MP-65180(SCL)

Scaler

No. IMP65180-1

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Contents

Please note that the drawings given in this instruction manual are somewhat different from actual components.

1. General

The scaler is capable of setting markers at any positions on an image, and measuring and displaying the length between two markers or the diameter of a circle. Linewidths (in the X-, Y-, and diagonal directions), distances between any two points, and diameters of circles can be measured.

2. Specifications
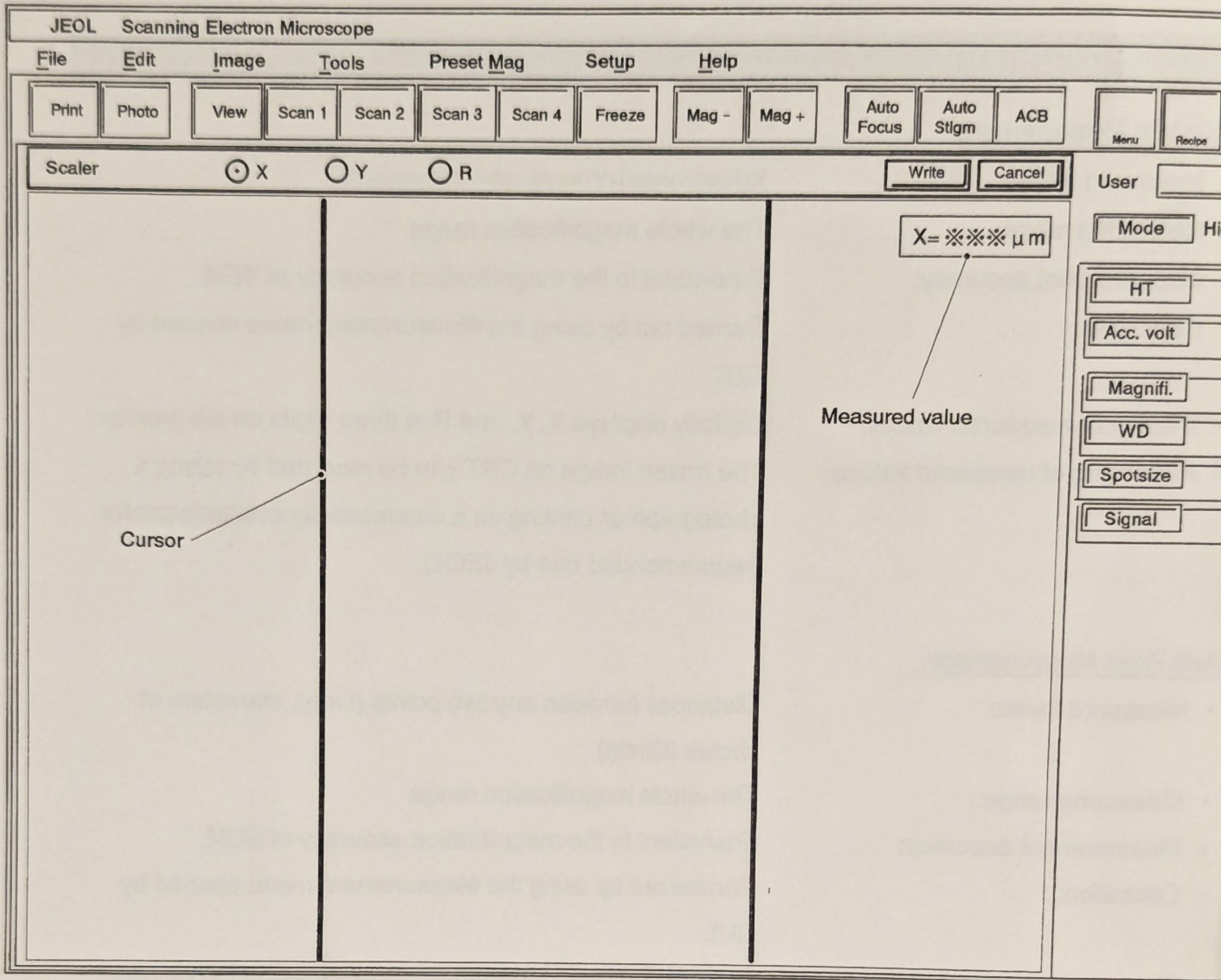
Linewidth Measurement

- Measured items: X(horizontal)·Y(vertical)·R(diagonal)
- Measuring range: The whole magnification range
- Measurement accuracy: Equivalent to the magnification accuracy of SEM.
- Operation: Carried out by using the Measurement menu opened by GUI.
- Display of measured values: Digitally displays X, Y, and R in three digits on the monitor.
- Recording of measured values: The frozen image on CRT can be recorded by taking a photograph or printing on a commercially available printer (recommended one by JEOL).

