

# User Manual

## MELAprint 80

Universal printer



EN

CE

Dear customer,

We thank you for your confidence demonstrated by the purchase of this MELAG product. As an owner-run and operated family concern founded in 1951, we have a long history of successful specialization in hygiene products for practice-based use. Our focus on innovation, quality and the highest standards of operational reliability has established MELAG as the world's leading manufacturer in the instrument reprocessing and hygiene field.

You, our customer are justified in your demand for the best products, quality and reliability. Providing **“competence in hygiene”** and **“Quality – made in Germany”**, we guarantee that these demands will be met. Our certified quality management system is subject to close monitoring: one instrument to this end is our annual multi-day audit conducted in accordance with EN ISO 13485. This guarantees that all MELAG products are manufactured and tested in accordance with strict quality criteria.

The MELAG management and team.



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# 1 General guidelines

Please read this user manual carefully before commissioning the device. The user manual includes important safety information. The functionality and value-retention of this device depends on the care accorded to it. Please store this user manual carefully and in close proximity to your device. It represents a component of the product.




The device type is specified on the type plate on the lower side of the device.

Should the manual no longer be legible, is damaged or has been lost, you can download a new copy from MELAG download centre at [www.melag.com](http://www.melag.com).

## Symbols used

Symbol	Description
	Draws your attention to a situation, which if not avoided, could result in damage to the practice fittings or the device.
	Draws your attention to important information.

## Formatting rules

Example	Description
<b>Settings</b>	Reference to a menu command, window title or a button.
see <b>Chapter 2</b>	Reference to another text section within this document.
	Reference to the glossary or another text section.
	Information for safe handling.
	Prerequisites for the following handling instruction.

## Symbols on the device

### Type plate



Do not dispose of product in household waste



CE marking

### Warning symbols



The marked area becomes hot during operation. Contact with it during or shortly after operation can pose the danger of burns.

### Symbols on the power switch



Switching on device



Switching off device

## Disposal

MELAG devices are synonymous with high quality and a long life-span. When you eventually need to decommission your MELAG device, the required disposal of the device can take place with MELAG in Berlin. Simply contact your stockist.

Dispose of accessories and consumption media which you no longer require in the appropriate manner. Comply with all relevant disposal specification in terms of possibly contaminated waste.

The packaging protects the device against transport damage. The packaging materials have been selected for their environmentally-friendly disposability and can be recycled. Returning the packaging to the material flow reduces the amount of waste and saves raw materials.

MELAG draws the operator's attention to the fact that they may be legally obliged (e.g. in Germany according to ElektroG) to remove used batteries and accumulators non-destructively before handing over the device, provided they are not enclosed in the device.

## 2 Safety



When operating the device, comply with the following safety instructions as well as those contained in subsequent chapters.

### Power cable and power plug

- Only the power cable included in the scope of delivery may be connected to the device.
- The power cable may not be replaced by a cable determined to be insufficient.
- Disconnect the device from the mains during long downtimes.
- Only connect the device to those products intended for operation with this device.
- Only connect the device to a suitable power source.

### Danger of short circuit

- Liquids may not be permitted to reach the interior of the device. This could result in an electrical shock or short circuiting.

### Setup, installation and commissioning

- Check the device after unpacking for any damage suffered during transport.
- The device is not suitable for operation in explosive atmospheres.
- Install and operate the device in a frost-free environment.
- The device is conceived for use outside the patient area. The device should be located a minimum of 1.5 m radius away from the treatment area.

### Installation location and storage

- Setup the device on a stable, level surface.
- Setup the device in such a way that it is protected against strong direct sunlight and heat.
- Store and operate the device only in a dust-free environment protected against heat and damp.
- Do not place the device directly on the steam sterilizer. The steam sterilizer will become hot upon operation. Non-compliance could result in restricted function and damage to the device.
- Set-up the device protected against blows or vibrations.

### Daily operation

- Always check whether a material roll has been inserted before printing. Otherwise, the print head and print roller could suffer damage.
- Never touch the blade of the device.
- Never touch the print head during or shortly after operation, as this can be very hot.
- The print head of the device is a sensitive component. Do not touch the print head so as not to damage it.

### Maintenance

- Always allow the device to dry after cleaning before closing the housing cover.

### Repair

- Never open the device housing. Incorrect opening and repair can compromise electrical safety and pose a danger to the user.
- The device may only be opened and repaired by authorised technicians. The guarantee and warranty are forfeited as soon as the device is opened by anyone other than a member of a MELAG-authorised technical customer service.

## 3 Description of the device

### Scope of delivery

Please check the scope of delivery before setting up and connecting the device.

#### Standard scope of delivery

- MELAprint 80
- User documentation card
- Power cable
- Power supply
- Ethernet cable 1:1 (RJ45)
- USB cable
- Label roll, double-sided

### Intended use

The MELAprint 80 printer serves the direct output of labels and logs for MELAG devices or via the documentation and approval software MELAtrace; it may only be used by trained practice or IT personnel. The labels for sterilization wrapping can then be read-out with a barcode scanner (not included in the scope of delivery).

