



# BBP<sup>®</sup>72-PLUS

LABEL PRINTER

Configuration Manual

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Important information and instructions in this documentation are designated as follows:



**Danger!**

Draws attention to an exceptionally great, imminent danger to your health or life due to hazardous voltages.



**Danger!**

Draws attention to a danger with high risk which, if not avoided, may result in death or serious injury.



**Warning!**

Draws attention to a danger with medium risk which, if not avoided, may result in death or serious injury.



**Caution!**

Draws attention to a danger with low risk which, if not avoided, may result in minor or moderate injury.



**Attention!**

Draws attention to potential risks of property damage or loss of quality.



**Note!**

Advices to make work routine easier or on important steps to be carried out.



**Environment!**

Gives you tips on protecting the environment.



Handling instruction



Reference to section, position, illustration number or document.



Option (accessories, peripheral equipment, special fittings).

*Time*

Information in the display.

Choose from the following options for connecting a computer to the label printer:

- Direct connection to the Ethernet interface (6) ▷ "2.5" on page 7.
- Connection via a computer network to the Ethernet interface (6) ▷ "2.5" on page 7.
- Connection to the full-speed USB device interface (5) ▷ "2.3" on page 7.
- Connection to the RS-232 interface ▷ "2.4" on page 7.

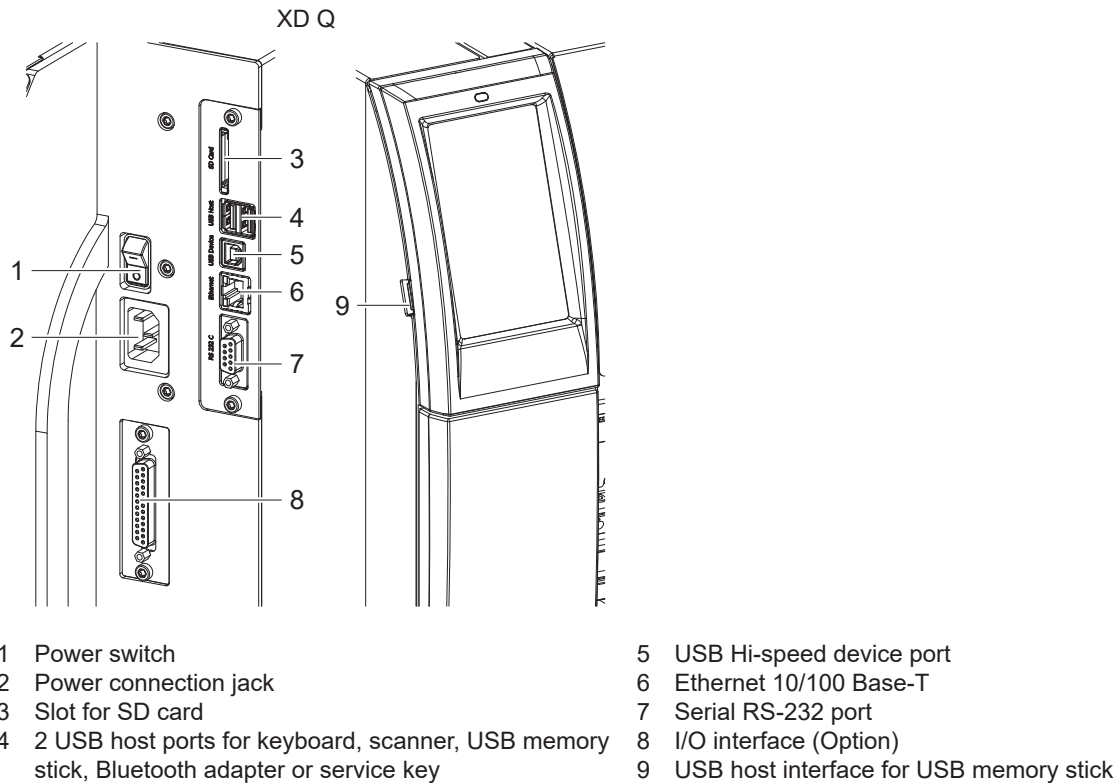


Figure 1 Connections

## 2.1 Print Services Raw-IP and LPR/LPD in MS Windows

- ▶ Install a standard TCP/IP port as additional port for printing.
- ▶ During installation of the new port choose between "Raw" and "LPR"
- ▶ Raw-IP: Enter the same port address in the printer which you have selected during installation.



### Notice!

In the delivery status the print services RawIP (Port 9100) and LPD are activated on the printer ▷ page 19.

## 2.2 Adjusting Windows Printer Setting

If you are using Brady Workstation software, you do not need to install the windows driver.

If you are using older Brady software or third-party software, you must install the Windows driver.

2.5 Connecting Label Printer via Ethernet Interface

To connect the label printer to a network jack, a patch cable with an RJ45 plug for 10 Base T or 100 Base T is required.



Attention!

▶ Use a shielded cable to connect the printer to the network.

- ▶ Connect computer and label printer with a suitable cable.
- ▶ Make the settings for operation of the Ethernet interface ▷ 6.1.6 on page 18.
- ▶ Set up print service if necessary ▷ 2.1 on page 6.
- ▶ Adjust Windows printer setting ▷ 2.2 on page 6.



Attention!

▶ Do not change the settings of the "IP" and "Gateway" on the printer web interface, as otherwise the connection to the printer may be lost.

2.3 Connecting Label Printer via USB Interface

The full-speed USB interface allows the label printer to be operated via a USB interface of a computer running one of the 32bit or 64bit operating systems:

- Windows Vista
- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

A printer driver must be installed if a USB interface will be used for connection. The printer driver for your unit is found on the "Installer DVD" which is included in the scope of delivery or on the internet.

1. Switch label printer off..
2. Connect computer and label printer with an A-B cable.
3. Switch computer on.
4. Place the "Installer DVD" in the DVD drive.
5. Exit all programs currently running.
6. Switch printer on.  
The Windows Installation Wizard is started automatically.
7. Follow the on-screen instructions. After successful installation, an icon for the label printer appears in the Windows "Printer" system folder.
8. Click icon in "Printer" system folder and make printer settings if necessary.

2.4 Connecting Label Printer via RS-232 interface

Pin	Designation	Function
1	CD	Carrier Detect
2	TxD	Transmit Data
3	RxD	Receive Data
4	DTR	Data Terminal Ready (not used)
5	GND	Ground
6	DSR	Data Set Ready (not used)
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indication (not used)

Table 1 Pin assignment of the RS-232 interface

- ▶ Connect the 9-pin socket to the matching port of the computer.  
For the most computers a 9pin serial SUB-D cable with 1:1 wiring can be used.
- ▶ Install the Windows Printer Driver from the DVD included in the delivery contents of the printer.
- ▶ Configure the interface parameters of the interface matching to the settings of the computer. ▷ page 19.

### 3.1 Structure of the Menu

The menu contains setting options on several levels for configuring the label printer. In addition, the menu features test and diagnostic functions for supporting the configuration or checking the function of the label printer.






























1st Selection Level	2nd Selection Level	3rd Selection Level	
 <i>Info</i>			
 <i>Storage</i>			
 <i>Setup</i>	 <i>Printing</i>		
	 <i>Labels</i>		
	 <i>Ribbon</i>		
	 <i>Tearing-off</i>		
	 <i>Cutting</i>		
	 <i>Peeling-off</i>		
	 <i>Labelling</i>		
	 <i>RFID</i>		
	 <i>Interfaces</i>	 <i>Ethernet</i>	
		 <i>Wi-Fi</i>	
		 <i>Network services</i>	
		 <i>RS-232</i>	
		 <i>I/O</i>	
	 <i>Errors</i>		
	 <i>Region</i>		
	 <i>Time</i>		
	 <i>Display</i>		
	 <i>Interpreter</i>		
	 <i>ZPL</i>		
	 <i>Test</i>		
 <i>Security</i>			
 <i>Diagnostics</i>			
 <i>Extras</i>			
 <i>Help</i>			
 <i>Service</i>			

Table 2 Structure of the menu



### 3.2 Navigating in the Menu

The orientation of the display contents is adapted to the orientation of the display in the typical operation position of the printer.

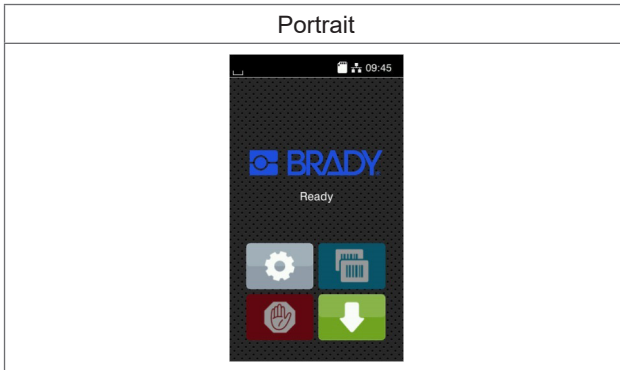


Figure 2 Orientation of the display contents

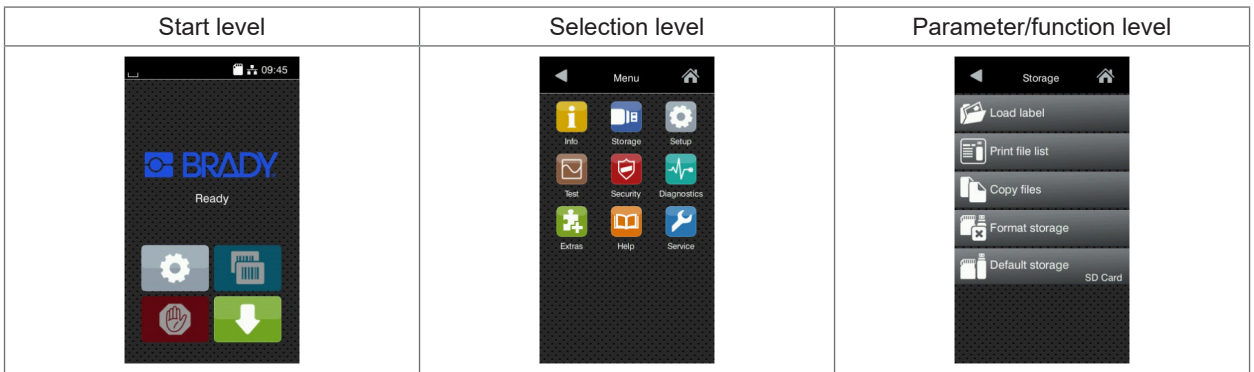





Figure 3 Menu levels

- ▶ To open the menu select  on the start screen.
- ▶ Select a theme in the selection level.  
Several themes have substructures again with selection levels.  
To return from the current level to the upper one select . To leave the menu select .
- ▶ Continue the selection until the parameter/function level is reached.

- ▶ Start a function. In some instances a dialogue box may open before carrying out the function.
- or - Select a parameter to set. The setup possibilities are depending from the parameter type.