Multi Point Measurement

- Measured items: Distances between any two points (Line), diameters of circles (Circle)
- Measuring range: The whole magnification range
- Measurement accuracy: Equivalent to the magnification accuracy of SEM.
- Operation: Carried out by using the Measurement menu opened by GUI.
- Display of measured values: Digitally displays Line/Circle in three digits on the monitor.
- Recording of measured values: The frozen image on CRT can be recorded by taking a photograph or printing on a commercially available printer (recommended one by JEOL).
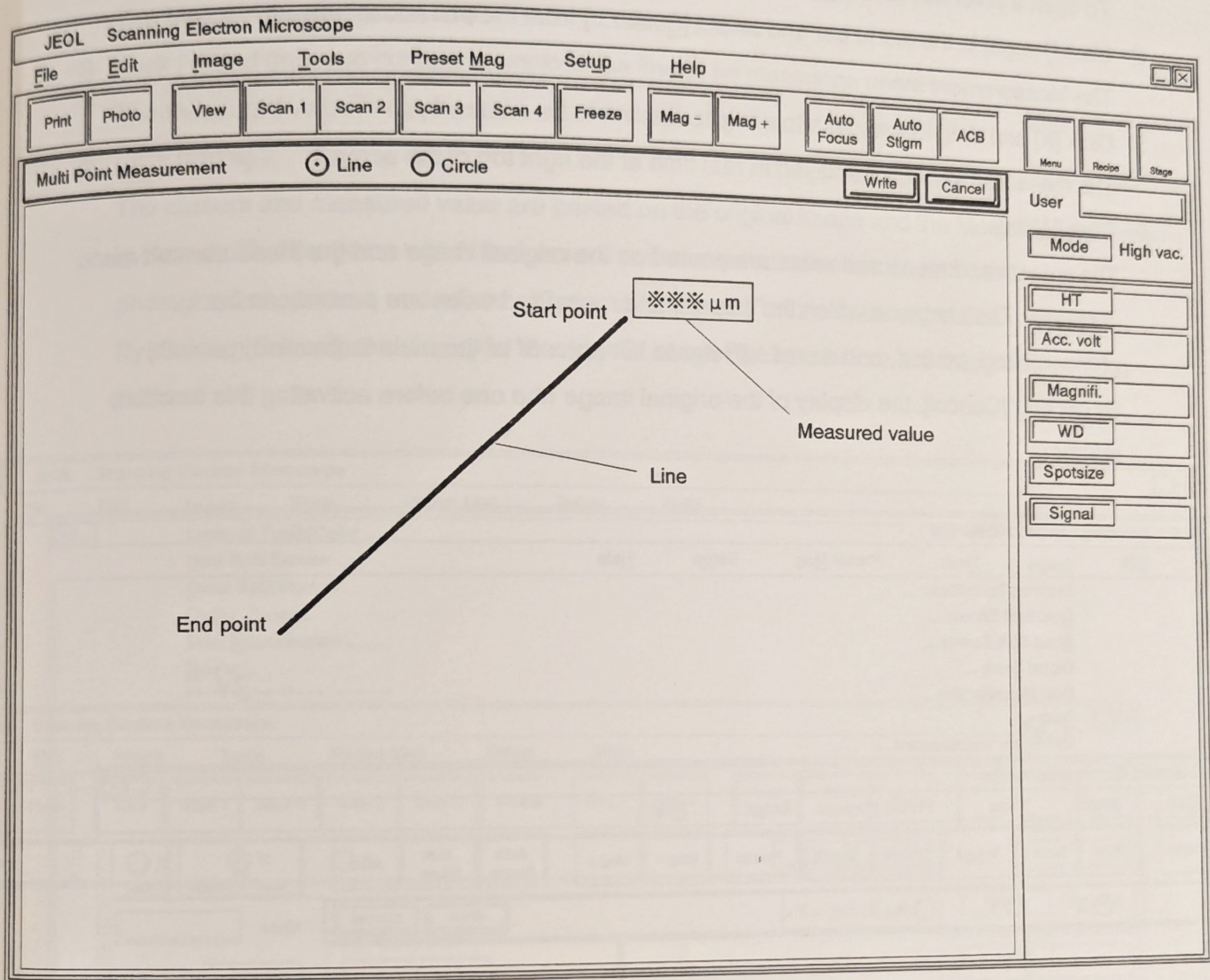
3. Composition

- Set-up floppy disk ·· 1

JEOL   Scanning Electron Microscope

File   Edit   Image   Tools   Preset Mag   Setup   Help

Print	Photo	View	Scan 1	Scan 2	Scan 3	Scan 4	Freeze	Mag –	Mag +	Auto Focus	Auto Stigm	ACB		

Menu   Recipe

Scaler   ⊙ X   ◯ Y   ◯ R   Write   Cancel   User

X= ※※※ μm

Mode   Hi

HT

Acc. volt

Magnifi.