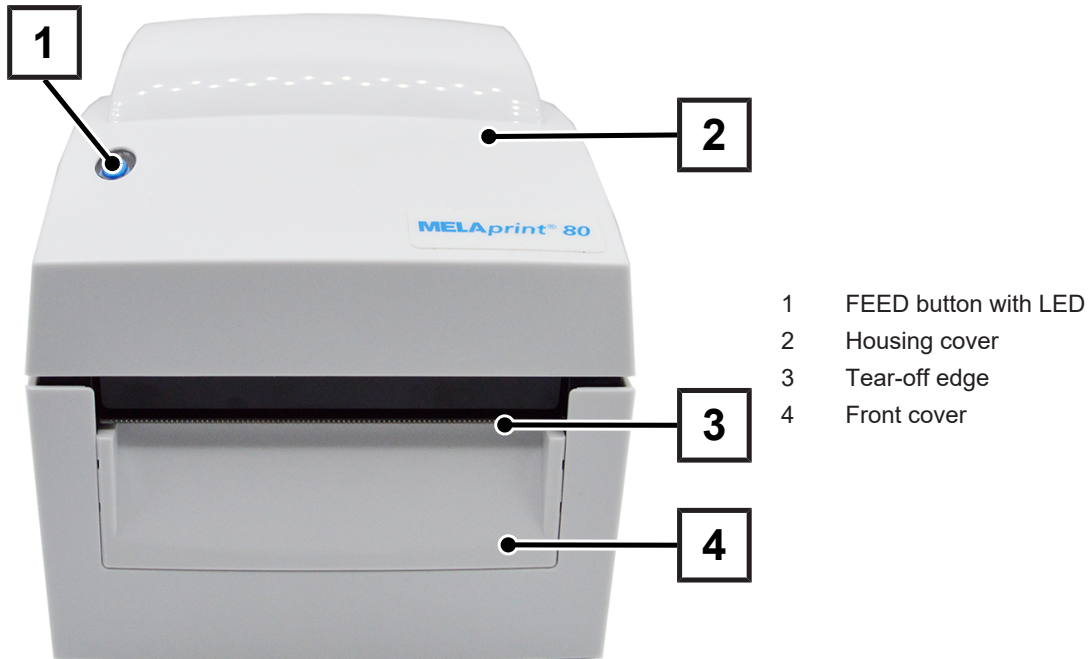
### Compatibility with MELAG products

Category	Device class	Device type
Software	Documentation and approval software	MELAtrace
Combi devices	Combi steam sterilizers	Careclave 618 <sup>1)</sup>
Steam sterilizers	Vacuclave	Vacuclave 550 <sup>2)</sup>
	Pro Line	Vacuclave 118 <sup>3)</sup> Vacuclave 123 <sup>3)</sup>
	Prime Line	Vacuclave 318 <sup>3)</sup> Vacuclave 323 <sup>3)</sup>
	SteriHero Line	SteriHero Beauty <sup>3)</sup> SteriHero Vet <sup>3)</sup>
	Pro-Class	Vacuklav 23 B+ <sup>4)</sup> Vacuklav 31 B+ <sup>4)</sup> Vacuklav 24 B+ <sup>4)</sup> Vacuklav 24 BL+ <sup>4)</sup> Vacuklav 30 B+ <sup>4)</sup>
	Vacuvet	Vacuvet 23 B+ <sup>4)</sup>
	DAC	DAC Professional <sup>4)</sup>
	Euroklav	Euroklav 29 VS+ <sup>4)</sup> Euroklav 23 VS+ <sup>4)</sup> Euroklav 23 S+ <sup>4)</sup>
	MELAtronic EN/EN+	MELAtronic 23 EN <sup>4)</sup> MELAtronic 15 EN+ <sup>4)</sup>
	MELAquick	MELAquick 12+/12+ p <sup>4)</sup>

- <sup>1)</sup> Label printing only; from software version v22.0.3
- <sup>2)</sup> Label printing only; from software version v4.0.1
- <sup>3)</sup> Label printing only; from software version v2.3.1;  
Log printing; from software version v2.6.1
- <sup>4)</sup> Log printing only; from software version v5.21