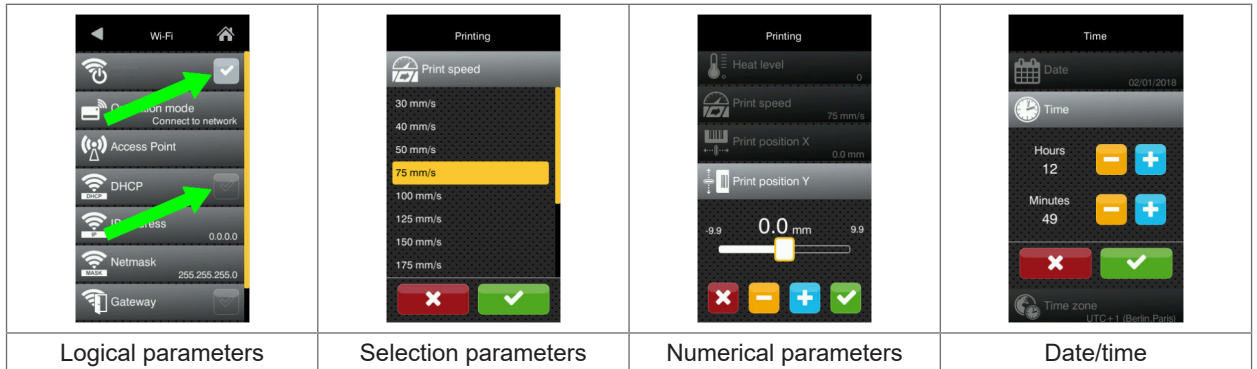


Figure 4 Samples for parameter setting








	Scroll bar for rough value setting
	Decreasing the value step-by-step
	Increasing the value step-by-step
	Return without saving the setting
	Return with saving the setting
	Parameter is disabled, touching enables the parameter
	Parameter is enabled, touching disables the parameter

Figure 5 Buttons for parameter setting

The  *Info* function provides an overview of important status information on the display of the printer.

- ▶ Start menu.
- ▶ Select *Info*.
- ▶ Return with *Close*.

The following parameters are displayed:

Line	Meaning	Example
1	Printer type Version number and creation date of the firmware	<b>BBP-72 Plus</b> <i>Firmware V5.13</i> <i>July, 2023</i>
2	IPv4 address of the printer when connected to a network via Ethernet MAC address of the network adapter on the PCB CPU	<b>Ethernet</b> <i>IPv4 10.20.2.42</i> <i>MAC 00:02:e7:05:cb:bf</i>
3	Zeroconf host name	<b>mDNS</b> <i>cab-05cbbf.local</i>
4	Operative time and number of printed labels	<b>Hours/no. of labels</b> <i>150h/1208</i>
5	Previously printed paper lengths with thermal direct printing / thermal transfer printing	<b>Thermal/Transfer</b> <i>29.04m/32.52m</i>
6	Resolution, number of dots and revision of the printhead	<b>Printhead</b> <i>300dpi, 1248dots</i> <i>Rev. 2.1.0</i>
7	Results of the label sensor calibration	<b>Label sensor</b> <i>Brightness 13-38</i>
8	Serial number of the PCB CPU, Revision of PCB CPU and the FPGA	<b>Board</b> <i>S/N 164162036456</i> <i>PCB Rev. 0</i> <i>FPGA Rev. 13</i>

Table 3 *Info* display

In the  Security menu the access rights for several printer function can be set.

- ▶ Start menu.
- ▶ Select Security.















Parameter	Meaning	Default
 PIN protection	Activation of a four-digit PIN to protect certain parameters and functions accessible by the control panel. <i>Setup:</i> Protection of the submenu <i>Setup</i> <i>Menu:</i> Protection of the whole menu	Off
 Password ftpprint	* Access only when <i>Interfaces &gt; Network services &gt; FTP = "On"</i> Password for FTP printing ▶ Login as ftpprint	print
 Password ftpcard	* Access only when <i>Interfaces &gt; Network services &gt; FTP = "On"</i> Password for FTP access to storage devices (USB stick, SD card, IFFS) ▶ Login as ftpcard	card
 Password ftpadmin	* Access only when <i>Interfaces &gt; Network services &gt; FTP = "On"</i> Password for FTP firmware update ▶ Login as ftpadmin	admin
 Password website	* Access only when <i>Interfaces &gt; Network services &gt; Website = "On"</i> Password for Parameter setting via web interface ▶ Login as admin	admin
 Security web service	* Access only when <i>Interfaces &gt; Network services &gt; Web service = "On"</i> Authentication type for the SOAP protocol	Digest
 Password web service	* Access only when <i>Interfaces &gt; Network services &gt; Web service = "On"</i> Password for the SOAP protocol	soap
 Password VNC	* Access only when <i>Interfaces &gt; Network services &gt; VNC server = "On"</i> Password for the VNC server	vnc
 Password OPC UA	Password for networking via OPC UA	opcpass
 Anonymous OPC UA	Access authorization level via OPC UA without password	Read permission
 TLS/SSL	Provides communications security to access the printer via https or ftps. The printer automatically generates a certificate, which is not signed by a third-party certificate authority. When accessing the printer a security message may appear.	Off
 TLS certificate	Allows to load a certificate in PEM format signed by a third-party certificate authority to provide communications security. The certificate must be stored before in the folder "misc" of an external memory device to be installed on the printer.	Serial no. of the certificate
 Block ext. storage	Blocks the access to installed SD cards and USB memories	Off
 Block USB ports	Blocks the access to USB host ports	None

Table 4 Parameters of the Security menu

## 6.1 Configuration via Control Panel

A host of parameters for configuring the printer are found in the *Setup* menu.

- ▶ Configure the printer via the control panel during initial commissioning and when making major changes to the operational conditions.
- ▶ For changes required for processing different print jobs use software settings.








### Notice!

The *Setup* menu can be protected from unauthorized access via a code number (PIN).

### 6.1.1 Printing

- ▶ Start menu.
- ▶ Select *Setup > Printing*.

Parameter	Meaning	Default
 <i>Heat level</i>	<p>Heating value for compensating for the differing thermal behavior of printheads. Changing this value is then especially necessary if the printing intensity has changed after replacing the printhead.</p> <ul style="list-style-type: none"> <li>▶ To adapt the printing intensity when using different media, print speeds or printing contents, you should change the heat level in the software.</li> </ul> <p>The settings of configuration and software are added together. The <i>Heat level</i> setting also affects the test printouts.</p>	0
<i>Heat level upper head</i>	Heating value for the upper printhead	0
<i>Heat level lower head</i>	Heating value for the lower printhead	0
 <i>Print speed</i>	<p>Basic print speed setting.</p> <p>The print speed can be re-specified for each print job via software. The basic setting is not changed by this.</p> <p>The print speed setting also affects the test printouts.</p>	50 mm/s
 <i>Print position X</i>	<p>Shifting of the entire print image perpendicular to the direction of paper flow.</p> <p>The absolute shifting is limited by the margins of the print zone. Those are determined by the width of the printing line on the printhead.</p> <p>The setting can also be adjusted by the software.</p> <p>The settings of configuration and software are added together.</p> <p>Affects both printheads at XD Q.</p>	0.0 mm
 <i>Print position Y</i>	<p>Shifting of the entire print image in the direction of paper flow. With positive values, printing begins later in the direction of paper flow.</p> <p>Shifting of the print image in the direction of paper flow also influences the peel and cut positions.</p> <ul style="list-style-type: none"> <li>▶ Correct the <i>Peel position</i> and <i>Cut position</i> parameters by the same value in the opposite direction.</li> </ul> <p>The setting can also be adjusted by the software.</p> <p>The settings of configuration and software are added together.</p> <p>Affects both printheads at XD Q.</p>	0.0 mm
 <i>Offset upper-lower head</i>	<p>Shifting of the entire print image of the upper printhead in the direction of paper flow. With positive values, printing begins later in the direction of paper flow.</p> <p>The setting can also be adjusted by the software.</p> <p>The settings of configuration and software are added together.</p>	0.0 mm












Parameter	Meaning	Default
 <i>Double print optim.</i>	<p>Minimization of material loss between the print job.</p> <p>With the parameter activated a print job will not be carried out immediately till the end. The printer pauses the material feed in a position where the following job can be printed without blank labels between the jobs and waits for the data for the next job.</p> <p>After receipt of the new data the current job will be completed automatically and the new job will be started without blank labels.</p> <p>If no more data are expected, the current job can be completed with <i>Finalize print job</i>.</p>	<i>Off</i>
 <i>Disable lower head</i>	<p>Switching off the lower printhead.</p> <p>With the parameter activated the printer can be operated like an one-side printer.</p>	<i>Off</i>
 <i>Print on demand</i>	<p>Peel-off mode : Behavior after removing a label from the peel position</p> <p><i>On:</i> The next label will be printed and peeled-off after touching </p> <p><i>Off:</i> The next label will be printed and peeled-off immediately</p> <hr/> <p>Cut mode : Behavior between the cuts</p> <p><i>On:</i> After cutting the next label will be printed and cut after touching </p> <p><i>Off:</i> All labels will be printed and cut nonstop</p>	<i>Off</i>
 <i>Reprint</i>	<p>Printing of another label with the information of the previous print job by touching .</p> <p>This function can be executed until the print buffer is cleared with .</p> <p><i>Re-render:</i> Adaption of counter values, variable data can be newly put in.</p> <p><i>Duplicate:</i> New label is identical with the last label of the print job.</p> <p><i>Off:</i> No reprint</p>	<i>Re-render</i>
 <i>Single label buffer</i>	The next label will be processed only when the current one has finished printing.	<i>Off</i>
 <i>Length scale</i>	Eliminate deviations of the print length from the length set in the programming	<i>0,0%</i>
 <i>Slippage correction</i>	To correct the slippage of the media transport the positioning of the print image will be re-adjusted to the position of the last detected label front edge considering the programmed label distance.	<i>Off</i>

Table 5 Parameters of the *Setup > Printing* menu

6.1.2  Labels

- ▶ Start menu.
- ▶ Select *Setup > Labels*.






Parameter	Meaning	Default
 <i>Label sensor</i>	Method for detecting the starting end of the label. <i>Gap Sensor</i> : Detection using changes in the transparency between the label and label gap. <i>Bottom-Reflect</i> : Detection using reflex marks on the bottom of the medium. <i>Continuous media</i> : Checking the existence of media only.	<i>Gap sensor</i>
 <i>Calibrate label sensor</i>	To adapt the printer electronics to the label sensor and	
 <i>Extrapolate labels</i>	The positions of the labels which are between the label sensor and the printhead are calculated from the first label recognized by the sensor and the programmed label distance. That way those labels can be printed although the printhead previously was open.	<i>Off</i>
 <i>Ignore paper end</i>	Suppression of wrong <i>Out of paper</i> error messages when using labels with transparent liner.	<i>Off</i>
 <i>Pause on warning</i>	The print job will be interrupted when the "labels low" message appears	<i>Off</i>

Table 6 Parameters of the *Setup > Labels* menu **Calibrate label sensor**

- ▶ Start menu.
- ▶ Select *Setup > Labels > Calibrate label sensor*.  
The display shows *Step 1/2 Remove labels*.
- ▶ Remove labels and select *Continue*.  
After a few seconds the display shows *Step 2/2 Insert liner*.
- ▶ Insert the liner without labels and select *Continue*.  
After a few seconds the message *Sensor successfully calibrated* appears.  
The display shows the characteristic values of the sensors e.g. *Brightness 12-28*.
- ▶ Select *Continue* to quit the function.

