

# ECLIPSE<sup>TM</sup>

Thermal Copier Machine



## Operation Guide



[www.wwta2.com](http://www.wwta2.com)

## 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 carriers) and 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 Advice:

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



Check if 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 the cord is suited to the current of the machine. Unplug extension cord for long periods when machine is not in use.

## Warning

- Check the voltage of your machine. Using an incorrect voltage will damage your machine beyond repair
- Do not place the machine in an area where people may step or trip on the power cord
- Do not place objects on the power cord
- Electrical products may be hazardous if misused
- Do not block the ventilation openings. The openings are intended to prevent overheating
- Do not drop paper clips or staples into the machine



## Warning

Do not push objects into slots or openings on the machine. Making contact with the voltage point or shorting out a part could result in fire or electrical shock.

If you notice noises that are not associated with the normal operation of the machine:

1. Turn off the machine immediately
2. Turn off and disconnect the power cord from the electrical outlet
3. Contact your place of purchase for all further support

## Warning

- Never open the lid while the machine is in use as direct viewing of light from heat lamp may damage eyes and cause damage to the machine.
- Never open machine case without ensuring the machine is switched off and the power cord is unplugged

## Machine Location:

**The location of your machine is important. Please read the following prior to use.**

1. Keep the Thermal-Copier out of direct sunlight.
  - Direct exposure to the sun or excessive heat may cause damage to the unit
2. Do not install the Thermal-Copier close to a radiator or air-conditioner unit.
3. Do not install the Thermal-Copier in a humid or dusty work area.
4. Place the Thermal-Copier securely on an even, flat and fireproof surface.
  - Heat from the machine escapes through the cooling vents at the base of the machine
  - Do not place the machine on paper or a flammable material
  - Tilted or uneven surfaces may cause mechanical or paper feeding problems
5. There must be sufficient (10cm or 4 inch) room around the machine to ensure adequate ventilation.

## Important Usage Hints



The Thermal-Copier produces heat during operation, especially when multiple copies have been made in a short period of time; parts inside may be hot. Do not touch parts under the top cover (e.g. Glass Roller) while the Rollers are still moving. The cooling fans will always be running when the power is on.

When the Thermal-Copier is in standby mode it is still consuming some power. To avoid wasting energy turn the main switch on the rear of the machine to "0".

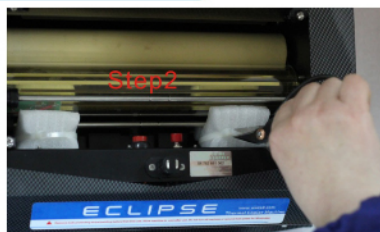
- Standby mode is when the copier has power on (lights on) and fans are running, but the rollers are not.

To disconnect the power completely from the machine remove the AC power plug from the wall socket.

- Never turn off the power or remove the AC power plug unless the rollers have stopped and the machine has finished its cool down period (approx. 20 minutes) after use.
- There are TWO GREEN lights on the Eclipse Thermal Copier. When powered on both lights will light up GREEN. The light on the right side is a temperature indicator. During normal operation, the temperature light will flicker as the temperature changes. When multiple copies are made in a short period of time, the right light will turn RED indicating that the rollers are too hot for further use. Do not make any more copies until the RED light has turned back to GREEN.

## Unpacking Instructions

1. Remove the machine from package, protective foam & plastic bag.
2. Open the lid of the machine to expose the glass roller and rubber roller. Remove protective foam and zip ties that protect the Glass Roller carefully.





3. On the back of the machine, use an Allen key to tighten the bolts into the machine. These two bolts provide the pressure between the glass roller and the rubber roller.



4. Take power cord from rear of machine and plug Into appropriate electrical outlet.



5. Turn the machine on (Green lights should illuminate), Press Feed Button (Left Red Button Next to the Glass Roller) to rotate Glass Roller.

