

DIGITAL LASER MFP SCX-6322DN/XAZ

Basic Model : SCX-6322DN

SERVICE Manual

DIGITAL LASER MFP



The keynote of Product

[Key Features]

- 1. General Spec
- CPU : 240 MHz Chorus-M
- Memory : 64MB SDRAM
- USB2.0, IEEE1284, Ethernet 10/100 base TX
- Toner: 8K (Std.) / Drum : 20K
- 50sh DADF (SCX-6322DN), 40sh ADF (SCX-6122FN)
- 550sh x 1 Tray (Max.550sh x 2 Tray), 100sh MP Tray
- Machine Life : 300K pages

2. Copying

- 20cpm/Ltr. (SCX-6322DN),
- 17cpm/Ltr. (SCX-6122FN)
- 600 x 600dpi, 25-400% Zoom Copy

3. Printing

- 23ppm /Ltr., 1200dpi Effective output Quality
- PCL6, PS3, Duplex Standard
- 4. Scan
- Scan to Email/SMB/FTP, 20 Sec.(Gray) Scan speed - JPEG, TIFF, PDF
- 5. FAX
- 33.6Kbps, PC-FAX
- Send from Local/Remote PC
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- 6. Options
- 2nd Tray (550sh)

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1. Precautions

In order to prevent accidents and to prevent damage to the equipment please read the precautions listed below carefully before servicing the printer and follow them closely.

1.1 Safety Warning

- Only to be serviced by appropriately qualified service engineers.
 High voltages and lasers inside this product are dangerous. This printer should only be serviced by a suitably trained and qualified service engineer.
- (2) Use only Samsung replacement parts

There are no user serviceable parts inside the printer. Do not make any unauthorized changes or additions to the printer, these could cause the printer to malfunction and create electric shock or fire hazards.

(3) Laser Safety Statement

The Printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class 1(1) laser products, and elsewhere, it is certified as a Class I laser product conforming to the requirements of IEC 825. Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

Warning >> Never operate or service the printer with the protective cover removed from Laser/Scanner assembly. The reflected beam, although invisible, can damage your eyes. When using this product, these basic safety pre-cautions should always be followed to reduce risk of fire, electric shock, and injury to persons.

	CAUTION - INVISIBLE LASER RADIATION WHEN THIS COVER OPEN. DO NOT OPEN THIS COVER.
	VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION -	RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ATTENZIONE -	RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.
PRECAUCION -	RADIACION LASER IVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.
ADVARSEL	USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.
ADVARSEL	USYNLIG LASERSTRÅLNING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING -	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. STRÅLEN ÄR FARLIG.
VARO! -	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER- SÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.
注 意-	严禁渴开此盖,以免激光泄露灼伤
주 의-	이 덮개를 열면 레이저광에 노출될 수 있으므로 주의하십시오.

1-1

1.2 Caution for safety

1.2.1 Toxic material

This product contains toxic materials that could cause illness if ingested.

- (1) If the LCD control panel is damaged it is possible for the liquid inside to leak. This liquid is toxic. Contact with the skin should be avoided, wash any splashes from eyes or skin immediately and contact your doctor. If the liquid gets into the mouth or is swallowed see a doctor immediately.
- (2) Please keep toner cartridges away from children. The toner powder contained in the toner cartridge may be harmful and if swallowed you should contact a doctor.

1.2.2 Electric Shock and Fire Safety Precautions

Failure to follow the following instructions could cause electric shock or potentially cause a fire.

- Use only the correct voltage, failure to do so could damage the printer and potentially cause a fire or electric shock.
- (2) Use only the power cable supplied with the printer. Use of an incorrectly specified cable could cause the cable to overheat and potentially cause a fire.
- (3) Do not overload the power socket, this could lead to overheating of the cables inside the wall and could lead to a fire.
- (4) Do not allow water or other liquids to spill into the printer, this can cause electric shock. Do not allow paper clips, pins or other foreign objects to fall into the printer these could cause a short circuit leading to an electric shock or fire hazard..
- (5) Never touch the plugs on either end of the power cable with wet hands, this can cause electric shock. When servicing the printer remove the power plug from the wall socket.
- (6) Use caution when inserting or removing the power connector. The power connector must be inserted completely otherwise a poor contact could cause overheating possibly leading to a fire. When removing the power connector grip it firmly and pull.
- (7) Take care of the power cable. Do not allow it to become twisted, bent sharply round corners or other wise damaged. Do not place objects on top of the power cable. If the power cable is damaged it could overheat and cause a fire or exposed cables could cause an electric shock. Replace a damaged power cable immediately, do not reuse or repair the damaged cable. Some chemicals can attack the coating on the power cable, weakening the cover or exposing cables causing fire and shock risks.
- (8) Ensure that the power sockets and plugs are not cracked or broken in any way. Any such defects should be repaired immediately. Take care not to cut or damage the power cable or plugs when moving the machine.
- (9) Use caution during thunder or lightening storms. Samsung recommend that this machine be disconnected from the power source when such weather conditions are expected. Do not touch the machine or the power cord if it is still connected to the wall socket in these weather conditions.
- (10) Avoid damp or dusty areas, install the printer in a clean well ventilated location. Do not position the machine near a humidifier. Damp and dust build up inside the machine can lead to overheating and cause a fire.
- (11) Do not position the printer in direct sunlight. This will cause the temperature inside the printer to rise possibly leading to the printer failing to work properly and in extreme conditions could lead to a fire.
- (12) Do not insert any metal objects into the machine through the ventilator fan or other part of the casing, it could make contact with a high voltage conductor inside the machine and cause an electric shock.

1.2.3 Handling Precautions

The following instructions are for your own personal safety, to avoid injury and so as not to damage the printer

- (1) Ensure the printer is installed on a level surface, capable of supporting its weight. Failure to do so could cause the printer to tip or fall.
- (2) The printer contains many rollers, gears and fans. Take great care to ensure that you do not catch your fingers, hair or clothing in any of these rotating devices.
- (3) Do not place any small metal objects, containers of water, chemicals or other liquids close to the printer which if spilled could get into the machine and cause damage or a shock or fire hazard.
- (4) Do not install the machine in areas with high dust or moisture levels, beside on open window or close to a humidifier or heater. Damage could be caused to the printer in such areas.
- (5) Do not place candles, burning cigarettes, etc on the printer, these could cause a fire.

1.2.4 Assembly / Disassembly Precautions

Replace parts carefully, always use Samsung parts. Take care to note the exact location of parts and also cable routing before dismantling any part of the machine. Ensure all parts and cables are replaced correctly. Please carry out the following procedures before dismantling the printer or replacing any parts.

- (1) Check the contents of the machine memory and make a note of any user settings. These will be erased if the mainboard or network card is replaced.
- (2) Ensure that power is disconnected before servicing or replacing any electrical parts.
- (3) Disconnect printer interface cables and power cables.
- (4) Only use approved spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct.
- (5) When removing or re-fitting any parts do not use excessive force, especially when fitting screws into plastic.
- (6) Take care not to drop any small parts into the machine.
- (7) Handling of the OPC Drum
 - The OPC Drum can be irreparably damaged if it exposed to light.

Take care not to expose the OPC Drum either to direct sunlight or to fluorescent or incandescent room lighting. Exposure for as little as 5 mins can damage the surface's photoconductive properties and will result in print quality degradation. Take extra care when servicing the printer. Remove the OPC Drum and store it in a black bag or other lightproof container. Take care when working with the covers(especially the top cover) open as light is admitted to the OPC area and can damage the OPC Drum.

- Take care not to scratch the green surface of OPC Drum Unit. If the green surface of the Drum Cartridge is scratched or touched the print quality will be compromised.

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1.2.5 Disregarding this warning may cause bodily injury

(1) Take care - some parts may be hot.

The fuser unit works at a high temperature. Use caution when working on the printer. Wait for the fuser to cool down before disassembly.

(2) Take care not to trap fingers or hair.

Take care when using a printer. It contains many rotating parts. Ensure that fingers, hair, clothing etc. do not become caught in the mechanism as this could cause injury.

(3) When you move the printer.

This printer weighs 17.5kg including toner cartridge and cassette. Use safe lifting and handling techniques. Use the lifting handles located on each side of the machine. Back injury could be caused if you do not lift carefully.

(4) Ensure the printer is installed safely.

The printer weighs 17.5Kg, ensure the printer is installed on a level surface, capable of supporting its weight. Failure to do so could cause the printer to tip or fall possibly causing personal injury or damaging the printer.

(5) Do not install the printer on a sloping or unstable surface. After installation, double check that the printer is stable.

1.3 ESD Precautions

Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly called "Electrostatically Sensitive (ES) Devices", or ESDs. Examples of typical ESDs are: integrated circuits, some field effect transistors, and semiconductor "chip" components.

The techniques outlined below should be followed to help reduce the incidence of component damage caused by static electricity.

Caution >>Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

- Immediately before handling a semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, employ a commercially available wrist strap device, which should be removed for your personal safety reasons prior to applying power to the unit under test.
- After removing an electrical assembly equipped with ESDs, place the assembly on a conductive surface, such as aluminum or copper foil, or conductive foam, to prevent electrostatic charge buildup in the vicinity of the assembly.
- 3. Use only a grounded tip soldering iron to solder or desolder ESDs.
- 4. Use only an "anti-static" solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
- Do not use Freon-propelled chemicals. When sprayed, these can generate electrical charges sufficient to damage ESDs.
- 6. Do not remove a replacement ESD from its protective packaging until immediately before installing it. Most replacement ESDs are packaged with all leads shorted together by conductive foam, aluminum foil, or a comparable conductive material.
- 7. Immediately before removing the protective shorting material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- 8. Maintain continuous electrical contact between the ESD and the assembly into which it will be installed, until completely plugged or soldered into the circuit.
- Minimize bodily motions when handling unpackaged replacement ESDs. Normal motions, such as the brushing together of clothing fabric and lifting one's foot from a carpeted floor, can generate static electricity sufficient to damage an ESD.

1.4 Super Capacitor or Lithium Battery Precautions

- 1. Exercise caution when replacing a super capacitor or Lithium battery. There could be a danger of explosion and subsequent operator injury and/or equipment damage if incorrectly installed.
- 2. Be sure to replace the battery with the same or equivalent type recommended by the manufacturers.
- Super capacitor or Lithium batteries contain toxic substances and should not be opened, crushed, or burned for disposal.
- 4. Dispose of used batteries according to the manufacturer's instructions.

2. Specification of Product

2.1 Product Overview

· Concept

- High network Feature , A4 Copier based MFP

- · Target User
 - General Office
 - Government, Education, Medical Vertical Market
 - Duty Cycle : 20K Pages
- \cdot Series Models
 - SCX-6122FN(4-in-1, ADF NW)
 - SCX-6322DN(4-in-1, DADF, NW)
- · Key Sales Point
 - Duplex Capability
 - Network Standard
 - Scan-to-Email
 - Large Volume Capability

2.2 Product Specification

2.2.1 Product General Specification

	Items	SCX-6122FN	SCX-6322DN	
Major Functions	Standar d	Local connection: Copier, Printer, Scan, Fax, ADF As Network connected: Network Print, Scan to Client/SMB/FTP/Emai I	Local connection: Copier, Printer, Scan, Fax , DADF As Network connected: Network Print, Scan to Client/SMB/FTP/Emai I	
	Option	2nd Cassette, Desk	2nd Cassette, Desk	
Dimensio n	without Tray 2	560 X 430 X 455 mm	560 X 430 X 495 mm	
(WxDxH)	with Tray2	560 X 430 X 595 mm	560 X 430 X 635 mm	
Net Weight (with	CRU)	22.55Kg	22.65Kg	
LC D		20*2 Char	20*2 Char	
	Standar d	USB 2.0, IEEE 1284 Parallel Port, Ethernet 10/100 base Tx	USB 2.0, IEEE 1284 Parallel Port, Ethernet 10/100 base Tx	
i/O interiac e	Option	N/A	N/A	
Power Consumption	Avg operation	450W	450W	
	Sleep Mode	28W	28W	
	OptionZhi Cassette, DeskZhiimension VxDxH)without Tray 2560 X 430 X 455 mm560with Tray2560 X 430 X 595 mm560xt Weight (with CRU)22.55Kg22.D20*2 Char20*D Interfac eStandar dUSB 2.0, IEEE 1284 Parallel Port, Ethernet 10/100 base TxUSBO Interfac eOptionN/AN/Awwer onsumptionSleep Mode28W28NStandby Mode100W100biseOperatingWarming up : 48dB, Printing/Coping/Scan : 60dBAWarming up : 48dB, Printing/Coping/Scan : 60dBAarm Up Timefrom sleep modeLess than 40dBALeesMonthly Duty Cycle20,000pages20,ADF Feed Roller50,000pages50,achine LifePaper Feeding Roller100,000pages50Tage for Dallor100,000pages50	100W		
Naiaa	Operatin g	Warming up : 48dB, Printing/Coping/Scan : 60dBA	Warming up : 48dB, Printing/Coping/Scan : 60dBA	
NOISE	Standby	Less than 40dBA	Instruction retrieves interviewer i	
Warm Up Time	from sleep mode	Less than 30 sec.	Less than 30 sec.	
	Monthly Duty Cycle	20,000pages	20,000pages	
	Machine Life	5Years or 300,000 Pages, which comes first	5Years or 300,000 Pages, which comes first	
	ADF Feed Roller	50,000pages	50,000pages	
Machine Life	Paper Feeding Roller	100,000pages	100,000pages	
	Transfer Roller	100,000pages	100,000pages	
	Fuser Unit	100,000pages	100,000pages	
Device Memory	•	64MB	64MB	

2.2.2 Print Specification

Items SCX-6122FN SCX-6322DN		SCX-6322DN		
Print Speed		Up to 22 ppm in A4 (23 ppm in Letter)	Up to 22 ppm in A4 (23 ppm in Letter)	
Print Language		PCL6, PS3	PCL6, PS3	
Power Save		Yes(5, 10, 15, 30, 60, 120 minutes)	Yes(5, 10, 15, 30, 60, 120 minutes)	
Resolution		Up to 1200dpi Effective Output	Up to 1200dpi Effective Output	
Memory		24MB buffer	38MB buffer	
FPOT		Approx. 12Seconds(Tray1), 13seconds(Tray2)	Approx. 12Seconds(Tray1), 13seconds(Tray2)	
Duplex Print		Yes	Yes	
Halftone(Gray S	Scale)	256level	256level	
Compatibility	-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3,10.4 -Windows 98/Me/NT4.0/2000/XF -Various Linux OS (via USB interface including Red Hat 8 ~ 9, Fedora Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3,10.4		-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3,10.4	
Compatibility - Win Serve -Varie inclue Mane -Mac		- Windows 98/Me/NT4.0/2000/XP(32/64bit)/2003 Server(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8~9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac OS 8.6~9.2, 10.1~10.4	- Windows 98/Me/NT4.0/2000/XP(32/64bit)/2003 Server(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8~9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac OS 8.6~9.2, 10.1~10.4	
N/W Print (Optional)	Printing Protocols	TCP/IP(LPR, Standard TCP/IP Printing, Samsung Port, IPP) NetWare,Ethertalk	TCP/IP(LPR, Standard TCP/IP Printing, Samsung Port, IPP) NetWare,Ethertalk	
	Novell N/W Print Service	PSERVER, NDS, IPX, NCP	PSERVER, NDS, IPX, NCP	
	Device Discovery	SLP, DHCP, BOOTP, RARP, DNS, DDNS, SNMP, SMB, Rendezvous	SNMP, SLP, DHCP, BOOTP, RARP, DNS, DDNS, SNM SMB, Rendezvous	

2.2.3 Scan Specification

	Items	SCX-6122FN	SCX-6322DN	
	Scan Method	Color CCD	Color CCD	
	Linearity, Halftone, 300dpi, ADF/DADF	15 Sec	15 Sec	
Scan Speed	Gray, 300dpi, ADF/DADF	20Sec	20Sec	
	Color 300dpi, ADF/DADF	30Sec	30Sec	
Desclution	Optical	600*600dpi	600*600dpi	
Resolution	Enhanced	4800dpi*4800dpi	4800dpi*4800dpi	
Halftone		256level	256level	
Seen Size	Max. Document Width	Max.216mm(8.5")	Max.216mm(8.5")	
Scan Size	an Size Effictive Scan Width Max 208mm(8.2inch)	Max 208mm(8.2inch)		
	Color	Internal : 36Bit, External: 24Bit	Internal : 36Bit, External: 24Bit	
Scan Depth	Mono	- 1bit for Linearity & Halftone - 8 Bit(External), 12 Bit(Internal) for Gray scale	 - 1bit for Linearity & Halftone - 8 Bit(External), 12 Bit(Internal) for Gray scale 	
	pplication Yes Y		Yes	
	USB	N/A	N/A	
	Email	Yes	Yes	
Scan to	SMB	Yes	Yes	
	FTP	Yes	Yes	
	HTTP(S)	N/A	N/A	
	Network Scan	Yes	Yes	
Compatibility	PC Scan	-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3, 10.4	-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3, 10.4	
	Network Scan	Windows 98/Me/2000/XP(32/64bit)	Windows 98/Me/2000/XP(32/64bit)	

2.2.4 Copy Specification

	Items	SCX-6122FN	SCX-6322DN	
Conv Spood	Simplex Copy Speed	- @SDMP, Text: 23cpm/Ltr. 22cpm/A4 - @ MDSP: 16.5cpm/Ltr, 15.5cpm/A4	- @SDMP, Text: 23cpm/Ltr. 22cpm/A4 - @MDSP, Text: 21cpm/Ltr, 20cpm/A4	
Copy Speed	Duplex Copy Speed	- Simplex-to-Duplex(1-2): Approx. 13ipm/Ltr, 12.5ipm/A4 - Duplex-to-Duplex(2-2) : N/A	- Simplex-to-Duplex(1-2): Approx. 13ipm/Ltr, 12.5pm/A4 - Duplex-to-Duplex(2-2) : 7ipm/Ltr, 7ipm/A4	
FCOT		13 seconds(ADF),10seconds(Platen)	Duplex-to-Duplex(2-2) : 7ipm/Ltr, 7ipm/A413.5 seconds(DADF), 10Seconds(Platen)25% to 400% for Platen25% to 100% for ADF1-999Original(100%)] $A4 \rightarrow A5(75\%)$]LGL→LTR(78%)]LGL→A4(83%)]A4→LTR(94%)]EXE→LTR(104%)]A5 → A4(133%)]50%,150%, 200%Custom:50-400%)]YesScan: 600x300dpi , Printing 600x600dpiScan: 600x300dpi @ Platen or 600x300dpiScan 600x600dpi @ Platen or 600x300dpiCustom:50-40(5f)	
Zoom Range		25% to 400% for Platen 25% to 100% for ADF	25% to 400% for Platen 25% to 100% for ADF	
Multi Copy		1~999	1~999	
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		[Original(100%)] [A4 \rightarrow A5(75%)] [LGL \rightarrow LTR(78%)] [LGL \rightarrow A4(83%)] [A4 \rightarrow LTR(94%)] [EXE \rightarrow LTR(104%)] [A5 \rightarrow A4(133%)] 50%,150%, 200% [Custom:50-400%)]		
Manual Duplex		Yes	Yes	
	Text	Scan: 600x300dpi , Printing 600x600dpi	Scan: 600x300dpi , Printing 600x600dpi	
Original Type	Text/Photo	Scan: 600x300dpi , Printing 600x600dpi	Scan: 600x300dpi , Printing 600x600dpi	
	Photo	Scan 600x600dpi @ Platen or 600x300dpi Scan 600x600dpi @ Platen or 600x300dpi @ ADF Printing 600x600dpi @ DADF Printing 600x600dpi @ @ DADF Printing 600x600dpi		
Automatic Bac	kground Suppression	Yes (On/Off)	Yes (On/Off)	
Darkness Control 5		5 level	5 level	
Collation Copy	,	Yes(600x300dpi and ADF only)	Yes(600x300dpi and DADF only)	
CCD Sleep Tir	ne	30 minutes	30 minutes	
	ID Card Copy	Yes	Yes	
	Margin Shift	2-up, 4-up (ADF only)	2-up, 4-up (DADF only)	
	Book Copy	Yes(300dpi and ADF open)	Yes(300dpi and DADF open)	
	Auto Suppression	Yes	Yes	
	Covers	No	No	
Special Copy	Transparencies	No	No	
	Create Booklet	No	No	
	N-up copy	2-up(ADF and Platen), 4-up (ADF only)	2-up(DADF and Platen), 4-up (DADF only)	
	Clone	Yes (Platen Only) Yes (Platen Only)		
	Poster	Yes(Platen Only)	Yes(Platen Only)	

2.2.5 Fax Specification

	Items SCX-6122FN SCX-6322DN		SCX-6322DN	
Compatibility		ITU-T G3	ITU-T G3	
Communication	System	PSTN/PABX	PSTN/PABX	
Modem Speed		33.6Kbps	33.6Kbps	
TX Speed		3 sec @ JBIG	3 sec @ JBIG	
Scan Speed(AI	DF)	2.5sec/A4 @ 203x98dpi, Platen 4.0sec/A4 @ 203x98dpi, ADF	2.5sec/A4 @ 203x98dpi, Platen 2.5sec/A4 @ 203x98dpi, DADF	
Compression		MH/MR/MMR/JBIG/JPEG	MH/MR/MMR/JBIG/JPEG	
ECM		Yes		
	Std	203*98dpi	203*98dpi	
Resolution	Fine	203*196dpi 203*196dpi		
	S.Fine	203*391dpi, 300*300dpi, 406*392dpi	203*391dpi, 300*300dpi, 406*392dpi	
	Handset	No	No	
	On hook Dial	Yes	Yes	
	Search	Yes(Phone Book)	Yes(Phone Book)	
	1-Touch Dial	40EA (Using QWERTY Keypad)	40EA (Using QWERTY Keypad)	
	Speed Dial	240 locations (Including One-touch dials)	240 locations (Including One-touch dials)	
	TAD I/F	Yes	Yes	
Telephone	Tone/Pulse	Selectable in Tech Mode	Selectable in Tech Mode	
Features	Pause	Yes	Yes	
	Auto Redial	Yes	Yes	
	Last Number Redial	Yes	Yes	
	Distinctive Ring	No	No	
	Caller ID	No	No	
	External Phone Interface	Yes	Yes	
	Tx/Rx Journal	Yes Yes		
Report & □ List Print out	Confirmation	2 types available (with Image TCR, w/o image TCR)	2 types available (with Image TCR, w/o image TCR)	
	Auto Dial List	Yes	Yes	
	System Data List	List all user setting	List all user setting	
	Ring Volume	Yes(Off,Low,MED,HIGH)	Yes(Off,Low,MED,HIGH)	
Sound Control	Key Volume	Yes(On,Off)	Yes(On,Off)	
Sound Control	Speaker	Yes(On,Off)	Yes(On,Off)	
	OHD volume	Yes(7 levels adjustable)	Yes(7 levels adjustable)	
Junk Fax barrie	r	Yes	Yes	
Security Receiv	e	Yes	Yes	
Battery Backup		Max. 72 Hours	Max. 72 Hours	
Rx fax duplex p	rint out	Yes	Yes	
Receive Mode		Fax, TEL, Ans/Fax	Fax, TEL, Ans/Fax	
Capacity		8MB(640 Pages)	8MB(640 Pages)	
Optional Memor	ry	NO	NO	
Max locations to store to 1 Group Dial		239 locations	239 locations	
Fax Forward to	FAX	Yes(On/Off), both Sent and Received	Yes(On/Off), both Sent and Received	
Fax Forward to e-mail		Yes(On/Off), both Sent and Received * works only when optional N/W Kit is installed	Yes(On/Off), both Sent and Received works only when optional N/W Kit is installed	
Broadcasting		up to 249 locations	up to 249 locations	
Cover page		No	NO	
Memory PY		Tes Yae	Tes Ves	
Mail Box(Electro	onic)	Yes(Receive, Store and Scan Documents to local mailbox), Print, Delete, Poll from Mail Box	Yes(Receive, Store and Scan Documents to local mailbox),Print, Delete, Poll from Mail Box	
Voice Request		No	No	

