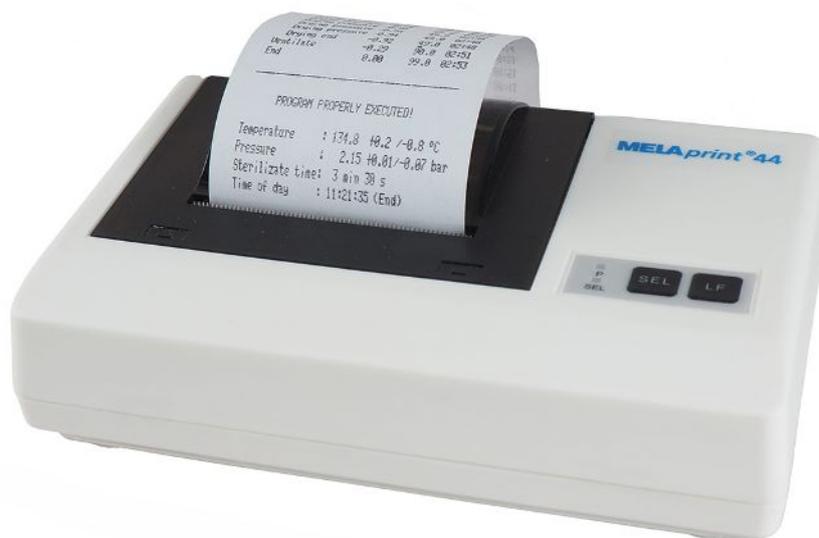


# User manual

## MELAprint 44

### Log printer



EN

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 treatment 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 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.

Should the user manual no longer be legible, damaged or lost, please obtain a new copy from MELAG. State the device type and your address in an e-mail.

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

## Symbols used

Symbol	Explanation
	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	Explanation
[Save]	Words in square brackets refer to the names of pushbuttons.
Universal-Program	Words or phrases appearing on the display of the device are marked as display text.

## Symbols on the device



In affixing the CE mark, the manufacturer declares that this product fulfils the corresponding EU requirements.



The device may not be disposed as domestic waste. The vendor is responsible for appropriate disposal of the device - it must be delivered to the vendor to be disposed of.

## Disposal

MELAG devices are synonymous with high quality and a long life-span. When you eventually need to de-commission your MELAG device, we offer a special disposal service. 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. Dispose of all non-required packaging materials at the collection points of the dual system.

## 2 Safety

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

### Cable and power supply

- Only ever operate the device with the original power supply.
- Disconnect the device from the mains during long downtimes.
- Only connect the device to those devices intended for operation with this device.
- Only connect the device to a suitable power source.
- Only operate the device with 5 V DC.

### Set-up, 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.
- Set-up 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.

### 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 authorized persons. The guarantee and warranty are forfeited as soon as the device is opened by anyone other than a member of a MELAG-authorized 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 44 log printer
- User manual
- Ribbon cartridge, already inserted
- Paper roll
- Power supply
- Serial connection cable (RS232)

#### **Optional**

- Network adapter for MELAprint

### Intended use

The MELAprint 44 log printer serves batch documentation and log output of the MELAG devices listed below.

The log printer can be connected directly to an RS323 interface. If a device with RJ45 interface is connected, an adapter (e.g. the MELAG network adapter) is required.

#### **MELAG network adapter for MELAprint**

The MELAG network adapter enables the protocol printer to be connected to the network to print protocols from compatible devices via the practice network. The network adapter is connected directly to the protocol printer via RS232 interface and integrated into the practice network via an RJ45 interface (ethernet cable).

### Compatibility with MELAG devices

Table 1: Overview of current device types

Category	Product class	Device type
Cleaning and disinfection	MELAtherm	MELAtherm 10 Evolution
		MELAtherm 10

Category	Product class	Device type
Steam sterilizers	Pro-Class	Vacuklav 23 B+ Vacuklav 31 B+ Vacuklav 24 B+ Vacuklav 24 B/L+ Vacuklav 30 B+
	Premium-Plus-Class ( <i>Evolution</i> )	Vacuklav 40 B+ Vacuklav 44 B+ Vacuklav 41 B+ Vacuklav 43 B+
	Cliniklav	Cliniclave series
	MELAtronic EN/EN+	MELAtronic 23 EN MELAtronic 15 EN+
	Euroklav	Euroklav 29 VS+ Euroklav 23 VS+ Euroklav 23 S+
	MELAquick	MELAquick 12+/12+ p
Sealing device	MELAseal	MELAseal Pro

