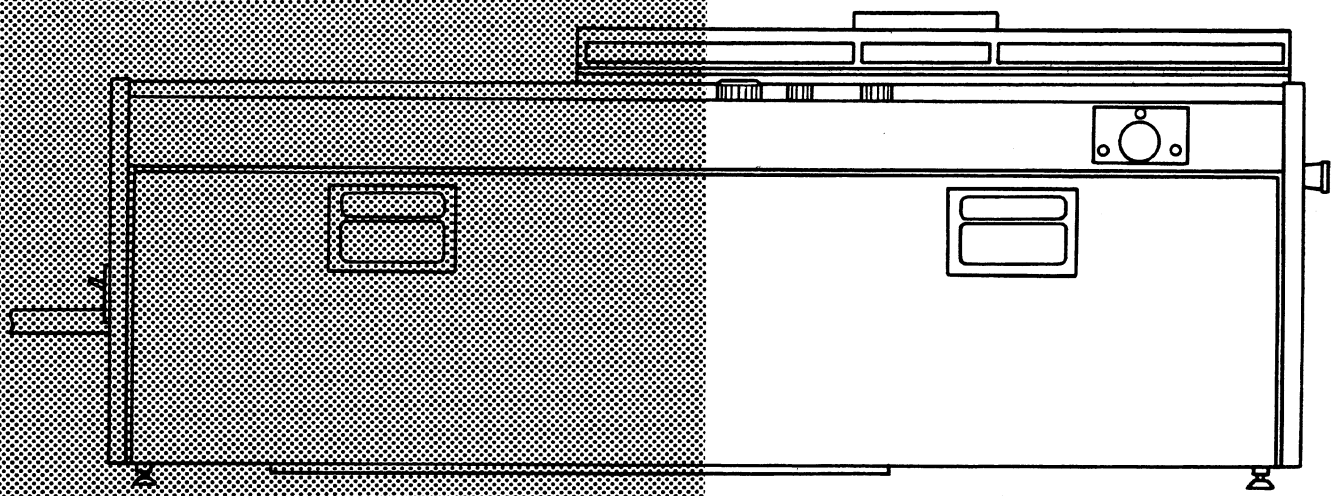
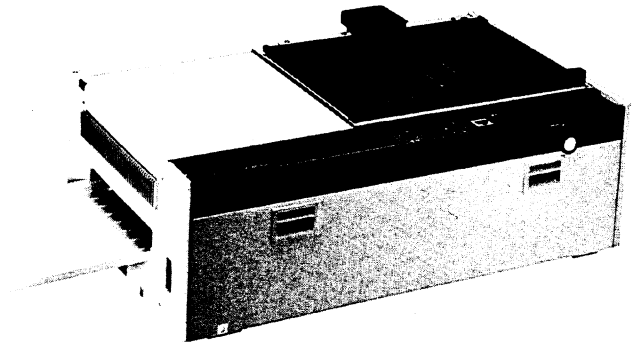
MITSUBISHI
PAPER MILLS
LIMITED





MITSUBISHI GRAPHIC ARTS SYSTEM

CP-50S

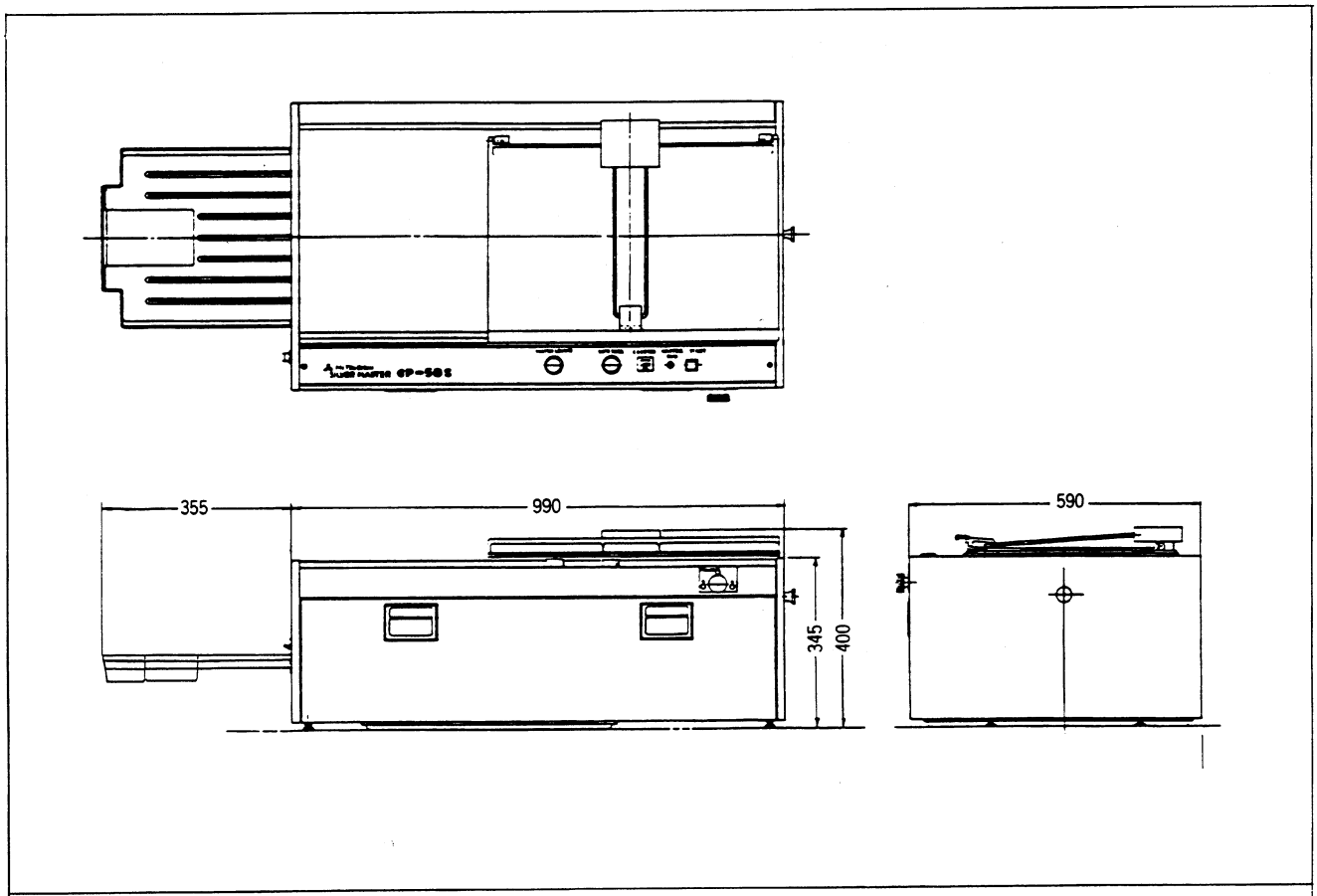
CONTENTS

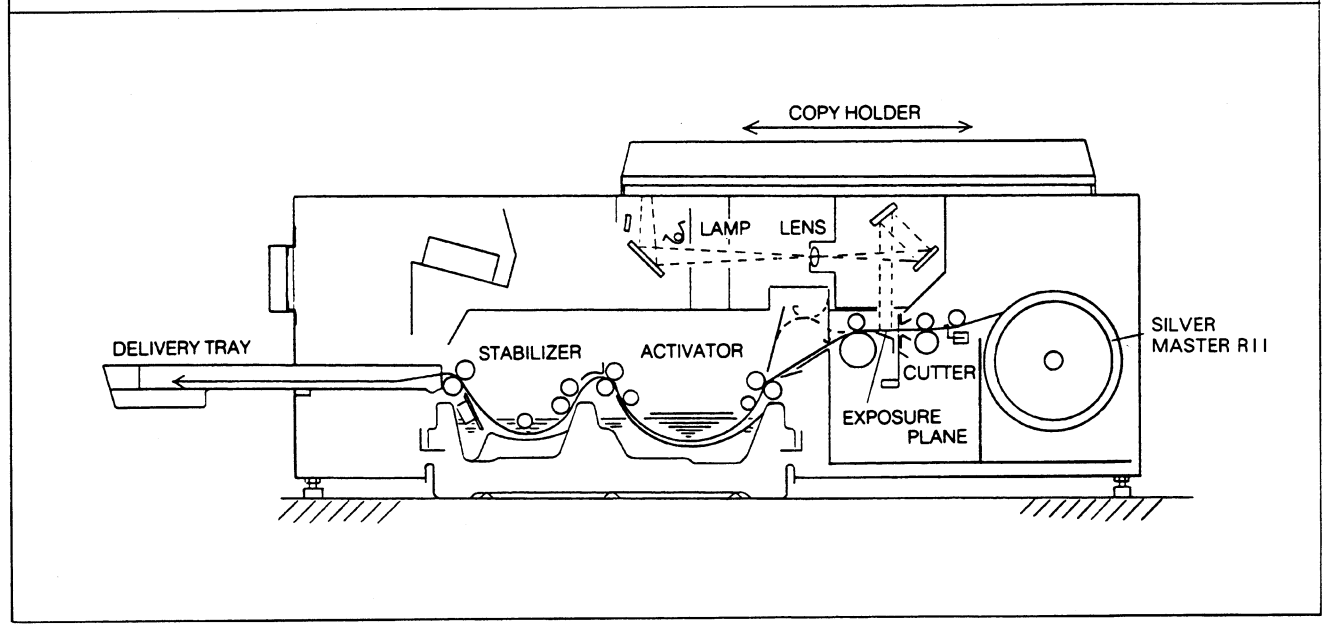
1. OUTLINE

1-1 Introduction

We at Mitsubishi are very grateful to you for selecting the Silver Master Platemaker CP-50S. The Silver Master Platemaker CP-50S is a completely new multi-functional platemaking system which, in combination with Silver Master RII, produces offset masters directly from the copy with a simple operation, eliminating the need for any intermediate film process.

This operation manual is intended to enable you to enjoy the system's superior features for a long time. For information on printing method, please refer to our separate booklet, "Silver Master Technical Guide."





