

# **LARGE FIELD MAGNIFIER**

## **INSTRUCTION MANUAL**

MICROM International GmbH  
Robert-Bosch-Str. 49

D- 69190 Walldorf

387 690 - English



**CERTIFICATION**

MICROM International GmbH certifies that this instrument has been tested and checked carefully. Its technical data was verified before shipment to be in accordance with the published specifications.

The instrument complies with applicable international safety regulations.

**WARRANTY**

This MICROM product is warranted against defects in material and workmanship for a period of 1 year. Parts which prove to be defective during the warranty period will be repaired or replaced free of charge by MICROM International GmbH. No other warranty is expressed or implied. Unauthorized modification or repair by third party persons will void the warranty.

The warranty will expire in case of improper or wrong use of the instrument and in case the warning and precautionary messages are not observed. MICROM International GmbH is not liable for any occurring damage.

Errors and omissions excepted. Subject to amendment and improvement without further notice.

This instruction manual will be supplied together with each instrument. Further copies can be ordered at the nearest MICROM sales office by giving the serial number of the instrument, the number of the instruction manual and the date of issue.

This instruction manual is available in the following languages:

	Cat. No.
German:	387 689
English:	387 690
French:	387 691



**INTENDED USE**

*Dear Customer,*

Before putting the instrument into operation, please read these operating instructions carefully to familiarize yourself with its proper operation and functions.

The large field magnifier is used to facilitate the knife alignment and approach for sectioning.

Only skilled or specially trained personnel must work with this appliance.

The listed and marked safety measures as well as the regulations and hygiene measures of your respective lab must strictly be observed.

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MICROM Ser. No. :.....

Please enter the serial number, which is placed on the type plate on the rear side of the supply unit. This way, questions and service can be handled faster.

Instruction Manual No. 387690

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**Intended Use**

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## EC Certificate of Conformity

**Name and address of the manufacturer:** MICROM International GmbH  
Robert-Bosch-Straße 49  
D-69190 Walldorf

**Product designation:** Accessories for Rotary Microtomes  
**Type reference:** Large field magnifier

**Notification to Competent Authorities:**

These medical device have been registered with the German authority as "Microtomes" under the EDMA-classification code: 23-06-02

The designated product complies with the laid down regulation:

**DIRECTIVE 98/79/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
of 27 October 1998  
on in vitro diagnostic medical devices**

The designated product complies with the EC regulations by strictly observing the following norms:

**DIN EN ISO 14971:2001-03**

Medical devices - Application of risk management to medical devices (ISO 14971:2000).

**DIN EN 61010-1:2002-08**

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements (IEC 61010-1:2001).

**DIN EN 61326:2002-03**

Electrical equipment for measurement, control and laboratory use - EMC requirements (IEC 61326-1:1997 + A1:1998 + A2:2000); German version EN 61326:1997 + A1:1998 + A2:2001

**DIN EN ISO 9001:2000**

Quality management systems - Requirements (ISO 9001:2000)



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Hans Heid  
Managing Director

Walldorf, 8 July 2004

## Safety Precautions

<b>CAUTION!</b>
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**Please observe the following general precautions during operation of this appliance. Failure to comply with these precautions violates safety standards and the intended use of the instrument. MICROM International GmbH is not liable for misuse of the appliances and failure to comply with basic safety requirements.**

### **INSTRUMENT GROUNDING**

To avoid injury from electrical current, the large field magnifier must be connected with the safety ground. The large field magnifier is equipped with a three wire ground plug. The power outlet must be connected to the safety ground and must meet the International Electrotechnical Commission (IEC) regulations.

### **CAUTION: MAINS VOLTAGE**

Never remove appliance covers during operation. Component replacements must only be made by trained service personnel. Unplug the unit before removing or opening the covers.

### **DANGER IN EXPLOSIVE ENVIRONMENT**

The appliance must not be operated in the presence of flammable gases.

### **HAZARD OF RADIOACTIVE RADIATION AND INFECTION**

When working with radioactive specimens observe all applicable radiation safety procedures. Use the appropriate safety and disinfection measures when working with infectious specimens.

### **HAZARD OF MALFUNCTION**

To avoid the hazard of malfunction of an instrument, it must only be operated in a controlled electromagnetic environment. This means, that transmitters such as mobile phones must not be operated in their close vicinity.

## WARNING SIGNALS AND SYMBOLS

The installation and routine use of the large field magnifier is easy and safe if the instructions in this manual are being observed.