Measured value

WD

Spotsize

Signal

Cursor

Measuring modes: X‑mode: Measures a distance in the horizontal direction.
(Two vertical line‑cursors are displayed.)

Y‑mode: Measures a distance in the vertical direction.
(Two horizontal line‑cursors are displayed.)

R‑mode: Measures a distance in the diagonal direction.
(Two pairs of vertical and horizontal line‑cursors are displayed.)

Write: By clicking [Write], the cursors and measured value(s) are pasted on the image and the Measurement menu is closed.

Cancel: By clicking [Cancel], the state before activating this function returns.

Measuring modes:	Line mode:	Measures the length of any line (the distance between two points).
	Circle mode:	Measures the diameter of any circle.
		Up to 10 measurements in total can be carried out in the line and circle modes.
Write:		By clicking [Write], the line or circle and the measured value are pasted on the image and the Multi Point Measurement menu is closed.
Cancel:		By clicking [Cancel], the state before activating this function returns.

5.1   X- Mode

1   Freeze the image or open a BMP file.

To open a BMP file, select [Open...] of [File] in the menu bar.

2   Click [Image] in the menu bar and select [Scaler...] from the pull-down menu.

The Measurement menu opens.

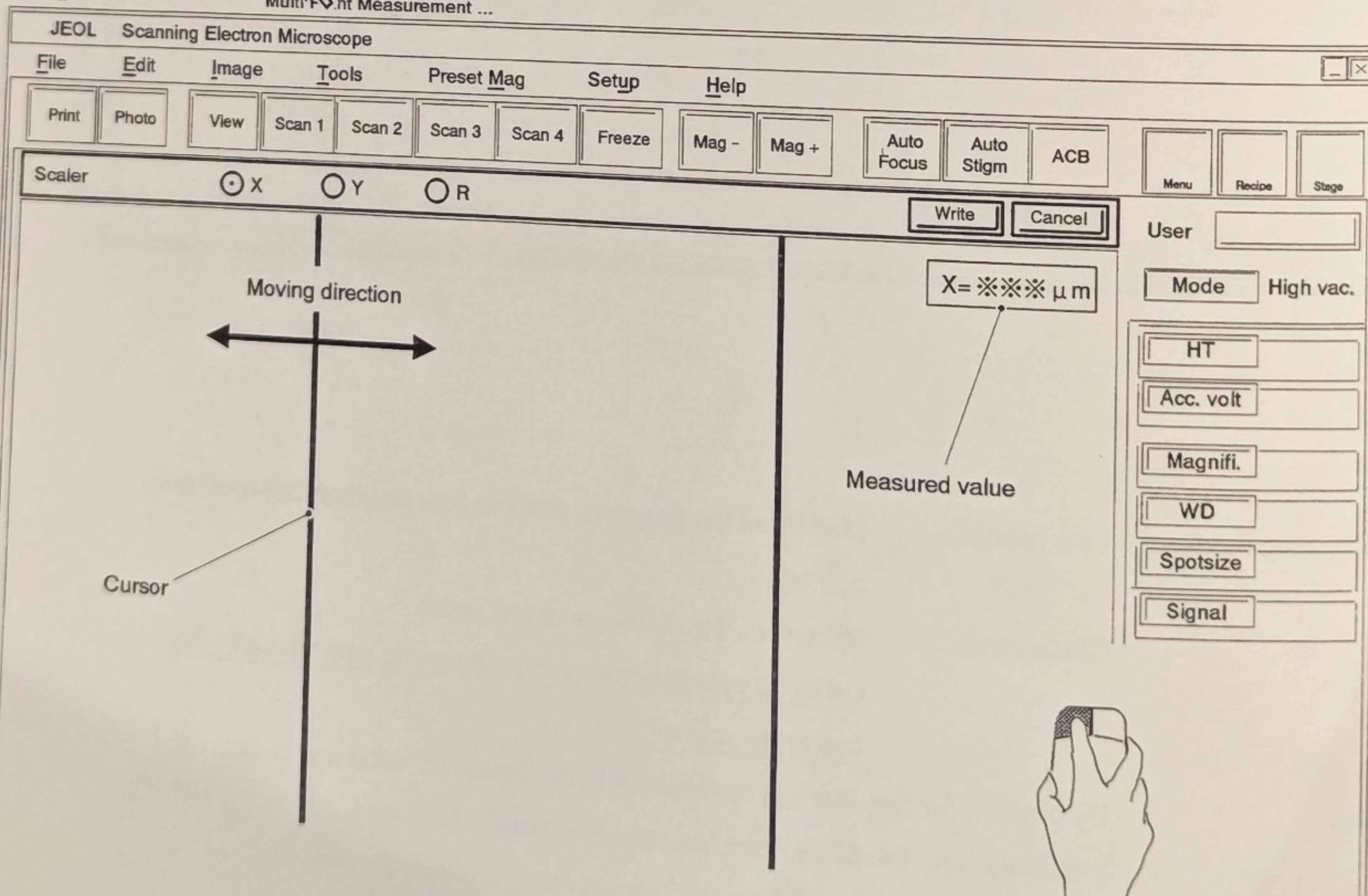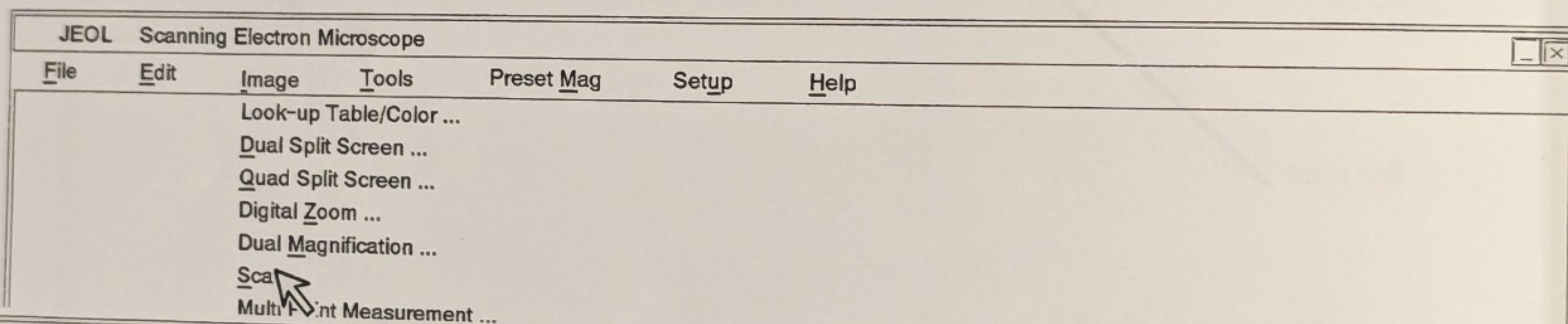3   Click [X] and drag two cursors to enclose the line to be measured.