### 6.1.3 Ribbon

- ▶ Start menu.
- ▶ Select *Setup > Ribbon*.





Parameter	Meaning	Default
 <i>Transfer print</i>	<p><i>On</i>: Sensor for monitoring the transfer ribbon is activated.</p> <p><i>Off</i>: Sensor for monitoring the transfer ribbon is not activated.</p> <p>The setting can be overwritten for each print job via software. The basic setting is not changed by this.</p>	<i>On</i>
 <i>Warn level ribbon</i>	Threshold diameter (32–74 mm) of the ribbon supply roll, if the value is undershot the "ribbon low" message will be activated	<i>Off</i>
 <i>Pause on warning</i>	The print job will be interrupted when the "ribbon low" message appears	<i>Off</i>
 <i>Monitor ink side</i>	<p>Setting of the ribbon unwinding direction</p> <p>The print job will be interrupted when the wrong ribbon winding direction has been detected. The error message "Ribbon ink side" appears.</p>	<i>Off</i>
<i>Monitor upper ink side</i>	Setting of the ribbon unwinding direction for the upper print unit	<i>Off</i>
<i>Monitor lower ink side</i>	Setting of the ribbon unwinding direction for the lower print unit	<i>Off</i>

Table 7 Parameters of the *Setup > Ribbon* menu



### 6.1.4 Tearing-off

- ▶ Start menu.
- ▶ Select *Setup > Tearing-off*.



Parameter	Meaning	Default
 <i>Tear-off mode</i>	Positioning the label medium for tearing off at the tear-off plate. <i>On</i> : Additional advancement of the label medium which positions the label gap after the last printed label at the dispense plate. <i>Off</i> : Label advance stops once the last label has fully passed the print line.	<i>On</i>
 <i>Tear-off position</i>	Shifting of the tear-off position in the direction of paper flow. With positive values, the label strip is transported farther out of the printer.	<i>0.0 mm</i>

Table 8 Parameters of the *Setup > Tearing-off* menu

### 6.1.5 Cutting

\* **Only with cutter installed!**

- ▶ Start menu.
- ▶ Select *Setup > Cutting*.



**Note!**

The content of the menu is depending on the cutter type installed.

### 6.1.6 Interfaces

- ▶ Start menu.
- ▶ Select *Setup > Interfaces*.

#### Ethernet










Parameter	Meaning	Default
 <i>Hostname</i>	Unique identification of the printer in a network in a human readable format Example: cab-05cbbf	<i>generated of OEM name and the last six digits of the MAC address</i>
 <i>IEEE 802.1X</i>	Selection of the authentication mechanism to devices wishing to attach to a LAN. Supported mechanisms: <ul style="list-style-type: none"> <li>• <i>Protected EAP (PEAP)</i>: MSCHAP v2, GTC, MD5</li> <li>• <i>Tunneled TLS (TTLS)</i>: PAP, CHAP, MSCHAP, MSCHAPv2</li> <li>• <i>TLS</i></li> </ul>	<i>Off</i>
 <i>DHCP</i>	Method of issuing IP address <i>On</i> : Dynamic issuing of IP address by the DHCP server <i>Off</i> : Direct issuing of the IP address by the operator	<i>On</i>
 > <i>IP address</i>	IP address of the label printer. Only valid with <i>DHCP = Off</i> .	-
 > <i>Netmask</i>	Subnet mask (classification and address range) of the local network. Only valid with <i>DHCP = Off</i> .	-
 > <i>Gateway</i>	Connection address between the local network and other networks.	<i>Off</i>
 >> <i>Gateway address</i>	The IP address of the computer (router) on the network through which the connection can be established is used for this. The address of the router can also be issued via DHCP.	-
 > <i>DNS server</i>	Setting the IP address of a DNS server manually The DNS server resolves the internet addresses to IP addresses e.g. to select network services such as NTP per domain name.	-
 > <i>Search domains</i>	Necessary to resolve the printer via complete domain name. Example: Hostname <i>cab-05cbbf</i> Search domain <i>cab.de</i> Printer accessible via <i>cab-05cbbf.cab.de</i>	-

Table 9 Parameters of the *Setup > Interfaces > Ethernet* menu

 Network Services














Parameter	Meaning	Default
 <i>FTP</i>	Activation of the File Transfer Protocol	<i>On</i>
 > <i>FTP Port</i>	Setting the FTP address	21
 <i>LPD</i>	Activation of the network printing service LPD	<i>On</i>
 <i>RawIP</i>	Activation of the network printing service RawIP and selection of the port address	<i>On</i>
 > <i>RawIP Port</i>	Selection of the port address for RawIP	9100
 > <i>RawIP Timeout</i>	Setting the timeout for the interruption of unused connections	<i>Default</i>
 <i>Website</i>	Activation of the Hypertext Transfer Protocol for the access to the internal printer website	<i>On</i>
 <i>Web service</i>	Activation of the Simple Object Access Protocol	<i>Off</i>
 <i>SNMP</i>	Data exchange between printer and management station via Simple Network Management Protocol	<i>Off</i>
 > <i>SNMP community</i>	Keyword to assign the SNMP rights	<i>public</i>
 <i>VNC server</i>	Activation of the VNC server for remote access to the control panel	<i>Off</i>
 <i>Zeroconf</i>	Activation of the auto-configuring Zeroconf method for adhoc networks	<i>On</i>
 <i>OPC UA</i>	Activation of the protocol OPC UA for multi-vendor machine to machine communication	<i>Off</i>

Table 10 Parameters of the *Setup > Interfaces > Network services* menu

 RS-232



Parameter	Meaning	Default
 <i>Baud rate</i>	Speed (in Baud) of data transfer	115.200
 <i>Handshake</i>	Data transfer protocol	<i>RTS/CTS</i>

Table 11 Parameters of the *Setup > Interfaces > RS-232* menu



**Note!**

The following parameters cannot be changed: **Data bits: 8, Stop bits: 1, Parity: None**

 I/O

\*

**Access only with I/O interface installed!**



**Note!**

The content of the menu is depending on the installed interface and described in the documentation of the interface.

### 6.1.7 Errors

- ▶ Start menu.
- ▶ Select *Setup > Errors*.





Parameter	Meaning	Default
 <i>Error-Reprint</i>	<i>On</i> : With a correctable error and corresponding troubleshooting, the label being printed when the error occurs is repeated. If an error occurs in the mode <i>Backfeed=smart</i> after the first label part has been printed, the label cannot be repeated. <i>Off</i> : Print job is continued with the next label.	<i>On</i>
 <i>Syntax error</i>	Printer switches to error mode after receipt of an incorrect command.	<i>On</i>
 <i>Barcode error</i>	<i>On</i> : With faulty barcode contents or size specifications, printing is interrupted. <i>Off</i> : Printing is not interrupted if an error occurs. If barcode contents are faulty, the printer attempts to replace the incorrect data with valid characters (e.g. zeros). If barcode size specifications are faulty, a gray area is printed instead of the barcode.	<i>On</i>
 <i>Network error</i>	Printer switches to error mode when problems with the network connection occur.	<i>Off</i>

Table 12 Parameters of the *Setup > Errors* menu

### 6.1.8 Region

- ▶ Start menu.
- ▶ Select *Setup > Region*.





Parameter	Meaning	Default
 <i>Language</i>	Setting the display language	<i>English</i>
 <i>Country</i>	Setting the country-specific date and time formats. The time formats can also be overwritten via software. The changes are not saved permanently, however.	<i>Germany</i>
 <i>Keyboard</i>	Setting of the keyboard layout when using an external keyboard or the soft keyboard on the printer display.	<i>Automatic (=Country)</i>

Table 13 Parameters of the *Setup > Region* menu

### 6.1.9 Time

- ▶ Start menu.
- ▶ Select *Setup > Time*.

Parameter	Meaning	Default
 <i>Date</i>	Setting of the system date in the format DD.MM.YYYY. The print output of the date occurs in the format set via the <i>Country</i> parameter. The date can also be changed via software. The change is not saved permanently, however.	-






Parameter	Meaning	Default
 <i>Time</i>	Setting the system time in the HH:MM:SS format. When changing the time, ensure that the <i>Timezone</i> , <i>Daylight saving</i> and <i>Date</i> parameters are set correctly.  The time can also be synchronized automatically via the internet using the Ethernet interface. The print output of the time occurs in the format set via the <i>Country</i> parameter.  The time can also be changed via software. The change is not saved permanently, however.	-
 <i>Time zone</i>	Adaptation of the time display of the printer to the time zone in relation to UTC (Universal Time Coordinated).	UTC+1
 <i>Daylight saving</i>	Selection of the daylight saving regulation applicable for the region. The time is then changed automatically.	EU
 <i>Time synchronisation</i>	Activation of a service to synchronize date and time of the printer.	NTP
 > <i>Time server</i>	* for <i>Time synchronisation</i> ≠ Off Address of the time server	

Table 14 Parameters of the *Setup > Time* menu

### 6.1.10 Display

- ▶ Start menu.
- ▶ Select *Setup > Display*.










Parameter	Meaning	Default
 <i>Orientation</i>	Adaptation of the display contents to the display orientation.	0°
 <i>Brightness</i>	Brightness of the LCD display.	8
 <i>Time powersave</i>	Time between the last operation and activation of energy-saving mode.	5 min
 <i>Peripheral button</i>	Activation/Deactivation of the start button	On
 <i>Reprint button</i>	Activation/Deactivation of the reprint button	On
 <i>Pause button</i>	Activation/Deactivation of the pause button	On
 <i>Cancel button</i>	Activation/Deactivation of the cancel button	On
 <i>Feed button</i>	Activation/Deactivation of the feed button	On
 <i>Extended view</i>	Activation allows a transient access to the menu item <i>Service &gt; Printer model</i> without service key e.g. after replacement of the CPU.  After the activation of the <i>Extended view</i> the menu item <i>Service &gt; Printer model</i> can be reached by navigation inside the menu.  When leaving the menu the parameter will be deactivated automatically.	Off

Table 15 Parameters of the *Setup > Display* menu

6.1.11  Interpreter

- ▶ Start menu.
- ▶ Select *Setup > Interpreter*.







