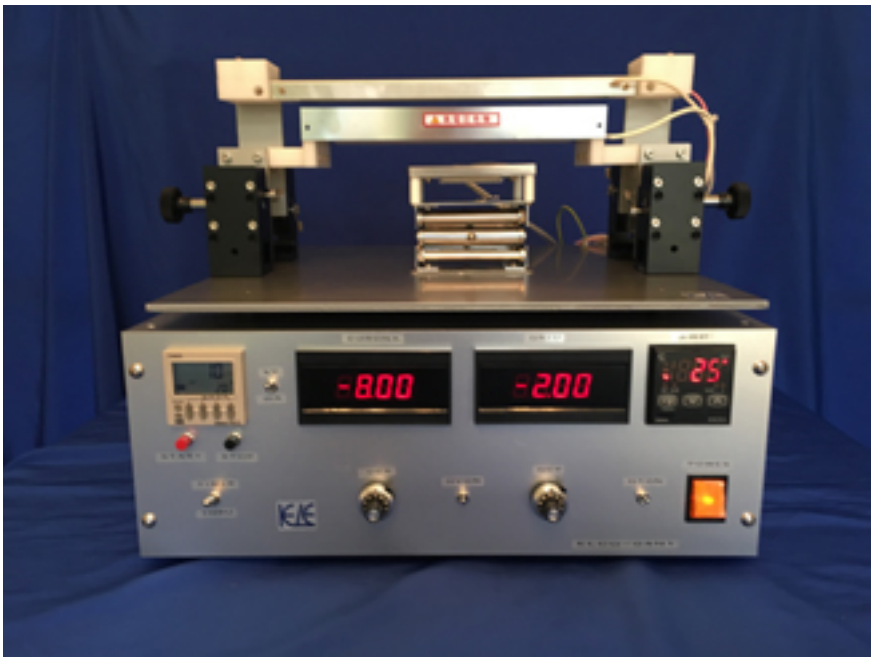
instruction manual

Non-contact electrification device

Model: ＥＬＣＧ－０４Ｎ１



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Precautions for use when using this product, be sure to refer to the instruction manual for your safety. Please observe the following notes.

1. This product is intended for general electronic equipment. This product Medical equipment and transportation equipment whose damage may affect the human body and facilities Please do not use in applications such as or in environments subject to vibration. Please contact us when using other than general electronic equipment.

2. This product is equipped with an overcurrent and short circuit protection circuit, Avoid using a short circuit state, as it may cause a failure.

3. Do not use this product under nonstandard electrical and environmental conditions. It may break down under excessive input voltage or high temperature.

4. Avoid using this product in a place with much dust or where corrosive gas is generated.

5. This product generates high voltage. Do not touch the high voltage output directly. Touching may cause electric shock, injury or death.

6. When touching this product, shut off the input power and leave it for a sufficient time.を Make sure that the high voltage accumulated inside is discharged and touch it.

7. This product sucks dust and dust. Sufficient creepage distance when used Use with consideration for insulation distance, wiring treatment, etc.

8. If a failure or abnormality occurs during use, immediately shut off the input and start operation. Please stop and contact us.

9. This product is a power supply designed and manufactured for equipment integration, equipment and research. Be sure to attach a warning label because high voltage is generated.

10. Since this product generates high voltage, a grounding of 3rd class or more Make sure to secure the ground wire with the shortest possible wire. Please contact us if you have any problems with wiring.

<Features> A device that electrifiction various samples without contact. Corona electrode unit and control unit separated type. Corona electrode applied voltage is -6kV-9KV maximum. Work table size W100mm × D100mm × H127mm External wiring method differs depending on whether grid electrode is used or not.

<Specifications>control unit

1. High voltage power supply

(1) Corona electrode power supply 0 ~ -10.0kV 3.00Ma Maximum applied voltage 0 ～ -9kV VR1 piece Digital panel meter for voltage and current display 1 piece

(2) Grid electrode power supply 0 to -3.00 kV 3.00 mA Maximum applied voltage 0 ~ -3kV VR1 piece Digital panel meter for voltage and current display

1* HV ON switch 1 (1) and (2) are both turned on.