The measured value is displayed in real time at the right top of the screen.

4   Click [Write].

The cursors and measured value are pasted on the original image and the Measurement menu is closed. The image on which the cursors and measured value are pasted can be photographed, printed, and saved. (Refer to "Chapter 3" of the main instruction manual.)

By clicking [Cancel], the display of the original image (the one before activating this function) returns.

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File   Edit   Image   Tools   Preset Mag   Setup   Help

Look-up Table/Color ...
Dual Split Screen ...
Quad Split Screen ...
Digital Zoom ...
Dual Magnification ...
Scaler
Multi Point Measurement ...

JEOL Scanning Electron Microscope

File   Edit   Image   Tools   Preset Mag   Setup   Help

Print   Photo   View   Scan 1   Scan 2   Scan 3   Scan 4   Freeze   Mag –   Mag +   Auto Focus   Auto Stigm   ACB   Menu   Recipe   Stage

Scaler   ⊙ X   ○ Y   ○ R

Write   Cancel   User

Moving direction

X = ※※※ μm   Mode   High vac.

HT

Acc. volt

Magnifi.

Measured value

WD

Spotsize

Cursor

Signal

1 Freeze the image or open a BMP file.

To open a BMP file, select [Open...] of [File] in the menu bar.

2 Click [Image] in the menu bar and select [Scaler...] from the pull-down menu.
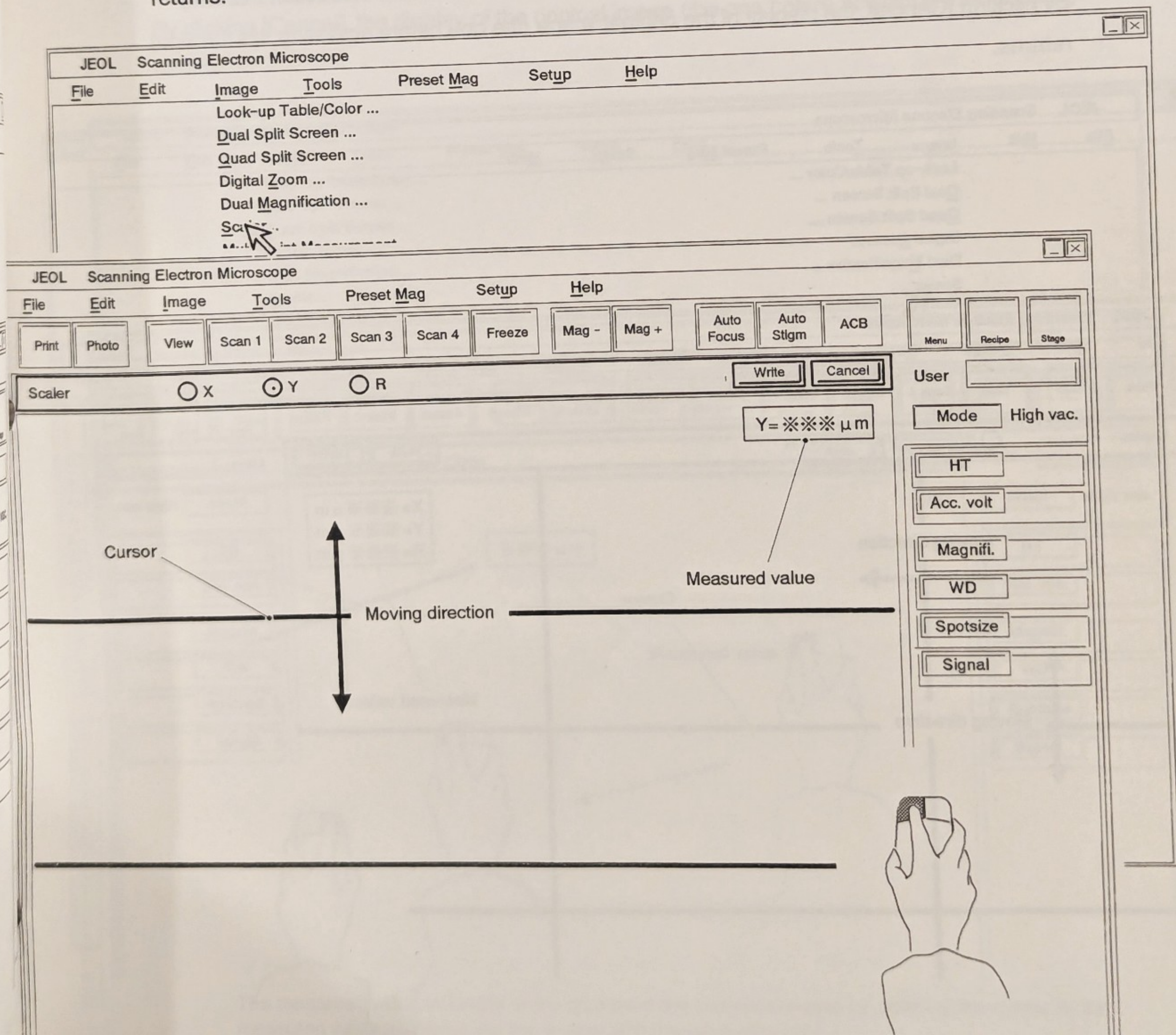
The Measurement menu opens.

3 Click [Y] and drag two cursors to enclose the line to be measured.

The measured value is displayed in real time at the right top of the screen.

4 Click [Write].

The cursors and measured value are pasted on the original image and the Measurement menu is closed. The image on which the cursors and measured value are pasted can be photographed, printed, and saved. (Refer to "Chapter 3" of the main instruction manual.) By clicking [Cancel], the display of the original image (the one before activating this function) returns.

1 Freeze the image or open a BMP file.

To open a BMP file, select [Open...] of [File] in the menu bar.

2 Click [Image] in the menu bar and select [Scaler...] from the pull-down menu.

The Measurement menu opens.