1-2 Specifications

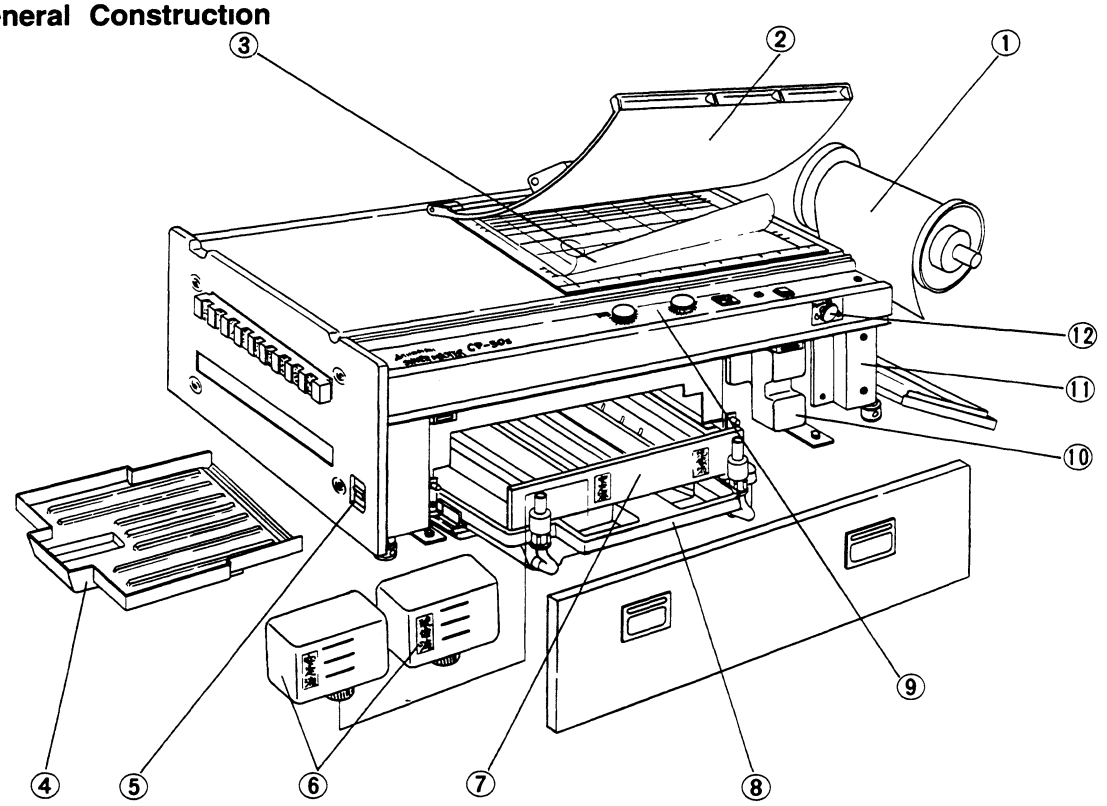
Item	Specifications
Master width	229mm (9″), 254mm (10″), 279mm (11″)
Master length	370mm to 480mm continuously variable
Effective image area	279mm × 430mm
Blank exposure size	279mm × 480mm
Exposure method	Slit exposure
Lens	Focal length = 150mm, F 11
Magnification	100% (1 1)
Cutter	Slide cut type
Exposure control	Power supply thyristor, with light-level control dial
Light source	Halogen lamp (80V, 600W × 1) with constant-voltage circuit
Copy loading	Copy holding with compression mat on the machine top, with the copy image side down
Processor tank capacity	Activator tank 3 liters Stabilizer tank 2 liters
Replenishing tanks	Activator replenishing tank 0 5 liters Stabilizer replenishing tank 0 5 liters constant level method
Processor heater	250W panel heater for temperature control at the activator tank
First master making time	65 to 78 sec (master length = 480mm)
Cycle master making time	48 to 58 sec (master length = 480mm)
Installation method	Table top mounting
Machine dimensions	990(W) × 590(D) × 400(H) mm
Weight	70 Kg
Electricity	100VAC, 1 2 KW

* These specifications are subject to change without notice for improvement

2. OPERATION

2-1 General Construction

General Construction



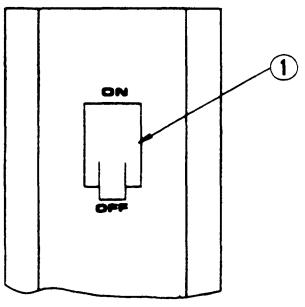
Parts descriptions ① Paper magazine ② Copy compression mat ③ Copy positioning sheet ④ Delivery tray ⑤ Power switch ⑥ Replenishing tanks ⑦ Processor conveyor unit ⑧ Vat ⑨ Main control panel ⑩ Cutter ⑪ Switchboard ⑫ Nip roller free knob

2-2 Power Switch

① **POWER switch**

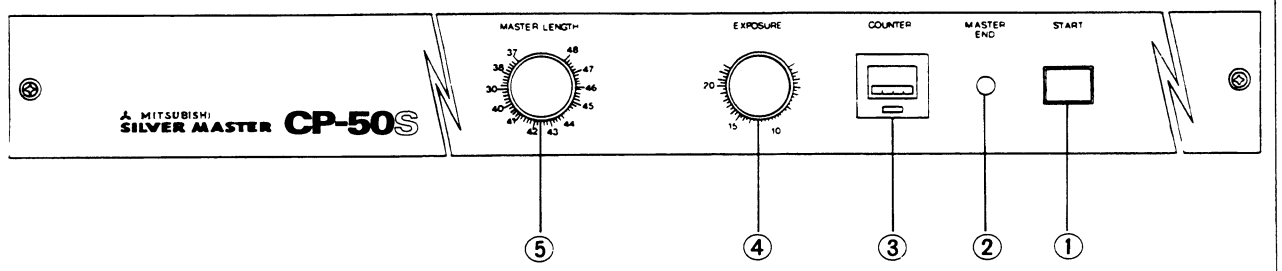
When this is turned on, the operation circuit, processor motor and panel heater are energized and the system is ready for operation

Power Switch



2-3 Main Control Panel

Main Control Panel



① **START button**
The START button switch initiates a series of operations exposure, paper feed, cutting, developing, stabilizing, drying and delivery (output)
The indicator of this button switch is off during photographing operation When the indicator comes on completion of the photographing operation, the machine becomes ready for another exposure

② **MASTER END pilot lamp** (red)
The MASTER END pilot lamp lights when the Master roll loaded in the magazine runs out The lamp also lights up if the Master roll is improperly loaded In such cases, reload the Master roll properly
The START botton switch does not work while this pilot lamp is on

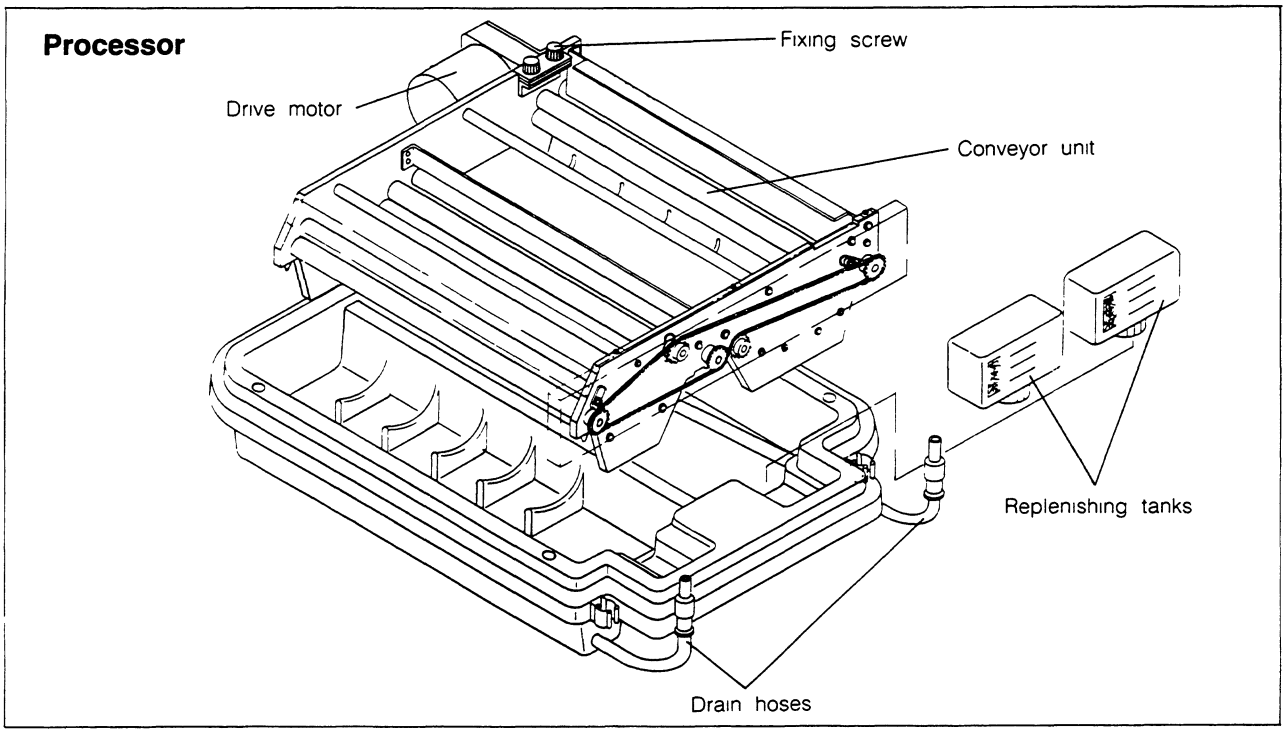
③ **COUNTER**
The COUNTER indicates the number of masters produced Reset the counter to zero by pushing the reset button after changing the activator or loading a new master paper roll

④ **EXPOSURE dial**
The EXPOSURE dial is used to control the amount of light exposure according to the copy density or the type of copy This dial controls the light source lamp voltage, or the brightness of the lamp to obtain the optimum light exposure Decrease the dial setting for copies with low density and increase it for copies with high density (dark text or background)

⑤ **MASTER LENGTH dial**
While being exposed, paper is fed by the length set on the MASTER LENGTH dial After the exposure/feeding, the master paper is cut automatically The master length can be set continuously in the range from 370 to 480 mm

2-4 Processor

When the POWER switch is turned on, the drive motor starts to drive the rollers of the conveyor unit and the panel heater begins to work



A. Preparation of processing solutions

- Take off the processor cover and unhook the processor, and the processor can be pulled out of the main body
- The processor is composed of an activator tank and a stabilizer tank, across both of which a conveyor unit lies the activator tank is equipped with 250W panel heater with thermostat which keeps the activator temperature at a constant level (approx 30°C) during operation
  After the machine is not in use for a long period of time, the rollers of the unit may not turn smoothly because they stick to each other In such cases, turn the rollers by hand before starting the machine
- For preparing the processing solutions, use specially made measuring cups
- Use 30 to 35°C hot water when the temperature of water is low in winter
- Be sure to handle the processor gently when taking it in or out

Activator Tank (capacity 3 liters)

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

① Add 1 5 liters of water to 1 5 liters of SLM-AC (undiluted solution), exclusive activator for SILVER MASTER, and pour the mixture into the activator tank after thoroughly stirring it

② Pour the activator, prepared in the same ratio (1 1), into the activator replenishing tank (0 5 liter) and mount the tank properly on the unit

Stabilizer Tank (capacity 2 liters)

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

① Add 1 5 liters of water to 0 5 liter of SLM-ST (undiluted solution), exclusive stabilizer for SILVER MASTER, and pour the mixture into the stabilizer tank after thoroughly stirring it

