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## Service Guide OKIOFFICE 84

Chapter 0 About This Manual

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Front Cover

# OKIDATA Service Guide

OKIOFFICE 84  
MULTIFUNCTIONAL PRODUCTS

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10/01/99

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### Read Me First

#### Kit Contents

Upon receiving the kit, verify that it contains the items listed below.

- This Read Me First Sheet
- Quick Start
- Certification Manual
- Hardware Handbook
- Service Manual
- Software Guide
- Word Scan Plus User's Guide

#### Missing Items

If any items are missing, please contact OKIDATA Order Processing at the appropriate number listed below.

Facsimile: 609-222-5022

Voice: 800-727-8654

You must provide the information listed below.

Okidata Authorization Number (Dealer Number)

Okidata Customer Number

Order Acknowledgement Number (on the invoice)

Part Number of Kit

#### Completing the Course

Refer to the Certification Manual for information on completing the course.

P/N 58323301

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## 1.1 General Performance

- 1 Type of appearance
  - Desktop type
- 2 Applicable lines
  - Public switched telephone network (PSTN)
  - Private branch exchange (PBX)
- 3 Compatibility ITU-T Group 3 facsimile transceiver
  - ITU-T Group 3 facsimile transceiver
- 4 Document width
  - Max. 216 mm (8.5 inches [North American Letter])
  - Min. 148 mm (5.83 inches [ISO A5 size])
- 5 Effective reading width
  - Max. 215 mm (8.46 inches)
- 6 Scanning length
  - 128 mm to 356 mm (5.06 inches to 14 inches)  
(Length setting: Infinite is also available.)
- 7 Automatic document feeder (ADF)
  - 20 sheets for OKIOFFICE84 North American Letter/A4-size: 20-1b bond
  - 15 sheets (North American Letter/A4-size: 16 to 28-1b bond/60-105 gm)
- 8 Recording paper or sheet
  - First tray: North American Letter/Legal/A4-size plain paper cut  
OKIOFFICE 84 100 sheets capacity (20-1b bond\*)
  - Manual loading feeder: Transparency for overhead projector, applicable. OKIOFFICE 84  
Sheet size: Letter/Legal/A4-size  
\* Oki Data Recommended paper
- 9 Printable width For OKIOFFICE84
  - North American: 203.2 mm (8 inches) / 203.2 mm (8 inches) for assured quality
  - North American Legal: 203.2 mm (8 inches) / 203.2 mm (8 inches) for assured quality
  - ISO A4: 203.2 mm (8 inches) / 197.3 mm (7.77 inches) for assured quality
- 10 Printable length
  - NA Letter: 273.4 mm (10.76 inches) / 266.7 mm (10.49 inches) for assured quality
  - NA Legal: 349.6 mm (13.76 inches) / 342.9 mm (13.49 inches) for assured quality
  - ISO A4: 291 mm (11.46 inches) / 284.3 mm (11.19 inches) for assured quality
- 11 Copy stacker
  - Maximum 30 sheets (20 lb. bond \*)
  - \*: Recommended paper
- 12 Scanning resolution
  - a) Horizontal
    - 8 pels/mm
  - b) VerticalTransmission mode:
  - STD 3.85 line/mm
  - FINE 7.7 line/mm
  - EX. FINE 15.4 line/mm
  - COPY mode: FINE 7.7 line/mm
  - EX. FINE 15.4 line/mm

**Note:** In the local COPY mode at standard (STD) resolutions, the dpi conversion is done from 300 dot/inch to 200 dot/inch.
- 13 Scanning method
  - 2592 bits contact image sensor

**14 Recording resolution)**

Horizontal: 300 dots/inch

b) Vertical:

Variable:

- Automatically adjusted to the paper length.
- STD mode (3.85 to 5.06 line/mm)
- FINE mode (7.7 to 10.13 line/mm)
- Fixed: STD mode: 3.85 line/mm
- FINE mode: 7.7 line/mm
- EX-FINE mode : 15.4 line/mm : 300 dot/inch

**15 Recording method**

- 211.3 mm (2496 bit) or 216.7 mm (2560 bit)

**16 Minimum scan line time for reception**

- When receiving from OKIFAX or ECM: 0 ms
- When receiving from non- OKIFAX and non ECM: 10 ms at 3.85 line/mm 5 ms at 7.7 line/mm

**17 Print speed**

- Max. 8 sheets per minute (at NA letter size) (6 PPM in the PC print mode if the paper width is 128 mm or less)

**18 Pre-heating time**

- Approx. 20 sec. (Standby to print)

**19 Coding scheme**

- Modified Huffman (MH)
- Modified READ (MR)
- Modified Modified READ (MMR)

**20 Modem (Rev. 2)**

- ITU-T Rec. V.29: 9600 bps for use on point-to-point 4-wire leased telephone type circuits.
- ITU-T Rec. V.27 ter: 4800 bps modem for use in GSTN (General Switched Telephone Network)
- ITU-T Rec. V.21 channel 2: 300 bps duplex modem for GSTN
- ITU-T Rec. V.17: 2-wire modem for fax applications up to 14.4 kbps

**21 Transmission speed**

- 6 sec. per sheet of ITU-T No. 1 sample document  
**Note:** This is Phase C time at 3.85 line/mm and 28800 bps for 3 sec. and 14400 bps for 6 sec. in MMR code transmission.