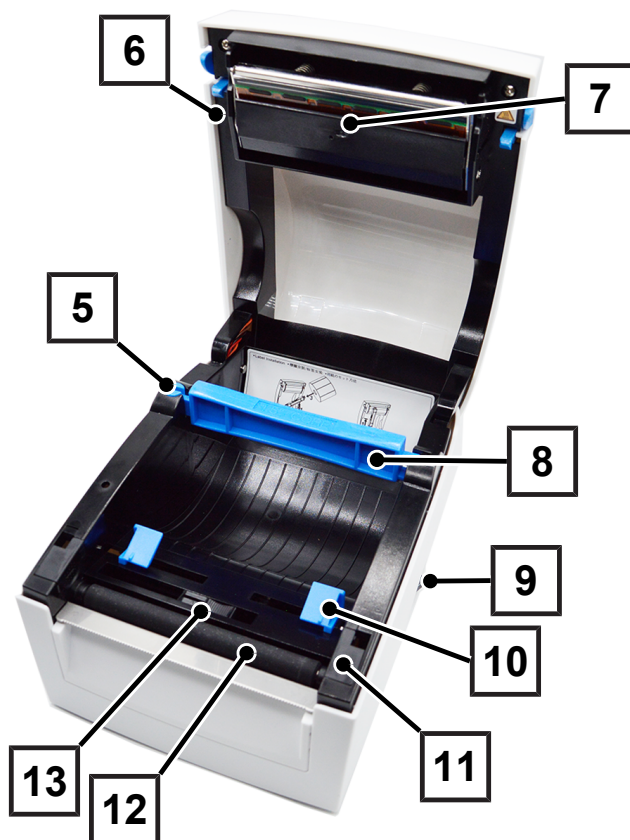
## Views of the device

### Front view of the device





*Interior view of the device*



- 5 Reel dispenser
- 6 Print head lever
- 7 Print mechanism with print head
- 8 Roll core
- 9 Power switch (ON/OFF)
- 10 Material guidance
- 11 Roller cover
- 12 Printer roller
- 13 Sensor

*Rear view of the device*



- 14 Power cable connection
- 15 Continuous paper feeder
- 16 Serial interface (RS-232)
- 17 Ethernet interface (RJ45)
- 18 USB interface



## FEED button

After pressing the FEED button, the printer moves the label to the specified stop position. If the label does not stop at the correct position, the label material must be calibrated, see [Automatic detection of material length](#) [► Page 15]. For log printing: When printing with continuous media, pressing the FEED button will advance the material until you release the FEED button.

## LED

There is an LED on the FEED button that indicates the operating status of the printer.

The following statuses are possible:

LED		Status	Description
	green	Standby mode	Printer is ready for operation
	red (flashing)	Error mode	Printer in error

## 4 Commissioning

### Loading printing material



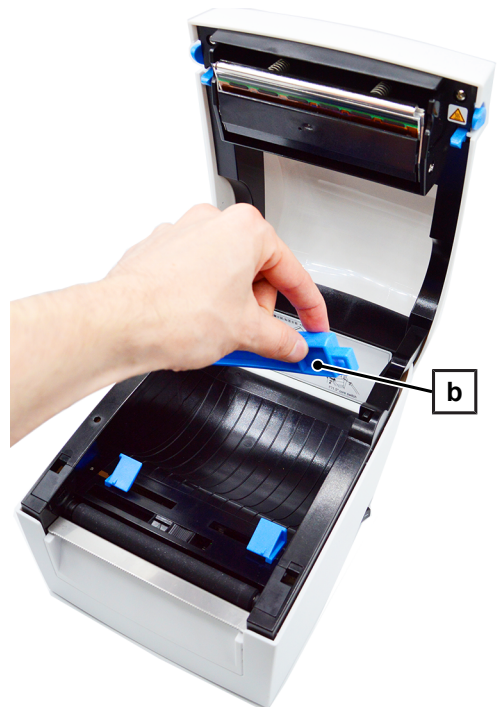
#### PLEASE NOTE

To achieve a good printing outcome and to secure the longest-possible life of the printer, use only the printing materials available from MELAG.

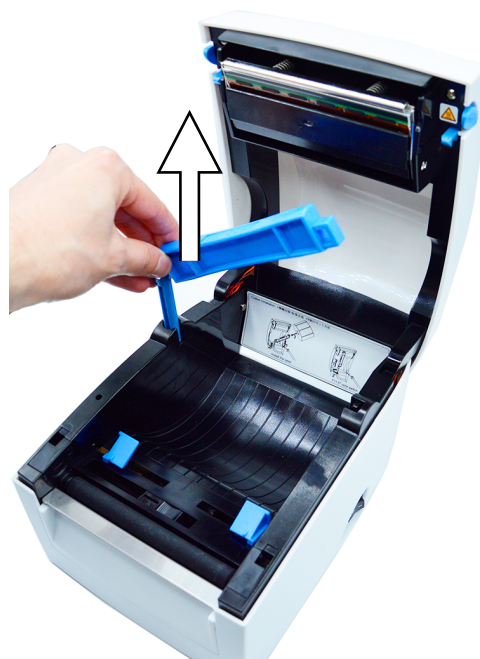
1. Open the housing cover by pressing the two buttons (pos. a) on the right and left side of the housing cover.