② Pour the stabilizer, prepared in the same ratio (1 3), into the stabilizer replenishing tank (0 5 liter) and mount it properly on the unit

Adding the processing solutions

The replenishing tanks should always contain a sufficient quantity of processing solutions properly prepared As the replenishing solution is exhausted, the liquid level in the processing tank is lowered, resulting in accelerated fatigue of the solution and deterioration of the master quality

Changing the processing solutions

Refer to the paragrapho of "General Care" (P 10)

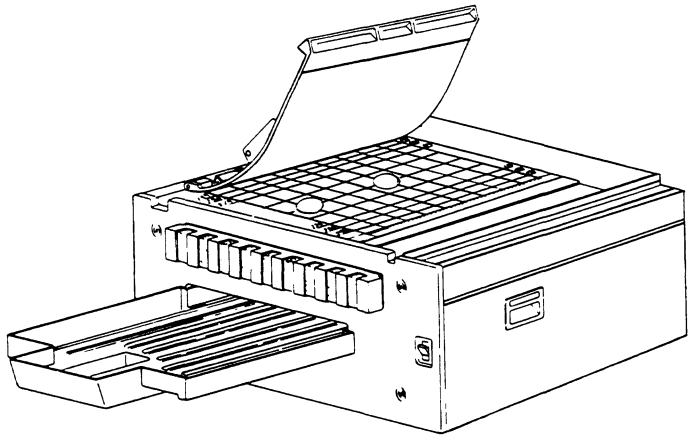
Caution in handling chemicals

① Be careful never to drink or get into eyes processing chemicals (In case of such accidents check with a doctor)
② When chemicals splash onto skin or cloths, immediately wash with running water
③ Use chemicals properly according to instruction
④ Keep chemicals out of reach of children

2-5 Copy Holder

Don't put anything on the top of the machine because the copy holder moves from right side to left side Never touch the copy holder during its movement

Copy Holder

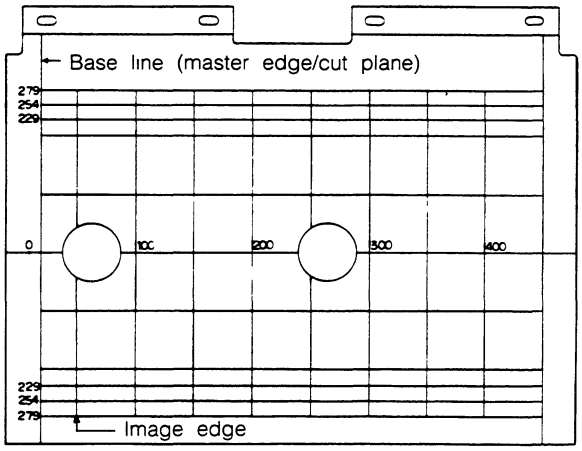


2-5-1 Loading the original copy

① Raise the copy frame slowly holding its handle, and it will be stopped in the specified position by means of spring (Hold the handle until the frame is stopped)
② Place the original copy between the positioning sheet and the copy glass (Refer to "B Positioning the original copy ") Close the copy frame gently

CAUTION
Don't handle the copy frame roughly especially in raising or lowering it

Positioning sheet

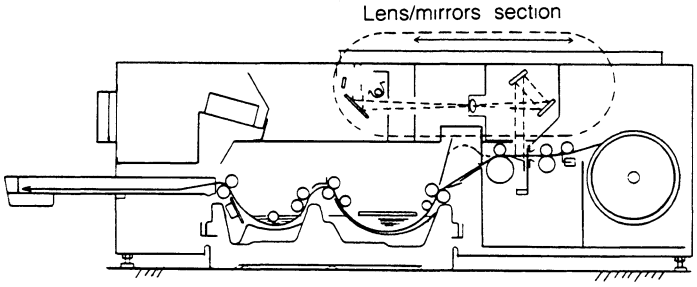


2-5-2 Positioning the original copy

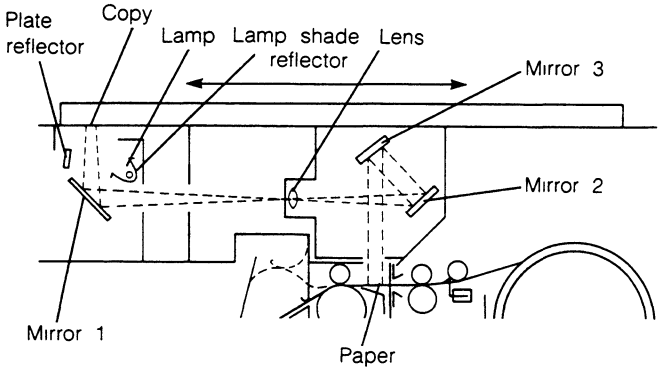
- The original copy should be centered in the cross directions as shown in the figure on the sheet
- The edge of the effective projected image area is 20 mm from the paper edge Put the copy left edge along the positioning sheet reference line
- For centering the copy, use the positioning sheet graduations
- The positioning sheet has round holes for accurate and easy positioning

2-6 Lens and Mirrors

Lens and Mirrors



Detail of the Lens and Mirrors

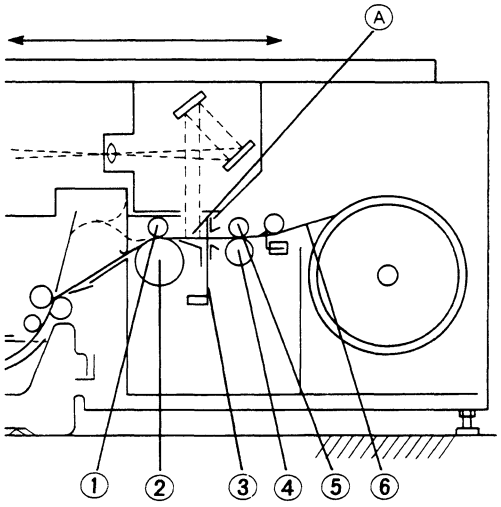


Principle of Photographing

- As the lamp lights up, the direct light from the lamp and the light reflected from the reflectors irradiate the copy plane
- The light from the copy, or the image, is reflected by mirror 1 and goes through the lens
- After passing through the lens, the light is reflected by mirror 2 and then mirror 3 to be cast on the Master
- The lens and mirrors are fixed, the copy holder moves from right to left As the Master moves synchronously with the copy holder travel, it is irradiated by the light from the copy image Thus the image is reproduced on the Master
- This machine uses f = 150 mm lens (F 11)
- This machine should be installed in a dust-free and less humid place because it incorporates mirrors
- Don't touch the lens or mirrors with bare hands especially when replacing the lamp or cleaning the inside of the machine

2-7 Photographing Section

Detail of the Photographing Section (1)

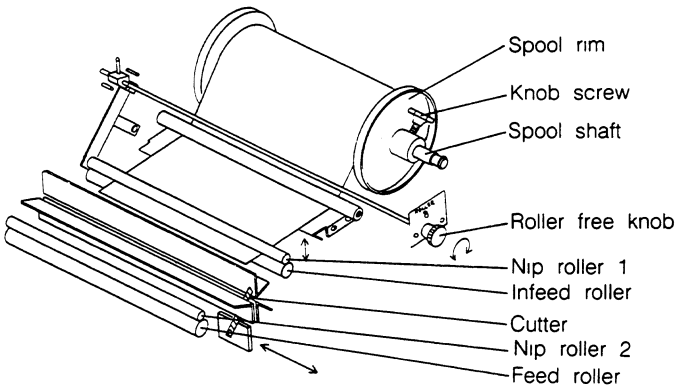


① Nip roller 2
② Feed roller
③ Cutter
④ Infeed roller
⑤ Nip roller 1
⑥ Master paper
Ⓐ Exposure plane

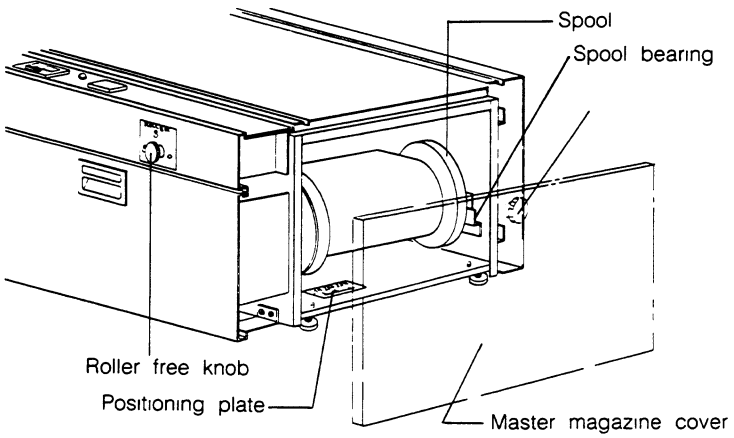
Master, kept level by means of the four rollers ①, ②, ④ and ⑤, is fed synchronously with the copy holder travel while being exposed Then, the master paper is transported to the processor

When the exposure is completed or the Master has been fed by the length set on the MASTER LENGTH dial, the Master is stopped and cut with the cutter

Detail of the Photographing Section (2)



Master Magazine



2-7-1 Loading master paper

① Turn the knob of the Master magazine cover and pull it toward you, and the cover opens

② Fit the spool rim to the spool shaft guide line depending on the width of the Master (229, 254 or 279 mm) in use and secure it with set screw The set screw holes are provided on the spool shaft reference side

③ Pass the spool shaft through the Master roll core hole (As you face the machine, the reference side is on the left)

④ Fit the other spool rim to the spool shaft and secure it with set screw

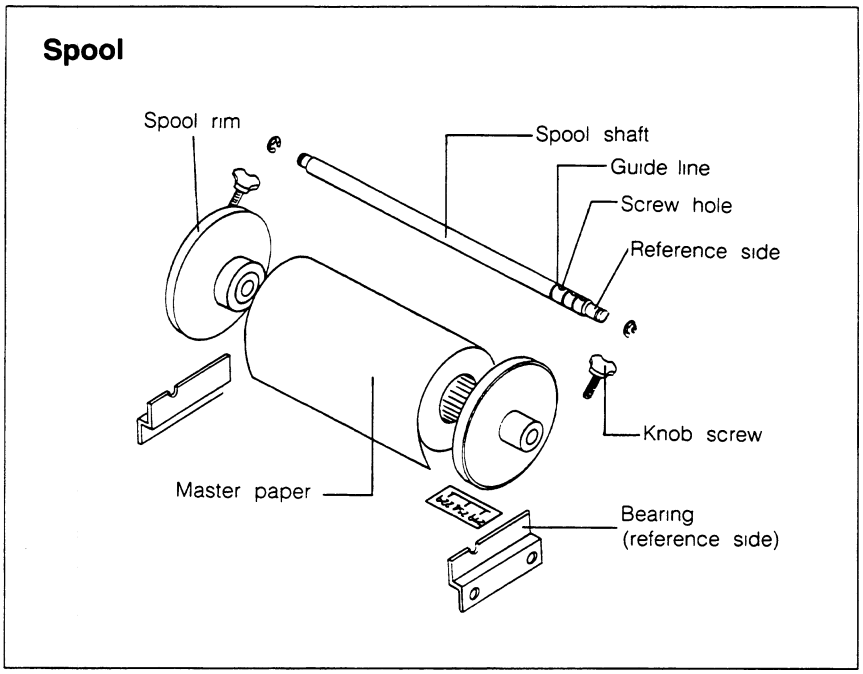
⑤ Put the spool loaded with paper on the spool bearings in place referring to the positioning plate

