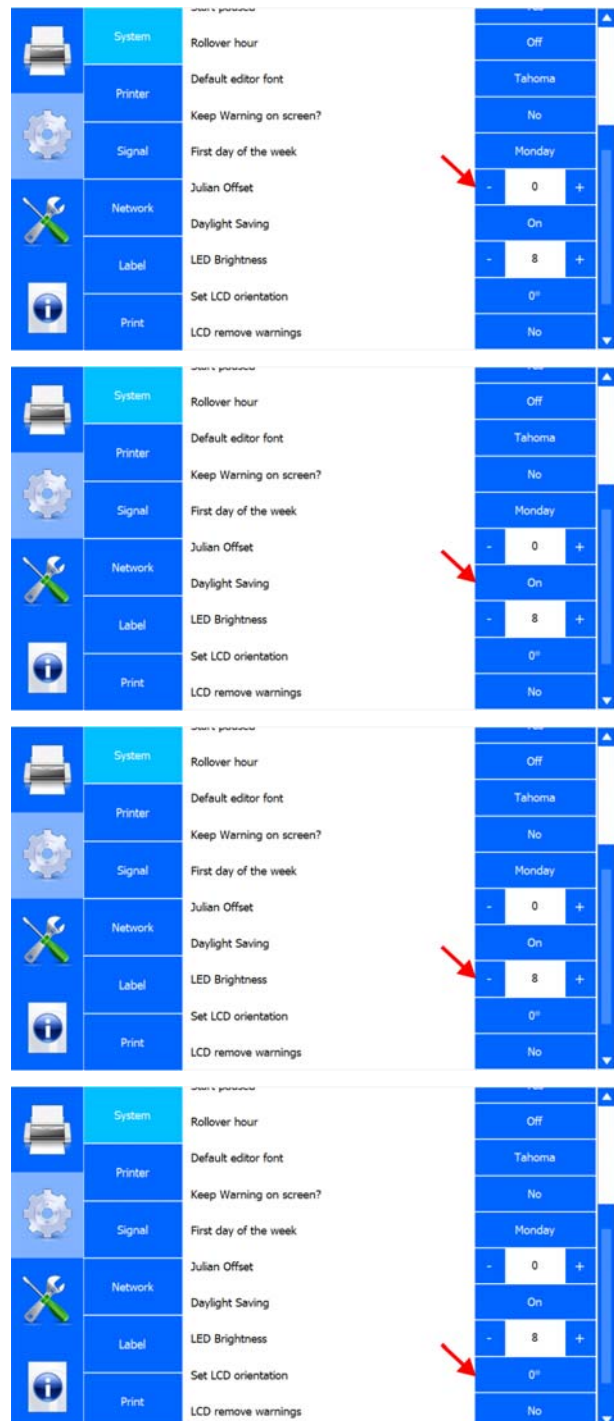
## LED brightness

**Click +** to increase the brightness.

**Click -** to decrease the brightness.

## LCD orientation

**Click SET LCD ORIENTATION** to adjust the LCD screen orientation.

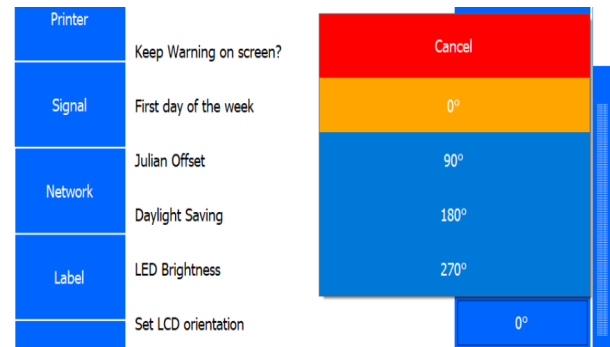




A pop-up menu with a list of orientation options based on 90° is brought up:

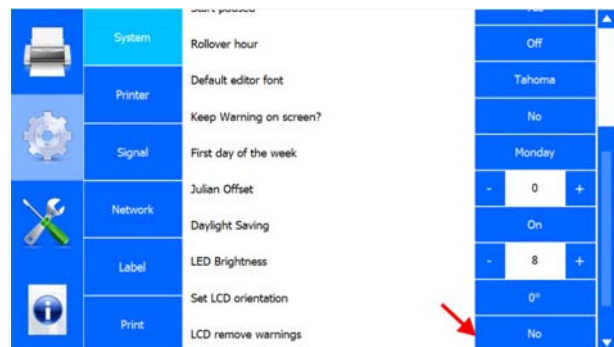
**Select** the relevant orientation.

**Click** CANCEL to return to the SYSTEM menu.



### LCD remove warnings

**Click** LCD REMOVE WARNINGS to remove the warnings from the LCD.



#### 4.2.2.2 Printer

**Click** PRINTER ID to change the printer name.

### Printer ID

A pop-up menu will appear:

**Enter** the new ID for the printer.

- The Printer ID is also shown in the Printer list of the KCC menu.
- The Printer ID can also be added to a label as a variable.

**Click** LINE ID to change the name of the production line.

### Line ID

A pop-up menu will appear:

**Enter** the new ID for the production line.

- The Line ID can also be added to a label as a variable.





**Click** CUSTOMER ID to change the customer's name.

## Customer ID

A pop-up menu will appear:

**Enter** the customer's new ID.

- The Customer ID can also be added to a label as a variable.

**Click** WARNING LENGTH (M) to set the length from which a warning is issued before the ribbon runs out.

## Warning length (m)

**Click** + to increase the length by 10 m.

**Click** - to decrease the length by 10 m.

**Click** PRINthead to switch the printhead on or off.

## Print head

**Click** P.H. RESISTANCE ( $\Omega$ ) to set the printhead resistance.

## P.h. resistance ( $\Omega$ )

**Click** + to increase resistance by 50 Ohms.

**Click** - to decrease resistance by 50 Ohms.



***The resistance has to be filled in again whenever printheads have been changed. Resistance is indicated on the label of the actual printhead.***

The screenshots show the following settings in the configuration menu:

- System:** Printer ID, Line ID
- Printer:** Customer ID, Warning length (m), Printhead
- Signal:** P.h. resistance ( $\Omega$ ), Pre-heater
- Network:** Temperature ( $^{\circ}\text{C}$ ), Indexing (1/10 mm)
- Label:** (empty)
- Print:** (empty)

The right-hand side of the menu shows the current values and controls for each setting:

- Virtual TT53:** Line1, Customer1
- Warning length (m):** - 25 +
- Printhead:** Enabled
- P.h. resistance ( $\Omega$ ):** - 1000 +
- Pre-heater:** No
- Temperature ( $^{\circ}\text{C}$ ):** - 30 +
- Indexing (1/10 mm):** - 0.0 +

The bottom of the menu shows the label: 030739 Prem. Black

**Click** PRE-HEATER to switch printhead preheating on or off.

### Pre-heater



*The pre-heater is often used in cold production environments.*

**Click** on TEMPERATURE (°C) to set the preheating temperature.

### Temperature (°C)

**Click** + to increase the temperature by 5 °C.

**Click** - decrease the temperature by 5 °C.

**Click** INDEXING (px) to set how much extra film should be moved after a print has been made.

### Indexing (px)

**Click** + to increase the length by 0.5 px.

**Click** - to decrease the length by 0.5 px.

The minimum value is -4 px and the maximum value +4 px.

**Click** the current foil type.

### Foil type

System	Printer ID	Virtual TT53
Printer	Line ID	Line1
Signal	Customer ID	Customer1
Network	Warning length (m)	- 25 +
Label	Printhead	Enabled
Print	P.h. resistance (Ω)	- 1000 +
	Pre-heater	No
	Temperature (°C)	- 30 +
	Indexing (1/10 mm)	- 0.0 +

System	Printer ID	Virtual TT53
Printer	Line ID	Line1
Signal	Customer ID	Customer1
Network	Warning length (m)	- 25 +
Label	Printhead	Enabled
Print	P.h. resistance (Ω)	- 1000 +
	Pre-heater	No
	Temperature (°C)	- 30 +
	Indexing (1/10 mm)	- 0.0 +

System	Printer ID	Virtual TT53
Printer	Line ID	Line1
Signal	Customer ID	Customer1
Network	Warning length (m)	- 25 +
Label	Printhead	Enabled
Print	P.h. resistance (Ω)	- 1000 +
	Pre-heater	No
	Temperature (°C)	- 30 +
	Indexing (1/10 mm)	- 0.0 +

System	Customer ID	Customer1
Printer	Warning length (m)	- 25 +
Signal	Printhead	Enabled
Network	P.h. resistance (Ω)	- 1000 +
Label	Pre-heater	No
Print	Temperature (°C)	- 30 +
	Indexing (1/10 mm)	- 0.0 +
	Foil Type	030739 Prem. Black
	Motion	Intermittent

Select the printer motion type.

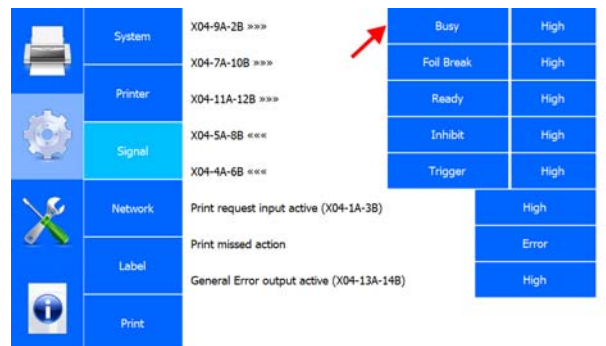
## Motion



### 4.2.2.3 Signal

#### Busy

Active when the printer is printing (from the print signal to the end of the print).



#### Foil break

Active if the ribbon is broken or the end of the reel is reached. The printer stops printing.

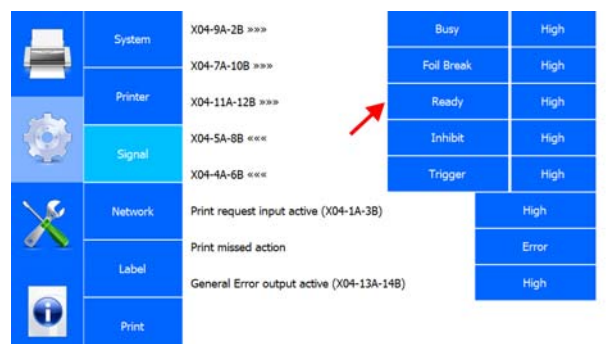


#### Ready

This output (Ready) becomes active if the following conditions are true:

- The system must be on.
- The system must be in Standby mode.
- The general alarm must be inactive.

This output can be used to check that the system is on and ready to place a print.



## Inhibit

If the Inhibit input is active, the system will not print. If this input becomes active while printing, the print will be completed first.

## Trigger










The trigger input can be used to update the counter in a label or to reset the counter to its initial value.






**Click** PRINT SIGNAL INPUT ACTIVE to set this to high or low signal.







### Print signal input active









**Click** PRINT MISSED ACTION to set the action to be taken when the printer receives a print signal while the printer is still printing.

### Print missed action

 System   Printer   Signal   Network   Label   Print	X04-9A-2B >>>	Busy	High
	X04-7A-10B >>>	Foil Break	High
	X04-11A-12B >>>	Ready	High
	X04-5A-8B <<<	Inhibit	High
	X04-4A-6B <<<	Trigger	High
 Network   Label   Print	Print request input active (X04-1A-3B)	High	
	Print missed action	Error	
	General Error output active (X04-13A-14B)	High	

 System   Printer   Signal   Network   Label   Print	X04-9A-2B >>>	Busy	High
	X04-7A-10B >>>	Foil Break	High
	X04-11A-12B >>>	Ready	High
	X04-5A-8B <<<	Inhibit	High
	X04-4A-6B <<<	Trigger	High
 Network   Label   Print	Print request input active (X04-1A-3B)	High	
	Print missed action	Error	
	General Error output active (X04-13A-14B)	High	

 System   Printer   Signal   Network   Label   Print	X04-9A-2B >>>	Busy	High
	X04-7A-10B >>>	Foil Break	High
	X04-11A-12B >>>	Ready	High
	X04-5A-8B <<<	Inhibit	High
	X04-4A-6B <<<	Trigger	High
 Network   Label   Print	Print request input active (X04-1A-3B)	High	
	Print missed action	Error	
	General Error output active (X04-13A-14B)	High	

 System   Printer   Signal   Network   Label   Print	X04-9A-2B >>>	Busy	High
	X04-7A-10B >>>	Foil Break	High
	X04-11A-12B >>>	Ready	High
	X04-5A-8B <<<	Inhibit	High
	X04-4A-6B <<<	Trigger	High
 Network   Label   Print	Print request input active (X04-1A-3B)	High	
	Print missed action	Error	
	General Error output active (X04-13A-14B)	High	

A pop-up menu will appear:

**Select** ERROR to stop the printer after a missed print.

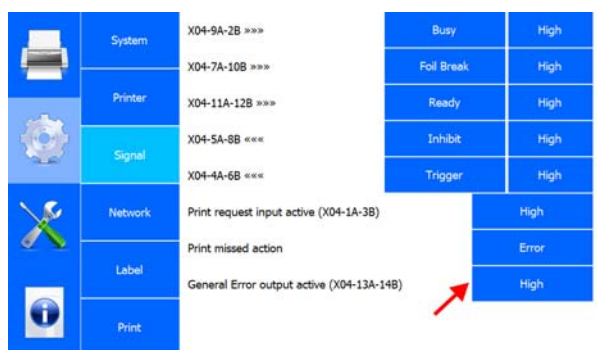
**Select** WARNING to generate a warning in the software.

**Select** IGNORE to continue printing without a message after a missed print.

**Click** CANCEL to return to the SYSTEM menu.

**Click** GENERAL ERROR OUTPUT ACTIVE to set this to high or low signal.

### General error output active

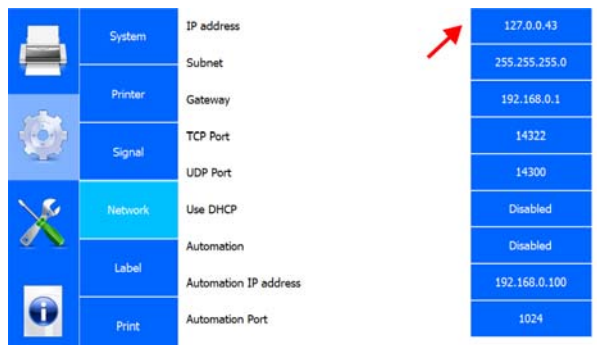


### 4.2.2.4 Network

**Click** IP ADDRESS to type the IP address.

### IP address

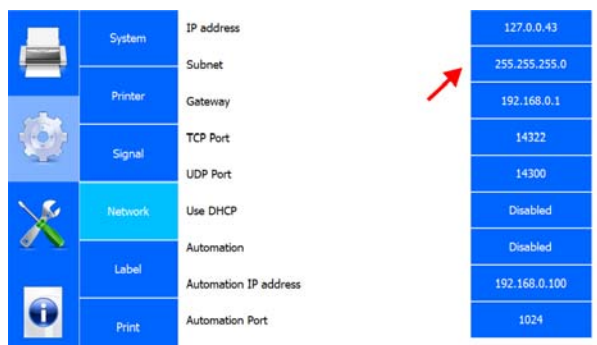
**Click** OK to confirm the IP address.



**Click** SUBNET to type the network's subnet mask.

### Subnet

**Click** OK to confirm the subnet mask.





**Click** GATEWAY to type the gateway address (if available).

### Gateway

**Click** OK to confirm the gateway address.

**Click** TCP PORT to type the printer's TCP port number.

### TCP Port

- The default number is: 14322.

**Click** OK to confirm the TCP port number.

**Click** UDP PORT to type the printer's UDP port number.




### UDP Port




- The default number is: 14300.

**Click** OK to confirm the UDP port number.




**Click** USE DHCP to activate or deactivate the DHCP server set for the printer network settings.

### Use DHCP

	System	IP address	127.0.0.43	
		Subnet	255.255.255.0	
		Printer	Gateway	192.168.0.1
		Signal	TCP Port	14322
		UDP Port	14300	
		Network	Use DHCP	Disabled
		Automation	Disabled	
Label		Automation IP address	192.168.0.100	
Print		Automation Port	1024	

	System	IP address	127.0.0.43	
		Subnet	255.255.255.0	
		Printer	Gateway	192.168.0.1
		Signal	TCP Port	14322
		UDP Port	14300	
		Network	Use DHCP	Disabled
		Automation	Disabled	
Label		Automation IP address	192.168.0.100	
Print		Automation Port	1024	

	System	IP address	127.0.0.43	
		Subnet	255.255.255.0	
		Printer	Gateway	192.168.0.1
		Signal	TCP Port	14322
		UDP Port	14300	
		Network	Use DHCP	Disabled
		Automation	Disabled	
Label		Automation IP address	192.168.0.100	
Print		Automation Port	1024	

	System	IP address	127.0.0.43	
		Subnet	255.255.255.0	
		Printer	Gateway	192.168.0.1
		Signal	TCP Port	14322
		UDP Port	14300	
		Network	Use DHCP	Disabled
		Automation	Disabled	
Label		Automation IP address	192.168.0.100	
Print		Automation Port	1024	

**Click** AUTOMATION to switch the PRINT\_COMPLETE command on or off. This command is sent whenever printing to the Automation IP address.

### Automation

**Click** AUTOMATION IP ADDRESS to type the Automation IP address.





### Automation IP address





**Click** OK to confirm the Automation IP address.






**Click** AUTOMATION PORT to type the printer's Automation port number.

### Automation Port

**Click** OK to confirm the Automation Port number.

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024

#### 4.2.2.5 Label

**Click** ORIENTATION to adjust the label print orientation.

##### Orientation

A pop-up menu will appear:

**Select** NORMAL to print the label in the current orientation.

**Select** MIRROR to print the label in a mirrored direction.

**Select** 180° to rotate the label through 180°.

**Select** MIRROR + 180° to print the label in a mirrored direction and rotated through 180°.

**Click** CANCEL to return to the SYSTEM menu.

##### Reset counters

Click Reset counters to restore the label orientation values to the default values.

**Click** LABEL DESIGN HEIGHT to adjust the label height.

##### Label design height

**Click** + to increase the height by 10 mm.

**Click** - to decrease the height by 10 mm.





**Click Y-OFFSET (MM)** to set the Y-offset relative to the zero point.

### Y-offset (mm)

**Click +** to increase the offset by 1 mm.

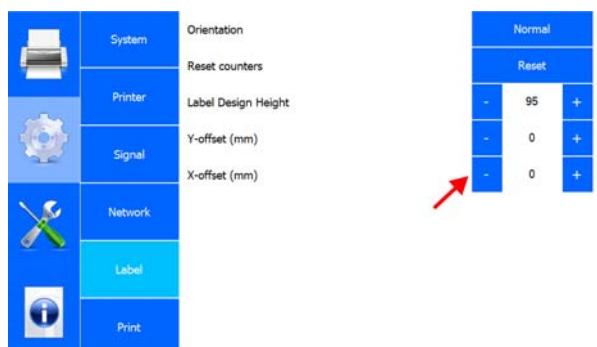
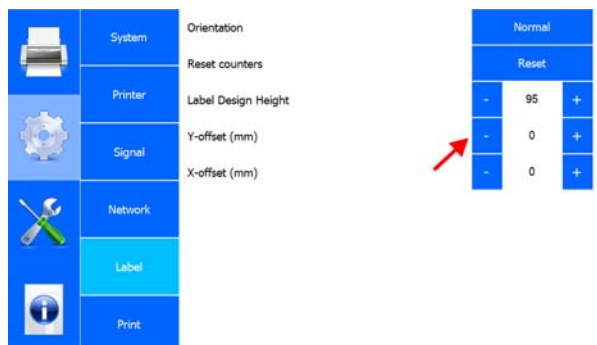
**Click -** to decrease the offset by 1 mm.

**Click X OFFSET (MM)** to set X-offset relative to the zero point.

### X-offset (mm)

**Click +** to increase the offset by 1 mm.

**Click -** to decrease the offset by 1 mm.



#### 4.2.2.6 Print

**Click PRINT DELAY (MS)** to set the delay from the print signal.

### Print delay (ms)

**Click +** to increase the delay by 10 ms.

**Click -** to decrease the delay by 10 ms.

**Click SPEED (M/MIN)** to set the printer's printing speed.

### Speed (m/min)

**Click +** to increase the speed by 1 m/min.

**Click -** to decrease the speed by 1 m/min.



**Click** PRINT QUANTITY to enter the Print quantity.

### Print quantity

- Set the print quantity to 0 to have the printer print infinitely.
- If the required number has been reached, the printer will stop and the counter will be reset to zero.

**Click** + to increase the print quantity by 1.

**Click** - to decrease the print quantity by 1.

**Click** DEBOUNCE (MS) to set how for long the printer may ignore the print signal once a print signal has been received.

### Debounce (ms)

**Click** + to increase the delay by 5 ms.

**Click** - to decrease the delay by 5 ms.

**Click** PRESSURE to set the printhead pressure.

### Pressure

- The minimum value is: 10.
- The maximum value is: 20.

**Click** + to increase the pressure by 1.

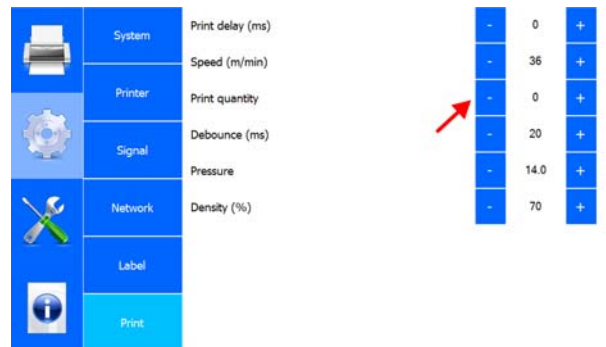
**Click** - to decrease the pressure by 1.

**Click** DENSITY (%) to adjust the density percentage.

### Density (%)

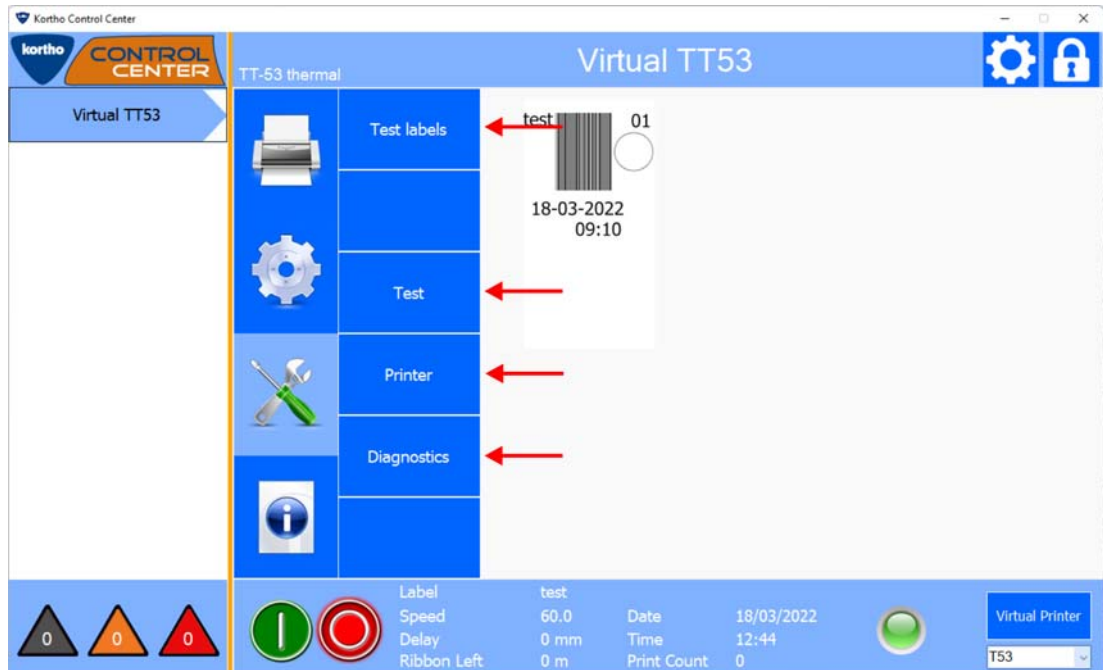
**Click** + to increase the density, i.e. contrast, by 10%.

**Click** - to decrease the density, i.e. contrast, by 10%.



### 4.2.3 Service and diagnostics

The SERVICE AND DIAGNOSTICS menu contains the following menu items:

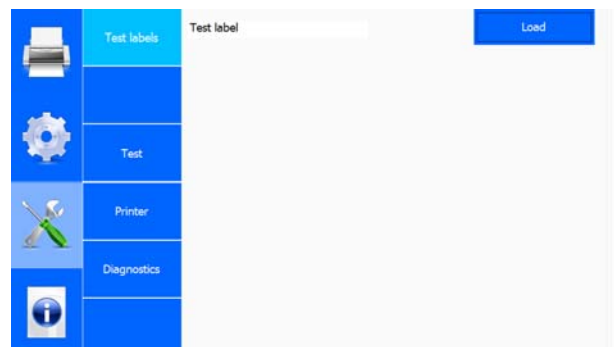


A description of each menu item is given below:

#### 4.2.3.1 Test labels

**Click TEST LABEL** to select a test label.

- Press Load to send the test program to the printer.
- Then press the start button of the printer to print a test print.



#### 4.2.3.2 Test

**Click SPEED (M/MIN)** to adjust the printing speed of a test print.

##### Speed (m/min)

- The maximum speed applicable is: 36 m/min.

**Click +** to increase the speed by 1 m/min.

**Click -** to decrease the speed by 1 m/min.



**Click PRINT** to have the software start a test print.

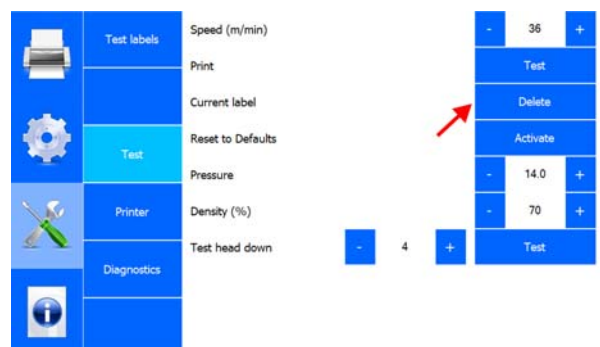
##### Print



**Click CURRENT LABEL** to delete the selected active label.

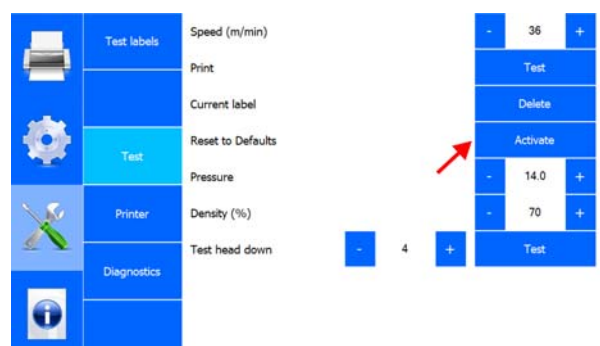
##### Current label

- This does not delete the label from the library.



