

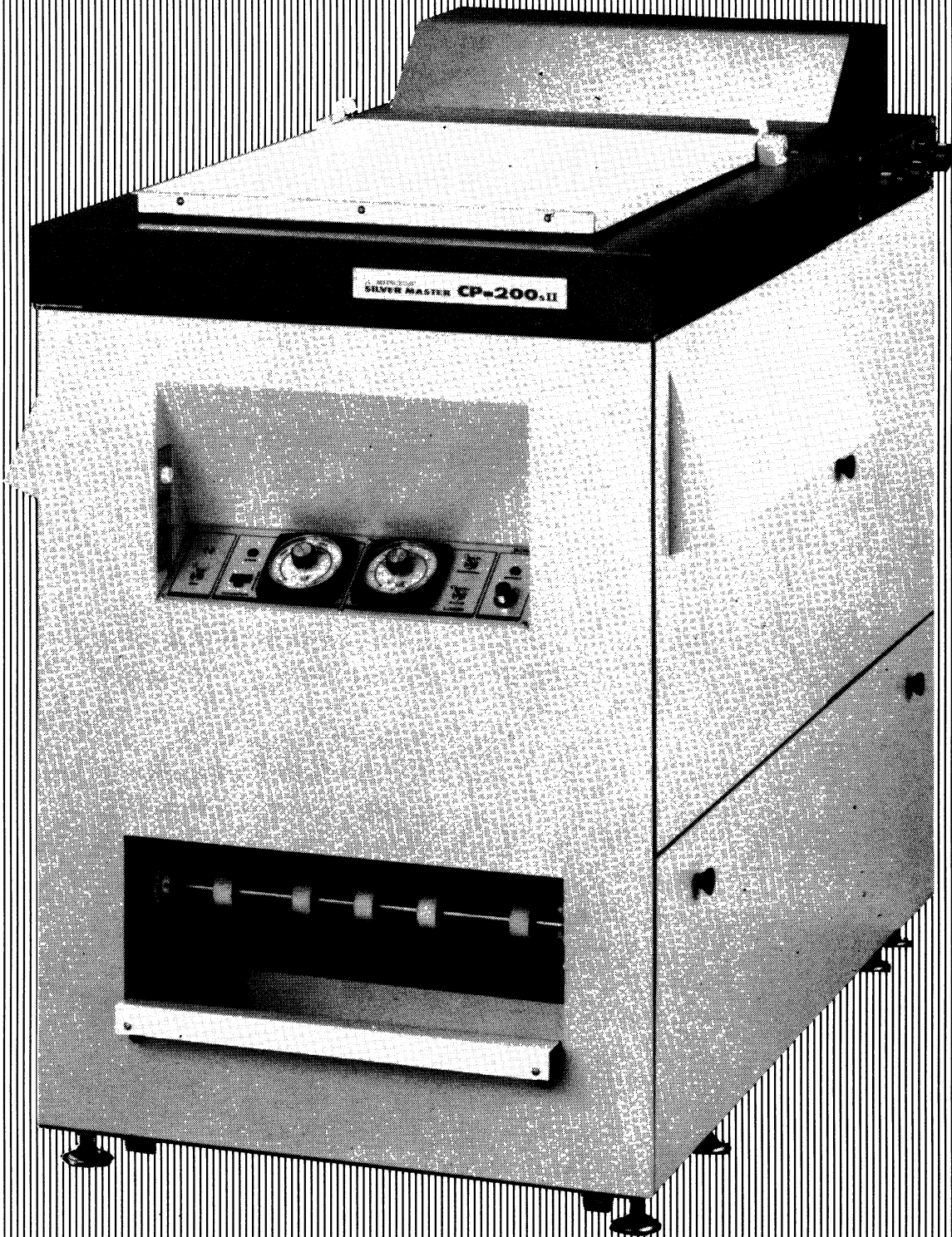
GAM

MITSUBISHI
GRAPHIC-ARTS
MATERIALS

SILVER MASTER SYSTEM

SILVER MASTER PLATEMAKER CP-200s II

OPERATION MANUAL



 **MITSUBISHI PAPER MILLS, LTD.**

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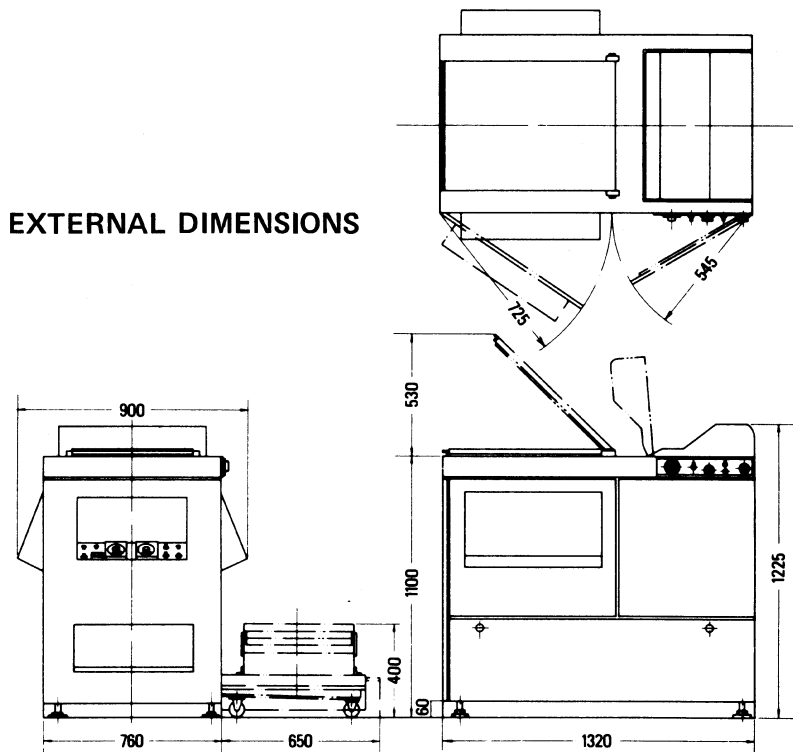
CHAPTER 1 OUTLINE

1 Introduction

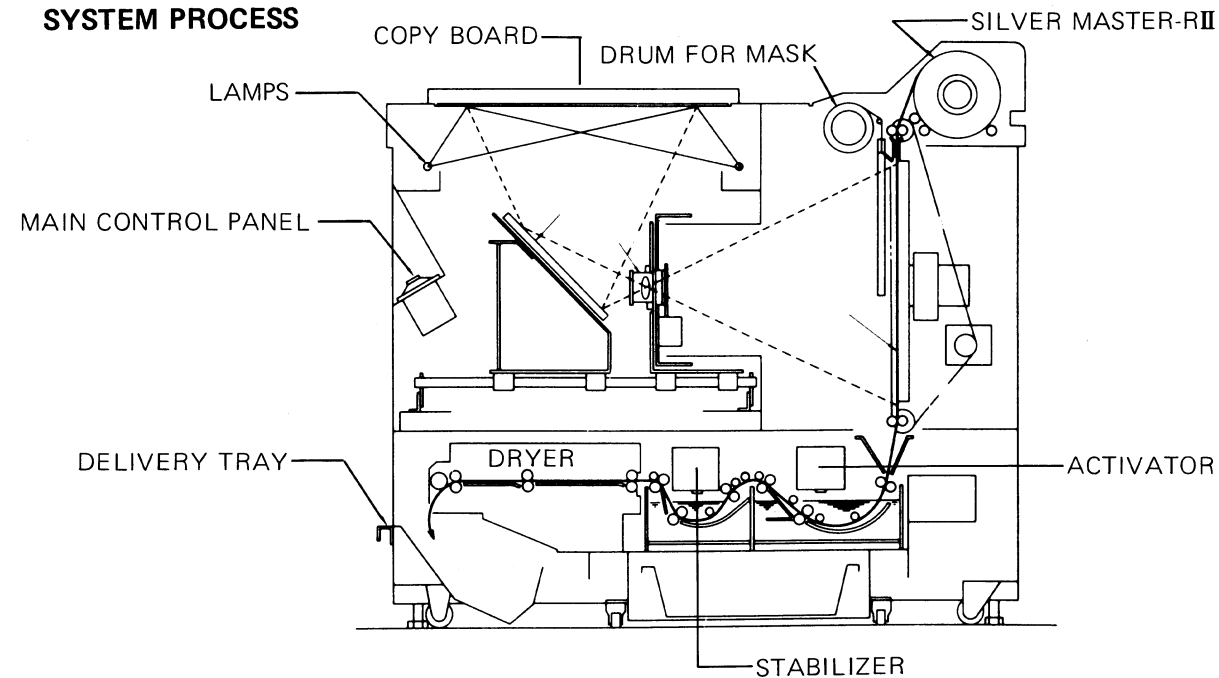
We at Mitsubishi are very grateful to you for your selecting the Silver Master CP-200SII. The Silver Master CP-200SII is a completely new multi-functional system of platemaking in which, in combination with Silver Master RII, an offset master plate is produced directly from the copy in one-touch operation, eliminating the intermediate film process. It has a wide latitude, from B4 to A3.

This operation manual has been produced to enable you to enjoy the system's superior qualities for a long time. For information on printing methods, please refer to our separate booklet, "Silver Master RII Technical Guide".