⑥ Turn the nip roller free knob to the right to symbol Ⓐ ( ) and the nip roller 1 goes up to leave the infeed roller

⑦ Pass the paper between the infeed roller and nip roller 1 and, feed it further to the feed roller by hand (Since the feed roller is in contact with the nip roller 2, you can feel the touch of the paper edge to the rollers

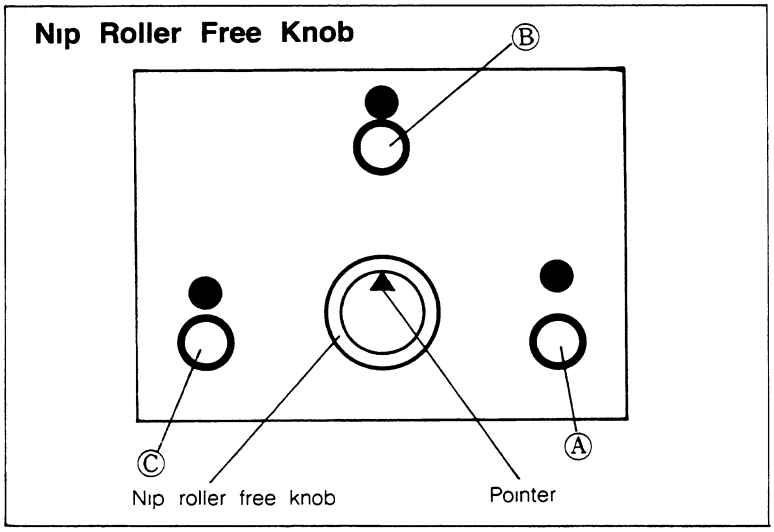
⑧ Then, move the paper back by approx 10-20 mm and return the nip roller free knob to the former position symbol Ⓑ ( ) The nip roller 1 goes down to touch the infeed roller

⑨ Switch on the POWER switch, and the START pilot lamp (green) lights If the START indicator does not light but the MASTER END pilot lamp lights, the paper is not in the exposure plane If so, take the above steps from ⑥ to ⑧ again



2-7-2 Roller free knob

The nip roller free knob provided with the pointer can be rotated both clockwise and counterclockwise By using the knob, the position of the nip roller 1 may be changed as indicated by the symbols depending on situation



Ⓐ The nip roller 1 is off the infeed roller with a wide gap To load paper, set the dial to this position

Ⓑ The nip roller 1 comes in touch with the infeed roller To feed paper (for photographing), set it to this position

Ⓒ The nip roller 1 is off the infeed roller with a small gap When the machine is expected not to be used for many hours, set it to this position to prevent fogging or wrinkles due to roller pressure

3. PHOTOGRAPHING

3-1 Photographing Procedure

Satisfactory photography cannot be produced unless the following conditions are met Carry out the checks stated below before starting the machine

① **Conditions for photographing**

1 Processing solutions are prepared
2 The MASTER END lamp (red) is out
3 The nip roller free knob is set to symbol Ⓑ (🧍)
4 The START indicato (green) is on

- Turn on the power approx 30 minutes before operation (The activator temperature should rise to the prescribed level The liquid temperature reses by approx 1°C per minute)
- Never put anything on the top of the machine since the copy holder moves longitudinally

② **Positioning the original copy**
Place the copy with its image side down and set it in the desired position, using the graduations of the positioning sheet

③ **Setting the master length**
Set a prescribed length (370-480 mm) on the MASTER LENGTH dial

④ **Exposure control**
Adjust the exposure (brightness of the light source) for each copy with the EXPOSURE dial

⑤ **Start**
Push the START button and photographing will be automatically performed to produce a master
After a master is produced, the START indicator (green) lights up

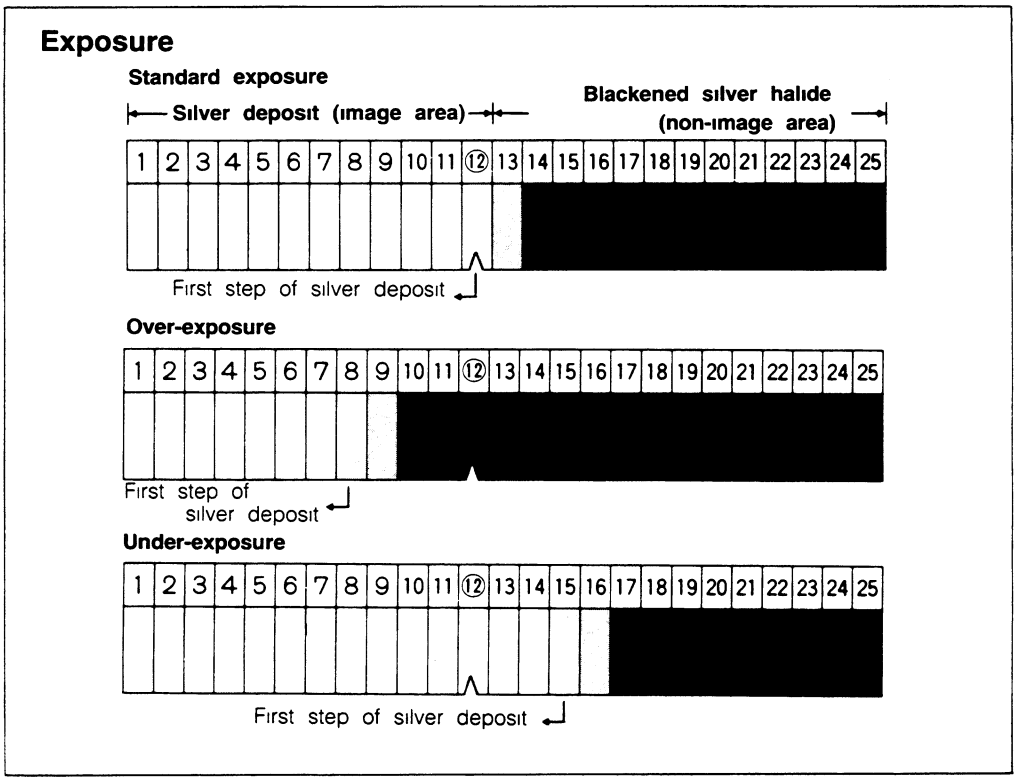
⑥ When the machine is expected not to be used for many hours or until tomorrow morning, turn the nip roller free knob counterclockwise to set it to symbol Ⓒ (🧍) This prevents paper from being fogged or wrinkled due to roller pressure

3-2 How to Determine Standard Exposure

Since the SILVER MASTER RII is coated with silver-halide emulsion, its sensitivity may somewhat vary among lots Each carton bears a lot number Before using a new lot, check its sensitivity
Under-exposure may cause thickened images or toning on backgrounds
Over-exposure may cause too thin images or lost images Optimum exposure is essential for SILVER MASTER RII to deliver the best performance

3-2-1 How to Determine Standard Exposure Time

① The CP-50S is supplied with a test chart and a standard print sample Make an exposure of the test chart and compare it with the print sample to determine optimum exposure
② Adjust the EXPOSURE dial so that silver deposit starts with the step marked with a circle in the test chart
③ The corresponding exposure is referred to as Standard Exposure for the test chart
④ Using this Standard Exposure Time for the test chart as a guide, determine the optimum exposure for each copy For such copies as clean proof (typed) and phototyped matter, increase the amount of exposure by 10% to 15% For line work, decrease the amount of exposure



3-2-2 Focus

The focus is thoroughly checked before shipment However, recheck it, when necessary, in accordance with the following procedure

- Print the resolving power chart contained in the test chart and compare the print with the resolving power standard sample to judge the focus accuracy
- The amount of exposure should be a little larger than the standard one
- If the print is equivalent to or better than the resolving power standard sample, the focus accuracy is accepted
- The resolving power should be 8 lines/mm (Since this resolving power chart is a reproduction, it does not indicate absolute valves)

CAUTION The standard print sample may fade with time So, keep it in a dark place such as a desk drawer

4. MAINTENANCE

To maintain satisfactory operation of the SILVER MASTER CP-50S, run routine checks as follows

4-1 Inspection at Start-up

① Plug in the machine and turn the POWER (camera) switch on the sub-control-panel to On
② Turn the nip roller free knob to symbol Ⓑ( )
③ Confirm that the copy glass and mirrors are not scratched or stained
Take special care to keep the glass clean since a stained glass seriously affects the image quality
④ Confirm that the processing tanks and replenishing tanks are filled properly
⑤ Confirm that the START indicator on the main control panel is on
⑥ Confirm that there is no trouble in a series of automatic operations
⑦ When a new processing solution has been put in or the paper roll has been replaced with a new one, it is advisable to photograph the test chart in order to check overall exposure condition

4-2 Inspection at Shut-down

① Switch the POWER (camera) switch on the sub-control-panel to OFF and disconnected the power cord from the outlet
② When the machine is expected not to be used for many hours, turn the nip roller free knob to symbol Ⓒ( )
③ Cover the copy glass with the copy compression mat to keep the glass surface free from dust

4-3 General Care

4-3-1 Changing the processing solutions

One full of activator and stabilizer is capable of processing 200 plates of B4 format In two weeks after preparation of the solutions, change the solutions regardless of the number of plates processed so far The processing tanks are located inside the machine Keep them clean

① Turn the POWER (camera) switch to OFF
② Remove the front cover from the main body and pull out the processor a little
③ Take off the replenishing tanks
④ Take out the drain vat and put the drain hose ends into the vat to drain the tank
⑤ Return the drain hoses to their original positions after the processing solutions are all drained
⑥ For the method of disposing of used solutions, refer to the separate brochure, "The Silver Master System and Environmental Issues "

4-3-2 Cleaning the tanks

After changing activator and stabilizer, wash the tanks in accordance with the following procedure without fail

① Disconnect connector J3
② Pull out the entire processor and move it to a place where access for cleaning is easy
③ After disconnecting the drive motor cable connector, loosen the two knob screws to remove the motor

