

Kirlian Photography Device

Model 5 - Manual and Instructions



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Read This First

Warning: Kirlian devices are very high voltage contact print photography devices. All high voltage devices are potentially dangerous and must be operated with extreme caution. Do not attempt to operate this device without reading the instructions.

Electrical Specifications: Kirlian device requires 117 VAC standard US electrical power. Device draws approximate 7 to 10 watts of power. International customers must use appropriate voltage converter.

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Safety Precautions

- A)** This equipment should not be used by children or anyone not familiar with normal safety precautions to be used around electrical equipment.
- B)** Do not operate the Kirlian apparatus in the presence of anyone with implanted inductive devices or electrodes such as a heart pacemaker equipment.
- C)** Use a pair of glass lensed sunglasses when viewing the corona discharge if you do not wear glasses. Common glass absorbs the short wave ultra violet rays which can cause eye irritation.
- D)** Do not operate the equipment if there is any evidence of damage to the discharge plate or its dielectric material.
- E)** Limit skin exposure to corona discharge to about 1 minute a day. Note: A tingling sensation or slight shock can be felt when touching the discharge plate or an object on the discharge plate. This is inherent in this type of Kirlian device.
- F)** Use in a ventilated area to prevent ozone build-up. If multiple exposures are done in a relatively short period of time with good ventilation, ozone concentrations of 0.5 to 1.0 PPM could produce throat irritation.
- G)** Do not run the discharge more than 30 seconds continuously. Allow one minute for device to cool down between long exposures.

Follow these simple guidelines and rules.

- 1) Do not use the Kirlian device if you have a heart condition, are pregnant, or have any condition or health issue that might render you susceptible to electrical shocks.
- 2) Set up your work area away from possible grounds that you may accidentally contact.. Keep your work area neat and clean to easily identify high voltage wires and grounds.
- 3) Be sure the floor is dry and wear preferably rubber-soled shoes.
- 4) Prove to yourself the high voltage power supply is off, by unplugging the device's electrical power cord. Don't trust power switches that could be hit or pressed and accidentally turned on.
- 5) Do not use Kirlian device when you are tired and not alert even if it means a delay.
- 6) Never leave the Kirlian device plugged in while unattended.
- 7) Keep one hand in your pocket. Only use your other hand to work with the high voltage equipment. This reduces the probability of accidentally passing high voltage current across your heart from hand to hand.
- 8) Keep your mobile phone, personal computer, tablet, or other personal devices at least ten (10) feet away from the Kirlian device as they may be permanently damaged.

WARRANTY

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Contents

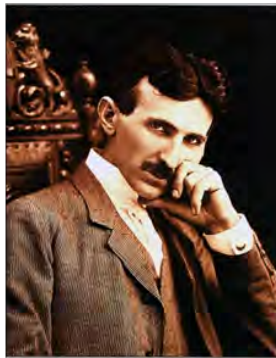
1

Section 1	Safety Precautions	2
	Warranty	4
	Contents (You are Here)	5
Section 2	Short History of Kirlian Photography	6
	Medical Diagnostic Tool	7
	Phantom Leaf Experiment	8
Section 3	Model 5– Instructions For Use	9
	High Voltage Power Supply & TDP	10
	Ground Plate	11
	Photography Set-Up (page 1)	12
	Photography Set-Up (page 2)	13
	Photographing People	14
	Factors Effecting Kirlian Images	
	Shooting Kirlian Video	15
Section 4	Optional Equipment	16



The beginning of electro-photography can be traced back to the late 1700s. In this time period, Georg Christoph Lichtenberg appears to have been the first to observe electrophotographs.

Lichtenberg made note of his observation of pictures made in dust created by static electricity and electric sparks. In the photograph to the right, Lichtenberg sparks frozen in plastic.



Nicola Tesla (1880) photographed many corona discharges using his famous Tesla coil. In the early 1900s, Russian Engineer and electrical researcher Yakov Narkevich-Todka exhibited interesting electro-photographs he made. A little later, but around the same time, Dr. F. Strong of Tufts University Medical School used a Tesla coil to make electrophotographs of his hand.