EXTERNAL DIMENSIONS



SYSTEM PROCESS

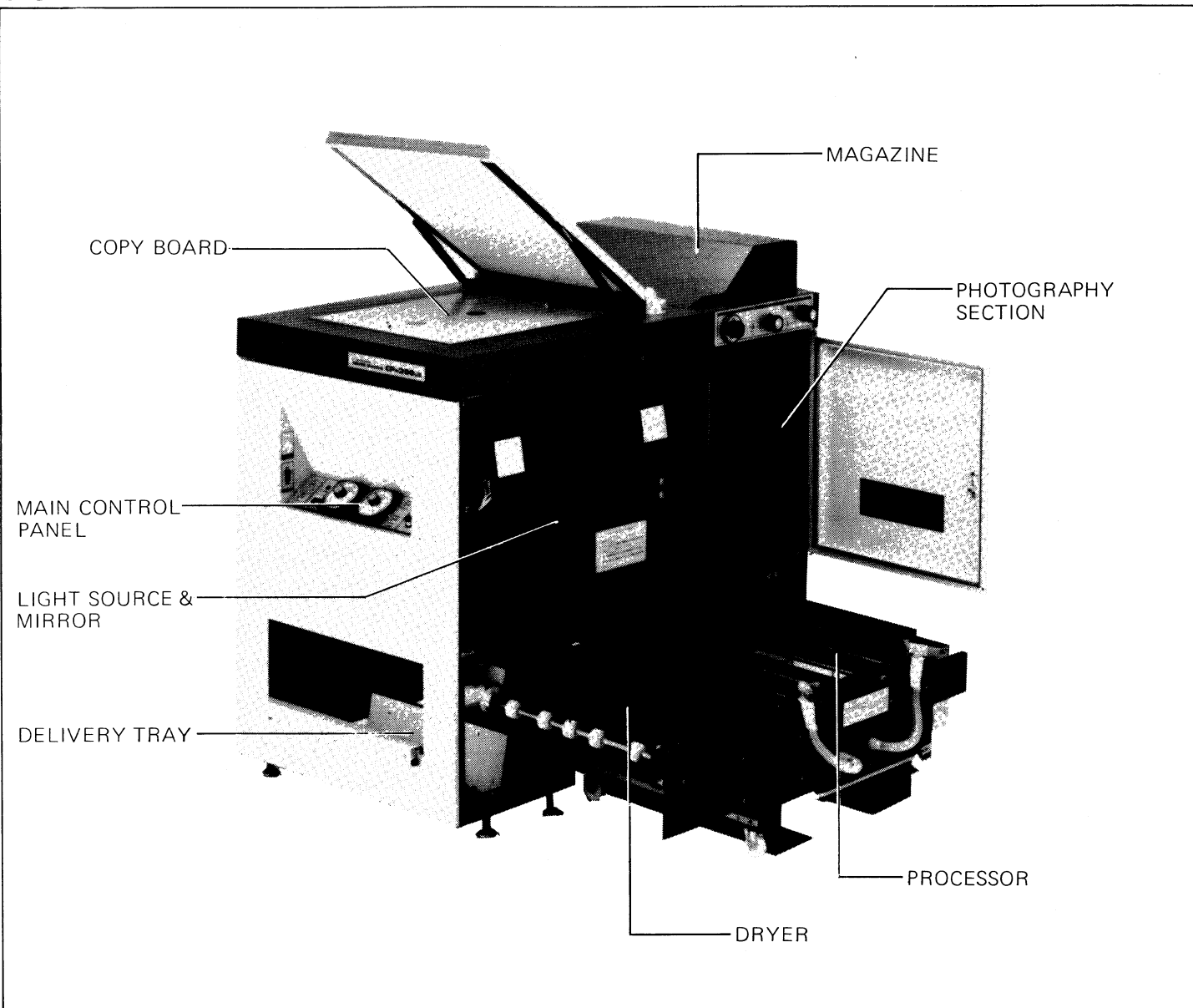


2. Specifications

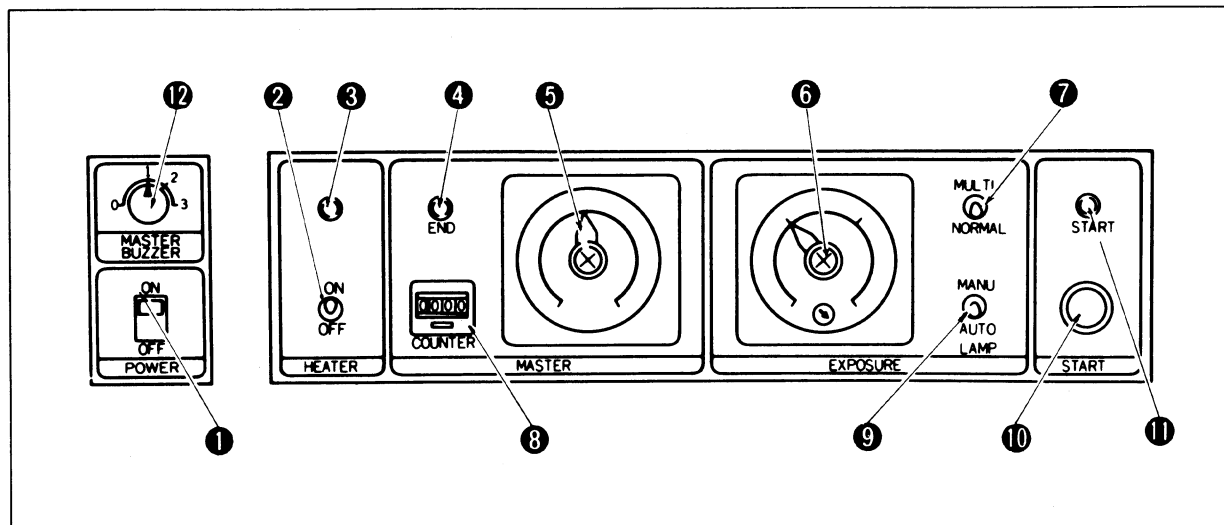
Item	Specifications
Master width	254mm(10"), 279mm(11"), 305mm(12"), 404mm(15 7/8")
Master length	254mm to 530mm
Effective image area	404mm x 485mm (blank exposure: 404mm x 530mm)
Copy setting	Sponge press-fit frame type with copy positioning sheet
Processor tank	Activator tank: 10 litres
Capacities	Stabilizer tank: 8 litres
Replenishing bottles	Activator and stabilizer: 2 litres each
Temperature regulating system	Activator tank-400W plate heater with thermostat
Dryer	650W thermo-control
Lens	F: 260mm-fixed focus
Magnification	100% (1:1)
Exposure time	0 to 60 sec., by timer
Light source	Halogen lamp: 4 x 100V-300W, 2 x 100V-200W
Light source for copy positioning	Tungsten lamp: 100V-100W
Separate Switch	Switch for suction fan Switch for master set Switch for dryer
Master rewind	Manual
Master splice detector	Warning buzzer, Automatic overcutting
Photographing-surface holding	Vacuum Board
Plate making speed	First plate/A3: 133sec/60Hz, 157sec/50Hz Continuous/A3: 41sec/60Hz, 46sec/50Hz
Machine dimensions	900(W) x 1,320(D) x 1,225(H)mm
Weight	260Kg
Power source	1φ 100V, 3.0KW-50/60Hz

CHAPTER 2 OPERATION

1. Overall Construction



2. Main Control Panel



① POWER (camera switch)

When the switch is turned on, the system is ready for operation.

② Heater switch

A 400W heater is equipped in the activator tank, keeping activator fluid at a correct temperature. Keep the switch in the ON position for operation. Turn it off when the fluid is discharged.

③ Heater lamp (yellow)

When the temperature of activator fluid rises up to its usable state (30°), this lamp goes off, indicating that the system is ready for operation. As the temperature drops, the lamp is lighted and as it rises, the lamp goes off. The thermostat is working and the CP-200SII is in working condition no matter whether the lamp is on or off.

④ END (Master End Lamp-red)

When the master roll runs out, the Master End Lamp is lighted and the buzzer sounds. The lamp is also lighted when the master roll is loaded improperly, in which case it should be re-loaded properly. While the lamp is on, the Start button does not work.

⑤ Master length dial

Following the completion of the exposure, a master, exactly of the length of this dial setting, will be transported and automatically cut. The length can be set in the range of 350 to 530mm at your discretion. When photographing in the 250 to 350mm range of master length, operate in accordance with the description of "3. Digital Timer Section".

⑥ Exposure Timer

The exposure timer controls the length of time during which the source lamp is on and the shutter is open. Select an appropriate frequency, 50Hz or 60Hz, by moving the frequency converter switch with a coin.

⑦ Exposure Converter Switch

Turn the exposure converter switch to NORMAL for normal photographing. By switching it to MULTI, the master is not transported after completion of exposure, enabling multi-exposure on the same plate. It should be turned to NORMAL for the final exposure.

⑧ COUNTER

The COUNTER indicates the number of master plates produced. Set the counter at "0" by pushing the reset button when activator is changed or a new roll is loaded.

⑨ LAMP (light source converter switch)

When the LAMP switch is turned to AUTO and the start button is pushed, the light source lights up. When exposure is finished, it goes off automatically. Keep it at AUTO when photographing. By turning it to MANU, 6 lamps of the light source light up continuously but the shutter is closed, thereby preventing the master from being exposed. This switch is used for cleaning of the glass of the copy board or examining the light source. Otherwise, be sure to keep it at AUTO.

⑩ START button

The start button initiates a series of operations-exposure, master transportation, master cut, developing, stabilizing, drying, and delivery. The start button does not work when START (start lamp-green) is off, when END (master end lamp-red) is on and MASTER BUZZER is sounding, or when the DRYER switch is off.