2.2.6 Paper Handling

	Items	SCX-6122FN	SCX-6322DN	
	Main Tray	Up to 550sheets @ 75-80g	Up to 550sheets @ 75-80g	
Input Capacity	MP Tray	100sheets @75-80g	100sheets @75-80g	
Optional Cassette Yes (Up to 550 sheets @75-80g) Yes (Up to 550 sheets @75-80g)		Yes (Up to 550 sheets @75-80g)		
Output Capacit	у	250Sheets/20lb face down	250Sheets/20lb face down	
	Main Tray A4,Letter,Legal, Folio, Oficio		A4,Letter,Legal, Folio, Oficio	
Media Size	MP Tray	A4. Lettter, Legal, Folio, Executive, Envelope, #10,DL,C5,B5,Oficio A5, C6 Env. Monach Env., A6, Oficio, Custom(Min:76x127mm(3.00x5.00inch), Max:216x356mm(8.50x14.00inch))	A4. Lettter, Legal, Folio, Executive, Envelope, #10,DL,C5,B5,Oficio A5, C6 Env. Monach Env., A6, Oficio, Custom(Min:76x127mm(3.00x5.00inch), Max:216x356mm(8.50x14.00inch))	
	Main Tray	Plain Paper	Plain Paper	
Main Tray Plain Paper Media Type MP Tray Plain Paper, Transparency, Label, Post Card, Envelope Thick Paper, Thin Paper, Bond Paper, Color Paper, Preprinted, Cotton, Recycled Paper		Plain Paper, Transparency, Label, Post Card, Envelope Thick Paper, Thin Paper, Bond Paper, Color Paper, Preprinted, Cotton, Recycled Paper		
Media Weight	Main Tray	16~24 lb. (Duplex : 16lb to 20lb)	16~24 lb. (Duplex : 16lb to 20lb)	
Media Wolgin	MP Tray	16~43 lb.	16~43 lb.	
	Paper Weight	12.5~28lb	12.5~28lb	
	Capacity	ADF 40 sheets (20lb, 75-80 g/m²)	DADF 50 sheets (20lb, 75-80 g/m²)	
ADF	Document Size	Width: 174 ~ 216mm (6.9"~8.5") Width: 174 ~ 216mm (6.9"~8.5") Length : 128 ~ 356mm (5" ~ 14.0") for Single page scan Length : 128 ~ 356mm (5" ~ 14.0") for Single 128 ~ 400mm (5" ~ 15.7") for Multi pages scan 128 ~ 400mm (5" ~ 15.7") for Multi 128 ~ 400mm (5" ~ 15.7") for Multi		
	Dimension	540 x 320 x 90 mm	540 x 320 x 130 mm	
	Weight	about 2.5 Kg about 5.6 Kg		

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2.2.7 Software

	Items	SCX-6122FN	SCX-6322DN	
OS		-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3, 10.4	-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3, 10.4	
Printer		PCL6, PS3 Clone	PCL6, PS3 Clone	
Driver	TWAIN	Yes	Yes	
	WIA	Yes	Yes	
	SmarThru	SmarThru Office (Windows)	SmarThru Office (Windows)	
	Smart Panel	Yes(Windows/Mac/Linux)	Yes(Windows/Mac/Linux)	
	Printer Settings Utility	Yes(Windows/Mac/Linux)	Yes(Windows/Mac/Linux)	
Application S/W	Network Scan (Client)	Yes(Windows)	Yes(Windows)	
	Scan To PC	Yes(Windows)	Yes(Windows)	
	PC-FAX	Yes (SmarThru Office , Send only, Local/Network)	Yes (SmarThru Office , Send only, Local/Network)	
	Direct Printing Utility	Yes(Windows)	Yes(Windows)	
Notwork Application	SWAS	SWAS 4.5 (Windows)	SWAS 4.5 (Windows)	
Network Application	SetIP	Yes(Windows)	-Windows 98/Me/NT4.0/2000/XP(32/64bit) -Various Linux OS (via USB interface only) including Red Hat 8 ~ 9, Fedora Core 1~4, Mandrake 9.2~10.1, and SuSE 8.2~9.2 -Mac 10.3, 10.4 PCL6, PS3 Clone Yes SmarThru Office (Windows) Yes(Windows/Mac/Linux) Yes(Windows) Yes(Windows)	

2.2.8 Options

Items SCX-6122FN		SCX-6322DN	
Network Kit	Standard	Standard	
Memory	-	-	
Paper Cassette	1EA x 550-sheet Cassette Tray(SCX-6320S5)	1EA x 550-sheet Cassette Tray(SCX-6320S5)	
PS	Standard	Standard	
Mechanical Counter	N/A	N/A	
FDI	N/A	N/A	
Downloadable Font ROM	N/A	N/A	
2nd Fax Modem	-	-	
Desk	Desk (SCX-6320G5)	Desk (SCX-6320G5)	
Others	-	-	

2.2.9 Consumables

Items		SCX-6122FN SCX-6322DN		
Туре		2 piece	2 piece	
Model Code	Toner	SCX-6320D8	SCX-6320D8	
	Drum	SCX-6320R2	SCX-6320R2	
Toner	Life	Standard Toner: 8,000 pages at ISO 19752 5% Coverage (Ships with standard 8,000 pages toner and 20,000 page Drum)	Standard Toner: 8,000 pages at ISO 19752 5% Coverage (Ships with standard 8,000 pages toner and 20,000 page Drum)	
	Level Sensor	Yes	Yes	
Drum Unit	Life	20K Pages (Ships with standard 8,000 pages toner and 20,000 page Drum)	20K Pages (Ships with standard 8,000 pages toner and 20,000 page Drum)	
	Level Sensor	No	No	
Toner Count	•	Yes (CRUM)	Yes (CRUM)	

2.2.10 Accessory

Items		SCX-6122FN	SCX-6322DN	
	Quick setup guide	Yes	Yes	
	S/W CD ROM	1 CD for PCL6, PS, Mac and Linux Driver, SmarThru Office, EUG 1 CD for Network	1 CD for PCL6, PS, Mac and Linux Driver, SmarThru Office, EUG 1 CD for Network	
Accessory	Toner Cartridge	1 EA	1 EA	
	Drum Unit	1 EA	1 EA	
	Power Cable	1 EA	1 EA	
	Telephone Jack	Yes	Yes	
	In/Out Guide	No	No	
	Printer Cable	1EA USB Cable	1EA USB Cable	

2.3 Model Comparison Table

Vendor	Samsung	Canon	Samsung
Model	SCX-6322DN	ImageRunning XXXX	SCX-6122FN
Image	- III		STIT.
Configuration	Copy,Print,Scan,Fax, NW	Copy,Print,Scan,Fax, NW	Copy,Print,Scan,Fax, NW
Standard Interfaces	10/100 Base TX, USB2.0, Parallel 1284	10/100 Base TX, USB2.0, Parallel 1284	10/100 Base TX, USB2.0, Parallel 1284
Print Speed	20ppm / A4	22ppm / A4	20PPM / A4
Warm-Up Time	30seconds	4.5 seconds	30seconds
First Copy Speed	8 seconds	8 seconds	8 seconds
ADF	Duplex ADF	Duplex ADF	Simplex ADF
STD Input Paper Capacity	600 sheed	600 sheet	600 sheet
Max. Pape Capacity	1,100 sheet	1,100 sheet	1,100 sheet
Print Resolution	1,200dpi effective output (Addressable 1,200dpi)	1,200 x 600 dpi	1,200dpi effective output (600x600dpi + RET)
Standard Memory	64MB	128MB	64MB
Zoom	25-400%	50-200%	25-400%
Fax Modem	33.6 Kbps	33.6 Kbps	33.6 Kbps
Fax Memory	8MB	20MB	8MB
Platen Glass Size	8.5" x 14"	8.5" x 14"	8.5" x 14"
Scan to Email	Standard	Standard	Standard
Toner Yield	8K	5K	8K
Drum Yield	20K	25K	20K

3. System Overview

3.1 System Construction

3.1.1 Printer

Printer consists of the Engine parts and F/W, and engine parts consist of the mechanical parts comprising Frame, Feeding, Developing, Driving, Transferring, Fusing, Cabinet and H/W comprising the main control board, power board, operation panel, PC Interface. The main controller consists of ASIC (CHORUSm) parts, Memory parts, Engine Interface parts and it functions as Bus Control, I/O Handling, drivers & PC Interface by CPU.

The Engine Board and the Controller Board are in one united board, and it consists of CPU part and print part in functional aspect. The CPU is functioned as the bus control, I/O handling, drivers, and PC interface.

The main board sends the Current Image, Video data to the LSU and manages the conduct of Electro photography for printing. It consists of the circuits of the motor (paper feed, pass) driving, clutch driving, pre-transfer lamp driving, current driving, and fan driving. The signals from the paper feed jam sensor and paper empty sensor are directly inputted to the main board.

3.1.2 Scanner

Pictorial signal input part : output signal of CCD passes through Bypass Cap change to ADC at HT82V26A, and defined signal between HT82V26A and CHORUSm processes the Image signal. When AFE accept each pixel, CDS(Correlated Double Sampling) technique which samples arm-level twice is used on each pixel by using CHORUSm IP signal.

Pictorial image processing part : read CCD Pixel data in terms of 600dpi Line and process Error Diffusion Algorithm on Text mode and Photo mode, and then store Data at Scan Buffer on PC Scan mode without algorithm.

On every mode Shading Correction and Gamma Correction are executed ahead, then processing is executed later.

3.1.3 Copier

1) Original Type Text Scan: 600x300dpi, Printing 600x600dpi Mixed Scan: 600x300dpi, Printing 600x600dpi Photo Scan 600x600dpi @ Platen or 600x300dpi @ ADFPrinting 600x600dpi 2) Automatic Background Suppression : Yes (On/Off) 3) Darkness Control : 5 level 4) FCOT(Platen) Ready: 10 Seconds Power Save : 35 Seconds(after 10minutes from sleep mode, Ltr size) 5) Copy Speed-For all tray Simplex Copy Speed <ADF> - @SDMC, Text : 23cpm/Ltr. 22cpm/A4 - @MDMC, Text : 17cpm/Ltr, 16cpm/A4 <DADF> - @SDMC, Text : 23cpm/Ltr. 22cpm/A4 - @MDMC, Text : 21cpm/Ltr, 20cpm/A4 Duplex Copy Speed: Yes 6) Auto return to default mode : Yes(Configurable, Default is 30 Sec) 7) Changeable Default mode : Darkness, Image, Reduce/Enlarge, No. of Copies, 8) Zoom Range : 25% to 400% for Platen25% to 100% for ADF 9) Multi Copy : 1~999 10) Preset Auto Fit, Clone 11) Manual Duplex : YES 12) Department Codes : Yes 13) Collation Copy : Yes 14) CCD Sleep Time : 30 minutes 15) Special Copy ID Card Copy : Yes Margin Shift : Yes Book Copy : Yes Auto Suppression : Yes Covers : No Transparencies : No Create Booklet : No N-up copy 2-up(ADF and Platen, 4-up (ADF only) Clone : Yes (Platen Only) Poster : Yes(Platen Only)

3.1.4 Fax

1) Modem part

Implemented by based on Conexant DAA (Data Access Arrangement) Solution, and is roughly composed of two kinds Chip Solution

- CX86710 (SFX336) : Existing Modern Chip which adds SSD (System Side Device) for interfacing between LSD and DIB of FM336Plus Core
- CX20493 (LSD) : LIU (Line Interface Unit) Chip which is controlled by SSD and satisfies each PSTN Requirements by modulating internal Configuration with connecting Tel Line.

2) Line Interface Part

This is Connection Part between system and PSTN(Public Switched Telephone Network), and primary circuit is usually located. Main functions are Line Interface, Telephone Connection and Line Condition Monitoring.

3.1.5 Mechanical

1) Feeding Part Feed Type : Universal Cassette Type Feed Standard : Side Loading Feed Capacity < Cassette> : 550sheets (75g/m², 20lb paper based on) <Bypass tray>: 100sheets (75g/m², 20lb paper based on) Feed Separation Method <Cassette> : Separation Claw Method <Bypass tray> : Friction Pad Method Driving System : Driving by gearing from Main Motor Pickup Roller Driving Control : Solenoid Pickup Roller Rubber Material <Cassette > : EPDM+IR <Bypass tray> : EPDM+IR Paper detection Sensor : Photo Sensor Paper Size Sensor : None Feed Type : Face Up Paper Exit Type : Face Down 2) Transfer Ass'y

High Pressure Voltage Type : Constant Voltage PWM Control Type Roller Material : NBR Sponge Rubber Roller Structure : Mono-layer Life : 100,000 pages printing or more

3) Driver Ass'y

Motor Specification : BLDC Motor DC24V

Driving Force Transmission by Gearing :

- Motor 1 : Developing/OPC/Feeding

- Motor 2 : Fixing/Duplex

4)Fuser

Unfused / Poor fusing temperature Poor Fusing Temperature : 170° C Maximum fuser temperature : 197° C Minimum fuser temperature : 180° C Heater : E-coil type Thermostat Type : Non-Contact Type THERMOSTAT

3.1.6 LSU

Optical Resolution : Real 600 dpi Motor : Brushless DC motor PLL control

3.1.7 CRUM

Once toner sensor determines "toner empty" (section 4.7.1), this state is written to the CRUM and the Vendor ID location is erased on the CRUM. Erasing the vendor ID will prevent an unauthorized (3rd party) refilled cartridge from being identified as a genuine Samsung toner cartridge.

Toner status : Toner Status has Normal, Low, and Empty, Exhausted State.

Usage data saved in CRUM :

- Page count using this cartridge(Print Page Counter)
- Installed date of New cartridge(copier/Fax configuration)
- Whether cartridge has ever exhausted (used to stop printing)(Exhaust)
- Large or small capacity cartridge (used by Capacity)(Capacity)

Disabling of features when non-Samsung cartridge :

- No working CRUM, stops printing.
- Print cartridge for different product, stops printing. "Invalid Toner" will be displayed on LCD in above 2 cases.

3.1.8 Drum Cartridge

Drum Cartridge to have a fuse to enable resetting of Drum Page counter.

Low Drum Warning : Message displayed on LCD "Drum Warning" after printing 18,000 images.

Out-of -Drum : Message displayed on LCD "Replace Drum" after printing 20,000 images.

Or after additional 2000 images from "Drum Warning

Life(Service) Time : 20,000 images

3.2 Engine H/W

3.2.1 Overview

Briefly, Elbruz consists of Main Control Part, Operation Panel Part, Scanner Part, Line Interface Part, Power Part and Network Interface Card.

Main Controller is commonly applied in all products, Elbruz, and in case of necessary a part of components or Module is selectively adopted in accordance with required feature of each model.

Each Part is designed with emphasis on Common-Use/Standardization with other models as independent module.

3.2.2 Main Controller

The Main Control has functionalities like a Printer engine controller, a Scanner, a Copier and a FAX machine.

As a Printer engine controller, Main controller controls the paper pick-up part, Laser scanning Unit, High voltage power supply(HVPS) and fixing unit.

As a Scanner, Main controller controls the image sensor(CCD) and the scan motor, and optimize the scanned image in order to transfer to the Computer or to send the image via Fax, or to copy it.

As a FAX machine, Main Controller controls the scanner part, and it driving the FAX communication part in order to communicate with the other FAX machine.

It makes a connection with the other FAX machine, send or receive an image, and it can print the received image.

1) CPU

CHORUSm is the CPU of the ElbruzSEC Main controller. It is made based on the ARM920T core and is optimized for the Laser multi functional peripheral.

Image Processor is intergrated in the CPU.

2) Flash Memory

Flash Memory is used to store system program code and system configuration contexts.

Machine is able to be up-graded by transferring newer ROM-file via computer interface or Tel-Line interface or Network interface.

- Capacity: total 16MB (8MB x 2ea)
- Access Time: 90ns

3) SDRAM

SDRAM memory are used as Print Buffer for Printing, Scan Buffer for Scanning, FAX receive memory for Facsimile and System Working Memory Area.

- Operating Frequency: 80MHz
- Total Capacity: 64MByte

4) USB 2.0 & IEEE1284

Elbruz machine can be connected to Host computer through IEEE1284 Parallel cable or USB cable.

IEEE1284 communication function is provided by the CHORUSm and USB function is provided by ISP1582-USB2.0 controller.

5) Engine Interface.

Engine interface is comprised of HVPS interface, SCF interface, motor interface, LSU interface, fixing unit interface and the other photo-sensors.

All engine interface is connected directly to the Main CPU and is controlled by Firmware.

6) Scan Interface

Scan interface is comprised of CCD interface, Platen and ADF interface.

CCD is interconnected to the CPU via CCD interface and Platen motor also connects to the CPU so that move the CCD along its way.

ADF Kit will be connected through scan interface and is recognized and enabled by the CPU.

7) Network Option Kit Interface

Network Option Kit is able to installed by end user easily. After align its connector he or she only push option card against Main board.

Network option card enables PostScript function at the same time as it installed properly.

Network option enables ElbruzSEC to connect to the LAN or Internet network.

Many users can share the machine and print out by internet or LAN connection.

8) Control Panel

Control Panel is prepared for communication with user.

Control panel gets the user°Øs command input and displays the machine status.

Command input will be achieved by pressing a specific key then Micom recognize which key is pressed and machine will respond proper action.

And machine can notify its state by displaying text on the LCD panel.

- Liquid Crystal Display
- Micom : OPE Micom gathers Key pressing information ,controls the LCD and LED.
 OPE Micom always communication with Main CPU periodically in order to send key input information, to receive text which will be display on LCD and to receive the LED information which LED must be lighted.
- 9) Modular Board

Modular board, treated as LIU board, has only RJ-11 modular jack and some protection parts in it.

DAA has almost function of LIU board, only modular jack is needed for Line connection.

3.2.3 SMPS & HVPS

3.2.3.1 SMPS

1) 110 V Power Supply Specification - Not compatible with 220-volt operation.

Input Voltage : AC 110~127V(-10%~+6%)/6 A

Rated Frequency: 50 / 60Hz

Power Switch : Yes

Average Power Consumptions

- in Power save mode : 28 Watts
- in Stand by mode : 100 Watts
- in Printing simplex : 400 Watts
- in Printing duplex : 300 Watts
- in ADF Copy mode (1-1 copy,Tray1): 450Watts
- Instantaneous Max Power Consumption : 1,500 Watts Peak power
- Fixing Unit Power Consumption : 900W
- 2) 220V Power Supply Specification Not compatible with 110-volt operation

Input Voltage : AC 220-240V(-10%~+6%)/ 3.5A

Rated Frequency : 50 / 60Hz

Power Switch : Yes

- Average Power Consumptions
- in Power save mode : 28 Watts
- in Stand by mode : 100 Watts
- in Printing simplex : 400 Watts
- in Printing duplex : 300 Watts
- in ADF Copy mode (1-1 copy,Tray1): 450Watts
- Instantaneous Max Power Consumption : 1,500 Watts Peak power
- Fixing Unit Power Consumption : 900W

3.2.3.2 HVPS

- 1) Transfer High Voltage (THV)
- Input Voltage : 24 V DC $\pm 15\%$
- Transfer Output Voltage : MAX +5.0kV DC \pm 10 %,(non-load)
- Transfer Cleaning Voltage : -1.0kV DC \pm 15% (when cleaning,200 MQ)
- Voltage Stability comparing with Input : ± 5 % or less(Input Fluctuation 21.6V ~26.4V comparing with Load : ± 5 % or less
- Output Voltage Rising Time : 100 ms Max(tbc)
- Output Voltage Falling Time : 100 ms Max(tbc)
- Environmental Transfer Variable Voltage : 500 V ~ 4.5 kV
- Environment Recognition Control Method : It detects resistance by recognizing the current by feedback with impressing the environment recognition voltage.
- Transfer Output Voltage Control Method : It controls the output by duty change of THV PWM Signal.
- Cleaning Voltage Control Method : Stationary voltage output when THV-EA signal is 'LOW'
- 2) Charge Voltage (MHV)
- Input Voltage : 24 V DC $\,\pm 15\%$
- Output Voltage : -1.3kV ~ -1.45KV DC $~\pm5~\%$
- Output Voltage Rising Time : 50 ms Max
- Output Voltage Falling Time : 50 ms Max
- Load range : 30 M Ω ~ 2000 M Ω
- Output Control Signal : CPU outputs high voltage when MHV-PWM is 'ON'
- 3) Developing Voltage (DEV)
- Input Voltage : 24 V DC $\pm 15\%$
- Output Voltage : -250V ~ -500V DC \pm 5 %
- Output Voltage Variable range : PWM control
- Output Voltage Rising Time : 50 ms Max
- Output Voltage Falling Time : 50 ms Max
- Load range : $10M \Omega \sim 1000 M \Omega$
- Output Control Signal : CPU outputs high voltage when BIAS-PWM is 'ON'

- 4) Supply Voltage
- Input Voltage : 24 V DC $\,\pm 15\%$
- Output Voltage : -400V ~ -650V DC $~\pm5~\%$
- Output Voltage Variable Range : fixed by Zenner diode
- Output Voltage Rising Time : 50 ms Max
- Output Voltage Falling Time : 50 ms Max
- Load Range : 10M Ω ~ 1000 M Ω
- Output Control Signal : CPU outputs high voltage when BIAS-PWM is 'ON'
- 5) Blade Voltage
- Input Voltage : 24 V DC $\,\pm 15\%$
- Output Voltage : -300V ~ -550V DC $\,\pm 5$ %
- Output Voltage Variable Range fixed by Zenner diode
- Output Voltage Rising Time : 50 ms Max
- Output Voltage Falling Time : 50 ms Max
- Load Range : 10M Ω ~ 1000 M Ω
- Output Control Signal : CPU outputs high voltage when BIAS-PWM is 'ON'
- * In case of SUPPLY/BLADE/DEV, in single high voltage output it outputs by inter-working as potential difference of ZENER-DIODE

4. Alignment and Adjustments

This chapter describes some of the main service procedures including: Using the Tech Mode; Clearing paper jam and test patterns. Much of this chapter is also included in the user's guide.