Russian Researcher Semyon Davidovich Kirlian and his wife Valentina began their work with high-voltage photography by accident in 1939. Semyon Kirlian was an electrical repairman in the city of Krasnodar. He had been called to do a repair at a local research institute. While at the institute, he happened to see a demonstration of a high frequency device used for electrotherapy. As a patient underwent treatment Kirlian noticed small flashes of light between the patient's skin and the machine's glass electrode. Kirlian wondered if he could photograph that light. Kirlian substituted a metal electrode for the glass one used in the machine to prevent exposing the film to light. Then, using himself as a subject, he was able to photograph the corona discharge.

Kirlian collaborated with his wife for over 30 years, developing equipment and studying electro-photographs. They made instruments to examine high-frequency currents on living tissue as well as on inanimate materials.

The Kirlians' work was highlighted in a book published in the United States in 1970 titled 'Psychic Discoveries Behind the Iron Curtain', by Sheila Ostrander and Lynn Schroeder. This is where I as well as many others first learned of electro-photography. Their work became so well known, that electro-photography from that point on became known as Kirlian photography.



Many paranormal claims were made concerning the resulting images. The Kirlians' themselves claimed that this type of photography could be used as a medical diagnostic tool. Stating that disease in subjects shown as a modified or disrupted pattern of discharge, before obvious symptoms became manifested in the subject. Naturally this claim generated much interest in this country.

Keep in mind that most of the observable Kirlian phenomena that's been reported does not require any paranormal or new bio-plasma field to be explained. For example, stress in the "act of lying" can be detected using a lie detector that measures the change in a person's galvanic skin resistance.

Stress caused by lying may also be seen in a Kirlian photograph as a change in the corona discharge (aura). However this change in the corona discharge is easily explained by the change in a person's skin resistance.

And it follows that much of the phenomena claimed to be paranormal by some Kirlian researchers can be explained by employing known physical laws, like changes in subjects skin resistance which can be due to factors like; stress, illness, fatigue, alcohol consumption, etc. Some other variable factors influencing the resulting Kirlian picture include the object's pressure against film, humidity, air pressure, voltage, frequency, and exposure time.

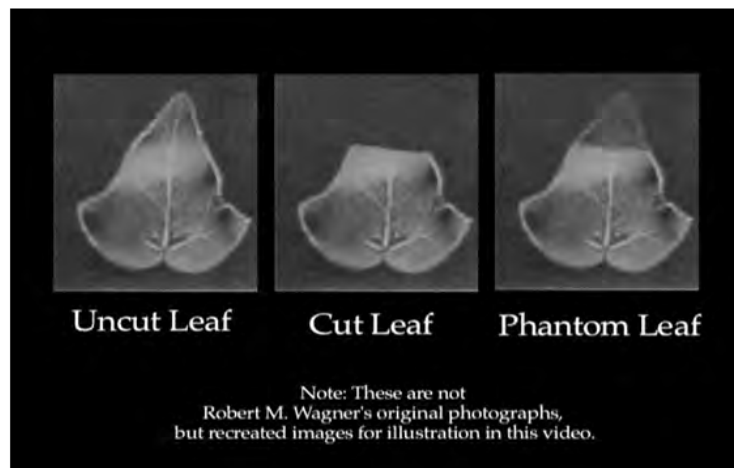
However the most interesting of all the Kirlian claims is known as the "phantom leaf" experiment. Here a small portion of a leaf is cut off; the leaf is then photographed using Kirlian photography. In a small percentage of cases the cut portion of the leaf appears in the photograph as a ghostly apparition. The appearance of the cut portion of the leaf, as claimed by the Soviet researchers is proof of an ethereal bio-plasma body.

Although a few Kirlian researchers have claimed to duplicate the phantom leaf experiment in their own labs, the most reported successful results (phantom leaf photographs) are from Soviet researchers. The exact experimental parameters (voltage, frequency, etc) needed to obtain phantom leaves are either not available or didn't work for me.

Phantom Leaf Experiment

2

Phantom leaf photographs are very easy to fake using a basic double exposure technique. Take a short exposure of the entire leaf. Stop the exposure, cut off a small section of the leaf, and then continue the exposure. In the resulting photograph the removed section of the leaf will appear as a distinct ghostly image, a phantom.