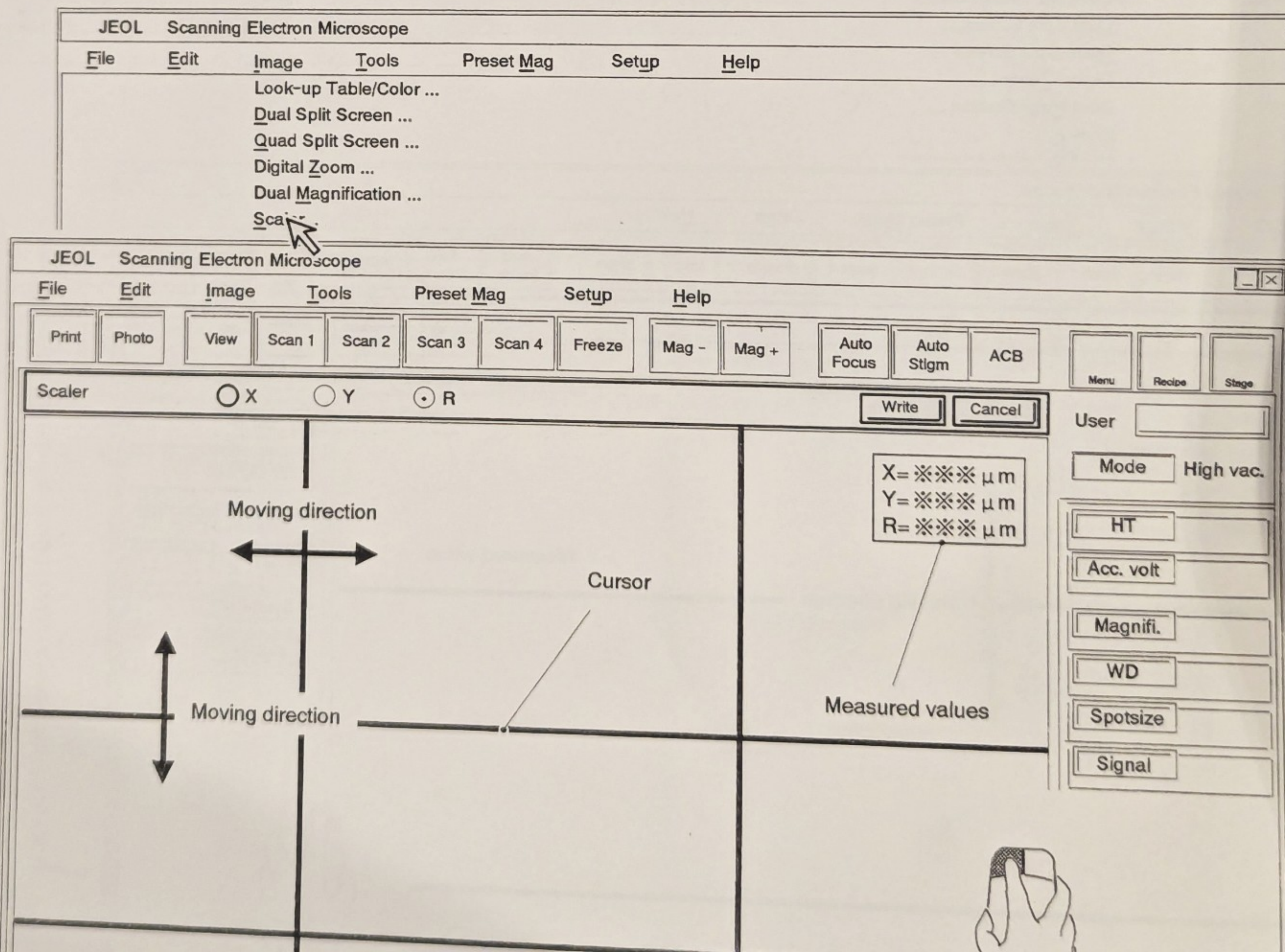3 Click [R] and drag the cursors to enclose the line to be measured.

A pair of vertical and horizontal line-cursors can be moved together by grabbing at their cross point. The measured value is displayed in real time at the right top of the screen. (The X- and Y-values are also displayed simultaneously.)

4 Click [Write].

The cursors and measured values are pasted on the image and the Measurement menu is closed. The image on which the cursors and measured values are pasted can be photographed, printed, and saved. (Refer to "Chapter 3" of the main instruction manual.) By clicking [Cancel], the display of the original image (the one before activating this function) returns.

6. Multi Point Measurement

6.1 Line Mode

1 Freeze the image or open a BMP file.

To open a BMP file, select [Open...] of [File] in the menu bar.

