

ECLIPSE™

Thermal Copier Machine



OPERATION GUIDE

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Thank you for purchasing the Eclipse Thermal Copier.

This guide introduces safety advice, installation instructions and operation, as well as maintenance information. Before using the machine, please read this entire guide to ensure correct set-up, care, and most importantly to avoid risks to your health and/or damage the machine by improper use.

Warranty

Each Eclipse Thermal Copier has passed several quality assurance tests (function, operation, electrical) both during and after manufacturing. The warranty period is 30 days from the purchase date, which may be extended to a full 12 Months (via a free 11 month warranty upgrade) by completing a warranty form within the 30 days of purchase. Please contact your place of purchase for Warranty Forms and Information.

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Declaration of conformity

The Eclipse Thermal Copier fits design, manufacturing, and delivery conditions for the following safety regulations of the EU-directives:

- DIN EN 60950-1: Safety of Information Technology Equipment.
- DIN EN 55022: Radio disturbance characteristics - Limits and methods of measurement
- DIN EN 55024: Immunity Characteristics - Limits methods of measurement
- DIN EN 61000-3-2: Electromagnetic compatibility (EMC) Limits - Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment rated current less than or equal to 16A per phase and not subject to conditional connection.
- All PCB's used inside the device are RoHS compliant.
- This device is made only for conventional use in studio's and offices with regular environmental temperatures. Children are not allowed to operate this device.

Manufacturer

E-M Medical Treatment and Electron (Suzhou) Co Ltd.

Sales, Supplies, and Support

Please contact your place of purchase for all further support, product supplies (including replacement parts or additional materials).

Disclaimer

This guide is produced by E-M Medical for the Eclipse Thermal Copier. This guide may not be reproduced or edited without written permission from E-M Medical. This document is intended to be used as a guide only. E-M Medical may not be held responsible for any fault or misinterpretation that may occur from its use by the customer.

SAFETY INFORMATION

Your Eclipse Thermal Copier has been designed and tested to meet strict safety requirements. Attention to the following information will ensure the continued safe operation of your machine.

Check if the voltage of your machine (Listed on the label at the rear of the machine) meets the voltage of your Country: 110 Volt or 220 Volt. Using a machine not suited for your Country's voltage will damage your machine beyond repair and will void your warranty. Use only the power cord supplied with your machine.

If you use an extension cord, make sure your cord is suited to withstand the current of your machine.

Unplug your Eclipse Thermal Copier machine when it will not be used for long periods of time.

Warning

- Check the voltage of your machine. Using an incorrect voltage will damage your machine beyond repair.
- Do not place your machine in an area where people may step or trip on the power cord.
- Do not place objects on the power cord.
- Do not block the ventilation openings. The openings are intended to prevent overheating.
- Do not drop paper clips or staples into the machine.
- Do not push objects into slots or other small openings of the machine. Making contact with the voltage point or shorting a circuit could result in fire or electric shock.
- If you notice noises that are not associated with the normal operation of the machine, turn off the machine immediately and disconnect the power cord from the electrical outlet.
- Never open machine case without ensuring the machine is switched off and the power cord is unplugged.

Machine Location Placement:

The location of your Eclipse Thermal Copier is important. Please read the following prior to use.

- Keep the machine out of direct sunlight as exposure to the sun or excessive heat may cause damage to the unit.
- Do not place the machine close to a radiator or air-conditioner.
- Do not place the machine in a humid or dusty work area.
- There must be sufficient (10cm or 4 inches) room around the machine to ensure adequate ventilation. Heat from the machine escapes through the cooling vents from all directions of the machine.
- Do not place the machine on paper or flammable material.
- Tilted or uneven surfaces may cause mechanical or paper feeding problems.

Important Usage Instructions

-The Eclipse Thermal Copier produces heat during operation, especially when multiple copies have been made in a short period of time; parts inside may be hot.

-If the internal temperature of the machine is too high, the machine will prevent any more copies being made and will emit a warning signal. **DO NOT TURN OFF** your machine if you hear this warning signal.