Parameter	Meaning	Default
 <i>Character set</i>	Selection of the character set table for adaptation to the computer system used. Switching the character set via software is not possible. Characters not available in the selected character set can be accessed using the Unicode table.	<i>UTF-8</i>
 <i>USB</i>	Choosing between the programming languages JScript and ZPL for data transfer via USB interface	<i>JScript</i>
 <i>RS-232</i>	Choosing between the programming languages JScript and ZPL for data transfer via RS-232 interface	<i>JScript</i>
 <i>FTP</i>	Choosing between the programming languages JScript and ZPL for data transfer via FTP	<i>JScript</i>
 <i>LPD</i>	Choosing between the programming languages JScript and ZPL for printing with LPD	<i>JScript</i>
 <i>RawIP</i>	Choosing between the programming languages JScript and ZPL for printing with RawIP	<i>JScript</i>

Table 16 Parameters of the *Setup > Interpreter* menu6.1.12  ZPL

- ▶ Start menu.
- ▶ Select *Setup > ZPL*.





Parameter	Meaning	Default
 <i>Print mode</i>	Setting the operation mode	<i>Tearing-off</i>
 <i>Printing width</i>	Setting the print width for ZPL programming	<i>maximum print width</i>
 <i>Label length</i>	Setting the label length for ZPL programming	<i>150.0 mm</i>
 <i>Left position</i>	Shifting of the entire print image perpendicular to the direction of paper flow.	<i>0.0 mm</i>

Table 17 Parameters of the *Setup > ZPL* menu

## 6.2 Configuration via the Web Interface

The parameters accessible via the control panel can also be set via the web interface contained in the firmware of the printer.

The printer web interface can be accessed with a browser (e.g. Microsoft Internet Explorer, Mozilla Firefox) with JavaScript activated via the Ethernet interface.

### Calling Up the Web Interface



#### Attention!

Whenever settings are changed via the web interface you are requested to enter the user name "admin" and a password. The default value of the password is also "admin". The password can be changed via the web interface (▷ "Setup Tab" page 26).

- ▶ Start the browser.
- ▶ Call the web interface by entering the IP address via HTTP (e.g. `http://192.168.100.208`). The "Status" tab is open on the home screen.

The web interface contains the following tabs:

- Status: general status description ▷ page 24.
- Setup: configuration parameter settings ▷ page 25.
- Security: password settings ▷ page 26.
- Notifications: settings for sending messages via SNMP or Email ▷ page 27.
- Devices: list of the hardware and optional components ▷ page 28.
- Fonts: overview of the available fonts ▷ page 28.

## 6.2.1 Status Tab

**Printer Administration**

Status Setup Security Notifications Devices Fonts Help Printer Display

**Brady BBP72 PLUS**

Firmware: 5.42.9 (Jun 22, 2023)  
Board: 166220292114

Operative time		Number of labels	
Total	174h 47min	Total	792
Service	-	Service	-
TPH	134h 41min	TPH	1909

Thermal transfer		Thermal direct	
Total	20.501 m	Total	0 m
Service	-	Service	-
TPH	65.883 m	TPH	0 m

Date - Time	Message
2023-06-22 10:42:41	Startup

Update Interval [s]:  Min: 1 1 Max: 10

10:48

**BRADY**

Ready

Settings Printer Status  
Stop Download

Figure 6 "Status" tab on the printer web interface

The following information is contained in the left top section of the "Status" tab:

- Printer type
- Firmware version
- Serial number of the PCB CPU
- Operative time of the printer
- Number of labels printed since commissioning
- Previously printed paper length with thermal transfer printing
- Previously printed paper length with thermal direct printing

A list of the events which have occurred since the printer was switched on is to be found in the left bottom section of the tab.

The right section of the tab shows the current printer display information.

**Notice!**

By clicking the buttons the printer can be operated in the same manner as by using the touchscreen on the device.

When the printer display is selected by mouse click, it is possible to use the computer keyboard in the same manner like an External Keyboard (> "14.3" on page 54) e.g. for entering variable input data.



## 6.2.2 Setup Tab

On the "Setup" tab all the configuration parameters can be set which are also accessible via the control panel in the Setup menu.

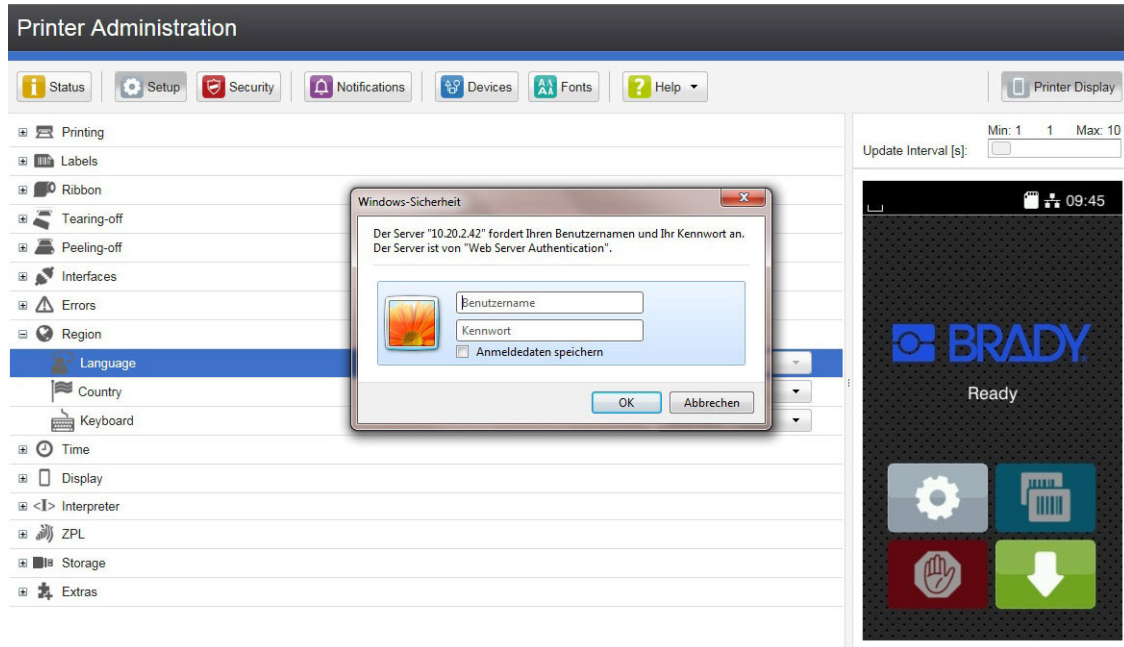


Figure 7 "Setup" tab on the printer web interface

To change a parameter:

1. Locate parameter in the tree structure.
2. Set the value of the parameter at the right end of the concerning line.  
A prompt to enter user name and password appears ▷ page 12.
3. Enter user name and password and click **OK**.

### 6.2.3 Security Tab

On the "Security" tab the access rights for several printer function can be set.

The tab contains the same parameters as the *Security* menu of the Setup ▸ page 12.

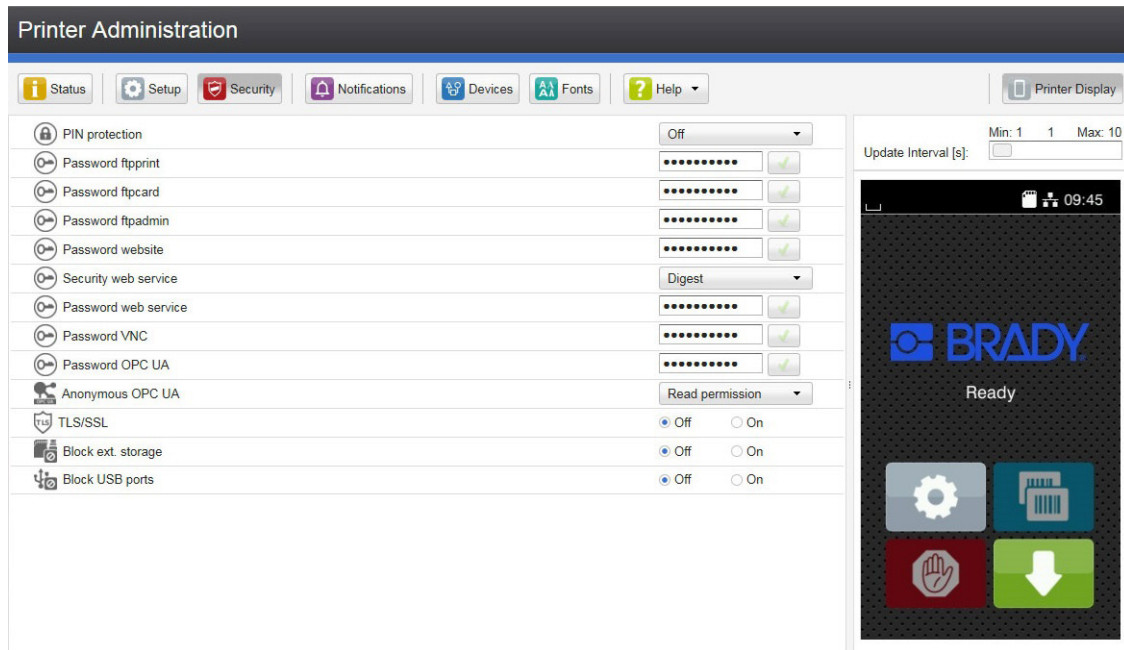


Figure 8 "Security" tab on the printer web interface

To change a parameter:

1. Locate parameter in the tree structure.
2. Set the value of the parameter at the right end of the concerning line.  
A prompt to enter user name and password appears ▸ page 12.
3. Enter user name and password and click **OK**.

6.2.4 Notifications Tab

The "Notifications" tab allows to send status and error messages automatically to a SNMP manager or via e-mail to selected addresses via the Ethernet interface or WiFi.

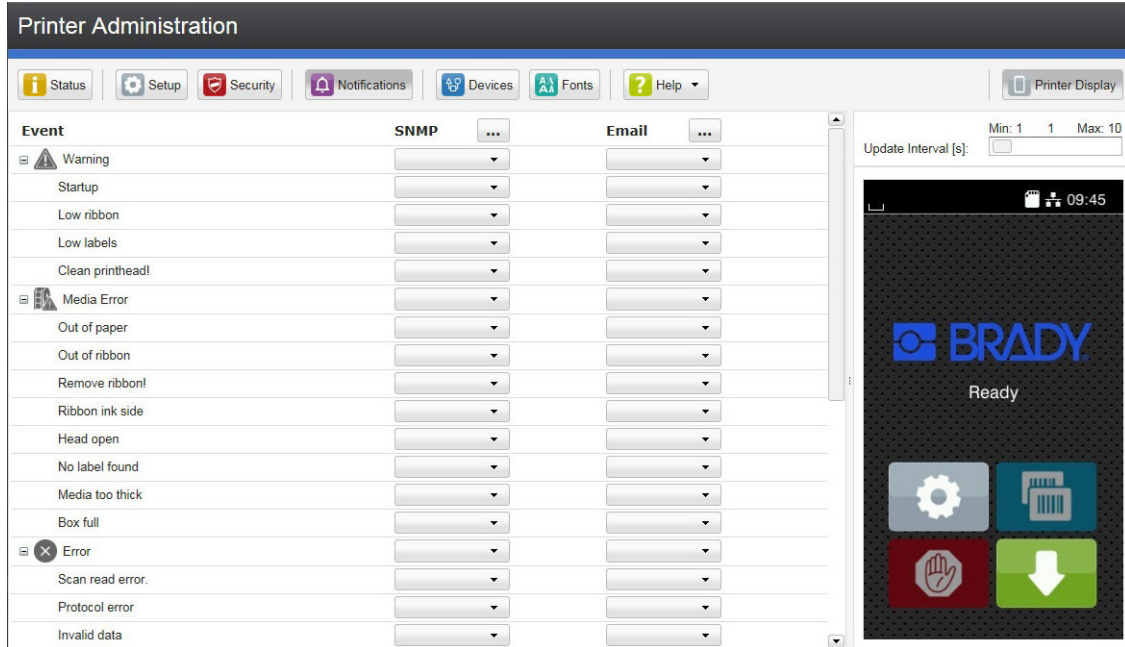


Figure 9 "Notifications" tab on the printer web interface

To change settings:

1. If necessary expand the tree structure.
2. Locate and click the message in the tree structure.
3. Select management station or e-mail address.
4. If the selection at SNMP or e-mail is empty, click the **...** button next to the concerning title and define the SNMP sinks or e-mail addresses.