4.1 Paper path



4.2 Clearing Paper Jams

This chapter gives helpful information for what to do if you encounter an error.

- This chapter includes:
- Fault Clearance
- Clearing document jams
- Clearing paper jams
- Understanding display messages
- Toner cartridge-related messages
- Solving other problems

4.2.1 Fault Clearance

When a fault occurs, check the Status Map on the Control Panel. A green blanking LED identifies the problem area:



4.2.2 Clearing document jams

When an original jams while passing through the ADF, [Document Jam] appears on the display.

- 1. Remove any remaining pages from the ADF.
- 2. Open the ADF cover.



3. Pull the jammed paper gently out of the ADF.



4. Close the ADF cover. Then load the removed pages, if any, back into the ADF.

4-3

Exit Misfeed

- 1. Remove the remaining documents from the ADF.
- 2. Open the document input tray upward and pull the document gently out of the DADF. Since the machine, which has the ADF, has a fixed document input tray, pull the misfeed document under the document input tray.



3. Close the document input tray. Then place the documents back into the DADF.

Roller misfeed

- 1. Open the scanner lid.
- 2. Seize the misfed paper, and remove the paper from the feed area by carefully pulling it to the right using both hands.



3. Close the scanner lid. Then load the removed pages back into the ADF.

4.2.3 Clearing paper jams

When a paper jam occurs, Paper Jam appears on the display. Refer to the table below to locate and clear the paper jam.

Message	Location of jam
[Paper Jam 0] Open/Close Door	In the paper feed area (tray 1, optional tray 2, or multi- purpose tray)
[Paper Jam 1] Open/Close Door	In the fuser area or around the toner cartridge
[Paper Jam 2] Check Inside	In the paper exit area
Duplex Jam Open/Close Door	In the duplex unit

In the tray 1

- Open and close the front cover. The jammed paper is automatically ejected from the machine. If the paper does not exit, go to the next step.
- 2. Pull out the paper Tray to open. After you pull it out completely, lift the front part of the Tray slightly up to release the Tray from the machine.



3. Remove the jammed paper by gently pulling it straight out.



Once you remove the jammed paper here, open the side cover and then close it to clear the "Paper Jam0" message on the display.

If there is any resistance, and the paper does not move immediately when you pull, stop pulling. Then: 4. Pull the release lever to open the side cover.



5. Carefully remove the misfed paper in the direction shown.



6. Close the cover and insert the paper Tray. Lower the rear part of the Tray to align the rear edge with the corresponding slot of the machine, then insert it completely.



In the optional tray 2

- 1. Pull the optional tray 2 open.
- 2. Pull the paper Tray to open. After you pull it out completely, lift the front part of the Tray slightly up to release the Tray from the machine.



If the paper does not move when you pull, or if you do not see the paper in this area, stop and go to step 3.

- 3. Pull the tray 1 half.
- 4. Remove the paper in the direction shown. To avoid the paper torn, pull it out gently and slowly.



In the multi-purpose tray

1. If the paper is not feeding properly, pull the paper out of the machine.



2. Open and close the front cover to resume printing.

In the fuser area or around the toner cartridge

- 1. Press the release lever to open the side cover. Lift the release lever to open the side cover.
- 2. Pull down on the fuser lever as shown below. This will release pressure on the paper. If paper is not seen in this area, skip to the Exit Area.



3. Remove the jammed paper, in the direction shown.



4. Push the fuser lever up, and then close the side cover.



5. Open and close the front cover to resume printing.

In the paper exit area

- 1. Press the release lever to open the side cover.
- 2. Open the front cover.



3. Pull down on the fuser lever. This will release pressure on the paper.



4. Turn the Jam Remove Lever in the direction of the arrow to move the paper to the exit area, then gently pull the paper out through the exit area.



5. Push the fuser lever up.



6. Turn the Jam Remove Lever back to the original position.



7. Close the front cover **①** and the side cover **②**. Printing automatically resumes.



In the duplex unit area

If the duplex unit is not inserted correctly, paper jam may occur. Make sure that the duplex unit is inserted correctly.

- 1. Press the release lever to open the side cover.
- 2. Remove the jammed paper.



3. Close the side cover.
4.3 User Mode

The table below shows all of the possible user settings. Full details can be found in the User Guide.

Function	>	1'st LCD	2'st LCD	Default			
1.Paper Setting			[Tray1]	[Tray1]			
	1	Fax Paper Tray	[Tray2]				
			[AII]				
			[Plain Paper/ Bond/				
4 Eav Bapar Tray	2	Papar Tupa	Transparency/ Card Stock	[Diain Danor]			
	2	raper Type	/Labels/Preprinted/	[Fiaili Faper]			
			Colored/envelope]				
	3	Paper Size	[Tray Paper]	LTR			
	Ū		[MP Tray Paper]	LTR			
2.Machine Setup	1	Machine ID	Fax:				
			ID:				
	2	Date & Time		1.21			
	3	Clock Mode	[12, 24 hours]	12hours			
			[English/FRANCAIS/Deutsch/Italia				
	4	Language	no/Español/Portuguê	English			
			s/Nederlands/Dansk/Svenska/suomi	Ū			
▲ Machine ID ►	E	Localization		Inch			
	5	Localization		Inch			
	6	Power save		JIIIII			
	7	CCD Power Save		4Hour			
	8	USB Mode	[Fast Slow]	Fast			
	9	Ignore Toner Empty		off			
	10	Time out	[Off 15 30 60 180]	[30]			
3.Copy Features	10		[Darkness]	[Normal]			
	1	Change Default	[Original Type]	[Text]			
		0	[Reduce/Enlarge]	[Original(100%)]			
			[Off]	[Off]			
			[Auto Center]				
	2	Morgin Shift	[Left Margin]				
	2	Maryin Shin	[Right Margin]				
			[Top Margin]				
			[Bottom Margin]				
			[Off]	[Off]			
	3	Book Copy	[Left Page]				
	Ū		[Right Page]				
			[Both Pages]				
	4	Auto Suppress	[Off, On]	[Off]			
	5	Covers	[Front]	[Iray 1]			
				[Iray 1]			
			[[Front&Back]	[Iray 1]			
	6	Transparencies					
			[we ray]	ĮOΠJ			

Function	►	1'st LCD	2'st LCD	Default
4.Fax Setup	1	Default Change	[Darkness]	[Normal]
		Delauit-Change	[Resolution]	[Standard]
	2	Receive Mode	[Fax, Tel, Ans/Fax]	FAX
	3	Ring to Answer	[1~7]	1
	4	Redial Term	[1~15minutes]	3minutes
	5	Redials	[0~13times]	7times
▲ Default-Change ►	6	MSG Confirm	[On, Off, On-Err]	On-Error
	7	Auto Report	[On, Off]	On
	8	Auto Reduction	[On, Off]	On
	9	Discard Size	[00~30mm]	20mm
	10	Prefix Dial	FAX: xxxxx (5 digits)	
	11	Receive Start Code		
	12	ECM Mode	[On, Off]	On
5.Fax Feature	1	Delay Fax		
	2	Priority Fax		
	3	Polling	[Tx Poll]	
		i onnig	[Delay Rx Poll]	
	4	Broadcasting		
	5	Batch Tx		
	6	Toll Save	[On]	Off
A Delay Fax ►			[Off]	
	7	Junk Fax Setup	[On]	off
			[Off]	
			[Off]	off
	8	Secure Receive	[On]	
			[Print]	
	9	Stamp RCV Name	[On, Off]	Off
	10	Fax Duplex	[Off, Long Edge, Short Edge]	
6.Reports	1	Fax Phone Book		
	2	Sent Report		
	3	RCV Report		
	4	System Data		
	5	Scheduled Jobs		
	6	MSG Confirm		
✓ Fax Phone Book ►	7	Email Tx Report		
	8	Junk Fax List		
	9	Billing/Counters		
	10	Connect Page		
	11	User Auth List		
	12			
	13	Print All Reports		
7.Sound/Volume	1 Speaker			Com
	2 Rir		[UIT, LOW,Med,High]	Mea
Speaker ►	3	Key Sound		UΠ
	4	Alarm Sound		On

Function	>	1'st LCD	2'st LCD	Default
8.Mail Box	1	Print		
	2	Store		
	3	Delete		
	4	Poll From		
	5	Send		
9.Email Features		Email Features		
 ✓ Group Mail ► 	1		▲ Drint Addross Book ►	
10 Svs. Admin Tools				Off
10.0y3. Admin 10013	1	Passcode Protect?		
	2	Department Codes		
	2		A Managament	
	3			Off
	5	Auxiliary Access	[On]	
	4	Network Setup		
			Auto Sond to Solf	
			Auto Sena to Sen >	
				[On]
	5	Email Setup		[Disable]
	Ũ			[Disable]
			Email Body Text	[Off]
				[01]
Passcode Protect			✓ File Format Prompt ►	
	6	Enter Passcode		
			[System Data]	
			[Fax TX History]	
			[Fax RX History]	
	_		[Fax Phone Book]	
	1	Clear Memory	[Email Address Book]	
			[Email TX History]	
			[Netscan Journal]	
			■ Billing Counters ■	
			[Serial Number]	
			[Adjust Shading]	
	8	Maintenance	[Clean Drum]	
			[New Drum]	
			[Notify Toner Low]	
	0	Mailhay Catur	[Create]	
	9	wallbox Setup	[Delete]	
	10	Fax/Email Forward	Setup Forward	
	11	Netscan Timeout	Timeout Period	
				1

4.4 Tech Mode

4.4.1 How to Enter Tech Mode

In service (tech) mode the technician can check the machine and perform various tests to help with failure diagnosis.

When in Tech mode the machine still performs all normal operations. While in Tech mode the machine still performs all normal operations.

To enter the Tech mode (SCX-6122FN)

To enter the Tech mode press $(1 \rightarrow 9 \rightarrow 3 \rightarrow 4)$ in sequence and the LCD briefly displays '**TECH**', the machine has entered service (tech) mode.

To enter the Tech mode (SCX-6322DN)

4.4.2 Engine Test Mode

The Engine Test Mode supplies useful functions to check the condition of the print engine. It tests the condition of each device and displays the result of the test on the LCD. It is divided into 7 functions (0~6), and these are shown below.

To enter the Engine Test mode (SCX-6122Fn)

Press $(1) \rightarrow (1) \rightarrow (3) \rightarrow (1)$ in sequence, and the LCD briefly displays

'Engine Test', the machine has entered Engine Test Mode.

Press "0", "1", "2", "3" or "4" to select the Test No. (see list below - left hand column)

To enter the Engine Test mode (SCX-6322DN)

Press $() \rightarrow () \rightarrow () \rightarrow () \rightarrow () \rightarrow () \rightarrow ()$ in sequence, and the LCD briefly displays **'Engine Test'**, the machine has entered Engine Test Mode.

Press "0", "1", "2", "3" or "4" to select the Test No. (see list below - left hand column)

4.4.2.1 Test No

First you must enter Tech Mode <In Fax mode>



<To Select Engine Test>

- [0]: All Motor Test
- [1]: LSU Motor Test
- [2]: Sensor Test
- [3]: SCF Motor Test
- [4]: OPC Motor Test
- [5]: MHV Supply 1350V
- [6]: Test Start

4.4.2.2 Test map

Trachia	Track Marrier (December Marrier)		Control Code		F21
Test NO	Test Items (Description)		[1]		[2]
	ALL MOTOR TEST	ON	Start the Developer_Motor & Fuser_Motor	OFF	Stop the Developer_Motor & Fuser_Motor
	FUSER MOTOR TEST (STEPPER)	ON	Start the Fuser_Motor only.	OFF	Stop the Fuser_Motor
	Deve. MOTOR TEST (BLDC)	ON	Start the Developer_Motor only.	OFF	Stop the Developer_Motor.
	FUSER MTR DIR TEST	FWD	Start the Fuser_Motor in the forward direction	RVS	Start the Fuser_Motor in the reverse direction
	ALL MOTOR STOP	STOP	Stop the Developer_Motor & Fuser_Motor.	NEXT	Go to next test item (Go to FCF SOLENOID TEST).
[0]	FCF (1st Tray) SOLENOID TEST	ON	Energize (Turn On) the Solenoid of the First Cassette Feeder (FCF). - Automatically de-energized after 200ms.	OFF	De-energize (Turn off) the Solenoid of the FCF.
	MPF (MP Tray) SOLENOID TEST	ON	Energize (Turn Off) the Solenoid of the Multi-Purpose Feeder (MPF). - Automatically de-energized after 200ms.	OFF	De-energize (Turn Off) the Solenoid of the MPF
	PTL TEST	ON	Turns on the Pre-Transfer Lamp (PTL)	OFF	Turns off the PTL.
	FAN TEST	ON	Start the FAN motors (Cooler on the Rear side and LSU)	OFF	Stop the FAN motors.
	FUSER CONTROL TEST	ON	Turns on the Fuser Heat lamp. - only when the current fuser temp. is lower than the standby fuser temp.	OFF	Turns off the Heating lamp of Fuser Unit.
	FUSER TEMP CHECK	CHECK	Display FUSER ADC VALUE	NEXT	Go to next test item (Go to ALL MOTOR TEST)
	LSU MOTOR TEST	ON	Start the polygon mirror motor in the LSU.	OFF	Stop the polygon mirror motor in the LSU.
	LASER DIODE TEST	ON	Turns on LASER diode in the LSU.	OFF	Turns off LASER diode in the LSU.
	LSU FAN TEST	ON	Turns LSU Fan On.	OFF	Turns LSU Fan Off.
[1]	LSU READY TEST	CHECK	Check the time for the LSU motor to come to speed. The time will be displayed. This includes 500ms for the speed to stabilize (must be less than 10sec). The Motor will stop automatically.	NEXT	Go to next test (go to LSU HSYNC TEST)
	LSU HSYNC TEST	CHECK	Check the time for LSU HSYNC (Horizontal Synch. Signal) to be detected. The time will be displayed. (must be less than 10sec). The Motor will stop automatically. Monitor the status of the Actuators (Sensor). - '1' :Active, '0':Inactive	NEXT	Go to the next test (go to LSU MOTOR TEST)
[2]	SENSOR TEST	СНЕСК	Monitor the status of Actuator(Sensor) with '1' or '0' . - '1' :Active, '0':Inactive (Legend) CV / SIDE COVER SENSOR FD / FEED SENSOR EX / EXIT SENSOR OB / OUT BIN SENSOR FE / FC EMPTY SENSOR ME / MP EMPTY SENSOR	NEXT	Go to the top level of Engine test mode.
	SCF MOTOR TEST	ON	Start the SCF Motor.	OFF	Sopt the SCF Motor.
[3]	SCF SOLENOID TEST	ON	Energize (Turn On) the Solenoid of the 2nd Cassette Feeder (SCF). - Automatically de-energized after 300ms.	OFF	De-energize (Turn Off) the Solenoid of the SCF
	SCF EMP/INST CHECK	CHECK	Display the status of the SCF (SCF Installed or not installed, Paper Empty)	NEXT	Go to the next test (go to SCF MOTOR TEST)
	OPC FUSE STATE	CHECK	Check thief there was a New OPC during the previous warm-up time.	NEXT	Go to the next test (go to OPC FUSE CHECK)
	OPC FUSE CHECK	CHECK	Display the current state of fuse in the OPC.	NEXT	Go to the next test (go to TONER STATE)
[4]	TONER STATE	СНЕСК	Display Toner State - This test does not check thecurrent toner state. It displays the stored value in SDRAM at the previous Open/Close of the Side-Cover or Power-on. - Opening/closing the side-cover or POPO, will update the memory with the current toner state.	NEXT	Go to the next test (go to TONER LOW CHECK)
	TONER LOW CHECK	CHECK	Check current toner state.	NEXT	Go to the next test (go to PAGE COUNTER INC)
	PAGE COUNTER INC	CHECK	Increase PAGE COUNTER by 1 count	NEXT	Go to the next test (go to AIR TEMP CHECK)
	AIR TEMP CHECK	СНЕСК	Read and display the temperature of the current working environment. - Display the ADC value	NEXT	Go to the next test (go to OPC FUSE STATE)

			Control Code		
Test No	Test Items (Description)		[1]		[2]
	MHV SUPPLY 1350V	ON	Supply 1350V to the MHV	OFF	Disconnect voltage from MHV
	MHV ADC READ	CHECK	Read and display the MHV ADC (Analog-To-Digital Conversion) value.	NEXT	Go to the next test (go to DEV SUPPLY 450V)
151	DEV SUPPLY 450V	ON	Supply 1450V to the DEV (Developer).	OFF	Disconnect voltage from DEV
[0]	THV SUPPLY NEG VOLT	ON	Supply negative voltage to the THV	OFF	Disconnect negative voltage from THV
	THV SUPPLY 1301V	ON	Supply 1300V to the THV	OFF	Disconnect voltage from THV
	THV ADC READ	CHECK	Read and display the THV ADC value.	NEXT	Go to the next test (go to MHV SUPPLY 1350V)
		NEXT : R	IGHT KEY	Automat	tically start to test with 2 sec intervals.
		EXIT : ST	TOP KEY	Go to th	e top level of Engine test mode.
				1	ALL MOTOR CONTROL
				2	FUSER MOTOR CONTROL
				3	DEV MOTOR CONTROL
				4	DUPLEX CONTROL
				5	FCF PICKUP CONTROL
				6	M P PICKUP CONTROL
161	Auto TEST			7	PTL CONTROL
101				8	FAN CONTROL
			T 10	9	FUSER CONTROL
		Automati	c Test Sequence	10	
				11	
				12	
				14	DEV CONTROL
				15	THV NEG CONTROL
				16	THV CONTROL
				17	MHV ADC READ
				18	THV ADC READ
				19	TEST END

Default	-12	33.6		10%																																												
6'st LCD																			1-ON 2-OEE	1:0N 2:0FF	1:0N 2:0FF	1:0N 2:0FF	1:ON 2:OFF	1:ON 2:OFF	1:CHECK 2:NEXT	1:ON 2:OFF	1:ON 2:OFF	1:CHECK 2:NEXT	1:CHECK 2:NEXT	1:CHECK 2:NEXT	1:0N 2:0FF	1:UN 2:UFF 4.CHECK 2:NEVT		1:CHECK 2:NEXT	1.CHECK 2.NEXT	1:CHECK 2:NEXT	1:CHECK 2:NEXT	1:ON 2:OFF	1:CHECK 2:NEXT	1:ON 2:OFF	1:ON 2:OFF	1:ON 2:OFF	1:CHECK 2:NEXT	NEXT : RIGHT KEY				
5'st LCD																				FCF SOLENOID TEST	M F SOLENOID TEST	PTL TEST	FAN TEST	FUSER CONTROL TEST	FUSER TEMP TEST	LSU MOTOR TEST	LASER DIODE TEST	LSU READY TEST	LSU HSYNC TEST	SENSOR TEST	SCF MOTOR TEST	SCF SOLENOID TEST		TONER STATE	TONER I OW CHECK	PAGE COUNTER INC	AIR TEMP CHECK	MHV SUPPLY 1350V	MHV ADC READ	DEV SUPPLY 450V	THV SUPPLY NEG VOLT	THV SUPPLY 1301V	THV ADC READ	TEST START				
4'st LCD	-9~-15]	[33.6,28.8,14.4,12,96, 48]	[Tone, Pulse]	[5%, 10%]	Customer Namel	[Service Number]	[Serial Number]		I otal Page Count	[CKU Print CNI] ELT Scan Count]	Used Toner CNTI	[Local]	[Remote]						NO > 0 - 6																													
3'st LCD	Send Level	Modem Speed	Dial Mode	Error Rate		•	•	Clear All Mem.	clear Count			Flash Upgrade							Encine Test																											Clutch Test Motor Test Sensor Test		
2'st LCD	[Send Level]	[Modem Speed]	[Dial Mode]	[Error Rate]				Clear All Mem.]	Clear Count]			[Flash Upgrade]		[Switch Test]	[Modem Test]	DRAM Test	[KUM lest]	(Fauelli Test) (Shoding Teet)	Oliaunig resij	[Autombail]																									[Status Print]	DADF EDC [DADF Diagnostic]	Protocol]	System Data]
1'st LCD	Data Setup		<u>. </u>	<u> </u>									-	Machine Test		<u> </u>			Encine Tect																										<u> </u>	DADF Test	Report	
^ :	-													2					c	>																										4	5	
Function	Tech Mode	 Data Setup 																																														

4.4.2.3 Operation of Tech mode

4.4.3 Data Setup

SEND LEVEL

You can set the level of the transmission signal. Typically, the Tx level should be under -12 dBm.

Caution : The Send Fax Level is set to the best condition during manufacture. Never change settings arbitrarily.

DIAL MODE

This function can choose the dialing method. *Default : Dial (Dial/Pulse)

MODEM SPEED

You can set the maximum modem speed.

When the fax establishes communication with a remote set the value of the maximum modem speed is checked for both transmitter and receiver. The lowest value is used. It is best set at 33.6Kbps, the default setting.

ERROR RATE

When the error rate is about exceed the set value, the Baud rate automatically adjusts to 2400 bps. This ensures that the error rate remains below the set value. You can select the rate between 5% and 10%.

CLEAR ALL MEMORY

The function resets the system to factory default settings.

This function is used to reset the system to the initial value when the product is functioning abnormally. All the values are returned to the default values, and all the information which was set by the user will be erased.

< Method >

- 1. Select the [MEMORY CLEAR] in TECH MODE.
- 2. Push the ENTER button.
- 3. Select your country. (There are four country groups. Refer to the table below.)
- 4. Push the ENTER button then it will clear all memory.

NOTICE : Always perform a me	mory clear after	replacing the main	board, otherw	vise the system may
not operate properly.				

Country Group	USA/Canada	UK	Russia	Southafrica
Country	USA/Canada Mexico Brazil	UK Germany France Italy Spain Austria Netherlands Belgium Portugal Sweden Norway Denmark Finland Switzerland Greece Ireland Turkey	Russia India Oman Poland Bangladesh Kuwait Moroco Algeria Pakistan UAE Bahrain Srilanka Saudi Arabia Chile Peru Argentina Hungary Romania Bulgaria Czech	South Africa

4.4.3.1 Clear Counters

The following counters can only be cleared in TECH MODE. They are accessed through the Data Setup menu.

Total page Count : XXXXX FLT Scan CNT : XXXXX ADF SCAN CNT : XXXXX Used Drum CNT : XXXXX Used Toner CNT : XXXXX

4.4.3.2 Flash Upgrade

FLASH memory is upgraded in the same way as Firmware. See Page 4-22.

4.4.4 Machine Test

SWITCH TEST

Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

MODEM TEST

Use this feature to hear various transmission signals to the telephone line from the modem and to check the modem, amplifier and speaker. If no transmission signal sound is heard, it means the modem part of the main board, amplifier, speaker or speaker harness is faulty.

DRAM TEST

Use this feature to test the machine's DRAM. The result appears in the LCD display. If all memory is working normally, the LCD shows << 0 K >>

ROM TEST

Use this feature to test the machine's ROM. The result and the software version appear in the LCD display.