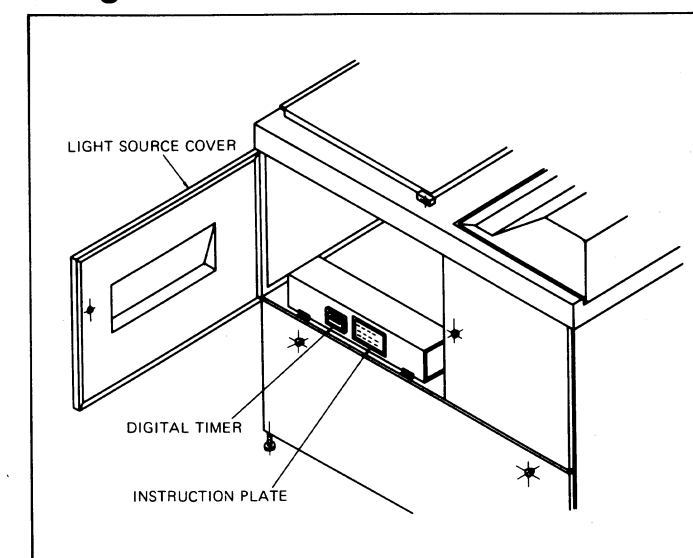
⑪ START (start lamp-green)

This pilot lamp, when lighted, indicates the start of photographing operation is possible. When photographing is taking place, when the master is at its end, when the V.B.FAN switch is OFF, when the DRYER switch is OFF, or when the master is not set down to the lower end of the master holder, the pilot lamp will not light up and the operation start is not possible.

⑫ MASTER BUZZER

When production of master is finished or the spliced part of master is passing, the buzzer sounds. Its volume can be controlled according to environmental conditions.

3. Digital Timer Section



when photographing in the 250 to 350mm range of master length, operations should be made in accordance with the description of the instruction plate, "How to use DIGITAL TIMER", attached to the power switch board inside of light source cover.

(Typical example of name plate)

How to use DIGITAL TIMER

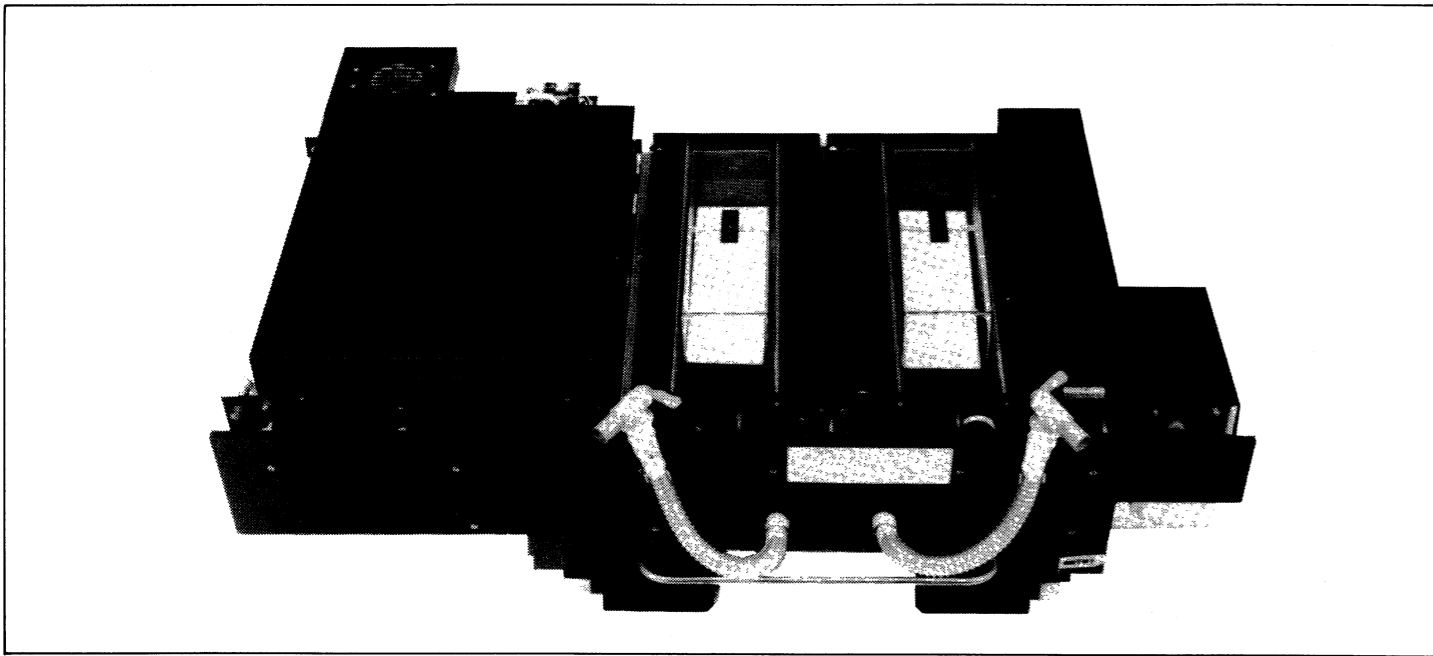
- Set 17.0 at ordinary times
 - Set 12.0 when the 250 to 350mm range of master length is used.
- Then adjust the master length dial on the main control panel to the value of desired length plus 100mm.

In case the numbers, 17.0 and 12.0 are indicated on the instruction plate as shown above, the digital timer has the setting of 017.0 when delivered from the manufacturer. When it is desired to transport a length of 254mm, change the setting to 012.0 and adjust the master length dial on the main control panel to 354 (254 + 100).

*1 when photographing of a short length is finished, be sure to return the setting to 017.0.

*2 Be careful never to mishandle as too large or too small setting of the digital timer cause troubles in master transport.

4. Processor and Dryer Section



A. Preparation of treating fluids

- Take off the processor cover and remove the fixing hook, and the processor section can be pulled out of the main body.
- The processor is composed of the activator tank and stabilizer tank, each of which is provided with an independent carrier unit. When not operated for a long period of time, the rollers of the unit may stick, thus preventing smooth rotation. In such case, turn the rollers by hand before starting.
- For preparing the processing fluid, use specially made measuring cups.
- In winter times when water temperature is low, use 30 to 35°C hot water.
- When taking in/out the processor, be sure to handle it gently.

Activator tank (capacity: 10 litres)

Prepare activator by mixing SLM-AC with water in the ratio of 1:1

1. Add 5 litres of water in 5 litres of SLM-AC (undiluted solution), exclusive activator for SILVER MASTER, and pour the mixture into the activator tank after being thoroughly stirred.
2. Pour the activator, prepared in the same 1:1 ratio, into the activator replenishing bottle (2 l) and set the bottle properly on the unit with its cap down.
3. Equipped with the 400-W plate heater and thermo-switch, the activator tank is kept at a constant temperature around 30°C for operation.
4. The thermo dial is located on the right side of the processor. For correct setting, adjust the "30" dial scale to the guide point. The dial reading show the set temperature. Confirm the fluid temperature when in use, and when it is found different from the set temperature, correct it by the dial. (The temperature stands at 28 to 30°C when the heater pilot goes off.)

Stabilizer Tank (capacity 8 litres)

Prepare stabilizer by mixing SLM-ST with water in the ratio of 1:3

1. Add 6 litres of water to 2 litres of SLM-ST (undiluted solution), exclusive stabilizer for SILVER MASTER, and pour it into the stabilizer tank after being thoroughly stirred.
2. Pour the stabilizer, prepared in the same 1:3 ratio, into the stabilizer replenishing bottle (2 liters) and set it properly on the unit with its cap down.

Replenishing the treating fluids

The replenishing bottle should always contain a certain quantity of stabilizer of the proper composition. When the replenishing fluid is gone, the liquid level in the treating tank will be lowered, resulting in accelerated fatigue of the liquid and deterioration of its quality.

Replacement of the treating fluids

Refer to the paragraph of general care (p 11)

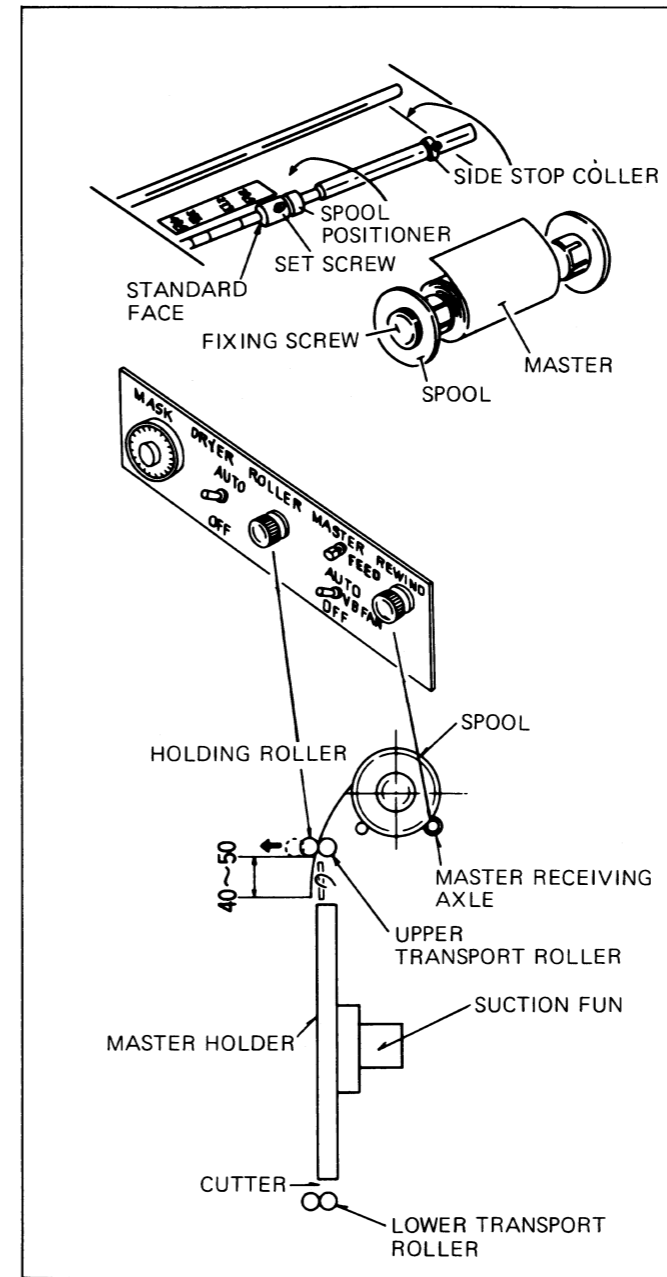
B. Dryer

When the POWER switch is turned on, the dryer is charged, with the result that the heater and fan start working and the hot air is kept at a constant temperature around 50°C. When no photograph is taken for long terms with the POWER switch on, power can be saved by turning the DRYER switch on the sub control panel from AUTO to OFF. Under this condition, however, the START lamp is not lighted and starting is not possible. A few minutes before re-starting photography, return the DRYER switch from OFF to AUTO.