Table 2: Overview of older device types

Category	Product class	Device type
Steam sterilizers	Premium-Class	Vacuklav 40-B Vacuklav 44-B Vacuklav 41-B Vacuklav 43-B
	Vacuquick	Vacuquick 13-B Vacuquick 14-B
	Classic	Vacuklav 23-B Vacuklav 24-B Vacuklav 24-BL Vacuklav 30-B Vacuklav 31-B
	Euroklav	Euroklav 29V-S Euroklav 23V-S Euroklav 23-S Euroklav 29-S
	MELAtronic EN	MELAtronic 15 EN MELAtronic 17 EN
	Cliniklav	Cliniklav 25

## Views of the device

### Log printer



Fig. 1: Paper tray closed

- 1 Cover
- 2 Operating LED
- 3 Operating keys

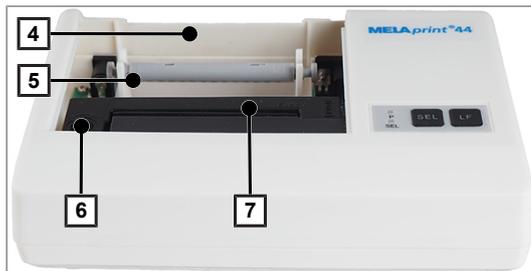


Fig. 2: Paper tray open

- 4 Paper tray
- 5 Roll dispenser
- 6 Transport button
- 7 Ink ribbon

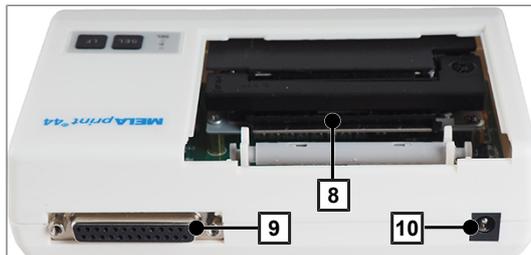


Fig. 3: Rear

- 8 Paper slit
- 9 RS232-connection
- 10 DC connection for power supply

Table 3: Operating panel of the log printer

Operating LED/operating keys		State	Status/function
	LED	P	On Device is switched on.
		SEL	On On-Offline mode is activated Data received
	Key	SEL	Switch the printer on and offline Start, interrupt and continue a print job Perform a self-test
		LF	Paper feed

**Network adapter for MELAprint**

The MELAprint network adapter enables integration of the log printer in the the practice network to print logs directly from network-capable MELAG devices.

The network adapter is not included with the log printer and is optionally available.



- 1 Reset key for resetting the user-defined settings to the factory settings
- 2 LED to indicate the status



- 3 Ethernet socket (RJ45) for connecting the Ethernet cable to the network
- 4 RJ12 socket for connecting the serial cable to the log printer
- 5 Network socket (5V/ DC) for connecting the power supply cable to the power supply

Table 4: Network adapter status displays

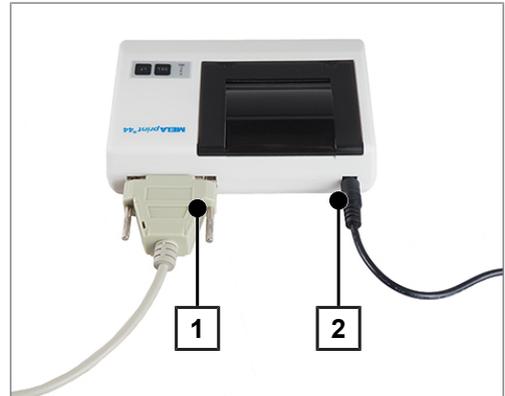
LEDs	State	Meaning
Power	On	The network adapter is switched on / connected to the power supply
	Off	The network adapter is switched off / not live
	Flashes slowly	Network adapter boots (the network adapter firmware is active)
	Flashes quickly	Start configuration of the network adapter successful
Data	Flashes	Data is being exchanged via the Ethernet interface between the computer and the network adapter
LAN	On	Connected with network
	Off	Not connected with network

## 4 Commissioning

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### Preparing the connections

1. Insert the the connection cable connector (pos. 1) in the RS232 connection of the log printer.



2. Connect the power supply (pos. 2) with the DC connection of the log printer.

### Inserting the paper roll

✓ *The printer is supplied with power*

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1. Push the cover to the rear to open the paper tray.