**Click RESET TO DEFAULTS** to reset all settings of the test label to the default factory settings.

##### Reset to Defaults



**Click** PRESSURE to set the printhead pressure.

## Pressure

- The minimum value is: 10.
- The maximum value is: 20.

**Click** + to increase the pressure by 1.

**Click** - to decrease the pressure by 1.

**Click** DENSITY (%) to adjust the density percentage of the test print.

## Density (%)

**Click** + to increase the density, i.e. contrast, by 10%.

**Click** - to decrease the density, i.e. contrast, by 10%.

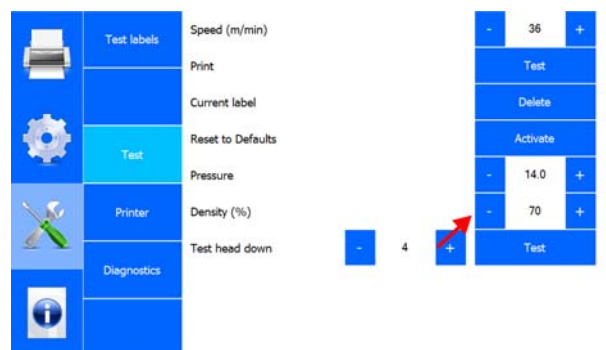
## Test head down

**Click** TEST HEAD DOWN to carry out a test for the printhead depth.

**Click** + to increase the printhead depth by 1 mm.

**Click** - to decrease the printhead depth by 1 mm.

**Click** TEST to carry out the test.

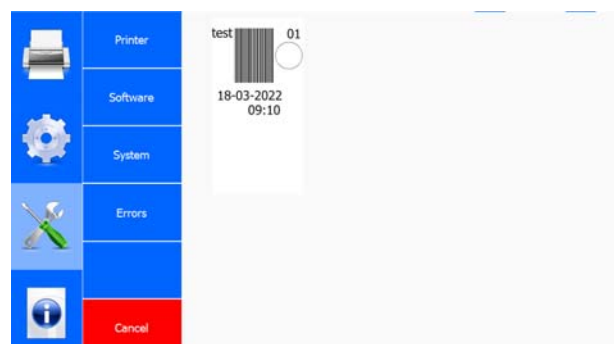


### 4.2.3.3 Printer

**Click** PRINTER to open a sub-menu containing information on:

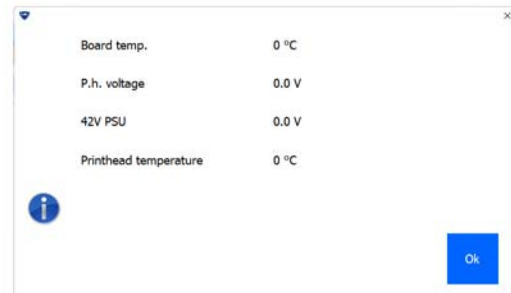
- Printer (the actual printer).
- Software.
- System.
- Errors.

**Click** CANCEL to return to the SERVICE menu.



## Printer

Displays information about the actual printer:



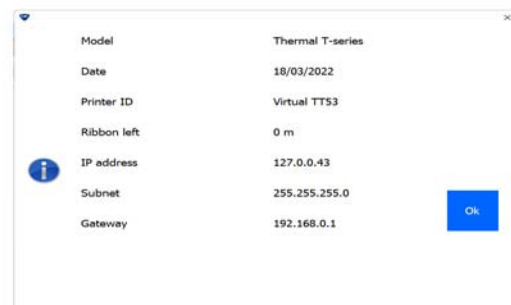
## Software

Displays information on the type of software and the software version:



## System

Displays information about the printer's system. This includes the identification on a network:



## Errors

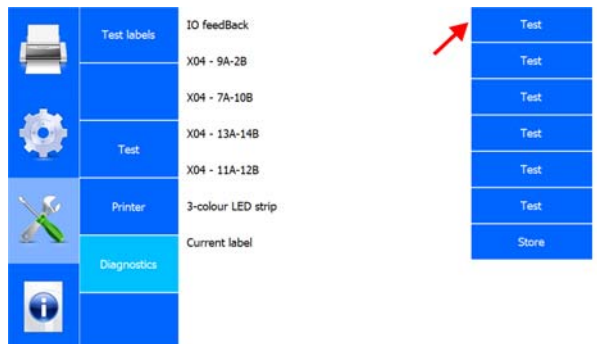
Lists the last 15 error messages:



#### 4.2.3.4 Diagnostics

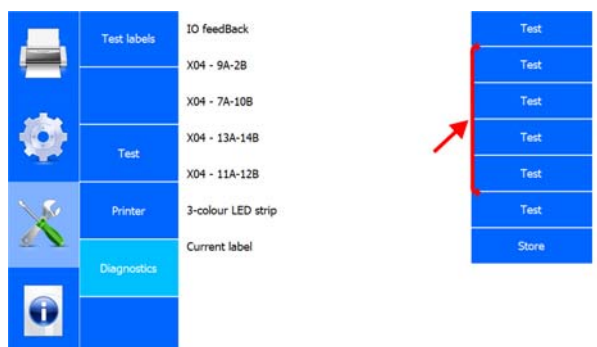
Click IO FEEDBACK to test different input signals.

##### IO feedback



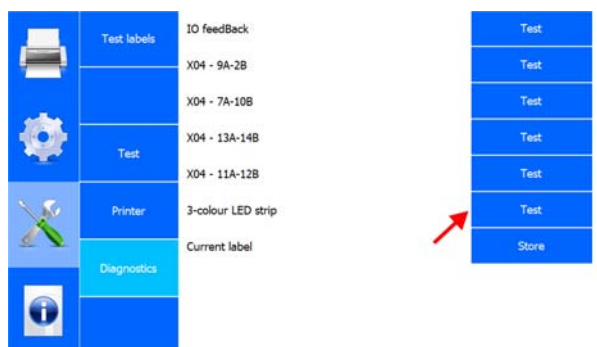
Click X03---A-B to test different output signals.

##### X03--A-B



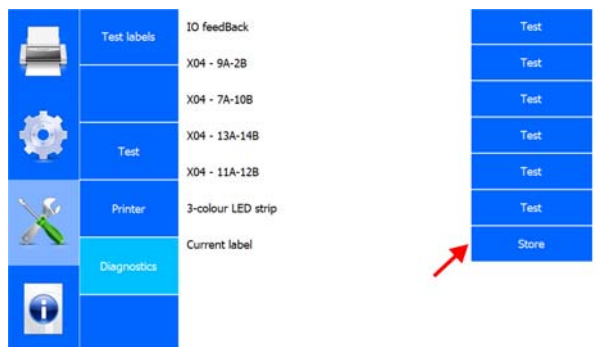
Click 3-COLOUR LED STRIP to test the printer's status LED.

##### 3-colour LED strip



##### Current label

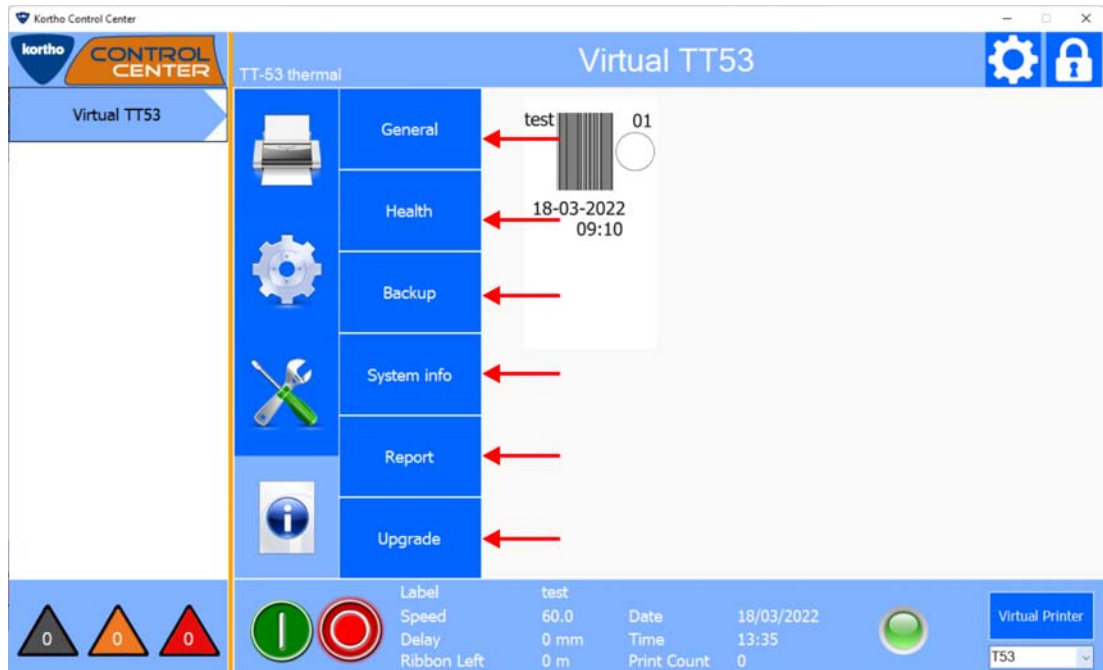
Click CURRENT LABEL to save the current label.





#### 4.2.4 Information

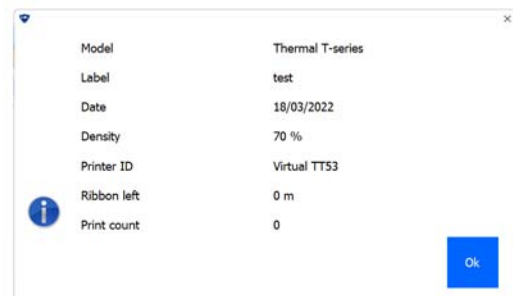
The INFORMATION menu contains the following menu items:



A description of each menu item is given below:

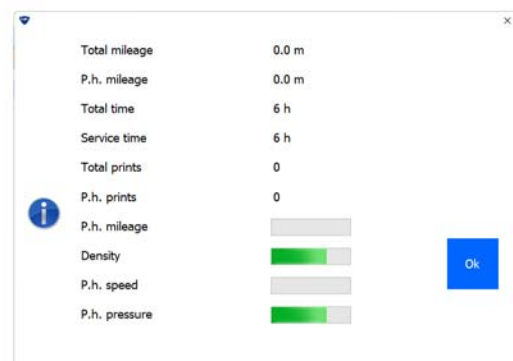
##### 4.2.4.1 General

Displays general information about the printer:



##### 4.2.4.2 Health

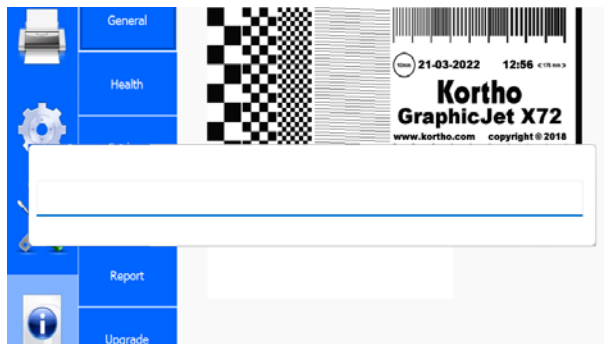
Shows production statistics and printer-specific adjustments:





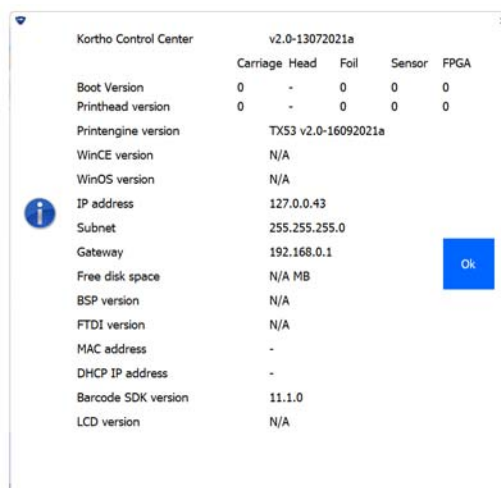
#### 4.2.4.3 Backup

**Enter** the file name of a backup to back up the labels. The labels are exported to the computer in a compressed file.



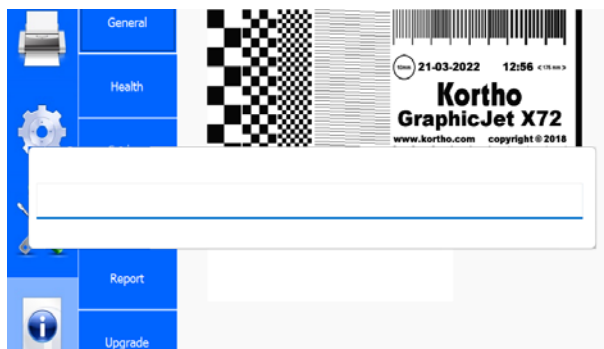
#### 4.2.4.4 System info

Displays system information of the printer and the KCC software:



#### 4.2.4.5 Report

**Enter** a file name to export a text file. This text file contains all the values of the settings entered so far.

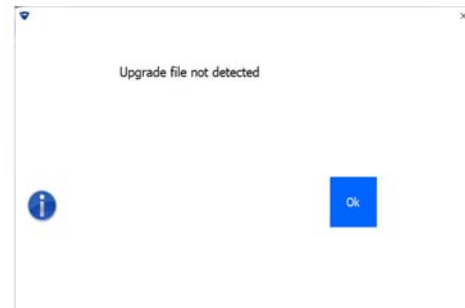


#### 4.2.4.6 Upgrade

---

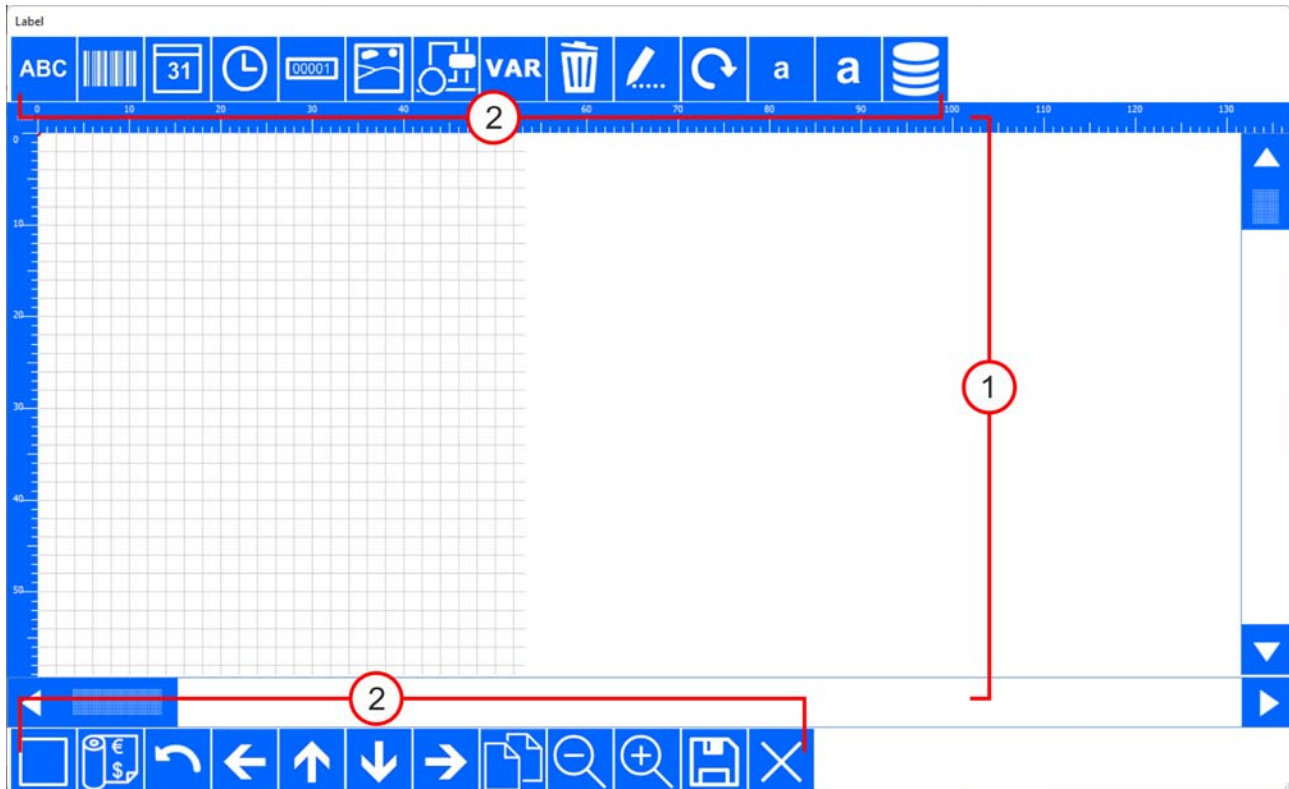
**Click** UPGRADE to search the upgrade folder for an upgrade file.

- Upgrade files can be found on the website of BV Korthofah: [www.kortho.com/faq](http://www.kortho.com/faq).
- Place upgrade files in the KCC software upgrade folder to use this function to upgrade.



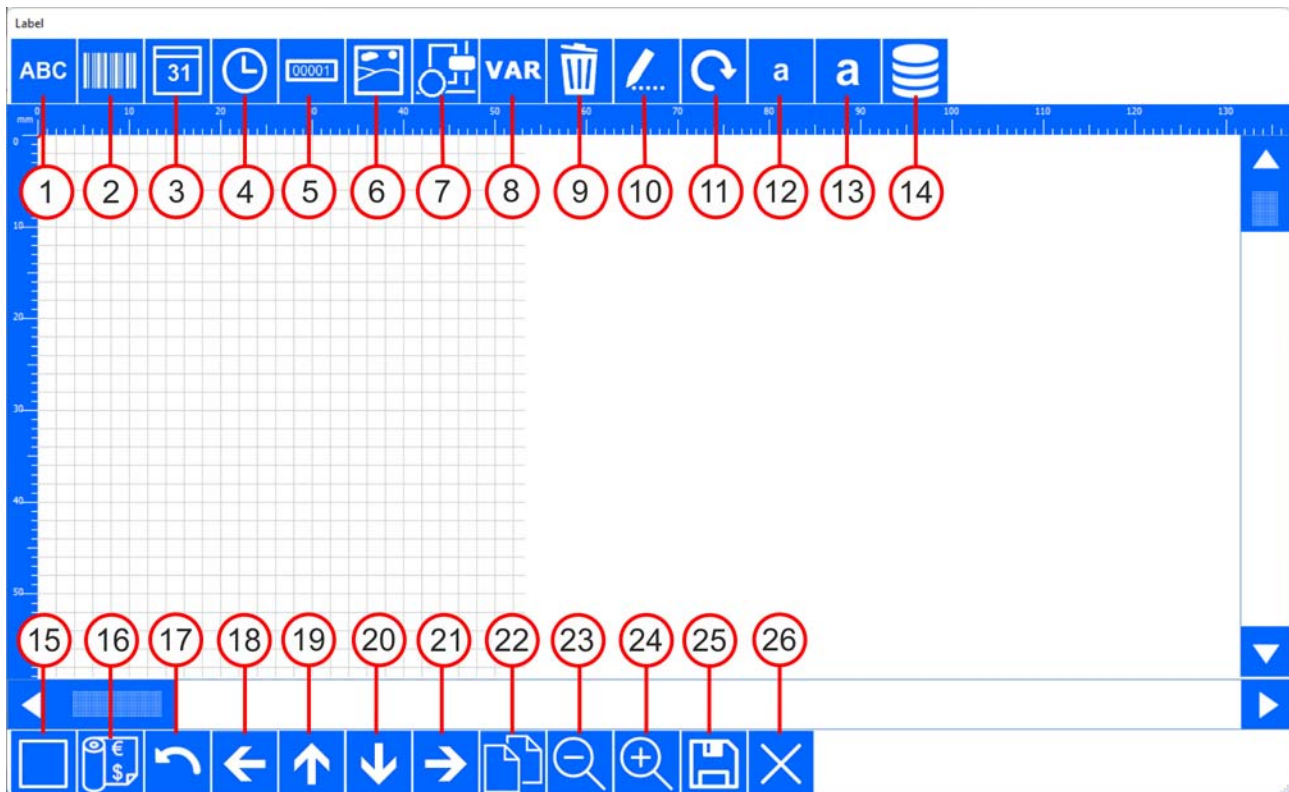
#### 4.2.5 Label creator

You can design your own labels and edit labels in the Label creator.



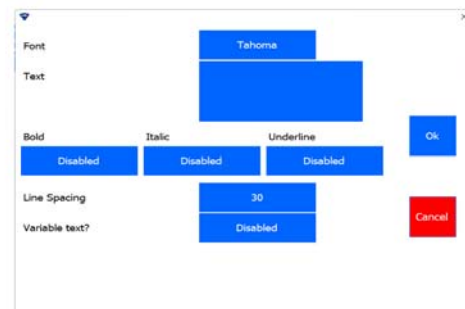
The Label creator screen consists of a worksheet (1) on which the design can be seen. The edges have rulers for aligning texts and graphics. There are buttons (2) at the top and bottom to insert, adjust and move label components.

These buttons are described below:



### 1. Text box

A sub-menu opens, enabling you to design a text box.



### 2. Bar code

A sub-menu opens, enabling you to design a bar-code.

- You can choose from different types of bar-codes.



### 3. Date

A sub-menu opens, enabling you to design how a date should be shown.

### 4. Time

A sub-menu opens, enabling you to design how a time should be shown.

### 5. Counter

A sub-menu opens, enabling you to design a counter.

### 6. Logo

A sub-menu with imported logos opens.

- **Select** a logo.
- **Click** OK to insert a logo.



**Place logos in PNG format in the graphics folder of the KCC software in order to be able to select them.**

## 7. Shape

A sub-menu opens, enabling you to insert shapes.

- **Select** a shape, line thickness and radius.
- **Click** OK to insert a shape.



## 8. Variable

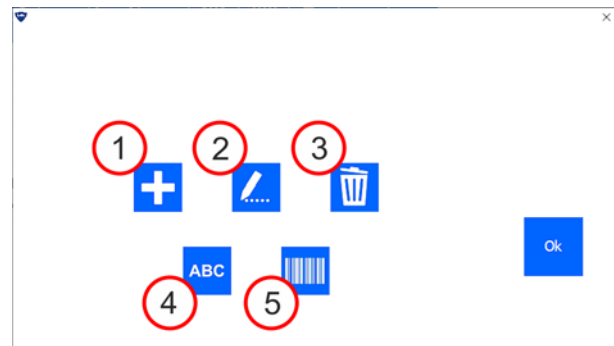
A sub-menu opens, enabling you to add a variable text or barcode. This requires a variable to be defined. The sub-menu contains the following buttons:

- 1. Add variable.
- 2. Change variable.
- 3. Delete variable.
- 4. Format variable text.
- 5. Format variable barcode.

### 1. ADD VARIABLE

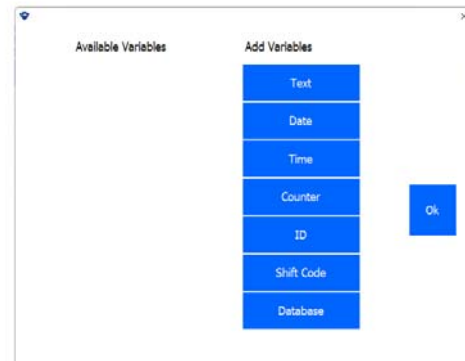
A variable can be formatted in the form of a text box, date, time, counter, ID, Shift Code or database. The same formatting features are available here to create the variable.

A variable which has been completed is placed in the list of available variables.



### 2. CHANGE VARIABLE

**Select** a variable from the list of available variables to change it.



### 3. DELETE VARIABLE

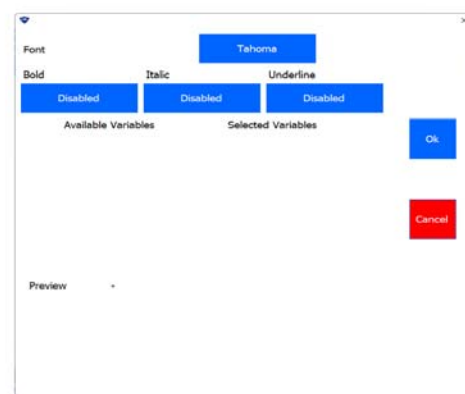
**Select** a variable from the list of available variables to delete it.

- If a variable is marked in red, it is being used and cannot be deleted.



### 4. FORMAT VARIABLE TEXT

The font layout of variables can be set.



### 5. FORMAT VARIABLE BARCODE

The type of barcode and the font layout of a variable barcode can be set.



## 9. Delete

**Select** a component in the worksheet which should be deleted.

## 10. Change

**Select** a component in the worksheet which should be changed.

- The component-specific menu is opened.

### 11. Rotate

**Select** a component in the worksheet which should be rotated.

### 12. Make smaller

**Select** a component in the worksheet to make it smaller in steps.

### 13. Enlarge

**Select** a component in the worksheet to enlarge it in steps.

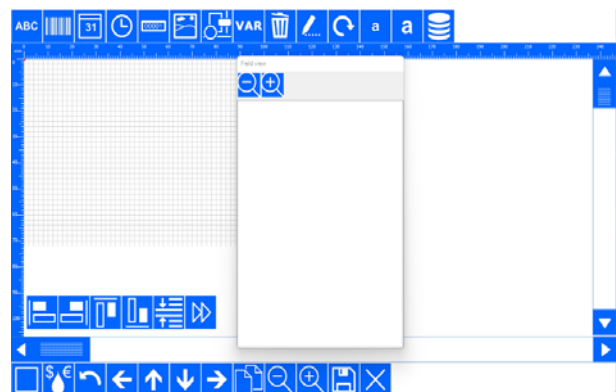
### 14 Database field

Opens a sub-menu to enable data to be printed from a database. File types which can be used are Microsoft Access and Microsoft Excel. Examples of database data that can be called are: Product, weight and/or barcode. See section 6.2.7.



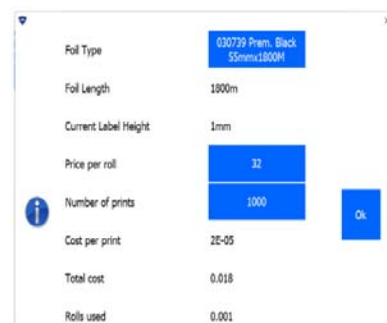
### 15. Features

Opens a sub-menu where all the components used are shown in a tree structure. Label components can be adjusted here as well.



### 16. Ribbon calculator

Opens a sub-menu where some ink data can be entered. This can be used to determine the costs of the label that has been designed.





## 17. Undo

---

Undoes a previous action.

## 18. Move left

---

Moves a selected component to the left in steps.

## 19. Move up

---

Moves a selected component up in steps.