**Examine the rollers making sure they rotate smoothly. If the rollers do not run smoothly or the glass is cracked, please contact your place of purchase for further instructions. Close the top cover. Your machine is now ready for use.**

## Artwork

Artwork for use with a Thermal-Copier MUST be carbon based, as it's the carbon that reacts with the heat the Thermal-Copier provides to melt the thermal film on the ScreenMaster mesh. Carbon based artwork is available in 3 main forms:

1. A Black and White Photocopy
2. Black and White Computer Laser Print
3. Hand drawn artwork with Carbon artwork pens

## Notes on Inkjet/ Bubble Jet Computer Prints

Inkjet (also called Bubble Jet) printers using liquid cartridges do not contain carbon and are thus not suited for artwork.

If using Inkjet prints, make a photocopy and use the photocopy as your artwork.

## Keys to Good Artwork

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



## Preparation

Screens are imaged directly from the artwork you provide, so a small amount of time preparing your artwork will help eliminate the 2 most common problems before they occur:

1. Moisture in the artwork
2. Excess carbon in the design

Either of these elements can cause carbon to lift off your artwork and block the mesh - a problem that is quickly and easily solved by performing a quick Artwork Clean-Up just before you image your screen.

## Artwork Clean-Up Process for the Eclipse Thermal-Copier

1. Open thermal carrier cover and place artwork inside facing upwards.



Step2

2. Tear, or cut, a piece of Clean-Up Paper from the roll, ensuring all the design is covered.

- Uncovered parts of the design will burn into the cover of the carrier.
- Clean-Up Paper should not stick out past edges of the carrier or it may jam in the machine. Fold Clean-Up Paper at the outer edge of the artwork and tuck back under design where required. Folds outside the design area will not effect the clean-up process.
- Use only Artwork Clean-Up Paper as other types of papers may stick to the design or not remove any excess carbon.

3. Lower the lid of the carrier and prepare to pass through the machine.
4. Set the machine to a speed setting of 5 (general setting)
  - Setting may vary depending on artwork type



Step5a



Step5b

- 5a Insert the carrier into the machine.
  - Continue to feed into the machine until AFTER the heat starts AND carrier is grabbed - hesitation may cause the head of the carrier to melt

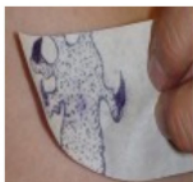
- 5b Support the top of the carrier with your hand as it comes out the back of the machine.

6. Open the lid of the carrier and remove the Clean-Up Paper/ Artwork
  - The artwork may now be slightly stuck to the paper - this is the excess carbon sticking
  - If the Clean-Up Paper does not stick this is OK
  - Excessive sticking is rare but may occur. This indicates heavy levels of carbon in the design and may require an increase of speed (less heat) or a second pass through machine on a new piece of Clean-Up Paper
7. Gently peel the Clean-Up Paper off the artwork.
8. Scrunch the used piece of Clean-Up Paper so it can not be reused
  - Reuse will transfer carbon back to the paper.
9. Artwork is now prepared and ready to image a screen.
  - If artwork is not used within 5 minutes repeat this process as the paper will begin to absorb moisture



The knob adjusts how fast the transfer paper travels through the Thermal-Copier. 1-Slow / 10-Fast. In general, the slower the paper feed, the darker the lines of the copied image; however, if the speed is too slow, the lines of copied image may become blurred. It may take a few attempts to find the best setting for you.

## Imaging Tattoo Transfer Paper



Tattoo Transfer Paper, is used to transfer a copy of a design onto the skin as a guide prior to tattooing.

It is not required but sometimes useful to use a thermal carrier in order to keep the tattoo paper and artwork together as it passes through the Eclipse Thermal Machine. In rare cases, using imaging paper without a carrier may result in paper wrapping around the glass roller.

### Step 1. Artwork

Artwork can be hand drawn, photocopied or computer laser printed - as long as it's carbon based, it will work. The quality of your artwork is important, so taking two minutes to ensure it's clean of background marks etc. will make all the difference once your paper has been imaged.