2. Cut off the corners of the paper roll on both sides.





### NOTICE

Never pull the paper roll through the printing mechanism.

This could result in premature wear of the paper feed.

- Always operate the paper feed with the LF key.

3. Guide the cut ends of the paper roll through the paper slit from behind. The paper roll will wind off from below.



4. Press the LF button until the end of the paper roll protrudes from the upper paper tray. **NOTICE! The paper may not be allowed to jam between the cover and the print head.**
5. Slide the roll dispenser into the paper roll.
6. Insert the roll dispenser in the bracket in the paper tray.
7. Close the paper tray. Ensure that the fore end of the paper roll protrudes from the slit in the cover.
8. Perform a function test. To do so, disconnect the power supply from the socket.
9. Hold the SEL key depressed.
10. Plug the power supply in the socket.
11. Release the SEL button.

➔ The log printer will print, stating the settings and the character reserve.

## Connecting a log printer to a MELAG device with a series data connection

Applies to the devices:

- Pro-Class
- S-Class
- Cliniclav 25
- MELAtronic EN/EN+
- MELAquick 12+/12+ p
- MELAseal Pro

### Connecting the log printer to the steam sterilizer

With Pro-Class or S-Class devices, please comply with the following:

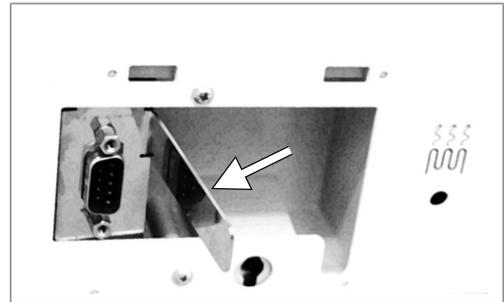
Remove the white cover on the front underside of the steam sterilizer before connecting the serial cable:

1. Open the door of the steam sterilizer.

2. Insert a coin in the slot of the white cover and turn it a quarter of a revolution to the right or left; then remove the cover.



3. Fold out the metal strap behind the cover forward to the left.



4. Push the metal frame downwards slightly until it snaps into place and can no longer fold back independently.



#### PLEASE NOTE

If the log printer or a computer is constantly connected to the steam sterilizer, you can insert the serial cable of the log printer in the cable guide, fold in the metal strap and replace the cover.

Connect the log printer as follows:



#### NOTICE

Only ever operate the log printer with the original power supply.

5. Connect the serial cable of the log printer in the RS232 series data connection of the steam sterilizer. The user manual of the respective MELAG device contains information as to the location of the RS232 data connection.
6. Connect the power cable of the log printer to the socket.
  - ↳ The log printer activates automatically.
7. Press the SEL key to send data to the printer and print.



#### PLEASE NOTE

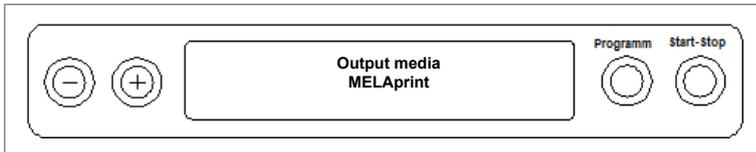
The printer is unable to receive data in off-line mode.

- The SEL LED must illuminate.

### Setting the log printer as the output medium (steam sterilizer)

1. Switch on the steam sterilizer.
2. Wait until the display shows the initial state.
3. Press the (+) and (-) buttons simultaneously to open the setup menu `Function`.
  - ↳ The display shows the `Function: notification Last batch number`

4. Navigate in the `Function` menu using the (+) or (-) buttons until the display shows `Function: log output`.
5. Press the (P) button to select the sub-menu `Log issue - Output medium`.
6. Press the (P) button again.
  - ↳ If an output medium has not been selected, the display shows `Log output - no output medium`.
7. Navigate using the (+) or (-) buttons until the display shows:

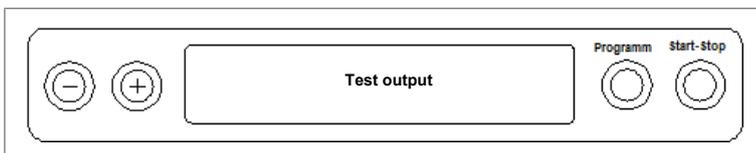


8. Press the (P) button to confirm.
  - ↳ The display returns to the `Log output - output medium menu`.
9. Press the (S) button to return to the setup menu `Function: log issue`.
10. Press the (S) button repeatedly to leave the menu.