*1. When the START is turned on immediately after the DRYER switch is returned from OFF to AUTO, the master may pass the dryer before the temperature reaches the set valve, thus resulting in inadequate drying. When the room temperature is low, turn on the START button a few minutes after the DRYER switch is turned to AUTO.

*2. To clean the stains on masters caused by the DRYER, refer to the paragraph of general care. (p 12)

5. Photography Section



A. Loading of master

1. Take out master from the package. Insert the spool into its center and tighten up the fixing screw.
2. Set the spool positioner so as to suit the width of master to be used (254, 279, 305, or 404mm) and fasten up the set screw.
3. Set the spool into the groove of the spool positioner and fix the side stop collar by adjusting it to the right hand spool.
4. Turn the ROLLER handle to FREE to open the holding roller.
5. Pass the master between the transport roller and the holding roller and transport 40 to 50mm of it by hand until the master buzzer stops sounding.
6. Return the ROLLER handle to LOCK and close the master loading door.
7. After confirming that the VB FAN and DRYER switches are at AUTO, push the MASTER FEED switch, and the master will be automatically set on the master holder and the START LAMP (green) turned on, indicating the ready-for-start condition of master plate production. This concludes the loading of master.

B. VB FAN switch

The START does not work when the VB FAN switch is at OFF. Keep it at AUTO at ordinary times.

C. Master splice overcut

Some masters have spliced parts. When it passes the photography section, the buzzer sounds twice intermittently. When the spliced part is included in the set master length, the master is cut at the set length. When the spliced part is outside of the set length, the master is cut just after two punch holes beside the spliced part have been passes. To prevent the spliced part from splitting over two plates, the master of a length greater than the set length may come out. This occurs in only one plate and the following plate always has the set length.

D. Master rewinding operation

* When the machine is out of use for long or when masters are replaced at halfway, follow the procedures as mentioned below.

1. Turn VB FAN switch to OFF.
2. Turn the REWIND handle (knob) to the direction of the arrow mark (counterclockwise) to rewind the master.
3. When the end of master is rewound around the upper point of master holder, the master buzzer sounds. Stop rewinding at this point.
4. Set the ROLLER handle to FREE to finish rewinding the master. (When replacing the master at halfway, open the master loading door under this condition.)

E. Master resetting

When resetting the master from the rewound state, turn the ROLLER handle to LOCK and VB FAN switch to AUTO, and push the FREE switch, and the master will be automatically set on the master holder, ready for starting the plate producing operation.

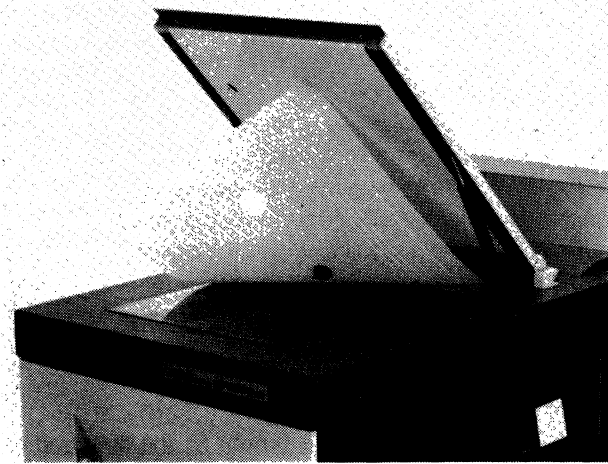
F. MASTER END

When the master runs out during the master transport, the MASTER BUZZER sound and MASTER END LAMP is turned on. For this one cycle, the whole master roll is discharged without cutter actions. To load a new master, be sure to turn the POWER switch to OFF (for reset of the master end) after all the preceding master has been discharged and then put it back to ON; otherwise, no operation will be made.

G. Shading mask

1. The shading mask is set by a dial in the range of 250 to 530mm.
2. The opening of the shading mask is set by the shading mask scale so that it will be the same as or a little larger than (about 5mm) the master length.
3. When the opening of the shading mask is not enough for the master length, belt-shaped silver retains on the end of master. (non-exposure state)
4. When the opening of the shading mask is too large for the master length, a double exposure sate appears on the top of the following master, resulting in the loss of images.

6. Copy Board

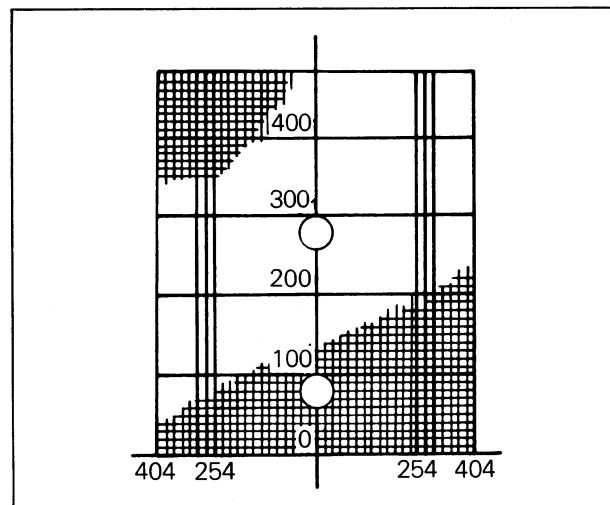


A. Loading the original copy

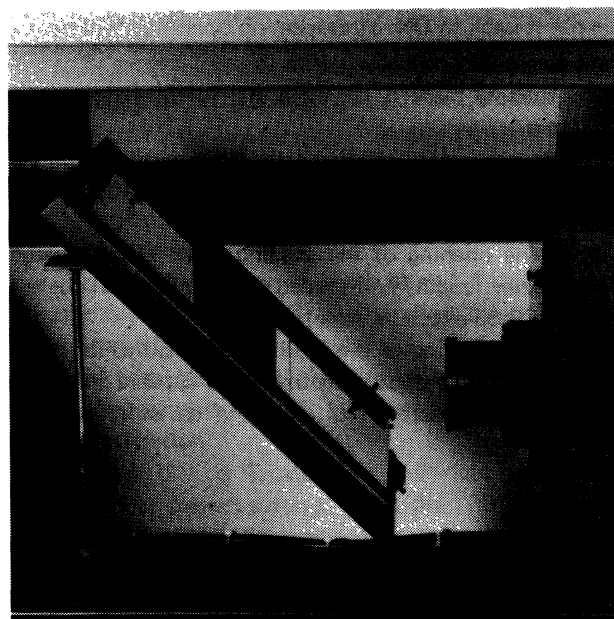
1. Raise the copy frame slowly by holding its handle, and it will stop at the specified position because of a gas spring effect. (Hold the handle until the frame stops).
2. By raising the copy frame, one positioning light is turned on automatically. (When the frame is closed, the light goes off).
3. Place the original copy between the positioning sheet and the copy glass. (Refer to B, "Positioning the original copy")
4. Close the copy frame slowly.
(Caution)
Avoid rough handling when the copy frame is raised or lowered so as not to cause possible troubles.

B. Positioning the original copy

- The positioning sheet has the center line and interval sectional lines which show the effective image range to be photographed on the master.
- The center is provided with 5mm-interval scale that indicate master length.
- The lateral center line, which varies with the master length is not marked for simplicity.
- The lateral center of copy should be positioned at the half point of master length.
- Use sheet scales for centering the copy.
- The positioning sheet is provided with round holes for correct and easy positioning.