### Artwork Preparation



Whilst not essential for tattoo paper, quality is improved by cleaning up your artwork before use, by passing through the machine against Artwork Clean-Up Paper

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

## Step 2. Combine artwork and paper in carrier



Tattoo Thermal 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

Step2a

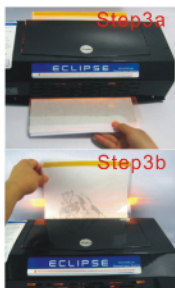


Step2b



Remove the protective sheet from between the cover and carbon layer. If this sheet is not removed before imaging the design will not transfer onto the cover.

## Step 3. Imaging



Turn the machine on and set to the required setting [will differ depending on artwork type].

a) Feed transfer paper with artwork in the front of the machine in a continuous motion.

- The machine will 'grab' transfer paper and pull it through
- Do not stop feeding until after the machine grabs the head of the transfer paper

b) Support the transfer paper using your hand as it exits the top of the machine.

## Step 4. Remove imaged design



Lift the cover of the carrier to reveal your tattoo paper. Peel back the cover sheet of the paper, which will slightly stick to the carbon layer, to reveal your imaged design on the back of the cover sheet. Slightly peel the artwork from a corner to check correct imaging.

- If under imaged do not remove the design as you can re-feed it back through the machine to complete the imaging process

## Step 5. Apply Design to Skin



Cut off excess paper (leave 1cm around design), clean the skin, apply transfer solution and apply paper design side down.

- Use caution not to press too hard or the paper may move causing a smudged design

## Imaging Screens

With your artwork prepared it's now time to image your screen. This section covers Screen Master- sizes up to A4, larger sizes are covered in the next section - Imaging Oversized Mesh.

### Cut Your ScreenMaster Mesh

1. Lay the frame you will be using for your design onto a flat surface and place the rolled ScreenMaster against the back.
2. Using a pair of scissors or a Stanley knife, cut the ScreenMaster to fit the outer edges of the double sided tape.
  - To make mounting the Mesh easier after the screen has been imaged, allow an additional 10mm (1/2 inch) past the tape.



Your ScreenMaster is now cut to size and ready for use.



1. Lift the clear cover of the carrier and place your artwork 'face up' on the base of the carrier.
2. With your ScreenMaster cut to size, place over your artwork, film side (smooth) down against the design.
3. Lower the lid of the carrier back over the mesh/ artwork - you are now ready for imaging.



4. Turn the machine on to the speed required.
  - Speed setting will differ depending on artwork type used
5. Feed the carrier into the front of the machine in a continuous motion.



- The machine will 'grab' the carrier and pull it through
  - Do not stop feeding until after the machine grabs the head (top) of the carrier
6. Support the carrier with your hand as it comes out the back of the machine.
    - Do not pull the carrier, support its weight as it comes out the back
  7. Lift the cover of the carrier and remove your imaged screen from the carrier.



8. Before removing the artwork from the back of the mesh, the screen should be checked.
  - Slightly peel the artwork from a corner to see if the screen has imaged correctly
9. If the screen is ready continue to remove the artwork.
  - Should the screen be under imaged do not peel the artwork off the screen, simply return to the carrier and re-image the screen through the machine. Adjust the imaging setting if required

**With your screen now imaged you are ready to mount your screen to a frame for printing.**



## Imaging Oversized Screens

The Eclipse Thermal-Copier has a maximum imaging width of 220mm (full A4 width), however an A4 design can also be placed onto an A3 size screen by folding the outer edges of the mesh under the design and passing through the machine.

### Why would an A3 size screen be needed with A4 artwork?

An A3 sized screen is required for A4 artwork when printing 'off contact' using opaque inks or Aqua Inks for Plastic/ metals.

### Does the fold to the ScreenMaster effect the print?

The fold created on the outer edges of the artwork is outside the design area. When stretched to a metal frame the fold becomes almost flat, however it's the fact it's outside the print area that's important. Provided there is a 5mm gap between the design and fold there is no issues.