### Test output

Perform a test print-out to test the connection of the log printer to the steam sterilizer. Proceed on the steam sterilizer display as follows:

1. Press the (+) and (-) buttons simultaneously to open the setup menu `Function`.
  - ↳ The display shows the `Function: notification Last batch number`
2. Navigate in the `Function` menu using the (+) or (-) buttons until the display shows `Function: log output`.
3. Press the (P) button again.
4. Navigate using the (+) or (-) buttons until the display shows:
5. Navigate using the (+) or (-) buttons until the display shows:



6. Press the (P) button to start the print-out. This is followed by the display of `Output`.
7. To abort the test output or to leave the menu once the output has been performed, press the (S) button.
  - ↳ The display shows `Function: log issue`.
8. Press the (S) button repeatedly to leave the menu.

### Connecting the log printer to the MELAseal Pro

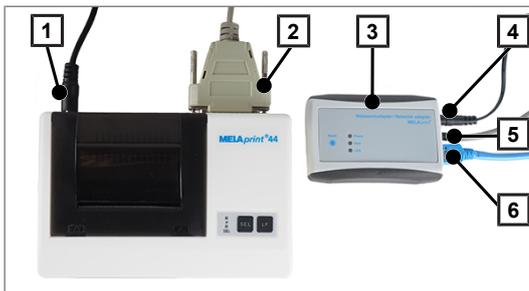
1. Connect the log printer serial connection cable to the RS232 interface on the rear of the sealing device.
  2. Connect the power cable of the log printer to the socket.
    - ↳ The log printer activates automatically.
    - ↳ The sealing device recognizes the log printer automatically. The sealing device does not need be set as the output medium.
- ↳ The log printer outputs a log row for every sealing procedure performed.

## Connecting a log printer to a MELAG device with an Ethernet data connection

Applies to the devices:

- MELAtherm 10
- MELAtherm 10 Evolution
- Cliniclave 45 / 45 M / 45 D / 45 MD
- Premium-Plus-Class (Evolution)
- Premium-Class
- Vacuquick 13-B, 14-B

### Connecting the network adapter



- |   |                                      |
|---|--------------------------------------|
| 1 | DC connection of the log printer     |
| 2 | RS232-connection                     |
| 3 | Network adapter                      |
| 4 | DC connection of the network adapter |
| 5 | RJ12 connection                      |
| 6 | RJ45 connection                      |



#### PLEASE NOTE

A network adapter is required to connect a MELAG device with an Ethernet data connection to the log printer.

First connect the network adapter to the log printer:

1. Insert the serial cable to the RS232 data connection of the log printer.
2. Connect the other end of the serial cable to the RJ12 socket of the network adapter.
3. Connect the network adapter to your MELAG device using the Ethernet data connection (RJ45 socket). The user manual of the respective MELAG device contains information as to the location of the Ethernet data connection.



#### PLEASE NOTE

Use the covered network cable to prevent the emission values from being exceeded. We recommend the type SF/UTP network cable in accordance with ISO/IEC 11801 Cat.5e.

4. Connect the power cable of the log printer to the socket.



#### NOTICE

Only ever operate the log printer with the original power supply.

5. To connect the network adapter to the power supply, connect the appendant power supply to the DC connection and the power plug in the socket.

### Determining the network situation and changing the computer IP address (temporary)

The MELAG device must be located in the same subnetwork as the MELAG device in order for it to recognize the log printer in the practice network. The factory setting of the log printer IP address is **192.168.40.240**.