Robert Wagner of the University of California, Long Beach, on April 29, 1975 show that the "phantom effect" was obtained. The author did more than 539 attempts before getting the desired picture. The leaf recently picked was exposed 0.7 seconds at a voltage of 50kV by 330kHz. These parameters were always the same for all the pictures

Whether Kirlian photographs are showing us something new or not they are unique and often times beautiful. You may use Kirlian photography to explore the phenomena or take beautiful pictures. Proof of the phantom leaf effect, if it exists, would begin a new paradigm in both physics and biology. Kirlian photography has the potential for becoming a diagnostic tool (both biological and industrial).



Standard 35 mm camera & color film shot through transparent discharge plate. (exposure unknown)



Digital camera image. Exposure 15 seconds shot through transparent discharge plate.



Model 5

The Model 5 shown above, includes the adjustable High Voltage Power supply, Ground Plate (GP) and Transparent Discharge Plate (TDP).

High Voltage Power Supply

The adjustable High Voltage Power supply is made for Kirlian photography. The frequency and voltage is adjustable. High voltage current output is limited to approximately 1 milliampere. The HV power supply is powered by a wall transformer that supplies 12 VDC at 500 mA to the device.

Transparent Discharge Plate

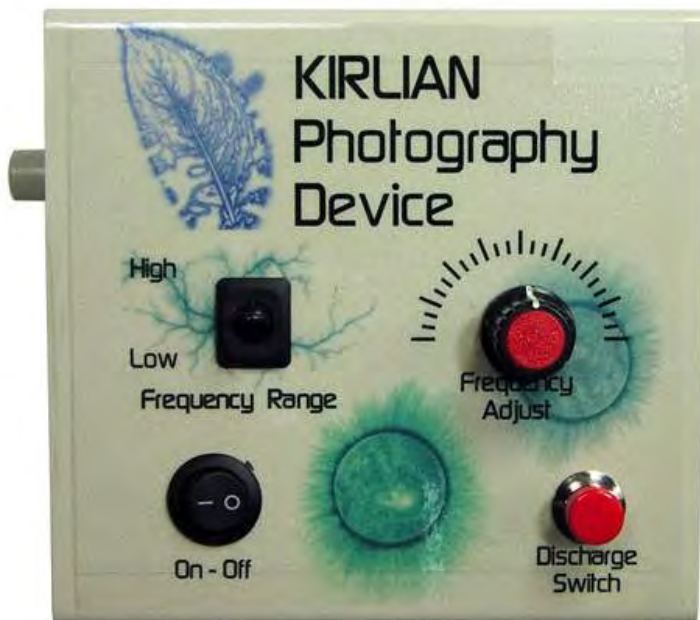
The Transparent Discharge Plate (TDP) (included) is the component that allows one to use standard digital cameras, both still and video. One may also use standard 35mm SLR film camera's. The HV plug on the TDP plugs into the HV socket on the side of the High Voltage Power supply.

Ground Plate

The Ground Plate (GP) included, connects to a ground provided on the side of the high voltage power supply.

Sheet Film Adapter (4x5) (Not Shown)

The Model 5 has an optional Sheet Film Adapter (SFA), (not included) may also be used with is designed to work with 4x 5 color and b/w sheet film and paper, including Polaroid 4 x 5 film.



High Voltage Power Supply

The adjustable high voltage power supply has all control and photography functions on the front panel; the main On/Off power switch, momentary contact Discharge Switch, Frequency Adjust control and the High-Low Range switch.

The On/Off power switch provides main power to the circuit.

The Discharge Switch is a momentary contact switch that applies the HV power to the discharge plate when pressed.

The frequency control varies the frequency of the high voltage electrical

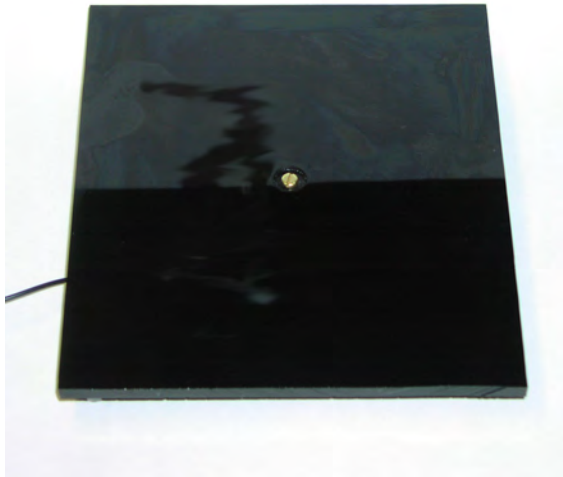
power output. The High-Low Frequency Range switch changes the range of the frequency.