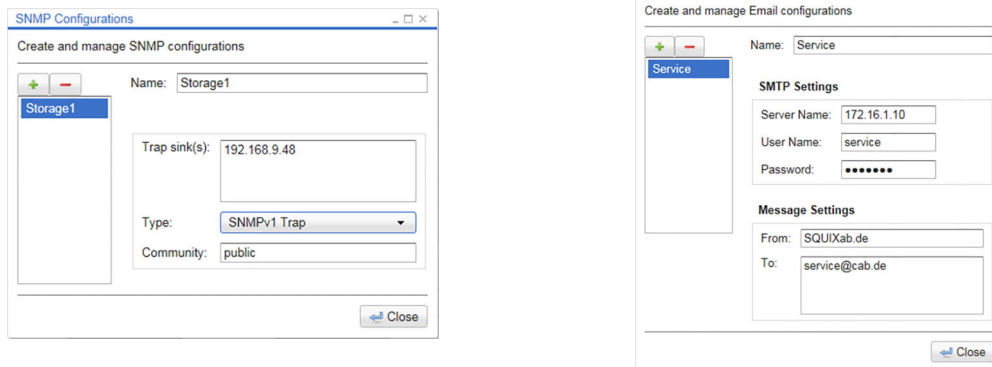


Figure 10 Dialog boxes for SNMP and e-mail configuration

### 6.2.5 Devices Tab

The "Devices" tab provides an overview of the most important hardware components installed in the printer and the optional devices connected.

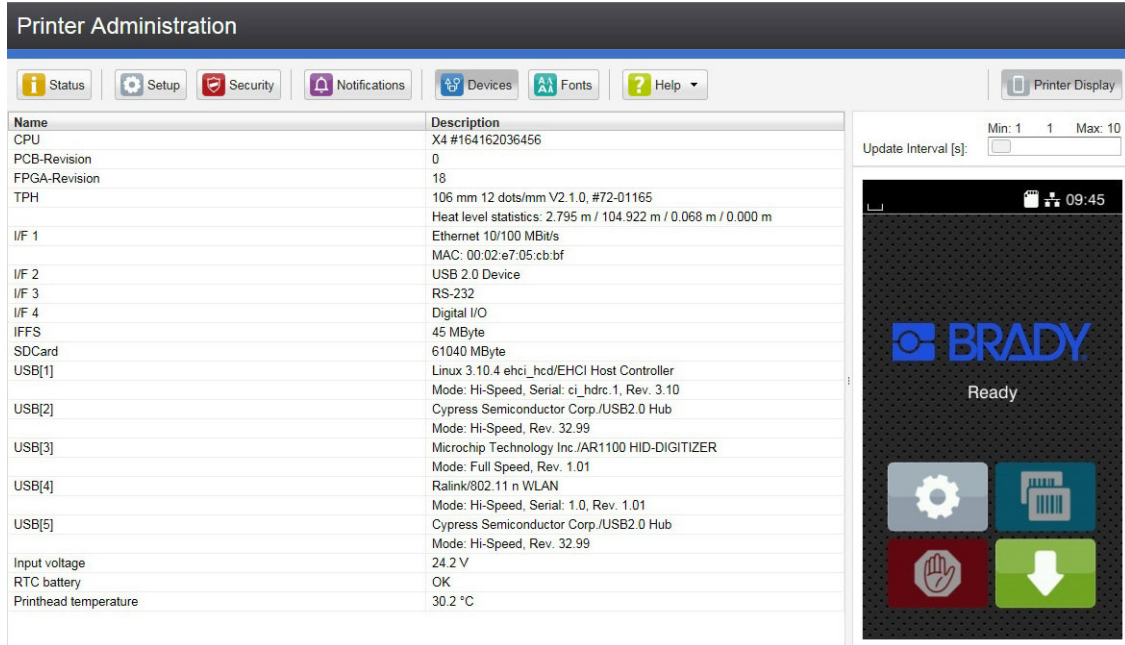


Figure 11 "Devices" tab on the printer web interface

The contents of the display correspond with those of the *Device list* ▷ "Table 19" on page 32.

### 6.2.6 Fonts Tab

The most important parameters of the fonts available in the printer are listed on the "Fonts" tab. The table contains both the original fonts in the printer and other fonts loaded into the printer.

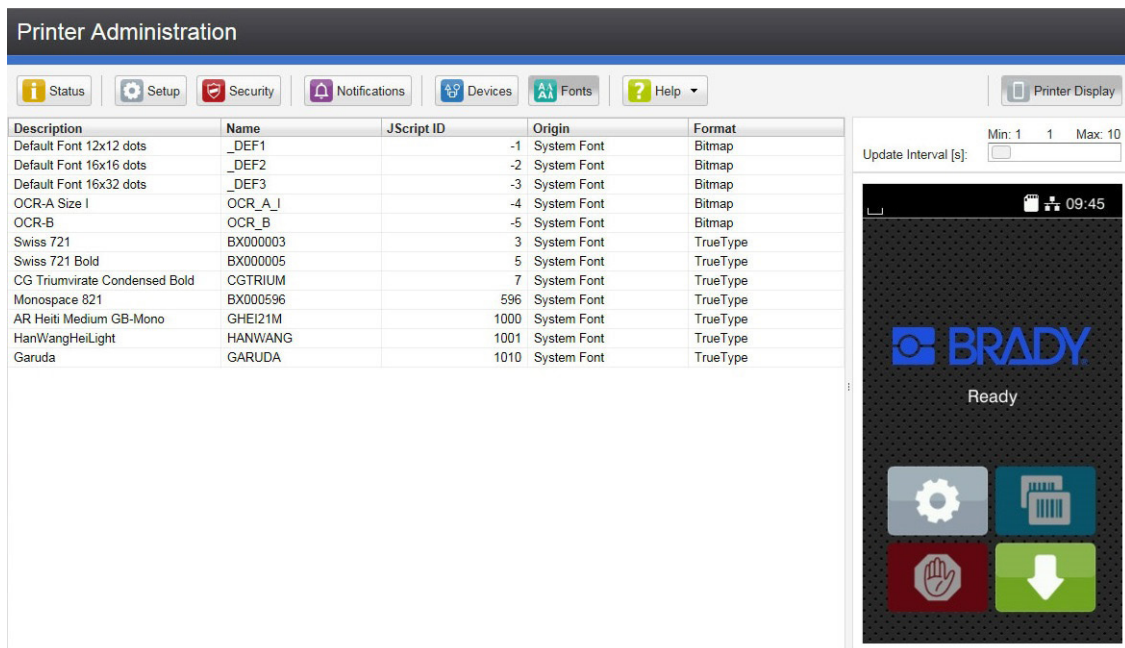


Figure 12 "Fonts" tab on the printer web interface

The parameters correspond to those in the *Font list* ▷ "Table 18" on page 31.

6.2.7 Help Menu

Independent from the chosen tab some help functions can be selected :

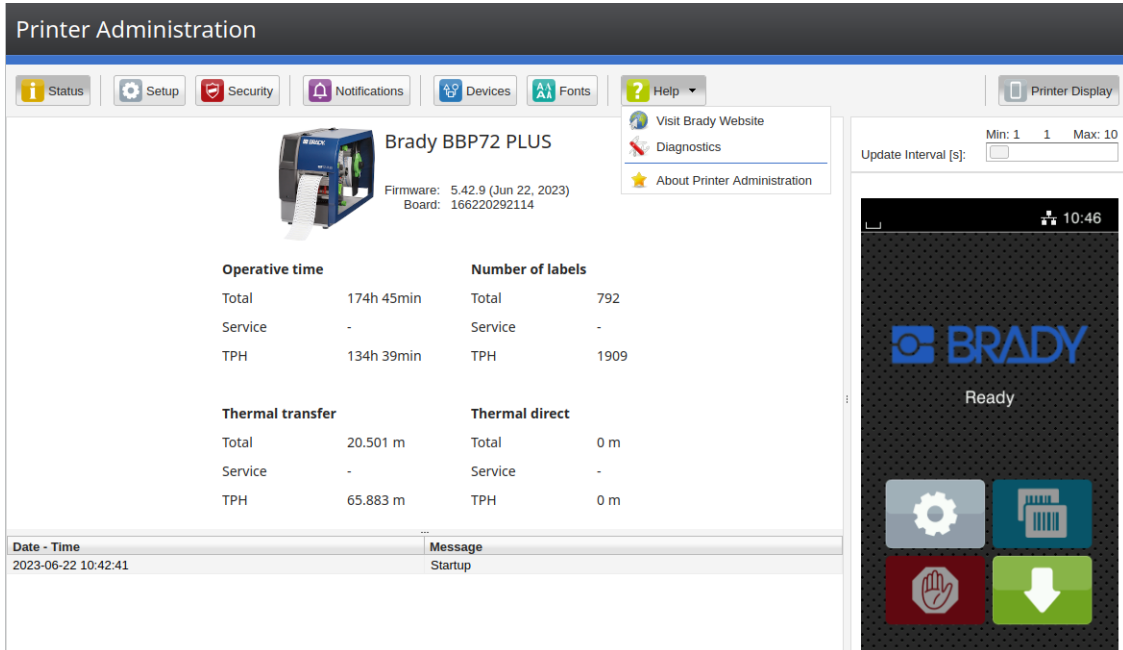
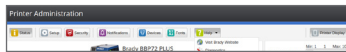


Figure 13 "Help" menu on the printer web interface



Check of the firmware version and offer for update.



Visit the cab-Website.




Starts a diagnostic program to check the printer.



Information about the version and the latest alterations of the web interface.

## 7.1 Overview

The  *Test* menu contains test functions providing information on:

- the most important configuration parameters
- the fonts available in the printer
- important hardware components and connected peripheral devices
- the print image quality and state of the thermal printhead
- available Wi-Fi networks.

## 7.2 Status Print


The *Status print* function prints a test image containing information on the configuration and status of the printer. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.



### Notice!

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Test > Status print*.

The printout can be canceled with  .