If this is not the case, the IP address of the log printer must be adapted as follows:



**PLEASE NOTE**

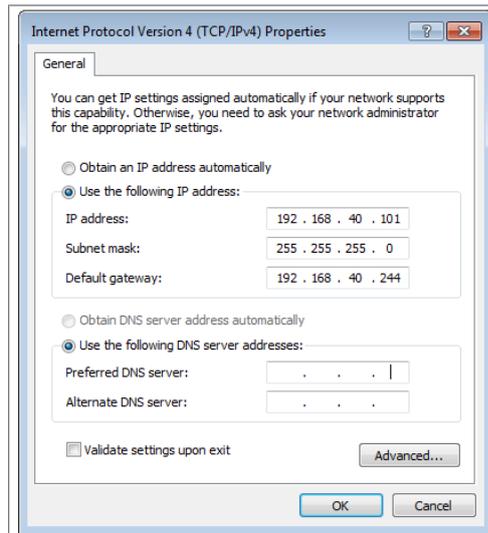
The following instructions apply to the procedure for a Windows operating system. Should a different operating system be installed on your computer, change the IP address manually in accordance with the relevant instructions.

✓ *The network adapter is connected to a power supply.*

1. Connect the Ethernet cable to the Ethernet socket on the network adapter and connect the other end with a computer.
2. Working on the computer **Start > Control panel > Network and Internet > Network and sharing centre**.
3. Select **LAN connection** and open the **Properties** window (right mouse-click).
4. Working in the list **Internet protocol version 4 (TCP/IP)** select **Properties**.
5. To change the IP address of the computer, select the applicable version:
  - *The computer has a fixed IP address*
  - *The computer obtains the IP address automatically*

**The computer has a fixed IP address:**

1. Click on the [Advanced] pushbutton.

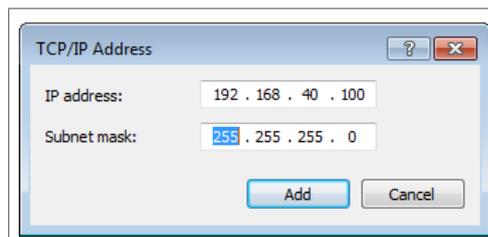


**PLEASE NOTE**

After concluding this configuration, reset the following settings to restore communication between the computer and the practice network.

- Note the data displayed before continuing with the configuration.

2. Working under **IP addresses** select the [Add] pushbutton and enter any IP address (e.g. 192.168.40.100). The subnet mask is updated automatically.

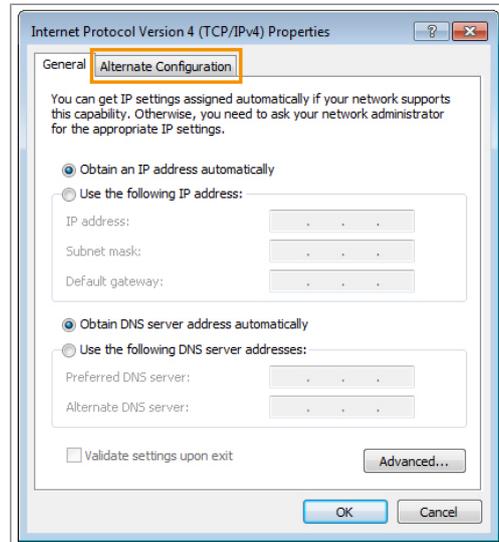


3. Accept the settings with [Add].

**The computer obtains the IP address automatically:**

This configuration requires that the network adapter be connected directly with the computer. See *computer has a fixed IP address*.

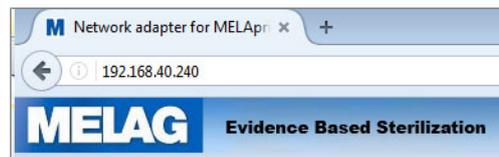
1. Working in the tab, select **Alternative configuration**.



2. Enter the IP address previously selected (e.g. **192.168.40.100**). The subnet mask is updated automatically. Confirm with [OK]

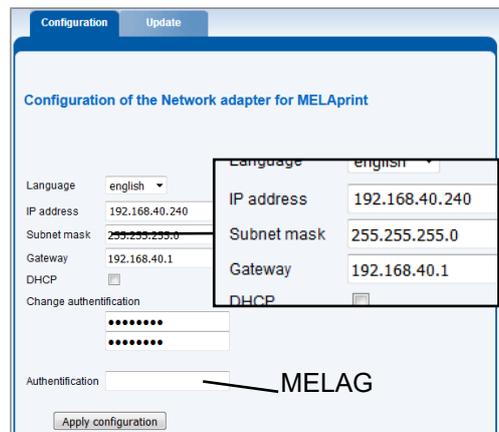
## Adapting the IP address of the log printer to the practice network

1. Open a web browser (e.g. Microsoft Internet Explorer ) and enter **http://192.168.40.240** in the address bar to access the website of the log printer.
2. To adapt the IP address of the log printer to the practice network, select the desired version:
  - *Assign the log printer a fixed IP address:*
  - *Connect the log printer in the practice network:*



### **Assign the log printer a fixed IP address:**

1. Working under **IP address**, enter the first three number blocks of the practice network. The last number block is assigned to the device connected in the network. A unique number is assigned to every device connected in the practice network.
2. Working under **Gateway**, enter the first three number blocks of the practice network. The fourth number block is specified by the practice network administrator.