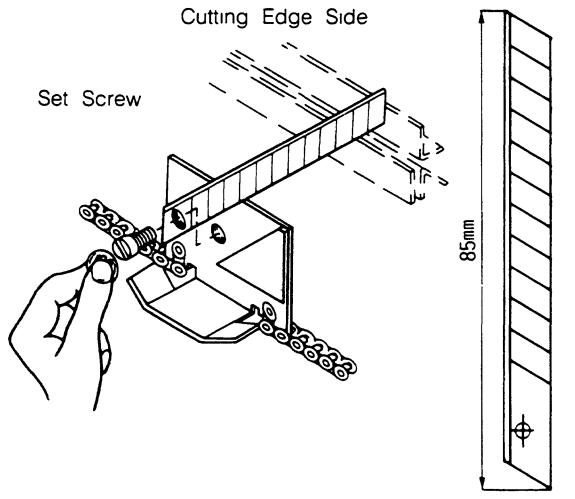
④ Dismount the conveyor unit from the tanks
⑤ Wash the tanks and the conveyor unit with water thoroughly Carefully wipe away the dregs with a damp cloth or sponge
⑥ As the synthetic rubber used in the rollers of the conveyor unit is not heat-resistant, wash it with hot water of less than 40°C
Any detergent or polishing sand must not be used
If the metal guides of the conveyor unit are very dirty, masters may be scratched Wash them with water and wipe dry Then, polish them with a soft cloth using metal polishing powder until their surfaces are lustrous

CAUTION
① The care described above is basic for obtaining masters of good quality Therefore, carry it out scrupulously
② If the activator and stabilizer were put in mistakenly for each other, take the following measures Be careful since the solutions have an antipathy to each other
1) Discharge the activator and stabilizer separately
2) Wash the processing tanks and conveyor unit with water
3) Pour activator and stabilizer in the respective tanks correctly

4-3-3 Replacement of the cutter blade

If more than thirty days have passed since blade replacement, replace regardless of the number of cuts made Replace the blade in the following manner

Replacement of the cutter blade



① Turn the POWER switch on the sub control panel to OFF
② Remove the front cover
③ Remove the cutter cover (Pull the cover a little strongly to toward you, and the cover will come off)
④ Use NT cutters available on the market Never touch the cutting edge
⑤ Fasten up the set screw using a coin or the like

4-3-4 Replacement of the halogen lamp

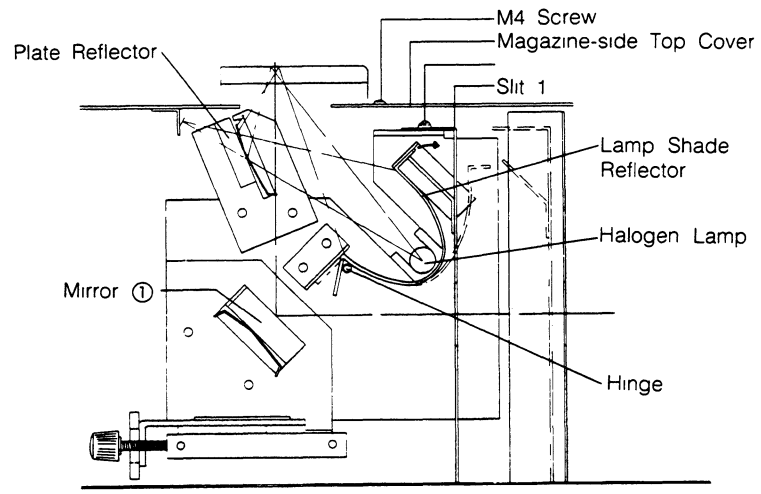
Replace the halogen lamp after the lamp and reflectors have cooled down

① Set the MASTER LENGTH dial to the maximum length (480 mm) and depress the START button

② As soon as the copy holder reaches the leftmost position, turn the POWER switch to OFF

③ Loosen the four M4 screws to remove the magazine-side top cover

Replacement of halogen lamp



④ Remove the M4 screw seccuring slit 1

⑤ Holding the lamp shade reflector by hand, dismiunt slit 1

⑥ One side of the reflector is secured with the hinge, so the reflector opens in the direction of the arrow

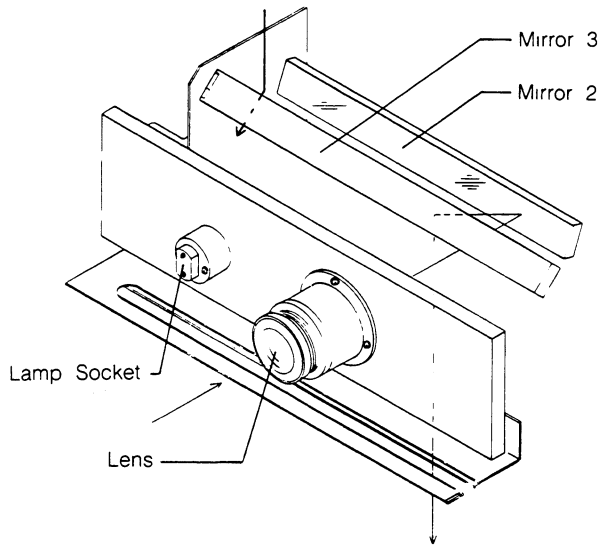
⑦ Hold the lamp with a dry clean cloth or gloves on your hand and install it

- The lamp base is of the bayonet type
- Take enough care not to warp the reflector
- The lamp, when stained with finger marks or smeared, will become opaque Clean the stained lamp with lens paper (available at general camera stores) moistened with a small quantity of industrial ethyl alcohol
- Never touch the insides of the lamp shade reflector, plate reflector and mirror 1 with bare hands

4-3-5 Replacement of the auxiliary exposure lamp

The auxiliary exposure lamp is provided near the lens to correct under-exposure at both ends of the master

Replacement of the auxiliary exposure lamp



① As when replacing the halogen lamp, remove the magazine-side top cover
② Then, the parts as shown on the left in the figure will appear Insert your hand in the direction of the arrow and replace the lamp

- The lamp base is of the screwing type
- Never touch mirrors 2 and 3 with bare hands

4-3-6 Handling and care of the lens and mirrors.

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

- Lightly bruch the mirror with the air brush (supplied as a standard part) every month
- If the lens is heavily dirty, wipe it gently with lens paper (available at general camera stores) moistened with a small amount of industrial ethyl alcohol (available on the market) Avoid strong rubbing or forcible removal of foreign matter so as not to cause scratches

4-3-7 Care of the copy glass

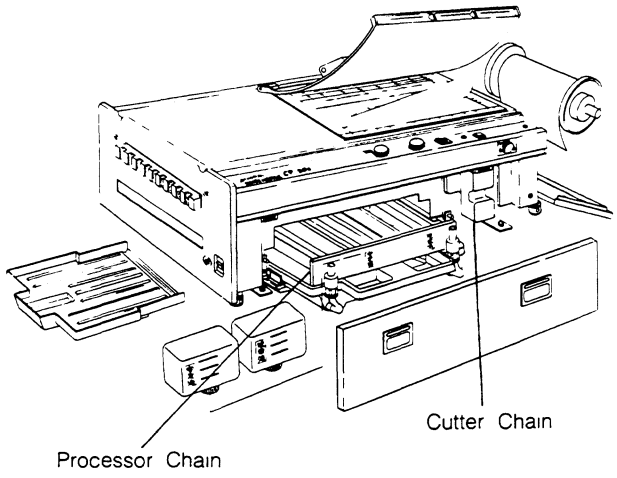
As the copy glass is liable to be stained with dust or finger-marks, inspect it daily If stained, wipe it with a soft cloth using a glass cleaner (available on the market), taking care not to leave the cleaning agent behind

4-3-8 Lubrication

The required frequency of lubrication depends on the frequency of use, but generally the following frequency is recommended

① Processor chain
Draw out the processor and lubricate weekly
② Cutter chain
Open the cover of the photographing section and lubricate monthly
Use SHELLTHERUS 27 or equivalent
③ Processor motor gear
Draw out the processor and lubricate it Use Daphne Colonex Grease No 2

Lubrication



4-4 Ordering and Replacement of Parts

There are various constituent parts, some of them can be replaced by customers while others must be replaced by trained service personnel When ordering parts, let us know the following information

① Whether only parts are required or both parts and installation (replacement) service are required

② The information given in the certificate or the nameplate of your machine
- Type (CP-50S)
- MFG NO

③ Descriptions of parts and quantities required, date of delivery

CAUTION
- The specification are subject to change without notice
- We assume no responsibility for troubles caused by any modifications made by the customer or by the use of another maker's equipment or parts with the machine without our approval

4-5 Troubles and Remedies

With a correct understanding of normal operations, clearly grasp the nature of the trouble which has arisen Basic remedies are listed below

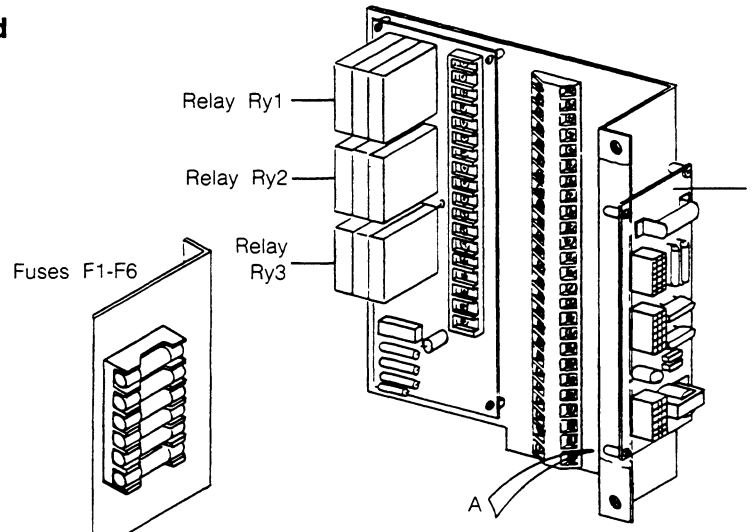
Check systematically and, if the trouble can not be corrected, contact our agent for advice

CAUTION

When checking the electric circuit for fuse replacement or other purposes, turn the POWER (camera) switch on the sub-control-panel to OFF