2. Unlock the roll holder (pos. b).

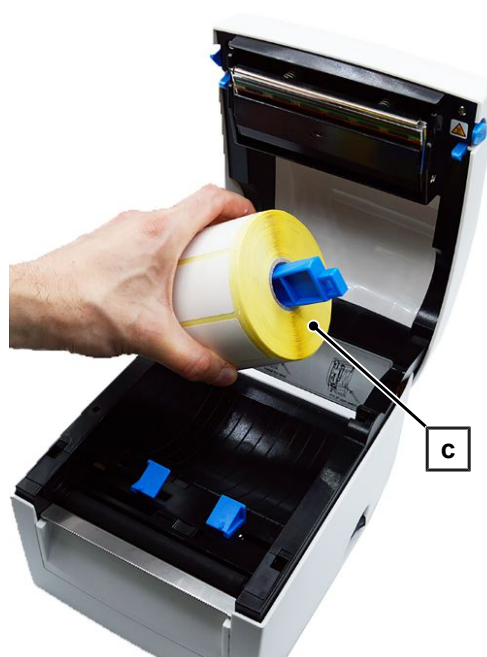


3. Lift the roll holder and pull it out as far as it will go.



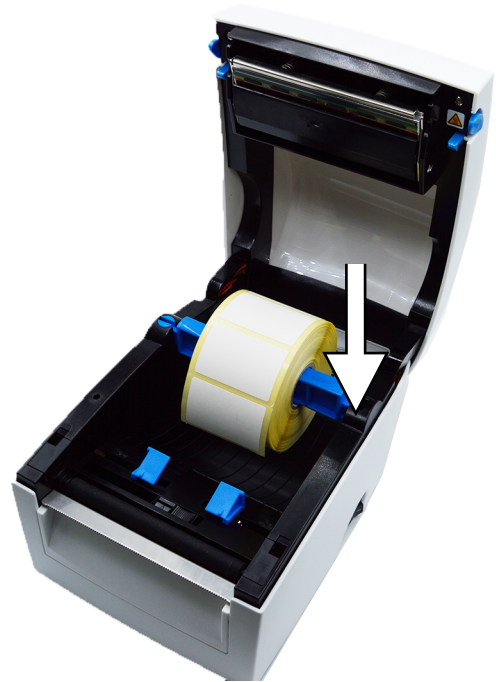
4. Slide the print roll (pos. c) onto the roll holder.

*Example view with one label roll!*



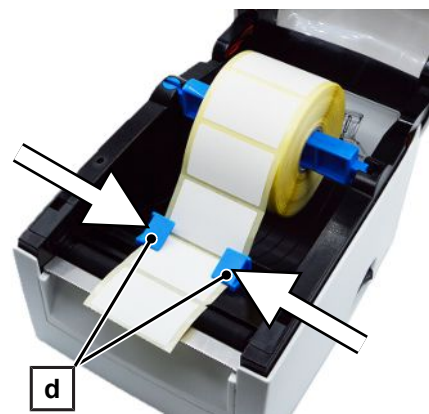
5. Now press down the roll holder and lock it in place.

Position the sensor, see [Adjusting the sensor](#) [► Page 14].



6. Slide the printing material under the material guide (pos. d) and pull it forward.

Then slide the material guide to the edge of the printing material.



7. Close the housing cover.

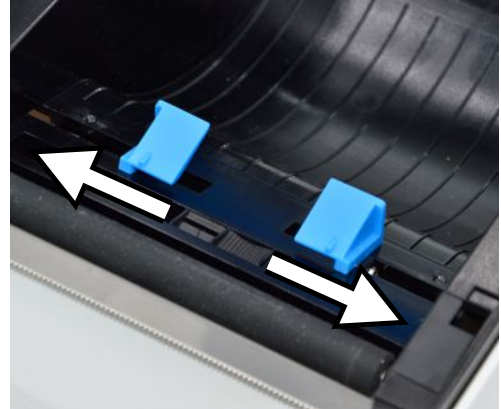


## Adjusting the sensor

The sensor must be correctly adjusted for optimum material feed.

Proceed as follows:

1. Open the housing cover.
2. Slide the sensor to the centre of the material.



3. Close the housing cover again and run an [Automatic detection of material length](#) [▶ Page 15].

## Switching on the printer

The following must be fulfilled or present:

- ✓ The printing material is loaded correctly, see [Loading printing material](#) [▶ Page 11].
- ✓ The printer is connected to a power supply.

1. Switch on the printer at the power switch (pos. a) at the lower right-hand side. The LED on the FEED button should now light up red for 5 seconds and then green.

**PLEASE NOTE:** During initial commissioning, carry out an [Automatic detection of material length](#) [▶ Page 15].



2. Press the FEED button (pos. b) to activate the material feed as required.



## Automatic detection of material length

The printer can automatically detect the material length and save it. This means that the printer does not have to be provided with the material length from the PC first.