-After using the machine, the cooling fans and rollers will continue to run for about 5 minutes to cool down the machine. During the cool down period, the fans will increase its speed to cool down the machine and may get very noisy.

-**DO NOT TURN OFF** your machine by unplugging the power cord or turning off your power supply during the cool down phase or you will damage the clear plastic roller.

-After the 5 minute cool down period, the rollers will stop and the fans will operate at reduced speed to disperse any remaining heat. It is safe to turn off your machine now by pressing the front knob. The fans may continue to run at reduced speeds even turned off.

-If you would like to unplug the machine, it is recommended to wait 20 minutes after last usage to ensure complete cool down of the machine's internal parts.

Unpacking Instructions

1. Remove the machine from package, protective bubble & protective foam.
2. Place your Eclipse Thermal Copier securely on an even, flat, and fireproof surface.
3. Take power cord and plug into the rear of the machine. Plug power cord into appropriate electrical outlet.
4. On the front of the machine, press the knob to turn on the machine.
5. Your machine is now ready for use.



The knob adjusts how fast the transfer paper travels through the Eclipse Thermal Copier. Speed can be adjusted from 0 (Slow) to 99 (Fast). In general, the slower the paper feed, the darker/thicker the lines come out on the copied image; however, if the speed is too slow, the lines of the copied image may become blurred. It may take a few attempts to find the best setting for you as temperature/humidity may affect which speed works for you. The Eclipse Thermal Copier when turned on is set to 15 by default. It is recommended to start with a faster speed (i.e. 30 or 40) and adjust from there to prevent waste when adjusting the machine.

ARTWORK REQUIREMENTS

Artwork for use with the Eclipse Thermal Copier **MUST** be CARBON BASED. It is the carbon that reacts with the light which provides the heat to melt the thermal film of Tattoo Thermal Stencil Paper and ScreenMaster Mesh. Carbon based artwork is commonly produced in 3 main forms:

- Black and White Photocopy
- Black and White Laser Print. (Ink based printers do not work)
- Hand drawn artwork with Carbon artwork pens/pencils.

Inkjet / Bubble Jet Printers

Inkjet (also called Bubble Jet) printers use liquid cartridges that do not contain carbon and are not suited for use with the Eclipse Thermal Copier.

If using Inkjet prints, be sure to make a photocopy and use the photocopy as your artwork to be used with the Eclipse Thermal Copier.

Keys to Good Artwork.

- Use the same type of artwork (i.e. don't mix photocopy and laser prints).
- Eliminate all moisture in your artwork.
- Remove excess carbon that may block your screen.

TATTOO THERMAL STENCIL PAPER INSTRUCTIONS

Tattoo Thermal Stencil Paper is used to transfer a copy of a design onto the skin as a guide prior to Tattooing. The Eclipse Thermal Copier is best suited for use with the **ATSUI** Thermal Transfer Paper or **REPLICA** Thermal Transfer Paper. Using other brands such as **SPIRIT** may require you use a thermal carrier with paper through the machine. It may not be required but sometimes useful to use a thermal carrier in order to keep the Tattoo Thermal Stencil Paper and Artwork together as it passes through the Eclipse Thermal Copier. In rare cases, using Tattoo Thermal Stencil Paper without a carrier may result in the paper wrapping around the plastic roller inside. In this case, you would need to turn off the machine, open the casing to be able to remove the trapped paper.



Tattoo Thermal Stencil Paper contains multiple layers:

- **Cover sheet**
Your design appears on back after imaging.
- **Protective sheet**
Must be removed before use.
- **Carbon paper**
Transfers the artwork to the cover sheet.
- **Backing sheet**
Artwork lays on top face up.

Step 1 - Preparing the Artwork

Artwork can be hand drawn, photocopied, or printed with a laser printer - as long as it's carbon based, it will work. The quality of your artwork is important, so taking a few minutes to ensure it's clean of background marks will make a big difference when your artwork is ready to be transferred.



While it's not essential for Tattoo Thermal Stencil Paper, quality is improved by cleaning up your artwork before use by passing it through the Eclipse with Artwork Clean-Up Paper.