## 20. Move down

---

Moves a selected component down in steps.

## 21. Move right

---

Moves a selected component to the right in steps.

## 22. Copy

---

Copies a selected component and places the copy diagonally below the selection.

## 23. Zoom in

---

Zooms in on the worksheet.

## 24. Zoom out

---

Zooms out on the worksheet.

## 25. Save

---

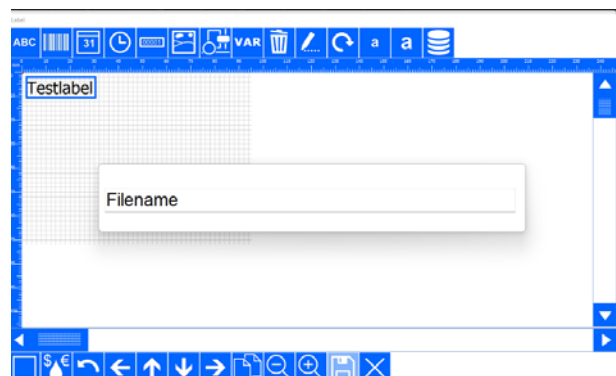
**Enter** a file name.

- **Press** OK to save a label to the folder of your choice.

## 26. Exit

---

Exit Label creator.





# 5 X-series software description

*This chapter describes the main components, function and operation of the KCC software.*

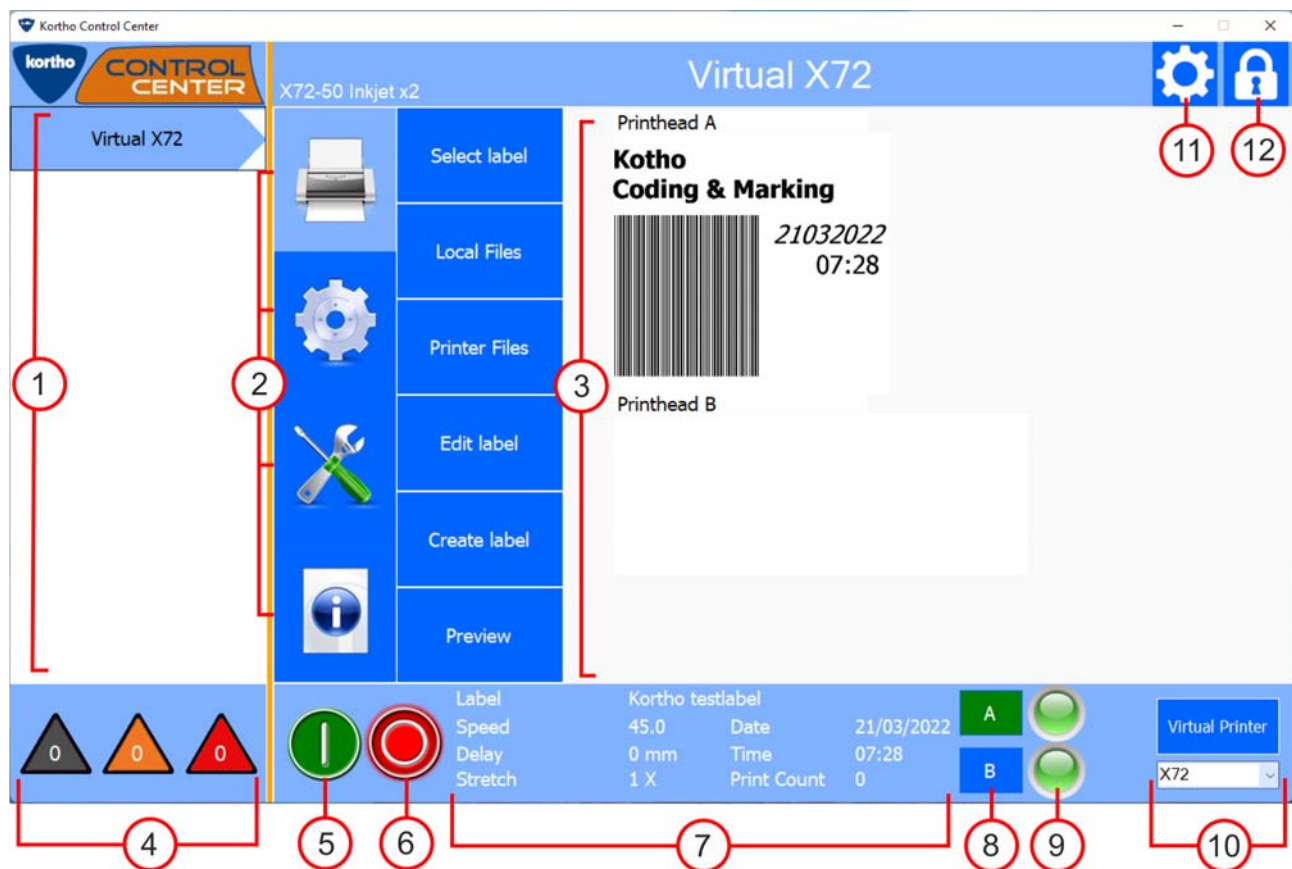
## 5.1 Function

The function of the KCC software is:

- Facilitating the design and maintenance of labels for printers with (variable) codes.

## 5.2 KCC X-series HMI

The KCC software interface, also referred to as the Kortho Control Center ('KCC software' from now on), consists of the following elements:



No.	Description
1	<p>PRINTER LIST</p> <p>Displays a list of all network-connected printers.</p> <ul style="list-style-type: none"> <li>- Active printers are marked in blue, orange or red.</li> </ul>
2	<p>PRINTER SELECTION MENU</p> <p><b>Press</b> one of the four buttons to expand the menus.</p> <p>The four buttons are:</p> <ul style="list-style-type: none"> <li>• Print (label selection and label management). §4.2.1.</li> <li>• Settings (printer and interface settings). §4.2.2.</li> <li>• Service and diagnostics (service and diagnostics functions). §4.2.3.</li> <li>• Information (system information). §4.2.4.</li> </ul>
3	<p>ACTIVE MENU SCREEN</p> <ul style="list-style-type: none"> <li>- Displays the selected menu. In this example: 'Select label'.</li> </ul>
4	<p>PRINTER STATUS TRIANGLES</p> <p>Displays the status of all active printers on the printer list.</p> <ul style="list-style-type: none"> <li>• Grey = no connection.</li> <li>• Orange = warning.</li> <li>• Red = error message.</li> <li>- The number in the triangle indicates the number of printers with the relevant status.</li> </ul>
5	<p>START BUTTON</p> <p><b>Press</b> this button to start the printer.</p> <ul style="list-style-type: none"> <li>- The printer will wait for a signal from the production line.</li> </ul>
6	<p>STOP BUTTON</p> <p><b>Press</b> this button to pause the printer.</p> <ul style="list-style-type: none"> <li>- The printer will not print, regardless of the message from the production line.</li> </ul>
7	<p>GENERAL PRINTER INFO</p> <p>Displays the name of the selected label, speed, delay, date, time and print quantity.</p> <ul style="list-style-type: none"> <li>- This data is also visible on the display of the printer proper.</li> </ul>
8	<p>PRINthead ACTIVATION</p> <p><b>Press</b> this button to activate the printhead.</p> <ul style="list-style-type: none"> <li>• Green = printhead active.</li> <li>• Blue = printhead off.</li> </ul>
9	<p>STATUS LED</p> <p>Displays the status of the printer selected in the printer list.</p> <ul style="list-style-type: none"> <li>• Blue = voltage present.</li> <li>• Green = ready.</li> <li>• Orange = warning.</li> <li>• Red = error message.</li> <li>• Pink = update software (only visible on the LED strip of the printer itself)</li> </ul>
10	<p>VIRTUAL PRINTER</p> <p>To carry out tests and design labels.</p>
11	SOFTWARE SETTINGS
12	<p>SCREEN SECURITY</p> <p><b>Press</b> this button to lock the screen.</p>

## 5.2.1 Print

The PRINT menu contains the following menu items:



A description of each menu item is given below:

### 5.2.1.1 Select label

Shows the folders with labels followed by the labels in the folder in question.

**Click** a folder and then click SELECT to open the folder.

**Click** a label and then click SELECT to select a label.

**Click** CANCEL to undo a selection and return to the Print menu.



### 5.2.1.2 Local files

Displays, on this computer, all:

- Labels.
- Fonts.
- Graphics.

**Press** LABELS.

#### Labels

The options offered by this menu are:

- List labels.
- Add labels.
- Delete labels.
- Move labels.
- Create Folder.

**Click** CANCEL to undo a selection and return to the Print menu.

**Click** on FONTS.

#### Fonts

The options offered by this menu are:

- List fonts.
- Add fonts.
- Delete fonts.

**Click** CANCEL to undo a selection and return to the Print menu.

**Click** GRAPHICS.

#### Graphics

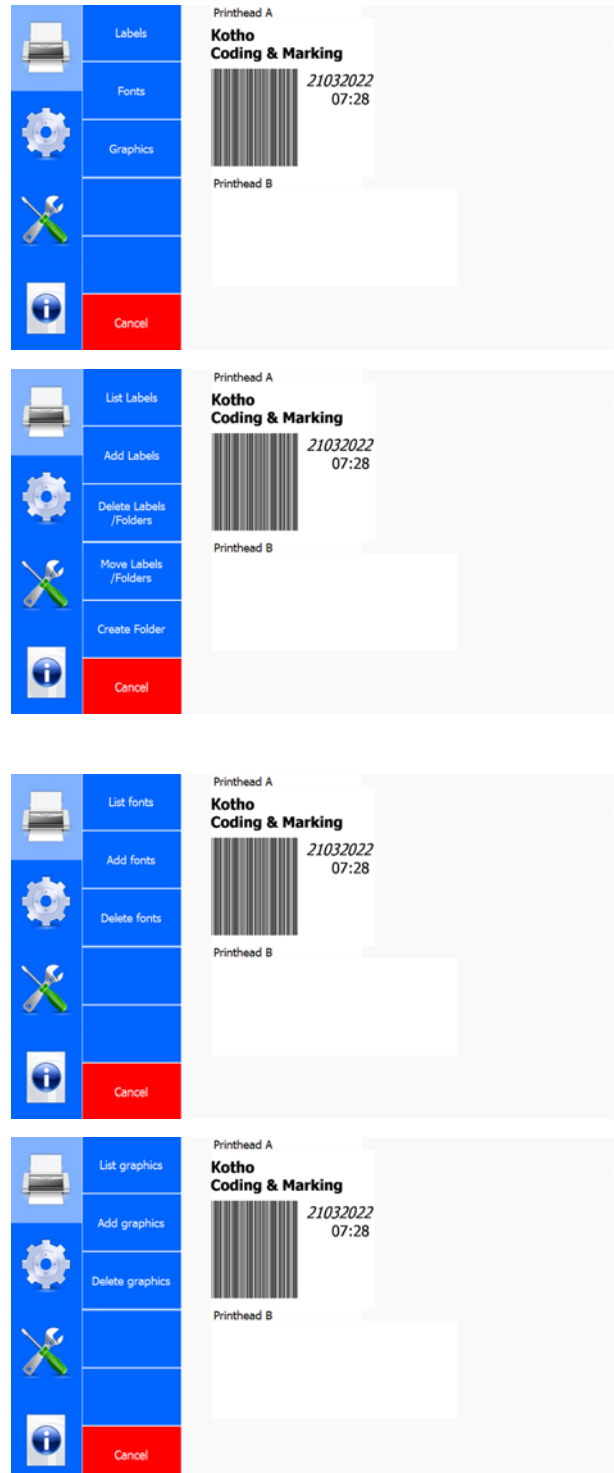
The options offered by this menu are:

- List graphics.
- Add graphics.
- Delete graphics.

**Click** CANCEL to undo a selection and return to the Print menu.



**Place graphics, i.e. images, in PNG format in the graphics folder of the KCC software in order to be able to select them.**



### 5.2.1.3 Printer files

Shows, for the selected printer, all:

- Labels.
- Fonts.
- Graphics.

These sub-menus have the same structure and functionalities as the LOCAL FILES.



### 5.2.1.4 Edit label

Shows the folders with labels followed by the labels in the folder in question which can be edited.

**Click** a folder and then click SELECT to open the folder.

**Click** on a label and then click SELECT to select the label which you want to edit.

- This opens the pop-up menu of the LABEL CREATOR. This enables you to edit labels. See section 4.3.5.

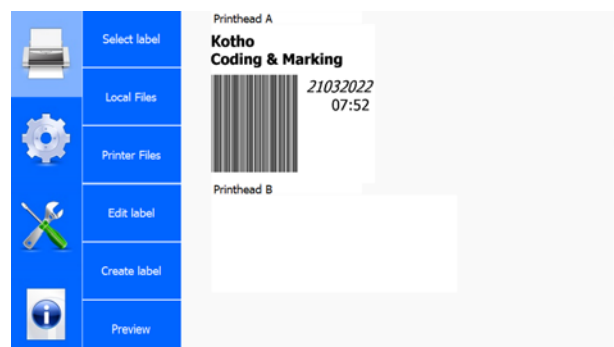
**Click** CANCEL to undo a selection and return to the Print menu.



### 5.2.1.5 Create label

Opens the pop-up menu of the LABEL CREATOR. Here you can create a new label according to your wishes.

See section 4.3.5 for the possibilities offered by the LABEL CREATOR.



### 5.2.1.6 Preview

---

**Click** the PREVIEW button several times in order to enlarge the preview.

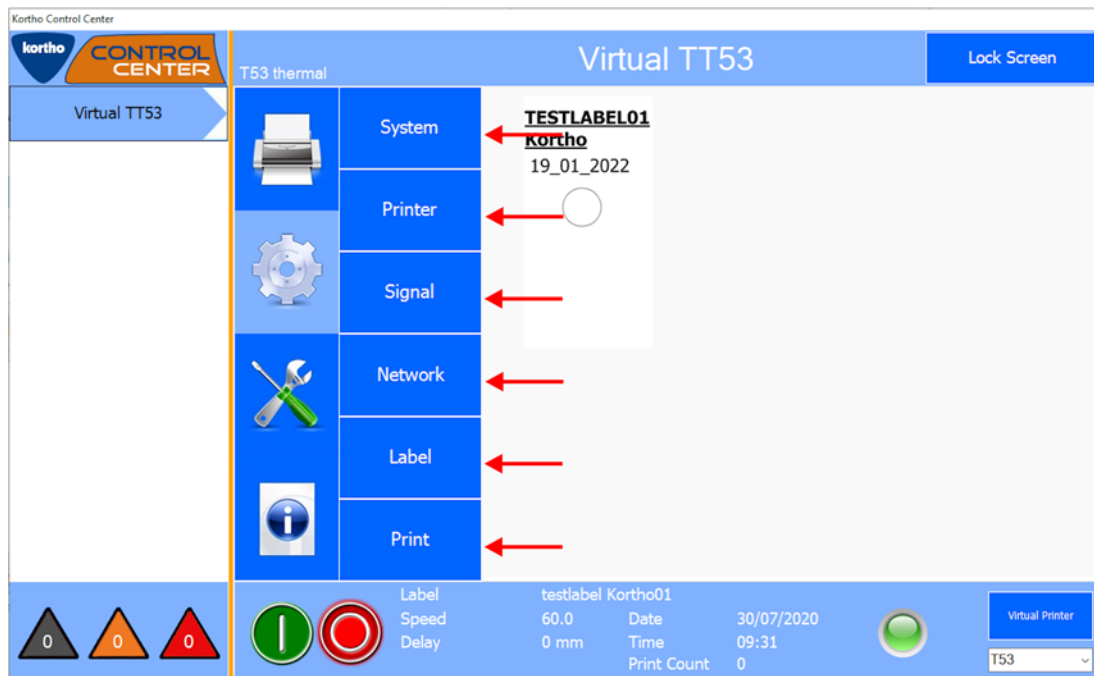
Shows a preview of the selected label.





## 5.2.2 Settings

The SETTINGS menu contains the following menu items:

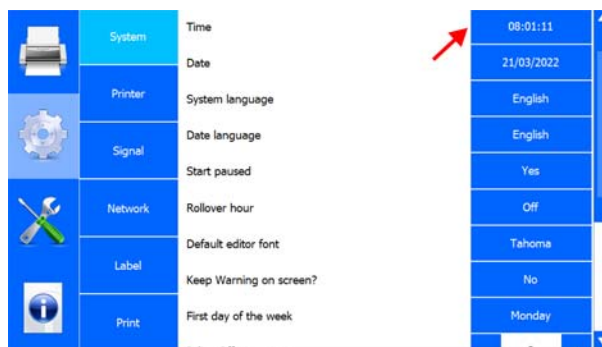


A description of each menu item is given below:

### 5.2.2.1 System

**Click** TIME to adjust the time setting.

#### Time



A pop-up menu will appear:

**Turn** the scroll wheels to change the time.

**Click** OK to confirm the time.



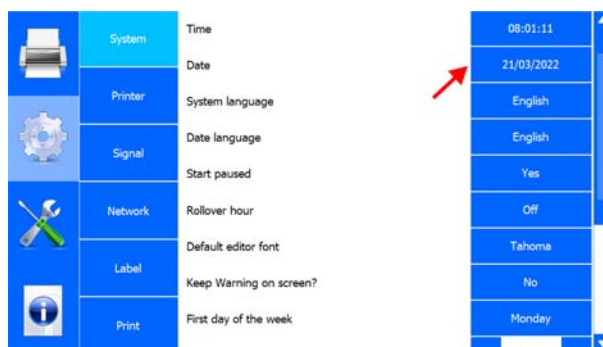
**Click DATE** to change the date setting.

### Date

A pop-up menu will appear:

**Turn** the scroll wheels to adjust the date.

**Click OK** to confirm the date.



**Click SYSTEM LANGUAGE** to adjust the KCC software language setting.

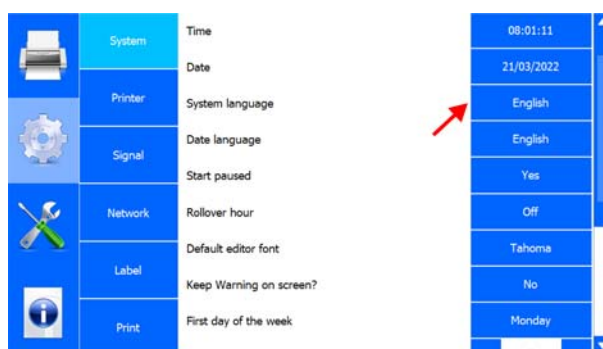
### System language

A pop-up menu with a list of languages appears:

**Select** the relevant language.

- The software will automatically restart in the desired language.

**Click CANCEL** to return to the SYSTEM menu.



**Click** DATE LANGUAGE to change the date language.

## Date language

A pop-up menu similar to the list of languages is displayed.

**Click** START PAUSED to set that the printer should, or should not, start immediately after power-on.

## Start paused

**YES:** When the printer is switched on, it does not start immediately.

**NO:** The printer starts immediately when it is switched on.

**Click** ROLLOVER HOUR to set after how many hours after midnight the date should change.

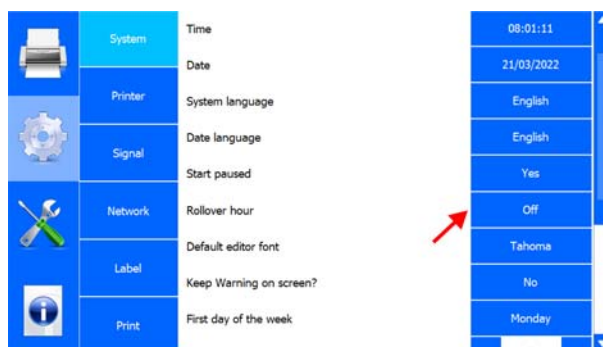
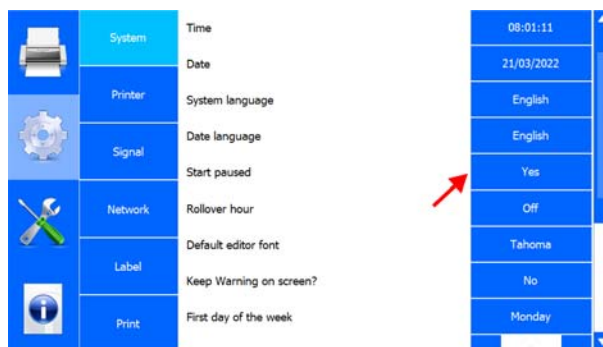
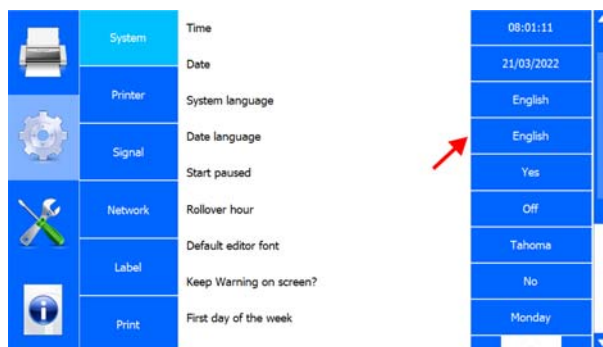
## Rollover hour

This brings up a pop-up menu with +hours:

For example: **select** +2 HOURS to have the date roll over two hours after 0:00 h.

**Select** OFF to switch off the Rollover hour.

**Click** CANCEL to return to the SYSTEM menu.



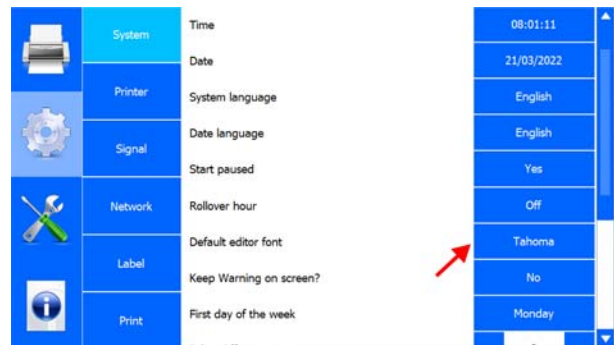
**Click** DEFAULT EDITOR FONT to adjust the default font of the LABEL CREATOR.

### Default editor font

A pop-up menu with a list of fonts appears:

**Select** the relevant font.

**Click** CANCEL to return to the SYSTEM menu.



**Click** KEEP WARNING ON SCREEN? to set whether the HMI should permanently display a warning.

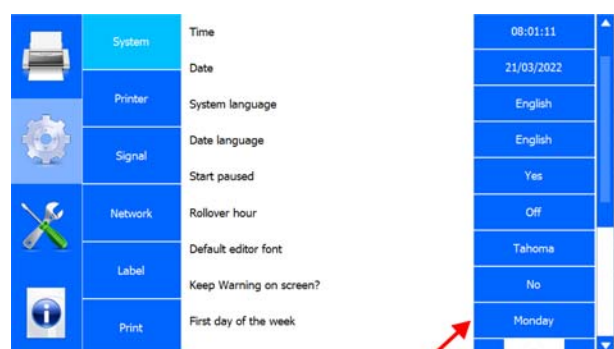
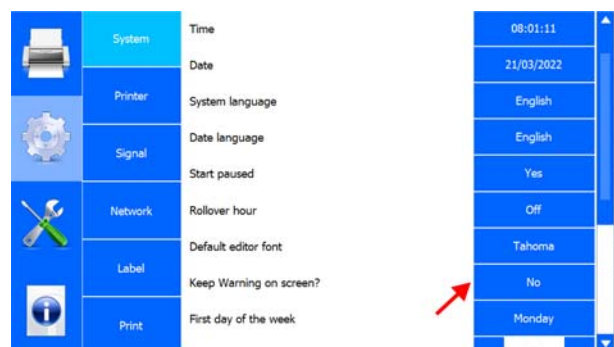
### Keep Warning on screen?

YES: The warning is displayed until the user confirms the warning.

No: The warning is cleared after three seconds.

**Click** FIRST DAY OF THE WEEK to select Monday or Sunday as the first day of the week.

### First day of the week



**Click** JULIAN OFFSET to set the number of days of the Julian date without resetting it. This is the Julian date after 365 days.

## Julian Offset

**Click** + to add a day.

**Click** - to deduct a day

**Click** DAYLIGHT SAVING to activate or deactivate the Daylight Saving setting.

## Daylight Saving

**Click** SYSTEM IN BCD MODE? to run the printer in BCD mode.

## System in BCD mode?

YES: The printer is switched to BCD mode.

No: The printer is not in BCD mode.

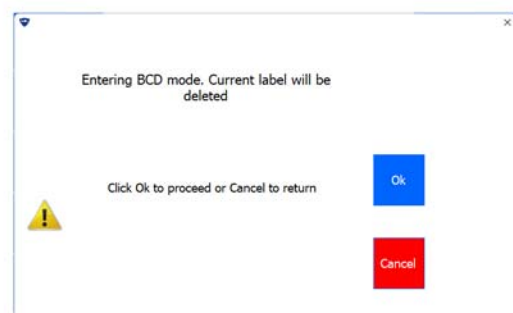
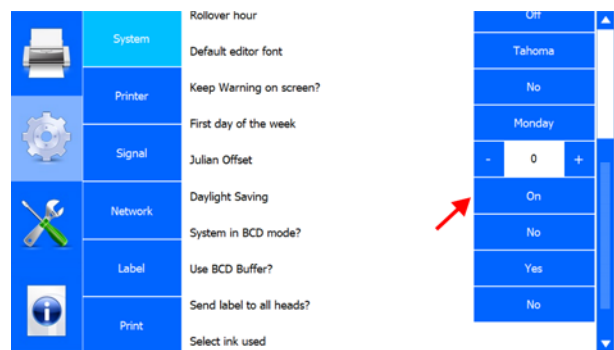
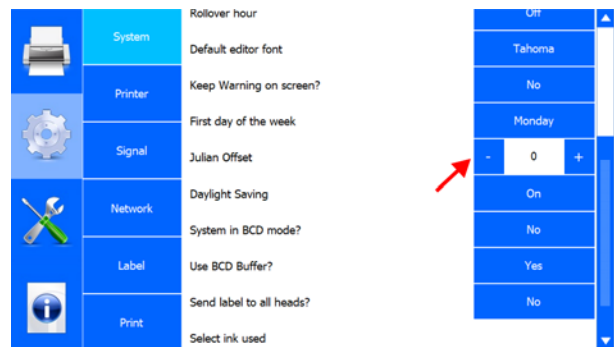
A pop-up menu with the following warning is displayed:



***The current label will be deleted if the system switches to BCD.***

**Click** OK to switch the printer to BCD mode.

**Click** CANCEL to return to the SYSTEM menu.



**Click** USE BCD BUFFER? to run the printer in BCD mode with BCD buffer.

### Use BCD buffer?

YES: The printer is in BCD mode with BCD buffer.

NO: The BCD buffer is not switched on.

**Click** SEND LABEL TO ALL HEADS? to have a single selected label printed by both printheads.

### Send label to all heads?

YES: The printer sends one label to two print-heads.

NO: Each printhead has its own selected label.