## Preparation



1. Prepare your artwork using the Artwork Clean-Up
2. With your ScreenMaster cut to size, place over your artwork, film side (smooth) down against the design.
3. Holding both the artwork and ScreenMaster together flip the combination over to have the artwork on top facing downwards, as pictured left.
  - If the artwork moves when the mesh is flipped you must reposition the design against the screen, as the next step will fix the design in place
  - Ensure this process is done on a flat surface with suitable space to limit any movement of the artwork/mesh combination
4. Fold the long edge closest to you back onto the artwork as pictured left.
  - **Do not** fold or crease the ScreenMaster mesh with your hand to flatten at this stage
  - The mesh will have a slight curve, not crease, as it folds over around the paper
5. Using a removable sticky tape attach the folded edge to the back of the artwork.
  - **Do not** use highly adhesive tapes as they may damage the mesh when removed
  - **Do not** use adhesive sprays or glues of any type
6. With the first long edge taped down, proceed to perform the same task on the second long edge of the screen.
  - Pull the mesh over onto the back of the artwork
  - Tape down against the back of the artwork
  - Do not fold or crease the edge

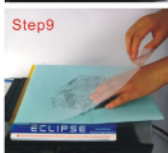


7. With both long (side) edges of the screen taped down proceed to fold and tape the head/ top of the mesh to the artwork.
- Use caution not to fold or crease the edges
  - Tape down against the back of the artwork, not against the mesh on the sizes or this may cause damage to the mesh when removed
  - There is no requirement to tape the fourth side of the mesh

## Imaging



8. Open the cover of the thermal carrier and insert the top of the artwork/ mesh into the carrier.
- Ensure the head is sitting just below the thermal tape - do not place the design behind the thermal tape as it will not image



9. Lower the cover of the thermal carrier back over the mesh/ artwork - you are now ready for imaging.
- Mesh will protrude out the bottom of the carrier - this is OK



10. Turn the machine on and set the speed to the required setting.
- Speed setting will differ depending on artwork type used
11. Feed the carrier into the front of the machine in a continuous motion. Do not stop feeding until after the machine grabs the head of the carrier.
- The machine will 'grab' the carrier and pull it through



12. Support the carrier with your hand as it comes out the back of the machine.
- Do not pull the carrier, support its weight as it comes out the back



- Maximum length of the design is 300mm
- Maximum length of mesh outside the carrier is 100mm
- For longer designs, fold and tape both the head and base of the mesh to the back of the artwork (all 4 sides).

13. Lift the cover of the carrier and remove your imaged screen from the carrier.

## Separating and Checking



We must now remove the tape from the back of the artwork to reveal our imaged screen.

14. Remove the tape from the head of the design using caution NOT to tear the artwork or mesh.
- The benefits of a removable sticky tape are clear at this point

If required you may keep the tape attached to the mesh and simply remove from the artwork. Fold the tape back onto the ScreenMaster mesh as this part of the screen will be attached to the frame and will not effect printing.



15. Remove the tape from one side of the artwork using caution NOT to tear the artwork or mesh.

It is at this point you should check the design for correct imaging.

- Peel back only a small area of the design
- If re-imaging is required you must reattach the side and head to the artwork (steps 4-7) before running through the machine



16. After checking your screen remove the final piece of tape from the back of the artwork.

17. Remove the artwork from the design.

18. You will note 3 creases on your mesh outside the artwork area caused by compression as the mesh was passed through the machine. Simply mount to a frame in the normal process.

- The crease is outside the print area and will not effect your print result, it is simply a cosmetic issue and should be ignored, as it is part of the oversized imaging process
- Do not try to 'pull out' the crease when mounting to a frame - you will distort your design and may damage the mesh

## Cleaning

Keeping your machine clean will ensure an ongoing trouble free operation. Above all avoid dusty locations and keep the Glass Roller clean!

### Machine

Clean carefully using moistened cotton swab with small amount of washing up liquid.