2 Click [Image] in the menu bar and select [Multi Point Measurement...] from the pull-down menu.
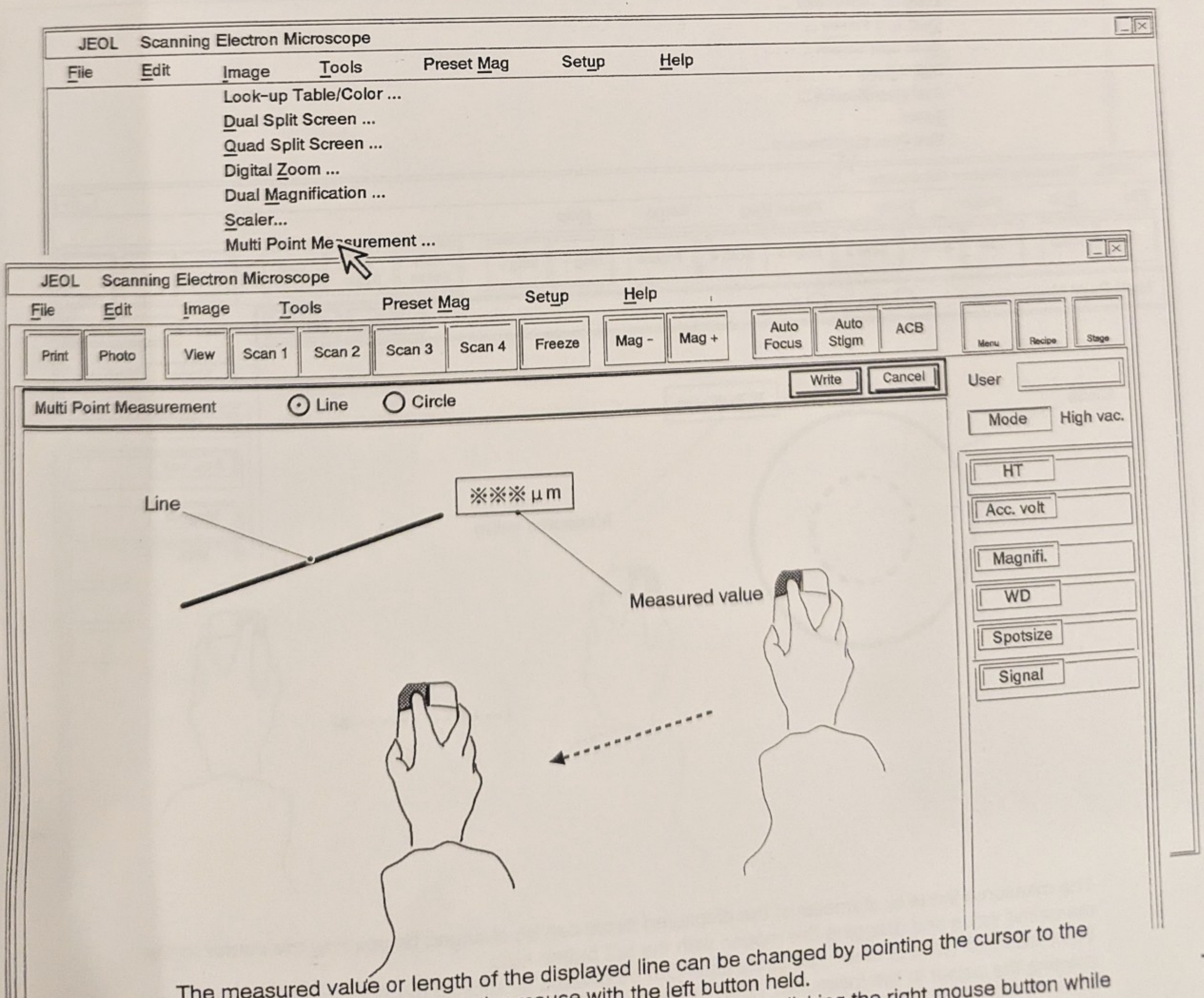
The Multi Point Measurement menu opens.

3 Click [Line] and drag with the mouse.

The position where the left mouse button is pressed becomes the start point and the position where the mouse button is released the end point. When the mouse button is released, the measured value (the distance between the two points) is displayed.

4 Click [Write].

The line and the measured value are pasted on the image and the Multi Point Measurement menu is closed. The image on which the line and the measured value are pasted can be photographed, printed, and saved. (Refer to "Chapter 3" of the main instruction manual.)

By clicking [Cancel], the display of the original image (the one before activating this function) returns.

The measured value or length of the displayed line can be changed by pointing the cursor to the measured value and dragging the mouse with the left button held.

6. Multi Point Measurement

6.2　　Circle Mode

1　Freeze the image or open a BMP file.

To open a BMP file, select [Open...] of [File] in the menu bar.