However, the situations which might be risky for the personnel or equipment are specially marked in this manual with the following symbols and messages.



**Note:**

Special instructions regarding operation of the large field magnifier.



**Caution:**

Special precautionary measures to prevent damage to equipment. For a long lifetime of the equipment, please observe these instructions carefully.



**Danger:**

Special warning messages to prevent harm to persons and/or serious damage to equipment. For your own safety, please observe these instructions carefully.



**Separate taking back of electrical and electronic instruments in the countries of the European Union:**

This is to be applied in the countries of the European Union and other European countries with a separate collecting system within the waste management.

This product, being an electro and/or electronic instrument, must be treated separately within the waste management process (WEEE).

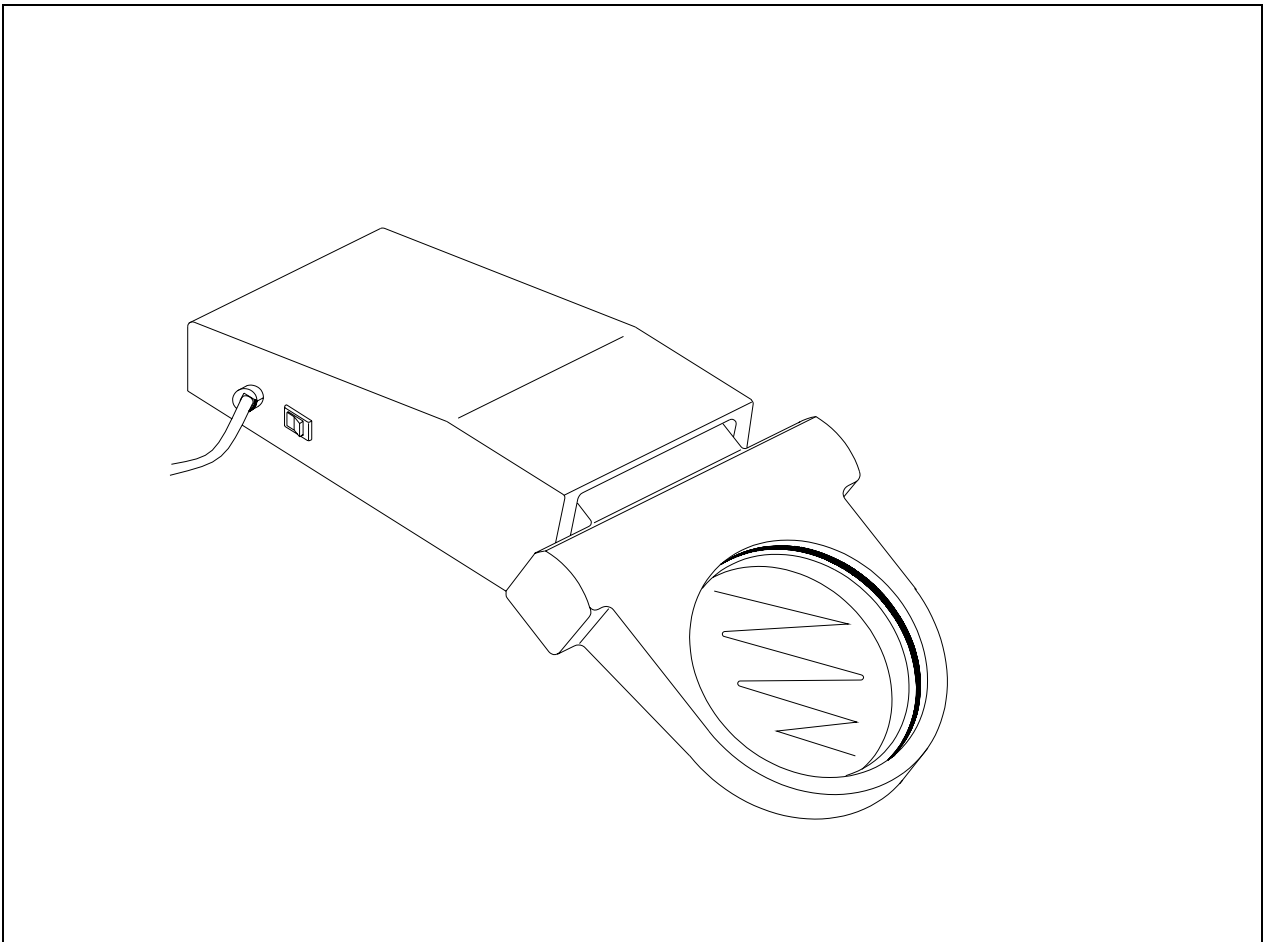


Fig. 1

**PART 1 INTRODUCTION**

**1-1 DESCRIPTION LARGE FIELD MAGNIFIER**

The large field magnifier from MICROM International GmbH is suitable for all rotary microtomes of the HM 300 series.