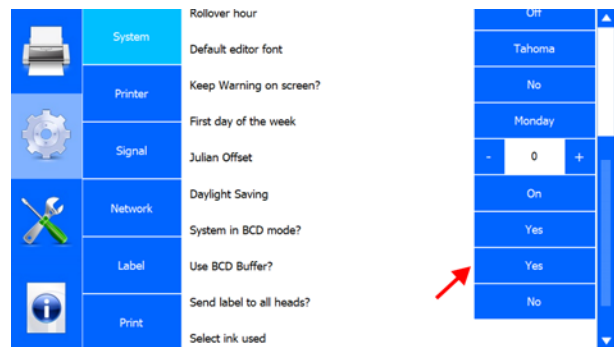
**Click** SELECT INK USED to select the ink type used in the printer in question.

### Select ink used

A pop-up menu with a list of ink options appears:

**Select** the ink type of your choice.

**Click** CANCEL to return to the SYSTEM menu.





### 5.2.2.2 Printer

**Click** PRINTER ID to change the printer name.

#### Printer ID

A pop-up menu will appear:

**Enter** the new ID for the printer.

- The Printer ID is also shown in the Printer list of the KCC menu.
- The Printer ID can also be added to a label as a variable.

**Click** LINE ID to change the name of the production line.

#### Line ID

A pop-up menu will appear:

**Enter** the new ID for the production line.

- The Line ID can also be added to a label as a variable.

**Click** CUSTOMER ID to change the customer's name.

#### Customer ID

A pop-up menu will appear:

**Enter** the customer's new ID.

- The Customer ID can also be added to a label as a variable.

**Click** LOW INK PRINTS to set the value for the number of prints that are allowed to be printed after a 'low ink level' message.

#### Low ink prints

**Click** + to increase the print quantity by 100.

**Click** - to decrease the print quantity by 100.



***This prevents the ink tank from being drained.***



**Click** PRINTHEAD A to switch printhead A on or off.

### Printhead A

**Click** PRINTHEAD B to switch printhead B on or off.

### Printhead B

### Continuous print

**Click** CONTINUOUS PRINT to have the printer continue printing after each print signal.

**Click** YES for repetitive printing after a print signal.

**Click** No to print a single print after a print signal.

**Click** SERIAL STRING WHEN BUSY ACTIVATES to have the serial port toggle outputs A and B as a string.

### Serial string when busy activates

**Click** YES to activate the serial output.

**Click** No to deactivate the serial output.





Click PRODUCT DIRECTION to set the printing direction.

## Product direction

- The product direction can be 'left to right' or 'right to left'. This is when viewed in the direction where the printer display faces the user.

Click RANK VOLTAGE to set the value

## Rank voltage

Click + to increase the value by 0.1.

Click - to decrease the value by 0.1.

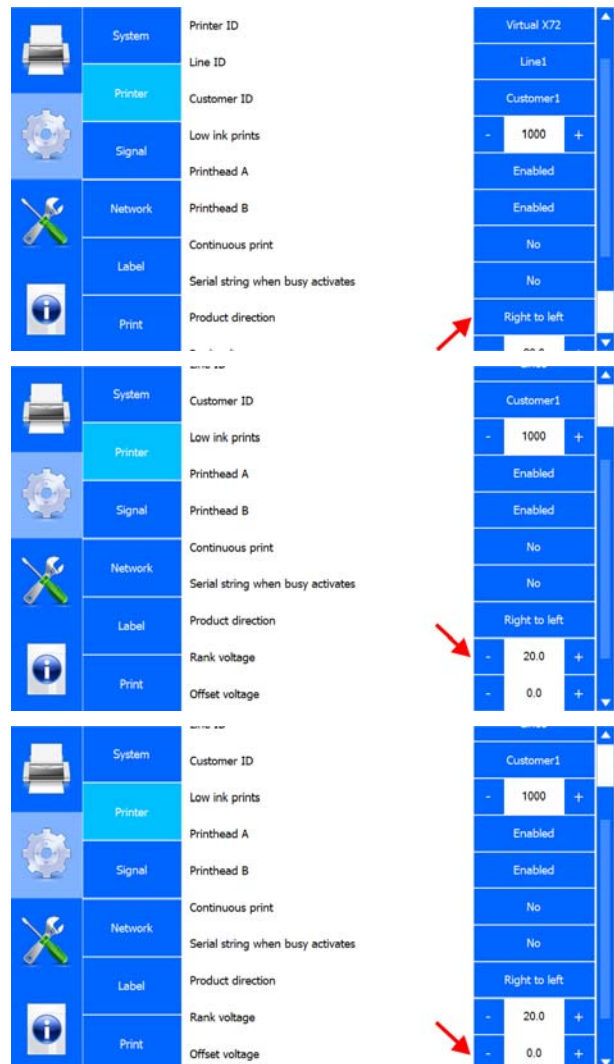
Click Offset voltage to set the current to the print-head.

## Offset voltage

Click + to increase the voltage by 0.1V.

Click - to decrease the voltage by -0.1V.

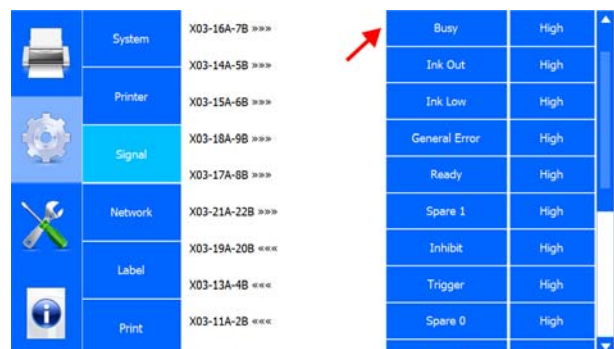
- The voltage value range is between -7V and 7V. A negative voltage gives smaller droplets of ink from the printhead and a positive voltage gives larger droplets.
- If the value is too low, the printer will not print.
- If the value is too high, the print quality may be poor.



### 5.2.2.3 Signal

## Busy

Active when the printer is printing (from the print signal to the end of the print).



### Ink out

Active if an "Ink low" situation has occurred and the number of prints set in "Low ink prints" has been printed. This means that ink needs to be refilled. The printer stops printing.

### Ink low

Active if an "Ink low" situation has occurred. This message indicates that the printer can be refilled.

### General error

Active if an error has occurred that requires the user's attention. The printer stops printing.

### Ready

This output (Ready) becomes active if the following conditions are true:

- The system must be on.
- The system must be in Standby mode.
- The general alarm must be inactive.

This output can be used to check that the system is on and ready to place a print.



System	Printer	Signal	Network	Label	Print
X03-16A-7B >>>>	X03-14A-5B >>>>	X03-15A-6B >>>>	X03-18A-9B >>>>	X03-17A-8B >>>>	X03-21A-22B >>>>
X03-19A-20B <<<<	X03-13A-4B <<<<	X03-11A-2B <<<<			

Busy	High
Ink Out	High
Ink Low	High
General Error	High
Ready	High
Spare 1	High
Inhibit	High
Trigger	High
Spare 0	High

Busy	High
Ink Out	High
Ink Low	High
General Error	High
Ready	High
Spare 1	High
Inhibit	High
Trigger	High
Spare 0	High

Busy	High
Ink Out	High
Ink Low	High
General Error	High
Ready	High
Spare 1	High
Inhibit	High
Trigger	High
Spare 0	High

Busy	High
Ink Out	High
Ink Low	High
General Error	High
Ready	High
Spare 1	High
Inhibit	High
Trigger	High
Spare 0	High

## Spare 1

Not in use.

## Inhibit

If the Inhibit input is active, the system will not print. If this input becomes active while printing, the print will be completed first.

## Trigger

The trigger input can be used to update the counter in a label or to reset the counter to its initial value.

## Spare 0

Not in use.

System	X03-16A-7B >>>>	Busy	High
Printer	X03-14A-5B >>>>	Ink Out	High
Printer	X03-15A-6B >>>>	Ink Low	High
Signal	X03-18A-9B >>>>	General Error	High
Signal	X03-17A-8B >>>>	Ready	High
Network	X03-21A-22B >>>>	Spare 1	High
Label	X03-19A-20B <<<<	Inhibit	High
Label	X03-13A-4B <<<<	Trigger	High
Print	X03-11A-2B <<<<	Spare 0	High

System	X03-16A-7B >>>>	Busy	High
Printer	X03-14A-5B >>>>	Ink Out	High
Printer	X03-15A-6B >>>>	Ink Low	High
Signal	X03-18A-9B >>>>	General Error	High
Signal	X03-17A-8B >>>>	Ready	High
Network	X03-21A-22B >>>>	Spare 1	High
Label	X03-19A-20B <<<<	Inhibit	High
Label	X03-13A-4B <<<<	Trigger	High
Print	X03-11A-2B <<<<	Spare 0	High

System	X03-16A-7B >>>>	Busy	High
Printer	X03-14A-5B >>>>	Ink Out	High
Printer	X03-15A-6B >>>>	Ink Low	High
Signal	X03-18A-9B >>>>	General Error	High
Signal	X03-17A-8B >>>>	Ready	High
Network	X03-21A-22B >>>>	Spare 1	High
Label	X03-19A-20B <<<<	Inhibit	High
Label	X03-13A-4B <<<<	Trigger	High
Print	X03-11A-2B <<<<	Spare 0	High

System	X03-16A-7B >>>>	Busy	High
Printer	X03-14A-5B >>>>	Ink Out	High
Printer	X03-15A-6B >>>>	Ink Low	High
Signal	X03-18A-9B >>>>	General Error	High
Signal	X03-17A-8B >>>>	Ready	High
Network	X03-21A-22B >>>>	Spare 1	High
Label	X03-19A-20B <<<<	Inhibit	High
Label	X03-13A-4B <<<<	Trigger	High
Print	X03-11A-2B <<<<	Spare 0	High

## Spare 1

Not in use.

**Click** PRINT SIGNAL INPUT ACTIVE to set this to high or low signal.

### Print signal input active

**Click** PRINT MISSED ACTION to set the action to be taken when the printer receives a print signal while the printer is still printing.

### Print missed action

A pop-up menu will appear:

**Select** ERROR to stop the printer after a missed print.

**Select** WARNING to generate a warning in the software.

**Select** IGNORE to continue printing without a message after a missed print.

**Click** CANCEL to return to the SYSTEM menu.



**Click** ENCODER TIMEOUT ACTION to set the action to be taken if the encoder does not generate any pulses because no movement is detected.

## Encoder timeout action

A pop-up menu will appear:

**Select** ERROR to stop the printer if an impulse has been missed.

**Select** WARNING to generate a warning in the software.

**Select** IGNORE to ignore the fact that no impulse is generated.

**Click** CANCEL to return to the SYSTEM menu.

**Click** OVER SPEED ACTION to set the action to be taken when the print speed is too high.

## Over speed action

A pop-up menu will appear:

**Select** ERROR to stop the printer if the speed is too high.

**Select** WARNING to generate a warning in the software.

**Select** IGNORE to continue printing without a message that the speed is too high.

**Click** CANCEL to return to the SYSTEM menu.



**Click** USE LINE SPEED ENCODER? to switch the application of a line speed encoder on or off.

#### Use line speed encoder?

**Click** BCD EMPTY ERROR ACTION to set the action to be taken if there is no more value in the BCD list.

#### BCD empty error action

A pop-up menu will appear:

**Select** ERROR to stop the printer if there is no more value in the BCD list.

**Select** WARNING to generate a warning in the software.

**Select** IGNORE to continue printing without a message.

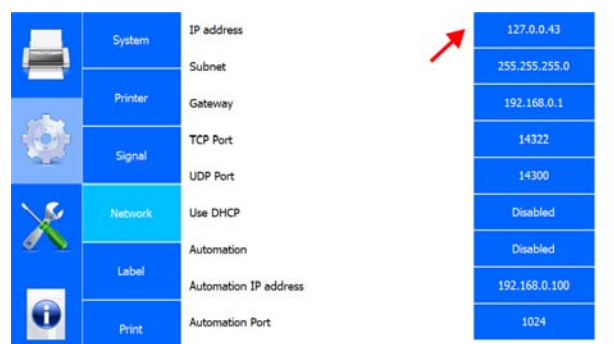
**Click** CANCEL to return to the SYSTEM menu.

#### 5.2.2.4 Network

**Click** IP ADDRESS to type the IP address.

#### IP address

**Click** OK to confirm the IP address.





**Click SUBNET** to type the network's subnet mask.

### Subnet

**Click OK** to confirm the subnet mask.

**Click GATEWAY** to type the gateway address (if available).

### Gateway

**Click OK** to confirm the gateway address.

**Click TCP PORT** to type the printer's TCP port number.

### TCP Port

- The default number is: 14322.

**Click OK** to confirm the TCP port number.

**Click UDP PORT** to type the printer's UDP port number.

### UDP Port

- The default number is: 14300.

**Click OK** to confirm the UDP port number.

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
	Signal	TCP Port	14322
		UDP Port	14300
	Network	Use DHCP	Disabled
		Automation	Disabled
	Label	Automation IP address	192.168.0.100
	Print	Automation Port	1024

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
	Signal	TCP Port	14322
		UDP Port	14300
	Network	Use DHCP	Disabled
		Automation	Disabled
	Label	Automation IP address	192.168.0.100
	Print	Automation Port	1024

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
	Signal	TCP Port	14322
		UDP Port	14300
	Network	Use DHCP	Disabled
		Automation	Disabled
	Label	Automation IP address	192.168.0.100
	Print	Automation Port	1024

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
	Signal	TCP Port	14322
		UDP Port	14300
	Network	Use DHCP	Disabled
		Automation	Disabled
	Label	Automation IP address	192.168.0.100
	Print	Automation Port	1024

**Click** USE DHCP to activate or deactivate the DHCP server set for the printer network settings.

### Use DHCP

**Click** AUTOMATION to switch the PRINT\_COMPLETE command on or off. This command is sent whenever printing to the Automation IP address.

### Automation

**Click** AUTOMATION IP ADDRESS to type the Automation IP address.






### Automation IP address






**Click** OK to confirm the Automation IP address.






**Click** AUTOMATION PORT to type the printer's Automation port number.


### Automation Port

**Click** OK to confirm the Automation Port number.

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024
	Print		

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024
	Print		

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024
	Print		

	System	IP address	127.0.0.43
		Subnet	255.255.255.0
	Printer	Gateway	192.168.0.1
		TCP Port	14322
	Signal	UDP Port	14300
		Use DHCP	Disabled
	Network	Automation	Disabled
		Automation IP address	192.168.0.100
	Label	Automation Port	1024
	Print		



## 5.2.2.5 Label

**Click** ORIENTATION to adjust the label print orientation.

### Orientation

A pop-up menu will appear:

**Select** NORMAL to print the label in the current orientation.

**Select** MIRROR to print the label in a mirrored direction.

**Select** 180° to rotate the label through 180°.

**Select** MIRROR + 180° to print the label in a mirrored direction and rotated through 180°.

**Click** CANCEL to return to the SYSTEM menu.

**Click** RESET COUNTERS to reset the counters in the currently selected label.

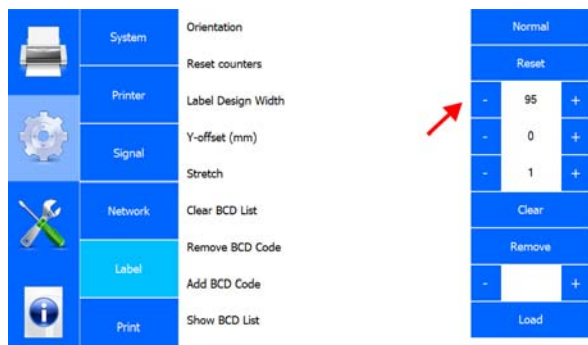
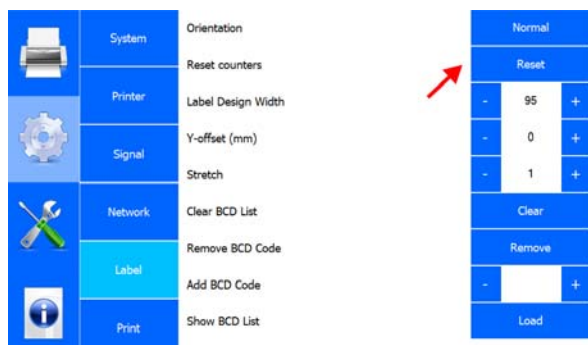
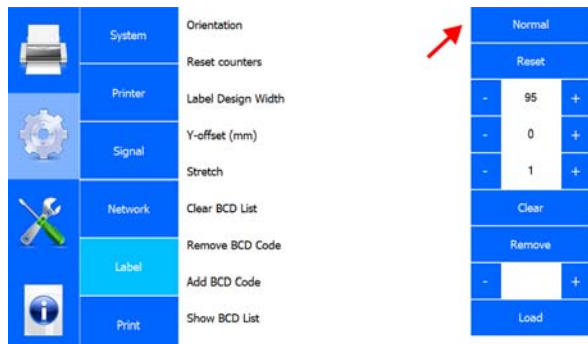
### Reset counters

**Click** LABEL DESIGN WIDTH to adjust the width of the label.

### Label design width

**Click** + to increase the width by 10 mm.

**Click** - to decrease the width by 10 mm.



**Click Y-OFFSET (MM)** to set the Y-offset relative to the zero point.

### Y-offset (mm)

**Click +** to increase the offset by 1 mm.

**Click -** to decrease the offset by 1 mm.

**Click STRETCH** to set the label width based on the number of pixels.

### Stretch

**Click +** to increase the pixel factor by 1.

**Click -** to decrease the pixel factor by 1.

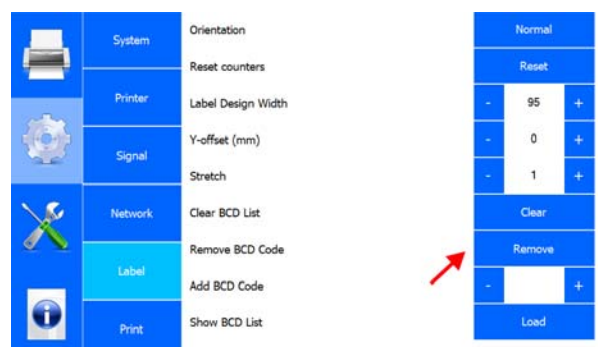
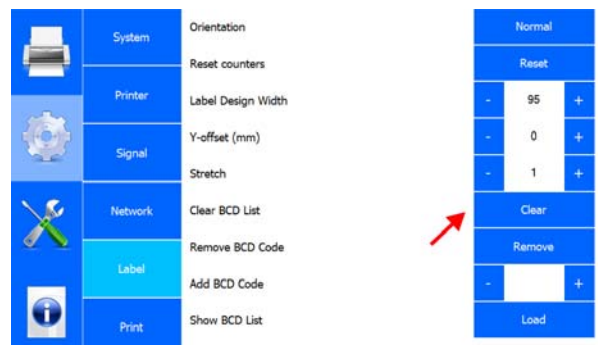
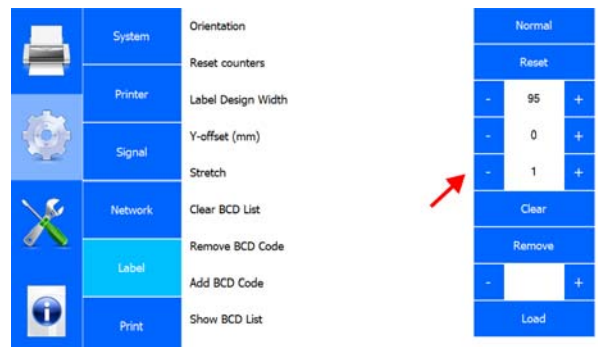
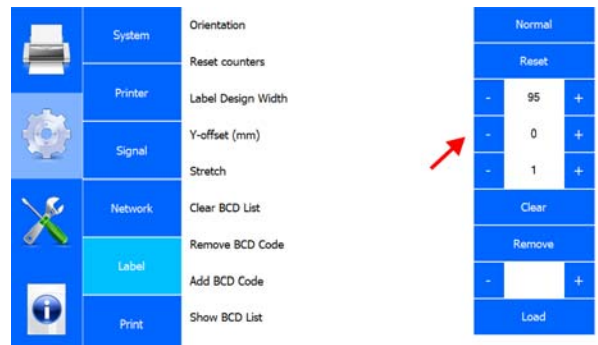
- The default stretch value is 1, printing 100 pixels. Factor 2 doubles the number of pixels, making the label twice as wide.

**Click CLEAR BCD LIST** to empty the current BCD list.

### Clear BCD list

**Click REMOVE BCD CODE** to remove the current BCD code.

### Remove BCD Code



Click ADD BCD CODE to enter a BCD code.

## Add BCD Code

Click SHOW BCD LIST to show the list of BCD codes.

## Show BCD List

A pop-up screen with the list of codes is displayed.



## 5.2.2.6 Print

Click PRINT DELAY (MM) to set the delay from the print signal.

## Print delay (mm)

Click + to increase the delay by 10 mm.

Click - to decrease the delay by 10 mm.

Click SPEED (m/min) to adjust the print speed.

## Speed (m/min)

Click + to increase the speed by 1 m/min.

Click - to decrease the speed by 1m/min.  
- The maximum printing speed is 45 m/min.



**Click PRINT QUANTITY** to enter the Print quantity.

### Print quantity

- Set the print quantity to 0 to have the printer print infinitely.
- If the required number has been reached, the printer will stop and the counter will be reset to zero.

**Click +** to increase the print quantity by 1.

**Click -** to decrease the print quantity by 1.

**Click DEBOUNCE (MS)** to set for how long the printer may ignore the print signal once a print signal has been received.

### Debounce (ms)

**Click +** to increase the delay by 5 ms.

**Click -** to decrease the delay by 5 ms.

**Click SPIT ENABLE** to switch the spit function on or off.

### Spit enable

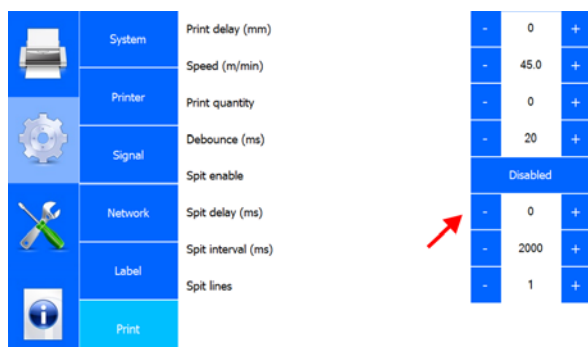
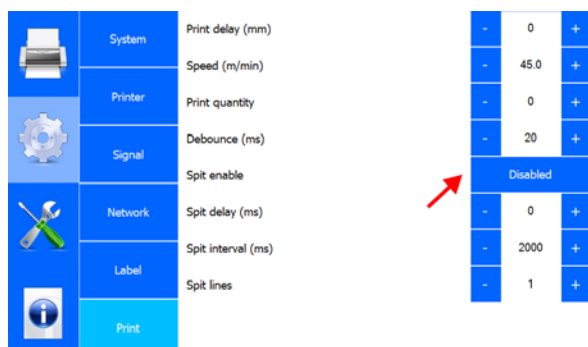
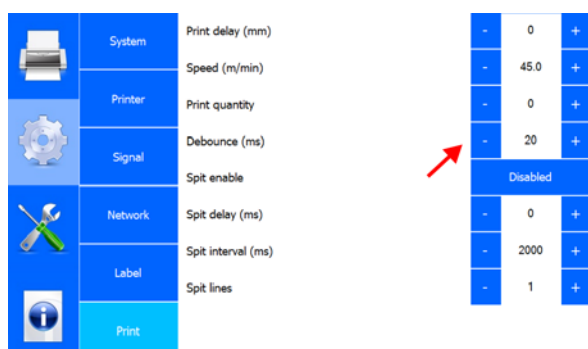
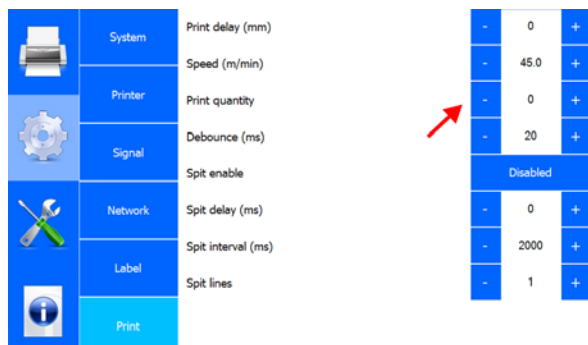
The spit function can be switched on to prevent a nozzle from becoming blocked. A timer triggers the printhead to 'spit' ink through all the nozzles.

**Click SPIT DELAY (MS)** to adjust the spit function delay.

### Spit delay (ms)

**Click +** to increase the delay by 100 ms.

**Click -** to decrease the delay by 100 ms.



**Click SPIT INTERVAL (MS)** to adjust the spit function interval.

## Spit interval (ms)

**Click +** to increase the interval by 100 ms.

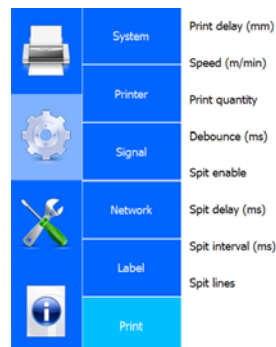
**Click -** to decrease the interval by 100 ms.

**Click SPIT LINES** to adjust the number of lines shot per spit.

## Spit lines

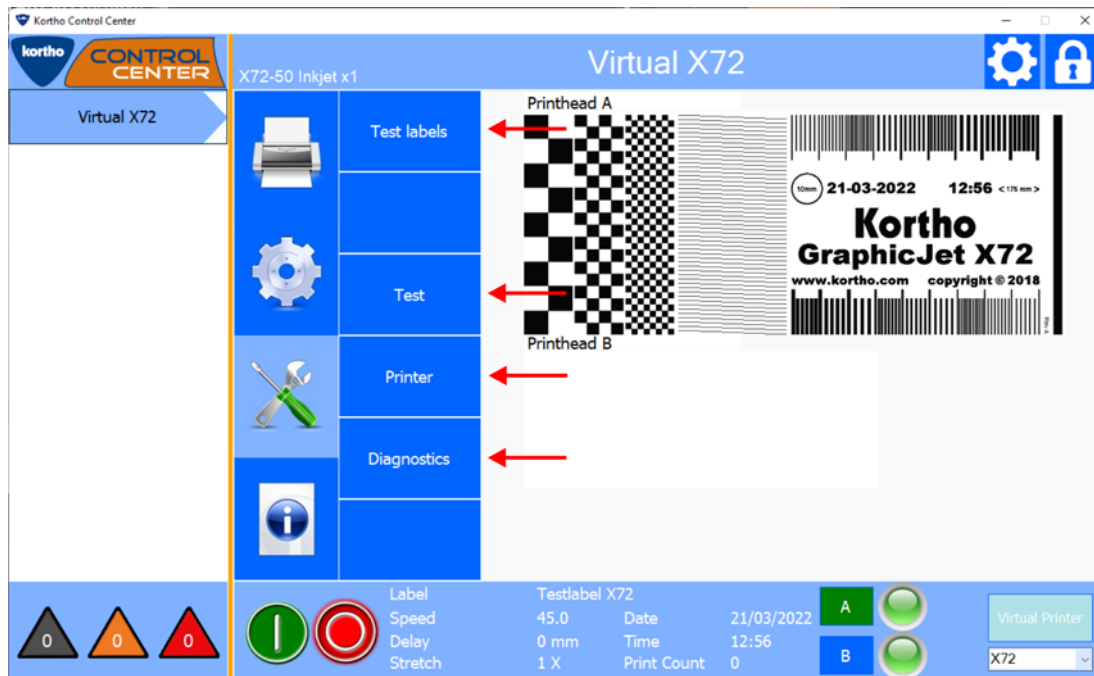
**Click +** to increase the number of lines by 1.