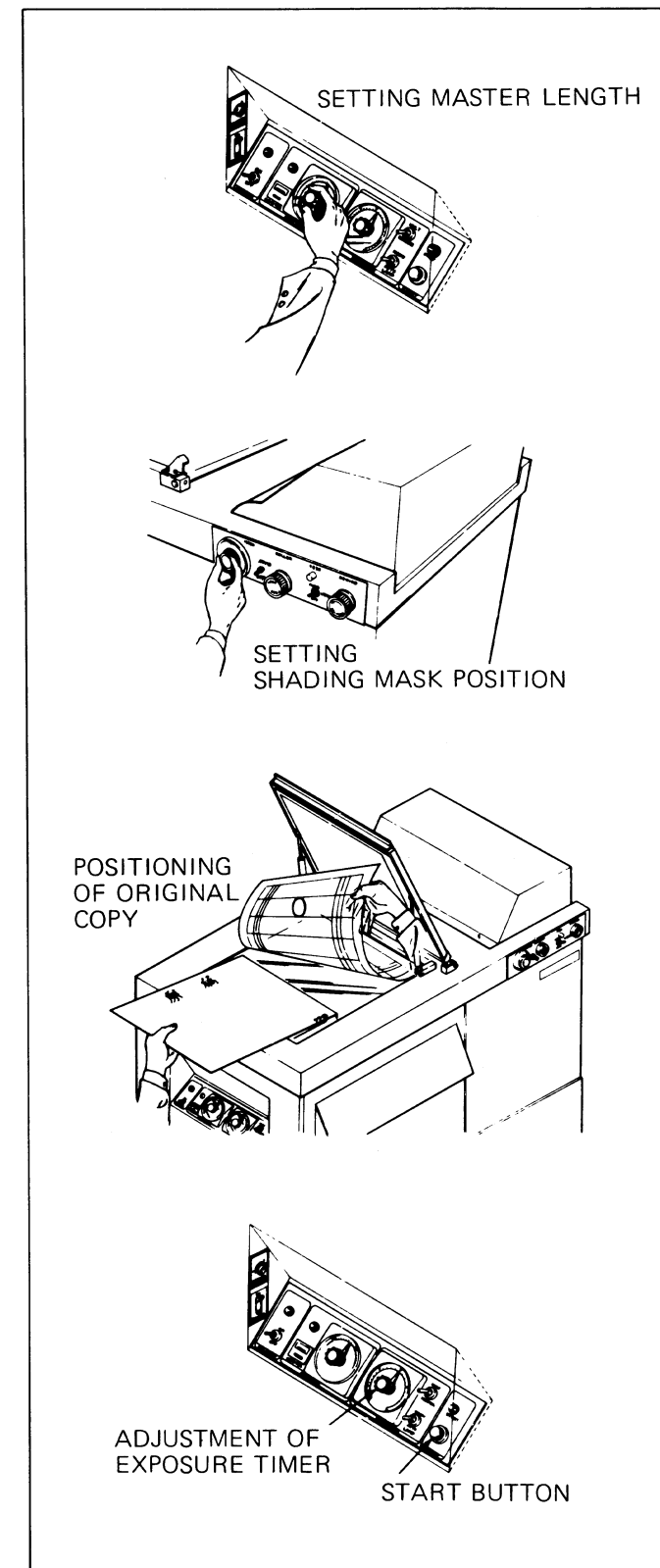
7. Lens and Mirror



- Lens: f260mm with fixed focus
- When the lens is out of use for long, apply the lens cap and mirror cover to prevent the lens and mirror from being touched with finger.

1. Procedure of Photography

Proper photography cannot be expected unless the following conditions are met. Check the each item prior to starting photographing.



1. Conditions for photography

- 1) Preparation of treating fluids
- 2) Loading of master roll
- 3) POWER (camera switch) is on
- 4) VB FAN switch is turned to AUTO
- 5) DRYER switch is turned to AUTO
- 6) ROLLER handle is at LOCK position
- 7) HEATER switch is ON and HEATER lamp is off.
- 8) LAMP switch (light source converter switch) is turned to AUTO.
- 9) Exposure converter switch is at NORMAL
- 10) START lamp (green) is on.

2. Setting of master length

Set the specified length, using the master length dial on the main control panel.

3. Positioning of shading mask.

Set the MASK dial on the photography section at the same value as the set master length.

4. Positioning of original copy

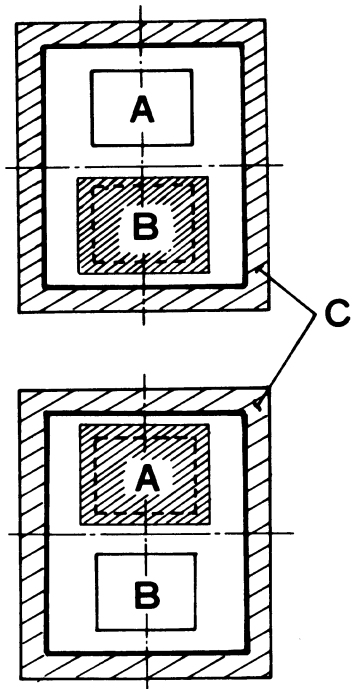
Place the copy downward and set it at the desired position, using the marked lines on the positioning sheet. (Refer to the paragraph of copy board)

5. Adjustment of exposure timer

Set the exposure time suitable for the positioned copy using the exposure timer on the main control panel. By pushing the START button, photographic operations proceed automatically, thus producing master plates.

6. For continuous plate production, under the same condition as initial one, above steps, 1, 2 and 3, can be skipped.

2. Multiple Photography



The SILVER MASTER CP-200S11 has a multiple-exposure function which enables multiple photographing on the same plate. Follow the following procedures.

1. Determine the positions (A,B.) of the original copy to be photographed, and set the copy on (A) position.
2. Place black paper (of over 2.0 reflection density) which is larger than the copy, at the (B) position where the copy is to be set later.
3. Turn the Exposure converter switch to MULTI.
4. Set exposure time, using the Exposure Timer.
5. Push the START button for the first exposure.
6. Transfer the copy to (B) position and place black paper on (A) position. Care should be taken in positioning the black-paper, since if the position of the black paper overlaps with its previous position, the overlapping portion will be under exposure (silver discharge).
7. For the final exposure, turn the exposure converter switch to NORMAL and push the START button.
(Caution)
For effective multiple photography, it is recommended to cover the (C) part, outside of the master size.

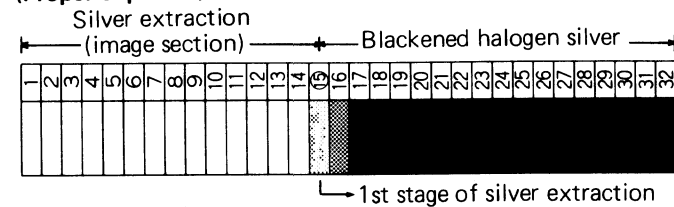
3. How to get a correct exposure of SILVER MASTER-R II

Since the SILVER MASTER is coated with silver emulsion, its sensitivity may slightly vary, depending on production lots. The lot number is indicated on the pack. When masters with different lot numbers are used, check the sensitivity before making exposure. Under-exposure will result in wide images or smeared surface, while over-exposure causes narrow images and loss of images. Correct exposure is essential for maximum utilization of SILVER MASTER's high quality capacity.

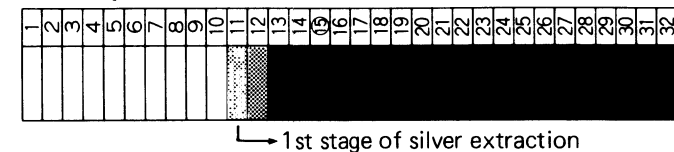
A. How to get a correct exposure

1. The CP-100 S11 contains test charts and samples of standard print sample. Print the test chart and compare it with the standard print sample to determine correct exposure.
2. Adjust exposure time so that the first stage of the silver extraction touches the stage with a 0 mask on the test chart.
3. Compare it with the standard print sample. If they match, that becomes the correct exposure for the test chart.
4. Obtain the correct exposure of the actual copy, based on the above correct exposure of the test chart. For materials containing typed or phototypeset letters, levels should be increased by 10 to 15%. For reled paper, on the contrary, the level should be decreased.

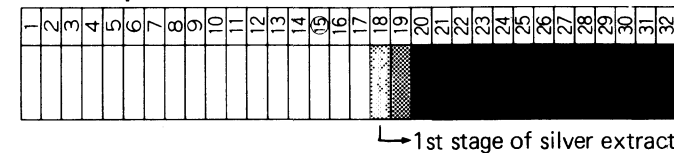
(Proper exposure)



(Over-exposure)



(Under-exposure)



B. Focus

The focus will have been thoroughly inspected at the time of delivery. However, confirm it, when necessary, in accordance with the following procedures.

- Print the resolving power chart contained in the test charts and compare it with the resolving power standard sample to judge focus accuracy.
- Make the exposure time longer than the correct one.
- If it is equivalent to or better than the resolving power standard sample, the focus is accurate.
- The resolving power at this time is reproduced in 8 lines/mm. (This resolving power chart, being a reproduction, does not necessarily indicate absolute values)
(Caution)
The standard print sample may become discolored if kept for a long time. So, keep it in a dark place such as a table drawer.

To enable the SILVER MASTER CP-200 SII to demonstrate its functions and keep it always in its best conditions, attention should be paid daily to the following points.

1. Pre-operation Inspection

1. Turn on the power source and switch the POWER (camera switch) on the main control panel to ON.
2. Confirm that the lens cap and mirror cover are removed.
3. Confirm that there are no scratches or stains on the copy-board glass and mirror. Pay special care to keep the glass clean since its stains will give bad effects on images. (Refer to the paragraph relating to the cleaning of the glass on the copy holding part)
4. Check that the fluid tanks and replenishing bottles are filled properly.
5. Confirm that the Start lamp on the main control panel is on. (Refer to VB FAN switch, DRYER switch, master loading, ROLLER LOCK, etc., in accordance with Photography procedures – item 1)
6. Check that there is no trouble in overall photographic operations.
7. When new treating was prepared or the master was replaced, it is recommended to photograph a test chart in order to check overall condition.

