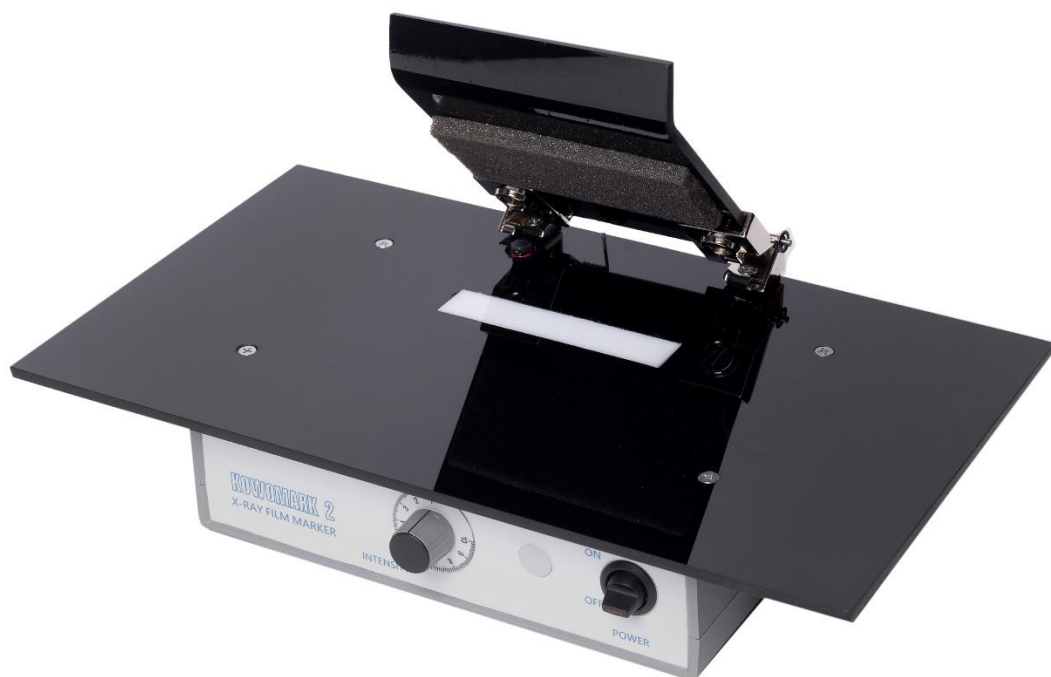


# KOWOMARK 2 Film Marker

12 30302

## Operating Instructions



KOWOMARK 2 facilitates marking of X-ray films compared to marking with lead letters. Saving time and making individual marking easy.

## Safety Notes

KOWOMARK 2 is to be used for marking of X-Ray films by exposure of texts or images onto the film.  
KOWOMARK 2 is to be used in doors, only!