**Click -** to decrease the number of lines by 1.



### 5.2.3 Service and diagnostics

The SERVICE AND DIAGNOSTICS menu contains the following menu items:

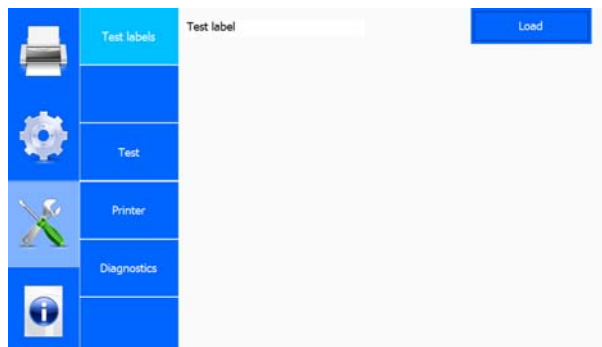


A description of each menu item is given below:

#### 5.2.3.1 Test labels

**Click** TEST LABEL to select a test label.

- Press LOAD to send the test program to the printer.
- Then press the start button of the printer to print a test print.



## 5.2.3.2 Test

**Click** SPEED (M/MIN) to adjust the printing speed of a test print.

### Speed (m/min)

- The maximum speed applicable is: 45 m/min.

**Click** + to increase the speed by 1 m/min.

**Click** - to decrease the speed by 1 m/min.

**Click** PRINT to have the software start a test print.

### Print



**Click** CURRENT LABEL to delete the selected active label.

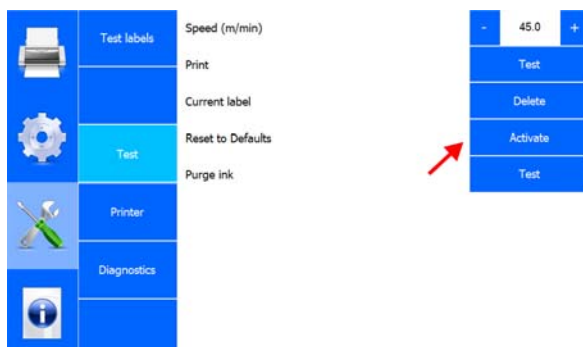
### Current label

- This does not delete the label from the library.



**Click** RESET TO DEFAULTS to reset all settings of the test label to the default factory settings.

### Reset to Defaults





**Click** ACTIVATE ALL CHANNELS to carry out a test of all channels.

### Activate all channels

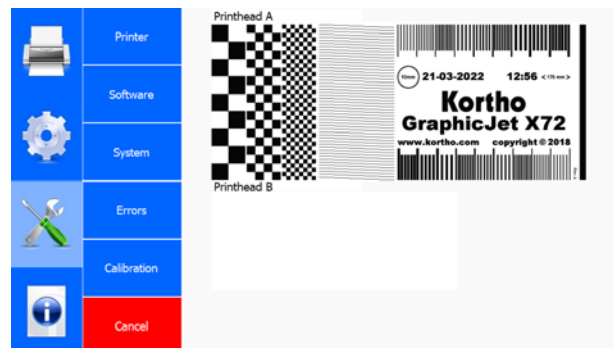


### 5.2.3.3 Printer

**Click** PRINTER to open a sub-menu containing information on:

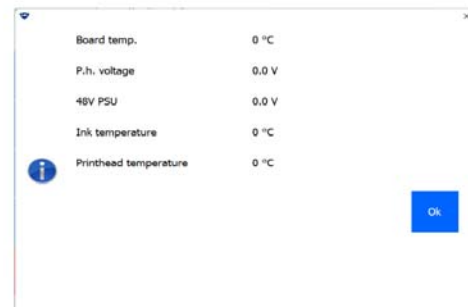
- Printer (the actual printer).
- Software.
- System.
- Errors.
- Calibration.

**Click** CANCEL to return to the SERVICE menu.



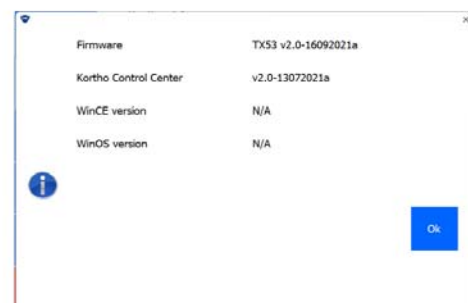
### Printer

Displays information about the actual printer:



### Software

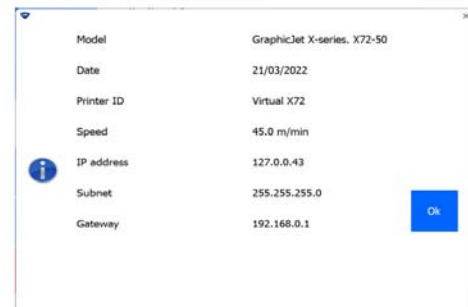
Displays information on the type of software and the software version:





## System

Displays information about the printer's system. This includes the identification on a network:



## Errors

Lists the last 15 error messages:



## Calibration

A pop-up screen with a warning will show:

Click OK to proceed to the calibration screen.



***Only service personnel are allowed to change any settings in the calibration screen.***

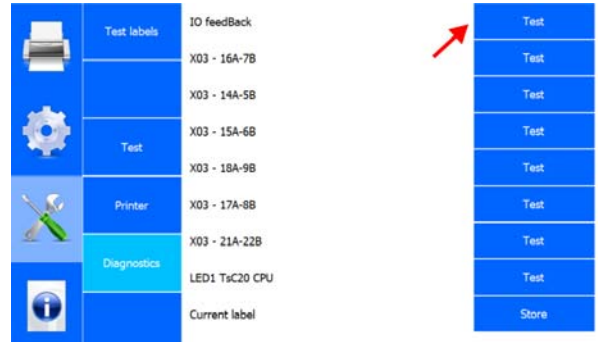
Click CANCEL to return to the Printer sub-menu.



### 5.2.3.4 Diagnostics

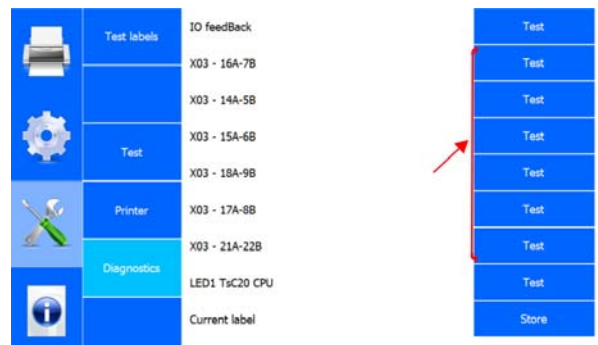
Click IO FEEDBACK to test different input signals.

#### IO feedback



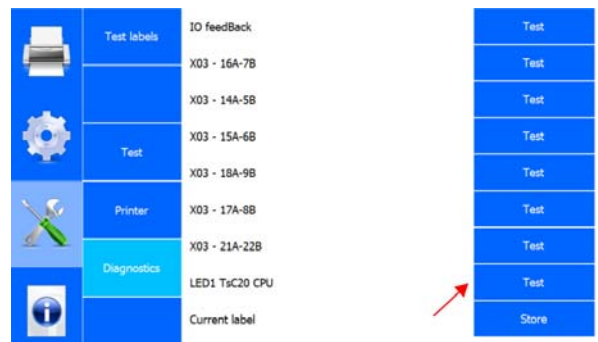
Click X03---A-B to test different output signals.

#### X03---A-B



Click LED1 Tsc20 CPU to test the status LED of the printer.

#### LED1 Tsc20 CPU



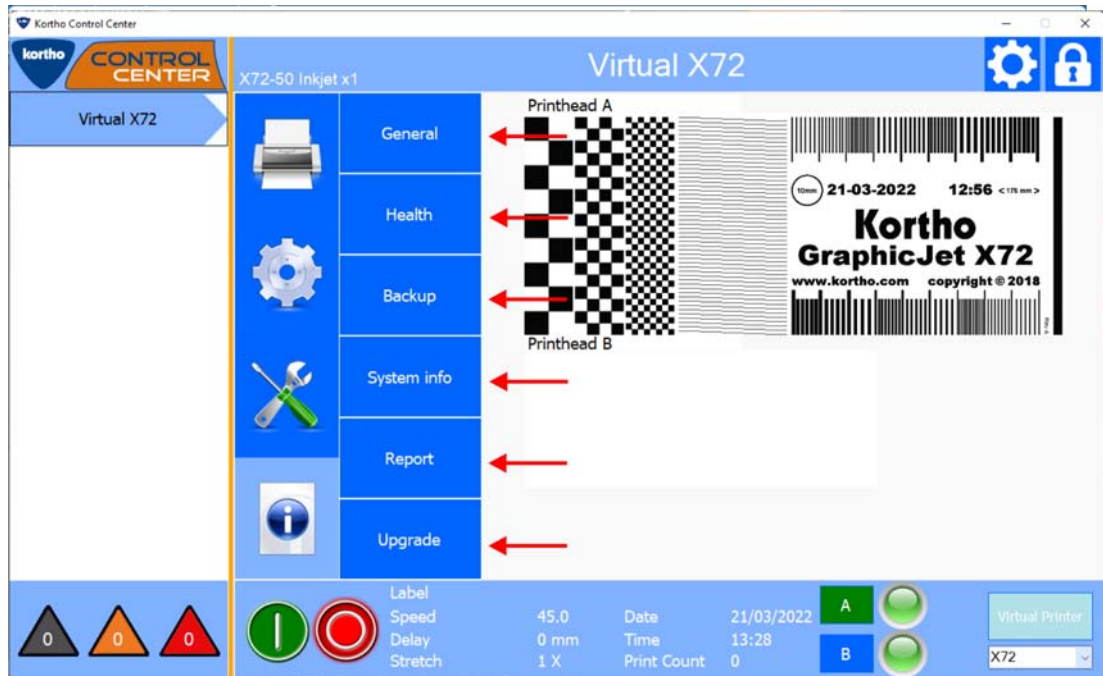
#### Current label

Click CURRENT LABEL to save the current label which has been selected and is active.



## 5.2.4 Information

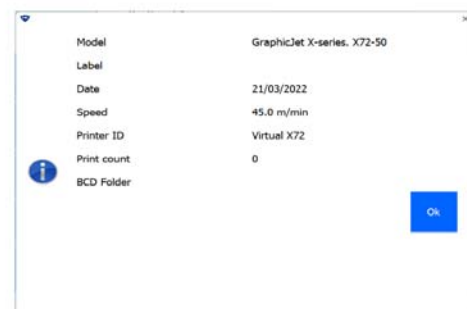
The INFORMATION menu contains the following menu items:



A description of each menu item is given below:

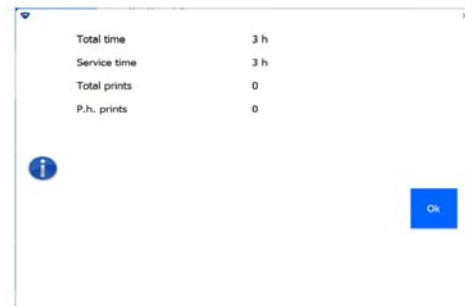
### 5.2.4.1 General

Displays general information about the printer:



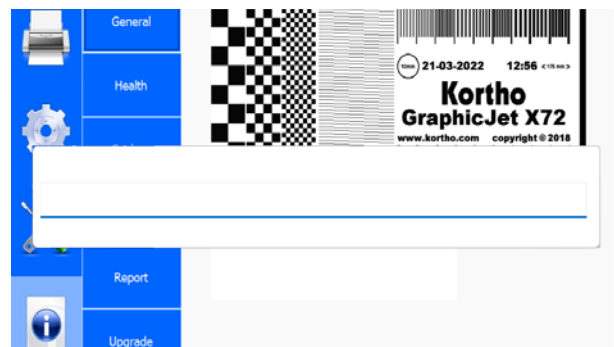
#### 5.2.4.2 Health

Shows production statistics and printer-specific adjustments:



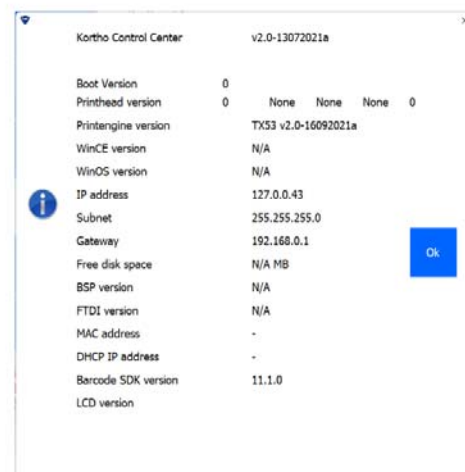
#### 5.2.4.3 Backup

**Enter** the file name of a backup to back up the labels. The labels are exported to the computer in a compressed file.



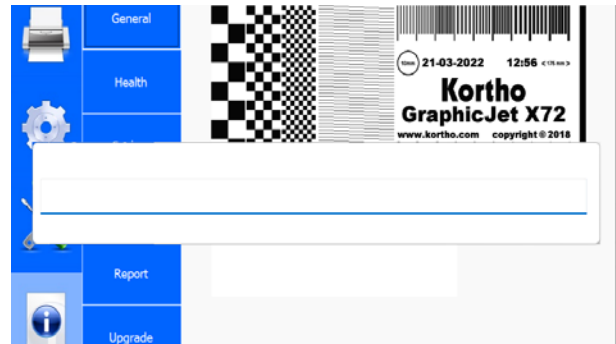
#### 5.2.4.4 System info

Displays system information of the printer and the KCC software:



## 5.2.4.5 Report

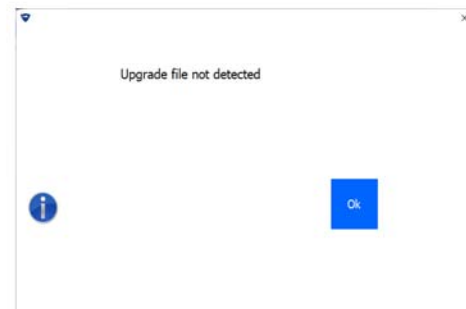
**Enter** a file name to export a text file. This text file contains all the values of the settings entered so far.



## 5.2.4.6 Upgrade

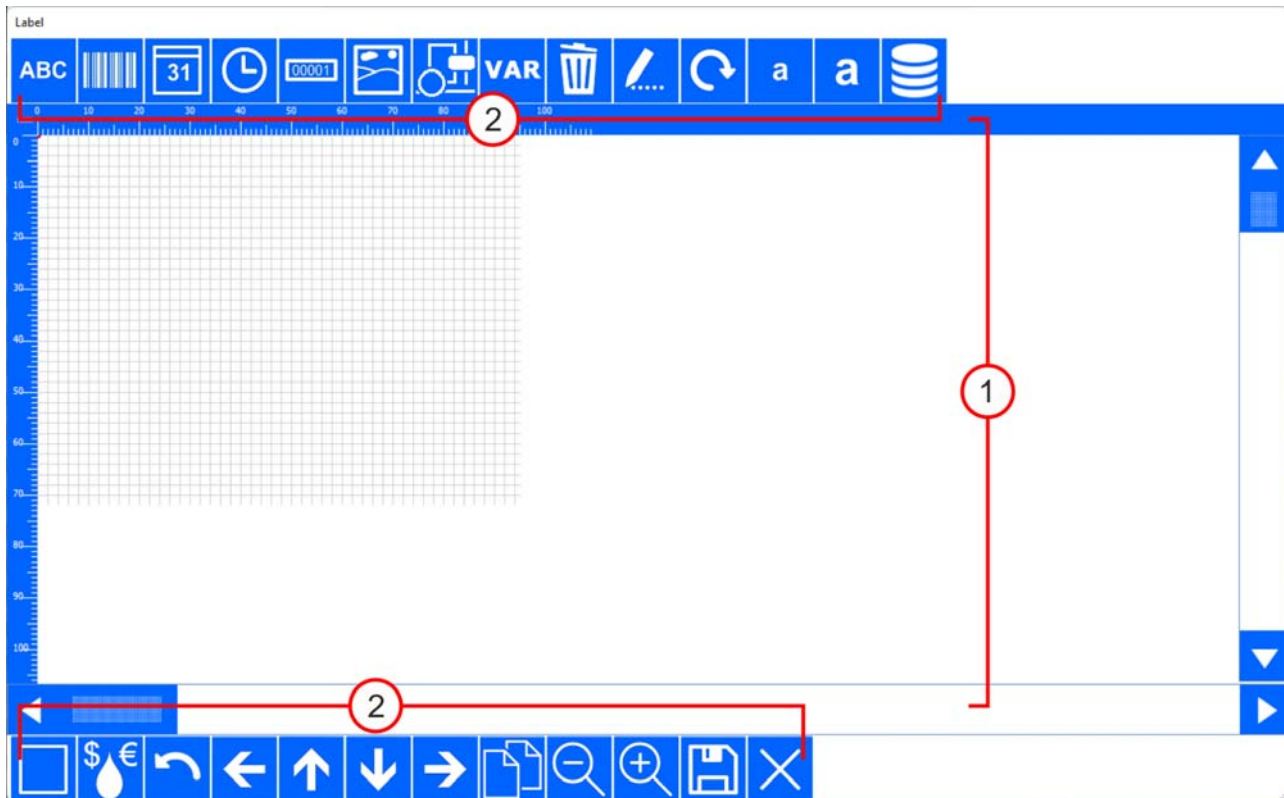
**Click** UPGRADE to search the upgrade folder for an upgrade file.

- Upgrade files can be found on the website of BV Korthofah: [www.kortho.com/faq](http://www.kortho.com/faq).
- Place upgrade files in the KCC software upgrade folder to use this function to upgrade.



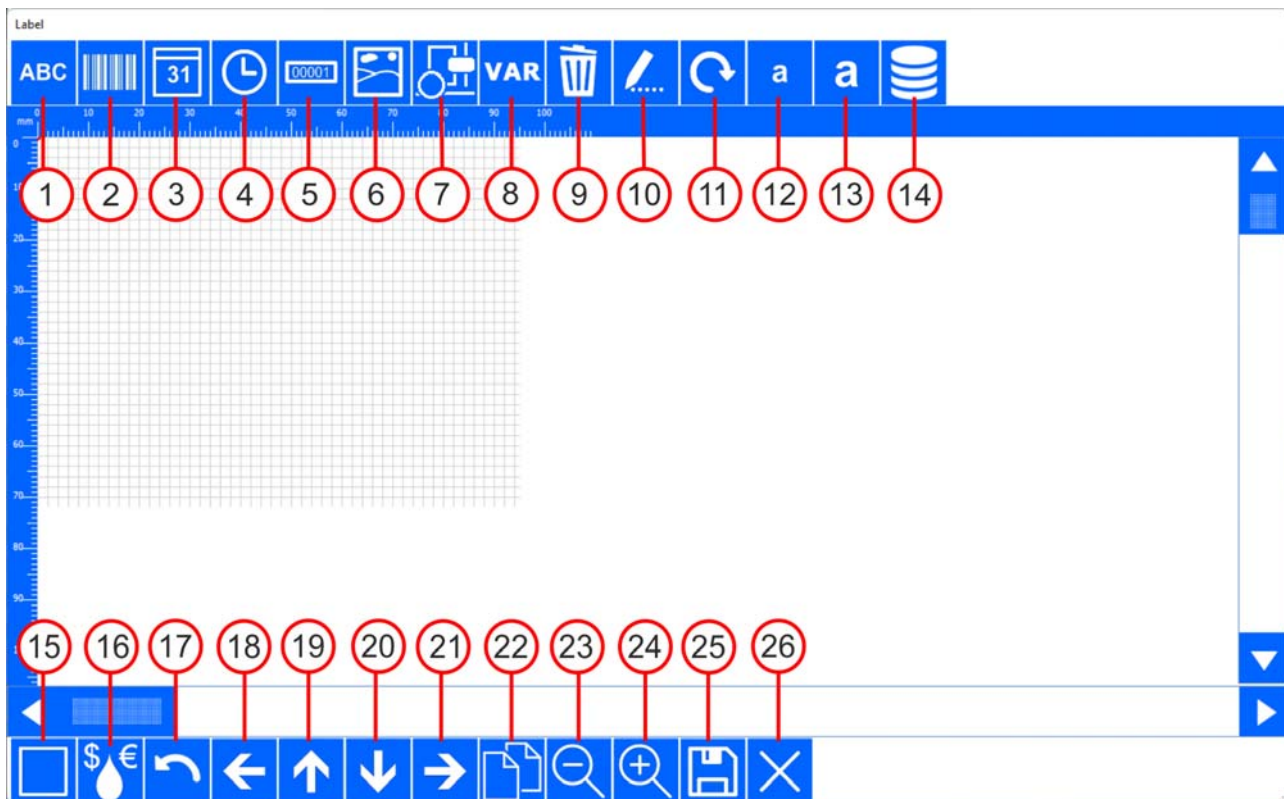
### 5.2.5 Label creator

You can design your own labels and edit labels in the Label creator.



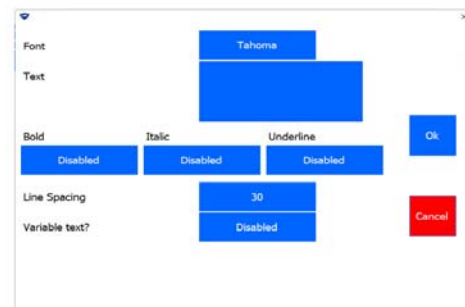
The Label creator screen consists of a worksheet (1) on which the design can be seen. The edges have rulers for aligning texts and graphics. There are buttons (2) at the top and bottom to insert, adjust and move label components.

These buttons are described below:



## 1. Text box

A sub-menu opens, enabling you to design a text box.



## 2. Bar code

A sub-menu opens, enabling you to design a bar-code.

- You can choose from different types of bar-codes.



### 3. Date

A sub-menu opens, enabling you to design how a date should be shown.



### 4. Time

A sub-menu opens, enabling you to design how a time should be shown.



### 5. Counter

A sub-menu opens, enabling you to design a counter.



### 6. Logo

A sub-menu with imported logos opens.

- **Select** a logo.
- **Click** OK to insert a logo.



**Place logos in PNG format in the graphics folder of the KCC software in order to be able to select them.**





## 7. Figure

A sub-menu opens, enabling you to insert shapes.

- **Select** a shape, line thickness and radius.
- **Click** OK to insert a shape.



## 8. Variable

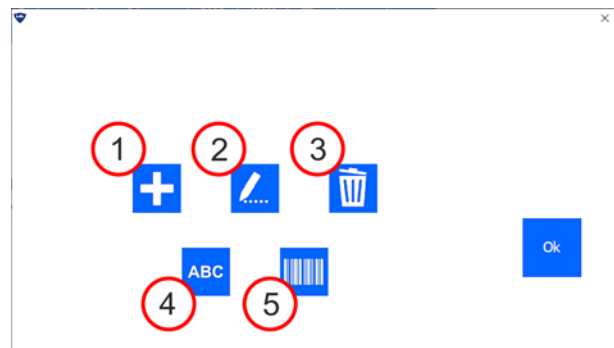
A sub-menu opens, enabling you to add a variable text or barcode. This requires a variable to be defined. The sub-menu contains the following buttons:

- 1. Add variable.
- 2. Change variable.
- 3. Delete variable.
- 4. Format variable text.
- 5. Format variable barcode.

### 1. ADD VARIABLE

A variable can be formatted in the form of a text box, date, time, counter, ID, Shift Code or database. The same formatting features are available here to create the variable.

A variable which has been completed is placed in the list of available variables.



### 2. CHANGE VARIABLE

**Select** a variable from the list of available variables to change it.



### 3. DELETE VARIABLE

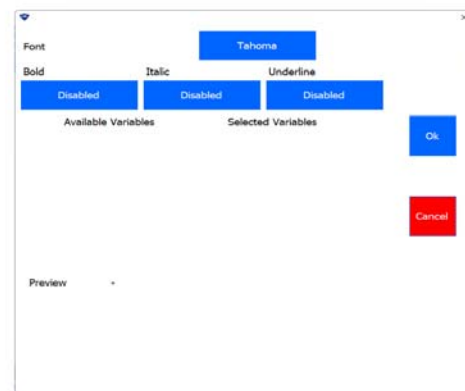
**Select** a variable from the list of available variables to delete it.

- If a variable is marked in red, it is being used and cannot be deleted.



### 4. FORMAT VARIABLE TEXT

The font layout of variables can be set.



### 5. FORMAT VARIABLE BARCODE

The type of barcode and the font layout of a variable barcode can be set.



## 9. Delete

**Select** a component in the worksheet which should be deleted.

## 10. Edit

**Select** a component in the worksheet which should be changed.

- The component-specific menu is opened.

### 11. Rotate

**Select** a component in the worksheet which should be rotated.

### 12. Make smaller

**Select** a component in the worksheet to make it smaller in steps.

### 13. Enlarge

**Select** a component in the worksheet to enlarge it in steps.

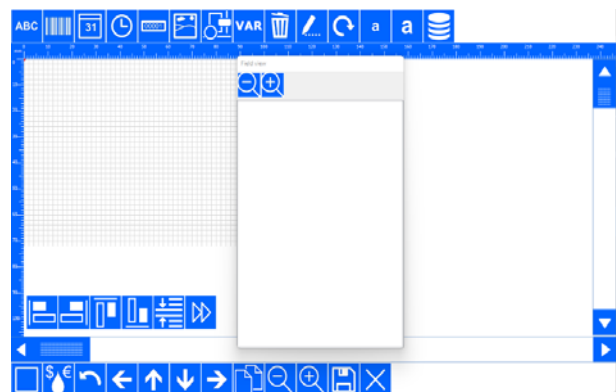
### 14. Database field

Opens a sub-menu to enable data to be printed from a database. File types which can be used are Microsoft Access and Microsoft Excel. Examples of database data that can be called are: Product, weight and/or barcode. See also section 6.2.7.



### 15. Features

Opens a sub-menu where all the components used are shown in a tree structure. Label components can be adjusted here as well.



## 16. Ink calculator

Opens a sub-menu where some ink data can be entered. This can be used to determine the costs of the label that has been designed.