The following must be fulfilled or present:

- ✓ The printing material is loaded correctly, see [Loading printing material](#) [► Page 11].
  - ✓ The sensor is in the correct position, see [Adjusting the sensor](#) [► Page 14].
  - 1. Switch off the printer.
  - 2. Press the FEED button while switching on the printer.
  - 3. Wait until the LED flashes red.
  - 4. Then release the FEED button. The printer will now measure the printing material and save the material length.
- ➔ If the calibration of the printing material was successful, a test print will be printed, see [Reading out the printer configuration \(print self-test\)](#) [► Page 20].

## Setting up the printer at the steam sterilizer

### Method 1: Connecting the device directly to the printer

**Set up the printer as output medium at the device**

*Example explanation of how to set up label printing on the Careclave 618 and Vacuclave 550*



#### PLEASE NOTE

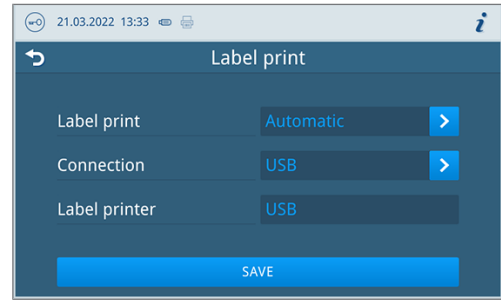
For further information, please refer to the user manual of your device.

The following must be fulfilled or present:

- ✓ The printer is connected to a power supply.
- ✓ The USB cable of the printer is connected with the steam sterilizer.
- 1. Switch on the printer.
- 2. Switch on the steam sterilizer at the power switch.
- 3. Press the **Label print** button in the **Settings** menu.



4. Press the  button to make changes.



5. Activate or deactivate the desired setting by selecting or deselecting it.
- ➔ For the option **Automatic** a dialog follows for the definition for which programs the automatic label print should take place.
6. Confirm the changes with **OK**.
7. Press **SAVE** to accept the changes.

## Method 2: Setting up for MELAtrace



### NOTICE

The printer should best be integrated in a network by the IT company that services your practice.

To enable the printer to be found in the search by MELAtrace, the printer must be installed in the same subnetwork as the computer on which MELAtrace is installed.

The following options for integration into the (practice) network are possible:

- [Automatic connection with DHCP server](#) [► Page 16]
- [Manual connection to the \(practice\) network](#) [► Page 17]

### **Automatic connection with DHCP server**

The Dynamic Host Configuration Protocol (DHCP) communication protocol is activated in the printer at the factory. This allows the network configuration to be automatically assigned to the printer by a DHCP server.

The following must be fulfilled or present:

- ✓ The printer is connected to a power supply.
  - ✓ An appropriately configured DHCP server in the practice network.
1. Connect the Ethernet cable to the corresponding port on the back of the printer. Connect the printer to the existing network.
  2. Switch on the printer.
    - ➔ The network configuration is automatically assigned to the printer.
  3. Open MELAtrace and connect to the printer.



### Manual connection to the (practice) network

If there is no DHCP server in the existing network, you must determine the network situation of the computer on which MELATrace is installed and then assign a free IP address to the printer.

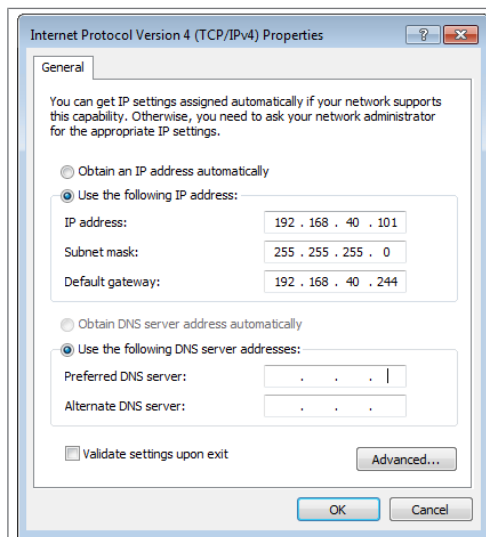


#### PLEASE NOTE

The following instructions apply to the procedure for a Windows operating system. Should a different operating system be installed on your computer, change the IP address manually in accordance with the relevant instructions.

#### Determining the network situation

1. Open on the computer via **Start > Control panel > Network and Internet > Network and Sharing Center**.
2. Select **Local Area Connection** and open the **Properties** window.
3. Select **Internet Protocol Version 4 (TCP/IPv4)** from the list and select **Properties**.



→ The current network configuration is displayed.



#### NOTICE

The printer should best be integrated in a network by the IT company that services your practice. The various methods of network configuration mean that MELAG can only provide support for the direct connection of the printer to the steam sterilizer.