2　Click [Image] in the menu bar and select [Multi Point Measurement...] from the pull-down menu.

The Multi Point Measurement menu opens.
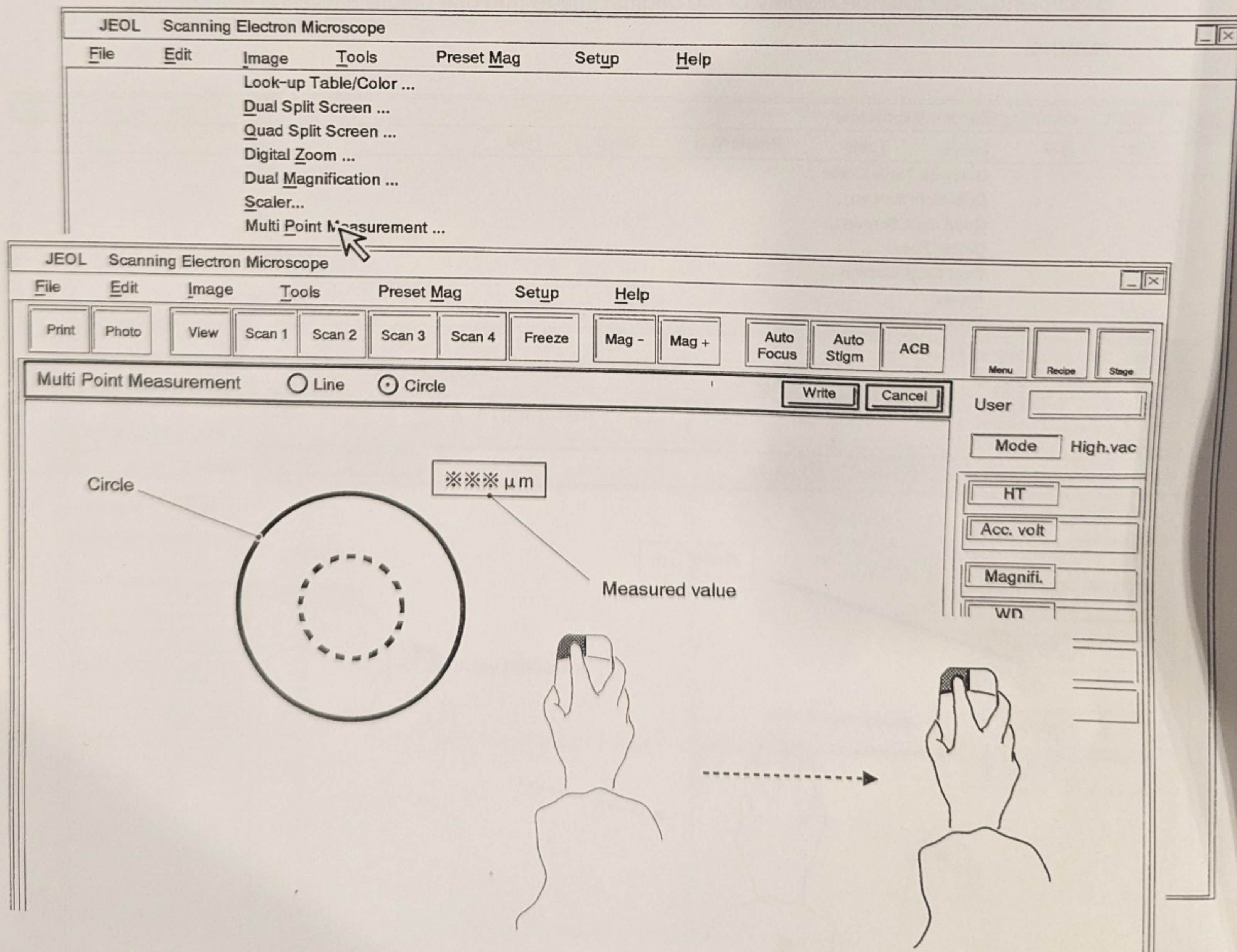
3　[Click [Circle] and drag with the mouse.

A circle having the diameter corresponding to the distance you drag the mouse is displayed.
When the mouse button is released, the measured value (the diameter of the circle) is
displayed.

4　Click [Write].

The cursors and the measured value are pasted on the image and the Multi Point Measurement
menu is closed. The image on which the circle and the measured value are pasted can be
photographed, printed, and saved. (Refer to "Chapter" 3 of the main instruction manual.)
By clicking [Cancel], the display of the original image (the one before activating this function)
returns.

Circle

※※※ μm

Measured value

The measured value or diameter of the displayed circle can be changed by pointing the cursor to the
measured value and dragging the mouse with the left button held.
The measured value or displayed circle itself can be deleted by clicking the right mouse button while
pointing the cursor to the measured value or the circle itself.