Pixel count	1
Drop size	50 pl
Unit volume(ml)	400
Price of unit	200
Number of prints	100000
Total usage (ml)	0.005
Total cost	0.002
Cost per print	0
Units used	0

## 17. Undo

Undoes a previous action.

## 18. Move left

Moves a selected component to the left in steps.

## 19. Move up

Moves a selected component up in steps.

## 20. Move down

Moves a selected component down in steps.

## 21. Move right

Moves a selected component to the right in steps.

## 22. Copy

Copies a selected component and places the copy diagonally below the selection.

## 23. Zoom in

Zooms in on the worksheet.

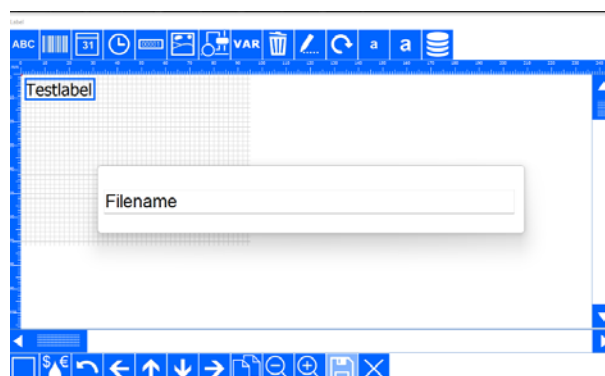
## 24. Zoom out

Zooms out on the worksheet.

## 25. Save

**Enter** a file name.

- **Press** OK to save a label to the folder of your choice.



## 26. Exit

---

Exit Label creator.



# 6 Operation

*This chapter provides information on the operation of the KCC software.*

## 6.1 Safety regulations



***The KCC software should only be operated by qualified personnel.***

## 6.2 Operational actions

The paragraphs below provide instructions for some basic operational actions that can be performed with the KCC software, such as:

1. Connecting with printers.
2. Selecting printers
3. Selecting labels.
4. Editing labels.
5. Creating labels.
6. Drop and Print.
7. Inserting database fields.

### 6.2.1 Connecting with printers

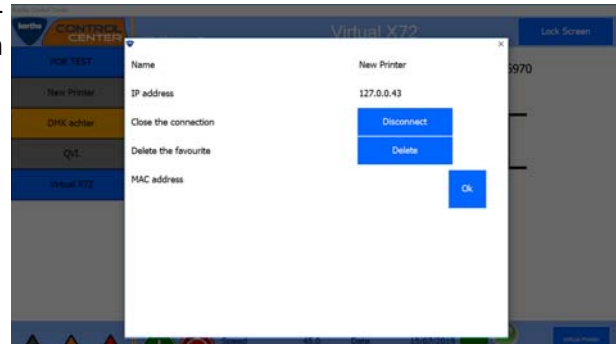
Proceed as follows to connect with printers:

When connecting a printer to the network, it is automatically added to the Printer List of the KCC software.



After this automatic connection, the following pop-up menu is displayed in which the connection can be confirmed.

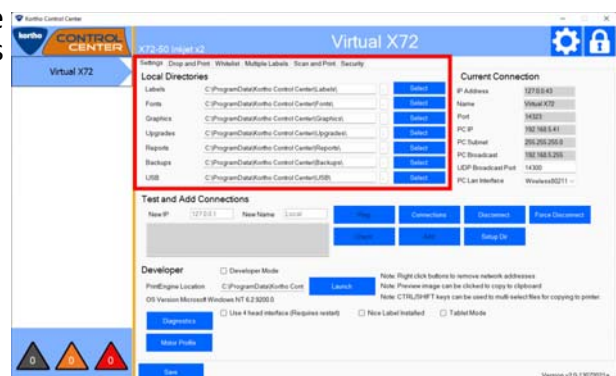
1. Click OK to confirm the connection.



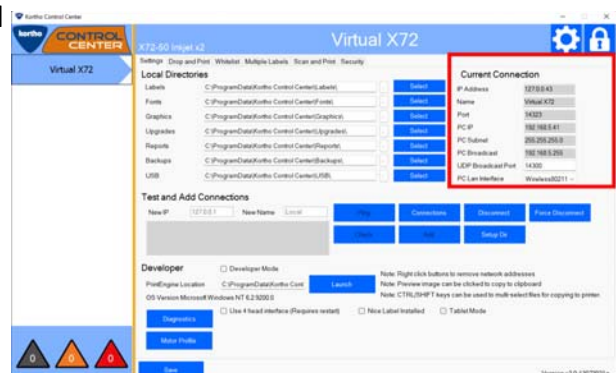
2. Press the SOFTWARE SETTINGS button to open the software settings tabs.
- The menu opens in the SETTINGS tab where the network data can be set and checked.



3. Check the file paths from the computer to the KCC software to access fonts, logos, upgrades etc.

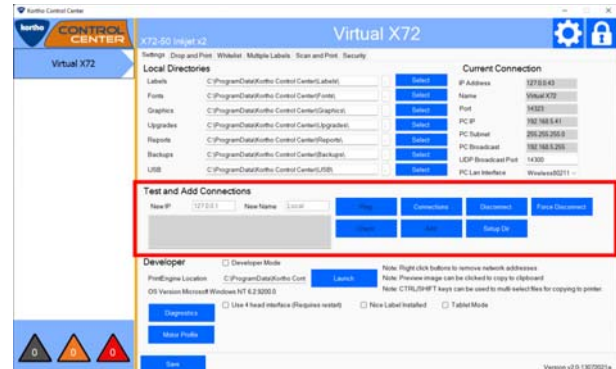


4. Check the network settings of the connected printer.

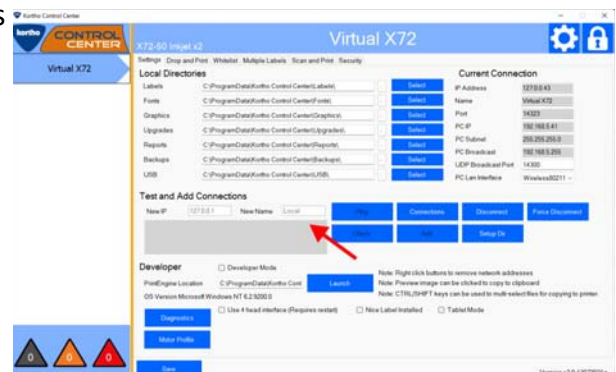




5. If relevant, **test** the network connection.

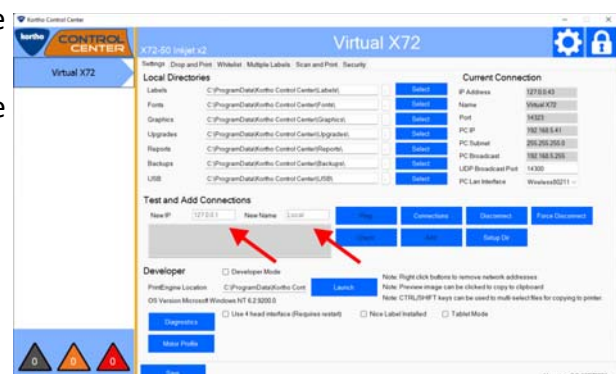


6. If relevant, **change** the name of the printer as it is shown in the list of printers.



If the printer does not automatically connect to the network:

7. Manually **enter** the IP address and name of the printer and connect the printer.



## 6.2.2 Selecting a printer

Proceed as follows to select a printer:

1. **Select** the relevant printer from the Printer list.  
- The button changes to an arrow.



2. Check the status of the printer.



### 6.2.3 Selecting a label

Proceed as follows to select a label:

1. Click PRINT.



2. Click SELECT LABEL.



3. Select the relevant folder.



4. **Select** the relevant label.

5. **Click** SELECT to select the label.  
- The label is uploaded to the printer.

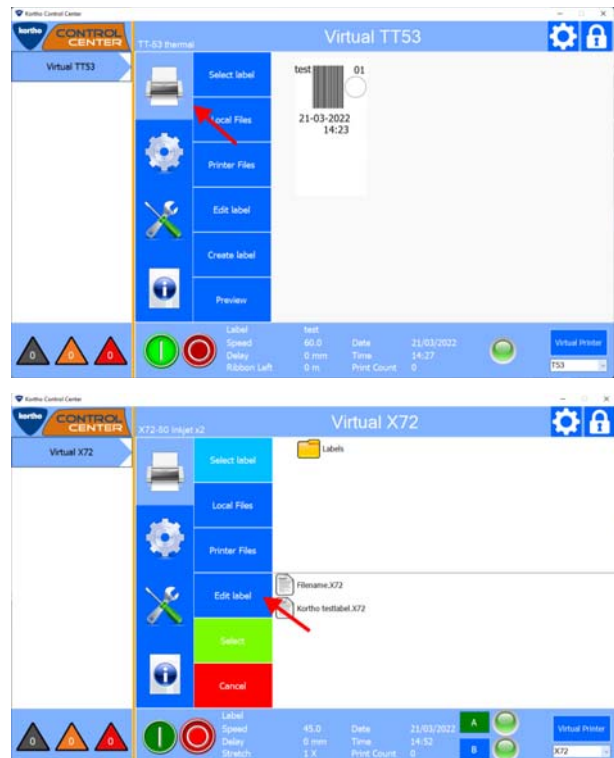


## 6.2.4 Editing labels

Proceed as follows to edit labels.

1. **Click** PRINT.

2. **Click** EDIT LABEL.



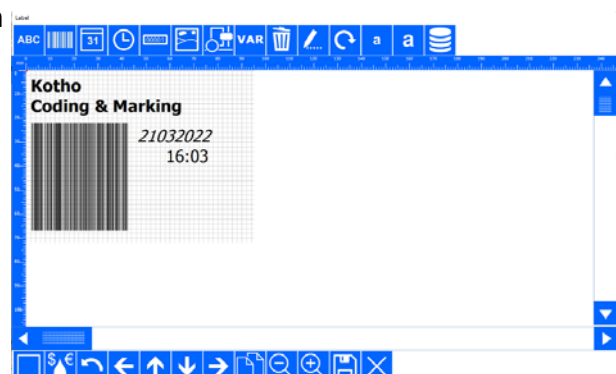
3. **Select** the relevant label.



4. **Click SELECT** to change the label.



This opens the Label creator in which the label can be changed.



### 6.2.5 Creating labels

Proceed as follows to create a label:

1. **Click PRINT.**

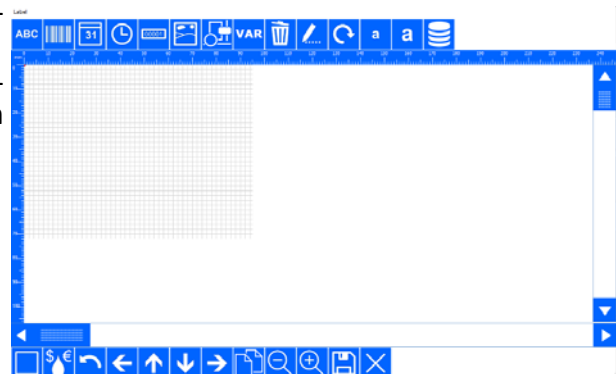


2. Click SELECT to change the label.



The Label creator opens so that the label can be created.

- See the extensive Label Creator options in the relevant chapter of the printer in question for each specific type of printer.



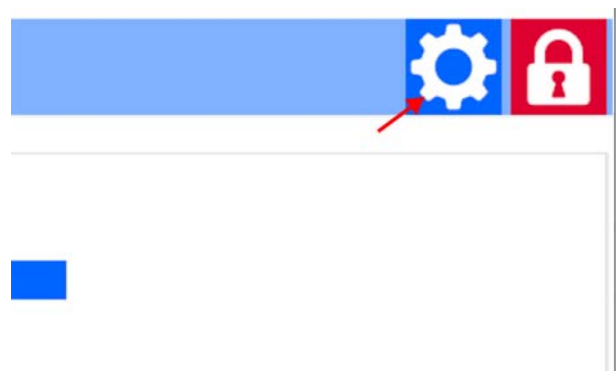
### 6.2.6 Drop and Print

When printing data from an ERP system, third-party software or custom programming is usually required to automate this process.

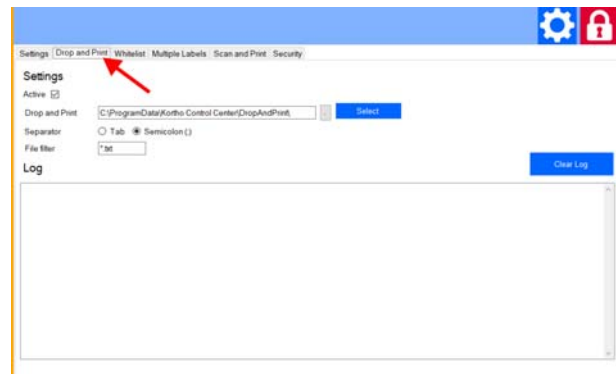
The ERP system should place a text file with variable data in a folder. Kortho Control Center takes this file, sends it - together with the other parameters - to the correct printer and fills the label template with the variables.

Proceed as follows to carry out a Drop and Print:

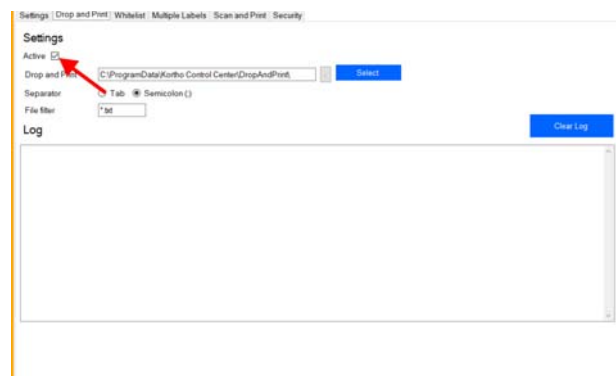
1. Press the SOFTWARE SETTINGS button.



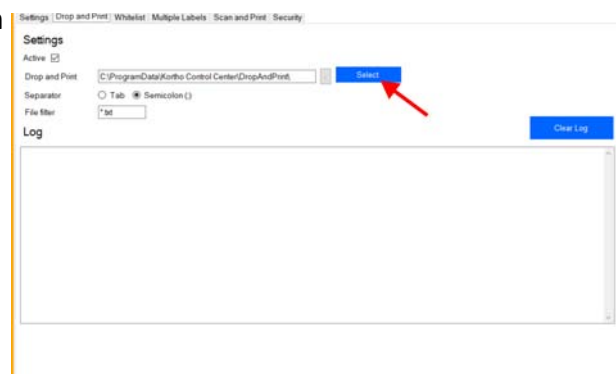
2. **Select** the DROP AND PRINT tab.



3. **Select** ACTIVE to activate Drop and Print.

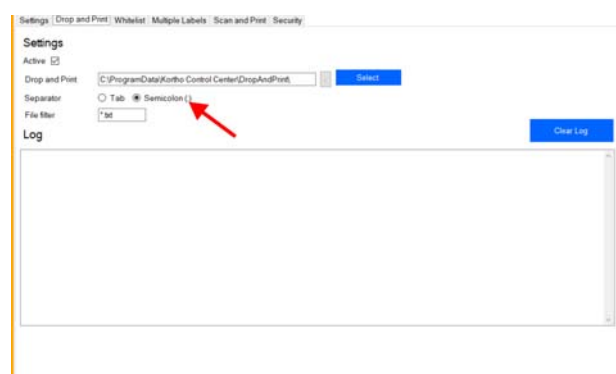


4. **Press** the **SELECT** button to select a file location for the text files.



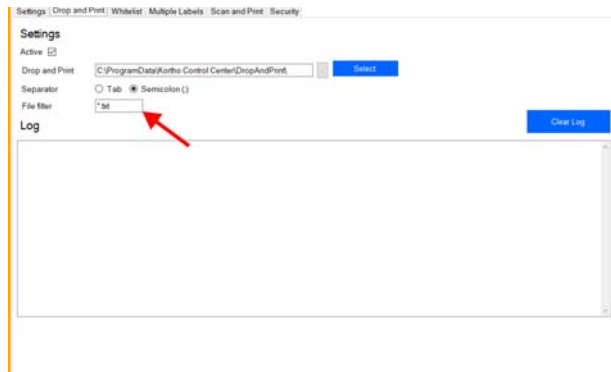
5. **Select** a SEPARATOR.

- This creates a delimiter in the text file.

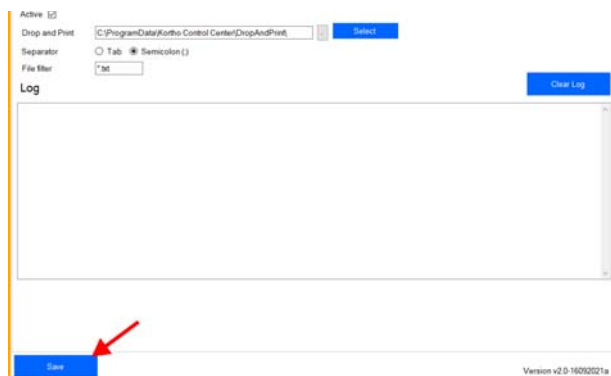




6. **Select** a FILE FILTER to add an extension to the text file name.



7. **Press** the SAVE button to save the text file.

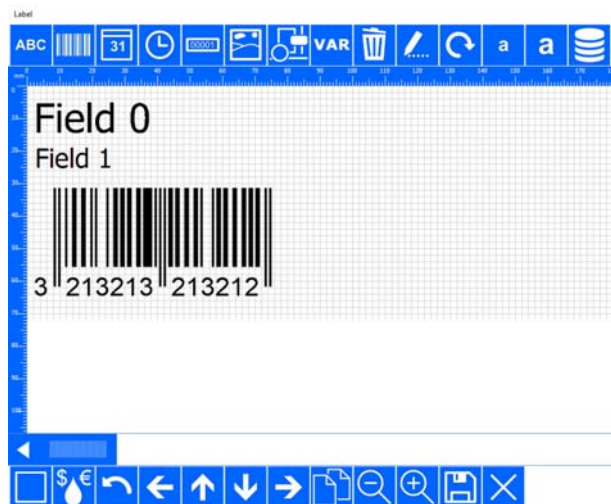


### Example

This example has two text fields and one barcode.

1. **Create** a label in the Editor.

- In this case, an example with two text fields and one barcode.

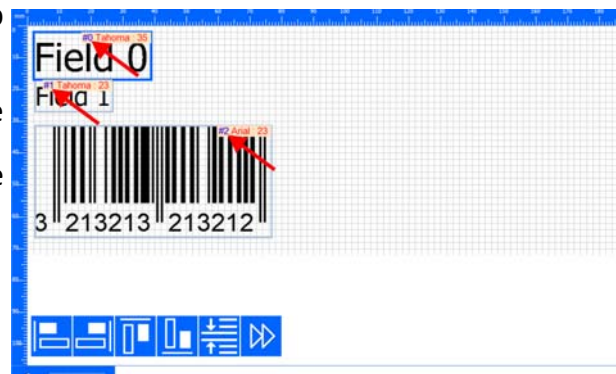


2. Press the PROPERTIES button.



3. Write down the field numbers shown in the top right corner for each label item.

- In this case, #0, #1 and #2.
- The field numbers in this example must match the product, weight and barcode.
- The following other variables can be used in the file:
  - Printer (Printer name in KCC, mandatory)
  - Head (A, B of AB, optional)
  - Label (label name in KCC, optional)
  - Speed (value in m/min, optional)
  - Delay (value in mm, optional)
  - Field # (field number in label template, optional)
- Only Printer is mandatory; all other fields are optional.



4. Create a text file with the following content:

Printer;Head;Label;Speed;Delay;Field0;Field1;Field2

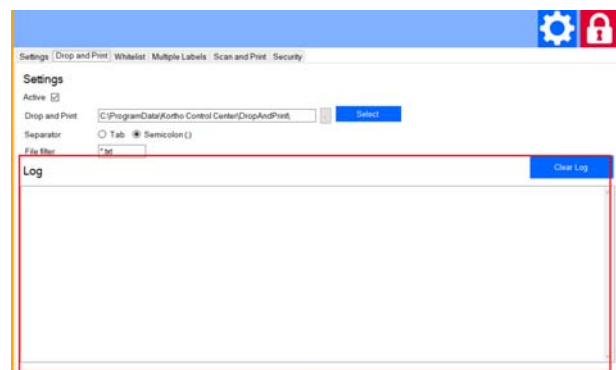
Lijn 1;A;label01.X72;12;180;Tagliatelle;450 gr.;5740700985706

5. Copy the file to the file location specified in the Drop and Print tab.

- The label is automatically selected and filled with the variable information from the text file.

6. Check the log for any mistakes in the text file.

- You can find the log in the Drop and Print tab.





- Check** the bottom of the status screen of the main menu to find out if the speed and delay have also been set.

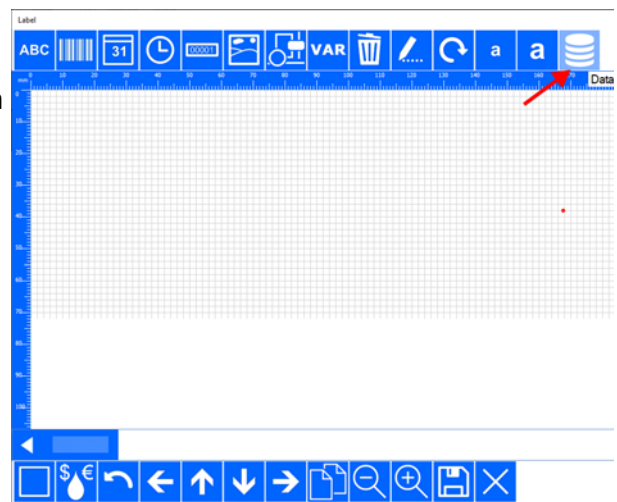


## 6.2.7 Printing database data

Printing data from database files is possible. File types which can be used are Microsoft Access and Microsoft Excel.

Proceed as follows to insert a database field:

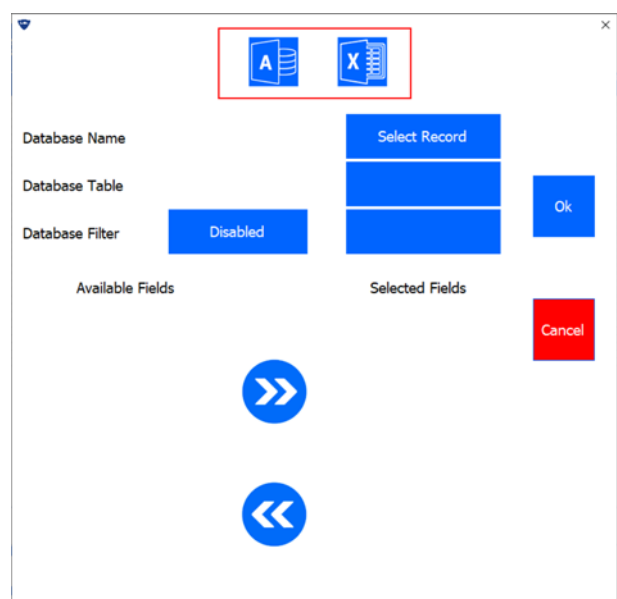
- Open** the EDITOR.
- Press** the DATABASE FIELD button.  
- This opens a sub-menu enabling you to insert a database field.



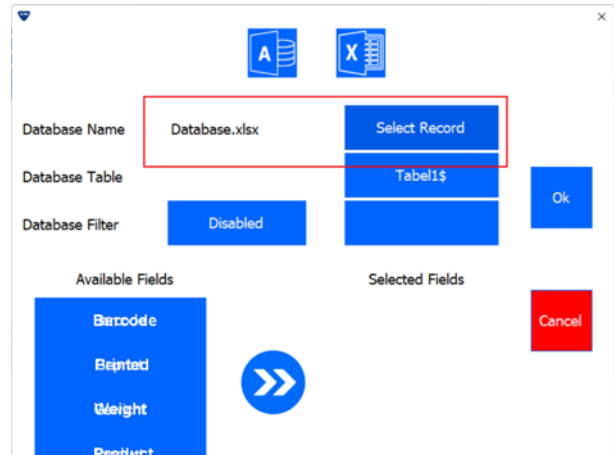
- Select** the file type by pressing ACCESS or EXCEL.
- Select** the relevant file.

Proceed to step 5 to select 1 record.

Proceed to step 8 to print all records once.

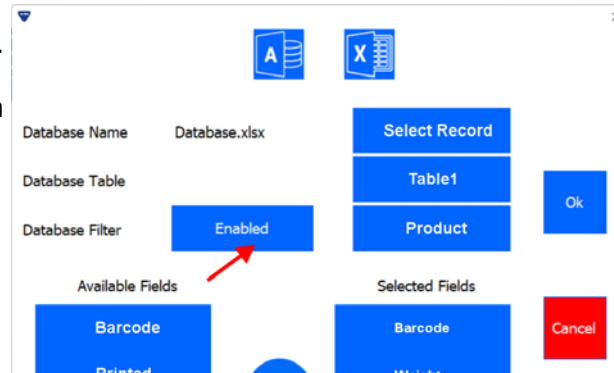


5. **Select** SELECT RECORD to select 1 record.



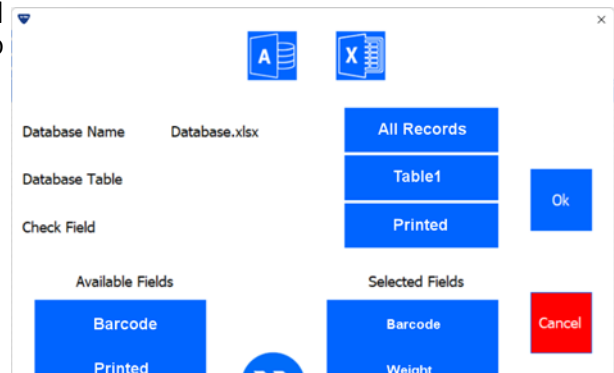
6. **Select** the ENABLED Database Filter.

- ENABLED to enter a value when starting to print. This is recommended in case of larger databases.
- DISABLED to see the entire database and select a record when the printer is started.

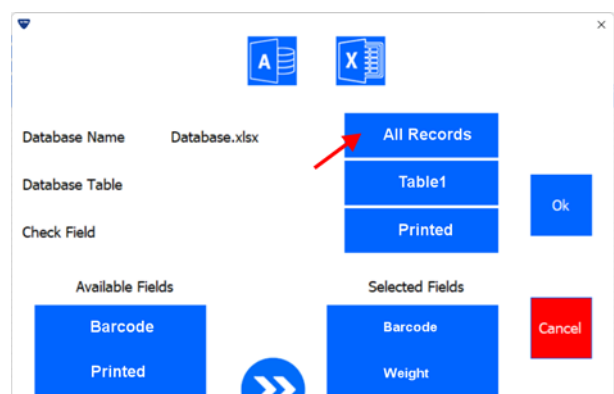


7. **Select** the required fields necessary in the label at AVAILABLE FIELDS and place them in SELECTED FIELDS.