- Removes moisture from the artwork.
- Helps remove pinholes, small marks.
- Removes excess carbon eliminating dark spots.

Step 2 - Combine Artwork and Tattoo Thermal Stencil Paper

1. Remove the protective sheet from between the cover and carbon layer. If this sheet is not removed before using the Eclipse Thermal Copier, the design will not transfer onto the cover!
2. Open the first two layers of your Tattoo Thermal Stencil Paper and place your artwork between the Carbon Layer and the Backing Sheet



Step 3 - Feed into Eclipse Thermal Copier

1. Turn the machine on and set to the appropriate speed (will differ depending on artwork type, temperature, and humidity).
2. Feed the Tattoo Thermal Stencil Paper with Artwork through the front slot of the machine in a continuous motion.
3. The machine will 'grab' the Thermal Paper and pull it through the machine.
4. Do not stop feeding until after the machine grabs the head of the transfer paper.
5. Support the transfer paper using your hand as it exits the back of the machine.

Step 4 - Removing Stencil / Artwork

1. Peel back the cover sheet of the paper, which will slightly stick to the carbon layer to reveal your transferred artwork which is now on the back of the cover sheet.
2. When peeling back the cover sheet, peel slowly to see how your stencil turned out. If the stencil is not dark enough, you can feed the same Thermal Paper through the machine without wasting paper.

If the stencil is blurred, increase speed and repeat Step 3 with a new piece of Tattoo Thermal Stencil Paper.



Step 5 - Applying Stencil to Skin

1. Cut off excess paper (leave 1 cm around the newly made stencil)
2. Shave and clean the skin where the stencil will be placed.
3. Spread Stencil Transfer solution onto the prepared skin location.
4. Apply the paper with the transferred stencil down side onto the skin.
5. Press lightly on the paper to ensure all areas of the paper adhere to the skin.
6. Be careful not to press too hard or move the paper or else it will smudge the stencil on the skin.

SCREENMASTER MESH INSTRUCTIONS - IMAGING

Preparation

Screens are imaged directly from the artwork you provide. Preparing your artwork properly will eliminate the 2 major factors which affect Imaging quality. These 2 factors are moisture in your artwork and excess carbon in the design.

Artwork Clean-Up Process For the Eclipse Thermal Copier

1. Open a thermal carrier sheet and place your artwork facing upwards.
2. Place a sheet of Clean-Up Paper on top of your artwork ensuring the entire design is covered. Only use Artwork Clean-Up Paper as other types of paper may stick to the design or not remove any excess carbon.
3. Lower the lid of the thermal carrier sheet.
4. Adjust the Eclipse Thermal Copier to appropriate speed setting (settings may vary depending on artwork type).
5. Feed the thermal carrier combination through the machine, and support it with your hand as it comes out through the back of the machine.
6. Open the thermal carrier sheet and remove the Clean-Up Paper from the Artwork. The paper may slightly stick to the Artwork due to excess carbon or moisture being picked up off from your artwork. Do not reuse used Clean-Up Paper as it may transfer the carbon or moisture back to your artwork.
7. The Artwork is now prepared for imaging.

IF ARTWORK IS NOT USED WITHIN 5 MINUTES, REPEAT THIS PROCESS AS THE PAPER WILL BEGIN TO ABSORB WATER FROM THE AIR.

IMAGING SCREENS

With your artwork prepared, it's now time to image your screen. This section covers ScreenMaster - sizes up to A4. Larger sizes are covered in the next section.



1. Lay the frame you will be using onto a flat surface and place the ScreenMaster against the frame.
2. Use a pair of scissors to cut the ScreenMaster to fit the outer edges of your frame with enough room for mounting. Remove the cut ScreenMaster from the your frame and put aside.
3. Open a carrier sheet and place your artwork facing upwards.
4. Place your prepped ScreenMaster film side (smooth) down against the design and close the lid of the carrier sheet.
5. Turn on your Eclipse Thermal Copier and adjust the speed.
6. Feed the carrier sheet into the front of the machine in a continuous motion until the machine grabs it and pulls it through. Support the carrier sheet as it comes out the back of the machine.
7. Open the lid of the carrier sheet and double check the imaging by slightly peeling the corner of your ScreenMaster to see if successful. If imaging is not sufficient, simply place it back into the carrier sheet again and run it through the machine once more. Adjust speed settings as necessary.
8. With your screen now imaged, you are ready to mount it to your frame for printing.