- FLASH VER : 1.00 V
- ENGINE VER :1.00V

PATTERN TEST

Using this pattern printout you can check that the printer mechanism is functioning properly. This function is for factory manufacturing use only.

SHADING TEST

The function is used to set the optimum scan quality determined by the specific characteristics of the CCD (Charge Coupled Device). If copy image quality is poor perform this function to check the condition of the CCD unit.

< Method >

- 1. Select the [Shading Test] in TECH MODE (Menu, #, 1934).
- 2. Push the ENTER button and an image will be scanned.
- 3. After scanning the CCD SHADING PROFILE will be print out.
- 4. If the printed image is different to the sample image shown the CCD is defective.

NOTICE : When you test the CCD, make sure that the cover is closed.

SHADING VALUE	
1. MONO GRAY SHADING : WHITE : AVERAGE FINEL VALUE = 103	BLACE : AVERAGE FIXEL VALUE = 54
and the second se	
2. RED GRAY SHADING : WHITE : AVENAGE FIREL VALUE = 156	BLACK : AVERAGE FIXEL VALUE = 50
and an	A
3. OFFEN OFAT SHADING : WHITE : AVERAGE FINEL VALUE = 170	BLACE : AVERAGE FIXEL VALUE = 54
and the second	and the second s
4. BLUE GRAY SHADING : WHITE : AVERAGE FIREL VALUE = 131	BLACK : AVERAGE FIXEL VALUE = 46
	والمتعادية ومعتور والمتعار والمتعار
> RESULTS : 03 00 00 00	

4.4.5 DADF Test

Test Item[DADF Diagnostic]

- Clutch Test: Pick up clutch, Regi clutch, Duplex clutch
- Motor Test: Scan Motor, Duplex CW, Duplex CCW

4.4.6 Report

4.4.6.1 Protocol Dump List

This list shows the sequence of the CCITT group 3 T.30 protocol during the most recent sending or receiving operation. Use this list to check for send and receive errors. If a communication error occurs while the machine is in TECH mode, the protocol list will print automatically.



4.4.6.2 System Data List

This list provides a list of the user system data settings and tech mode settings.

	SEX-Social Sections Sections 13 Decision 13	i 10 KEN I KENIP-DADAGEKEND
Options	Pax thatbec Item	 DOBURTISCOMESE STatue
TR() 5640	10%/0ff]	011
Bartich Ta-	[40m/10fY]	otr
TORY 1 Blue	[LandAnter/Web]	244
Tray 2 blos	Litertoen (Merci)	246
MP Tenty Hing	[Letter/We]	ind.
Firefol Dave	[8/30/08/30/48/064]	5 Bin
TURNETUR	115/30/WO/180/BET1	179 (Beec)
Damp R.C. Name	[05/0f7]	otr
Rissin Bound	Dru/OFF	ion .
Bey Bound	100/0011	011
Rymakaer Contorni-	10h/0fT/Commi	COMM
Latoputope	[Briglinh/Franssis]	Brogli Lada
Locwillswillen	3n-ch/986	HH
Life Mode	[Past, 191 (m)]	Past
Closik Habe	[33 Binar/26 Brur]	1.3 Brug
TONEL BEAR	10m/011	110
Discard Also	10-30 Amp	200 994
Loghtees, Olar Ken	[2-8]	3
Reensurcion	[Findard/Fine]	Dia miami
Darra i ra Paola	179.0/790/1	761
NPO Configm	[Os/OFF/Osr-Bre]	00
Auto Reduction	[On/OFF]	iles .
PTWEER DLAL NO.	[Ph.s. Number]	
Poto Report	105/0871	00
BCN MION	[On/OFF]	685
BOTIALS	10-21	2
Barbard Barra	[]=1]	
BORISL INCO	12-15	3 815
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4.4.6.3 Billing / Counters List

This list provides the usage data (page count) of Drum Cartridge, Toner Cartridge, the page count of machine, and DADF / Platen scan page count. (See the chapter 4.2.8.3)

Billing/Counters List	JAN-08-2004 01:39 AM THU
	SCX-6320F Machine ID : Serial Number : PR-HV51 Fax Number :
Total impressions	: 1762
Total impression Count	: 1762
Drum impression Count	: 1762
DADF Scan Page Count	: 1342
Platen Scan Page Count	: 2/
Replaced Ioner Count	: 1
Equivalent Drum Revolution Rate	: ∪ • 126 10⊱ (2237)
(Projected Page Counts)	. 120.108 (2257)
CRUM Information	
Vendor	: SAMSUNG(China) [CHN]
Capacity	: 8K
Product Date	: 2004.06
Install Date	: 2004.01.04
Serial	: CRUM-04060934720
Total Pages	: 1762(0)
Toner Status	: 0

4.5 Flash Upgrade

There are 2 methods to update the Flash Rom, Local and Remote.

(1) Local Machine

• RCP (Remote Control Panel) mode

This method is for Parallel Port or USB Port. Connect the PC and activate the RCP (Remote Control Panel) to upgrade the Firmware.

< Method >

How to Update Firmware using RCP

- 1. Connect PC and Printer with a Parallel Cable or a USB Cable.
- 2. Run the RCP utility and select Firmware Update.
- 3. Search for the Firmware file to be used to update the set using the Browse Icon.
- 4. Click the Update icon. The firmware file is transmitted to the Printer automatically and the printer is initialized when the download completes.
- 5. Click the Refresh icon and check that the updated version numbers are displayed.

• DOS Command mode

This method is ONLY for Parallel Port. Connect the PC to the set using a Parallel Cable and enter the DOS Command to upgrade the firmware.

- < Method >
- 1. First of all you need the following files : down.bat, down_com.bin, fprt.exe, and Rom File: (file name for upgrade). Ensure you save ALL of these files in the same folder.
- 2. At the DOS prompt enter the correct command (as shown below) and push the enter key. Then the upgrade will automatically take place..
- 3. There are two commands use the correct one depending on the condition of the set..
 - * When the product is in the idle condition
 - down "rom file"
 - * When the product is in Ready condition
 - (TECH MODE --> DATA SETUP --> FLASH UPGRADE --> LOCAL) fprt "rom file"
- 4. Do not turn off the power during the upgrade process.

(2) Remote FAX

It is possible to use a set that already has the latest firmware to upgrade a remote set remotely using the telephone system.

- < Method >
- 1. On the set that has the latest firmware set it to transmit the upgrade:-(TECH MODE •DATA SETUP•••• FLASH UPGRADE•••• REMOTE)
- 2. Enter the telephone number of the set that needs to be upgraded. (Several faxes can be upgrade at the same time. In this case, enter each fax number.)
- When the enter button is pressed the set sends the firmware file by calling designated fax number. (Around 10~15 minutes are needed to send the file.)
- < Caution >
- 1. The Sending and Receiving fax machines MUST be the same model.
- 2. The sending fax must be set up in ECM mode and the Receiving fax memory must be 100%. If not the function will not work.

4.5.1 NIC Card F/W Upgrade

There're two methods for upgrading NIC f/w. You can not do it by using Printer RCP.

A. SyncThru :

SyncThru

->Menu

->Maintenance

->Upgrade Firmware

->Select the machine you want to upgrade.

-> Fill file path and name in File name field.

->Press Start.

Upgrading NIC F/W will take at least one minute.

B. SyncThru Web Service :

Open a browser(Internet explore)

- -> type your machine ip address in address field.
- -> Maintenance Tab
- -> Firmware Upgrade
- -> Fill file path and name in File name field.

-> Press "Upgrade" button

Upgrading NIC F/W will take at least one minute.

4.6 Abnormal Image Printing and Defective Roller

If a mark or other printing defect occurs at regular intervals down the page it may be caused by a damaged or contaminated roller. Measure the repetition interval and refer to the table below to identify the roller concerned.



No	Roller	Abnormal image period	Kind of abnormal image
1	OPC Drum	94.30mm	White spot, Block spot
2	Charge Roller	38.30mm	Black spot
3	Supply Roller	43.80mm	Horizontal density band
4	Develop Roller	54.30mm	Horizontal density band
5	Transfer Roller	56.60mm	Black side contamination/transfer fault
6	Heat Roller	83.60mm	Black spot and fuser ghost
7	Pressure Roller	91.00mm	Black side contamination

4.7 Error Messages

Message	Meaning	Suggested solutions
Authentication Failure	The ID or password you entered is incorrect.	Enter the correct ID or password.
Cancel? ∢Yes ▶	Your machine's memory has become full while trying to store an original into memory.	To cancel the fax job, press the OK button to accept Yes. If you want to send those pages that have been successfully stored, press the OK button to accept No. You should send the remaining pages later, when memory is available.
[COMM. Error]	The machine has a communication problem.	Ask the sender to try again.
Connection Error	Connection with the SMTP server failed.	Check the server settings and the network cable.
Connection Failed	The protocol you have entered is not supported or server port is wrong.	Check the protocol or server port.
[Document Jam]	The loaded original has jammed in the ADF.	Clear the jam.
Door Open	The front cover or rear cover is not securely latched.	Close the cover until it locks into place.
Drum Warning	The drum cartridge is near the end of its life.	You should ensure a replacement cartridge in stock.
Enter Again	You entered an unavailable item.	Enter the correct item again.
Duplex Jam Open/Close Door	Paper has jammed during duplex printing.	Clear the jam.
File Access Denied	Login to the network server was successful. However, access to the file on the network server was denied.	Change the server settings.
File Name Exist	The file name you have entered already exists.	Enter a different file name.
File Name Over Limit	The file names you can use are from doc001 to doc999. However, all file names are used already.	Delete unnecessary files.
Fuser Door Open	The fuser door is not securely latched.	Open the rear cover and close the fuser door until it locks into place. For the location of the fuser door.
Group Not Available	You have tried to select a group location number where only a single location number can be used, such as when adding locations for a Multiple Send operation.	Use a speed dial number or dial a number manually using the number keypad.
[Incompatible]	The machine has received a fax from which is registered as a junk fax.	The received fax data will be deleted. Reconfirm junk fax setup.
Invalid Server Address	The server address you have entered is invalid.	Enter the correct server address.
Line Busy	The receiving fax machine did not answer or the line is already engaged.	Try again after a few minutes.

Message	Meaning	Suggested solutions
[Line Error]	Your machine cannot connect with the receiving fax machine or has lost contact because of a problem with the phone line.	Try again. If the problem persists, wait an hour or so for the line to clear and try again. Or, turn the ECM mode on.
Low Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, Replace to the Fuser Unit
LSU Motor Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back inches. If the problem persists, Replace to the Fuser Unit
LSU Hsync Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit).	Unplug the power cord and plug it back inches. If the problem persists, Replace to the Fuser Unit
Main Motor Locked	There is a problem in the main motor.	Open and then close the front cover.
Mail Exceeds Server Support	The mail size is larger than the supported size by SMTP server.	Divide your mail or reduce the resolution.
Memory Full	The memory is full.	Delete unnecessary fax jobs and retransmit after more memory becomes available. Alternatively, split the transmission into more than one operation.
MP Tray Paper Empty	There is no paper in the multi-purpose tray.	Load paper in the multi-purpose tray.
Network Error	There is a problem with the network.	Contact your network administrator.
[No Answer]	The receiving fax machine has not answered after several redial attempts.	Try again. Make sure that the receiving machine is operational.
Not Assigned	The one-touch dial or speed dial number you tried to use has no number or email address assigned to it.	Enter the number or email address manually using the number keypad or store the number or address.
[No Paper] Add Paper	The paper in the tray has run out.	Load paper in the tray.
One Page is Too Large	Single page data exceeds the configured mail size.	Reduce the resolution and try again.
Open Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, Replace to the Fuser Unit
Operation Not Assigned	You are in the Add Page/Cancel Job operation, but there are no jobs stored.	Check the display to see if there are any scheduled jobs.
Over Heat Error Cycle Power	There is a problem in the fuser unit.	Unplug the power cord and plug it back in. If the problem persists, Replace to the Fuser Unit
Paper Jam 0 Open/Close Door	Paper has jammed in the feeding area of the tray.	Clear the jam.
Paper Jam 1 Open/Close Door	Paper has jammed in the fuser area.	Clear the jam.
Paper Jam 2 Check Inside	Paper has jammed in the paper exit area.	Clear the jam.
Power Failure	Power has turned off then on and the machine's memory has not been back up.	The job which you were trying to do before the power failure must be completely re-done.

Message	Meaning	Suggested solutions
Replace Drum	The drum cartridge is at the end of its life.	Replace the drum cartridge.
Retry Redial?	The machine is waiting for a specified time interval to redial a previously busy station.	You can press OK to immediately redial, or Stop/Clear to cancel the redial operation.
Scanner locked	The scanner module is locked	Unlock the scanner and press Stop/Clear.
Self Diagnostic LSU	The LSU (Laser Scanning Unit) in your printer is checking some problems detected.	Please wait a few minutes.
Self Diagnostic Temperature	The engine in your machine is checking some problems detected.	Please wait a few minutes.
Send Error (AUTH)	There is a problem in SMTP authentication.	Configure the authentication setting.
Send Error (DNS)	There is a problem in DNS.	Configure the DNS setting.
Send Error (POP3)	There is a problem in POP3.	Configure the POP3 setting.
Send Error (SMTP)	There is a problem in SMTP.	Change to the available server.
Send Error (Wrong Config)	There is a problem on the network interface card.	Configure your network interface card correctly.
[Stop Pressed]	Stop/Clear has been pressed during a fax transmission.	Try again.
Tray 1 Paper Empty	There is no paper in the tray 1.	Load paper in the tray 1.
Tray 2 Paper Empty	There is no paper in the optional tray 2.	Load paper in the optional tray 2.



5. Disassembly and Reassembly

5.1 General Precautions on Disassembly

When you disassemble and reassemble components, you must use extreme caution. The close proximity of cables to moving parts makes proper routing a must.

If components are removed, any cables disturbed by the procedure must be restored as close as possible to their original positions. Before removing any component from the machine, note the cable routing that will be affected.

Whenever servicing the machine, you must perform as follows:

- 1. Check to verify that documents are not stored in memory.
- 2. Be sure to remove the toner cartridge before you disassemble any parts.
- 3. Unplug the power cord.
- 4. Use a flat and clean surface.
- 5. Replace only with authorized components.
- 6. Do not excessive force on components made of plastic, they may break.
- 7. Make sure all components are in their proper position.

Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully.

To remove such parts, press the hook end of the latch away from the part to which it is latched.



5.2 Rear Cover

1. Remove the six screws securing the Rear Cover.



2. Separate the rear cover from the base frame and Scanner Ass'y.



5.3 Scanner Ass'y

- 1. Before you remove the Scanner Ass'y, you should remove:
 - Rear Cover (see page 5-1)
- 2. Unplug the DADF harness connector and CCD cable.



Notice : When removing the CCD flat cable pull firmly taking care not to bend or crack the cable.

3. Remove the three screws, as shown below. Also remove the single screw securing 2 ground cables.



4. The side and front covers are interlocked. Open the side door before opening the front door. When closing the doors the front door must be closed before the side door.

Open the front and side doors to gain access to the screws in the following steps.



5. Remove two screws.



6. Pull up the Scanner Ass'y in the direction of arrow.



7. Remove the DADF Main Cable.



8. Open the DADF Ass'y in the direction of arrow. Pull the DADF Ass'y upward and remove it.



9. Remove the three screws securing the Platen Ass'y.



OPE Ass'y

10. Pull the OPE Ass'y and unplug the one connector.

11. Remove the five screws securing the Platen Ass'y.



12. Release 2 clips (1 each side) to release the Scan Upper Ass'y securing the glass and remove it. Take care to ensure that the DADF connector is clear.



- **Notice :** When reassembling the Scan Upper take care to ensure that the Lever Sensor is free to operate
- 13. Remove the two screws to remove the Dummy Upper Ass'y.



Notice : Dust or other foreign matter can cause the module to jam or image quality to deteriorate. Only open the scanner in a clean environment and ensure all parts are clean when reassembling the scanner.

5-4

14. Remove four screws to release the Channel Base Frame.



16. Remove the CCD cable cover by flexing and releasing the front clip. Slide the scan module to a position half way along the scanner bed and raise it to a vertical position. Disconnect the CCD cable



17. Release the belt from the underside of the scanner module. Unclip the Shaft CCD and take out the Scanner Module.



Cover Dummy Lower

15. Remove the five screws securing the Cover Dummy

Lower and remove it.



- Scanner Module
- 18. Disconnect the motor harness. Remove three screws and take out the Motor Bracket.
- 19. Remove the OPE Harness from the Platen PBA. Remove two screws and take out the Platen PBA.



Notice : Take care when reassembling the scanner module to the belt. The CCD Module should be located just to the right of the belt tension spring as shown below.



Spring Belt

5.4 DADF Ass'y

- 1. Before you remove the DADF Ass'y, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
- 2. Open the Open Cover Ass'y



3. Remove the one screw securing the COVER-M-FRONT and unlatch the COVER-M-FRONT using a flat-blade screwdriver, as shown below. Then pull the COVER-M-FRONT upward and remove it.



4. Remove the two screws securing the COVER-M-REAR and release the stopper. Then pull the COVER-M-REAR upward and remove it.



5. Remove the TX Stacker



6. Lift the Guide Duplex Ass'y at the front hinge. It may be necessary to gently flex the plastic frame to release the hinge. Take out the Guide Duplex Ass'y, as shown below.



7. Remove the two screws securing the Support Pickup Ass'y. Look under the edge of the Support Pickup Ass'y and release the spring from the Pickup Ass'y. Then remove the Support Pickup Ass'y, as shown below.



8. Unplug the one connector and remove the circlip on the end of the shaft. Remove the Clutch. Remove 2 further circlips and bushes then take out the Pickup Ass'y, as shown below.



9. Unplug The Gate Sensor connector and remove one screw securing the ground cable.



5-8

10. Remove the four screws securing the Scan Main Ass'y and remove it.



12. Open the Cover Exit Ass'y and unplug the two connectors.



- 13. Remove the three screws securing the Guide Pickup Ass'y and remove it.
- Guide Pickup Ass'y
- 11. Unplug the Open Cover Sensor connector and remove the Open Cover Ass'y in the direction of arrow. Then release the harness, as shown below.





14. Remove the five screws securing the Guide-Duplex-Inner and Guide-Duplex-Lower covers. Then remove them.

15. Remove the three screws securing the Cover Gear and remove it, as shown below.



16. Unplug the one connector. Then remove the five screws securing the DADF Motor Ass'y and remove it, as shown below.



17. Unplug the one connector and three screws securing the Duplex Motor Ass'y and remove it.



5.5 OPE Ass'y

- 1. Before you remove the OPE Ass'y, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
- 2. Remove eleven screws securing the OPE Main PBA and the LCD Module from the OPE Cover.



3. Remove the Contact Rubbers from the unit.



4. Remove the Key and Key Pad from the unit.



5.6 Side Cover Ass'y

1. Remove two screws to release the Stopper securing the Side Cover to the Main Frame.



* MP-Tray

1. Pull firmly on both hinges ① to release them.



2. Taking care not to damage the Tray Links position the Tray Case so that the Tray Links are at 45° and release the Tray Links from the slot in the Tray Case.





* Duplex Ass'y

1. Release 4 clips (2 each side – 1 black and 1 white). Then lift the Duplex Ass'y away from the Side Cover.



* Transfer Roller Ass'y

1. Release the colored plastic bushes at each end of the Transfer Roller and lift the roller out, as shown below.



5.7 Fuser Ass'y

- 1. Before you remove the Fuser Ass'y, you should be power off and remove:
 - Rear Cover (see page 5-1)
 - Side Cover Ass'y (see page 5-12)
- 2. Remove the one screw and take out the Cover Sheet Connector.



4. Open the Front Door and then remove the three screws and take out the Fuser Ass'y.



5. Remove the two screws and take out the Thermostat.



3. Unplug the one connector.



5.8 Exit Ass'y

- 1. Before you remove Exit Ass'y, you should remove: - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
- 2. Remove three screws, and then untie the harness from the Exit Upper. Unplug one connector from the Main PBA and unlatch the Dummy Base Frame using a flat blade screwdriver, as shown below.



3. Lift the exit ass'y and remove it.



5.9 Cover Paper Exit Ass'y

- 1. Before you remove the Cover Paper Exit Ass'y, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)



2. Remove two screws and Cover Paper Exit Ass'y, as shown below.



5.10 Drive Ass'y

- 1. Before you remove the Drive Ass'y, you should remove:
 - Rear Cover (see page 5-1)
- 2. Unplug the two connectors. (Main Motor : 10 pin, Duplex Motor : 4 pin)



3. Disconnect the fan harness from the Main PBA. Remove one screw and take out the Fan and Dust Fan.



4. Remove Five screws (2 screws securing ground wires and 1 screw securing the Zener PBA) and take out the Drive Ass'y. taking care not to damage the Zener PBA.



5.11 SMPS

- 1. Before you remove the LSU, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
 - Cover Paper Exit Ass'y(see page 5-15)
- 2. Remove three screws and take out the Shield SMPS Upper.



3. Unplug the all connectors, Remove the AC_INPUT Harness.



4. Remove the SMPS, as shown below.



5.12 LSU (Laser Scaning Unit)

- 1. Before you remove the LSU, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
 - Cover Paper Exit Ass'y (see page 5-15)

2. Unplug the two connectors.



3. Remove the three screws and take out the LSU.



5.13 Cover Exit Rear

- 1. Before you remove the Cover Exit Rear, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
 - Exit Ass'y (see page 5-15)
 - Cover Paper Exit Ass'y(see page 5-15)
 - SMPS (see page 5-17)
- 2. Remove the three screw and take out the Panel Connect MPF.



3. Remove the one screw and Cover Exit Rear, as shown below.


5.14 Main Frame Ass'y

- 1. Before you remove the LSU, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
 - Side Cover Ass'y (see page 5-12)
 - Fuser (see page 5-14)
 - Exit Ass'y (see page 5-15)
 - Cover Paper Exit Ass'y(see page 5-15)
 - SMPS (see page 5-17)
 - LSU (see page 5-18)
- 2. Remove 3 screws located inside the Dummy Base Frame and 1 screw securing the Dummy Base Frame to the Channel Base Frame. Disconnect the Counter harness. Lift out the Dummy Base Frame and the jam release mechanism.



3. Remove the Lock Deve, and then remove one screw and the Cover Motor Bracket.



4. Disconnect the all harness.



5. Remove the seven screws and take out the Main Frame Ass'y.



5.15 MP Ass'y

- 1. Before you remove the MP Ass'y, you should remove: - Rear Cover (see page 5-1)
 - Side Cover Ass'y (see page 5-12)
- 2. Unplug the two connectors.



3. Remove the one screw and take out the Dummy Cover.



4. remove the three screws.



5. Release two hooks underneath the frame. Pull the MP Ass'y upward and remove it.



5.16 Feed Ass'y

- 1. Before you remove the Feed Ass'y, you should remove:
 - Rear Cover (see page 5-1)
 - Scanner Ass'y (see page 5-2)
 - Side Cover Ass'y (see page 5-12)
 - Exit Ass'y (see page 5-15)
 - Cover Paper Exit Ass'y(see page 5-15)
 - LSU (see page 5-18)
 - Main Frame Ass'y (see page 5-19)
 - MP Ass'y(see page 5-20)
- 2. Remove the three screws.