#### Assigning the IP address to the printer

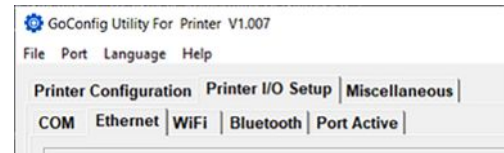
The following must be fulfilled or present:

- ✓ The printer is connected to a power supply.
- ✓ The GoConfig software is available.

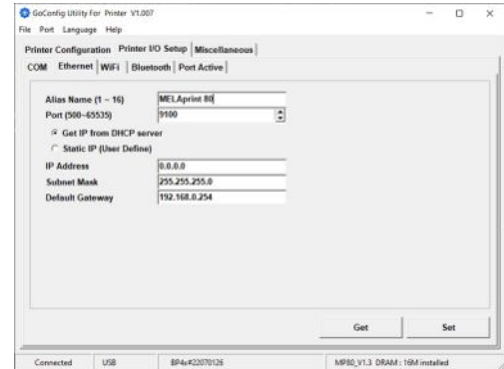
**PLEASE NOTE:** The software can be downloaded from the download centre at [www.melag.com](http://www.melag.com).

1. Connect the USB cable to the USB port on the back of the printer and connect the other end to the computer on which GoConfig is available.
2. Switch on the printer.
3. Start the GoConfig program.

4. Open the network settings via the **Printer I/O Setup** > **Ethernet** tab.



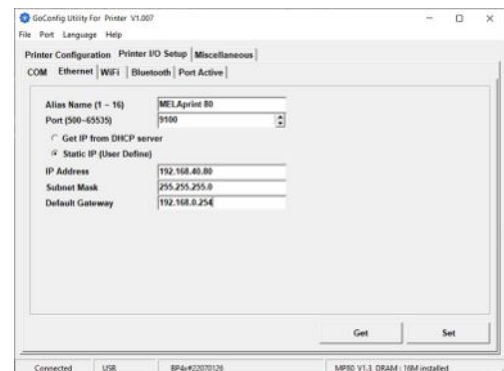
5. The factory settings of the printer are displayed.



6. Activate the option **Static IP**.

Fill in the entry mask according to your network configuration.

*Example view of a network configuration.*



7. Confirm the entry with **Set**.
  - ➡ The printer confirms that the settings have been accepted with a beep.
8. Unplug the USB cable from the printer and the computer.
9. Connect the printer to the network using the Ethernet cable supplied.
10. Open MELAt race and connect to the printer via MELAt race.

**PLEASE NOTE:** For more information on setting up the printer in MELAt race, see the MELAt race user manual.

## Control of printer integration into the practice network

### Accessing the printer web page

- ✓ Printer and computer must be on the same network.
- 1. Make a test print, see [Reading out the printer configuration \(print self-test\)](#) [► Page 20].
- 2. Open a web browser and enter the IP address of the printer in the address bar to access the web page.
- 3. Log in.

**PLEASE NOTE:** The default user name is *admin* and the default password is *1111*.

Please Input Login Account	
Account	<input type="text"/>
Password	<input type="password"/>
Login	Cancel

### Checking the IP address

- 1. Working in the left-hand navigation bar, select the **Configuration** menu.

The screenshot shows the printer's web interface. On the left is a navigation bar with the following menu items: Configuration, Maintenance, Printer Control, Diagnosis, Alert Message, and Status. The 'Configuration' menu is selected. The main content area displays the 'Printer Status' page, which includes sections for 'Printer Information' (Model: B080, Firmware: V0.1), 'Server Information' (Server Name: B14, Mac Address: 80-10-0A-1D-3C), and 'TCP/IP Status' (IP Address: 100.254.229.66, Subnet Mask: 255.255.0.0, Gateway: 192.168.0.254, DNS Server: 192.168.0.254, Domain Name: ).

- 2. Working in the left-hand navigation bar, select the **TCP/IP** and check the IP address.

**PLEASE NOTE:** You can also make changes to the network settings on the printer web page.

## Reading out the printer configuration (print self-test)

The self-test function helps to find out whether the printer is working properly.

The following must be fulfilled or present:

- ✓ The printing material is loaded correctly, see [Loading printing material](#) [► Page 11].
- ✓ The sensor is in the correct position, see [Adjusting the sensor](#) [► Page 14].

1. Switch off the printer.
2. Press and hold the FEED button and switch on the label printer simultaneously.
3. Wait until the LED flashes red.
4. Then release the FEED button.

→ The following sample test print (here as an example: when a DHCP server has assigned an IP address to the printer) is output:

MP80_V1.3	Model & version
USB S/N: 2207006C	USB ID setting
Serial port: 96, N, 8, 1	Serial port setting
MAC: 00 1D 9A 0A 15 39	MAC address
IP 192.168.56.144 [DHCP_100IP]	IP address
Gateway 192.168.0.244	Gateway setting
Sub-mask 255.255.255.0	Netmask setting
Card status: Not detected [00]	CF card status
Network: LAN ON-LINE	Network connection
PORT State L S E U B	Interface status
1 1 1 1 1	
#####	#####
0000 FORM(S) IN MEMORY	Number of saved forms
0000 GRAPHIC(S) IN MEMORY	Number of saved graphics
000 FONT(S) IN MEMORY	Number of saved fonts
000 ASIAN FONT(S) IN MEMORY	Number of saved Asian fonts

## Daily operation

In daily operation, first switch on the printer and then the steam sterilizer. This ensures that the printer is immediately recognized as an output medium.