IMAGING OVERSIZED SCREENS

The Eclipse Thermal Copier has a maximum imaging width of 220mm (Full A4 width). However, if your frame is wider than this width, you may use this trick to image a larger size ScreenMaster. For example, A3 size screens are required for A4 size artwork when printing 'off contact' using opaque inks or Aqua Inks for plastics and metals.



1. Lay the frame you will be using onto a flat surface and place the ScreenMaster against the frame.



2. Use a pair of scissors to cut the ScreenMaster to fit the outer edges of your frame with enough room for mounting. Remove the cut ScreenMaster from the frame.

3. Place your oversized ScreenMaster film side (smooth) down on a flat surface.

4. Place your A4 sized (or smaller) artwork face down on top of your ScreenMaster film.



5. Fold 3 of the 4 edges of the oversized ScreenMaster onto the back of the artwork while securing it down with removable tape. Only tape the ScreenMaster edges to the artwork, and to itself. Taping the ScreenMaster onto itself may damage it. Do not use excessive force to crease the ScreenMaster when folding. The total width of your folded oversize ScreenMaster should be no wider than your carrier sheet.

6. Open a carrier sheet and place your ScreenMaster/Artwork combination upwards and then close the lid of the carrier sheet.

7. Turn on your Eclipse Thermal Copier and adjust the speed.

8. Feed the carrier sheet into the front of the machine in a continuous motion until the machine grabs it and pulls it through. Support the carrier sheet as it comes out the back of the machine.



9. Open the lid of the carrier sheet and double check the imaging by slightly peeling the corner of your ScreenMaster to see if successful. If imaging is not sufficient, simply place it back into the carrier sheet again and run it through the machine once more. Adjust speed settings as necessary.

10. With your screen now imaged, you are ready to mount it to your frame for printing. When mounting, do not try to flatten out the creases as it may distort your image and damage the mesh.

Q: Does the fold to the ScreenMaster affect the print?

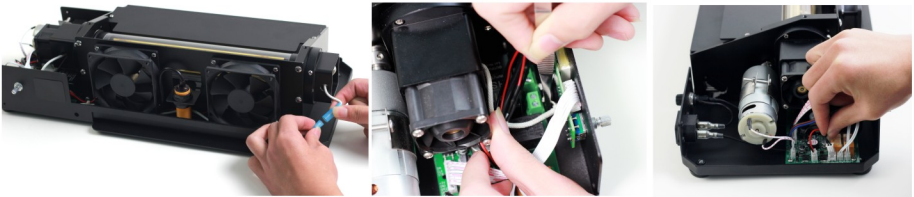
A: The fold created on the outer edges of the artwork is outside the design area. When stretched to a metal frame, the fold becomes nearly flat. The fold is outside of the print area so it will not affect the image quality. In general, as long as there is a 5mm gap between the design and fold, there will be no issues.

REPLACING THE HEAT LAMP

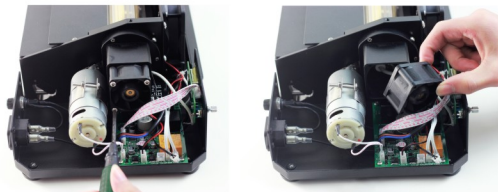
Required Tools: Screwdrivers (both Phillips and Flathead), and a pair of Tweezers



Unplug the power cord from the outlet. Remove the screws from the front (2) and back (4) of the cover. Also remove the Speed Adjusting knob by pulling it firmly away from the machine. With the Eclipse Thermal Copier facing toward you, slowly lift the cover by tilting the back side of the cover upwards first and then towards you.