2. Post-operation Inspection

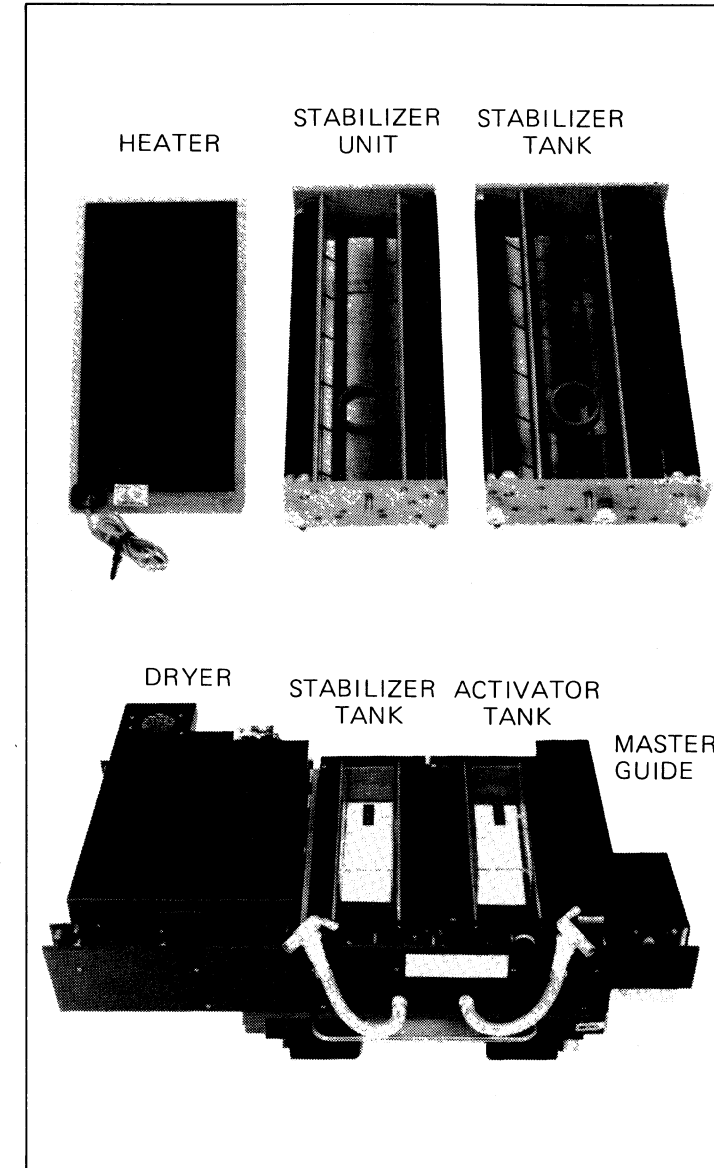
1. Confirm that the master has been rewound
2. Switch the POWER (camera switch) on the main control panel to OFF and turn off the power source.
3. Apply the mirror cover and lens cap.
4. When the machine will be out of use for long, cover it with a vinyl cover or the like to protect from dust.

3. General Care

A. Replacement of treating fluids

The activator and stabilizer are capable of processing 800 plates of B4 size or 400 of A3. In four weeks after preparation, replace the fluid even if the number of plates processed is within the above limit. Since the fluid tanks are located inside the machine, keep them always clean.

1. Turn the HEATER switch on the main control panel to OFF and switch the POWER (camera switch) to OFF, or turn off the power source switch. If the switch remains ON, the tank will be heated even after fluids are discharged, which will cause the tanks and heater to be damaged.
2. Remove the front cover of the main body and pull out the whole processor.
3. Take off the replenishing bottles.
4. Take out the discharge vat and put the discharge hoses into the vat.
5. Return the discharge hoses to the original position after the treating fluids are all discharged.
6. For disposing of the discharged fluids, refer to the separate brochure, "The Silver Master system and environmental issues".



B. Cleaning of fluid tanks

When replacing stabilizer after processing, wash the tank in accordance with the following procedures without fail.

1. Remove the activator unit, stabilizer unit and heater from the fluid tanks and thoroughly clean them with water. Carefully wipe off any fluid sediment with a damp cloth or sponge.
2. As artificial rubber used for the rollers of activator and stabilizer units is not heat-resistant, wash it with warm water of no greater than 40°C temperature. Use of detergent or polishing sand is absolutely prohibitive.
3. Clean the inside of activator and stabilizer tanks with water.
4. When the carrier guides at the lower sections of activator and stabilizer units are too dirty, masters may be scratched as a result. Wash them with water and then wipe dry. Thereafter, polish it with soft cloth applied with metal polishing powder until its surface burnishes mirror-like with all dirt removed.

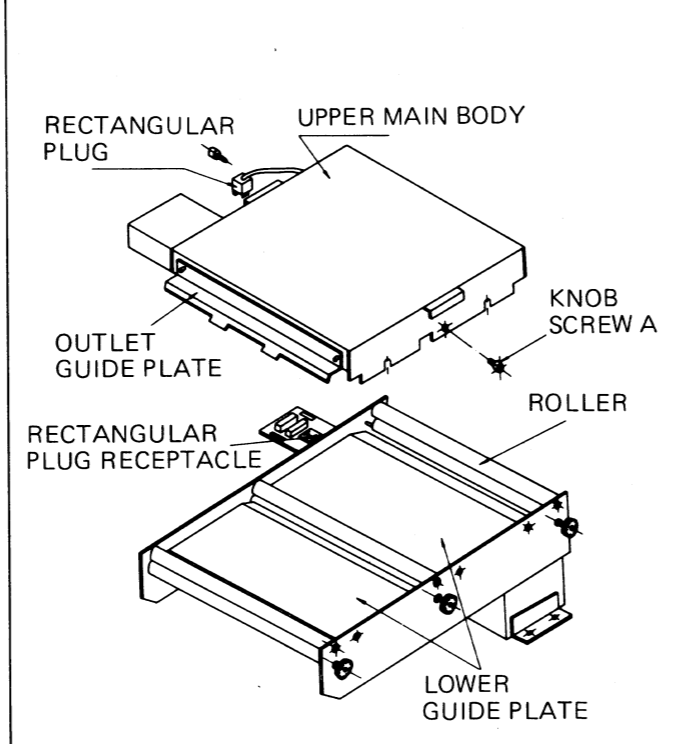
(Caution)

1. The measures described above are basic for obtaining plates of good quality continuously. Therefore, carry them out scrupulously.
2. When the activator and stabilizer were put mistakenly for each other, take the following measures. Be careful in handling since the reactions of both fluids are opposite.
 - 1) Switch the POWER (camera switch) on the main control panel to OFF or turn off the power source.
 - 2) Discharge the activator and stabilizer separately
 - 3) Wash with water the fluid tanks, activator and stabilizer units.
 - 4) Pour in activator and stabilizer correctly.

C. Cleaning of dryer

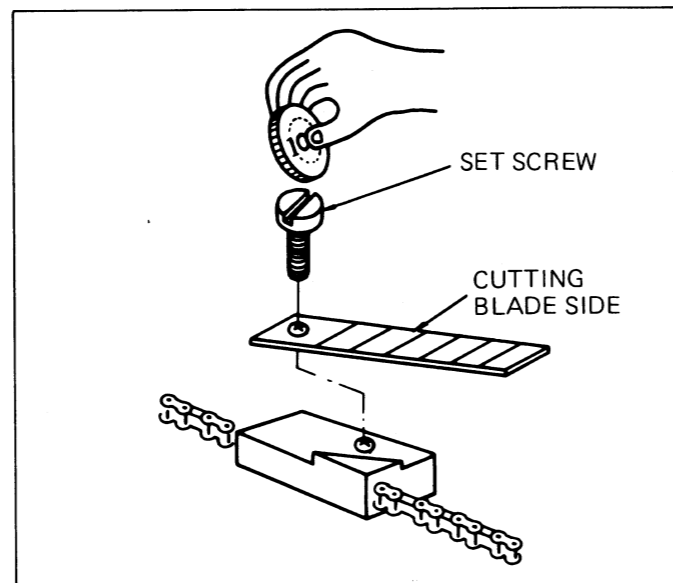
When masters get stained because of the dryer, clean it as follows:

1. Switch the POWER switch on the main control panel to OFF.
2. Draw out the processor dryer unit and pull out the rectangular plug of dryer.
3. Remove the outlet guide plate (not to scratch the roller).
4. Unfasten two knob screws, A. Raise the upper main body of dryer by about 45° and remove it by sliding sideways. (Raise the side towards you and lower the rectangular plug side)
5. Wring hard the cloth soaked with water, and wipe off dirt on the lower guide plate, rollers, etc. with it. (When wiping, switch the POWER OFF without fail to stop the roller. Operation with the roller kept running are dangerous.)
6. Return the upper main body, outlet guide plate, and rectangular receptacle as before and lock with the knob screw A.



D. Replacement of cutter blade

One cutter blade is capable of cutting 400 plates. (two 75m rolls approximately) Thirty days after a new blade is set, replace it notwithstanding the number of cuts made. The cutter shall be replaced in the following manner.



1. Turn the POWER switch on the main control panel to OFF.
2. Use NT cutters available in the market. Be careful of the blade side.
3. Fasten up the set screw with the use of a coin or the like.