2, Temperature controller unit

(1) K-type thermocouple input room temperature to 130 ° C setting

(2) SSR drive heater heating HTON switch 1

3. Rear panel interface

(1) CORONA High voltage connector for corona discharge

(2) GRID 2P high voltage terminal block for grid

(3) 10P terminal block PIN arrangement

1, HVON1

2, HVON2

3, COM Status signal at high voltage power supply ON

4, NO

5, NC *

6, NC (no connection)

7, heater 1 * Wiring to work table heater

8, heater 2

9, NC (no connection)

10, E Connect when not using GRID electrode.

4. Use one corona discharge electrode 0.05Φmm gold plated tungsten wire

** Be careful not to break the wire because it is a very thin wire.

<Preparation>

1.The POWER switch of the control unit is OFF　Confirm that the HV ON switch is OFF.

2. 3P AC cable to an AC outlet (3A or more).Connect three or more ground wires to the E terminal on the rear panel of the control unit.

3.The ground wiring is yellow-green from one Teflon-coated wire for the work table and the Z-axis stage.　Two wires are wired from the terminal E of the main unit.

4. Corona electrode for high voltage connector CORONA with attached connector Wired in one place.

5. The heater wiring is wired to the rear panel terminal block 7P8P with red and white lines. If the temperature does not rise even after several minutes have elapsed after turning on the HTON switch　K sensor (thermocouple) may not be firmly fixed to the work table　There is. Check the fixing condition.

6. Height of work table, corona electrode, grid electrode using Z-axis stage, etc. Please fine-tune.

7. If grid electrode is used, grid electrode wiring and two high voltage lines of existing corona guard wiring on the rear panel　Wire each to 2P of 2P terminal block for grid electrode.

8. When not using the grid electrode, connect the corona guard wiring to 10P Change the connection to terminal 10P before use.

<Operation procedure>

1. The operation method differs depending on the manual operation and the timer operation.

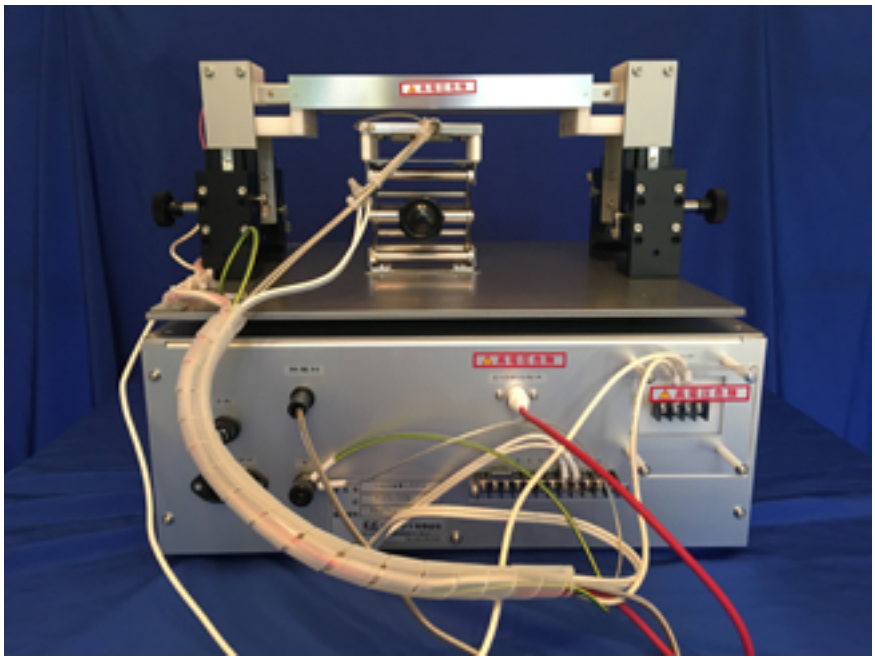
2. At manual operation, set the {TIMER / THRU} switch to THRU.　Please set on the side. By turning on the HVON switch　Outputs CORONA voltage and GRID voltage

3. Set the CORONA voltage value with CCV.

4. Set the grid voltage with GCV.　Carefully consider the distance between each electrode, etc., so that arc discharge does not occur.