7.3  Font list


The *Font list* function prints the most important parameters of the fonts available in the printer in tabular form. The table contains both the original fonts in the printer and other fonts loaded into the printer. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.



**Notice!**

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Test > Font list*.

The printout can be canceled with .

Font list			
Wed Aug 14 10:44:21 2019			
cab SQUIX 4/300MP			
Firmware V5.27 (Jul 25, 2019) - #164162036456			
No.	Name	Type	Description
-1	_DEF1	Bitmap	Default Font 12x12 dots
-2	_DEF2	Bitmap	Default Font 16x16 dots
-3	_DEF3	Bitmap	Default Font 16x32 dots
-4	OCR_A_I	Bitmap	OCR-A Size I
-5	OCR_B	Bitmap	OCR-B
3	BX000003	TrueType	Swiss 721
5	BX000005	TrueType	Swiss 721 Bold
7	CGTRIUM	TrueType	CG Triumvirate Condensed Bold
596	BX000596	TrueType	Monospace 821
1000	GHEI21M	TrueType	AR Heiti Medium GB-Mono
1001	HANWANG	TrueType	HanWangHeiLight
1010	GARUDA	TrueType	Garuda

Figure 14 Font list

Column	Meaning
No.	ID number of the font required for programming (command T).
Name	Name with which the font is saved internally.
Type	Type of font generation. It provides information on the variability of the font and is important when programming (command T).
Description	Explanations of the font: size, font family. The printout occurs in the appropriate font.

Table 18 Parameters of the *Font list*

## 7.4



## Device List

The *Device list* function prints out the most important information on hardware components of the printer and connected devices. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

**Notice!**

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Test > Device list*.

The printout can be canceled with



Name	Information
CPU	Type and serial number of the PCB CPU Revision of PCB CPU and FPGA
TPH	Print width and resolution of the installed thermal printhead
IF [x]	Type of interfaces installed <b>x</b> : Number of interface
IFFS	Size of the Internal Flash File System
USBMEM	Size and type of an installed USB storage device
SD	Size and type of an installed SD card
USB [a] Speed	Type and revision of installed USB devices <b>a</b> : number of USB device <b>Speed</b> : data transfer speed (low, full, high) The following properties are only displayed when the service key is inserted: <b>Mfr.:</b> Manufacturer ID. This identifies the manufacturer of the USB device <b>Class:</b> Code for the USB device class <b>Protocol:</b> Code for the type of communication with the USB device <b>Phase:</b> Internal value for troubleshooting
HEALTH	Printhead voltage, charge state of the lithium battery on the PCB CPU, temperature of CPU and printhead
Line pattern	Lines differing in thickness at various distances. They are used to evaluate the print quality.

Table 19 Parameters of the *Device list*



## 7.5 Test Grid

The *Test grid* function prints out a geometric pattern on a background grid. This allows you to assess the evenness of the print quality.

The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.




### Notice!

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Test > Test grid*.

The geometric pattern is printed every 3 seconds once the Test grid function is started.

The printout can be canceled with .

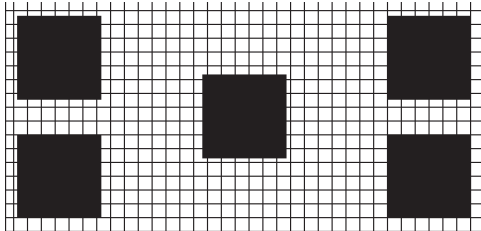



Figure 15 Test grid

The  *Diagnostics* menu contains several functions for troubleshooting

## 8.1 Printhead

The function *Printhead* provides an overview of important status information concerning the printhead on the display of the printer.

- ▶ Start menu.
- ▶ Select *Diagnostics > Printhead*.
- ▶ Return with *Close*.

The following parameters are displayed:

Line	Meaning	Example
1	Serial number of the printhead	<b>Serial no.</b> 68-0252
2	Part number of the printhead	<b>Part no.</b> 5977444
3	Firmware revision of the printhead	<b>Firmware</b> 2.1.0
4	Temperature of the printhead	<b>Temperature</b> 26.2 °C
5	Resolution of the printhead	<b>Resolution</b> 12 DPMM (dots/millimeter)
6	Print width / Number of dots	<b>Width/no. of dots</b> 106mm/1248
7	Operative time/Number of printed labels with the current printhead	<b>Hours/no. of labels</b> 424h/32018
8	Previously printed paper lengths with thermal direct printing / thermal transfer printing	<b>Thermal/Transfer</b> 29.04m/286.42m
9	Previously printed paper length with heat level < 0	<b>Heat level &lt;0</b> 44.31m
10	Previously printed paper length with heat level 0 - 7	<b>Heat level 0-7</b> 219.93m
11	Previously printed paper length with heat level 8 - 14	<b>Heat level 8-14</b> 50.41m
12	Previously printed paper length with heat level > 14	<b>Heat level &gt;14</b> 0.81m
13	Resistance of the printhead	<b>Resistance</b> 1110Ω
14	Description of the printhead	<b>Description</b> 4"/300dpi/Kyocera

Table 20 *Printhead display*


8.2  Monitor Mode

Monitor Mode offers the option of checking incoming control sequences at an interface. The commands are printed out as text. In addition, a corresponding error message is printed out immediately after an error occurs. The printout occurs using the heat level and print speed specified in the Setup > Printing menu.



Notice!

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Diagnostics > Monitor Mode*.
- ▶ Send print jobs.
- ▶ Select  to cancel the printout or switch to the Ready mode.

Example:

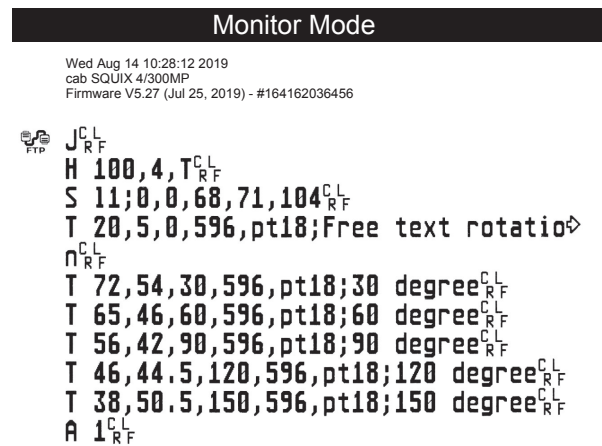
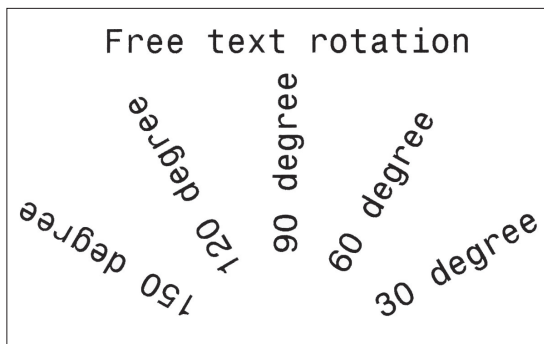


Figure 16 Example label printed normally (left) and in Monitor mode (right)

The control characters (ASCII-Code 00...31) are presented in stylized design.

- e.g. :  $L_F$  : Code 10 (0A) - line feed
- $C_R$  : Code 13 (0D) - carriage return

### 8.3 Label Profile

The *Label profile* function carries out a longer label advance. It saves the values measured by the label sensor here and then prints them out in a diagram.

The printout is used to check label detection in conjunction with the optical properties of the label medium.


The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.



#### Notice!

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Select the label sensor to be tested in the *Setup > Labels* menu ▷ page 15.
- ▶ Load the label medium to be tested into the printer.
- ▶ Start menu.
- ▶ Select *Diagnostics > Label profile*.  
The printer performs a longer label advance. The label sensor measures the transparency/reflection capacity of the label material here. The message *Insert* appears in the display once the advance is complete.
- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start the diagram printout with *Continue*.

The printout can be canceled with .

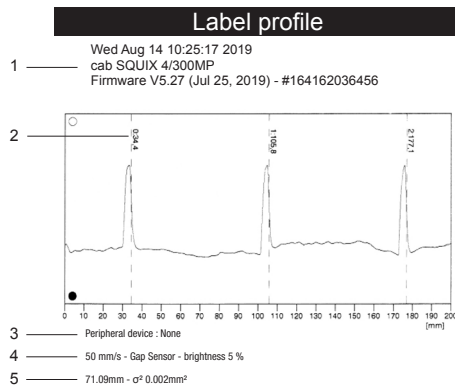


Figure 17 Label profile

No.	Information
1	Date and time of the printout Device type Version and creation date of the firmware Serial number of the PCB CPU Firmware version and serial number of the label sensor
2	Coordinate in the direction of paper flow at which the label start was detected
3	Type of peripheral device connected
4	Print speed, method of label detection (Gap sensor / Bottom-reflect sensor) Brightness of the sensor LED during the measurement
5	Average value and variation of label distances

Table 21 Information in *Label profile*

8.4  Event Log

The label printer saves the following events in the *Event log*:

- Hardware fault
- Printhead replacement
- Firmware updates
- Changing the OEM name
- Resetting of the service counters

The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.



**Notice!**

**The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Diagnostics > Event log*.



Event log	
Wed Aug 14 10:19:29 2019	
cab SQUIX 4/300MP	
Firmware V5.27 (Jul 25, 2019) - #164162036456	
Date	Description
13.08.17 07:45	TPH (#59-0051) -> 300 dpi, 1248 dots
20.09.17 07:46	Firmware update -> V5.10 (0000)
04.10.17 07:38	Firmware update -> V5.11 (0000)
15.10.17 13:35	Printer model: cab SQUIX 4/300MP
19.12.17 14:01	Firmware update -> V5.13 (0000)
05.09.18 11:38	Clear service counters
05.09.18 11:38	Cleaning interval -> 41242 + 1000000
13.08.19 07:42	Firmware update -> V5.27 (0000)

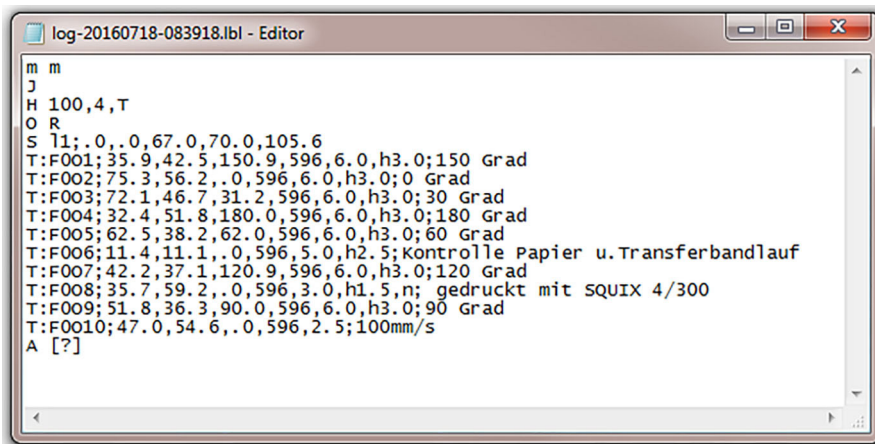
Figure 18 Event log

## 8.5 Record Data Stream

### \* Access only with external storage device!

The function *Record data stream* allows to store data incoming via an interface as an .lbl file to an external storage device (SD card, USB memory module) installed on the printer.