Transparent Discharge Plate (TDP)



The Transparent Discharge Plate (TDP) has an object and camera sides. The side with the colored dot is the object side that faces (or is placed on) the object. This will provide the brightest corona discharge to photograph. The camera side faces the camera.

The transparent section of the TDP has a better than 90% transparency.



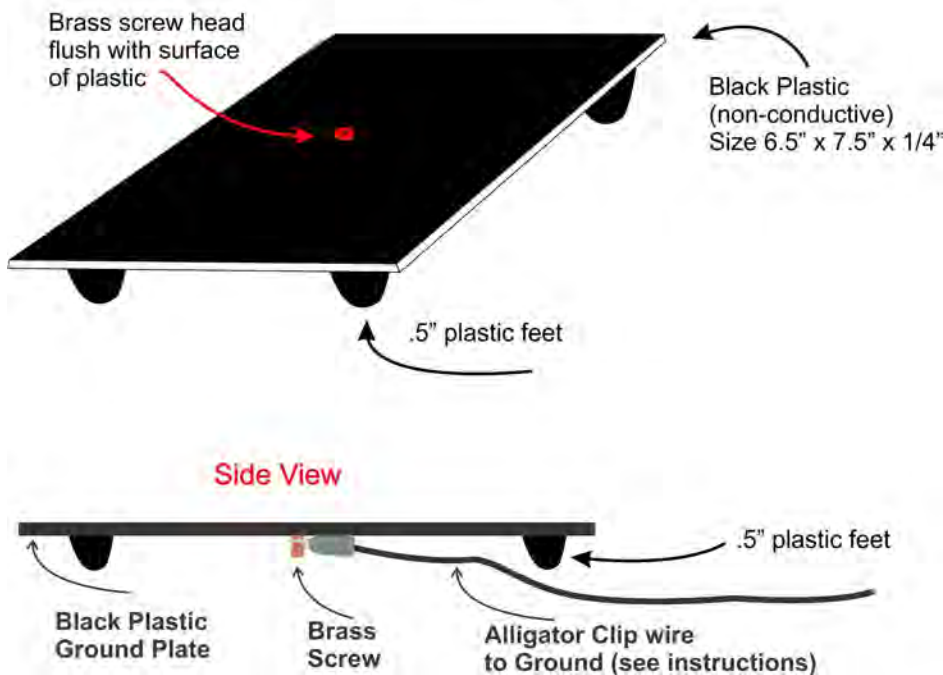
Ground Plate (GP)

Ground Plate (GP)

The Ground Plate (GP) makes it easier to ground an inanimate object you want to photograph safely and quickly.

The black nonconductive plastic of the Ground Plate provides an ideal background to improve the contrast and visibility of the objects corona discharge that you are attempting to photograph.

The construction of the ground plate is shown in the figure on the left.



The ground plate is constructed of a 6.5" x 7.5" non-conductive black plastic plate. The plastic plate has a brass screw through its center. The head of the brass screw is flush with the top surface of the black plastic. This top surface is the photography side of the ground plate. This is where you will place an inanimate object you are photographing, like a leaf or a coin.

The bottom (connection side) of the ground plate, has the opposite end of the brass screw protruding.

The four rubber feet create enough space under the ground plate to connect an alligator clip wire to the end of the brass screw. The opposite end of this wire has a banana plug that plugs into ground connector on the side of the high voltage power supply. This is a circuit ground. You can also use an Earth ground instead of a circuit ground. You would need to connect the banana plug of the ground plate to an Earth ground.



Typical exposure time using a digital camera is set to 10-20 seconds. Exposure time can be adjusted up or down once you have taken an image.

To hold the camera still during the long multi-second exposures one typically uses a copy stand or tripod. The copy stand is positioned so that the camera faces down on the object.