The printer should remain switched on during operation of the steam sterilizer in order to ensure faultless communication between steam sterilizer and printer and to avoid repeated calibration after reactivation.

## 5 Troubleshooting

### General malfunctions

Problem	What you can do
The printer is switched on but the LEDs are not lit.	Check the power supply.
The LED lights up red after printing.	<p>Check if there are any errors in the software setting or the print commands.</p> <p>Check if you are using suitable printing material.</p> <p>Check if there is a material jam.</p> <p>Check whether the printing material has been used up.</p> <p>Check if the printing mechanism is closed (wrong position of the thermal print head).</p> <p>Check if the sensor is blocked by the printing material.</p>
The printing process runs without executing the print.	<p>Load suitable printing material correctly.</p> <p>Select the correct printer driver.</p> <p>Select the correct printing material and print mode.</p>
Printing material is jammed during printing.	Remove the jammed media. If printing material is stuck on the thermal print head, remove it and clean the head using a soft cloth moistened with alcohol.
Printing is done piecemeal and the printout is not complete.	<p>Check if printing material is stuck on the thermal print head.</p> <p>Check the application software for errors.</p> <p>Check for errors in the start position setting.</p> <p>Check the power supply.</p>
During printing, part of the printing material is not printed completely.	<p>Check if the thermal print head is dusty or otherwise dirty.</p> <p>Use the internal command “~T” to check if the thermal print head performs a complete print operation.</p> <p>Check the quality of the print material.</p>
The positioning of the print is incorrect.	<p>Check if the sensor technology is covered by printing material or dusty.</p> <p>Check if the label liner is suitable.</p> <p>Check the setting of the guide, see <a href="#">Loading printing material</a> [► Page 11].</p>
A label is skipped during printing.	<p>Check the label length setting.</p> <p>Check if the sensor is dusty.</p>
The printout is unclear.	<p>Check the light/dark setting.</p> <p>Check if the print head is soiled with glue or otherwise dirty.</p>

## LED status

LED	Signal tone	Problem	What you can do
Red	2 x 4 signal tones	Pressure mechanism is not closed properly.	Open the pressure mechanism and close it again.
Red (flashing)	--	High temperature at the print head.	When the temperature drops to normal, the printer automatically returns to standby mode.
Red	2 x 2 signal tones	Material not recognized.	Check the position of the sensor, see <a href="#">Adjusting the sensor</a> [► Page 14]. If the sensor technology still does not detect the material, run the <a href="#">Automatic detection of material length</a> [► Page 15] again.
		Material used up.	Insert a new roll.
Red	2 x 2 signal tones	Unusual material feed.	The print media has wrapped around the rubber rollers, the sensor cannot detect the label gap or the "black mark". There is no more material. Readjust the sensor, see <a href="#">Adjusting the sensor</a> [► Page 14].
Red	2 x 2 signal tones	Memory is full; the printer prints: "Memory full"	Delete superfluous data or install a memory extension.
Red	2 x 2 signal tones	The file is not found; the printer prints: "Filename cannot be found."	Use the "~X4" command to print all the files. Then check if the files exist and if the names are correct.
Red	2 x 2 signal tones	The filename is repeated; the printer prints: "Filename is repeated."	Change the file name and reload the file.

## 6 Maintenance

- Switch off the printer and pull the power plug before cleaning and/or maintenance.
- Do not use any solvents such as benzine or acetone.
- Should you use cleaning alcohol, wait until it has evaporated entirely before closing the housing cover.

### Routine maintenance

Routine maintenance should be performed weekly and comprises cleaning of the following components:

#### Print head and print roller

Clean the print head and print roller as follows.

1. Open the upper housing cover.
2. Remove any soiling such as dust and stains from the print head or printer roller. Use a soft, non-fuzzing cotton cloth.

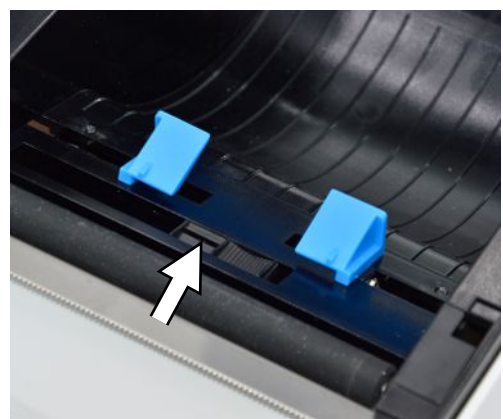


3. Close the housing cover after cleaning.

#### Sensor

Clean the sensor as follows:

1. Open the upper housing cover.
2. Remove any soiling such as dust and stains from the sensor. Use a soft, non-fuzzing cotton cloth and pure alcohol.