- ▶ Insert SD card or USB memory module.
- ▶ Start menu.
- ▶ Select *Diagnostics > Record data stream*.
- ▶ Select the external storage device.
- ▶ Enter a file name.  
The predefined name is composed of the identifier "log", date, clock time and the suffix ".lbl", but may also be altered.  
Confirm the selection with .
- ▶ In the status line of the display the data saving is indicated by the symbol .
- ▶ Send print jobs. All data received by the printer are stored in the .lbl file.
- ▶ To complete the function select *Diagnostics > Record data stream* again and confirm with *OK*. The .lbl file will be stored in the root of the storage device.



```

log-20160718-083918.lbl - Editor
m m
J
H 100,4,T
O R
S l1;.0;.0,67.0,70.0,105.6
T:F001;35.9,42.5,150.9,596,6.0,h3.0;150 Grad
T:F002;75.3,56.2,.0,596,6.0,h3.0;0 Grad
T:F003;72.1,46.7,31.2,596,6.0,h3.0;30 Grad
T:F004;32.4,51.8,180.0,596,6.0,h3.0;180 Grad
T:F005;62.5,38.2,62.0,596,6.0,h3.0;60 Grad
T:F006;11.4,11.1,.0,596,5.0,h2.5;Kontrolle Papier u.Transferbandlauf
T:F007;42.2,37.1,120.9,596,6.0,h3.0;120 Grad
T:F008;35.7,59.2,.0,596,3.0,h1.5,n;gedruckt mit SQUIX 4/300
T:F009;51.8,36.3,90.0,596,6.0,h3.0;90 Grad
T:F0010;47.0,54.6,.0,596,2.5;100mm/s
A [?]


```

Figure 19 Data stream record

8.6  Save Print Image

## \* Access only with external storage device!

The function *Save print image* allows to store the last print image as a .png file to an external storage device (SD card, USB memory module) installed on the printer.

- ▶ Insert SD card or USB memory module.
- ▶ Start menu.
- ▶ Select *Diagnostics > Save print image*.
- ▶ Select the external storage device.
- ▶ Enter a file name.  
The predefined name is composed of the identifier "img", date, clock time and the suffix ".png", but may also be altered.
- ▶ Confirm the selection with . The .png file will be stored in the root of the storage device.

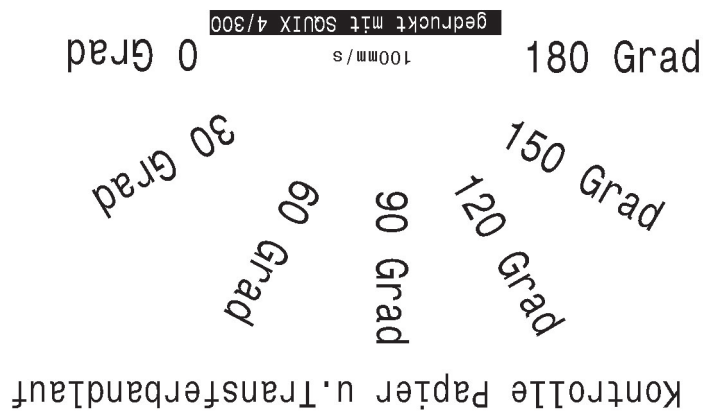



Figure 20 Saved print image

## 8.7 Save System Log

### \* Access only with external storage device!

The function *Save system log* allows to store several system files packed to a .zip file to an external storage device (SD card, USB memory module) installed on the printer.

- ▶ Insert SD card or USB memory module.
- ▶ Start menu.
- ▶ Select *Diagnostics* > *Save system log*.
- ▶ Select the external storage device.
- ▶ Enter a file name.  
The predefined name is composed of the identifier "sys", date, clock time and the suffix ".png", but may also be altered.
- ▶ Confirm the selection with . The display shows the several steps of saving.

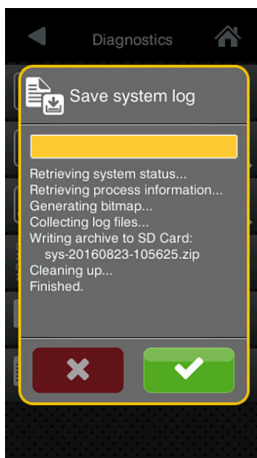


Figure 21 System log saving

- ▶ Confirm the completion of saving with . The .zip file will be stored in the root of the storage device.

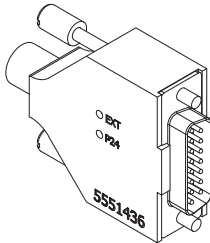


8.8  I/O Test

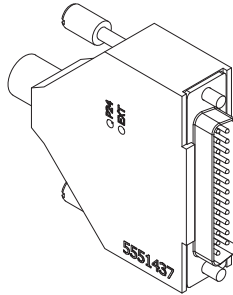
With the function *I/O Test* the functionality of the I/O interface can be checked.

**Attention!**

A matching I/O tester must be connected to the I/O interface to get a correct test result.



15 pin, 24 V



25 pin, 24 V

Figure 22 I/O tester

- ▶ Install the I/O tester.
- ▶ Start menu.
- ▶ Select *Diagnostics* > *I/O test*. The display shows the steps of the test.

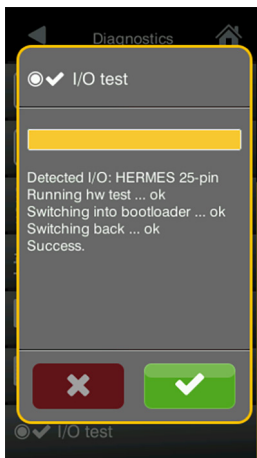


Figure 23 I/O test

- ▶ Confirm the test result with .


## 9.1 Firmware Update



### Notice!

The firmware file can be obtained from the internet.

### \* Access only with external storage device!

- ▶ Copy the firmware file to the "misc" directory of the storage device. This can be done on a computer or via FTP on the printer.
- ▶ Insert the prepared storage device into the printer.
- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Firmware update*.  
The display shows the selection of external storage devices and the firmware files stored on the devices.
- ▶ Select a file and confirm with  .  
The selected firmware file is copied. A progress indicator is displayed while the firmware is being copied. After completion the printer will be re-started.




### Notice!

The firmware update also can be done via FTP printer management ▷ "11.4" on page 47.

## 9.2 Save Settings


With the *Save settings* function the printer configuration can be saved to a storage device.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Save settings*.
- ▶ Select the external storage device.
- ▶ Enter a file name.  
The predefined name is composed of the identifier "gui", date, clock time and the suffix ".xml", but may also be altered.
- ▶ Confirm the selection with  . The .xml file will be stored in the folder /misc of the storage device.

An error message appearing during the saving procedure may be caused by an unreadable medium (e.g. unknown medium, unformatted medium) ▷ "12.5.4" on page 51.

## 9.3 Load Settings

A printer configuration previously saved to a storage device can be loaded with the *Load settings* function.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Load settings*.
- ▶ Select the desired file.
- ▶ Confirm the selection with  . Loading of the configuration data starts. Do not remove the USB flash drive until the loading procedure is complete. The printer returns to the *Extras* menu.

If an error occurs during the loading procedure, an error message appears in the display. Restart the loading procedure in this case. If an error occurs again, the configuration parameters must be entered via the control panel.

## 9.4 Reset Settings

With the *Default settings* function all setup parameters excepting the passwords ▷ page 12 can be reset to the default values.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Reset settings*.  
The display shows "Reset settings".
- ▶ Select *Continue*. The setup parameters will be reset and printer returns to the *Extras* menu.

## 9.5 Reset Passwords

The function *Reset passwords* allows to reset all passwords for the network services to the default values.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Reset passwords*.  
The display shows "Reset passwords".
- ▶ Select *Continue*. The passwords will be reset and printer returns to the *Extras* menu.

Function	User name	Password
Web interface access	admin	admin
FTP printing	ftpprint	print
FTP access to storage devices	ftpcard	card
FTP firmware update	ftpadmin	admin
Web service	soap	soap
OPC networking	opcuser	opcpass


Table 22 Default passwords

## 9.6 Cleaning Interval

With the parameter *Cleaning interval* an interval for the printhead cleaning can be set in steps of 100 m media passage.

If the set length of the medium (label strip, transfer ribbon) has passed the printhead and an error occurs in the flow of the medium (e.g. label end, transfer ribbon end), the *Clean printhead!* message appears in the display.

The error message for the error which occurred is not displayed until the *Clean printhead!* message is acknowledged. As long as no errors occur in the medium flow, no messages are displayed and the print job is continued even if the cleaning interval has passed.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Cleaning interval*.
- ▶ Select a new value and confirm the selection with .

## 9.7

**Legal Notices**

The *Legal notices* function shows the licenses and software libraries of third party solutions used in the printer firmware.

- ▶ Start menu.
- ▶ Select *Extras*.  
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.
- ▶ Select *Legal notices*.  
The notices will be shown on the display
- ▶ Select *Close* to leave the notices.

The *Help* menu contains links to video clips about important operations.

- ▶ Start menu.
- ▶ Select *Help*.  
A list of clips will be shown.

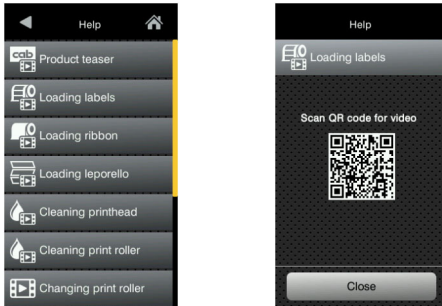


Figure 24 Help

- ▶ Select a clip.  
The display shows a QR code which can be scanned by a mobile device.  
If the mobile device is connected to the internet a video clip with the selected content will start.

The File Transfer Protocol (FTP) allows to manage and transfer files on the network via the Ethernet interface. An FTP program (FTP client) is required which supports the "binary" transfer mode to manage the printer. The printer functions as an FTP server.

FTP printer management is comprised of four functions:

- Direct printing via copying JScript or ZPL files.
- Management of the memory media installed in the label printer
- IFFS management
- Firmware update.

## 11.1 FTP Login

To establish an FTP connection, the client must be logged on to the server. The login type depends on the client. The following information must be specified in any case, however:

- IP address of the label printer
- User name and password

Access to the printer management functions depends on the user name:

Function	User name	Default password
FTP printing, loading PPP vouchers	ftpprint	print
FTP access to storage devices	ftpcard	card
FTP firmware update	ftpadmin	admin

Table 23 Default passwords



### Notice!

- ▶ The passwords can be changed in the "Setup" tab of the web interface ▷ page 26.

After logging on the FTP server is accessible in a manner similar to a Windows folder.