## Scope of Supply

KOWOMARK 2 Film Marker

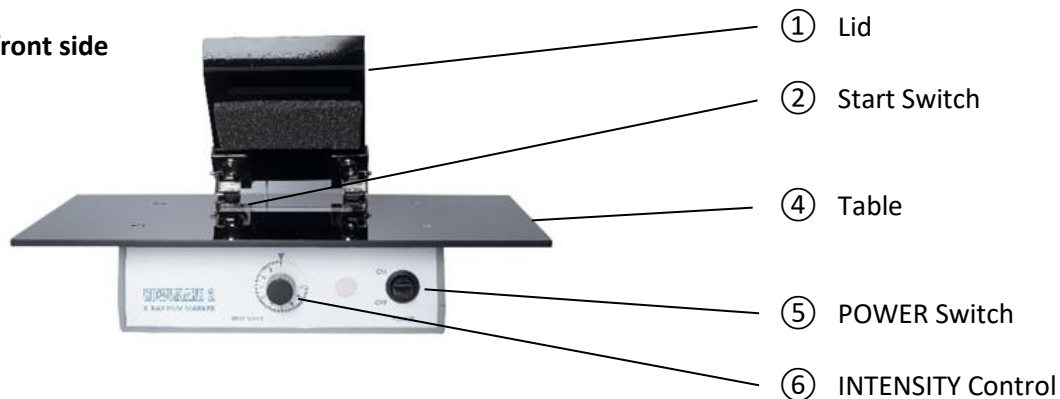
Power supply unit

110 ... 240 V AC – 12 V DC / 12 W

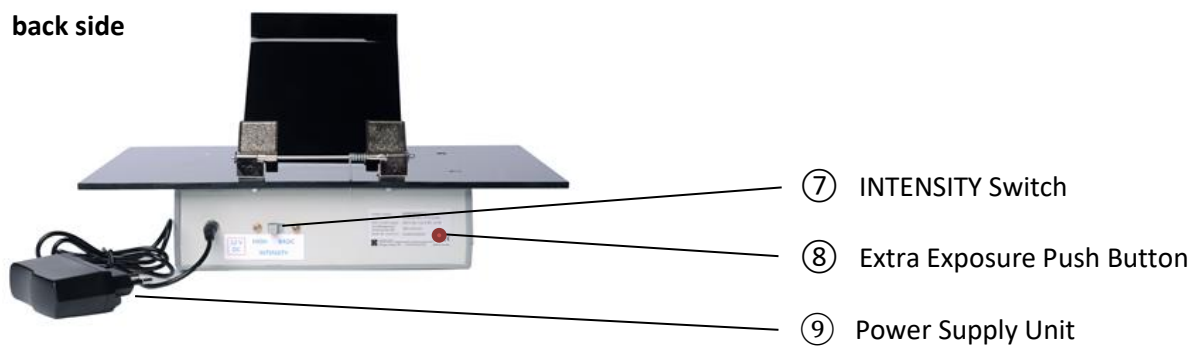
***Do not use different power supply!***

## Operating Elements

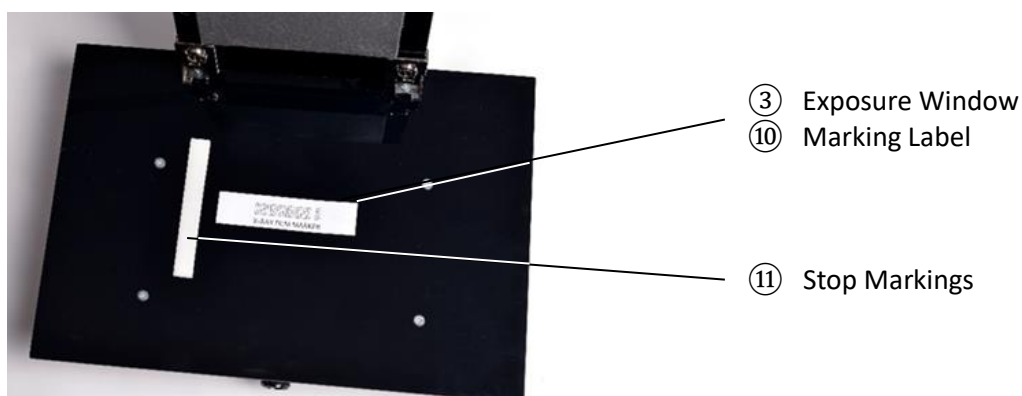
front side



back side



top side



## Operation

### Preparations

1. Exposure X-Ray film as usual. But cover the part of the film, where the marking should be placed later, with a Pb plate.

**Note: Plate should have a thickness of 1 to 3 mm – depending on X-Ray high voltage.**

**Size of plate should be at least size of marking – max. 100 x 25 mm.**

2. Prepare Marking Label ⑩ with desired text or image (logo) on a PC, print in black color and cut label to size of Exposure Window ③.

For handwritten Marking Label use a 0.5 to 0.7 mm fine liner pen in black color.