E. Handling and care of lens and mirror

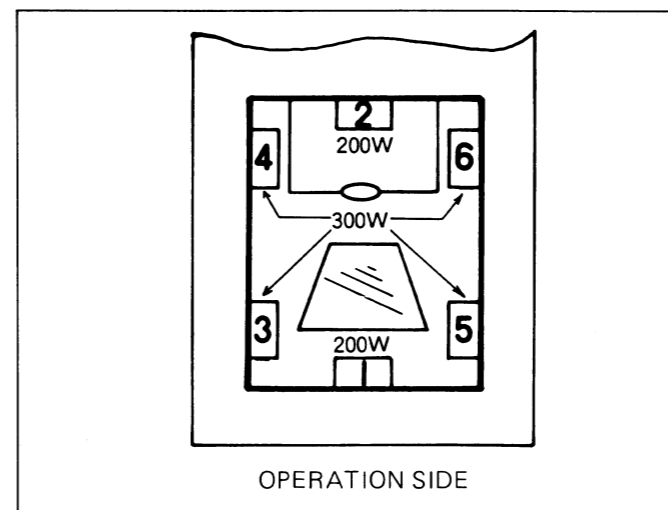
The lens and mirror surfaces, being soft, should be handled with the utmost care not to cause scratches or stain. Do not wipe them unnecessarily.

- Lightly brush off any dust on the mirror with the air brush (attached as one of standard parts) every month.
- When dirt is heavy, wipe it off lightly with lens paper (available at general camera stores) applied with a small amount of industrial ethylalcohol (available in the market). Avoid strong rubbing or forcible removal of attached matter so as not to cause scratches.
- When not in use for long, put the lens cap and mirror cover on.

F. Replacement of halogen lamp

Replace the halogen lamp after the lamp and reflecting plates have cooled down.

1. Put the cover on the mirror for protection before replacing the lamp.
2. Handle the lamp with dry cloth or gloves. Do not hold it with bare hands.
3. The 1 and 2 contacts shown in the lamp drawing, which are of screw type, should be fully fastened up to insure perfect contact.
4. The lamp, when stained with finger marks or oily smears, will become opaque. Clean the stained lamp with the use of lens paper (available at general camera stores) applied with a small quantity of industrial ethylalcohol.
5. Halogen lamps are arranged as shown below



For replacing lamps, open the right hand cover and remove the copy-board glass, which can be easily done by pushing from its underside.

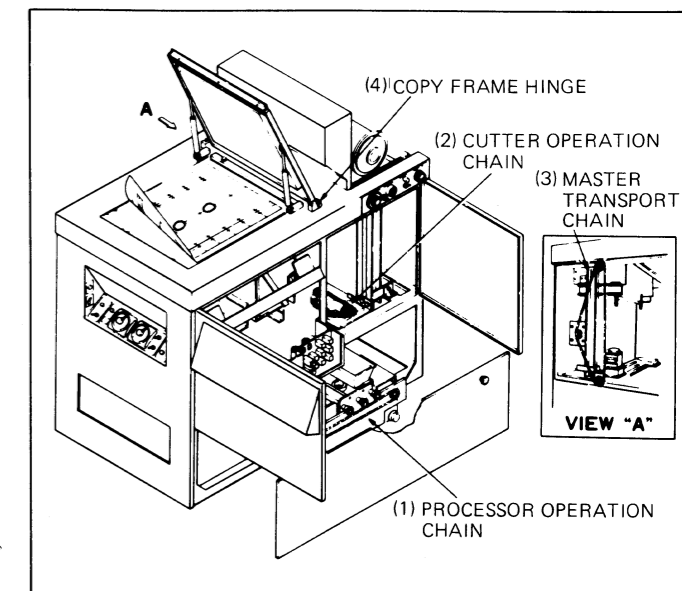
G. Care of copyboard glass

As the copyboard glass is liable to be stained by dust or finger-marks, inspect it daily. When stained, wipe it off with soft cloth applied with a glass cleaner (available in the market), taking care not to leave the cleaning agent behind.

H. Lubrication

Lubrication will depend on the frequency of use, but the following should be taken as guides.

1. Processor operation chain
Draw out the processor weekly.
2. Cutter operation chain
Open the cover of photography section monthly.
3. Master transport chain
Remove the rear cover monthly.
4. Copy frame hinged part
Open the copy frame monthly.



4. Ordering and Replacement of Parts

There are a variety of component parts, some of them can be replaced by customers once new parts are obtained while some others must be replaced by a service man. When ordering parts, indicate the following:

1. Whether only the parts are required or whether installation (replacement) is also required.
2. Details of entries in the guarantee card or plates applied to the machine:
 - Type of machine (CP-200 SII)
 - Machine number
3. Required parts name, number of pieces and delivery date. (Caution)
 - Specifications are subject to alternation without advance notice, as a result of improvements.
 - It must be understood that, when the user makes any improvements by himself or use our machine in conjunction with other manufacturer's products, the user bears the responsibility.

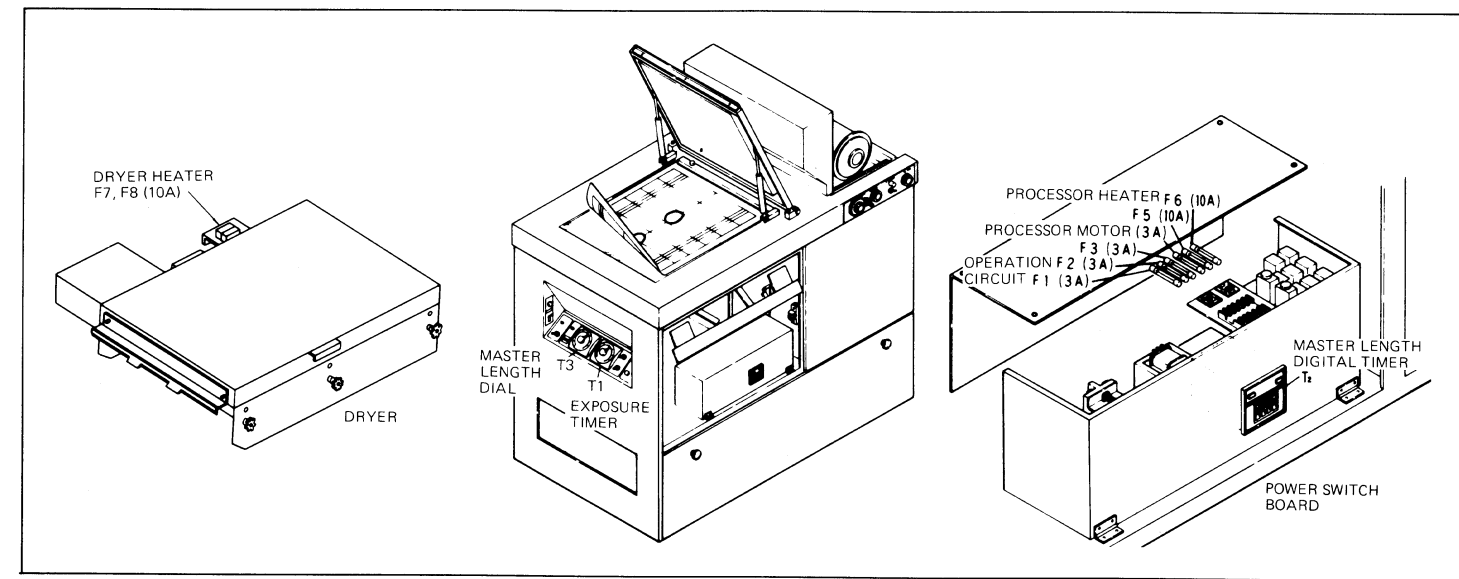
5. Troubles and Remedies

With a correct understanding of normal operations, clearly grasp the nature of the troubles. Basic remedies are listed below. Check systematically and, if not successful, contact our agent for advice.

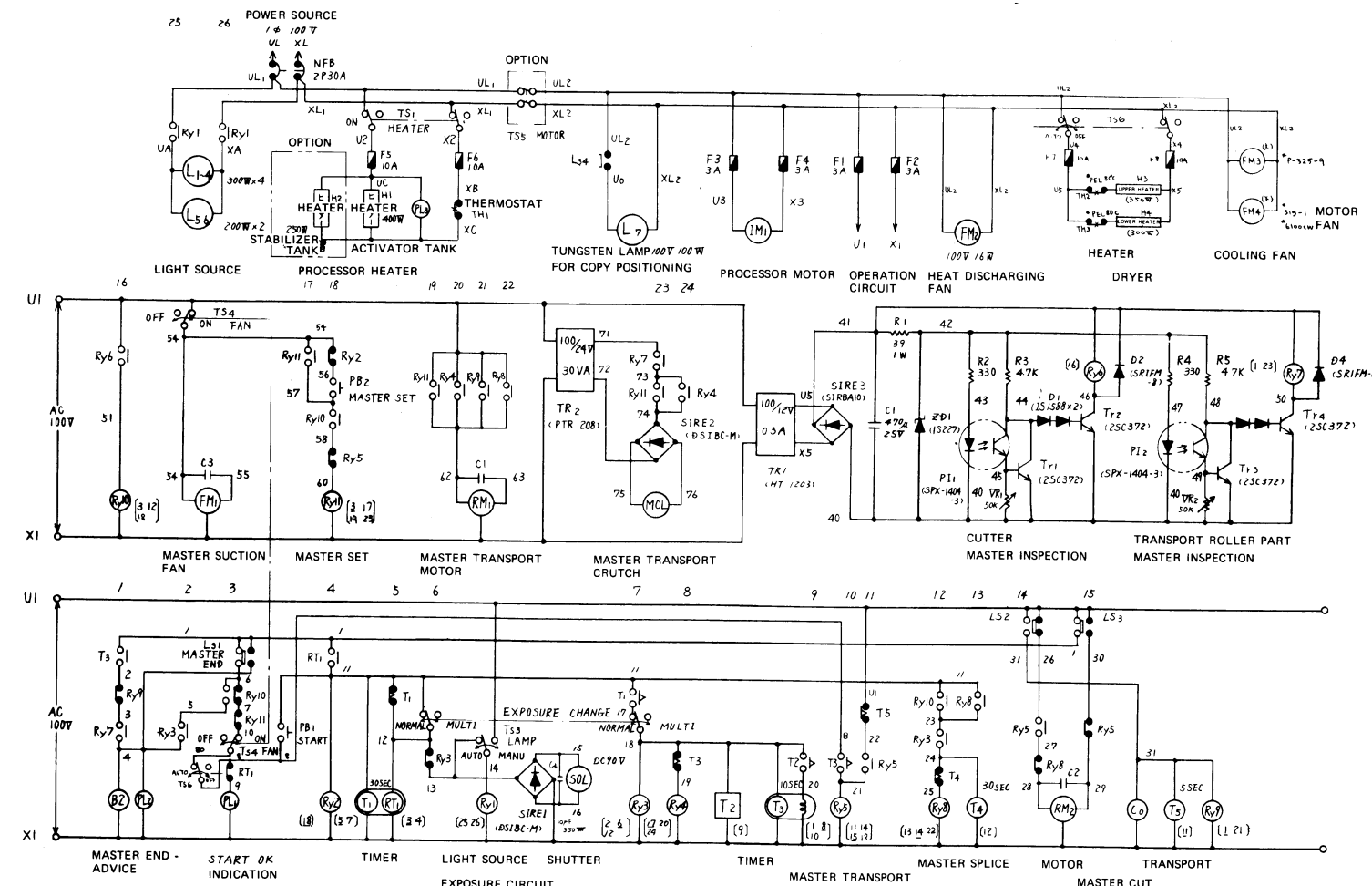
(Caution)