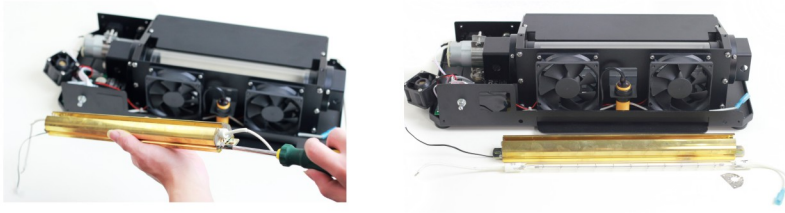
With the Eclipse Thermal Copier facing toward you, disconnect the right side of the Heat Lamp by disconnecting the Blue Connectors. Disconnect the left side of the Heat Lamp with a Flathead screwdriver. Lastly, disconnect the Heat Sensor by gently pulling on the pin connector shown in the picture.



Unscrew the 4 screws holding the cooling fan to the square bracket. Place the fan nearby during the next few steps as there is no need to disconnect the fan from the circuit board.



Loosen the 2 screws on top of the frame, then loosen the 2 screws (1 on each side bracket) to release the gold plated reflective unit. Gently pull the unit from the side of the machine until it's completely outside of the machine.



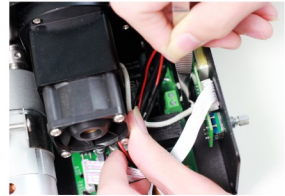
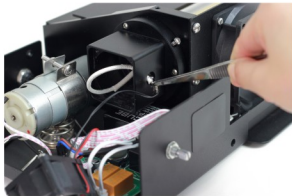
Looking at the reflective unit, unscrew one side of the metal clasps and pull the Heat Lamp out with some force. Important: Take note on which side of reflective unit has the Blue Connector and which side is bare wire. This is important during reconnection.



Insert the new Heat Lamp while taking note of which side has the Blue Connector. The bare wire should be on the same side as the Heat Sensor Pin. Re-attach the metal clasps and screw back onto the reflector.



Gently slide the reflective unit back into the machine. Be careful of the two wires that must go through the entire length of the plastic roller.



Using a pair of tweezers, pull the two connectors through the front hole of the square bracket. Gently push the Heat Sensor Pin back into the circuit board. Use the tweezers to guide the Heat Lamps bare wire to the circuit board and secure with a Flathead screwdriver.



Re-attach the cooling fan to the square bracket. Reconnect the Blue Connectors on the right side of the machine. Gently screw the top 2 screws but not too tightly. Tighten screws just enough to secure the reflective unit in place. Screwing the top 2 screws with too much force may impede the rotation of the plastic roller. Test by gently rotating the plastic roller with your hand to make sure it can rotate smoothly.



Place cover back on to the machine by following Step 1 in reverse.

REPLACING THE PLASTIC ROLLER

Required Tools: Allen Wrench, Screwdriver (Phillips)



Unplug the power cord from the outlet. Remove the screws from the front (2) and back (4) of the cover. Also remove the Speed Adjusting knob by pulling it firmly away from the machine. With the Eclipse Thermal Copier facing toward you, slowly lift the cover by tilting the back side of the cover upwards first and then towards you.



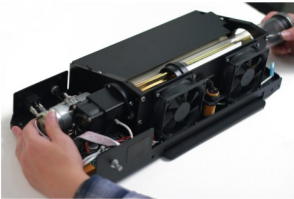
With the Eclipse Thermal Copier facing toward you, disconnect the right side of the Heat Lamp by disconnecting the Blue Connectors.



Thermal Copier facing toward you, loosen (without removing) the 4 screws of the right square bracket and place it aside.



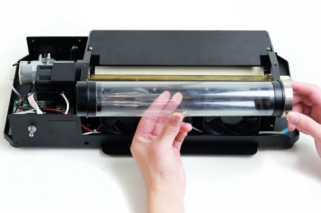
On top of the frame, loosen the 2 top screws. Behind the machine, use an Allen Wrench on the 2 screws to release the spring tension of the mechanical rubber roller.