	Trouble	Probable Cause	Remedy
1	Machine not powered up	Power supply to camera	Check the 100 VAC, 1 2 KW power source
			Turn on no-fuse breaker
		Blown fuses	Replace fuses F1 and F2 (5A)
2	Processor won't work	Blown fuses	Replace fuses F3 and F4 (1A)
		Connector	Check connector J3 and J4
3	The temperature of processing solutions won't rise	Connector	Check connector J3 and J5
		Defective panel heater	Replace it if necessary
4	Machine won t start	MASTER END indicator is on	Load a new paper roll
			Check connector J7
		START indicator is out	Check if the cutter is in the original osition
			Check microswitch LS3 and LS6
			Check connector J6 and J8
			Check if copy holder is in the original position
		Power switch is off	Check relay Ry2
			Check light control PCB
5	Copy holder won't move	Defective relay Ry1	Check relay Ry1
		Microswitches malfunctioning	Check microswitch LS4
			Check connector J11
		Defective motor	Check microswitch LS5
			Check the motor and capacitor
		Drive steel tape broken or slipping	Check the steel tape
6	Copy holder won't return	Microswitch malfunctioning	Check microswitch LS6
			Check connector J6
7	Cutter won't work or malfunction	Microswitch malfunctioning	Check microswitches LS2 and LS3
			Check connectors J8 and J9
		Defective motor	Check the motor and capacitor
		Defective cutter	Replace the cutter blade
8	Light source (halogen lamp) won t light	Relay Ry4 mulfunctioning	Check relay Ry4
		Blown fuses	Check the operation of thyristor (SIRE 3)
		Lamp out of place	Replace fuses F5 and F6 (10A)
		Lamp burned out	Replace the lamp
		Broken triac (BCR16C-8R)	Replace it
		Defective light control PCB	Replace it
		Connector	Check connectors CN1, CN2 and CN4
9	Paper not feed	Nip roller free knob out of position	Turn the nip roller free knob to symbol Ⓑ
		Infeed roller won t rotate	Check the drive chain
		Paper end caught by feed roller	Check paper end for wrinkles
10	Master quality not satisfactory	Over-or under-exposure	Improper setting of the EXPOSURE dial
			If the adjustment is impossible replace light control PCB
		Developing temperature	Defective panel heater
11	Partially lost image	Dirty copy glass	Clean the glass
		Dirty mirror	Clean the mirror
		Light leakage	Taping
12	Silver deposit on part of master	Processor conveyor unit rollers dirty	Clean the rollers
		Auxiliary exposure isn t made	Replace the lamp
13	Scratches on part of master	Paper feed rollers of processor unit stained or foreign matter on them	Clean them
		Paper guides stained or foreign matter on them	Clean them

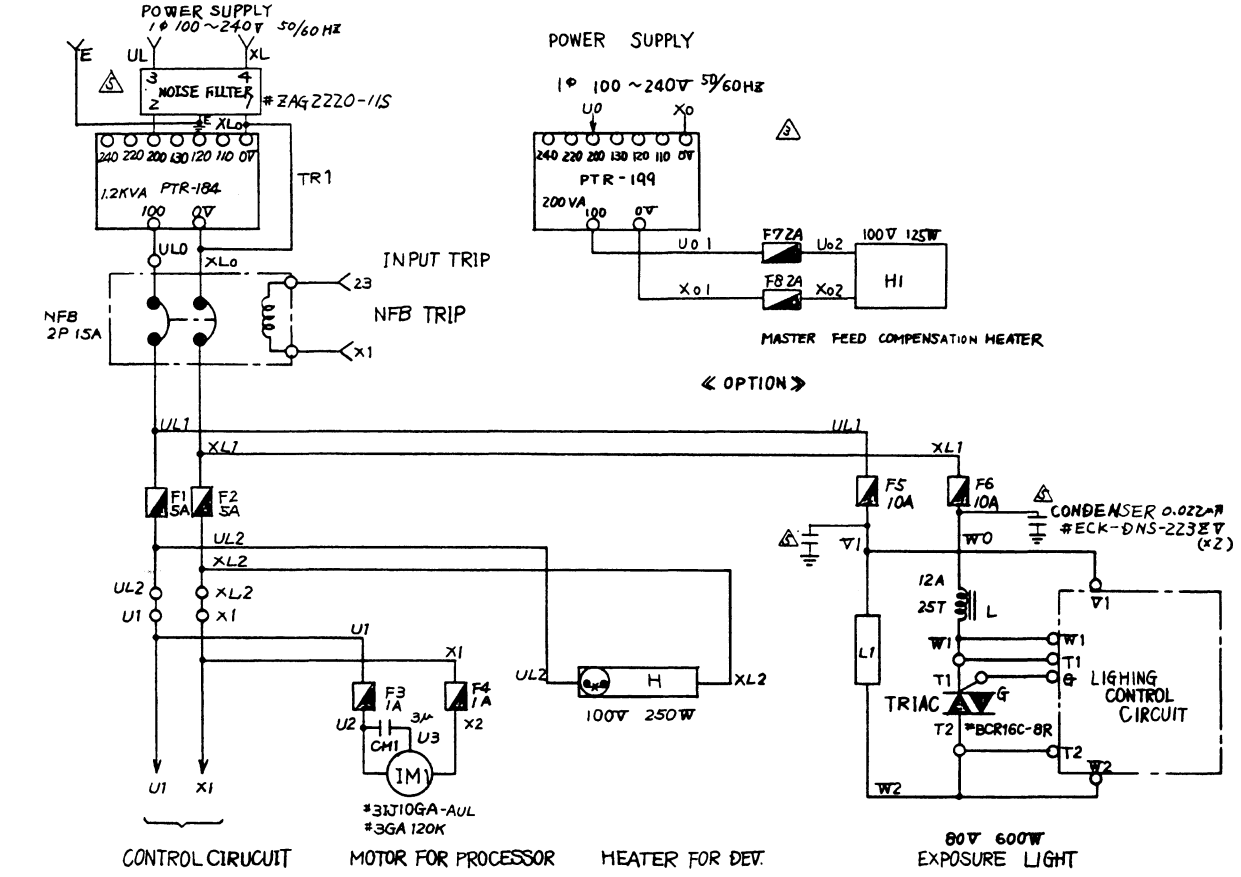
Switchboard

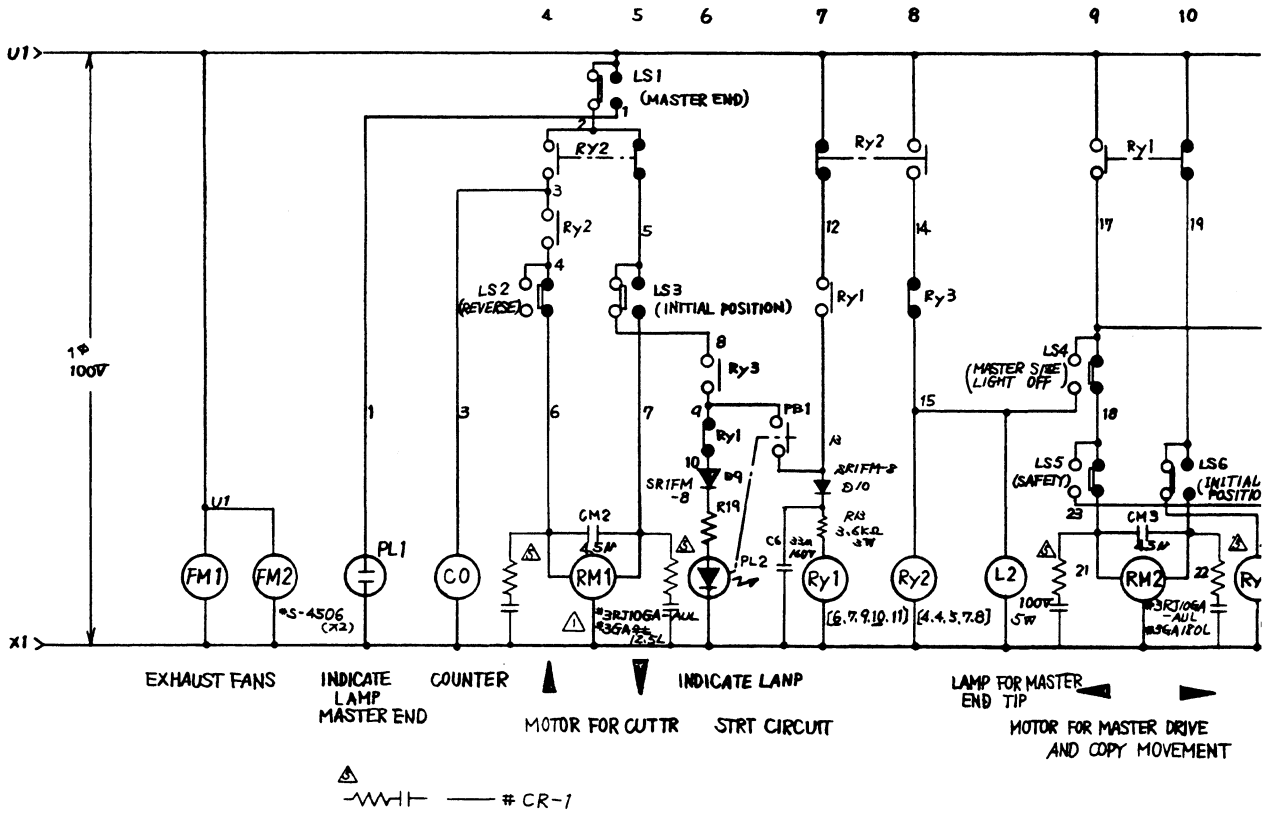


DETAIL A

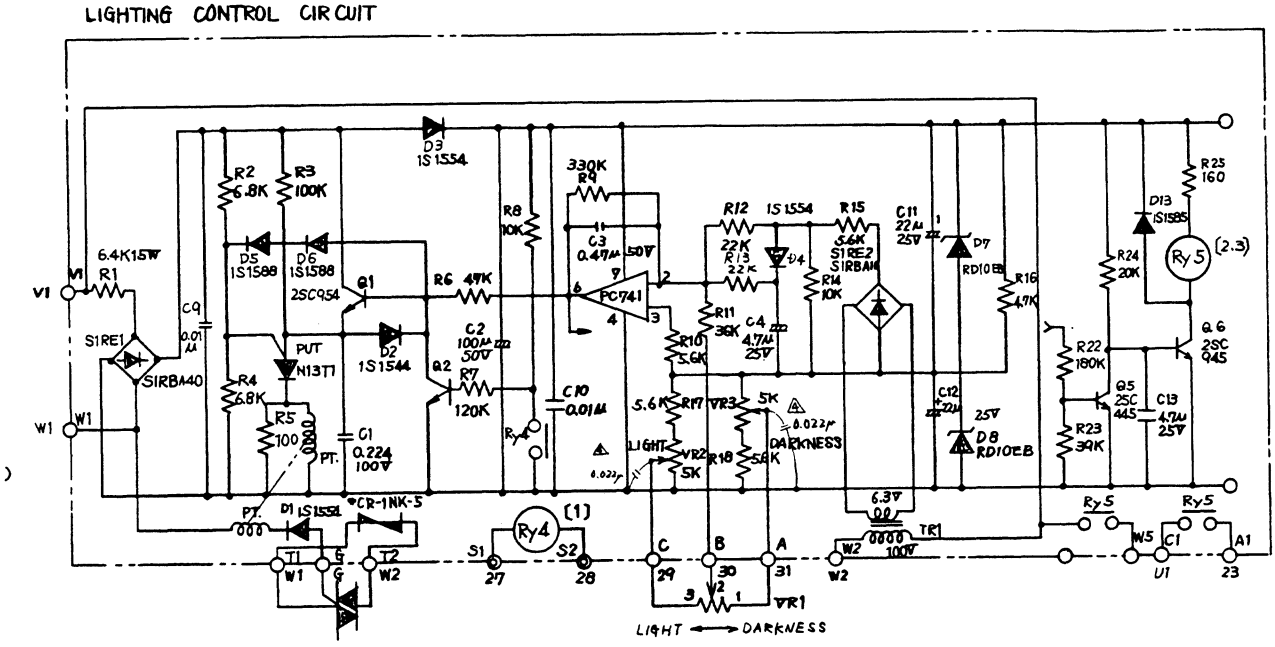
Remove the front cover and switchboard cover, and the switchboard appears