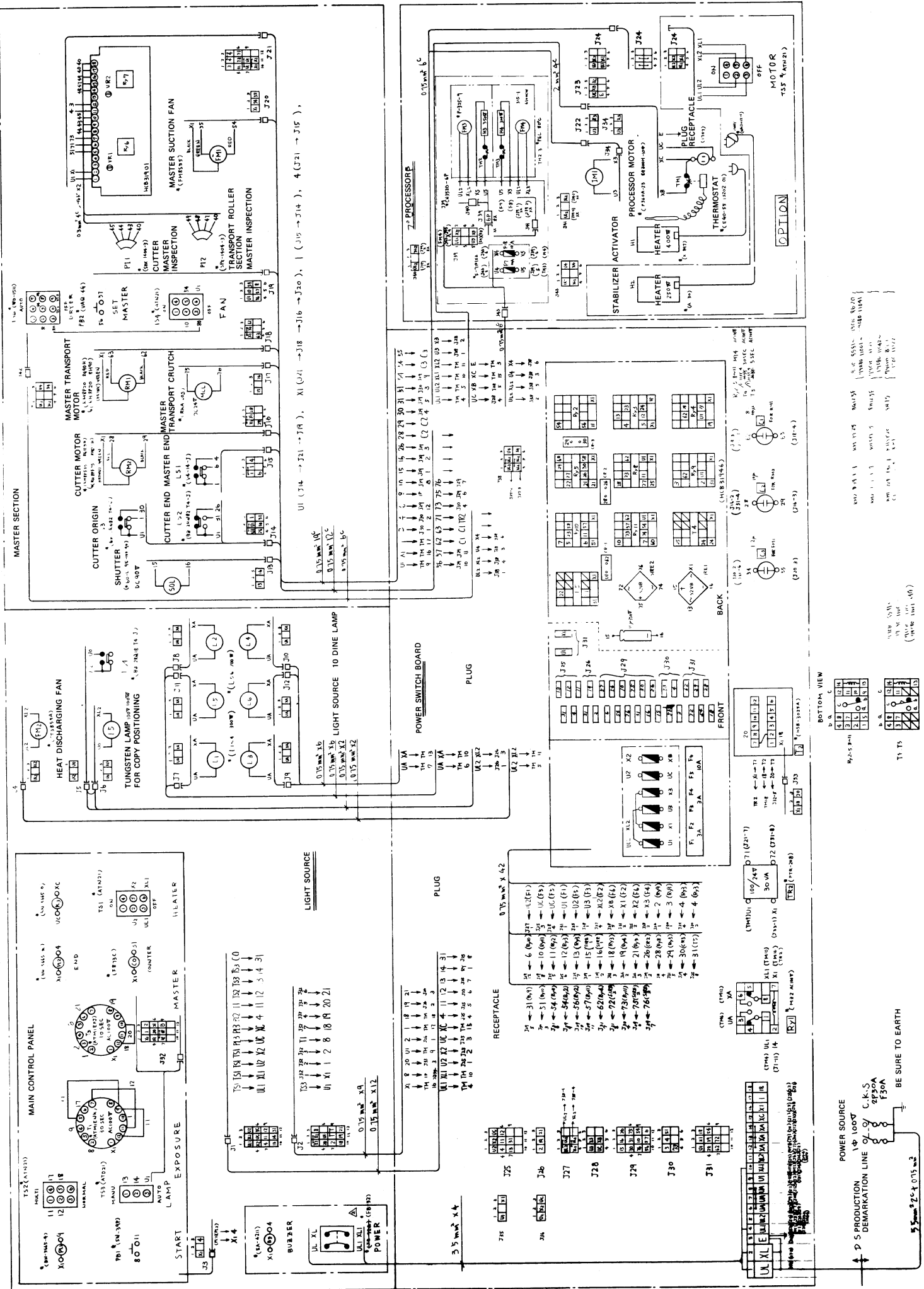
When electric circuits are checked in such case as fuel replacement, turn the POWER (camera switch) on the main control panel to OFF.

	Trouble	Cause	Remedy
1.	Power source is does not come ON.	Power supply to camera	Turn on the power source
2.	Processor does not work	1. Blown out fuses 2. Processor connector is disengaged.	1. Replace processor motor fuses, F3 and F4 (3A) 2. Engage the connector
3.	The temperature of treating fluids does not rise	1. Heater plug has been disengaged 2. Erroneous setting of thermo-switch 3. Blown-out fuses	1. Connect the heater plug 2. Set the thermo-dial at 30°C 3. Replace heater fuses, F5 and F6 (10A)
4.	START is not turned	1. VB FAN is OFF 2. Faulty master setting (The master does not come to the lower end of VB) 3. Blown out fuses 4. Faulty cutting position 5. DRYER switch is OFF	1. Set VB FAN to AUTO 2. ROLLER-LOCK, FEED SW-ON 3. Replace operation circuit fuses, F1 and F2 (3A) 4. Return digital timer setting to the original one 5. DRYER switch to AUTO
5.	Light source is not lighted (with exposure converter switch at MANU position)	1. Lamp is broken 2. Faulty contact of lamp socket	1. Replace the lamp 2. Reinstall the lamp properly
6.	EXPOSURE is not on (Light source is lighted only While the START button is pressed)	1. Faulty contact of relay at the rear part of exposure timer (T1)	1. Push in the relay at the rear part of exposure timer (T1)
7.	MASTER FEED is not turned on	1. Faulty roller handle lock 2. Paper jamming at lower transport roller (RY 7 is active)	1. Reset the roller handle to LOCK side 2. Inspect the lower transport roller and remove jammed paper if any
8.	Faulty cutter malfunctioning	1. Faulty cutter blade 2. Faulty contact of cutter end limiter 3. Faulty contact of the rear relay of master length dial (T3) 4. Mishandling: The case when the exposure converter switch is turned to MULTI at halfway of master transport	1. Replace the cutter blade (p 12) 2. Turn off the power source and manually operate the cutter end limiter (inner part) to check its action 3. Push in the rear relay of master length dial (T3) 4. Do not turn the converter switch at halfway of master feed
9.	Copy positioning lamp is not lighted	1. The lamp is broken 2. Malfunction of limiter switch at hinge part of upper copy frame	1. Replace the lamp (p 13) 2. Operate the limiter by hand to check its action
10.	Lost image	1. Dirty copy-board glass 2. Dirty mirror	1. Clean the glass (p 13) 2. Clean the mirror (p 13)
11.	Silver comes out on part of plates	1. First roller of activator unit of processor is dirty 2. Faulty setting of mask length 3. Faulty master length	1. Clean the roller 2. Check the mask position 3. Measure the master length and correct it as found necessary
12.	Scratches on part of master plate	1. Master-transport rollers of processor unit are stained or attached with foreign matters 2. Master guides are stained or attached with foreign matters	1. Clean the master-transport rollers of activator and stabilizer units (p 12) 2. Clean the master passing part of master guides
13.	Faulty drying of masters	1. The rectangular receptacle at dryer section is not plugged or insufficiently plugged	1. Fully plug in the receptacle 2. Replace heater fuses, F7 and F8 (10A)



6. Circuit Diagram

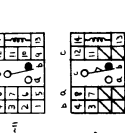




BE SURE TO EARTH

POWER SOURCE
 100V 50/60 Hz
 1000VA
 C.K.S.
 2P20A
 F30A

DEMARCATION LINE



BE SURE TO EARTH

POWER SOURCE
 100V 50/60 Hz
 1000VA
 C.K.S.
 2P20A
 F30A

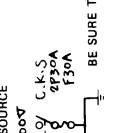
DEMARCATION LINE



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 2P20A
 F30A

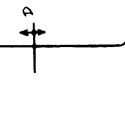
DEMARCATION LINE



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 C.K.S.
 2P20A
 F30A

DEMARCATION LINE



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