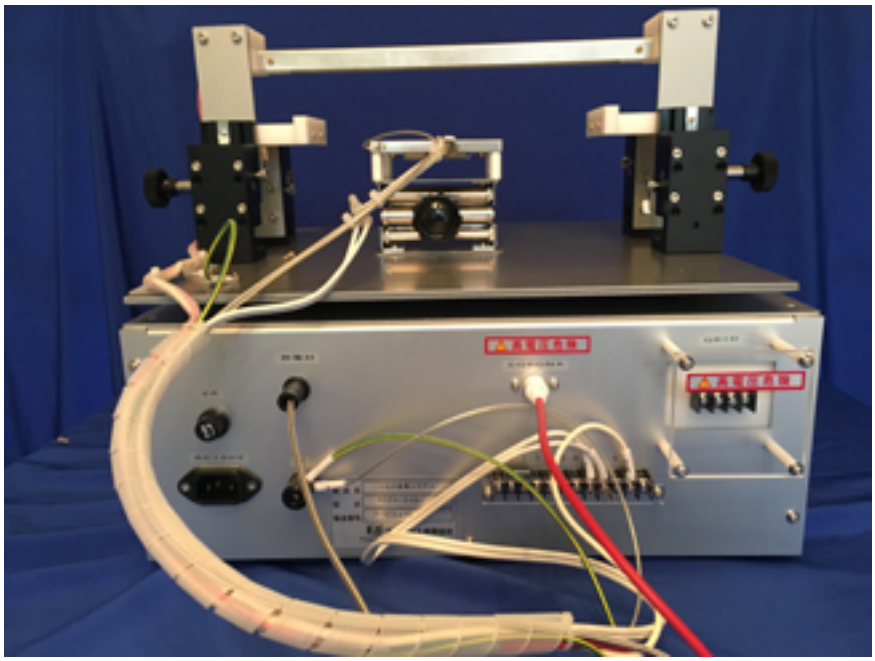
5. Use the timer operation when you work repeatedly.　Turn off HVON switch and TIMER / THRU switch　Set on the TIMER side. When the STRAT switch is turned ON, the CORONA voltage is output for the set time.(Initial setting is 20 SEC. 999 SEC by setting the numerical value of the timer　Can be set.) * If you want to stop suddenly, turn on the STOP switch.

Wiring rear panel with grid



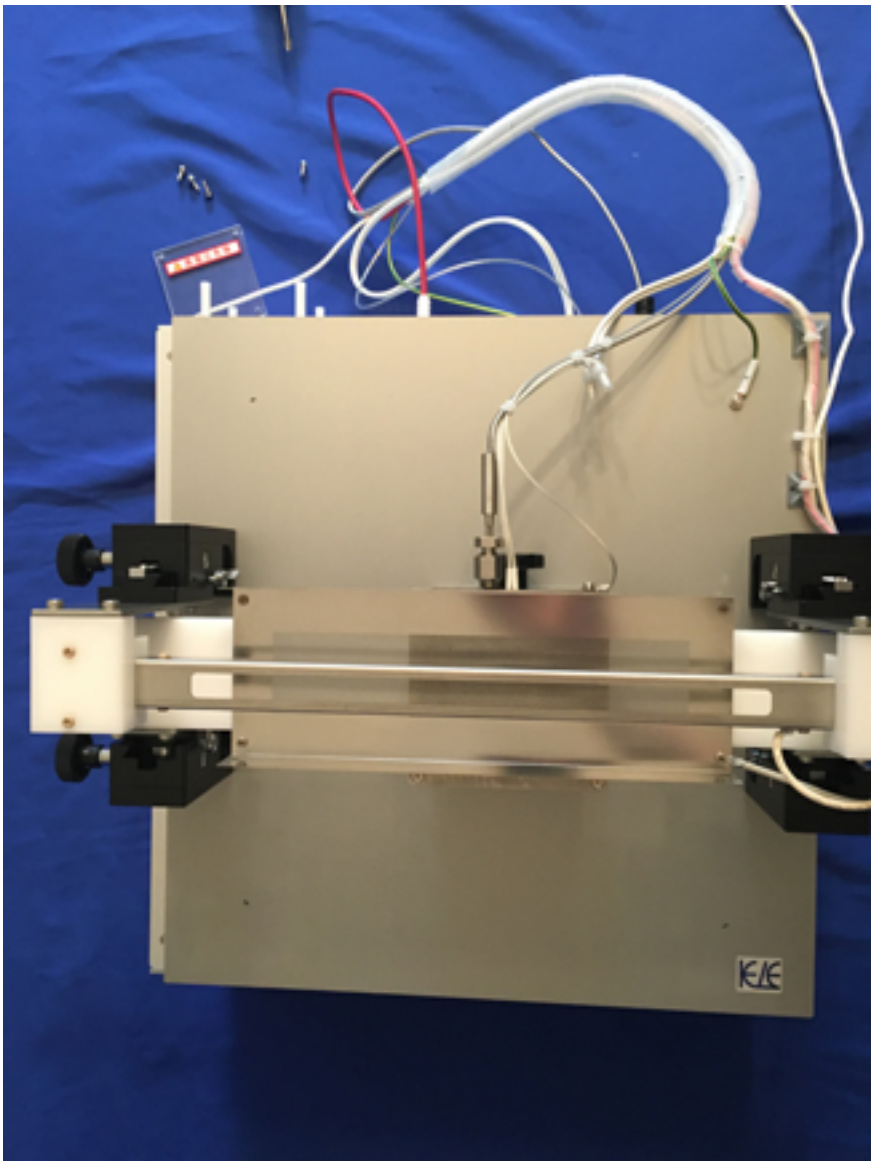
* Wire two wires to GRID.