3. Pull the Feed Ass'y upward and remove it.



5.17 Pick Up Ass'y

- 1. Before you remove the Pick Up Ass'y, you should remove:
 - Rear Cover (see page 5-1)
 - Drive Ass'y (see page 5-16)
- 2. Remove three connector and take out the pick up gear.



3. Remove the two screws and take out the Cassette Rail.



4. Remove the five screws and remove the Guide Paper Out shown below. Release the paper Pickup Roller bush(white plastic clip) and take out the Pick Up Ass'y, as shown below.



* 2 lift the Bearing Shaft by cross at right angles



5.18 Main PBA

- To remove the Main PBA without major disassembly
- 1. Before you remove the Main PBA, you should
 - remove:
 - Rear Cover (see page 5-1)
- Goto Step 4
 - In order to remove the Shield Main Lower you must also remove:
 - Scanner Ass'y (see page 5-2)
 - Cover Paper Exit Ass'y(see page 5-15)
 - SMPS (see page 5-17)
- 2. Remove the three frame screws and 2 ground wire screws. Take out the Shield Main taking care to ease the power socket from the LH frame.



3. Remove the two screws securing the connect screw. Take out the Modular Jack PBA from the Shield Main Lower.



4. Remove the ten screws securing the connect screw. Take out the Main PBA and HVPS from the Shield Main Lower.



5. If fitted release the plastic support securing the network card to the Main PBA and HVPS.



6. Troubleshooting

6.1 Procedure of Checking the Symptoms

Before attempting to repair the printer first obtain a detailed description of the problem from the customer.



6.2 Solution

6.2.1 Scanner

6.2.1.1 COPY

PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
White copy	Check the Scan-Cover open.	Room light can transit a thin original.
	Check shading profile.	• Remake shading profile in the tech mode.
Black copy	Check the CCD problem in Main PBA.	Check the CCD harness contact.
	Check shading profile.	• Remake shading profile in the tech mode.
Defective image quality	Check shading profile.	Remake shading profile in the tech mode.
	Check the gap between original and scanner. glass	 The gap above 0.5mm can cause a blurred image.
	Check printing quality.	See "Print" troubleshooting.
Abnormal noise	Check the Scanner Motor and any mechanical disturbance.	 Check the right position of the Scanner Motor, and check the any mechanical dis turbance in the CCD carriaging part.
	Check the Motor Driver in Driver PBA.	• If any driver is defective, replace it.

6.2.1.2 PC-Scan

PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
Scanning Error	Check the printer cable installed.	Check correct installation, and use standard IEEE1284 cable.
	Check how TWAIN driver is installed.	Remove any other scanner driver.
		 Reboot after reinstallation of the TWAIN driver.
	Check the printer port(Parallel).	 Check the parallel-port-related items in the CMOS Setup. As a printer port, Select ECP among SPP(Normal), ECP, and EPP modes(increase print-ing speed)
	Check harness contact.	Check CN12 contact in Main PBA
Check the IEEE1284 signal level.		 If any signal level is defective, replace Driver PBA.
		Main PBA = 0.8V to 2.4V TTL signal.
		Otherwise, replace Main PBA.
	Check the USB signal level.	 If USB signal level is defective, replace Main PBA.
Defective image	Check shading profile.	• Remake shading profile in the tech mode.
Quality	• Check the gap between original and scanner glass.	 The gap above 0.5mm can cause a blurred image.
Abnormal noise	Check the Scanner Motor and any mechanical disturbance.	Check the right position of the Scanner Motor, and check the any mechanical disturbance in the CCD carriaging part.
	Check the motor driver in Driver PBA.	• If any driver is defective, replace it.

6.2.2 FAX (only SCX-6122FN)

6.2.2.1 FAX/TELEPHONE Precautions

PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
TEL LINE CANNOT BE ENGAGED (NO DIAL TONE)	 When you press "OHD" key: a) Check line cord connection. b) Check MAIN LIU harness, and CN1 (LIU PBA). 	a) insert it correctly into the connection jack called "line".b) Replace defective parts.
Cannot MF dial	Check MAIN-LIU harness.	Replace defective parts.
MF dial is possible but not DP dial.	 Check DP control signal of MAIN PBA and Liu PBA. 	• Replace LIU PBA.
Defective fax	Check MAIN LIU harness.	Replace defective parts.
transmission	 Is the external phone hooked off? 	Replace LIU PBA if low.
	Check 'hook off' : Refer to 'TEL LINE CANNOT BE ENGAGED' above.	Refer to 'TEL LINE CANNOT BE ENGAGED' above.
	Check transmission path and reception path of	Replace main PBA, if abnormal.
	the LIU PBA.	• Replace LIU PBA. Replace main PBA.
Defective automatic fax	Is the ring checked?	Replace LIU PBA if it cannot be checked.
reception	Refer to 'Defective Transmission.'	Refer to 'Defective Transmission'.

6.2.3 Print Quality

Error Status	Check	Solution
Vertical black line and band Digital Plinter Digital Plinter Digital Plinter Digital Plinter Digital Plinter	 Bad blade of Toner cartridge LSU Bad cleaning blade of drum cartridge. 	 Change Toner cartridge Replace LSU Replace drum cartridge.
Vertical white line Ligital Printer Ligital Printer Ligital Printer Ligital Printer Ligital Printer	 LSU window contamination Toner cartridge 	 Clean LSU window If not LSU, change Toner cartridge.
No image	 GND OPC is well grounded? LSU running well? Biss voltage is normal? Lower toner? Is there video data from Main PBA 	 Measure the resistance between frame ground and the ground spring attached frame. Confirm stable ground. Unless bad ground, detach cabinet, check where is bad point Adjust LSU or replace it Normal Dev bias = -450V Shake toner cartridge and print.If a like good, toner is empty Test engine test pattern , replace Main PBA
Light image Digital Printer Digital Printer Digital Printer Digital Printer Digital Printer	 LSU light power normal? Enough toner? High charger voltage? Lower bias voltage Contamination of high voltage contact. Transfer volatge and roller. 	 LSU light power check is difficult. Compare with new one and check. Check toner and the toner cartridge counter 3~4. Measure all high voltage output. Leakage toner cause bad contact and increase contact resistance. Clean contami- nated area.

Error Status	Check	Solution
Dark image	 LSU light power normal? Bias voltage output is high? Video data is always supplied? Bad high charge voltage contact. 	 Check the rated level and replace. Set to power rating. Replace defected board. Check the charge voltage or change the drum cartridge.
Background Digital Printer Digital Printer Digital Printer Digital Printer Digital Printer	 High voltage output is normal? C/R of drum cartridge is contaminated? 	 Adjust to the rated status. Replace drum cartridge.
Ghost Digital Printer Digital Printer Digital Printer	 High voltage output. Pre-Transfer Lamp. Bad high voltage contact. 	 Check every high voltage. Check the turn-on PTL, LED crash. Clean the inside machine or replace drum cartridge.
Stains on back of paper	 Contamination of transfer roller. Stains of paper path. Pressure roller's contamination. 	 Clean the transfer roller with vacuum cleaner. Clean the area of paper path with cloth or air cleaner. Remove fuser and replace it.

Error Status Check		Solution	
Poor Fusing	 Use recommended paper? Check fusing temperature. 	 Should use recommended paper. Check engine controller board. If you have not thermometer, measure the thermistor voltage to CPU, If 2.3V±5% in printing CPU works well. Then, disassemble fuser and check the thermistor contact and thermistor. 	
	3. The machine was under the low tempera ture for a long time?	3. Re-check after putting the machine in the warm place for certain period.	
Partial blank image (not periodic)	 Toner is low? The toner cartridge is out of position? 	 Replace Toner cartridge. Checkand adjust. 	
Partial blank image (periodic)	 Develop roller scar or particle. Scar or particle. (94.3 mm) Transfer roller scar or particle. (56.6 mm) 	 Replace toner cartridge. Replace drum cartridge. Replace transfer roller. 	
Different image density (left and right)	 Charge roller's pressure force unbalance Dev. roller and OPC or Dev. roller and blade's pressure force unbalance 	 Replace drum cartridge. Replace toner cartridge and drum cartridge. 	
Digital Printer pressure force unbalance Digital Printer 3. Transfer roller's pressure force unbalance of each side Digital Printer Digital Printer Digital Printer Digital Printer		3. Check left and right spring of transfer roller and the spring pressing the toner cartridge inside the machine	
Horizonral band Digital Printer Digital Printer	 Unstable high voltage contact Charge roller's contamination Contamination of heat roller Malfunction of LSU 	 Clean each contact and check good contact Clean charge roller Replace fuser unit Check Main PBA. 	
Digital Printer			

Abnormal Image Printing and Defective Roller

If abnormal image prints periodically, check the parts shown below.

NO	Roller	Abnormal image period	Kind of abnormal image
1	OPC Drum	94.3 mm	White spot. Black spot
2	Charge Roller	38.3 mm	White spot. Black spot
3	Supply Roller	43.8 mm	Horizontal dark band
4	Develope Roller	54.3 mm	Horizontal dark band
5	Transfer Roller	56.6 mm	Black side contamination/transfer fault
6	Heat Roller	83.6 mm	Black spot, White spot
7	Pressure Roller	91.0 mm	Black side contamination

No Image





All Black

Does the Check the path among video All black in NO video data line to LSU NO controller, engine board, printing area? transit to High/Low when Ð HVPS, LSU for the shortage printing? or open -> Repair or replace the boards YES YES V Replace LSU Is charge NO voltage supplied from HVPS? Repair or replace HVPS YES Is the NO Hsync signal received in LSU? Replace LSU YES Charge part's contact

is bad -> Repair or replace the drum cartridge

Vertical White Line (Band)



Dark Image



Barkground



Ghost



Black Spot



Horzontal Band



Irregular Density



White Spot



Trembling at the End When OHP Printing



Poor Fusing Grade



6.2.4 Malfunction

Error Status	Check	Solution
No power	1. Check power is supplying	1. If supplying power differs from machine's power rating, replace the machine.
	2. Check fuse F1 open	2. Replace it.
Fuser Error	1. Thermostat open	1. Detach AC connector and measure the resistane between pin 1 and 2. If it is megohm, thermostat is open, Replace it.
	2. AC wire open	2. Check bad connector contact or wire is cut.
	3. Thermistor wire open	3. Check thermistor wire and its connection.
	4. Main PBA	4. Replace Main PBA
Cover open	 When close Side cover, check the lever is pressed Micro switch's contact 	1. Open Side cover and press the lever with pen. If Controller detects cover close, there is some mechanical trouble in Side cover and lever's assembly. If not so there is elec-
	3. CPU and related circuit	trical problem.
	Check where Jam 0 happens	
Jan U	1. Paper is not picked up	 Check whether solenoid is working or not by using Engine test mode
	2. Paper is located in feed sensor	2. Check feed sensor malfunction.
	3. Happened when inserting specific papers such as envelope into the MPF (Multipurpose Paper Feeder)?	3. Re-try inserting a fewer papers.
		•fan the papers and align
		 take out the loaded papers and insert them reverse direction
	4. Happened when inserting specific papers such as envelope into the Manual Feeder?	4. Take out the loaded papers and insert them reverse direction
		 inserted papers as recommended for Manual Feeding?
		•When loading, tap the papers until paper detect sensor senses loading
	5. Is the Stacker Extender is folded out?	5. When using long papers, use the Stacker
	6. Does not the Guide Adjust distort the papers	Extender
Jam 1	Paper is stopped in just after of fuser unit.	6. Adjust Guide to fit the paper width
		1. It is mostly resulted from double feeding. Check paper is well stocked in feeder.
		2. Check feed actuator position and actuator's operating. There may be stiff movind or double reflection. If not so, check the operation of feed sensor by Engine test mode.
		3. Check exit lever operation. Remore jam and check actuator moving by hand. If actu- ator is too stiff, paper is wrapped around the heat roller. Remove obstacles or replace.

Error Status	Check	Solution
Jam 2	Check where Jam 2 happens	1. Remove paper using pinset or some tool
	1. Paper is curled and cannot exit.	and watch if separate claws have any troble. Clean around fuser.
	2. Paper is curled in the exit cover?.	2. Check locking works wells. Watch whether the ribs of exit cover hace any burr or resisitive edge. If they do, remove obstacles or replace.
Jam 2 at face-down tray	1. Then paper is not drawn in because of the stack of papers in the Out tray.	1. Load recommended quantity of papers
	2. Does it curl while coming out?	2. Open the Cover Front and check whether roller or spring, which are related to paper out, is not out of position. If so, re-locate or replace.
Clutch error	1. Check the spring of solenoid	1. Check whether the spring is expanded or not.
	2. Check the armature assembly/cushion	2. Check armature is well installed. It may be unstable assemble.
	3. Electrical check	3. Remove the Main PBA.
High voltage error	1. Check the terminal output voltage	 Remove the Toner cartridge and open the cover and press cover open switch lever and measure the voltage with high voltage probe and sending printing data. If the volt- age is normal, change the toner cartridge.
	2. Check HVPS	2. Disassemble the left side cover, and check HV of the solder side of HVPS and change it.
Feeding obstacles	Does the Plate-knockup prevent the paper	MPF :
	loading?	Turn the power off and on. Open and close the Side cover to return to the original state.
		Cassette : Adjust Guide to fit the paper width.
Skew	Is the Guide adjust set to the paper width?	Fit the paper width using the Guide adjust.
Stacking	1. Took out the Stacker extender to support long	1. Use extender as per the paper length.
	papers? 2. Stacked too many papers more than Stacker can hold?	2. The Face-up stacker normally can hold 100 pages when using 75g/m2, however, stack- ing capacity can be lowered depending on the type of papers.
Engine Error	Check CBF Harness_CN7.(Main PBA to LSU)	Refer to troubleshooring "ENGINE ERROR".
Document Jam	Document is not picked up(in ADF).	1. Check document is well stocked in ADF.
		2. Check whether document was been fas- tened together by staple or clip.
		3. Load recommended quantity of papers.
	Document is stopped after it has fed into the ADF.	1. Check whether the Reg. sensor is working or not.
		2. Check whether the Feed Roller is working or not.
	Does it curl while coming out?	1. Check the Open Cover whether there are bosses.
		2. Check the ADF ass'y is well assemble.



Fuser Error



Paper Jam (Mis-Feeding)



Paper Jam (Jam 1)



6.2.5 The cause and solutions of bad environment of the software

6.2.5.1 The printer is not working (1)

• Description : While Power turned on, the printer is not working in the printing mode.

Check and Cause	Solution
1. Check if the PC and the printer is properly con- nected and the toner cartridge installed.	1. Replace the printer cable. If the problems not solved even after the cable replaced, check the amount of the remaining tone.
2. Printing is nor working in the Windows.	2. Check if the connection between PC and printer port is proper. If you use windows, check if the printer driver in the controller is set up. If the printer driver is properly set up, check in which program the printing is not working. The best way to find out is to open the memo pad to check the function of printing. If it is not working in a certain program, adjust the setup the program requires. Sometimes, the printout is normal within the Windows basic programs, but it's not working in a particular program. In such case, install the new driver again. If not working in the Windows basic program, Check the setup of the port of CMOS is on ECP. And check the address of IRQ 7 and 378
3. Check if the printer cable is directly connected to peripheral devices	3. If the scanner needs to be connected to the printer, first the remove the scanner from the PC to see if the printer is properly working alone.

6.2.5.2 The printer is not working (2)

• **Description :** After receiving the printing order, no response at all or the low speed of printing occurs due to wrong setup of the environment rather than malfunction of the printer itself.

Check and Cause	Solution
1. Secure more space of the hard disk.	1. Not working with the message 'insufficient printer memory' means hard disk space problem rather than the RAM problem. In this case, provide more space for the hard disk. Secure more space using the disk utilities program.
2. Printing error occurs even if there is enough space in the hard disk.	2. The connection of the cable and printer port is not proper. Check if the connection is properly done and if the parallel port in CMOS is rightly set up.
3. Check the parallel-port-related items in the CMOS Setup.	3. As a printer port, Select ECP or SPP among SPP(Normal), ECP, and EPP modes(increase printing speed) SPP normal mode sup- port 8-bit data transfer, while ECP Mode transfer the 12-bit data.
4. Reboot the system to print.	4. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and printer off, and reboot the system to print again. If not solved, double-click the printer in my computer If the regular fonts are not printed this time again. the cable must be defective so replace the cable with new one.

6.2.5.3 Abnormal Printing

• **Description** : The printing is not working properly even when the cable has no problem. (even after the cable is replaced) If the printer won't work at all or the strange fonts are repeated, the printer driver may be defective or wrong setup in the CMOS Setup.

Check and Cause	Solution
1. Set up the parallel port in the CMOS SETUP.	1. Select SPP(Normal) or ECP LPT Port the among ECP, EPP or SPP in the CMOS Setup.
2. Printer Driver Error.	2. Check the printer in My Computer.(to see if the printer driver is compatible to the present driver or delete the old driver, if defective and reinstall the new driver)
3. Error message from insufficient memory. (The printing job sometimes stops or due to insufficient virtual memory, but it actually comes from the insufficient space of the hard disk.)	 Delete the unnecessary files to secure enough space of the hard disk and start printing job again.

6.2.5.4 SPOOL Error

• **Description** : To spool which stands for "simultaneous peripheral operations online" a computer document or task list (or "job") is to read it in and store it, usually on a hard disk or larger storage medium so that it can be printed or otherwise processed at a more convenient time (for example, when a printer is finished printing its current document).

Check and Cause	Solution
1. Insufficient space of the hard disk in the directory assigned for the basic spool.	1. Delete the unnecessary files to provide more space to start printing job.
2. If the previous printing error not solved.	2. If there are some files with the extension name of ****.jnl, Delete them and Reboot the Windows to restart printing job.
3. When expected to collide with other program.	3. Shut down all other programs except the current one, if possible.
4. When an application program or the printer driver is damaged.	4. Delete the printer driver completely and reinstall it.
5. When some files related to OS are damaged or virus infected.	5 After rebooting the computer, check for viruses, restore the dam- aged files and reinstall the program to do the printing job.
6. Memory is less than suggested one.	6. Add up enough memory to the PC.

How to delete the data in the spool manager.

In the spool manager, the installed drivers and the list of the documents waiting to be printed are shown. Select the document to be deleted and check the delete menu.

If you intend to delete the current document being printed, the data being transferred to the printer will be put out and then the document is removed. Before choosing the document, the menu is still inactive.

Or put the document out of the list and repeat the routine as in the above or finish the spool manager.

7. Setting Guide

7.1 Printer overview

These are the main components of your machine:

7.1.1 Front view



* The figure above shows an SCX-6322DN with all available accessories.

1	ADF (Automatic Document Feeder)1	9	scanner lid
2	document width guides	10	tray 1
3	document input tray	11	optional tray 2
4	document output tray	12	multi-purpose tray extension
5	control panel	13	multi-purpose tray paper width guides
6	multi-purpose tray	14	scanner glass
7	front cover	15	toner cartridge
8	release lever	16	drum cartridge

1. SCX-6122FN has the ADF function, while SCX-6322DN uses the duplex ADF function.

7.1.2 Rear view



* The figure above shows an SCX-6322DN with all available accessories.

1	ADF connector	6	network port
2	extension telephone socket (EXT)	7	power receptacle
3	telephone line socket (LINE)	8	power switch
4	parallel port	9	output support
5	USB port		
7.1.3 Control panel overview



1	1 Keyboard: Used to enter characters. Used to store frequently dialed fax number and dial them with a touch of the buttons.		OK: Confirms the selection on the screen.		
			Back: Sends you back to the upper menu level.		
2	 Address Book: Allows you to store frequently used fax numbers in memory or search for stored fax numbers or email addresses. Also allows you to print an Address Book/Phone Book list. Beachtigen Adjuste the desument recolution for 		Status: Shows the status of your machine.		
			Darkness: Adjusts the document brightness for the current copy job.		
3			Original Type: Selects the document type for the current copy job		
	the current fax job.	40			
4	 Redial/Pause: In Standby mode, redials the last number, or in Edit mode, inserts a pause into a fax number. 		than the original.		
			Duplex: Allows you to print documents on both sides of the paper.		
5	Fax: Activates Fax mode.	18	Toner Save: Allows you to save on toner by using		
6	Copy: Activates Copy mode.		less toner in printing.		
7	Scan/Email: Activates Scan mode.	19	number keypad: dials a number or enters		
8	Display: Shows the current status and prompts				
	during an operation.	20	On Hook Dial: Engages the telephone line.		
9	Menu: Enters Menu mode and scrolls through the available menus.	21	Stop/Clear: Stops an operation at any time. In Standby mode, clears/cancels the copy options,		
10	Scroll buttons: Scroll through the options avail- able in the selected menu, and increase or		such as the darkness, the document type setting, the copy size, and the number of copies.		
decrease values.		22	Start: Starts a job.		

7.2 Understanding the Status LED

The Status LED on the control panel shows the status of your machine. See the table below to know your machine's status.

Status		Description		
Off		The machine is off-line.		
		The machine is in Power Save mode. When data is received, or any button is pressed, it switches to on-line automatically.		
Green	On	The machine is on-line and can be used.		
	Blinking	 When the backlight slowly blinks, the machine is receiving data from the computer. 		
		When the backlight fast blinks, the machine is printing data.		
Red	On	The toner cartridge is totally exhausted. Remove the old toner cartridge and install a new one.		
		 The drum cartridge is totally exhausted. Remove the old drum cartridge and install a new one. 		
		 A paper jam has occurred. To solve the problem. 		
		The front cover is open. Close the front cover.		
		There is no paper in the tray. Load paper in the tray.		
		 The toner cartridge installed is not a genuine cartridge, and you selected Stop at the NonGenuine Toner prompt. 		
		 The lifespan of the toner cartridge is reached, and you selected Stop at the Toner Exhausted prompt. 		
		The machine has stopped due to a major error. Check the display message.		
	Blinking	A minor error occurs and the machine is waiting an error to be cleared. Check the display message. When the problem is cleared, the machine resumes.		
		 The toner cartridge installed is not a genuine cartridge, and you selected Continue at the NonGenuine Toner prompt. 		
		• The lifespan of the toner cartridge is reached, and you selected Continue at the Toner Exhausted prompt.		
		• The toner cartridge is low. Order a new toner cartridge. You can temporarily improve print quality by redistributing the toner.		

7.3 Finding more information

You can find information for setting up and using your machine from the following resources, either printed or onscreen.

Quick Install Guide	Provides information on setting up your machine and, therefore, be sure to follow the instructions in the guide to get the machine ready.
Online User's Guide	 Provides you with step-by-step instructions for using your machine's full features, and contains information for maintaining your machine, troubleshooting, and installing accessories. This user's guide also contains the Software Section providing you with information on how to print documents with your machine on various operating systems, and how to use the supplied software utilities. Note : You can access the user's guides in other languages from the Manual folder on the printer software CD.
Network Printer User's Guide	Contained on the network utilities CD, provides you with information on setting up and connecting your machine to a network.
Printer Driver Help	Provides you with help information on printer driver properties and instructions for setting up the properties for printing. To access a printer driver help screen, click Help from the printer properties dialog box.
Samsung website	If you have Internet access, you can get help, support, printer drivers, manuals, and order information from the Samsung website, www.samsungprinter.com.