The large field magnifier is used for the precise orienting and exact approach between specimen and knife edge as well as for the safe, accurate sectioning of specimens. Magnification 2,5x.

The magnifier can be moved, swivelled and displaced for optimal viewing position. It is equipped with adapter and illumination.

1 - 2

**TECHNICAL DATA LARGE FIELD MAGNIFIER**

Storage temperature range: ..... -20°C up to +50°C

Operating conditions: .....+5°C up to +35°C (at a max. rel. humidity of 60%)  
..... altitude up to 2000 m M.S.L.  
.....for indoor use only

Power requirements: ..... 220...240 V/200 mA +/-10%/50...60 Hz  
..... 100...120 V/400 mA +/-10%/50...60 Hz

Pollution degree: .....2

Overvoltage category: .....II

Dimensions: ..... 370 mm x 150 mm x 80 mm (wide/deep/high)

Weight: .....2,4 kg

## PART 2 OPERATING INSTRUCTIONS

### 2-1 INSTALLING THE MAGNIFIER ON THE MICROTOME

Unpack the large field magnifier and remove the packing material.



**Danger:**

Before turning on the large field magnifier for the first time, please check if the power requirements indicated on the supply unit correspond to the power supply voltage being used.

- The integrated illumination is connected to the power outlet via the power cord (fig. 2.2) and turned on and off via the switch (fig. 2.3).

**Please use the enclosed fastening elements to attach the magnifier to the microtome:**

- Remove the four plastic caps from the upper side of the front panel.
- If there are no drilled holes in the housing, it must be replaced with a new one with drilled holes.
- Fasten the peg (fig. 2.4) to the plate (fig. 2.6) via the screw (fig. 2.7).
- Carefully introduce the four sleeves (fig. 2.8) into the drilled holes with the screws (fig. 2.5).



**Caution:**

Please make sure that the sleeves do not fall into the interior of the microtome.



**Note:**

Make sure the plate (fig. 2.6) is mounted in a way that the peg (fig. 2.4) is closer to the front of the microtome.

- Put the plate (fig. 2.6) on the sleeves and fasten it to the microtome via the four screws (fig. 2.5).
- A movable plastic socket that should be put on the peg (fig. 2.4) is on the under side of the magnifier.
- The magnifier can be adjusted forwards and backwards for the most favorable viewing position.
- If the large field magnifier is not used, slightly raise it and turn it sideways on the peg.

