**Simple manual for carbon deposition instrument**

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※Be careful not to beat against rear instrument.

**Preparation**

1. Make sure that power switch at lower right is OFF.



1. Open upper cover and take off glass chamber.



※Don’t contact seal area of glass chamber with anything.

Take care that glass chamber rolls over.



1. Prepare carbon bar. Use two categories of carbon bar. One is “carbon bar for fixation” which head is flat and another is “carbon bar for transfer” which head is fine.

If head of “carbon bar for fixation” is not flat, put an edge by sand paper.

And lop off head of “carbon bar for fixation” and make head’s length is about 5mm by pencil sharpener.

1. Attach carbon bar to electrode section as shown below.

(1) Attach “carbon bar for fixation”.

(2) Attach “carbon bar for transfer” and adjust position which head of “carbon bar for transfer” push “carbon bar for fixation” lightly by spring.

※Not to screw tightly because carbon bar break up.



1. Set sample on sample stage.
2. Apply low oil to tile on the corner for film thickness measurement and

 set on sample stage.

1. Incline sample stage slightly against carbon bar.

(※In case of sample with a lot of asperity）

1. Set glass chamber and close upper cover.

**Carbon Deposition**

1. Switch on power switch and emission starts automatically.



1. Wait until pressure in chamber down under 5 Pa. (for about 5 minutes)
2. Conduct energization test.

・Select [MANUAL](a) at select button . Set［TIMER］(b) to 5s and

［VOLTAGE］(c) to 4.0 V.

・Push［START/STOP］(d) button and make sure that carbon bar glow.

1. Turn on tab for rotation of sample stage.



1. Conduct carbon deposition.

※Don’t look squarely during carbon deposition because carbon bar glow.

(1) Set［TIMER］(b) to 10s and ［VOLTAGE］(c) to 4.5V.

（you can change this value arbitrarily. TIMER’s range is 0~10s and

VOLTAGE’s range is 0~5.5V.)

(2) Push ［START/STOP］(d).

(3) Repeat deposition with looking tile’s color until coating aimed thickness.

1. After deposition, turn off tab for rotation of stage.
2. Switch off power switch.
3. Wait for becoming atmosphere pressure.
4. Open upper cover and take off glass chamber. Take back tilt of sample stage and take out sample.

※Don’t touch carbon bar right away because carbon bar is high temperature.

1. Make sure that tile’s color and sample thickness. Clean off tile and start clearance.

**Finish**

1. Clean off glass chamber with ethanol and Kim Wipes.
2. Make sure that there`re no dust.
3. After carbon bar cooling down (about 10minutets), take off carbon bar.
4. Set glass chamber and upper cover.