Wiring rear panel without grid

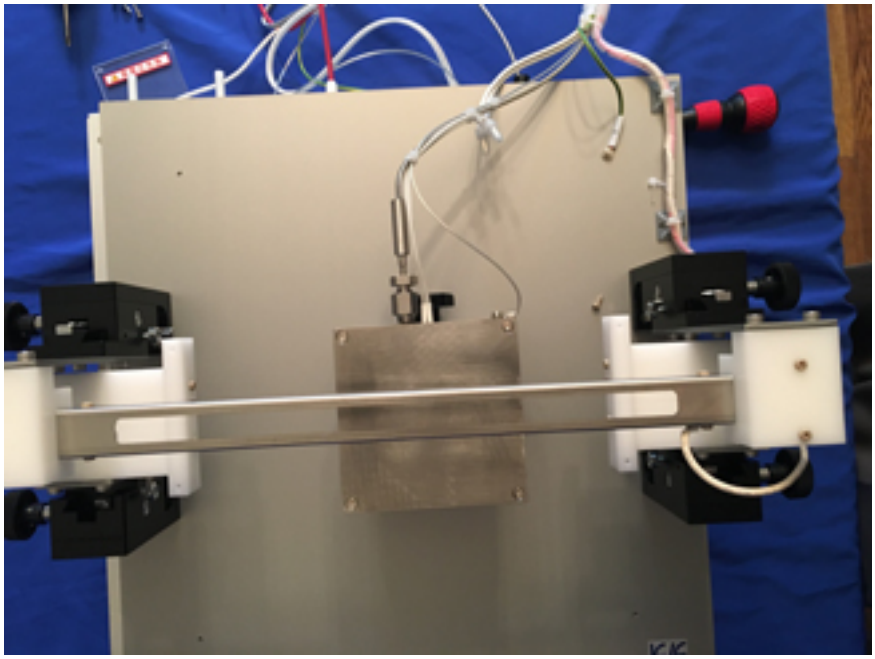


Remove the GRID electrode and remove the wiring that is fastened together with the GRID electrode.　Wire one GRID wire combined with the CORONA wire to the 10P terminal block 10P.

With GRID electrode



Without GRID electrode



* Set at the bottom of Z axis stage for GRID electrode

Ensure a sufficient gap with the CORONA electrode, Remove the four brown peak screws of GRID electrode,　Remove the electrode.

Connection of attached GRID white high voltage line　Remove.

(One of the rear panel 2P) The already wired GRID wiring

(one of the rear panel 2P)Connect to 10P on the 10P terminal block. (10P is earth)