3. Enter the password "MELAG" under **Authentication**.
4. Accept the settings with [Apply configuration].

**Connect the log printer in the practice network:**

- ▶ Disconnect the Ethernet cable from the computer and connect the cable directly to the steam sterilizer integrated in the network, or to a free network socket.

The IP address changed on the computer (e.g. **192.168.40.100**) must be returned to the original IP address after configuration.

**Re-establishing communication between the computer and the practice network:**

1. Working on the computer **Start > Control panel > Network and Internet > Network and sharing centre**.
2. Select **LAN connection** and open the **Properties** window (right mouse-click).
3. Working in the list **Internet protocol version 4 (TCP/IP)** select **Properties**.
4. To perform the original computer settings, select the applicable version:
  - To change the configuration manually, proceed as described in the section *The computer has a fixed IP address*. First enter the information which you noted previously.
  - To perform automatic configuration, proceed as described in the section *The computer obtains the IP address automatically*. If possible, set a checkmark under "Obtain IP address automatically".

## Registering the log printer on the MELAG device

The practice network must be operated in the following subnetwork so that the log printer can be recognized automatically in the MELAG device without any further settings being performed. **192.168.40.xx**.

**For MELAtherm 10 / Premium-Class / Vacuquick:**

Proceed as follows to register and save the log printer as the output medium in the MELAG device:

1. Activate the MELAG device and wait until the main menu is displayed.
2. Connect the power cable of the log printer to the socket.
  - ↳ The log printer activates automatically.
3. Switch off the MELAG device and then on again.
  - ↳ The MELAG device will recognise and save the IP address of the log printer automatically.



### PLEASE NOTE

Should these steps not be successful, it is probable that the IP address saved in the MELAG device and the log printer do not belong to the same subnetwork.

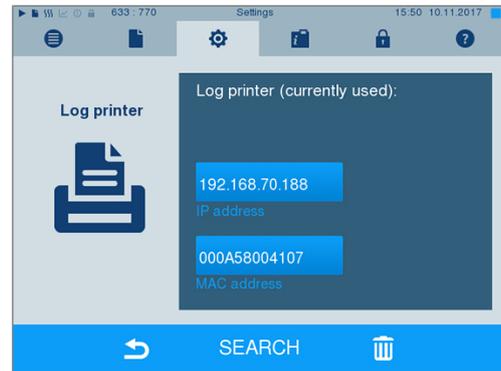
- In this case, change the IP address of the log printer in the MELAG device. Consult the technical manual of the MELAG device.

**For Premium-Plus-Class (Evolution) / Cliniclave series:**

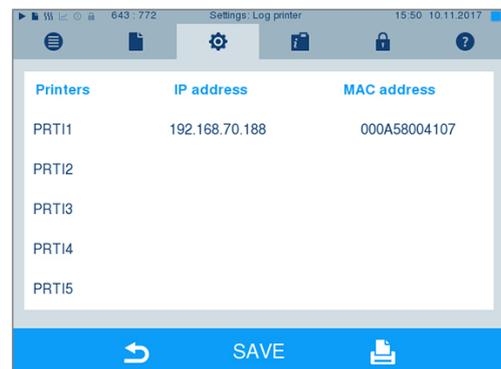
Proceed as follows to register and save the log printer as the output medium in the MELAG device:

1. Connect the power cable of the log printer to the socket.
  - ↳ The log printer activates automatically.
2. Select the **Settings** menu.
3. Navigate to the option **Log printer**. The display switches to the submenu **Log printer**. If a log printer has not been setup, the "IP address" and "MAC address" fields are empty.

4. Select SEARCH to display a list of all available log printers connected in the network.



5. Press the  symbol to search for all log printers available in the network. If one or more log printers are available in the network, these will be displayed in the list of printers.