**Note: For Marking Label have to be used white, wood-free paper with 80 to 90 g/m<sup>2</sup>.**

**The marking must fit into the dimensions of the flash window (100 x 25 mm).**

### Marking – in darkroom

1. Connect external Power Supply Unit ⑨ to KOWOMARK 2 and 230 V AC mains power. Switch on unit by pushing POWER Switch ⑤ from OFF to ON. Red light on switch indicates that unit is on.
2. Fix the Marking Label ⑩ on the Exposure Window ③.
3. Unpack the exposed X-Ray film and place it on the Table ④. Locate X-Ray film to correct position (e.g. in the top left corner) where marking should be placed on the Exposure Window ③ with Marking Label ⑩.  
**Note: To make positioning easier the Exposure Window is illuminated with dim red light.**  
**To find correct position for next films it might help to make Stop Markings ⑪ with a tape on the Table – see picture**
4. Select exposure intensity with INTENSITY Control ⑥ depending on film class – see table below. \*)  
The INTENSITY Switch ⑦ on the back of the unit is set to BASIC- suitable for most film classes.  
Push INTENSITY Switch ⑦ to HIGH for marking of films with very low sensitivity (e.g. Agfa D3, D2), only.  
**Note: In case Exposure is not sufficient even in HIGH intensity (e.g. for Carestream M100 ) a second exposure can be activated by pushing Extra Exposure Push Button ⑧ on the back of KOWOMARK. Hold Lid ① closed during extra Exposure to prevent film from moving – this would cause an unsharp Marking!**
5. Start marking by closing Lid ① (Start Switch ② is pushed and Exposure is activated) – an acoustic signal (short BEEP) is active during exposure.
6. **Only in case of insufficient Exposure! See Note under 4.**  
Start second exposure by pushing Extra Exposure Push Button ⑧ on the back of KOWOMARK 2 while keeping Lid ① closed.
7. Open Lid ① and take out film – marking is finished.
8. X-Ray film can be developed now.
9. Repeat process with more films. If different text or image have to be marked, change Marking Label.
9. After finishing work switch off the KOWOMARK 2 by pushing POWER Switch ⑤ from ON to OFF.

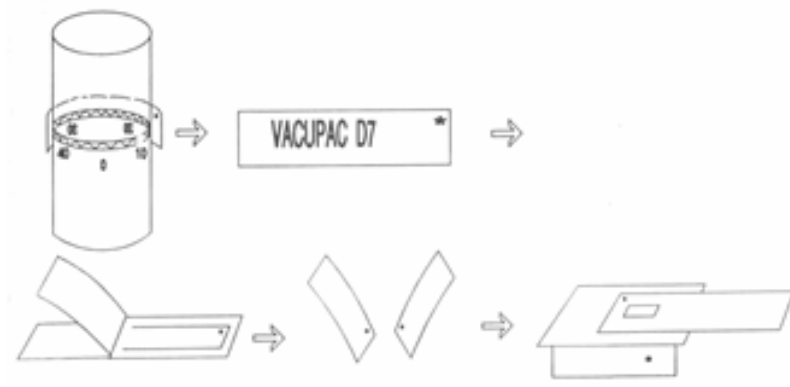
INTENSITY Control – front side	INTENSITY Switch – back side	
	BASIC	HIGH
1	Agfa D7	Agfa D5
2 - 3	Agfa D5	Agfa D4
4 - 5	Agfa D4	Agfa D3
8 - 10	Agfa D3	Agfa D2

**\*) Note:** *Settings in above table are guidelines, only.  
Actual settings have to be found by test exposures.  
Recommended settings in table above were found by use of AGFA films.*

### Additional Notes

Exposed X-ray film has to be placed on KOWOMARK 2 so that the marking is in the correct position according to the standards - for example ISO 17636-1.

### Example



The unpacked film must be turned around in longitudinal axis. This is to make sure that texts of Marking, IQIs and measuring tape can be read correctly.

### Technical Data

Exposure Window size: 100 x 25 mm  
 Marking size, max.: 100 x 25 mm  
 Power supply: 110 ... 240 V AC  
 12 V DC / 12 W  
 Dimensions: 36 x 20,5 x 10 cm  
 Weight: 1,20 kg

### Service address

KOWOTEST GmbH  
 Solinger Strasse 186  
 40764 Langenfeld  
 Germany  
 info@kowotest.de  
 kowotest.com