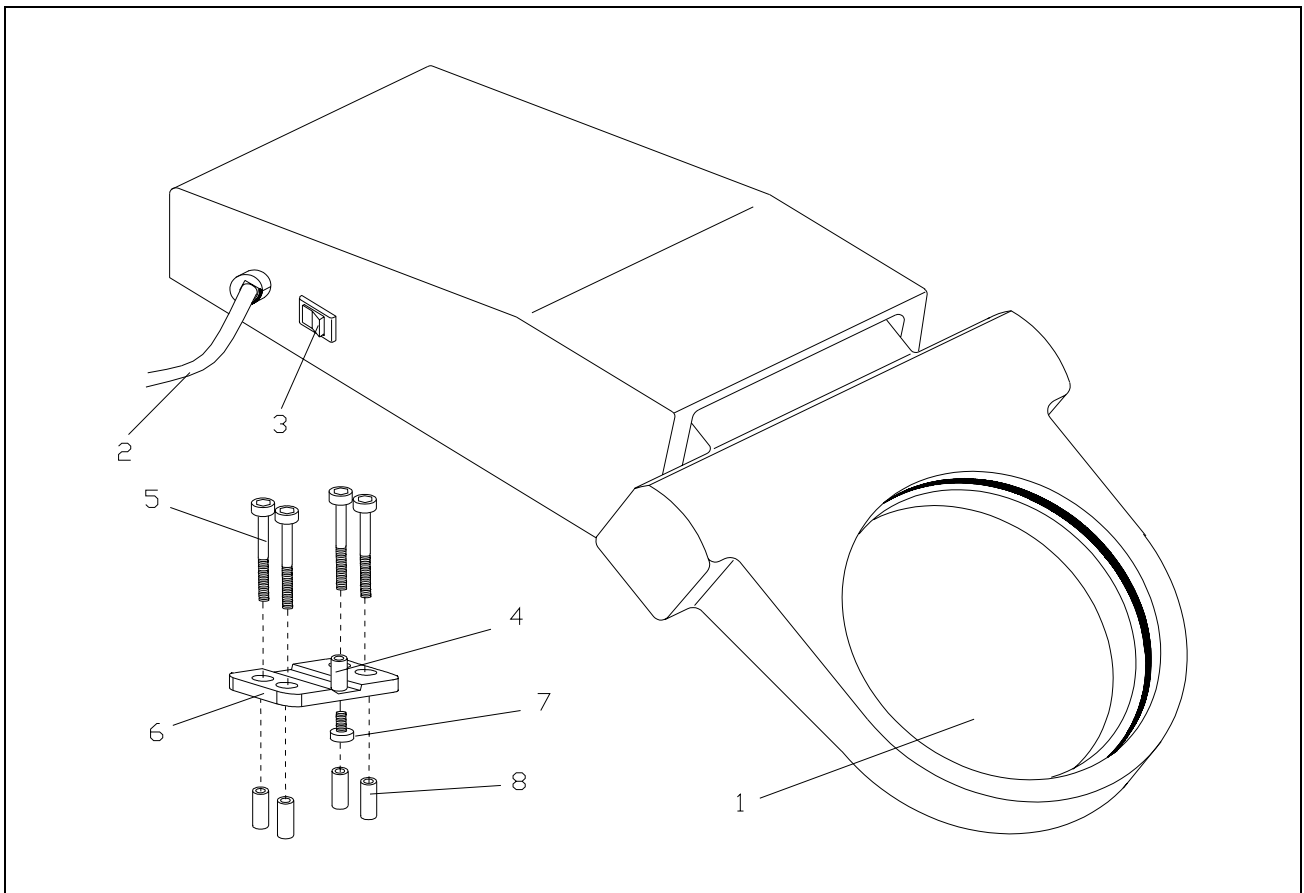


Fig. 2

## 2-2 CHANGING THE LAMP

The fluorescent lamp of the large field magnifier is placed on the underside of the appliance.



**Caution:**

Before changing the lamp, first turn off the power switch of the large field magnifier and unplug it.

- Remove the large field magnifier from the microtome. For this, pull the large field magnifier off the pin (fig. 2.4) in an upward movement.
- Turn over the large field magnifier.
- Pull the lamp out of the socket.
- Replace the lamp with a new one.



**Note:**

Original spare parts must be used only. The lamp can be ordered from MICROM under the cat. no. 346020.

- Insert the new lamp into the socket.

## 2-3 ACCESSORIES

### 2-3-1 STANDARD EQUIPMENT

The large field magnifier is supplied with the following accessories:

	Cat. No.
1 Magnifier support	532030
4 Distance sleeves	414740
4 Allan screws M5x40	
1 Allan key	362240
1 Instruction manual	387690

## **PART 3      CLEANING AND CARE**

### **3-1            CLEANING**

#### **Cleaning intervals**

Cleaning of the large field magnifier depends on how frequently it is used. The more it is used, the more it will need to be cleaned.

#### **Cleaning agents**

Mild household cleaners can be used to clean the large field magnifier. Do not use aggressive cleaners or solvents, as the paint and plastic parts can be affected.

<p><b>NOTE!</b> Before starting sectioning, the housing should be treated with a commercially available paraffin repellent.</p>
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- Carefully clean the glass of the magnifier with cleaning agents that are recommended for spectacles.

### 3-2 DISPOSAL OF THE INSTRUMENT AFTER FINAL SHUTDOWN

After the final shutdown of the instrument, we recommend to contact a local recycling company for the disposal according to the national applicable regulations.



**To be applied in the countries of the European Union and other European countries with a separate collecting system within the waste management.**

The marking of the product and/or the respective literature indicates that, after its final shutdown, it must not be disposed of together with ordinary domestic waste.

- Please dispose of your instrument separately from other waste to not harm our environment and/or human health by uncontrolled waste disposal.
- Recycle your instrument to support the sustainable recycling of material resources.
- **Industrial users** should contact their suppliers and observe the conditions of the contract. This product must not be disposed of together with other commercial waste.
- **Please contact your supplier!!**