- The data is now ready for printing.



8. **Select** ALL RECORDS to print all records once.

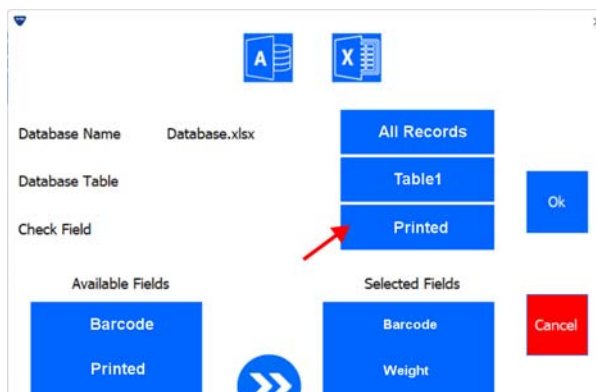


9. **Create** an extra field which can be used to record whether the record has already been printed.

- This is the “Printed” field in this example. Select this field for CHECK FIELD.

10. **Select** the required fields necessary in the label at AVAILABLE FIELDS and place them in SELECTED FIELDS.

- The data is now ready for printing.



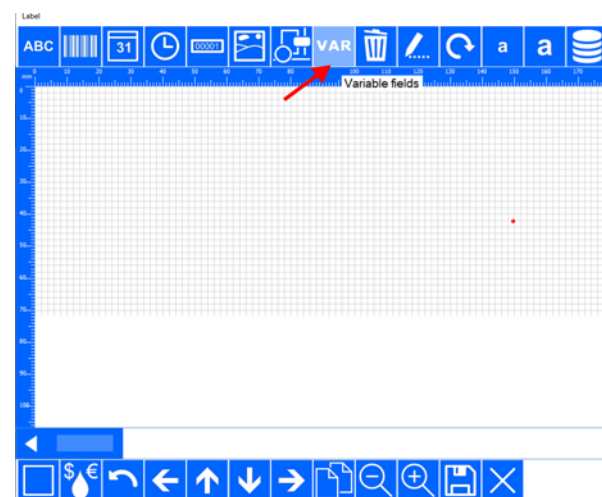
### 6.2.8 Defining database fields in the label

Proceed as follows to select a database field:

1. **Open** the EDITOR.

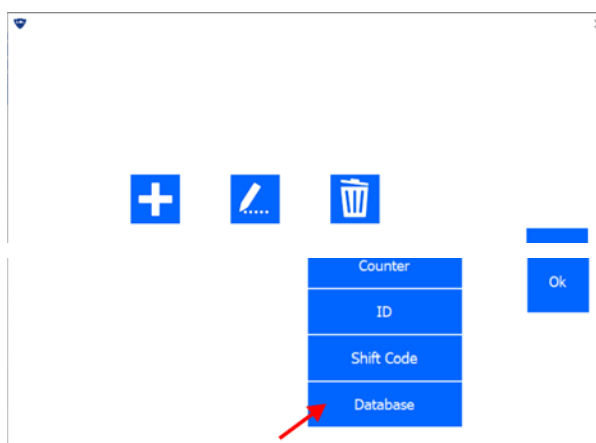
2. **Press** the VAR button.

- This opens a sub-menu enabling you to insert a variable.

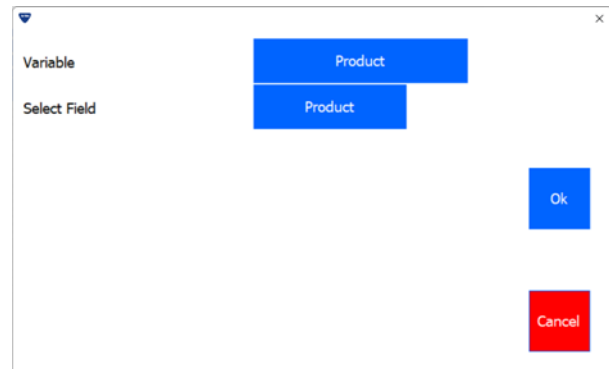


3. **Press** the + button to add a variable.

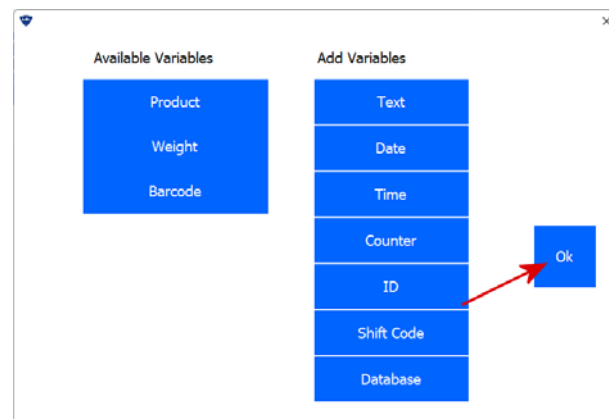
4. **Press** the DATABASE button to select a database field.



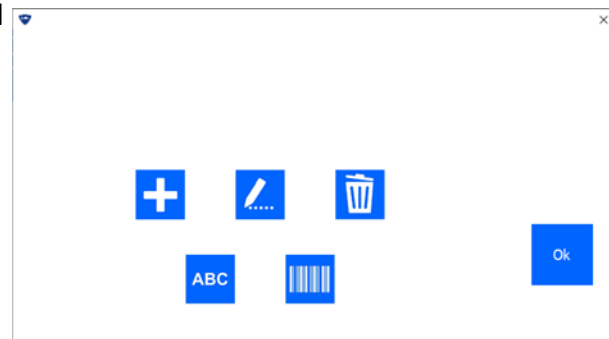
5. Enter the name of the variable.
6. Select the corresponding field.
7. Press OK.



8. Press OK when all fields have been defined.

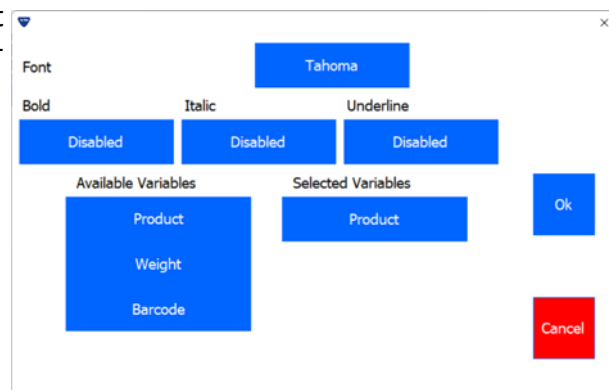


9. Press the ABC button to turn a database field into a text field.

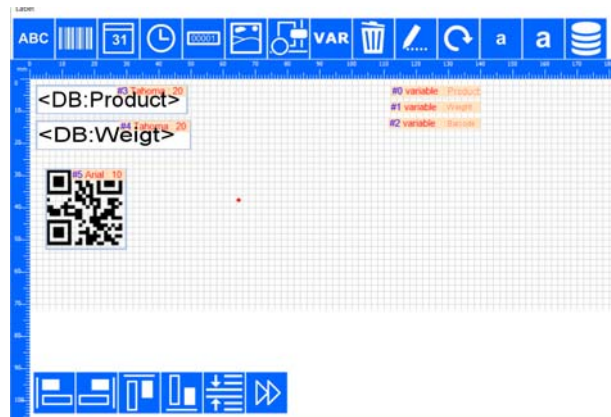


10. Select the required font properties and select the required field or fields in the AVAILABLE VARIABLES list.

11. Press OK.



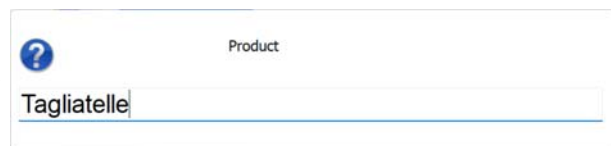
- 12. Save** the label under the name of your choice.
- The database fields are marked by <DB: field name>.



### 6.2.9 Selecting a database label

Proceed as follows to select a database field:

- 1. Select** the database label from the label library.
  - If SELECT RECORD and a filter have been applied in the database connection, you will be prompted to select the record.
- 2. Enter** the value required and confirm this by pressing ENTER.
- 3. Select** the relevant record.
- 4. Select** the PRINT button.



- If ALL RECORDS has been applied in the database connection, the settings in the printer must match the Computer.
  - The printer's network settings must be set to AUTOMATION ENABLED and the AUTOMATION IP ADDRESS should be the IP address of the computer on which Kortho Control Center is active.
- 5. Select** the database label from the label library.

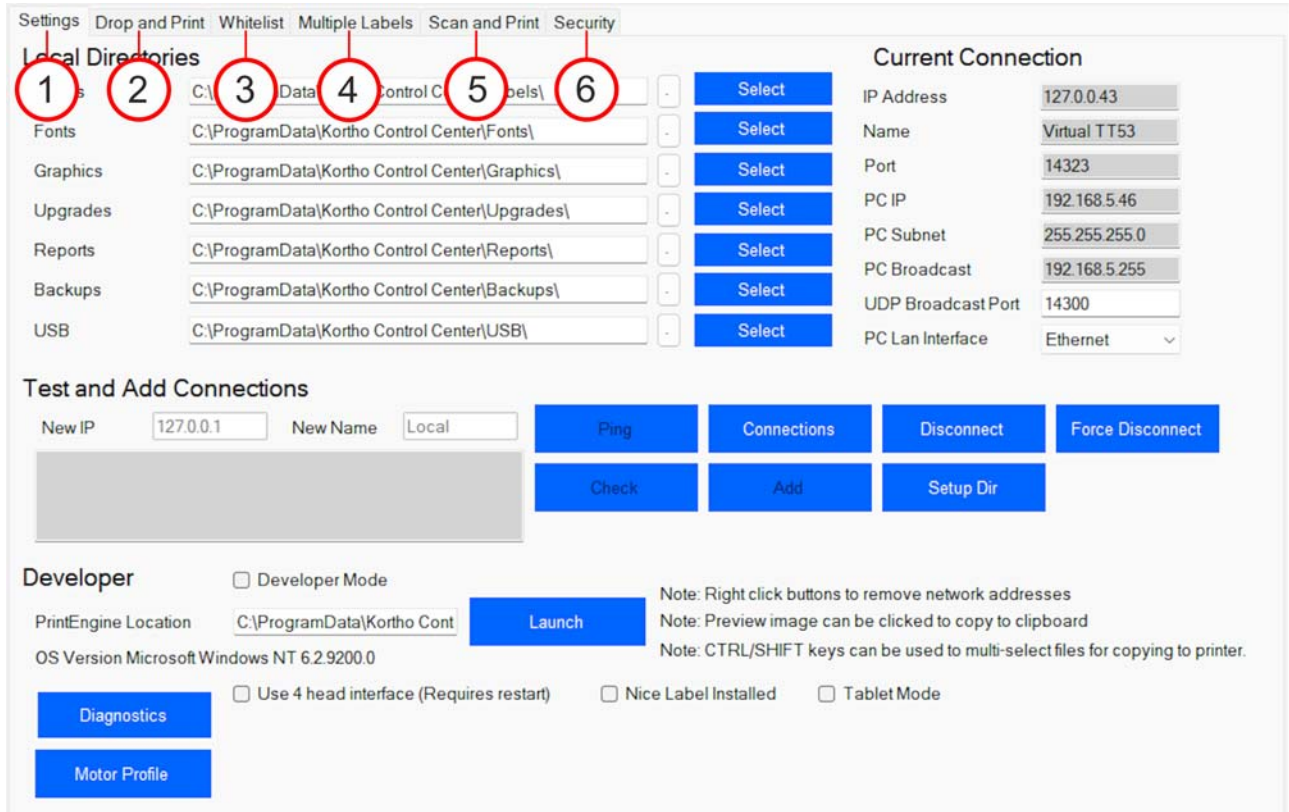


- A status screen appears showing the progress of the records to be printed.
- A record which has been printed is marked in the database and the next record which has not been marked is found.



## 6.3 Software settings

Pressing the SOFTWARE SETTINGS button opens the SOFTWARE SETTINGS menu. This menu consists of six tabs. The menu always opens in the SETTINGS tab.



The screenshot shows the 'Settings' tab of the software settings menu. The tabs are: Settings, Drop and Print, Whitelist, Multiple Labels, Scan and Print, and Security. The 'Settings' tab is active. It contains several sections:

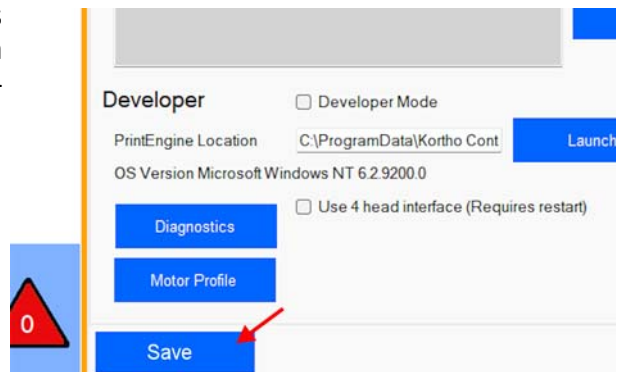
- Local Directories:** A list of directories with corresponding 'Select' buttons. The directories are: Fonts, Graphics, Upgrades, Reports, Backups, and USB. The paths are all under C:\ProgramData\Kortho Control Center\.
- Current Connection:** A section for network settings including IP Address (127.0.0.43), Name (Virtual TT53), Port (14323), PC IP (192.168.5.46), PC Subnet (255.255.255.0), PC Broadcast (192.168.5.255), UDP Broadcast Port (14300), and PC Lan Interface (Ethernet).
- Test and Add Connections:** A section with input fields for 'New IP' (127.0.0.1) and 'New Name' (Local), and buttons for 'Ping', 'Connections', 'Disconnect', 'Force Disconnect', 'Check', 'Add', and 'Setup Dir'.
- Developer:** A section with a 'Developer Mode' checkbox, 'PrintEngine Location' (C:\ProgramData\Kortho Cont), 'OS Version Microsoft Windows NT 6.2.9200.0', and buttons for 'Launch', 'Diagnostics', and 'Motor Profile'. There are also checkboxes for 'Use 4 head interface (Requires restart)', 'Nice Label Installed', and 'Tablet Mode'.

Numbered red circles highlight the following elements:

- Settings tab
- Drop and Print tab
- Whitelist tab
- Multiple Labels tab
- Scan and Print tab
- Security tab

Figure 6-1: Software settings tabs

Any settings which have been changed must always be saved. All software settings menu tabs have a SAVE button in their bottom left corner. The new settings are activated after saving.



This close-up shows the 'Developer' section of the software settings menu. It includes the 'Developer Mode' checkbox, 'PrintEngine Location' (C:\ProgramData\Kortho Cont), 'OS Version Microsoft Windows NT 6.2.9200.0', and buttons for 'Launch', 'Diagnostics', and 'Motor Profile'. There are also checkboxes for 'Use 4 head interface (Requires restart)', 'Nice Label Installed', and 'Tablet Mode'. A red arrow points to the 'Save' button in the bottom left corner of the Developer section.

This menu consists of the following six tabs:

No.	Description
1	Settings
2	Drop and Print
3	Whitelist
4	Multiple labels
5	Scan and Print
6	Security

The tabs are described in the following sections:



### 6.3.1 Settings

The Settings menu consists of the following fields:

The screenshot shows the 'Settings' window of the KCC software. It is divided into several tabs: 'Settings', 'Drop and Print', 'Whitelist', 'Multiple Labels', 'Scan and Print', and 'Security'. The 'Settings' tab is active. It contains four main sections, each highlighted with a red box and a numbered callout:

- 1. Local Directories:** A list of file types (Labels, Fonts, Graphics, Upgrades, Reports, Backups, USB) with their current paths and a 'Select' button for each.
- 2. Current Connection:** Network configuration fields including IP Address, Name, Port, PC IP, PC Subnet, PC Broadcast, UDP Broadcast Port, and PC Lan Interface.
- 3. Test and Add Connections:** Fields for New IP and New Name, and buttons for Ping, Connections, Disconnect, Force Disconnect, Check, Add, and Setup Dir.
- 4. Developer:** A section for software developers with checkboxes for Developer Mode, Use 4 head interface, Nice Label Installed, and Tablet Mode, along with buttons for Diagnostics and Motor Profile.

Figure 6-2: Settings

No.	Description
1	This field shows the file locations of the different file types which can be saved for the KCC software. <b>Press</b> SELECT to change a file location.
2	This field shows the IP addresses and network locations necessary for the KCC software.
3	This field contains test functionalities for testing and setting up the network.
4	This field contains test functions for software developers. Only BV Korthofah's software developers are allowed to apply these functionalities.



### 6.3.2 Drop and Print

If any data is printed from an ERP system, third-party software or custom programming is usually required in order to automate this process.

The ERP system should place a text file with variable data in a folder. Kortho Control Center takes this file, sends it to the correct printer together with the other parameters and fills the label template with the variables. See section 6.2.6.

The Drop and Print menu consists of the following fields:

Figure 6-3: Drop and Print

No.	Description
1	<b>Select</b> ACTIVE to activate Drop and Print.
2	<b>Press</b> SELECT to indicate the file location for the text files.
3	<b>Select</b> a SEPARATOR to apply the correct delimiter to the text file.
4	<b>Select</b> a FILE FILTER to apply an extension to the text file.
5	The Log enables text files to be checked for any errors. <b>Press</b> CLEAR LOG to empty the Log field.

### 6.3.3 Whitelist

If there are several printers in a network and only some specific printers should be shown for a computer or HMI, this can be configured in the Whitelist.

The Whitelist menu consists of the following fields:

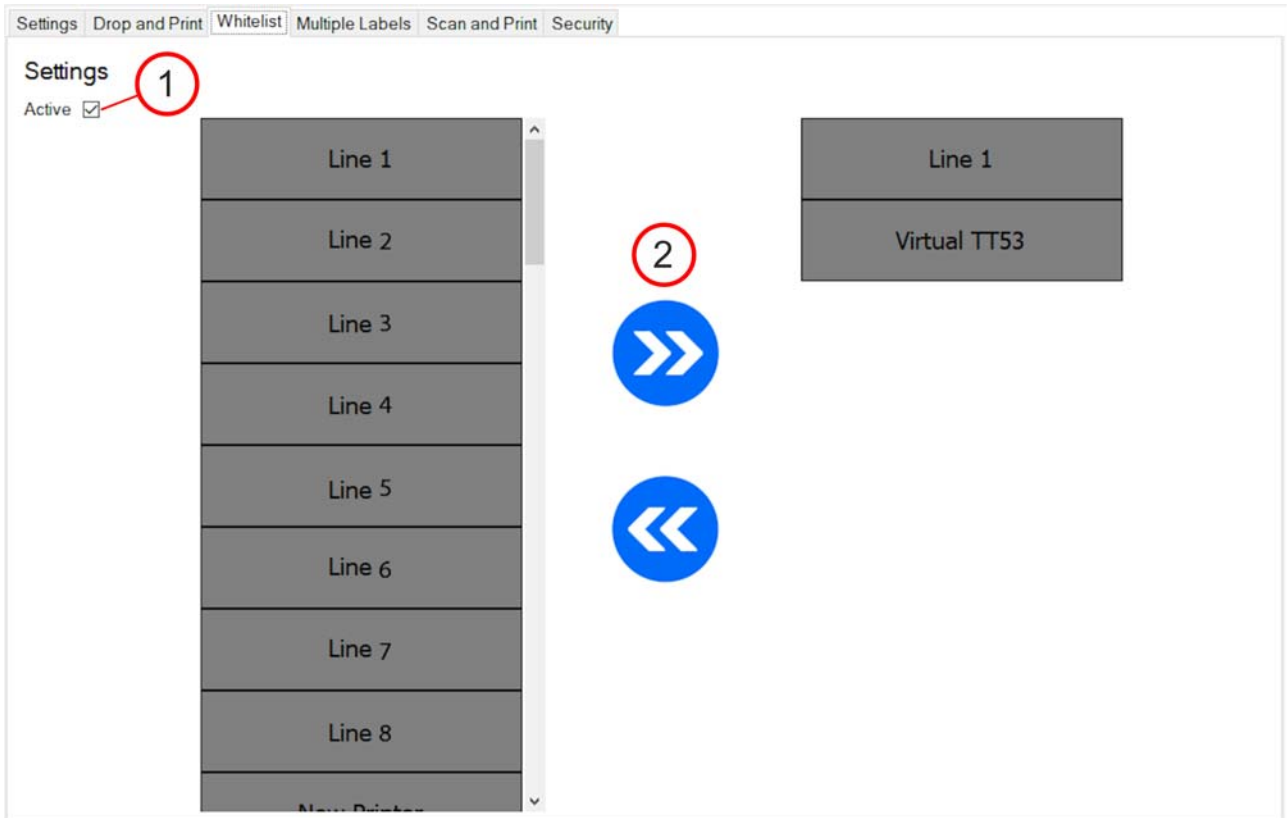


Figure 6-4: Whitelist

No.	Description
1	<b>Select</b> ACTIVE to activate WHITELIST.
2	<b>Press</b> the directional buttons to move printers from the list of all printers (list on the left) to the list of selected printers (list on the right).

### 6.3.4 Multiple labels

Multiple labels can be used to have different labels printed in a predefined sequence. This example uses two labels for a multiple label with three labels.

The Multiple labels menu consists of the following fields:

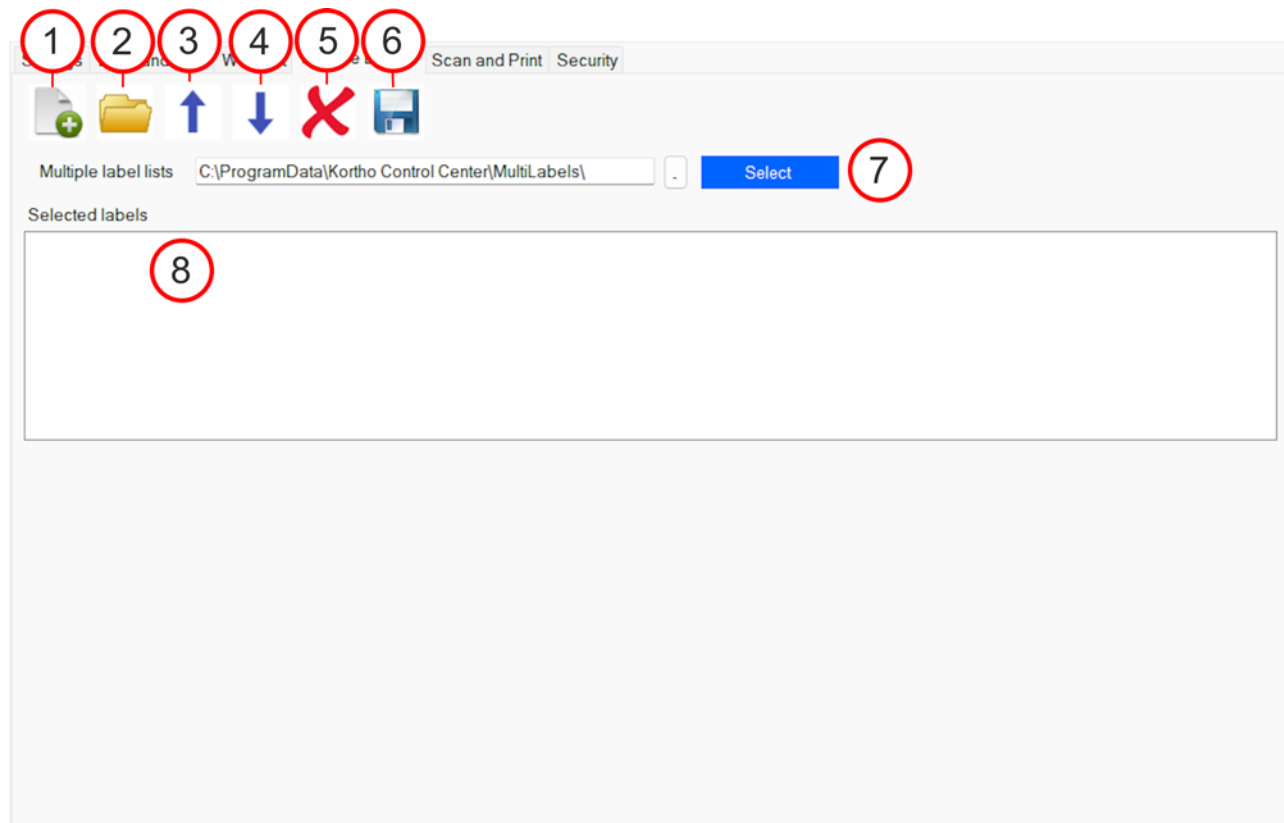


Figure 6-5: Multiple labels

No.	Description
1	<b>Press</b> this button to insert a new label in the list.
2	<b>Press</b> this button to insert a label in the list from the Explorer.
3	<b>Press</b> this button to move a label up in the list.
4	<b>Press</b> this button to move a label down in the list.
5	<b>Press</b> this button to delete a label from the list.
6	<b>Press</b> this button to save a label list of several labels.
7	<b>Press</b> SELECT to assign a file location to the list of labels.
8	View of the list of labels.

### 6.3.5 Scan and Print

Scan and Print enables labels to be selected by means of a barcode scanner. This barcode scanner must have a USB keyboard Wedge functionality. The scanner configuration must be such that the output contains STX as a prefix and ETX as a suffix. Consult the barcode scanner documentation for instructions on how to configure this. The barcode value must match the label name.