- Do not wet tables or rear electrical power plug

### Glass Roller

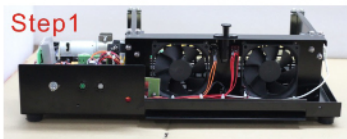
Clean regularly by depressing the Feed button and wiping with Isopropyl alcohol.

### Carriers

Wipe carrier immediately after use with lint free cloth and return to protective cover. Replace if cover worn, damaged, marked, bent or results begin to deteriorate.

## Replacing the Heat Lamp

Step1



1. Unplug the power cord and remove the cover of the Thermal-Copier. You need to unscrew 2 screws in the front and 3 from the back to remove the cover.

Step2



2. Carefully cut the zip tie as shown above. Be careful not to accidentally cut any wires.

Step3



3. Unscrew the 2nd and 3rd screw from the right to release the bulb's connectors. They should be white in color and very noticeable.

Step4



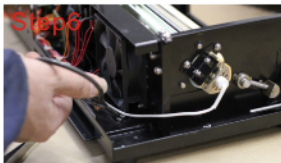
4. Carefully remove the wire from the circuit board. Using a pair of tweezers help.

Step5



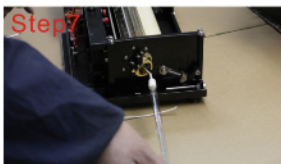
5. Unscrew the screws which keep the bulb in place

Step6



6. Carefully remove any zip ties binding the bulb. There are quite a few to keep the wires bundled neatly and are not needed for the Thermal-Copier to function properly.

Step7



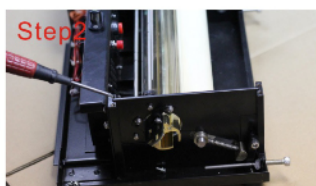
7. Remove the bulb as shown. Repeat the steps in reverse to reassemble your Thermal-Copier.



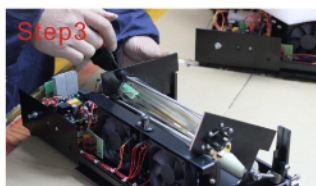
## Replacing the Glass Roller



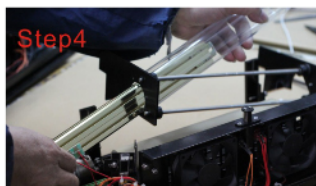
1. You must remove bulb first before replacing the glass roller. Once the bulb is removed, unscrew the screws on both sides as shown.



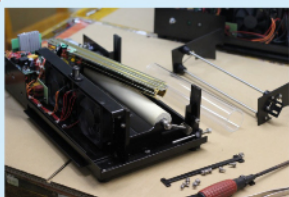
2. Unscrew the 8 screws on the top side of the frame.



3. Carefully lift up the two sides of frame.



4. Slide out the Glass Roller.



This is how it should look like when disassembled. Repeat any steps in reverse to reassemble your Thermal-Copier.

## Trouble shooting

### Problems

### Solutions

#### Green LED doesn't light:

Main switch set to "0"	Set to "I"
Power cord not properly connected	Connect to a suitable electrical outlet
Electrical unit inside the machine defective	Please contact your place of purchase

#### The heat lamp doesn't work, but green LED lights up:

High temperature inside the machine – protective thermal sensor has activated	Heat sensor activated. Wait up to 20 minutes for the machine to cool
Lamp is defective/ broken	Please contact your place of purchase
Fuse of the lamp is broken	Replace with same type and value

#### After copying, rollers continue to work:

Normal operation: motor runs until cooled. Fans are constantly running	Do not switch off the machine. Cooling is in progress.
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#### Originals are jammed (Rolled up on Glass Roller):

May happen rarely if no carrier is used with transfer paper.	Press the two red buttons by the roller to "reverse" the rollers and remove the jam. Clean the glass roller from excess dirt and moisture.
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Additional Troubleshooting, How to and Support Contact your local supplier

# ECLIPSE<sup>TM</sup>

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PATENT PENDING