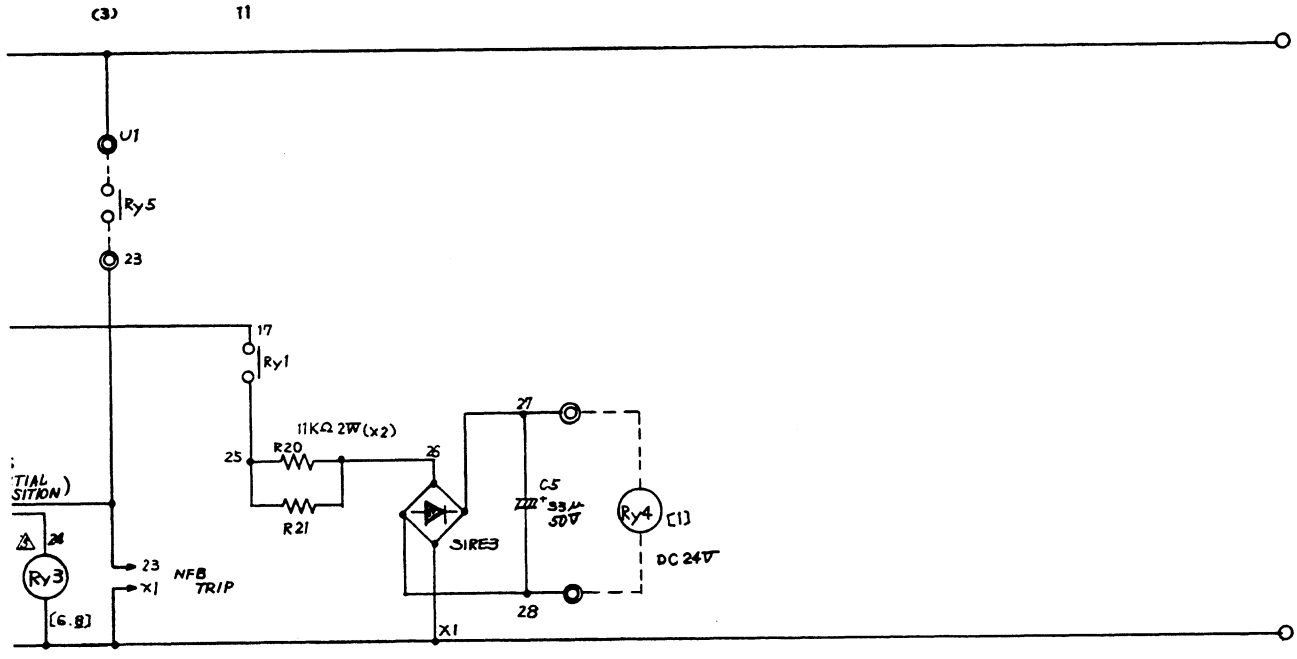
4-6 Wiring Diagram





LIGHTING CONTROL CIRCUIT



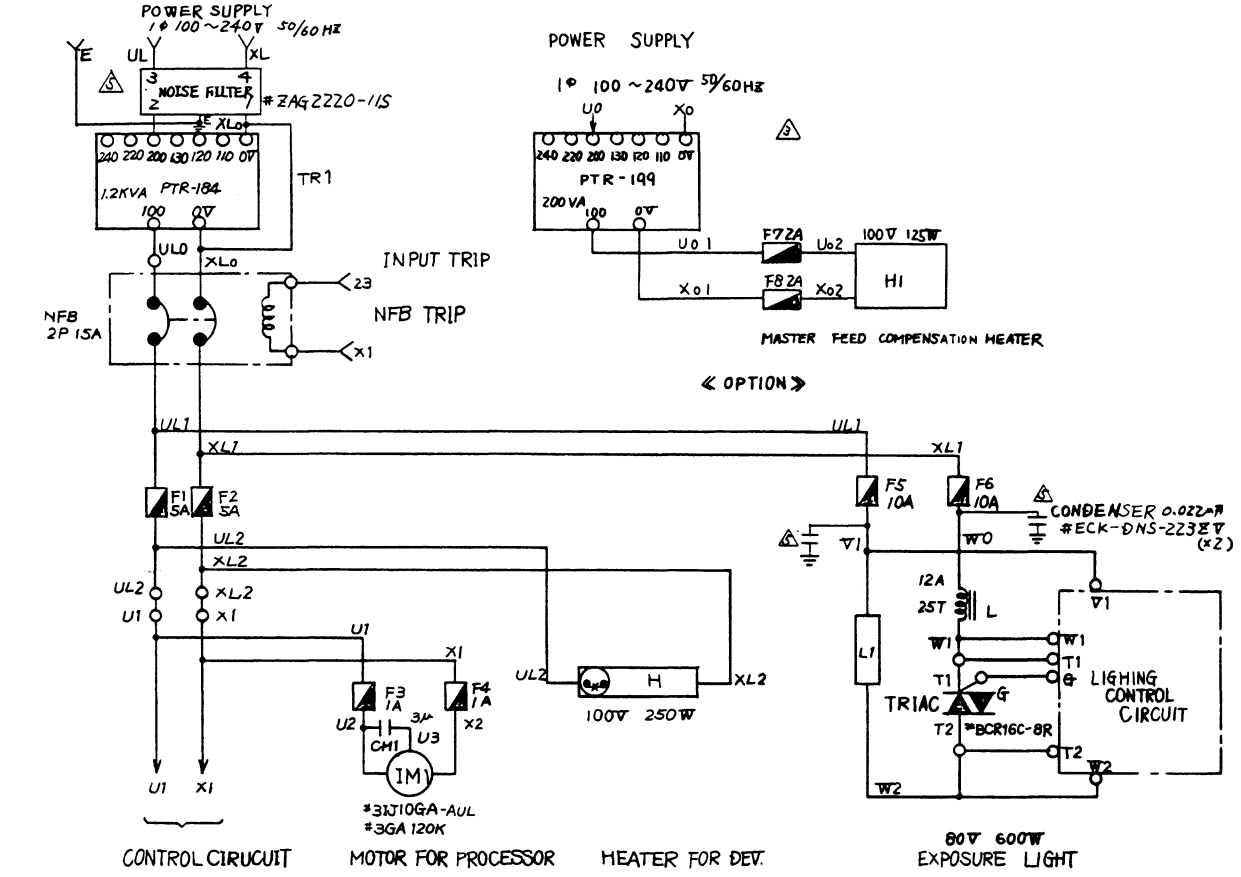


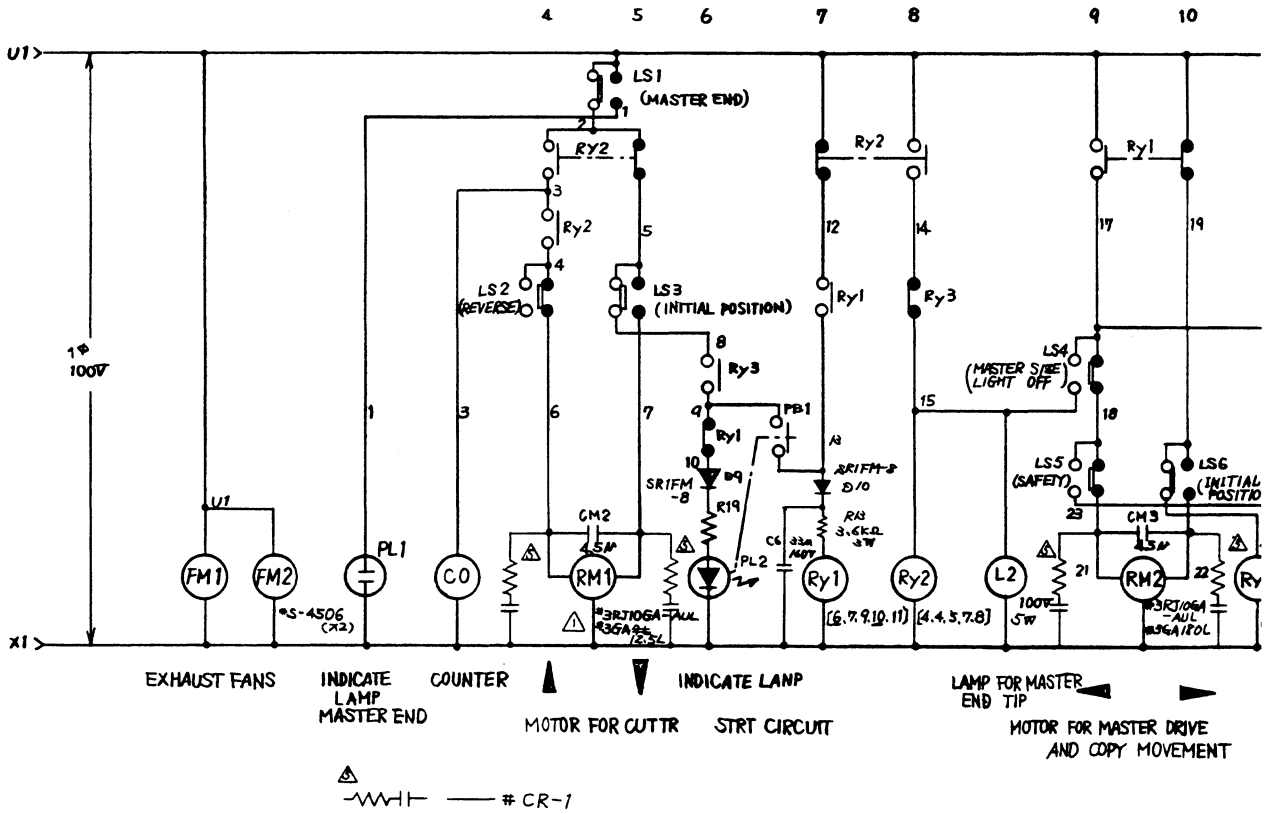
RELAY FOR LIGHT

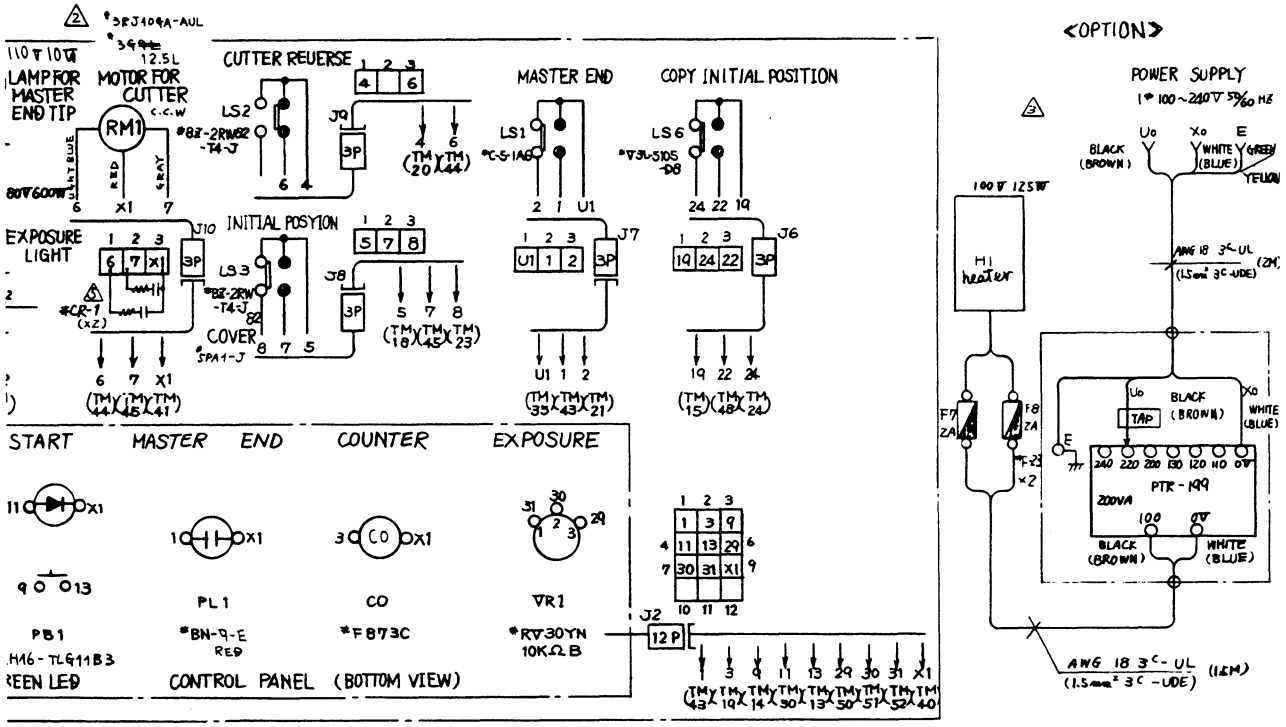
WIRING SYSTEMDIA

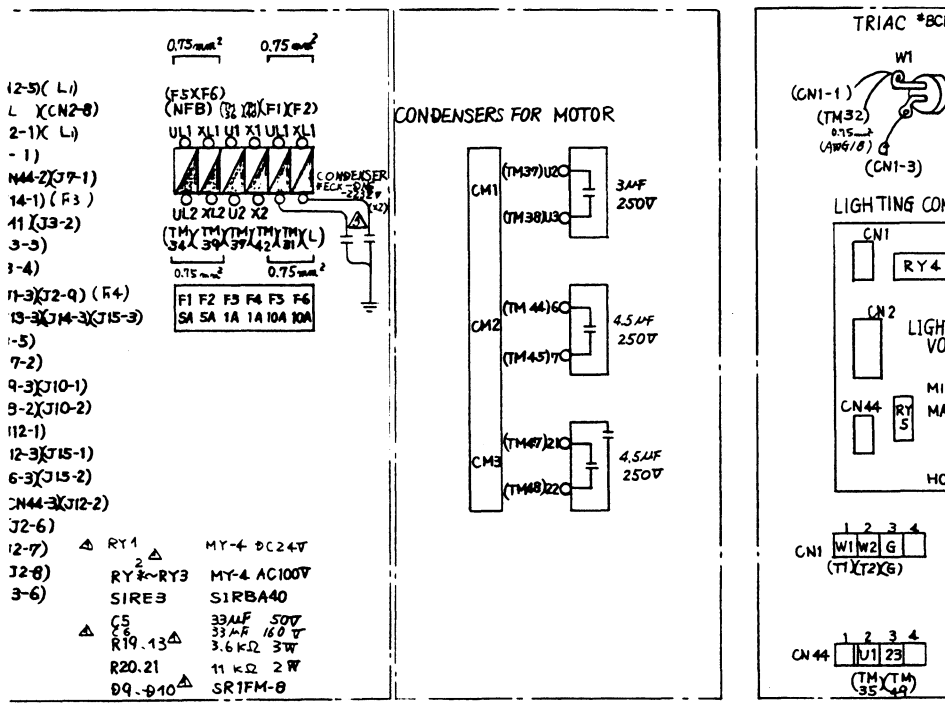
DWG NO.	HCS31575

4-6 Wiring Diagram







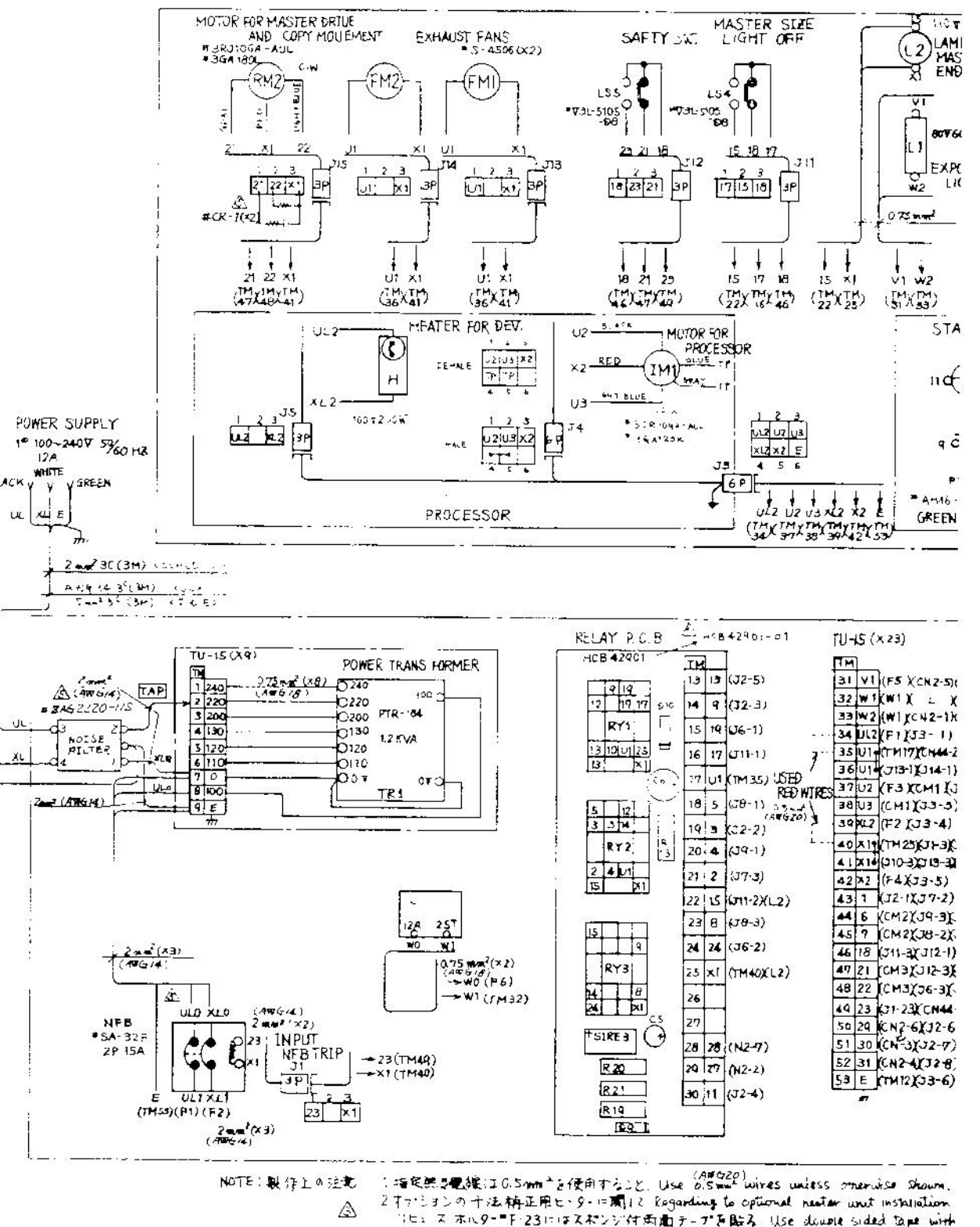


with sponge for attaching fuse holder *F-23.
where it will be readily visible.
heater and fuse holder should be long enough as attach in distribution board.

REFERENCE D1A.
1.WIRING SYSTEM D1A. HCS31575

WIRING DIA

DWG NO.	HCW31364


MOTOR FOR MASTER DRIVE AND COPY MOVEMENT
EXHAUST FANS
SAFTY S/C
MASTER SIZE LIGHT OFF
RM2
FM2
FM1
LS5
LS4
J15
J14
J13
J12
J11
HEATER FOR DEV.
MOTOR FOR PROCESSOR
IM1
H
PROCESSOR
POWER SUPPLY
1φ 100~240V 5%/60 HZ
12A
WHITE
GREEN
TU-1S (X9)
POWER TRANS FORMER
PTR-184
1.2 KVA
TR1
NOISE FILTER
TAP
RELAY P.C.B
HCB429Q1
TU-4S (X23)
USED RED WIRES
NFB
SA-32F
2P 15A
INPUT
NFB TRIP
J1
NOTE：取付上の注意
1)指定無き電線は0.5mm²を使用すること。Use 0.5mm² (AWG20) wires unless otherwise shown.
2)オプションの寸法精密用ヒーターに関して Regarding to optional heater unit installation
3)ヒューズホルダーF-23にはスポンジ付両面テープを貼る Use double sided tape with
2)ヒューズホルダーには Z4 記銘板を付ける 先端しているのを使用する Put Z4 marking tube
3)ヒーターとヒューズホルダーとの電線長さはヒューズホルダーを取付時に wires between heat
fuse holders atta
取付られる長さとする。
4)トランスのUoには T4B 記銘板を貼ること。TAP marking should be on a input wire
5)N.F.BのULoには T4B 記銘板を貼ること。TAP marking should be on a input wire

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