7.4 System setup

This chapter gives you an overview of menus available on your machine and step-by-step instructions for setting up the machine's systems.

This chapter includes:

- Menu overview
- Changing the display language
- Setting the date and time
- Changing the default mode
- Setting sounds
- · Entering characters using the keyboard
- · Entering characters using the number keypad
- · Using the save modes
- · Setting print job timeout

Menu overview

The control panel provides access to various menus to set up the machine or use the machine's functions. These menus can be accessed by pressing Menu. Refer to the following diagram. Menus available in Fax, Copy, or Scan mode vary.



7.4.1 Changing the display language

To change the language that appears on the control panel, follow these steps:

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Language appears and press OK.
- 4. Press the Scroll buttons until the language you want appears and press OK.
- 5. Press Stop/Clear to return to Standby mode.

7.4.2 Setting the date and time

The current date and time are shown on the display when your machine is on and ready to work. All of your faxes will have the date and time printed on them.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Date & Time appears and press OK.
- 4. Enter the correct time and date using the number keypad.

Month = 01 to 12 Day = 01 to 31 Year = requires four digits Hour = 01 to 12 (12-hour mode) 00 to 23 (24-hour mode) Minute = 00 to 59

You can also use the Scroll buttons to move the cursor under the digit you want to correct and enter a new number.

5. To s ell ect AM or PM for 12-hour format, press the or button * or # any number button. When the cursor is not under the AM or PM indicator, pressing the * or # button immediately moves the cursor to the indicator.

You can change the clock mode to 24-hour format (e.g. 01:00 PM as 13:00). For details, see the next section.

- 6. Press OK to save the time and date. When you enter a wrong number, Out of Range appears and the machine does not proceed to the next step. If this happens, simply reenter the correct number.
- 7. Press Stop/Clear to return to Standby mode.

Changing the clock mode

You can set your machine to display the current time using either a 12-hour or 24-hour format.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Clock Mode appears and press OK.
- 4. Press the Scroll buttons to select the other mode and press OK.
- 5. Press Stop/Clear to return to Standby mode.

7.4.3 Changing the default mode

You can switch this default mode between Fax mode and Copy mode.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Default Mode appears and press OK.
- 4. Press the Scroll buttons until the default mode you want appears and press OK.
- 5. Press Stop/Clear to return to Standby mode.

7.4.4 Setting sounds

You can control the following sounds:

- Key Sound: Turns the key sound on or off. With this option set to On, a tone sounds each time a key is pressed.
- Alarm Sound: Turns the alarm sound on or off. With this option set to On, an alarm tone sounds when an error occurs or fax communication ends.
- Speaker: Turns on or off the sounds from the telephone line through the speaker, such as a dial tone or a fax tone. With this option set to Comm. which means "Common," the speaker is on until the remote machine answers. You can adjust the volume level using On Hook Dial.
- Ringer: Adjusts the ringer volume. For the ringer volume, you can select Off, Low, Mid, and High.

Speaker, ringer, key sound, and alarm sound

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until Sound/Volume appears and press OK.
- 3. Press the Scroll buttons until the sound option you want appears and press OK.
- 4. Press the Scroll buttons until the desired status or volume for the sound you have selected appears and press OK.
- 5. If necessary, repeat steps 3 through 5 to set other sounds.
- 6. Press Stop/Clear to return to Standby mode.

Speaker volume

- 1. Press On Hook Dial. A dial tone sounds from the speaker.
- 2. Press the Scroll buttons until you hear the volume you want.
- 3. Press On Hook Dial to save the change and return to Standby mode.

7.4.5 Entering characters using the keyboard

You can enter alphabet characters using the keyboard on the left side of the control panel. Especially this keyboard is arranged as like a normal keyboard for its better usability for user. In case of entering the machine ID or email addresses, it lets you enter letters easily.

Entering alphabet characters

You can enter the alphabet characters by just pressing the alphabet keys on the keyboard, as like a normal keyboard. To enter the uppercase characters, press Caps Lock button on the keyboard.

Entering numbers

You can enter the numbers by using the number keypad on the right side of the control panel.

Entering symbols

You can enter symbols by pressing the buttons on the upper part of the keyboard. To enter upper symbols on buttons, press and hold the Shift button and the symbol button simutaneously which you want to enter.

Entering international characters

You can enter the special multilingual characters using the international button.

- 1. Press the character button you want to enter.
- 2. Press the international button on the keyboard until the desired character you want displays.
- Example: To enter Â, press A key first. And then, press the international button three times until character shows.

Uppercase		Lowercase	
Α	À, Á, Â, Ã, Ä, Å, Æ	а	à, á, â, ã, ä, å, æ
С	Ç	С	Ç
Е	È, É, Ê, Ë	е	è, é, ê,ë
I	ì, í, î, ï	i	ì, í, î, ï
Ν	Ñ	n	ñ
0	Ò, Ó, Ô, Õ, Ö, Œ, Ø	0	ò, ó, ô, õ, ö, œ, ø
U	Ù, Ú, Û, Ü	u	ù, ú, û, ü
S	β	s	β
Y	,	У	"

Refer to the table below for international character map.

7.4.6 Entering characters using the number keypad

As you perform various tasks, you may need to enter names and numbers. For example, when you set up your machine, you enter your name or your company's name, and the fax number.

Entering alphanumeric characters

1. When you are prompted to enter a letter, locate the button labeled with the character you want. Press the button until the correct letter appears on the display.

For example, to enter the letter O, press 6, labeled with MNO.

Each time you press 6, the display shows a different letter, M, N, O, and finally 6.

You can enter special characters, such as space, plus sign, and etc. For details, see the below section.

2. To enter additional letters, repeat step 1.

If the next letter is printed on the same button, move the cursor by pressing the right Scroll button and then press the button labeled with the letter you want. The cursor will move to the right and the next letter will appear on the display. You can enter a space by pressing 1 twice.

3. When you have finished entering letters, press OK.

Keypad letters and numbers

Кеу	Assigned numbers, letters, or characters				
1	1 Space				
2	A B C 2				
3	DEF3				
4	G H I 4				
5	J K L 5				
6	M N O 6				
7	PQRS7				
8	T U V 8				
9	W X Y Z 9				
0	+ - , . '/ * # & @ 0				

Correcting numbers or names

If you make a mistake while entering a number or name, press the left Scroll button to delete the last digit or character. Then enter the correct number or character.

Inserting a pause

With some telephone systems, you must dial an access code (9, for example) and listen for a second dial tone. In such cases, you must insert a pause in the telephone number. You can insert a pause while you are setting up one-touch dial numbers or speed dial numbers.

To insert a pause, press Redial/Pause at the appropriate place while entering the telephone number. A - appears on the display at the corresponding location.

7.4.7 Using the save modes

Toner Save mode

Toner Save mode allows your machine to use less toner on each page.

Activating this mode extends the life of the toner cartridge beyond what one would experience in the normal mode, but it reduces print quality.

To turn this mode on or off, press Toner Save.

Power Save mode

Power Save mode allows your machine to reduce power consumption when it is not in actual use. You can turn this mode on and select a length of time for which the machine waits after a job is printed before it switches to a reduced power state.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Power Save appears and press OK.
- 4. Press the Scroll buttons until On appears and press OK.
- 5. Press the Scroll buttons until the time setting you want appears and press OK.
- 6. Press Stop/Clear to return to Standby mode.

Scan Power Save mode

Scan Power Save mode allows you to save power by turning off the scan lamp. The scan lamp under the scanner glass automatically turns off when it is not in actual use to reduce power consumption and extend the life of the lamp. The lamp automatically wakes up after some warm-up time when you start scanning.

You can set the length of time for which the scan lamp waits after a scan job is completed before it switches to the power save mode.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Scan PWR Save appears and press OK.
- 4. Press the Scroll buttons until the time setting you want appears and press OK.
- 5. Press Stop/Clear to return to Standby mode.

7.4.8 Setting print job timeout

You can set the amount of time a single print job is active before it must print.

The machine handles incoming data as a single job if it comes in within the specified time. When an error occurs while processing data from the computer and the data flow stops, the machine waits the specified time and then cancels printing if data flow does not resume.

- 1. Press Menu until System Setup appears on the bottom line of the display and press OK.
- 2. Press OK when Machine Setup appears.
- 3. Press the Scroll buttons until Job Timeout appears and press OK.
- 4. Press the Scroll buttons until the time setting you want appears and press OK.
- 5. Press Stop/Clear to return to Standby mode.

7.5 Network setup

7.5.1 Supported operating systems

The following table shows the network environments supported by the machine:

ltem	Requirements
Network interface	10/100 Base-TX
Network operating system	Novell NetWare 4.x, 5.x, 6.x Windows 98/Me/NT 4.0/2000/XP/2003 Various Linux OS Macintosh OS 10.3 ~ 10.4
Network protocols	NetWare IPX/SPX TCP/IP EtherTalk
Dynamic addressing server	DHCP, BOOTP

· IPX/SPX: Internet Packet eXchange/Sequenced Packet eXchange

• TCP/IP: Transmission Control Protocol/Internet Protocol

DHCP: Dynamic Host Configuration Protocol

• BOOTP: Bootstrap Protocol

7.5.2 Configuring TCP/IP

Your machine can be set up with a variety of TCP/IP network information, such as an IP address, a subnet mask, a gateway, and DNS addresses.

There are several ways in which your machine can be assigned a TCP/ IP address, depending on your network.

- \cdot Static addressing: A TCP/IP address is assigned manually by the system administrator.
- · Dynamic addressing via BOOTP/DHCP (default): A TCP/IP address is assigned automatically by the server.

Static addressing

To enter a TCP/IP address from your machine's control panel, take the following steps:

- 1. Press Menu until Network appears on the bottom line of the display and press OK.
- 2. Press OK when TCP/IP appears.
- 3. Press the Scroll buttons until Static appears and press OK.
- 4. Press OK when IP Address appears.
- 5. Enter a byte between 0 and 255 using the number keypad and press the Scroll buttons to move between bytes. Repeat this to complete the address from the 1st byte to the 4th byte.
- 6. When you have finished, press OK.
- 7. Repeat steps 5 and 6 to configure the other TCP/IP parameters: subnet mask and gateway address.
- 8. Press the Scroll buttons until Primary DNS appears and press OK.
- 9. Enter each byte of the address and press OK.
- 10. Press the Scroll buttons until Secondary DNS appears and press OK.
- 11. Enter each byte of the address and press OK.
- 12. Press Stop/Clear to return to Standby mode.

Dynamic addressing (BOOTP/DHCP)

To have a TCP/IP address assigned automatically by the server, take the following steps:

- 1. Press Menu until Network appears on the bottom line of the display.
- 2. Press OK when TCP/IP appears.
- 3. Press the Scroll buttons until DHCP or BOOTP appears and press OK.
- 4. Press Stop/Clear to return to Standby mode.

7.5.3 Configuring EtherTalk

EtherTalk is AppleTalk used in an Ethernet network. This protocol is widely used in Macintosh network environments. To use EtherTalk, take the following steps:

- 1. Press Menu until Network appears on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until EtherTalk appears and press OK.
- 3. Press the Scroll buttons until On appears and press OK.
- 4. Press Stop/Clear to return to Standby mode.
 - Restart your machine to apply new settings.

7.5.4 Configuring IPX frame types

To use IPX/SPX protocol networks (for example, Novell NetWare), the format of the network communication frames must be specified for the machine. In most cases, you can keep the Auto setting. However, you can manually set the frame type format, if required. Take the following steps to change the frame type format:

- 1. Press Menu until Network on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until NetWare appears and press OK.
- 3. Press the Scroll buttons until the desired frame type appears.
 - Auto: Automatically senses and limits the frame type to the first one detected.
 - 802.2: Limits the frame type to IPX over IEEE 802.2 with IEEE 802.3 frames. All others will be discarded.
 - · 802.3: Limits the frame type to IPX over IEEE 802.3 frames. All others will be discarded.
 - · Ethernet II: Limits the frame type to IPX over Ethernet Frames. All others will be discarded.
 - SNAP: Limits the frame type to IPX over SNAP with IEEE 802.3 frames. All others will be discarded.
 - · Off: The IPX/SPX protocol is disabled.
- 4. Press OK to save the selection.
- 5. Press Stop/Clear to return to Standby mode.

Restart your machine to apply new settings.

7.5.5 Setting Ethernet speed

You can select the communication speed for Ethernet connections.

- 1. Press Menu until Network appears on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until Ethernet Speed appears and press OK.
- 3. Press the Scroll buttons until the speed you want appears and press OK.
- 4. Press Stop/Clear to return to Standby mode.

Restart your machine to apply new settings.

7.5.6 Restoring the network configuration

You can return the network configuration to its default settings.

- 1. Press Menu until Network appears on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until Clear Setting appears and press OK.
- 3. Press OK when Yes appears to restore the network configuration.
- 4. Power the machine off and back on.

7.5.7 Printing a network configuration page

The Network Configuration page shows how the network interface card on your machine is configured.

- 1. Press Menu until Network appears on the bottom line of the display and press OK.
- 2. Press the Scroll buttons until Network Info. appears and press OK.
- 3. Press OK when Yes appears.

The Network Configuration page prints out.

8. Exploded Views and Parts List

8.1 Main • • • • • • • • • • • • • • • • • • •
8.2 Housing Scanner
8.3 OPE Cover • • • • • • • • • • • • • • • • • • •
8.4 Platen Cover Ass'y
8.5 ADF Ass'y
8.6 DADF Ass'y · · · · · · · · · · · · · · · · · · ·
8.7 DADF Platen Cover Ass'y · · · · · · · · · · · · · · · · · · ·
8.8 DADF SUB Ass'y
8.9 Side Cover Ass'y
8.10 Cassette Ass'y
8.11 Exit Ass'y
8.12 Feeder Ass'y \cdot
8.13 MP Ass'y
8.14 Base Frame • • • • • • • • • • • • • • • • • • •
8.15 Pick-up Ass'y
8.16 Drive Ass'y
8.17 Main Frame Ass'y
8.18 FuserAss'y
8.19 SCF Unit(Option Cassette)

Way to observe Part Code & Description



8.1 Main



8.2 Housing Scanner



8.3 OPE Cover



8.4 Platen Cover Ass'y





8-5

8.5 ADF Ass'y



8.6 DADF Ass'y



8.7 DADF Platen Cover Ass'y





8.8 DADF SUB Ass'y



8.9 Side Cover Ass'y



8.10 Cassette Ass'y



8.11 Exit Ass'y



8.12 Feeder Ass'y



8.13 MP Ass'y





8.14 Base Frame



8.15 Pick-up Ass'y



8.16 Drive Ass'y



8.17 Main Frame Ass'y



8.18 Fuser Ass'y





Service Parts List(SCX-6322DN/XAZ)

	Service(SA:service available, SNA:service not avaialble)			
Drawer#	Description	SEC_Code	QT'y	Service
8.1-0	22 PPM FLATBED MFP	SCX-6322DN/XAZ		
8.1-1-1	ELA HOU-SCANNER	JC96-04180X	1	SA
8.1-2	MEA UNIT-COVER PA EX	JC97-01556C	1	SA
8.1-2-1	PMO-TRAY EXT MP NE	JC72-00354D	1	SA
8.1-2-2	PMO-COVER PAPER EXIT	JC72-00786C	1	SA
8.1-3	MEA UNIT-CASSETTE	JC97-01736D	1	SA
8.1-4	MEA UNIT-COVER FRONT	JC97-01572C	1	SA
8.1-5	UNIT-LSU,600DPI,22	JC59-00014C	1	SA
8.1-6	ELA HOU-SHIELD SMPS	JC96-04178A	1	SA
8.1-7	PBA SUB-LIU	JC92-01793D	1	SA
8.1-8	SUPPORTER	6103-000101	2	SNA
8.1-9	ELA HOU-PICK UP PLUS	JC96-02715C	1	SA
8.1-10	ELA HOU-SIDE COVER	JC96-02183D	1	SA
8.1-11	ELA HOU-MP	JC96-02182B	1	SA
8.1-12	ELA HOU-BASE FRAME	JC96-04010C	1	SA
8.1-13	MEA UNIT-FEED ROLLER	JC97-01850A	1	SA
8.1-14	FLA HOU-FUSER F_COIL	JC96-03021C	1	SA
8.1-15	FLA HOU-FRAME MAIN	JC96-04012A	1	SA
8 1-16	MEA UNIT-EXIT	JC97-01643D	1	SA
8 1-17	FLA HOU-ENGINE DRIVE	JC96-04183A	1	SA
8 1-18	MEA UNIT-REAR COVER	JC97-01851D	1	SA
8 1-18-1	COVER-MAIN REAR DUMMY	JC63-00192C	1	SA
8 1-18-2	COVER-MAIN REAR	JC63-00191B	1	SA
8 1-19	PBA MAIN-CONTROLLER	JC92-01792D	1	SA
8 1-20		.1C63-01089C	1	SNA
8 1-21	FLA HOU-DUCT FAN	JC96-02311A	1	SA
8.1-21-1	FAN-DC	JC31-00012A	1	SA
8.1-21-2	PMO-DUCT FAN	JC72-00807A	1	SA
8.1-24	SOLENOID-PICK UP	JC33-00007A	1	SA
8.1-25	PMO-COVER EXIT REAR	JC72-00790B	1	SA
8.1-26	MEA UNIT-GUIDE CST PA	JC97-01624B	1	SA
8.1-26-1	PPR-SHEET/GUIDE PAPER	JC72-00836A	1	SA
8.1-26-2	PMO-GUIDE CST RAIL	JC72-00791B	1	SA
8.1-26-3	SHEET-FEED	JC63-00078A	2	SNA
8.1-26-4	IPR-GUIDE CASSETTE PAPER	JC70-00244A	1	SA
8.1-28	PMO-DUMMY BASE FRAME	JC72-00789B	1	SA
8.1-29	FLA HOU-SHIELD MAIN	JC96-04182A	1	SA
8.1-29-1	SHIELD-P MAIN BOARD	JC63-01092A	1	SNA
8.1-29-2	HARNESS-INLET	JC39-00604A	1	SA
8.1-29-3	CBF HARNESS-LIU GND	JB39-00103A	1	SA
8 1-30	PMO-COVER FEED AY	JC72-00801A	1	SA
8.1-32	PMO-GUIDE PAPER OUT	JC72-00835B	1	SA
8 1-33	SHEET-CONNECTOR	JC63-00072A	1	SA
8.1-34	CBF HARNESS-LSU	JC39-00336A	1	SA
8 1-35	HARNESS-HVPS	JC39-00590A	1	SA
8.1-37	HARNESS-MAIN MOTOR	JC39-00598B	1	SA
8.1-38	GEAR-PICK UP	JC66-00335A	1	SA
8.1-39	IPR-SHIELD SMPS UPPER	JC70-00248A	1	SA
8.1-40	MEA UNIT-HOLD GND ASS'Y	JC97-01574A	1	SA
8.1-40-1	SPRING ETC-PLATE TR	JC61-70203A	1	SA
8.1-40-2	SPRING ETC-TR_L	JC61-70961A	1	SA

Drawer#	Description	SEC_Code	QT'y	Service
8.1-40-3	PMO-BUSH	JC72-40228A	1	SA
8.1-40-4	PMO-HOLDER GND TR	JC72-00883A	1	SA
8.1-41	MEA UNIT-HOLD GEAR ASS'Y	JC97-01573A	1	SA
8.1-41-1	SPRING ETC-TR_R	JC61-70906A	1	SA
8.1-41-2	PMO-BUSH	JC72-40228A	1	SA
8.1-41-3	PMO-HOLDER GEAR TR	JC72-00884A	1	SA
8.1-44	PMO-CAM JAM REMOVE	JC72-00799A	1	SA
8.1-45	PMO-LOCKER DEVE	JC72-00805A	1	SA
8.1-46	PMO-LEVER JAM REMOVE	JC72-00804A	1	SA
8.1-47	HARNESS-POWER_SWITCH	JC39-00601C	1	SA
8.1-48	GEAR-TRANSFER	JC66-40947A	1	SA
8.1-49	PMO-BEARING SHAFT	JC72-41191A	1	SA
8.1-50	MEC-TRANSFER ROLLER	JC75-00148A	1	SA
8.1-51	PMO-COVER BRKT MOTER	JC72-00834A	1	SA
8.2-0	ELA HOU-SCANNER	JC96-04180X	1	SA
8.2-1	ELA HOU-DADF	JC96-02943B	1	SNA
8.2-2	ELA HOU-OPE	JC96-04170X	1	SNA
8.2-3	ELA HOU-PLATEN	JC96-04171A	1	SNA
8.3-0	ELA HOU-OPE	JC96-04170X	1	SNA
8.3-1	COVER-DUMMY	JC63-01155N	1	SNA
8.3-2	COVER-OPE	JC63-01156X	1	SA
8.3-3	KEY-M_STOP CLEAR	JC64-00242A	1	SNA
8.3-4	KEY-M_START BLACK	JC64-00243A	1	SNA
8.3-5	KEY-M_TEL	JC64-00239A	1	SNA
8.3-7	KEY-M_FAX	JC64-00241A	2	SNA
8.3-8	KEY-M_ON HOOK	JC64-00249A	1	SNA
8.3-9	KEY-M_MENU	JC64-00248A	1	SNA
8.3-10	LENS-STATUS	JC67-00198A	1	SNA
8.3-11	RUBBER-TEL	JC73-00246A	1	SA
8.3-12	RUBBER-MODE	JC73-00247A	1	SA
8.3-13	RUBBER-MENU	JC73-00230A	1	SNA
8.3-14		JC63-01157A	1	SNA
8.3-15		JC64-00247A	1	SNA
8.3-10		JC64-00245A	1	SINA
8.3-17		JC64-00246A	1	SINA
8.3-18		JC73-00248A	1	SA
0.3-19		JC73-00245A	1	SA
0.3-20			1	SA SA
0.3-21		6003 000154	17	SA SA
8.4-33		IC96-04034B	1	SA SA
8 4-33-1	PMO-COVER SCAN UPPER	JC72-00758B	1	SA
8 4-33-2		IC97-02800A	1	SA SA
8 4-33-2-1		JC72-00759D	1	SA
8 4-33-2-2	MCT-GLASS ADE	JC74-00019A	1	SA
8 4-33-2-4		JC63-00074A	1	SA
8 4-33-3	SHEET ABS-REGLEDGE	JC72-00809B	1	SA
8.4-33-4	SCREW-TAPTITE	6003-000154	2	SA
8.4-33-5	TAPE ETC-DOUBLE TAPE SMALL	JC02-00013A	3	SNA
8.4-33-6	TAPE ETC-DOUBLE TAPE LARGE	JC02-00012A	2	SNA
8.4-33-7	MCT-GLASS SCANNER(LEGAL)	JC74-00018A	1	SA
8.4-33-10	IPR-HOLDER GLASS	JB70-00148A	3	SA
8.4-34	ELA HOU-SCAN LOWER	JC96-04172A	1	SNA
8.4-34-1	COVER-SCAN LOWER	JC63-00157B	1	SNA
8.4-34-2	PMO-COVER DUMMY LOWER	JC72-00753B	1	SA
8.4-34-3	SCREW-TAPTITE	6003-000154	15	SA