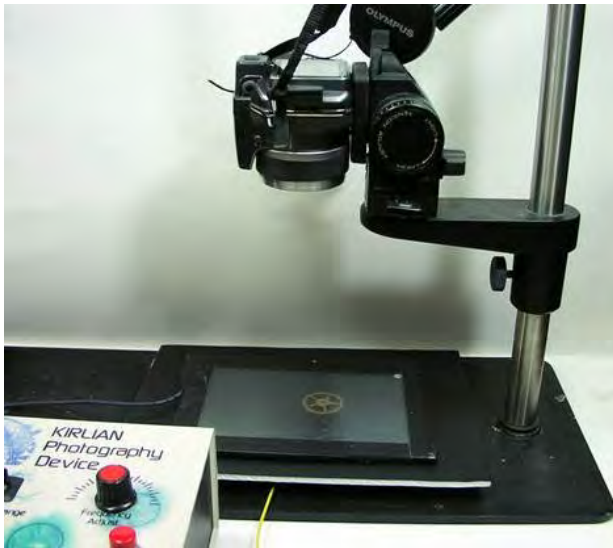
As an example, here is how you would shoot a metal gear with the camera set to with a 10-second exposure.

Set up your Kirlian photography equipment in a room that can be made relatively dark.

Begin your set-up by connecting the ground plate to ground. The ground wire has an alligator clip on one end and a banana plug on the opposite end. The alligator clip is attached to the brass screw protruding from the bottom of the ground plate. The other side of the wire is attached to a ground or plugged into the ground socket on the Kirlian device.

The gear is placed on the top side of the ground plate, covering the brass screw head. The gear becomes grounded through

the brass screw head, which is connect to ground by the ground wire.



over the gear. Object side of the TDP is placed facing the gear.

Put the camera in your Tripod or copy stand.

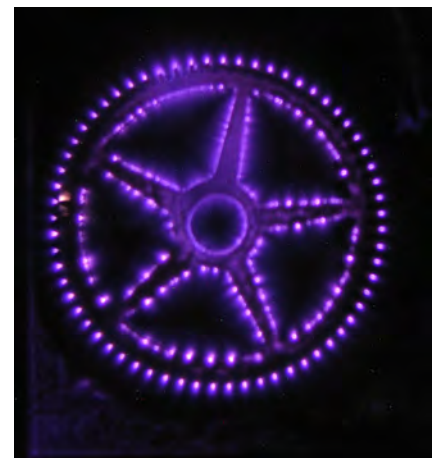
Set the camera's exposure time to 5 seconds.

Position the camera over the TDP (see Figure 3). Adjust the view through the camera to only show the object under the TDP. If an auto-focus camera is being used, turn off the auto focus mode and set the camera for manual focus operation.

Manually focus the camera on the object with the room lights on. After the camera is focused, shut off all the room lights. Use a flashlight to navigate around the room, if necessary. Open the shutter release of the camera and turn on the high voltage power supply. Keep the hv power supply on for the full length of the exposure you are making (5 seconds). After the exposure has been made, turn off the hv power supply. Turn on the room lights

You can view the image and adjust the exposure time up or down.

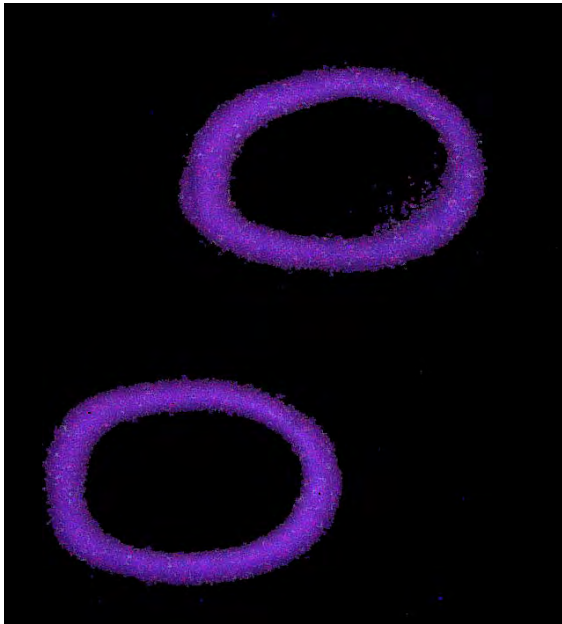
The same technique described here for taking stills may also be used to film real time Kirlian video. The video camera required must be capable of taking low light video, or be equipped with an light enhancing image intensifier.



Grounding for Kirlian Photography (When Not to use the Ground Plate (GP))

When shooting live or human subjects, do not allow the subject to come in contact with a ground. This will increase the HV current through the subject and may be uncomfortable to the subject. Typically a person doesn't need to be grounded, they just need to touch the plastic side of the transparent discharge plate to create a corona discharge.