With the tension released, push down and away on the electric motor while sliding the Plastic Roller Unit to the right and outside of the machine. Once the Plastic Roller Unit has cleared the machine, you can let go of the electric motor.



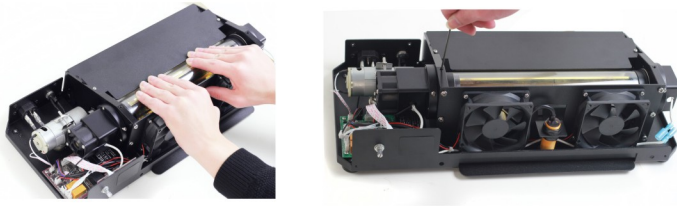
The removed unit consists of 1 Plastic Roller, 2 Aluminum Holders, and 1 Bearing. Take note of how the unit is assembled. Remove the Aluminum Holders and Bearing and place them onto the new Plastic Roller Replacement.



With the new Plastic Roller Unit assembled, gently slide back into machine while holding down the electric motor.



Re-attach the right square bracket and also the blue connectors.



Gently screw the top 2 screws but not too tightly. Tighten screws just enough to secure the reflective unit in place. Screwing the top 2 screws with too much force may impede the rotation of the plastic roller. Test by gently rotating the plastic roller with your hand to make sure it can rotate smoothly.



With the Allen Wrench, tighten both screws on the back of the machine until fully into the machine.

Place cover back on to the machine by following Step 1 in reverse.

TROUBLESHOOTING

Question: My machine doesn't turn on?

Answer:

- The Eclipse Thermal Copier is turned on by pressing the front knob which also illuminates the LED screen.
- If LED does not turn on, check to see if power cord is plugged into outlet.
- Check if the Electrical Fuse on the back of the machine is still intact.

Q: My machine is very noisy after making copies?

A: This is normal and part of the cool down period. The noise should go down after approximately 5 minutes. Do not unplug the machine or else the plastic roller will deform and need to be replaced.

Q: My machine is still making noise after 5 minutes since last use?

A: The internal fans will still run at low speeds to dissipate any residual heat to protect the plastic roller.

Q: My machine is making a beeping noise and I'm unable to make any more copies?

A: The internal temperature of the machine is too high. This may occur if you make multiple copies in quick succession. Making copies is disabled until the machine cools down. Do not turn off your machine if you hear the beeping noise or else the plastic roller will deform and needs to be replaced.

Q: My artwork has disappeared into the machine?

A: On rare occasions, your artwork may stick to the plastic roller inside the machine. This may be due to moisture or stickiness on the paper itself. The easiest way to prevent this is to use a carrier sheet with your artwork. To remove the trapped artwork, wait until the machine cools down, unplug the machine and open up the cover.

Q: My copies have horizontal sections that are not being transferred?

A: It is possible that your plastic roller has warped due to heat. This occurs if you unplug your machine immediately after making a copy. The plastic roller must be replaced.

Q: My machine is on but doesn't make any copies or my copies are very 'light'?

A: -If there is no visible light coming out of the machine when you feed your artwork, the Heat Lamp may be broken or possibly disconnected during shipment.
-If there is visible light and your copies are coming out very 'light', there could be hairline cracks in the Heat Lamp which affects its efficiency.
-If the 2 tension screws on the back of the machine are not screwed in all the way, it may also cause 'light' copies. These 2 Screws are responsible for creating pressure between the rubber and plastic roller which is necessary during the copy process.

Q: My Artwork doesn't pass through the machine?

A: -If your machine isn't audibly working when feeding your artwork, it's possible the internal motion sensor is defective.
-If machine is audibly working but the machine doesn't grab your artwork, it could be that the electrical motor is defective or the 2 tension screws are not screwed in.

Q: The Heat Lamp is constantly on when turning on the machine?

A: The Internal Motion Sensor may be blocked with something and must be cleared of obstruction before further use. If the heat lamp has been on for a long period of time, your plastic roller is at risk of deformation.

Q: My machine is broken and I don't know what to do.

A: Contact your place of purchase for further assistance.



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PATENT PENDING