Service(SA:service available, S	SNA:service	not avaialble)
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Drawer#	Description	SEC_Code	QT'y	Service
8.4-34-4	ICT-INSERT SHAFT	JB70-00154A	1	SNA
8.4-34-5	PMO-PULLEY	JB72-00763A	1	SA
8.4-34-6	PMO-HOLDER BELT	JB72-00764A	1	SA
8.4-34-7	RING-E	6044-000125	1	SA
8.4-34-8	ELA HOU-CCD MODULE	JC96-02759B	1	SA
8.4-34-9	BELT-TIMING GEAR	6602-001084	1	SA
8.4-34-11	HOLDER-M-CCD(UMAX)	JC61-00703A	1	SA
8.4-34-12	SPRING ETC-EXIT	JB61-70939A	1	SNA
8.4-34-13	IPR-BRK SCAN BD	JC70-00228A	1	SA
8.4-34-14	COVER-CCD CABLE	JC63-00158B	1	SNA
8.4-34-15	PMO-LEVER SENSOR	JC72-00755A	1	SA
8.4-34-16	SPRING ETC-BELT	JB61-00059A	1	SA
8.4-34-17	SCREW-TAPPING	6002-000175	3	SA
8.4-34-18	ELA HOU-SCAN MOTOR	JC96-02751A	1	SA
8.4-34-18-1	BRACKET-MOTOR PLATEN	JC61-00702A	1	SNA
8.4-34-18-2	SCREW-TAPTITE	6003-000154	2	SA
8.4-34-18-3	GEAR-IDLE	JB66-00083A	1	SA
8.4-34-18-4	GEAR-REDUCTION73/37	JC66-00530A	1	SA
8.4-34-18-5	GEAR-TIMING	JC66-00531A	1	SA
8.4-34-18-6	PMO-HOLDER BELT	JB72-00764A	1	SA
8.4-34-18-7	RING-E	6044-000125	2	SA
8.4-34-18-8	MOTOR STEP-SCAN	JB31-00011A	1	SA
8.4-34-19	CABLE CLAMP	6502-000132	1	SNA
8.4-34-21	SCREW-TAPTITE	6003-000154	8	SNA
8.4-34-22	CBF HARNESS-OPE	JC39-00340A	1	SA
8.4-34-23	CBF HARNESS-SCAN MOTOR	JB39-00077A	1	SA
8.4-34-24	CBF HARNESS-DRIVER GND	JB39-00065A	1	SNA
8.4-34-25	CBF SIGNAL-CCD FFC	JC39-00236A	1	SA
8.4-34-26	CBF HARNESS-SCAN_DSUB	JC39-00338A	1	SA
8.4-34-27	ELA UNIT-CORE	JB96-01381A	3	SA
8.4-34-28	SHAFT-CCD(UMAX)	JC66-00532A	1	SA
8.4-34-28	IPR-CHANNEL BASE FRAME	JC70-00239A	2	SA
8.6-0	ELA HOU-DADF	JC96-02943B	1	SNA
8.6-1	ELA HOU-COVER PLATEN	JC96-02942B	1	SA
8.6-2	COVER-FRONT	JC63-00200B	1	SA
8.6-3	COVER-REAR	JC63-00201B	1	SA
8.6-4	ELA HOU-DADF SUB	JC96-02973B	1	SNA
8.6-5	MEA UNIT-TX STACKER	JC97-01840B	1	SNA
8.6-5-1	PMO-TX STACKER	JC72-01253B	1	SA
8.6-5-2	GUIDE-DOC_LEFT	JC61-00739B	1	SNA
8.6-5-3	GUIDE-DOC_RIGHT	JC61-00740B	1	SNA
8.6-5-4	IPR-WASHER SPRING CU	JF70-10616A	1	SA
8.6-5-5	PMO-GEAR PINION	JF72-41354A	1	SA
8.6-5-6	PMO-ACTUATOR LENGTH	JC72-01250B	1	SA
8.6-5-7	PMO-TX STACKER LOWER	JC72-01254B	1	SA
8.6-5-8	SPRING ETC-TORSION DOC (CC2-F)	JB61-00076A	1	SA
8.7-0	ELA HOU-COVER PLATEN	JC96-02942B	1	SA
8.7-1	COVER-PLATEN	JC63-00198B	1	SNA
8.7-2	PMO-EXTENTION PLATEN	JC72-01251B	1	SNA
8.7-3	GUIDE-EXTENTION	JC61-00746B	1	SNA
8.7-4	PPR-SPONG SHEET	JC72-00751B	1	SA
8.7-5	PMO-ROLL PINCH	JG72-40663A	6	SA
8.7-6	IPR-P_PINCH(SCAN)	JC70-00468A	6	SNA
8.7-7	SHAFT-PINCH	JC66-00659A	2	SA
8.7-8	PMO-ACTUATOR SENSOR SCAN	JC72-00746A	1	SA
8.7-9	PBA SUB-GATE	JC92-01562A	1	SA
Service(SA:service	available,	SNA:service	not avaialble)	
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Drawer#	Description	SEC_Code	QT'y	Service
8.7-10	MEA UNIT-HINGE(MCK2)	JC97-01839A	2	SA
8.7-11	PLATE-P-DUMMY PLATEN	JC61-00819A	1	SA
8.7-12	SPRING ETC-CHARGE	JC61-70925A	1	SNA
8.7-13	SPRING ETC-TORSION DOC (CC2-F)	JB61-00076A	1	SA
8.8-0	ELA HOU-DADF SUB	JC96-02973B	1	SNA
8.8-1	MEA UNIT-COVER OPEN	JC97-01844B	1	SA
8.8-1-1	COVER-OPEN	JC63-00195B	1	SA
8.8-1-2	PMO-STOPPER EXIT	JC72-41396B	1	SA
8.8-1-4	ROLLER-REGI	JC66-00587A	1	SNA
8.8-1-5	PMO-LEVER OPEN	JC72-01256B	1	SNA
8.8-1-6	SPRING ETC-KNOCKUP,MP	JC61-00483A	2	SA
8.8-1-7	PBA SUB-REGI	JC92-01561A	1	SA
8.8-1-8	PMO-ACTUATOR REGI	JC72-01261A	1	SNA
8.8-1-9	COVER-SENSOR	JC63-00197B	1	SA
8.8-1-10	SPRING ETC-TORSION DOC (CC2-F)	JB61-00076A	1	SA
8.8-1-11	BUSH-6_D	JC61-00423A	2	SA
8.8-1-12	RING-E	6044-000125	3	SA
8.8-1-13	GROUND-P DUPLEX	JC63-00315A	1	SNA
8.8-1-14	COVER-HARNESS	JC63-00408B	1	SNA
8.8-1-15	CBF HARNESS-LIU GND	JB39-00103A	1	SA
8.8-2	GUIDE-SCAN	JC61-00738B	1	SNA
8.8-3	GROUND-P_SCAN ROLLER	JC63-00249A	1	SNA
8.8-4	GROUND-P_EXIT ROLLER	JC63-00250A	1	SNA
8.8-5	PBA SUB-SENSOR_IF	JC92-01556A	1	SA
8.8-6	IPR-BRKT WHITE BAR	JC70-00225A	1	SA
8.8-7	SPRING ETC-WHITE BAR	JC61-00548A	2	SA
8.8-8	SHEET-GUIDE PAPER	JC63-00185A	1	SNA
8.8-9	ROLLER-EXIT	JC66-00588A	1	SA
8.8-10	GEAR-DADF_EXIT31	JC66-00571A	1	SA
8.8-11	MEA UNIT-COVER EXIT	JC97-01841B	1	SNA
8.8-11-1	COVER-EXIT	JC63-00196B	1	SNA
8.8-11-2	SPRING ETC-WHITE BAR	JC61-00548A	2	SA
8.8-11-3	PMO-ROLLER IDLE SCAN	JC72-00906A	3	SA
8.8-11-4	SHAFT-EXIT IDLE	JC66-00661A	1	SA
8.8-11-5	TAPE ETC-ANTI BRUSH	JC02-00014A	1	SNA
8.8-11-6	GROUND-P-EXIT COVER	JC63-00203A	1	SNA
8.8-12	ROLLER-SCAN	JC66-00585A	2	SA
8.8-13	PMO-BUSHING HOLDER	JG72-40732A	2	SNA
8.8-14	SPRING ETC-CLUTCH	JB61-70922A	2	SA
8.8-15	GEAR-DADF_SCAN31	JC66-00570A	2	SA
8.8-16	MEA UNIT-PICK_UP	JC97-01848A	1	SA
8.8-17	MEP-CLUTCH SMALL	JC47-00003C	3	SA
8.8-18	ELA HOU-DUPLEX MOTOR	JC96-02940A	1	SA
8.8-19	MOTOR STEP-DUPLEX	JC31-00034A	1	SA
8.8-20	IPR-GUARD C/O S/W	JC70-00218A	1	SA
8.8-21	CBF HARNESS-COVER_OPEN	JC39-00332A	1	SA
8.8-22	MOTOR STEP-DADF	JC31-00033A	1	SA
8.8-23	ELA HOU-DADF MOTOR	JC96-02941A	1	SA
8.8-24	COVER-P GEAR	JC63-00307A	1	SA
8.8-26	GEAR-DADF24(A)	JC66-00565A	1	SA
8.8-27	PMO-GATE DUPLEX	JC72-01255A	1	SA
8.8-28	IPBA SUB-DADF	JC92-01554B	1	SA
8.8-29	CBF HARNESS-CLUTCH_IF	JC39-00327A	1	SA
8.8-30	CBF D SUB CABLE-DADF	JC39-00359A	1	SA
8.8-31	PMO-ACTUATOR SCAN	JC72-01249A	1	SA
8.8-32	PMO-ACTUATOR DUPLEX	JC72-01263A	1	SA

Drawer#	Description	SEC_Code	QT'y	Service
8.8-33	CBF HARNESS-DADF_GND	JC39-00334A	1	SA
8.8-34	ROLLER-DUPLEX	JC66-00589A	1	SA
8.8-36	GUIDE-DUPLEX_INNER	JC61-00737B	1	SA
8.8-37	GUIDE-DUPLEX_LOWER	JC61-00735B	1	SA
8.8-38	MEA UNIT-GUIDE DUPLEX	JC97-01843A	1	SA
8.8-39	MEA UNIT-GUIDE_P UP	JC97-01847B	1	SA
8.8-39-1	GUIDE-PICK_UP_UPPER	JC61-00733B	1	SNA
8.8-39-2	MEA UNIT-HOLDER RUB	JC97-01846B	1	SA
8.8-39-3	PBA SUB-PAPER SEN	JC92-01783A	1	SNA
8.8-39-4	PBA SUB-EXIT_OPEN	JC92-01564A	1	SA
8.8-39-5	PMO-ACTUATOR DOC	JC72-01248A	2	SA
8.8-39-6	GUIDE-PICK_UP_LOWER	JC61-00732B	1	SNA
8.8-39-7	SPRING ETC-TORSION DOC (CC2-F)	JB61-00076A	2	SA
8.8-40	MEA UNIT-SUPPORT P UP	JC97-01845B	1	SA
8.8-40-1	SUPPORT-PICK UP	JC61-00742B	1	SNA
8.8-40-2	SPRING ETC-PICKUP	JC61-00482A	1	SA
8.8-40-3	GUIDE-DOC SENSOR	JC61-00788B	2	SNA
8.8-41	BUSH-10_D	JC61-00720A	2	SNA
8.8-42	BUSH-6_D	JC61-00423A	8	SA
8.8-43	BUSH-6_D(L)	JC61-00884A	2	SNA
8.8-44	SHAFT-GATE_DUPLEX	JC66-00683A	1	SNA
8.8-45	SHAFT-REGI	JC66-00662A	1	SA
8.8-46	CBF HARNESS-SENSOR_IF	JC39-00344A	1	SA
8.9-0	ELA HOU-SIDE COVER	JC96-02183D	1	SA
8.9-1	MEA UNIT-DUPLEX	JC97-01578B	1	SA
8.9-1-1	IPR-E-PLATE SAW(MCK2)	JC70-10232D	1	SA
8.9-1-2	IPR-BRACKET GUIDE B	JC70-00234A	1	SA
8.9-1-3	PMO-HOLDER SAW	JC72-41213B	1	SNA
8.9-1-4	IPR-BRACKET GUIDE A	JC70-00229A	1	SA
8.9-1-5		JC72-00731A	1	SA
8.9-1-6		JC61-00478A	<u> </u>	SA
8.9-1-7		JC72-00730A	1	SA
8.9-1-8		JC66-00341A	3	SA
0.9-1-9		5000-00340A	1	
0.9-1-10				SINA
8 0-1-12		JC70-00231A	1	SA
8 9-1-13		IC70-00232A	1	SA SA
8 9-1-13		IC72-00764A	2	SA SA
8 9-1-14		JC73-10203A	2	SA
8 9-1-15		JC70-00233A	1	SA
8.9-1-16	PMO-GP LOWER DP	JC72-00732A	1	SA
8.9-1-17	PMO-ROLLER EXIT	JC72-40361A	2	SNA
8.9-1-18	SPRING FTC-FUSER EXIT	JC61-70976A	2	SNA
8.9-1-19	CBF HARNESS-OPE GND	JC39-00036A	1	SA
8.9-1-20	IPR-BRKT GROUND B	JC70-00230A	1	SA
8.9-2	MEA UNIT-SIDE SUB	JC97-01909B	1	SA
8.9-2-1	PMO-GUIDE DP SIDE	JC72-00806A	1	SA
8.9-2-2	GUIDE-SIDE PUSH	JC61-00919B	1	SNA
8.9-2-3	PMO-LOCKER OPEN	JC72-00762D	1	SA
8.9-2-5	PMO-LOCKER SIDE R	JC72-00763C	1	SA
8.9-2-6	SPRING ETC-LOCKER TORSION	JC61-00479A	1	SA
8.9-2-7	PMO-TIE STOPPER	JC72-00766A	2	SA
8.9-2-8	MEA UNIT-TRAY	JC97-01577C	1	SA
8.9-2-8-1	PMO-TRAY CASE MP	JC72-00776B	1	SA
8.9-2-8-2	PMO-TRAY EXT MP	JC72-00778D	1	SA

Service(SA:service	available,	SNA:service	not avaialble)
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Drawer#	Description	SEC_Code	QT'y	Service
8.9-2-8-3	PMO-SIDE GUIDE MP	JC72-00547A	1	SA
8.9-2-8-4	PMO-TRAY COVER MP	JC72-00777D	1	SA
8.9-2-8-5	IPR-GUIDE LATCH	JB70-10906A	1	SA
8.9-2-8-6	PMO-TRAY LINK MP	JC72-00857C	2	SA
8.10-1	PMO-IMPACT CASSETTE	JC72-00877C	1	SA
8.10-2	PLATE-P_GUIDE PAPER	JC61-00831A	2	SA
8.10-3	IPR-PLATE K/UP	JC70-00221A	1	SA
8.10-5	PMO-COVER CASSETTE	JC72-00795B	1	SA
8.10-6	PMO-FRAME CASSETTE	JC72-00716B	1	SA
8.10-7	GUIDE-FRONT CST PLUS	JC61-00825C	1	SNA
8.10-8	PMO-GUIDE REAR	JC72-00717C	1	SA
8.10-9	GUIDE-P-SIDE CST	JC61-00826A	1	SA
8.10-10	PMO-LOCKER PLATE	JC72-41210A	1	SA
8.10-11	PAD-CST PLUS	JC69-00474A	2	SA
8.10-12	SPRING ETC-LOCKER,PLATE	JG61-70531A	1	SA
8.10-13	SPRING-CS	6107-001172	1	SA
8.10-14	SPRING-CS	6107-001172	1	SA
8.10-17	GUIDE-SIDE HANDLE	JC61-00824C	1	SNA
8.10-18	IPR-P-FINGER LEFT	JC70-00325A	1	SA
8.10-19	BUSH-M-FINGER,F	JC61-00653A	2	SA
8.10-20	WASHER-PLAIN	6031-000021	2	SA
8.10-21	SPRING ETC-WHITE BAR	JC61-00548A	1	SA
8.10-22	GUIDE-SUB WALL	JC61-00840B	1	SNA
8.11-0	MEA UNIT-EXIT	JC97-01643D	1	SA
8.11-2	PMO-GUIDE-EXIT LOWER	JC72-00710A	1	SA
8.11-3	SPRING ETC-EXIT LOWER IDLE	JC61-00484A	4	SA
8.11-4	HOLDER-EXIT(MC)	JC61-00547A	4	SNA
8.11-5	PMO-ROLLER FD F	JC72-41007A	4	SA
8.11-6	PMO-ROLLER FD R	JC72-41008A	4	SA
8.11-7	SPRING ETC-EXIT ROLL FD	JC61-70911A	2	SA
8.11-8	SHAFT-IDLE LOWER	JC66-00715A	1	SNA
8.11-9	PMO-ROLLER EXIT	JC72-40361A	4	SNA
8.11-10	PMO-GUIDE EXIT UPPER	JC72-00708B	1	SA
8.11-11	MEC-ROLLER EXIT DRIVE	JC75-00166A	2	SA
8.11-12	PMO-BEARING LARGE DP	JC72-00885A	2	SA
8.11-13	PMO-ROLLER DECURL	JC72-00833A	4	SA
8.11-14	PMO-BUSHING DP	JC72-01345A	1	SNA
8.11-15	PMO-BEARING LARGE DP	JC72-00885A	1	SA
8.11-16	PMO-HOLDER PAD,MP	JC72-00771A	1	SA
8.11-16	GEAR-DUPLEX	JC66-40912A	1	SA
8.11-17	PMO-PULLEY DUPLEX	JC72-40980A	2	SA
8.11-18	RING-C	6044-000159	4	SA
8.11-19	BELT-TIMING GEAR	6602-001084	1	SA
8.11-20	IPR-GROUND-EXIT	JC70-00252A	1	SA
8.11-21	PMO-LEVER STACKING	JC72-00709B	1	SA
8.11-22	MEC-BRUSH ANTISTATIC	JC75-00095A	1	SA
8.11-23	SCREW-TAPTITE	6003-000154	3	SA
8.11-24	PBA SUB-BIN_FULL_SEN	JC92-01400B	1	SA
8.12-0	MEA UNIT-FEED ROLLER	JC97-01850A	1	SA
8.12-1	PMO-FRAME FEED	JC72-00821A	1	SA
8.12-3	GEAR-MP/DUP DRV	JC66-00346A	1	SA
8.12-4	ICT-SHAFT FEED	JC70-00267A	1	SNA
8.12-5	PMO-BUSHING_P/U,MP	JC72-41364A	2	SA
8.12-6	RING-E	6044-000125	2	SA
8.12-7	RING-CS	6044-000001	1	SNA
8.12-8	BRACKET-PM_FEED(25)	JC61-00849A	1	SNA

Service(SA:service	available,	SNA:service	not avaialble)
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Drawer#	Description	SEC_Code	QT'y	Service
8.12-9	PMO-ROLLER FEED	JC72-00727A	1	SA
8.12-11	PMO-HOLDER PINCH SUB	JC72-00725A	1	SA
8.12-12	PMO-ROLLER FEED L	JC72-40261A	1	SA
8.12-13	HOLDER-PUSH_FEED_CST	JC61-00871A	1	SNA
8.12-14	PMO-HOLDER PINCH M	JC72-00724A	1	SA
8.12-15	PMO-SUB HOLDER FEED	JC72-40266A	1	SA
8.12-16	SPRING ETC-FEED MP	JC61-00481A	1	SA
8.12-17	WASHER-PLAIN	6031-000021	3	SNA
8.12-18	PMO-ROLLER FEED S	JC72-40262A	1	SA
8.12-19	IPR-SHAFT FEED IDLER	JC70-10230A	4	SA
8.12-20	SHEET-FEEDER	JC63-00259A	1	SNA
8.12-21	PMO-ROLLER PINCH FEED	JC72-01315A	2	SNA
8.12-22	RING-C	6044-000159	2	SA
8.13-0	ELA HOU-MP	JC96-02182B	1	SA
8.13-2	SCREW-TAPTITE	6003-000154	1	SNA
8.13-3	RING-E	6044-000125	2	SA
8.13-5	SPRING ETCCAM MP	JC61-00003A	1	SA
8.13-7	SPRING ETC-KNOCKUP,MP	JC61-00483A	1	SA
8.13-8	IPR-BRACKET SOLENOIDE	JC70-00237A	1	SA
8.13-9	PMO-HOLDER CAM MPF	JC72-00055A	1	SNA
8.13-10	PMO-GEAR P/U MPF	JC72-00056A	1	SA
8.13-11	PMO-ROLLER CAM.MP	JC72-00761A	1	SA
8.13-12	PMO-ACTUATOR,MP	JC72-00767A	1	SA
8.13-13	PMO-ADJUSTER,MP	JC72-00768A	1	SA
8.13-14	PMO-CAM PICK UP,MP	JC72-00769A	1	SA
8.13-15	PMO-FRAME MP	JC72-00770B	1	SA
8.13-17	PMO-HOLDER SENSOR,MP	JC72-00772A	1	SA
8.13-18	PMO-HOUSING PICK UP,MP	JC72-00773A	1	SA
8.13-19	PMO-PLATE KNOCK UP,MP	JC72-00775A	1	SA
8.13-20	PMO-IDLE PICK UP MP	JC72-41027A	2	SA
8.13-21	RPR-RUBBER PICK UP,MP	JC73-00089A	1	SA
8.13-22	RPR-RCT PAD PICKUP,MP	JC73-00090A	1	SA
8.13-23	PAD-MP(PLUS)	JC69-00494A	1	SA
8.13-24	PBA SUB-MP SEN	JC92-01362A	1	SA
8.13-25	PMO-BUSHING_P/U,MP	JC72-41364A	2	SA
8.14-0	ELA HOU-BASE FRAME	JC96-04010C	1	SA
8.14-1	PMO-BASE FRAME	JC72-00779B	1	SA
8.14-2	PMO-COVER FRONT DUMMY	JC72-00785B	1	SA
8.14-3	SPRING ETC-TORSION	JC61-00486A	1	SA
8.14-5	SCREW-TAPTITE	6003-000154	12	SA
8.14-6	IPR-CHANNEL BASE FRAME	JC70-00239A	1	SA
8.14-7	SCREW-TAPTITE	6003-000154	5	SNA
8.14-8	FOOT-ML80	JC61-40001A	2	SA
8.14-9	IPR-GROUND PLATE B(BASE)	JC70-00241A	1	SA
8.14-10	SCREW-TAPTITE	6003-000154	1	SA
8.14-11	ELA M/M-AUD SPEAKER	JC96-01607A	1	SA
8.14-12	BRACKET-M-PUSH DEVE	JC61-00789A	2	SNA
8.14-13	SPRING ETC-DEVE REAR	JC61-00550A	1	SA
8.14-14	IPR-GROUND PLATE SCF	JC70-00243A	1	SA
8.14-15	CBF HARNESS-SCF	JC39-00082A	1	SA
8.14-17	FAN-DC CARDINAL	JC31-00027B	1	SA
8.14-18	SHAFT-DEVE_BOTTOM	JC66-00684A	1	SNA
8.14-19	SPRING ETC-DEVE FRONT	JC61-00551A	1	SA
8.14-20	HOLDER-M_ROLLER BOTTOM	JC61-00855A	1	SNA
8.14-21	HOLDER-CATCH CST(MC2)	JC61-00857A	1	SNA
8.14-22	BAT FERY-NIH(2ND)	4302-001183	1	SA