When shooting inanimate objects like coins and leaves, a ground is necessary to create a corona discharge. One may ground inanimate objects you are planning to photograph in any number of ways, using either an Earth or circuit ground.



Kirlian Fingertips

Warning: Do not photograph or operate the Kirlian apparatus in the presence of anyone with implanted inductive devices or electrodes such as a heart pacemaker equipment.

Photographing People

When photographing a living subject (human or animals) **DO NOT** permit the living subject to be grounded or to touch a ground while being photographed. This will increase the HV current flowing through the subject and will cause an unpleasant shock. As stated in the precautions, do not operate the apparatus in the presence of anyone with implanted inductive devices or electrodes such as a heart pacemaker equipment.

To photograph a fingertip corona, set up the device with the film as described before. Have the subject place their finger on top of the film. Press the discharge switch for a few seconds to expose the film.

Factors Affecting Exposure Time

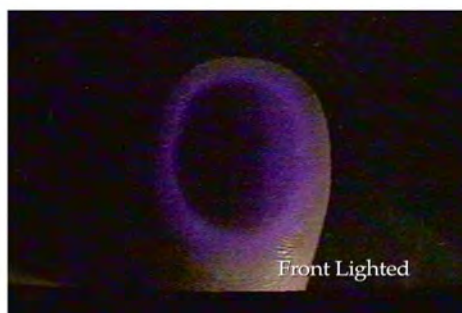
There are a number of factors that effect image exposure time:

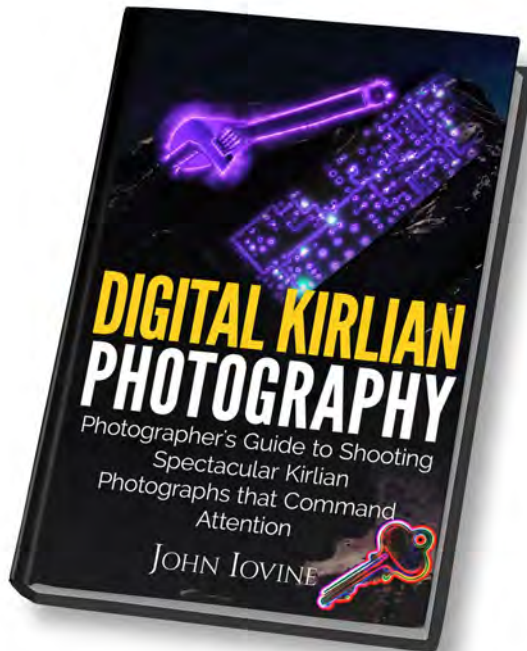
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|-----------------------------------|--------------------------|
| * Frequency & Voltage | * Object Size |
| * Object's pressure against TDP | * F-Stop of Camera |
| * Humidly | * Temperature |
| * Dielectric properties of object | * Conductivity of Object |

To start, for smaller object use an exposure time of approximately 1 second. Larger objects that only produce a faint corona discharge one may increase the exposure time to 5-10 seconds or more.

A similar technique described for taking stills is also used to record real time Kirlian video through a transparent discharge plate. Ideally the video camera should be capable of close up photography and be able to record video under extreme low light levels.

There are many ways one can set-up a video camera to shoot through the transparent discharge plate to record video. One method is shown below. A black plastic stand holds a transparent discharge plate above a low lux colour video camera. This video camera stand and low lux camera are available from Images SI Inc. Images from the instruction manual for the stand are shown below.





Digital Kirlian Photography

In Digital Kirlian Photography, John Iovine gives you all the hands-on guidance you need to produce Kirlian photographs using digital cameras.

You'll also learn how to build your equipment, clean digital photos and market your photographs for sale.

Book is available on Amazon.Com in both Print and Kindle editions.



Foot Switch

Used for hands free operation when activating the high voltage power supply. The foot switch plugs into the $\frac{1}{4}$ jack on the side of the High Voltage Power Supply. You can use either the discharge switch on top of the power supply or the foot switch to activate the high voltage power supply.



Film Plate Adapter

Film Plate adapter allows one to use color and b/w 4" x 5" sheet film. May also be used with Polaroid sheet film.