## 11.2 FTP Printing

Label files in cab JScript format (▷ Programming Manual) or in ZPL format can be printed directly via FTP connection:

- ▶ Establish a FTP connection with the user name **ftpprint** and the defined password (Default: **print**)  
An empty folder of the FTP server will be shown.
- ▶ Copy a label file in JScript or ZPL format to the folder of the FTP server.  
Printing of the label file is started immediately. The corresponding file is deleted once the print job is complete.
- ▶ Close the FTP connection.

## 11.3 FTP Access to Storage Devices

FTP connection allows to manage data of a storage device:

- ▶ Establish a FTP connection with the user name **ftpcard** and the defined password (Default: **card**).  
The content of the storage device will be shown. The files are separated into several subfolders.
- ▶ Manage the files as necessary. When copying files to the folder, type-based sorting occurs automatically in the subfolders.
- ▶ Close the FTP connection.

**11.4 FTP Firmware Update**

FTP allows to carry out a firmware update:

- ▶ Establish a FTP connection with the user name **ftpadmin** and the defined password (Default: **admin**).  
An empty folder of the FTP server will be shown.
- ▶ Copy a valid firmware file (e.g. 527\_9725.cfw) to the folder.  
The status of the saving procedure is shown by a progress indicator in the display. The printer resets automatically after the update is carried out successfully.
- ▶ Close the FTP connection.

Whether the firmware update was carried out successfully can be checked on the "Status" tab of the web interface.

Label descriptions, graphics, fonts, and database information can be saved for the long-term on memory media.



**Notice!**

- ▶ **Always create a backup copy of external devices in case of a malfunction.**

## 12.1 Suitable Storage Devices

### External Devices

- USB flash drive at USB host interface.
- SD cards
- WebDAV server

### Internal Device

- approx. 50 MB flash memory inside the printer (Internal Flash File System IFFS)

## 12.2 Installation

### \* For external storage devices only!

- ▶ Slide SD card contact-side first into the matching slot until it latches. To unlatch SD card press it shortly into the slot and remove it.  
or
- ▶ Connect USB flash drive to an USB host interface.



### Attention!

#### Risk of data loss !

- ▶ **Do not remove the storage device while it is being accessed.**

## 12.3 Directory Structure

On storage devices connected to the printer, the following directory structure is automatically generated when uploading files:

Folder name	Contents
fonts	Font files
images	Graphic files
labels	Label description files
misc	Firmware, PPP, Setup and TMP files

Table 24 Directory structure



**Note!**

- ▶ **For saving files on a WebDAV server the directory structure must be generated manually.**



12.4 Writing

The storage devices can be written to in several ways. The most functionally secure way is writing to the storage device via a data interface.



**Attention!**

The device selected as *Default storage* is written to by default. To write to another device specify the path name of the device in the file name (▷ Programming Manual).


**Example:**

With direct programming, the command sequence for saving a label (file XYZ) has the following form:

Ms LBL; XYZ	Command for saving the file <b>XYZ</b>
J	
H 100,0,T	
S I1;0,0,68,71,104	Contents of the file <b>XYZ</b>
T 10,10,0,3,pt15;memory card	
A 1[NOPRINT]	
Ms LBL	End of save command

- After transfer of the command sequence, the file XYZ is saved with the commands from J to A.
- Only one label is printed each time the file XYZ is called up.
- The [NOPRINT] parameter in command A suppresses the printing of a label when the file is saved.
- To print the label a variable number of times, use command A [?].

12.5  Storage Device Functions

- ▶ Start menu.
- ▶ Select  Storage.












Parameter	Meaning	Default
 Load label	Printing labels whose descriptions are stored on a storage device	
 Print file list	Printing a list a of the files stored on a storage device	
 Copy files	Copying files from one to another storage device	
 Format storage	Formatting a storage device and deleting all data	
 Default storage	Defining the storage device, which can be operated via interfaces and FTP printer management.	SD card
 WebDAV	Activation of the WebDAV protocol to allow the access the data stored on a server. The possibilities of access are depending on the server type and the administrator settings. <i>Disabled:</i> No access <i>User account:</i> Login with user name and password <i>Anonymous:</i> Anonymous login	Disabled
 WebDAV server URL	Address of the server area designated for the WebDAV access	-
 WebDAV username	User name for the WebDAV user account	-
 WebDAV password	Password for the WebDAV user account	-

Table 25 Menu Storage


### 12.5.1 Load Label

Labels whose descriptions are saved on the storage device can be printed using the *Load label* function.

- ▶ Start menu.
- ▶ Select *Storage > Load label*.  
The display shows the selection of external storage devices and the label files stored on the devices.
- ▶ Select a label and confirm with .  
If a label is selected which was saved with a fixed contents and fixed label quantity, the print job is started immediately.  
If additional input on the label description is required, the display requests to enter the variable data.  
For label descriptions with a variable label quantity, a prompt to enter the label quantity is displayed.
- ▶ Enter the label quantity/variable data and select  to start the print job.

### 12.5.2 Print File List

The *Print file list* function creates a list of the files stored on the default storage device.



- ▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
- ▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
- ▶ Start menu.
- ▶ Select *Storage > Print file list*  
The display shows the selection of storage devices
- ▶ Select a storage device and confirm with .  
The directory of the storage device will be printed.

Contents of the printout:

- the name of the storage device
- information on the saved files
- the size of the available memory area


### 12.5.3 Copy Files

With the *Copy files* function files can be copied from one to another storage devices.

- ▶ Insert the storage devices.
- ▶ Start menu.
- ▶ Select *Storage > Copy files*.  
Under the headline *Source* the selection of storage devices will be shown.
- ▶ Select source device.
- ▶ Select a folder.
- ▶ Select files. One single file or all files (\*.\*) of the folder can be selected.
- ▶ Confirm the selection with .  
Under the headline *Destination* the selection of storage devices will be shown again.
- ▶ Select destination device and folder.
- ▶ Confirm the selection with .  
The files are copied. The display shows the message "*Copied ... file(s) to [Destination]*"
- ▶ Select *Continue* to return to the *Storage* menu.

### 12.5.4 Format Storage


The *Format* function can be used to delete all data from a storage device. This reformats the storage device. So you can also use the *Format* function if the *Unknown card* error message appears when using the device.

- ▶ Insert storage device
- ▶ Start menu.
- ▶ Select *Storage > Format storage*.  
If the function is protected via a PIN a prompt appears in the display. Enter the code number and confirm with *OK*. The display shows the selection of storage devices.
- ▶ Select a storage device and confirm the selection with  .  
The display shows the message *All data on the selected device will be lost*.
- ▶ Select *Continue*. The storage device will be formatted.  
Do not remove the device from the printer during the deleting procedure.  
The printer returns to the *Storage* menu.

### 12.5.5 Default Storage

With the parameter *Default storage* Definition the storage device can be defined, which can be operated via interfaces and FTP printer management.

At functions started from the printer display all storage devices are accessible, but the default storage will be offered first.

- ▶ Start menu.
- ▶ Select *Storage > Default storage*.  
The display shows the selection of storage devices.
- ▶ Select a storage device and confirm the selection with  .

**Attention!**

For the remote access via VNC the firmware version 5.03 or later must be installed.

VNC is a software that allows remote control of a printer's operation control panel (server) via a computer (client) through input devices like keyboard and mouse.

VNC is not platform dependent and enables the use of a Windows computer as well as a mobile Android or iOS system as an external remote control. The prerequisite for this is the installation of a VNC client on the system used.

**Preparing the Computer**

- ▶ Install the VNC client on the computer.

**Preparing the Printer**

- ▶ Activate the VNC server under *Setup > Interfaces > Network services > VNC server*.
- ▶ Enter password *vnc* under *Security > Password VNC*.

For Ethernet Access:

- ▶ Find out the Ethernet-IP-Address under *Info*.

**Establishing a Connection**

- ▶ Start the VNC client on the computer.
- ▶ Enter the IP address and password *vnc* in the configuration of the VNC client.
- ▶ Activate the connection.  
The menu of the printer will be visible and usable via mouse click, keyboard or touch-pad just like on the printer itself.

An external keyboard or a compatible input device (e.g. barcode scanner) can be connected directly to the printer. Using an external keyboard facilitates the entry of variable data while processing print jobs and printing from storage devices.

Input prompts and the data received from the keyboard are shown in the display.

### 14.1 Connecting External Keyboard

Any HID compatible USB keyboard can be connected to the printer.

- ▶ Insert connection cable of the keyboard into a USB host interface of the printer.

### 14.2 Keyboard Assignment

- ▶ If necessary set the parameter *Setup > Region > Keyboard* matching to the used keyboard.



**Notice!**

- ▶ If the parameter *Keyboard* is set to *Automatic*, the keyboard assignment will be defined by the setting of the parameter *Country*.

The following *Country* settings have special keyboard assignment :

Country	Keyboard
China	USA
South Africa	USA
Taiwan	USA
Mexico	Latin America
Egypt	Arabic

Table 26 Special assignments *Country - Keyboard*

For the following *Keyboard* settings can be switched between two assignments by pressing the CTRL key and the SHIFT key:

Keyboard	First assignment	Second assignment
Bulgaria	Latin	Cyrillic
Greece	Latin	Greek
Iran	Latin	Persian
Macedonia	Latin	Cyrillic
Russia	Latin	Cyrillic
Thailand	Latin	Thai
Arabic	Latin	Arabic

Table 27 *Keyboard* settings with double assignment

### 14.3 Special Key Functions

General :






[F1]	Executes the <i>Load label</i> storage device function.
[F2]	Prints an additional label from the last print job. Corresponds to  .
[F3]	Repeats the last print job with renewed polling of the variable data and polling of the label quantity.
[F8]	Functions like  : Label feed
[Enter]	Starts menu
[Esc]	Functions like short touch  : Cancels the current job
[Strg][Esc]	Functions like long touch  : Cancels all jobs
[Space]	Functions like  .

Table 28 Special key functions: general

**In the menu and for entry of variable data:**

[Enter]	Confirms the input.
[Esc]	Cancels the input and returns.
[Shift][Entf]	Clears the input line.

Table 29 Special key functions: Menu and data input



#### Attention!

When using a scanner operated as keyboard emulation ensure that the same character set is set for both the scanner and the printer.

Contact your local Brady Technical Support location to update your printer's firmware.

- United States: [bradyid.com/techsupport](https://bradyid.com/techsupport)
- Canada: [bradycanada.ca/contact-us](https://bradycanada.ca/contact-us)
- Mexico: [bradyid.com.mx/es-mx/contacto](https://bradyid.com.mx/es-mx/contacto)
- Latin America: [bradylatinamerica.com/es-mx/soporte-técnico](https://bradylatinamerica.com/es-mx/soporte-técnico)
- Europe: [bradyeurope.com/services](https://bradyeurope.com/services)
- Australia: [bradyid.com.au/technical-support](https://bradyid.com.au/technical-support)
- Asia Pacific: [brady.co.uk/landing-pages/global-landing-page](https://brady.co.uk/landing-pages/global-landing-page)

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