Service(SA:service	available,	SNA:service	not avaialble)
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Drawer#	Description	SEC_Code	QT'y	Service
8.14-23	STOPPER-M-FAN80	JC61-00667A	1	SA
8.14-24	PBA SUB-AIR_TMP	JC92-01568A	1	SA
8.15-0	ELA HOU-PICK UP PLUS	JC96-02715C	1	SA
8.15-1	IPR-GND FEED	JC70-00238A	1	SA
8.15-2	IPR-GND INPUT	JC70-00235A	1	SA
8.15-3	IPR-GUIDE INPUT	JC70-00222A	1	SA
8.15-4	PMO-M-ACTUATOR_NO PAPER	JC72-01313A	1	SA
8.15-6	PBA SUB-PTL	JC92-01361A	1	SA
8.15-7	PMO-FEED SENSOR	JC72-00721A	1	SA
8.15-8	PMO-GUIDE PAPER	JC72-00722B	1	SA
8.15-9	PMO-HOLDER SENSOR FEED	JC72-00726A	1	SA
8.15-10	PMO-LENS TONER SENSOR	JC72-00803A	1	SA
8.15-11	PMO-PTL PATH	JC72-00822A	1	SA
8.15-13	PMO-BUSHING_P/U,MP	JC72-41364A	1	SA
8.15-14	HOUSING-M-PICKUP LARGE	JC61-00822A	1	SNA
8.15-15	HOUSING-M-PICKUP SMALL	JC61-00823A	1	SNA
8.16-0	ELA HOU-ENGINE DRIVE	JC96-04183A	1	SA
8.16-2	MOTOR STEP-MCK2(MAIN)	JC31-00020C	1	SA
8.16-3	PMO-IMPELLER_DRV	JC72-00825A	1	SA
8.16-7	GEAR-71/23	JC66-00345A	1	SA
8.16-8	GEAR-OPC53/37	JC66-00580A	1	SNA
8.16-9	GEAR-86/23	JC66-00337A	1	SA
8.16-11	GEAR-31/19	JC66-00350A	1	SA
8.16-12	GEAR-RDCN FEED INNER	JC66-00342A	1	SA
8.16-13	GEAR-DEVE DRV	JC66-00338A	1	SA
8.16-14	GEAR-HUB CLUTCH	JC66-00340A	2	SA
8.16-15	PMO-DEV/COUPLING	JC72-00743A	1	SA
8.16-16	GEAR-RDCN FEED OUTER	JC66-00343A	1	SA
8.16-17	GEAR-OPC DRV	JC66-00347A	1	SA
8.16-18	MEC-BRAKE GEAR	JC75-00163A	1	SNA
8.16-19	GEAR-OPC 55/31	JC66-00581A	1	SNA
8.16-20	BRACKET-P-BRAKE	JC61-00853A	1	SNA
8.16-21	GEAR-FEED DRV	JC66-00348A	1	SA
8.16-22	GEAR-FUSER DRV INNER	JC66-00333A	1	SA
8.16-23	GEAR-GEAR FUSER DRV OUTER	JC66-00334A	1	SA
8.16-24	GEAR-SWING DRV	JC66-00349A	1	SA
8.16-25	GEAR-EXIT/U,ID	JC66-40211B	1	SA
8.16-26	LINK-P-DUPLEX	JC66-00576A	1	SNA
8.16-27	RING-C	6044-000159	1	SA
8.17-0	ELA HOU-FRAME MAIN	JC96-04012A	1	SA
8.17-1	PMO-FRAME MAIN	JC72-00800A	1	SA
8.17-2	PMO-LENS TONER SENSOR	JC72-00803A	1	SA
8.17-3	PBA SUB-TONER_RX	JC92-01360B	1	SA
8.17-4	IPR-GND OPC	JC70-00216A	1	SA
8.17-5	HARNESS-OPC GND	JC39-00592A	2	SA
8.17-7	SCREW-TAPPING	6002-000175	1	SA
8.17-9	PMO-CAP CONNECTOR L	JC72-00463A	1	SA
8.17-10	PMO-CAP CONNECTOR U	JC72-00465A	1	SA
8.17-11	IPR-GUARD C/O S/W	JC70-00218A	1	SA
8.17-12	IPR-GND TERMINAL	JC70-00219A	1	SA
8.17-13	CBF HARNESS-COVER_SW	JC39-00360A	1	SA
8.17-14	IGEAR-EXIT,IDLE(Z17)	JC66-40964A	2	SA
8.17-15	SCREW-TAPTITE	6003-000154	1	SNA
8.17-16	IGROUND-P-FUSER_MC2	JC63-00409A	1	SNA
8.17-17	RING-CS	6044-000001	6	SNA
8.17-18	SPRING ETC-CLUTCH	JB61-70922A	2	SA

Drawer#	Description	SEC_Code	QT'y	Service
8.17-19	GEAR-EXIT/U,ID	JC66-40211B	3	SA
8.17-20	IPR-GND EXIT	JC70-00214A	1	SA
8.17-21	IPR-TERMINAL OPC	JC70-00298A	2	SNA
8.17-22	HOUSING-M-TERMINAL	JC61-00723A	1	SA
8.17-23	IPR-TERMINAL GND	JC70-00272A	1	SA
8.17-24	IPR-TERMINAL TR	JC70-00271A	1	SA
8.17-25	IPR-TERMINAL BLADE	JC70-00269A	2	SA
8.17-26	IPR-TERMINAL SUPPLY	JC70-00270A	2	SA
8.17-27	PMO-HOUSING TERMINAL	JC72-41010A	1	SA
8.17-28	IPR-TERMINAL FU	JC70-10961A	2	SA
8.17-29	NUT-HEXAGON	6021-000222	2	SNA
8.17-30	SCREW-MACHINE	6001-000568	2	SNA
8.17-36	HARNESS-FUSER	JC39-00600B	1	SA
8.17-37	HARNESS-OPC FUSER	JC39-00593A	1	SA
8.17-38	CBF HARNESS-THERM	JC39-00377A	1	SA
8.17-38	HARNESS-H VOLTAGE	JC39-00589A	1	SA
8.18-0	ELA HOU-FUSER E COIL	JC96-03021C	1	SA
8.18-1	ELA UNIT-HEAT ROLLER	JC96-03020C	1	SNA
8.18-2	MEA UNIT-ACTUATOR	JC97-01611B	1	SA
8.18-3	PEX-ROLLER F/UP(2)	JC72-20902A	3	SA
8.18-4	IPR-PIN ROLLER EXIT	JC70-00064A	3	SNA
8.18-5	MEA UNIT-CLAW	JC97-01587B	4	SA
8.18-5-1	SPRING ETC-SAPERATION	JC61-70909A	1	SA
8.18-5-2	PMO-GUIDE CLAW	JC72-00376B	1	SA
8.18-6	BRUSH-CARBON	JC67-00067A	2	SA
8.18-7	SPRING-CS	6107-001172	2	SA
8.18-8	SCREW-MACHINE	6001-000568	2	SNA
8.18-9	COVER-M-BRUSH	JC63-00353A	2	SNA
8.18-10	SCREW-TAPTITE	6003-000154	5	SA
8.18-11	ELECTRODE-P-FRONT	JC70-00469A	1	SNA
8.18-12	THERMOSTAT	4712-001027	1	SA
8.18-13	SCREW-MACHINE	6001-000568	2	SA
8.18-14	THERMISTOR-NTC	1404-001340	1	SA
8.18-15	NPR-ELECTRODE M	JC71-00030A	1	SA
8.18-16	SCREW-TAPTITE	6003-000154	4	SNA
8.18-17	ELECTRODE-P-GEAR	JC70-00470A	1	SNA
8.18-18	PMO-UPPER FUSER	JC72-01318A	1	SNA
8.18-19	NUT-HEXAGON	6021-000222	2	SNA
8.18-20	SPRING ETC-ACTUATOR6G	JC61-00485A	1	SA
8.18-21	LEVER-M-JAM R	JC66-00679A	1	SNA
8.18-22	ROLLER-PRESSURE	JC66-00691A	1	SNA
8.18-23	PMO-LOWER FUSER	JC72-01316A	1	SNA
8.18-24	IPR-GROUND FU	JC70-00259A	1	SA
8.18-25	SPRING ETC-PR(7300)	JC61-00056A	2	SA
8.18-26	BUSH	JC66-10901A	2	SA
8.18-27	PMO-GUIDE INPUT	JC72-00817A	1	SA
8.18-28	LEVER-M-JAM F	JC66-00678A	1	SNA
8.18-29	BUSH-HEAT ROLLER	JC61-01702A	1	SNA
Replacement	BOX-MAIN	JC69-01018E	1	SA
Replacement	CBF-POWER CORD	3903-000020	1	SA

9. Block Diagram

9.1 SCX-6122FN Block Diagram



9-1

9.2 SCX-6322DN Block Diagram



10. Connection Diagram

10.1 SCX-6122FN Connection Diagram





10.2 SCX-6322DN Connection Diagram

11. Schematic Diagrams

11.1 Main board(1/11)



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Main board(2/11)

Main board(3/11)





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Main board(4/11)

Schematic Diagram



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Main board(6/11)





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Main board(7/11)



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Main board(8/11)



Samsung Electronics







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Main board(10/11)



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11.2 DADF(1/3)



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11-12 Service Manual

DADF(2/3)





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DADF(3/3)





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11-14 Service Manual

Schematic Diagram



11.3 OPE(1/2)

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OPE(2/2)



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11.4 HVPS(1/4)





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HVPS(2/4)



Samsung Electronics

HVPS(3/4)





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HVPS(4/4)





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11.5 Modular board

Schematic Diagram



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12. Reference Information

This chapter contains the tools list, list of abbreviations used in this manual, and a guide to the location space required when installing the printer. A definition of test pages and Wireless Network information definition is also included.

12.1 Tool for Troubleshooting

The following tools are recommended safe and easy troubleshooting as described in this service manual.



12.2 Acronyms and Abbreviations

The table below explains abbreviations used in this service manual. The contents of this service manual are declared with abbreviations in many parts. Please refer to the table.

12.2.1 General

AC	Alternating Current	IC	integrated circuit
	Automatic Document Feeder	IDE	Intelligent Drive electronics or Imbedded
ASIC	Application Specific Integrated Circuit	IDE	Drive Electronics
ASSY	assembly	IEEE	Institute of Electrical and Electronics
BIOS	Basic Input Output System	IDΛ	
CCD	Charge Coupled Device		Images Der Minute
CMOS	Complementary Metal Oxide Semiconductor		
CN	connector	LAN	
CON	connector		pound(s)
CPM	Copies Per Minute	LBP	Laser Beam Printer
CPU	Central Processing Unit	LCD	Liquid Crystal Display
CRU	Customer Replaceable Unit	LED	Light Emitting Diode
CRUM	CRU Memory	LSU	Laser Scanning Unit
dB	decibel	MB	Megabyte
dbA	decibelampere	MFP	Multi-Functional Product
dBM	decibel milliwatt	MHz	Megahertz
DADF	Duplex Auto Document Feeder(=DADH)	MP	Multi Purpose
DC	direct current	NVRAM	Nonvolatile random access memory
	Diagnostic Control Unit	OPC	Organic Photo Conductor
DPI	Dot Per Inch	PBA	Printed Board Assembly
DRAM	Dynamic Random Access Memory	PCL	Printer Command Language, Printer Control Language
DVM	Digital Voltmeter	PDL	Page Discription Language
ECM	Error Correction Mode	PPM	Page Per Minute
ECP	Enhanced Capability Port	PS/3	Post Script Level-3
EEPROM	Electronically Erasable Programmable Read	PTL	Pre-Transfer Lamp
		Q'ty	Quantity
		RAM	Random Access Memory
		ROM	Read Only Memory
EPP		SCF	Second Cassette Feeder
FCOT	First Copy Out Time	SMPS	Switching Mode Power Supply
FPUI		SPGP	Samsung Printer Graphic Processor
F/W	tirmware	SPL	Samsung Printer Language
GDI		Spool	Simultaneous Peripheral Operation Online
GND	ground	SW	Switch
HBP	Host Based Printing	Sync	Synchronous or synchronization
HDD	Hard Disk Drive	TBD	To Be Determined
HV	high voltage	USB	Universal Serial Bus
HVPS	High Voltage Power Supply	WxDxH	Width x Depth x Height
I/F	interface		
I/O	Input and Output		

12.2.2 Service Parts

ACRONYM	EXPLANATION
ELA HOU-SCANNER ASS'Y	ELA=Electrical Assembly, HOU =Housing
MEA UNIT-COVER PA EXIT ASS'Y	MEA= Mechanical Assembly, PA=Paper
PMO-TRAY EXTENTION MP NE	PMO= Processing Mold MP=Multi-Purpose(Bypass) tray NE=for NEC (common as Samsung Halk printer)
MEC-CASSETTE ASS'Y(LETTER)	MEC = Mechanic Combined unit
COVER-M-FRONT	M=Mold
MPR-NAME/PLATE	MPR= Machinery Press,
UNIT-LSU	LSU =Laser Scanning Unit
SMPS-SMPS(V1)+HVPS	SMPS =Switching Mode Power Supply HVPS =High Voltage Power Supply
ELA-OPC UNIT SET	OPC=Organic Photo-Conductive
ELA HOU-MP ASS'Y	MP =Multi-Purpose (Bypass) tray
PBA MAIN-MAIN	PBA =Printed circuit Board Assembly
PMO-CONNECT PAPER MFP	MFP =Multi-Functional Peripheral
FAN-DC	DC =Direct Current
CBF POWER STITCH GRAY	CBF= Cable Form
MEA UNIT GUIDE CST PAASS'Y	CST=Cassette(Paper tray), PA=Paper
PBA LIU	PBA =Printed circuit Board Assembly LIU =Line Interface Unit for FAX
SHIELD-P_MAIN LOWER	P=Press
CBF HARNESS-LIU GND	LIU =Line Interface Unit for FAX GND= Ground
PMO-COVER FEED AY	AY=Assembly
PMO-COVER BRKT MOTER	BRKT=Bracket
CBF HARNESS-LSU	LSU =Laser Scanning Unit
IPR-SHIELD SMPS UPPERI	IPR=Iron Press
PMO-BUSHING P/U.MP	P/U=Pickup MP=Multi-Purpose (Bypass) Tray
PMO-HOLDER GEAR TRr	TR= Transfer Roller
SPRING ETC-TR_L	TR_L=Transfer Roller - Left

ACRONYM	EXPLANATION	
PMO-CAM JAM REMOVE	PMO-CAM= Processing Mold-CAM	
PMO-LOCKER DEVE	DEVE=Developer	
SPECIAL SCREW(PANNEL MFP)	MFP =Multi-Functional Peripheral	
A/S MATERAL-DUMMY UPPER ASS'Y	A/S=After-Service	
MCT-GLASS ADF	MCT= Machinery Cutting ADF=Automatic Document Feeder	
PPR-REGISTRATION EDGE(F)	PPR= Processing Press	
IPR-HOLDER GLASSI	PR=Iron Press	
MCT-GLASS SCANNER(LEGAL)	MCT= Machinery Cutting	
CBF HARNESS-OPE	OPE=Operation Panel(Control Panel)	
PBA SUB-D_SUB	PBA SUB-D_SUB =>Sub Printed circuit Board Assembly for the D-SUB type electrical connector (D-Sub) a kind of the connector type(shape 'D')	
COVER-M-CCD CABLE	M=Mold CCD=Charge Coupled Device	
COVER-SCAN LOWER(UMAX)	UMAX=> Supplier's name for CCD module	
ICT-INSERT SHAFTI	ICT= Iron Cutting	
IPR-BRK SCAN BD	IPR=Iron Press BRK=Bracket BD= Board	
CBF SIGNAL-CCD FFC	CCD = Charge Coupled Device FFC =Flexible Flat Cable	
COVER-M-OPE	M=Mold OPE=Operation Panel(Control Panel)	
KEY-M-COPY	M=Mold	
PLATE-M-ALPHA KEY	M=Molde ALPHA=Alphabet	
PMO-GUIDE DP SIDE	DP=Duplex	
RING-CS	CS= Compress	
GEAR-MP/DUP DRV	MP =Multi-Purpose (Bypass) tray DUP DRV = Duplex Driver	
IPR-BRKT G DUPI	PR=Iron Press BRKT=BRACKET G= Ground DUP=Duplex	
PMO-BUSHING TX(B4)	TX=Transmit	
PMO-TRAY CASE, MP	MP=Multi-Purpose tray(Bypass tray)	

ACRONYM	EXPLANATION	
SPRING CS RE	CS=Compress RE=Rear	
SPRING CS FR	CS=Compress FR=Front	
PMO-BUSHING FINGER, F	F=Front	
ICT-SHAFT-EXIT LOWER ID	ID=Idler	
SPRING-EXIT ROLL FD	FD=Face Down	
PMO-BUSHING_P/U,MP	P/U=Pickup MP =Multi-Purpose (Bypass) tray	
PMO-HOLDER CAM MPF	MPF=Multi-Purpose Feeder(=MP)	
PMO-GEAR P/U MPF	P/U=Pickup	
MFP =Multi-Functional Peripheral		
RPR-RUBBER PICK UP,MP	RPR=Rubber Press	
PBA SUB-MP SEN	PBA SUB-MP-SEN =>Sub Printed circuit Board Assembly for the MP-SEN(= Multi-Purpose (Bypass) tray-Sensor)	
A/S MATERAL-PICKUP,MP		
FOOT-ML80		
HOLDER CATCH CST MC2	MC2=>McKInley2 (Samsung Project code name)	
IPR-GROUND PLATE A(OPC)	OPC=Organic Photo-Conductive	
ELA M/M-AUD SPEAKER	ELA M/M => Electrical Assembly M/M AUD=Audio	
CBF HARNESS-OPC GND	OPC GNG=Organic Photo-Conductive-Ground	
IPR-GROUND PLATE SCF	SCF=Second Cassette Feeder(Tray2)	
PBA SUB-PTL	PBA SUB-PTL=>Sub Printed circuit Board Assembly for the PTL(= Pre Transfer Lamp)	
PBA SUB-FEED+P.EMP SEN.	PBA SUB-FEED=>Sub Printed circuit Board Assembly for the feeder EMP SEN=Empty Sensor	
MOTOR STEP-MCK2(MAIN)		
GEAR-EXIT/U	EXIT/U=EXIT/Upper	
GEAR-RDCN FEED INNER	RDCN=Reduction	
CBF-HARNESS-MAIN-THV WIRE	THV =Transfer High Voltage	
CBF-HARNESS-MAIN-MHV WIRE	MHV= High Voltage(Charge Voltage)	
ACRONYM	EXPLANATION	
----------------------	----------------------------------------------------------------------------	
GEAR-EXIT/U,ID	U=Upper ID=Idler	
IPR-TERMINAL FU	FU=Fuser	
PMO-BEARING H/R-F	H/R-F=Heat Roller - Front	
BEARING-H/R L	H/R-L=Heat Roller -Left	
PEX-ROLLER EXIT F_UP	PEX= Processing Extrude F_UP=Face Up	
SPRING ETC-P/R	P/R=Pressure Roller	
SPRING(R)-CAU-HOT-FU	CAU-HOT-FU = Caution Hot -Fuser	
PMO-ARM ACTUATOR	PMO-ARM= Processing Mold Arm	
LABEL(R)-HV FUSER	HV=High Voltage (220V)	
LABEL(R)-LV FUSER	LV=Low Voltage (110V)	
PPR-SPONG SHEET	PPR=Plastic Press	
IPR-P_PINCH(SCAN)I	PR-P = Iron Press	
ROLLER-REGI	REGI=Registration	
PBA SUB-REGI	PBA SUB-REGI => Sub Printed circuit Board Assembly for the Registration	
GROUND-P_SCAN ROLLER	GROUND-P =Ground-Press	
IPR-GUARD C/O S/W	C/O = Cover Open S/W= Switch	
MEA UNIT-TX STACKER	TX =Transmit	
IPR-WASHER SPRING CU	CU=Curve	

12.3 The Sample Pattern for the Test

The sample pattern shown in below is the standard pattern used in the factory. The life of the toner cartridge and the printing speed are measured using the pattern shown below. (The image is 70% of the actual A4 size).

12.3.1 A4 ISO 19752 Standard Patterns

This test page is reproduced at 70% of the normal A4 size



12.4 Wireless LAN

• This product uses a printing function with a wireless LAN, which is an option.

- The wireless LAN function uses a frequency instead of connecting LAN cable to connect data to an access point for print.
- For a wireless LAN connection, an AP is needed, It is possible to use wireless LAN onnection with wired LAN. Also, if AP is installed in an office or at home, the wireless LAN function can be simply used.

• Types of desk top PC (or Lap top) that uses the wireless LAN.

Division	Basic type	Recommend type
CPU	Over PENTIUM 233M	PENTIUM 300MHz
MEMORY	Over 64MB	Over 128MB
VIDEO CARD	Over 800X600	Over 1024X768
OS	Over WINDOWS 98	Over WINDOWS ME
INTERFACE CARD	A product has a certificated mark of Wi-Fi™	

About the certificated mark of Wi-Fi[™]



- The Wi-Fi[™] is a registered trademark of WECA (Wireless Ethernet Compatibility Alliance). Over 50 of a wireless LAN companies are member of it. The most of main wireless networking companies are attending and the main companies are Lucent technologies, Cisco, Intel/Symbol, 3Com, Enterasys (Cabletron), Compaq, IBM, Nokia, Dell, Philips, Samsung electronic, Sony, Intersil, and so on. This mark certifies mutual compatibility among product has Wi-Fi[™] (IEEE 802.1) and it is certified as a standard of a wireless LAN market.

12.5 Selecting a location

Select a level, stable place with adequate space for air circulation. Allow extra space for opening covers and trays.

The area should be well-ventilated and away from direct sunlight or sources of heat, cold, and humidity. Do not set the machine close to the edge of your desk or table.

Clearance space

- Front: 482.6 mm (enough space so that the paper tray can be removed)
- Back: 100 mm (enough space for ventilation)
- Right: 300 mm (enough space for ventilation)
- Left: 100 mm (enough space for ventilation)





GSPN (Global Service Partner Network)

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