3. Wait until the alcohol has evaporated completely and then close the housing cover.

## Replacing the print head

The following must be fulfilled or present:

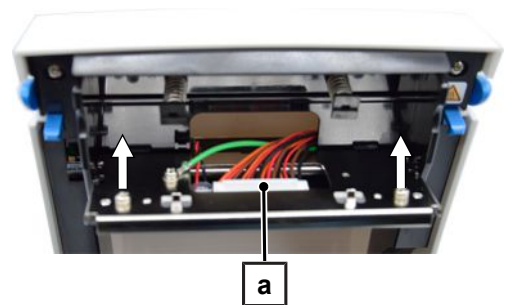
- ✓ The printer is switched off.
- ✓ The print head has cooled down.
- 1. Open the housing cover.
- 2. Lower the print head lever to open the print mechanism.



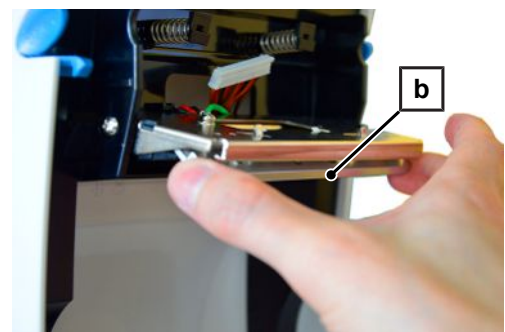
- 3. Fold down the print head holder.



- 4. Disconnect the print head connector (pos. a) and remove the print head screws.



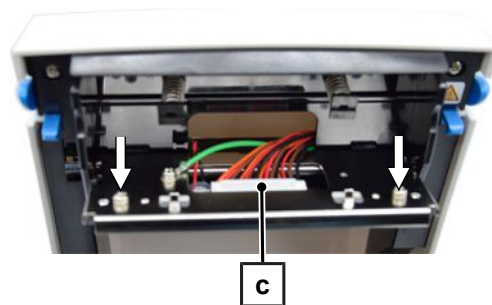
- 5. Remove the print head (pos. b) by taking it out at the front end on the lower side of the print head holder.



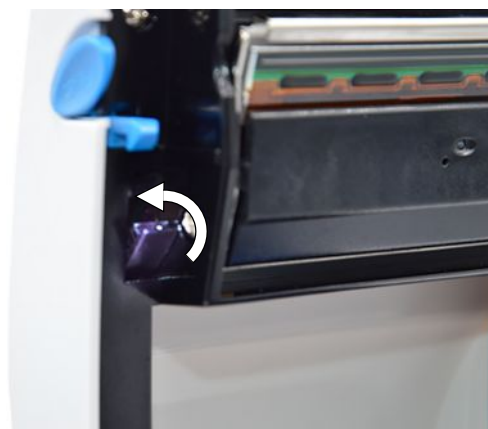
- 6. Insert the new print head.



7. Fix the print head and connect the print head (pos. c).



8. Fold the print head holder back into its original position and then close the print head lever.



9. Close the housing cover and check the print result.

## 7 Technical data

<b>Model name</b>	<b>MELAprint 80</b>
Device dimensions (H x W x D)	16.6 x 16.8 x 21.8 cm
Weight	1.5 kg without consumables
Electrical connection	AC 100-240V $\pm 10$ %, 50/60 Hz
Temperature	Operation: 5 - 40 °C Storage: -20 - 50 °C
Relative humidity	Operation: 30 - 85 %, non-condensing Storage: 10 - 90 %, non-condensing
Printing method	Thermal printing
Print resolution	203 dpi
Printing speed	102 mm/s
Print span	max. 108 mm
Storage life of label printouts	see product data sheet <sup>1)</sup>
Manufacturer <sup>2)</sup>	GODEX INTERNATIONAL Co., Ltd. 13F, No.168, Jian-Kang Road, Zhonghe Dist, New Taipei City 235 Taiwan

<sup>1)</sup> The original product data sheet from the label manufacturer is available from MELAG on request.

<sup>2)</sup> The original manufacturer's user manual is available from MELAG on request.

## 8 Accessories

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Consult your MELAG stockist regarding accessories and consumption media. When ordering consumables, use the article number listed below.

Article	Art. no.
Serial connection cable, MELAprint 80	ME15823
MELAprint 60/80 labels (double adhesive) 6 rolls, 1,000 labels each	ME41942
MELAprint 60/80 labels (single adhesive) 6 rolls, 1,000 labels each	ME41943
Printer paper MELAprint 80 (2 rolls, 50 m each)	ME41946



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Manufacturer:

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