The Scan and Print menu consists of the following fields:

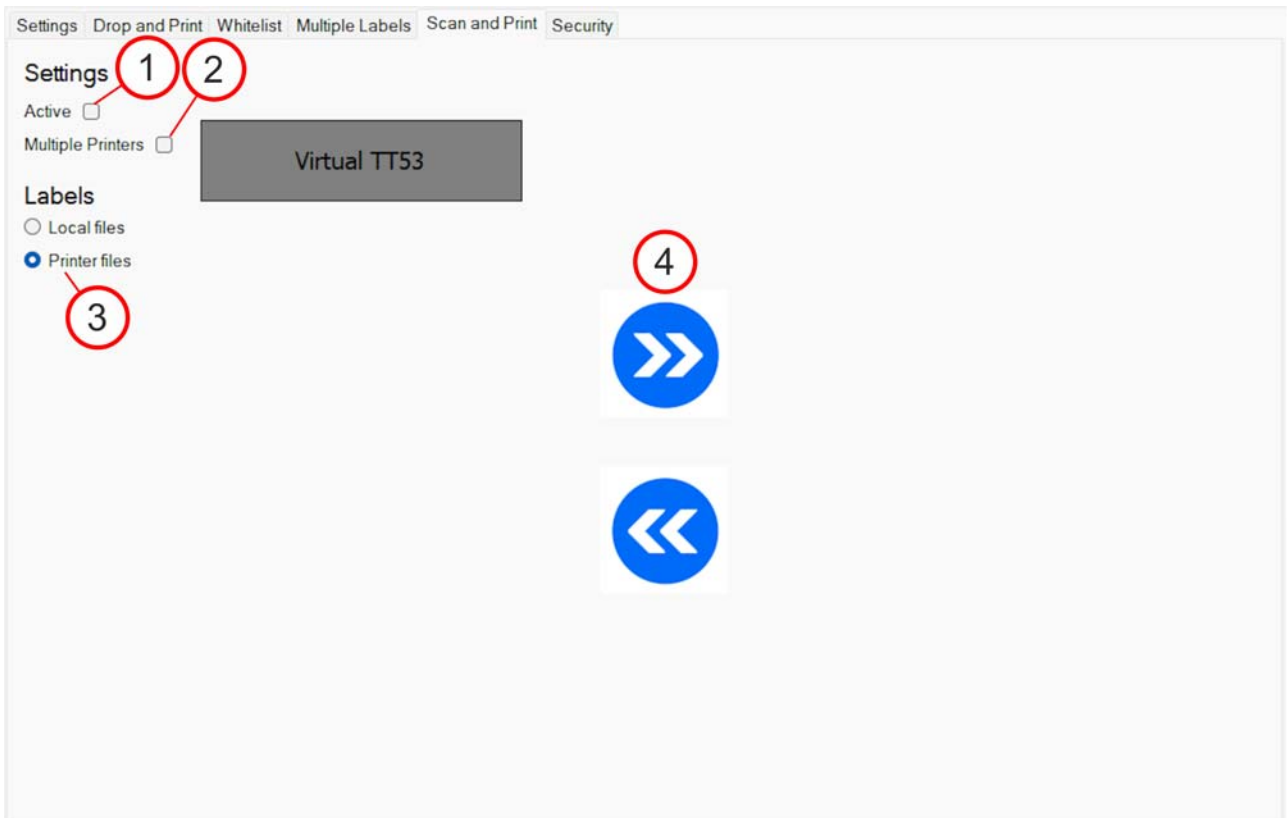


Figure 6-6: Scan and Print

No.	Description
1	<b>Select</b> ACTIVE to activate SCAN AND PRINT.
2	<b>Select</b> MULTIPLE PRINTERS to assign the Scan and Print function to multiple printers.
3	<b>Select</b> a file location for the scanned labels.
4	<b>Press</b> the directional buttons to move printers from the list of all printers (left-hand list) to the list of required printers (right-hand list) to which Scan and Print applies.

When the Scan and Print settings have been saved, a SCAN button is shown in the bottom right corner of the main screen.

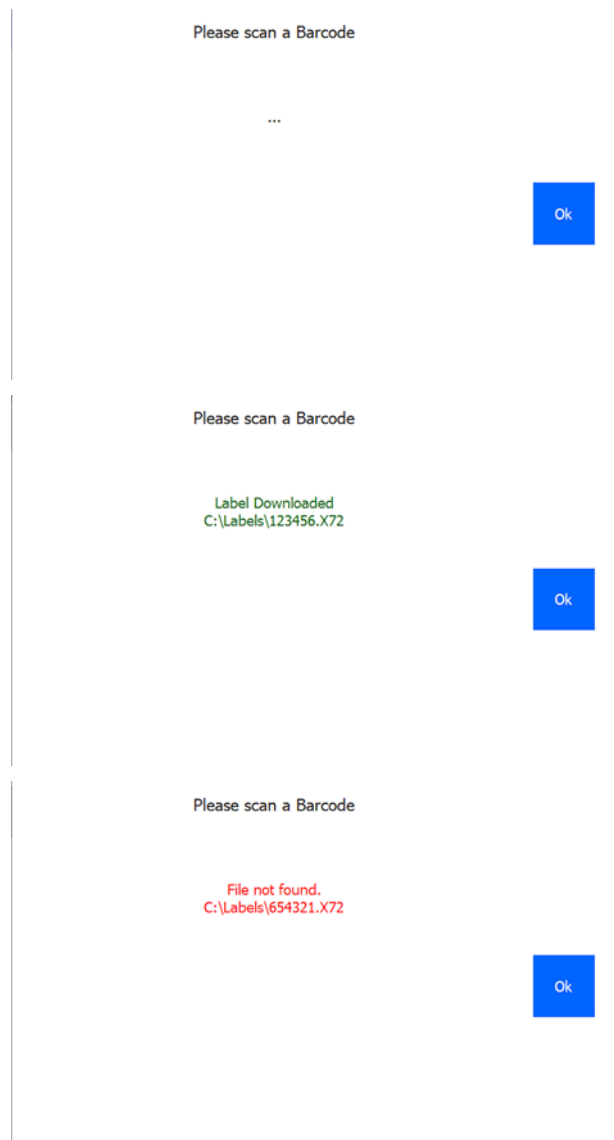
1. **Press** the SCAN button to start scanning a barcode.



2. Use the scanner to **scan** a barcode.

The scanned label is shown in the pop-up menu.

3. **Press** OK to confirm the scanned label.



A faulty scan will trigger an error message.

### 6.3.6 Security

---

The use of the Security function requires an Administrator password to be defined. This password is needed to set the security.

Different passwords can be set for five levels.

#### Level 1 - Select label only

---

This level only enables labels from the library to be selected for printing. Editing or creating labels, settings, service and info are not accessible.

#### Level 2 - Create / Edit labels.

---

This level enables labels to be selected from the library for printing and enables labels to be edited or created. Settings, service and info are not accessible.

#### Level 3 - Settings

---

This level enables labels to be selected from the library for printing and enables labels to be edited or created. Settings can be changed. Service and info are not accessible.

#### Level 4 - Service

---

This level enables labels to be selected from the library for printing and enables labels to be edited or created. Settings can be changed. The Service menu is accessible to enable that diagnostic functions to be performed. The Info menu is not accessible.

#### Level 5 - Info

---

This level enables labels to be selected from the library for printing and enables labels to be edited or created. Settings can be changed. The Service menu is accessible to enable that diagnostic functions to be performed. The Info menu is accessible, enabling the printer firmware to be updated.

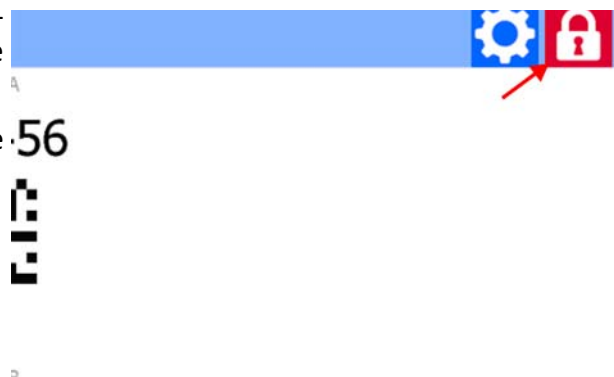
The Security menu consists of the following fields:

Figure 6-7: Security

No.	Description
1	<b>Press</b> SET to confirm a password.
2	<b>Select</b> a security level. Next, <b>press</b> SET to confirm the security level.
3	<b>Press</b> RESET SECURITY to reset the password settings.

The SCREEN SECURITY button turns red after a password level has been set, demonstrating that the software is protected.

1. **Press** the red SCREEN SECURITY button to unlock the screen.



2. **Enter** the password for the security level set.

3. **Press** ENTER to confirm the password.

The security level and the corresponding functions have been unlocked.





# 7 Malfunctions

*This chapter describes how to detect and remedy any faults.*

## 7.1 Safety regulations



**Troubleshooting must be done by qualified personnel.**

## 7.2 Finding faults

Proceed as follows to detect a fault:

1. **Check** the PRINTER STATUS TRIANGLES.
  - Grey = no connection.
  - Orange = warning.
  - Red = error message.
- The number in the triangle indicates the number of printers with the relevant status.



If there is a message for one of the three PRINTER STATUS TRIANGLES:

2. **Click** SERVICE AND DIAGNOSTICS.



### 3. Click DIAGNOSTICS.

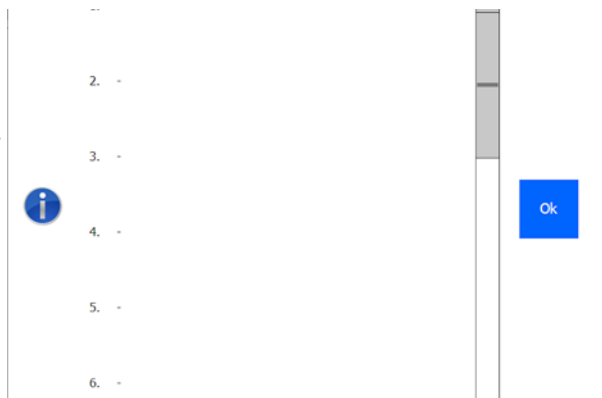


### 4. Click ERRORS.



A pop-up menu with a list of fault messages is opened.

- The fault message consists of an error message number and a description. The number of the error message can be found in appendix 2 'List of faults' where you can get instructions for solving the fault.



**See Appendix 2 for the list of fault messages. The number of the error message can be found here. The error number is accompanied by a description, explanation and solution.**

# A1 Software specifications

*This appendix contains the software specifications for the KCC software.*



# A2 List of malfunctions

*This appendix contains the List of faults for the KCC software.*



**'No.'** in the list below is the error message number shown on the printer display and in the error message list in the KCC software.

No.	Message	Printer type	Explanation	Solution
0	Initialising Ethernet.	BOTH	The Ethernet connection is being prepared.	
1	Flash programming error.	BOTH	Flash memory error.	
2	The printhead has not been set. Check jumper setting J10 on the PIB (control electronics).	INKJET	The type of printhead to be controlled by the control system is not indicated on the control PCB.	Set Jumper J10 on the PIB if necessary.
3	Incorrect firmware for the PIB has been detected in the coding part.	INKJET	An incorrect firmware version was installed on the control PCB of the inkjet printer.	Install the correct firmware version. Or: Contact your local distributor.
4	The label contains a font which has not been installed.	BOTH	The label design uses a font which has not been installed on the computer.	Install the missing font on the computer.
5	SREC file problem (PIB in coding part).	INKJET		
6	Folder already exists or cannot be created.	BOTH	There is a folder with the same name. The folder cannot be created at all. This may be due to: The use of invalid characters, insufficient memory or the folder name being too long. Or:	1. Check that the name of the folder which is being created is new and is not in use for another folder. 2. Check that the correct characters are used and check the available memory or the folder name length.
7	The maximum storage capacity of 112Kb has been reached.	BOTH	The label which has been created exceeds the maximum allowed memory space of 112kb.	Assess whether the data, such as graphics, in the label design can be compressed.

No.	Message	Printer type	Explanation	Solution
8	The printer has received an incomplete message.	BOTH	Data was lost when sending data to the printer. This prevents the operation from being continued.	1. Try again. If the problem persists: 2. Check the label design for any errors. 3. Contact your local distributor.
9	The CRC check of the message is incorrect.	BOTH	An incorrect checksum value is returned.	Contact your local distributor.
10	The security code is old.	BOTH	It has been too long since you last entered a new code. This is required for safety reasons.	Create a new code.
11	There is a problem with the flash memory.	BOTH	The flash card used in the system may have become corrupted.	1. Place a new flash card. 2. Contact your local distributor.
12	There is a problem with the ribbon encoder.	THERMO	The ribbon encoder does not measure the number of pulses expected by the printer.	1. Check the encoder ribbon for any damage or dirt. 2. Check the functioning of the ribbon encoder.
13	An unknown command has been received.	BOTH	The printer has received a command which is not recognised.	Check the command. Or: Upgrade the firmware.
14	Minimum value is...	BOTH	The value entered is too low. The minimum value is...	Enter a correct minimum value.
15	Maximum value is...	BOTH	The value entered is too high. The maximum value is...	Enter a correct maximum value.
16	Missing value.	BOTH		
17	Maximum number of digits for...	BOTH	The maximum number of digits you can enter has been exceeded.	Enter a value with fewer digits.
18	Maximum number of characters for...	BOTH	The maximum number of characters you can enter has been exceeded.	Enter a name with fewer characters.
19	Invalid date.	BOTH	The date range entered is not recognised.	Enter a valid date range. Or: Upgrade the firmware.
20	Invalid time.	BOTH	The time entered is not recognised.	Enter a valid time. Or: Upgrade the firmware.
21	Incorrect name or variable missing.	BOTH	An incorrect name has been entered.	Enter a valid name which is recognised by the system.

No.	Message	Printer type	Explanation	Solution
22	The printhead cover was closed after a time out.	INKJET	The printhead cover was closed after the time out period.	
23	Maximum number of users.	BOTH	The maximum number of users that can be entered has been exceeded.	
24	Access is denied.	BOTH	You do not have the necessary permissions to access and/or edit this folder with values.	Have the permissions adjusted.
25	An unknown error has occurred.	THERMO	An unknown error has occurred.	1. Switch off the printer for at least 10 seconds. If the unknown error persists after rebooting the system: 2. Contact your local distributor.
26	A problem has occurred while generating the label.	BOTH	A problem has occurred while generating the label.	Try again. Or: Contact your local distributor.
27.	An incorrect coding part is connected.	BOTH	The coding part connected is not recognised by the computer.	1. Connect a correct coding part. 2. Upgrade the computer firmware. 3. Contact your local distributor.
28	Font error.	BOTH	The font used is not recognised.	Install the missing font on the computer.
29	There is a problem with the font.	BOTH	The font used is not recognised.	1. Check Windows to make sure that the font is correct. 2. Check that the correct font has been loaded into the control box.
30	The printhead carriage does not return to its home position.	THERMO	The printhead carriage does not return to the same home position.	The system may be measuring an incorrect encoder value. 1. Check the encoder strip for any damage or dirt. 2. Check the 'eye' which reads the strip. Continue as follows: 3. Check the system for any mechanical obstructions. 4. Check the air pressure (4 bar).

No.	Message	Printer type	Explanation	Solution
31	There is a problem with the ribbon transport.	THERMO	The film is not transported in the cassette or it is not transported correctly. This can be due to the following causes:	
			- The film has run out.	Place new film. See the graphic in the cassette for the correct film run.
			- The film is broken.	1. Remove the broken film. 2. Thread the film from the unwinding roller through the cassette again. See the graphic in the cassette for the correct film run.
			- The film was mounted incorrectly on the cassette.	Thread the film from the unwinding roller through the cassette again. See the graphic in the cassette for the correct film run.
			- The yellow or blue encoder roller is dirty.	Clean the roller in question using alcohol or surface cleaner.
			- The encoder roller spring is no longer in place on the underside of the encoder roller.	Install the encoder roller spring on the underside.
			- The unwinding shaft does not spring back into position.	1. Turn the shaft through approx. 45 degrees in a clockwise direction. 2. Release the spring. If the shaft does not spring back: 3. Replace the spring.
32	A time out has occurred for the print position.	THERMO		
33	A print was skipped.	THERMO	A print signal was received while printing a label. Since the printer had started printing, the new print could not be made and has been skipped.	1. Adjust the print delay time. The print speed is higher than the speed the printer can handle: 2. Lower the production speed.



No.	Message	Printer type	Explanation	Solution
34	The label is too small or the font is missing.	THERMO	The label size should be at least 3 mm.	1. Check that the label is 3 mm or is greater than 3 mm. 2. Check that the font used is actually in the list of fonts.
35	A time out has occurred for the print encoder.	THERMO		
36	The ribbon encoder was not connected correctly. Swap the wires.	THERMO		Contact your local distributor.
37	The printhead carriage encoder was not connected correctly.	THERMO		Contact your local distributor.
38	The first user must be of the manager type.	BOTH		
39	The user list is empty.	BOTH	No user list has been created on the system.	
40	Password protection is off.	BOTH	The system does not have any password protection.	
41	The cassette is missing or has not been placed correctly.	THERMO	The switch does not detect any cassette.	Press the cassette into the printer and move the lever to the left. Or: Replace the cassette switch.
42	Incorrect FPGA.	BOTH	An attempt is being made to load an incorrect FPGA version. The software might not be suitable for the type of printer.	Contact your local distributor.
43	The wire tension is too high.			
44	The printer is in pause mode.	BOTH	Pause mode will have to be switched off to start the printing process.	Press the round (red / green) button.
45	An unknown coding part has been connected.	BOTH	The system does not recognise the coding part which has been connected.	1. Check the coding part and the connections. 2. Upgrade the firmware. 3. Contact your local distributor.
46	A thermal coding part has been detected although the system is set up as an inkjet printer.	THERMO		1. Connect the correct coding part. 2. Set the control box. 3. Contact your local distributor.

No.	Message	Printer type	Explanation	Solution
47	No coding part has been detected.	BOTH	No coding part has been detected	Connect a coding part. Or: Check the connection.
48	The total size of the multiple label is too large.	THERMO	The total length of the multiple label is too long.	Reduce the label size.
49	The maximum number of labels has been reached.	THERMO	The maximum number of labels that you can store has been reached.	Delete a label before adding a new one.
50	The printhead cover does not open.	THERMO		
51	The ink level is low.	INKJET	The ink level is low. This can progressively lower the print contrast or density.	Top up ink.
52	The end of the ribbon has almost been reached.	THERMO	The ribbon on the cassette has almost run out.	Wait for the end of the ribbon to be reached and place a new reel. Or: Place new ribbon right away.
53	Printhead carriage encoder error.	THERMO	The encoder pulses read by the system are not as expected.	1. Check the air pressure. 2. Check the encoder mounting.
54	No label has been loaded for printing.	BOTH	No label has been loaded for printing.	Load a label.
55	No pulses are detected.	INKJET	The external encoder has been selected, but no pulses are detected.	Print a test print using the internal encoder.
56	The print head cover has been open too long.	INKJET		
57	The ink reservoir is empty.	INKJET	The ink reservoir is empty.	Fill the ink reservoir.
58	The print head cover does not close.	INKJET		
59	Unused error message.			
60	The print preview is too large.	BOTH	The print preview is too large. The preview cannot be displayed.	
61	The production line speed is too low.	THERMO	The speed should be at least 40 mm/s (2.4 m/min).	Increase the speed of the production line.
62	The production line speed is too high.	THERMO	The maximum speed allowed is {1} mm/s ({2} m/min).	Decrease the speed of the production line.

No.	Message	Printer type	Explanation	Solution
63	Printhead temperature.	THERMO	The printhead temperature is too high.	Reduce preheating.
64	The printhead ink temperature is too low.	INKJET	The temperature of the ink in the print head is too low.	Contact your local distributor.
65	A print has been missed.	BOTH	A print signal was received while printing a label. Since the printer had started printing, the new print could not be made and has been skipped. This may be because the printer delay time is too long or the production speed is too high.	Shorten the print delay time. Or: Lower the production speed.
66	The printhead encoder has generated a time out.	BOTH	The print signal was given but the printhead encoder is not running. The system has been waiting for pulses from the encoder for some time and has now generated a time out.	
67	The speed is too low.	BOTH	The product speed is too low.	Increase the product speed.
68	The speed is too high.	BOTH	The production speed is too high.	Reduce the product speed.
69	The IP address is invalid.	BOTH	The IP address entered is invalid.	Fill in the correct IP address.
70	The function can only be carried out in pause mode.	BOTH	The function selected can only be carried out in pause mode.	Switch the system to pause mode.
71	The PX2 OS version is wrong.	THERMO	The PX2 OS version installed on the system is incorrect.	Contact your local distributor.
72	Some text is outside the printable area of the label.	THERMO	Some text of the label that has been created is outside the printable area of the label. Any text outside the printable area will not be printed. All text within the printable area will be printed.	Correct the label in the Label creator.

No.	Message	Printer type	Explanation	Solution
73	A graphic is outside the printable area of the label.	THERMO	Some graphics on the label that has been created are outside the printable area of the label. The graphics outside the printable area will not be printed. All text within the printable area will be printed.	Correct the label in the Label creator.
74	An error occurred during start-up. The label has been deleted.	THERMO	An error occurred during start-up. The label that was created has been corrupted. The system has deleted the label.	Find the label in the backup.
75	Unused error message.			
76	The values of the variables are loaded from the backup.	BOTH	The backup has been loaded and the variables on the system have been overwritten by the values from the backup.	
77	The ON time value is loaded from the backup.	BOTH	The value which indicates for how long the system has been ON is loaded from the backup.	
78	The voltage settings are loaded from the backup.	BOTH	Voltage settings are loaded from the backup.	
79	The model setting is loaded from the backup.	BOTH	Model setting is loaded from the backup.	
80	Restoring the value from the EEPROM backup was not successful.	BOTH	Restoring the value from the EEPROM backup was not successful.	1. Restart the system. Or: 2. Contact your local distributor.
81	Reset the counters.	BOTH	The counters are reset.	
82	The label was created for a different printer type.	BOTH	The label which has been created cannot be used by the connected coding part.	1. Adjust the label to the printer type. Or: 2. Move the label to another printer type.
83	The total length of the label including the Y-offset is too long. The Y-offset has been reset to 0.	THERMO	A Y-offset has been set. Since the combination of this offset and the label length makes it impossible to print the full label, the Y-offset has been reset to zero.	Adjust the Y-offset.

No.	Message	Printer type	Explanation	Solution
84	Printing has stopped. The print quantity set has been reached.	BOTH	A maximum print quantity has been set. Since the system has reached this value, any new print requests will not be carried out.	Set the print quantity again.
85	The barcode contains incorrect characters or code page.	BOTH	The barcode contains incorrect characters or an incorrect code page.	Use the correct characters belonging to the barcode in question
86	The barcode contains an incorrect number of characters.	BOTH	The barcode contains an incorrect number of characters.	Use the correct number of characters belonging to the barcode in question
87	The barcode has an incorrect check digit or the data format is wrong.	BOTH	The barcode has an incorrect check digit or the data format is wrong.	Correct the check digit. Or: Adjust the data format.
88	There is a barcode problem. See the log file for further details.	BOTH	There is a problem with the bar code.	View the log file. This may contain the answer to the problem. If you cannot find the solution: Or: Send the log files to your local distributor so that they may help you.
89	There is a problem with the RAM.	BOTH	There is a problem with the RAM (random access memory).	Contact your local distributor.
90	The file system could not be initialised.	BOTH	The file system could not be initialised.	Contact your local distributor.
91	Ethernet initialisation was not successful.	BOTH	Ethernet initialisation was not successful.	Contact your local distributor.
92	The printhead did not respond.	BOTH	There is no communication between the electronics.	Contact your local distributor.
93	The printhead cannot update.	INKJET	There is a problem updating the printhead.	1. Try again. 2. Use the correct firmware. 3. Contact your local distributor.
94	The label cannot download to the printhead.	BOTH	There is no communication between the electronics.	Contact your local distributor.
95	The font cannot be downloaded.			

No.	Message	Printer type	Explanation	Solution
96	The file was not found.	THERMO	This error occurs if a BCD code in the list does not occur in a BCD label name. This means that the label is missing or an incorrect name is used. The code has been saved to the print list. The pop-up also shows the BCD code which caused the error. If more than one BCD code is found, only the first BCD code will be displayed. This message does not stop the process. This means that the next BCD code on the list will be dealt with by the system. Any new BCD codes sent by the host will also be received and saved to the print list.	
97	Unused error message.			
98	The label surface area is too large (the height or length is wrong).		The surface area of the label you have designed is too large for the printer selected.	<ol style="list-style-type: none"> <li>1. Check that the label was created for the correct printer.</li> <li>2. Check that the height or length entered does not exceed the maximum print-head area.</li> </ol>
99	The printhead has restarted.	INKJET	The printhead has restarted.	
100	The file cannot be downloaded.		An unknown cause prevents the file from being downloaded.	Try again.
101	The label does not contain any data that can be printed.	BOTH	<p>The label you created does not contain any printable data or does not contain any data at all.</p> <ol style="list-style-type: none"> <li>1. It is possible that an attempt is being made to save a label which does not contain any data.</li> </ol> <p>Or:</p> <ol style="list-style-type: none"> <li>2. The data applied is not compatible with the system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Select another label, with data.</li> <li>2. Adjust the label with data which is compatible with the system.</li> </ol>

No.	Message	Printer type	Explanation	Solution
102	A problem has been found concerning the RS232 communication to the printhead.	BOTH	There is a problem with the RS232 connection to the printhead.	Check the cables for any mistakes or damage.
103	The BCD label list is empty.	INKJET	If no BCD codes have been saved to the print list and the Tsc20 is still receiving print requests, this error message will show. The recommended setting is to change the Error.	<ol style="list-style-type: none"> <li>1. Open Settings. The general error output is activated.</li> <li>2. Open Signal.</li> <li>3. Activate the BCD empty error action.</li> </ol>
104	The BCD label list is full.	INKJET	The maximum size of the list in the Tsc20 is 50 BCD codes. This should be sufficient for any application which uses the BCD label selection. If a 51st BCD code is sent to the printer list, this 51st BCD code will be ignored.	Delete any unnecessary BCD codes.
105	BCD active; cannot load the label.	INKJET	If BCD mode has been activated, the operator is not allowed to select labels. If the operator still attempts to do this, this error message will show.	Deactivate BCD mode in order to select another label.
106	The BCD label list is empty.	INKJET	The print list has not saved any BCD codes and the control unit is still receiving print requests.	<p>- A message from the Tsc20 control unit will be displayed. The system will continue to use the BCD codes, but please be aware that synchronisation will be lost now. This means that the labels are no longer printed on the correct products.</p> <p>If this happens while a production process is ongoing:</p> <ol style="list-style-type: none"> <li>1. Check the communication to the printer control unit which was initiated on the host side. The BCD is generated here.</li> <li>2. Open the Settings menu.</li> <li>3. Open the Signal menu.</li> <li>4. Set the "BCD-Empty error action" function to its warning position.</li> </ol>

No.	Message	Printer type	Explanation	Solution
107	Exit BCD mode.	INKJET	The current operation cannot be performed because the system is set to BCD mode.	1. Switch off BCD mode. 2. Select a label to continue printing.
108	The automation connection failed.	BOTH	Automation cannot connect.	1. Check that the correct connection details have been entered in KCC. 2. Check that the Ethernet cable is connected.
109	The motherboard DIP switch has been set.	INKJET	The motherboard DIP switch has been set. Your old settings have now been overwritten by the factory settings.	1. Check the backup to make sure that your own settings have been saved. 2. Set the printer again, using your own settings.
110	The Ethernet connection was broken.	BOTH	There is no Ethernet connection now.	1. Check that the correct connection details have been entered in KCC. 2. Check that the Ethernet cable is connected.
111	The USB serial port could not be detected.	BOTH	The connected USB device is not recognised.	1. Restart the control box. 2. Check that the USB device works properly. 3. Check the connection of the USB cable in the control box.
112	The ink data is not correct for the connected printhead.	INKJET	The ink data specified does not match the connected printhead.	1. Connect the proper printhead. 2. Enter the correct ink data. 3. Update the firmware.
113	The printhead temperature is too high (piezo drivers).	THERMO	The printhead temperature is too high. The overheating may be due to the printhead being damaged or reaching the end of its life cycle. This results in poor prints.	1. Replace the printhead. If present: 2. Deactivate the pre-heater in the control box. 3. Lower the print speed. 4. Contact your local distributor.