6. Select the desired log printer from the list and confirm with SAVE.
7. The display returns to the submenu **Log printer**.
8. Press the  symbol to exit the menu.
9. Working in the menu **Settings > Logging** select the log printer for log output.



#### PLEASE NOTE

Should these steps not be successful, it is probable that the IP address saved in the MELAG device and the log printer do not belong to the same subnetwork.

- In this case, change the IP address of the log printer in the MELAG device. Consult the technical manual of the MELAG device.



#### PLEASE NOTE

If the log printer is connected with multiple MELAG devices, check whether the serial number of the MELAG is correct on every log printout.

## Switching MELAprint 42/44 on the MELAtherm 10

Working in the **SETUP MENU** switch the printer as follows:

1. Press  to navigate to **Autom. logging**.
2. Press  to open the **Autom. logging** menu.
  - The selectable output media are displayed consecutively.

3. Working in the **Autom. logging** menu, press  to navigate to **MELAp rint**.
  4. Hold  for at least three seconds.
    - ↳ All available printers are displayed with their MAC address.
  5. Press  to select the new printer.
  6. Press  to apply the printer.
    - ↳ The current value flashes.
  7. Press  to save the new value.
    - ↳ The value no longer flashes.
  8. Press  to leave the **SETUP MENU**.
    - ↳ The selected value is automatically saved when leaving the **SETUP MENU**.
- ↳ The new MELAp rint 42/44 is ready for operation.

### Setting the log printer as the output medium

Please note that you need to select the log printer as the output medium for immediate or subsequent log output independently of registration on the respective MELAp rint device. The user manual of the respective MELAG device shows how to set the output medium on the device.

### Test output

You can perform a test output to check the connection of the log printer to the MELAG device. Simply select any log and print it. Further instructions on selecting a log are outlined in the user manual of the respective MELAG device. How to perform a printer self-test is outlined here: [Self-test](#)  page 21].

## 5 Maintenance



### PLEASE NOTE

Check the legibility of the log printout on an annual basis. Given reduced legibility, produce a copy.

### Changing the ink ribbon

Change the ink ribbon as soon as the print quality declines.

1. Push the cover to the rear to open the paper tray.



2. Remove the paper roll from the paper tray.
3. Press on PUSH.



↪ The ink ribbon will rise on the opposite side.

4. Remove the ink ribbon from the bracket.
5. Insert the new ink ribbon in the bracket with the left-hand side first.  
The ink ribbon must snap in to the printer unit on the right-hand side.



6. Check the ink ribbon for its correct position.  
Tighten the ink ribbon by turning the transport button in the direction of the arrow.



7. Insert the paper roll as described on page [Inserting the paper roll](#) [▶ page 10].
8. Close the paper tray.

## Self-test

The printer will generate a test printout with all characters and information about the serial interface.

1. Hold the SEL key depressed.
2. Connect the power supply to a socket.
3. Release the SEL button.

➔ The printer will start with the test printout, which will stop automatically.

## 6 Technical data

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<b>Model name</b>	<b>MELAprint 44</b>
Device dimensions (HxWxD)	13.7 x 5.7x 8.2 cm
Electrical connection	100-250 V, 47-63 Hz, 0.5 A DC 5V ±5%, max. 5 A
Network cable	1.5 m long
Ambient temperature	0 – 50 °C
Relative humidity	0 – 80 %
Data connection	RS232C interface
Printing speed	1.5 rows per second 140 DPI
Dimensions paper roll (B, D)	5.75 cm ±0.5mm, Ø 4 cm
Max. paper thickness	80 g
IP address (factory setting)	192.168.40.240
Manufacturer	DATA MODUL AG Landsberger Str. 322 80687 Munich GERMANY

## 7 Accessories

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Consult your MELAG stockist regarding accessories and consumption media. When ordering consumption media, please state the serial number of your device and use the article number listed below.

Article	Art. no.
Printer paper (5 rolls)	35226
Ink ribbon	41940
Log printer plug-in power supply (Germany)	01041
Log printer plug-in power supply (international)	19400
Network adapter	40295
Network adapter plug-in power supply for MELAprint	30403
Network adapter plug-in power supply for MELAprint (UK/AUS/US/CHN)	30402
Printer cable for connection without network adapter (9 to 25 pole series)	40290
Printer cable for connection to a network adapter (25-pole series to RJ12)	15822

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Original instructions

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Your stockist