**22 Protocol**

- ITU-T Rec. T.30
- OKI special protocols: High-speed protocol

**23 Error correction mode (ECM)**

**24 Communication mode**

- Half duplex

**25 Image memory**

- Basic model: 1 M byte

**26 Liquid crystal display (LCD)**

- Two rows of 20 characters for operation guidance, check and various kinds of information

**27 Power source**

- Nominal input voltage 120 VAC for ODA version
- Nominal input voltage 230 VAC for INT'L version

**28 MFP (Multi- Function Peripheral) function**

The optional board (CTR board) provides the MFP functions

- PC Printer Function
- PC Scanner Function
- PC Fax Modem Function
- Location Programming Function

NA = North America

---

## 1.2 General User's Function

- 1 Transmit mode
  - Automatic transmit mode
  - Manual transmit mode
- 2 Receive mode
  - Automatic receive mode
  - Manual receive mode
  - TEL/FAX automatic switchover mode
  - TAD mode
  - Memory only receive mode
  - PC receive mode (This function is the standard for OKIOFFICE of ODA)
- 3 Dual Access
- 4 Advanced T.30 protocol
- 5 Dual access
- 6 Voice request
- 7 Automatic redial
- 8 Last number redial (Manual redial)
- 9 Local copy including multiple copies
  - Maximum 50 copies of document
- 10 Sender identification (Sender ID)
- 11 Personal identification (Personal ID)
- 12 Polling transmission
  - Feeder Polling transmission
  - Memory Polling transmission
- 13 Polling reception
- 14 Bulletin polling
- 15 Acoustic line monitor
- 16 Automatic alternate selecting call (FAX No. + FAX No. can be registered in one-touch keys).
- 17 Delayed transmission (Maximum length of delay 3 days)
  - Delayed broadcast
  - Delayed transmission  
15 specified time
- 18 Relay broadcast initiate
- 19 Confidential message transmission
- 20 Confidential message reception  
8 mail boxes
- 21 PHOTO mode (at FINE resolution)
  - 64 scale gradations
- 22 G3 sequential broadcast (Memory)
  - Broadcast mode  
90 stations at maximum
  - Delayed broadcast mode
- 23 No paper/no toner reception
- 24 Memory-only reception  
(Memory reception even if paper does not run out)
- 25 Distinguishing text from picture
- 26 Page re-transmission (Only in case of memory TX mode)
- 27 Reduction printing (Reduction rate is from 100% to 75%.) (Legal to Letter)
- 28 Horizontal reduction (RX, copy: Reduction rate is from 93% to 98%)
- 29 Smoothing printing (In case of 8 dots/mm x 3.85, 7.7 or 1.54 lines/mm ---> 300 dots/inch x 784 line/inch)  
\* Turns off in the PC print mode.
- 30 Programmed key operation ("F" key + "OT" key)
- 31 Auto dialing

- One-touch dialing - 10 locations
  - Two-digit automatic dialing - 70 locations
  - Keypad dialing
  - Chain dialing
  - Mixed dialing
  - Group dialing - 5 dialing groups
- 32** Realtime dialing  
(In case of optional handset is installed or Hook key is pressed.)
- 33** Automatic pause signal insertion
- 34** Manual feeder local copy
- 35** Telephone directory (Alpha search) dialing
- 36** TEL/FAX automatic switching
- 37** Time and date printing
- 38** Closed users group (Direct mail rejection)
- 39** Transmission contrast and resolution control
- 40** Key touch tone
- 41** Printer counter display (For drum, toner, total print)
- 42** Total page counter (Scan)
- 43** Quick scanning 6 sec. minimum ---> A4 size 3.85 line / mm
- 44** Time and date setting
- 45** PC interface
- Standard
- 46** Language selection
- 2 languages (LCD and Reports)  
English / Spanish  
English / Portuguese
- 47** Reports
- Activity report
  - Active memory files report
  - Protocol report
  - Message confirmation report (Single address and multiple addresses)
  - Broadcast entry report (Broadcast)
  - Transmission error report
  - Confidential reception report
  - Configuration report
  - Telephone directory
  - Power outage report
- 48** Restricted access
- 49** Continuous alarm tone



---

**1.3 General Maintenance Functions**

- 1** Self-diagnosis
  - CPU ROM/RAM check
  - FLASH memory check (Program, Language, Default)
  - RAM check
  - Print test
- 2** Sensor calibration (Adjustment of scanning level)
- 3** LED test
- 4** Tone send test
- 5** Multi-frequency (MF) send test
- 6** High-speed modem send test
- 7** High-speed modem receive test
- 8** Tone (TEL/FAX) test
- 9** Remote diagnosis
- 10** System reset
- 11** Service default report (Machine setting for service engineer)





## Service Guide OKIOFFICE 84

### Chapter 1 General Information

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#### 1.4 General Appearance

Figure 1.4.1 shows the general appearance of the OKIOFFICE 84

Figure 1.4.2 Control Panel

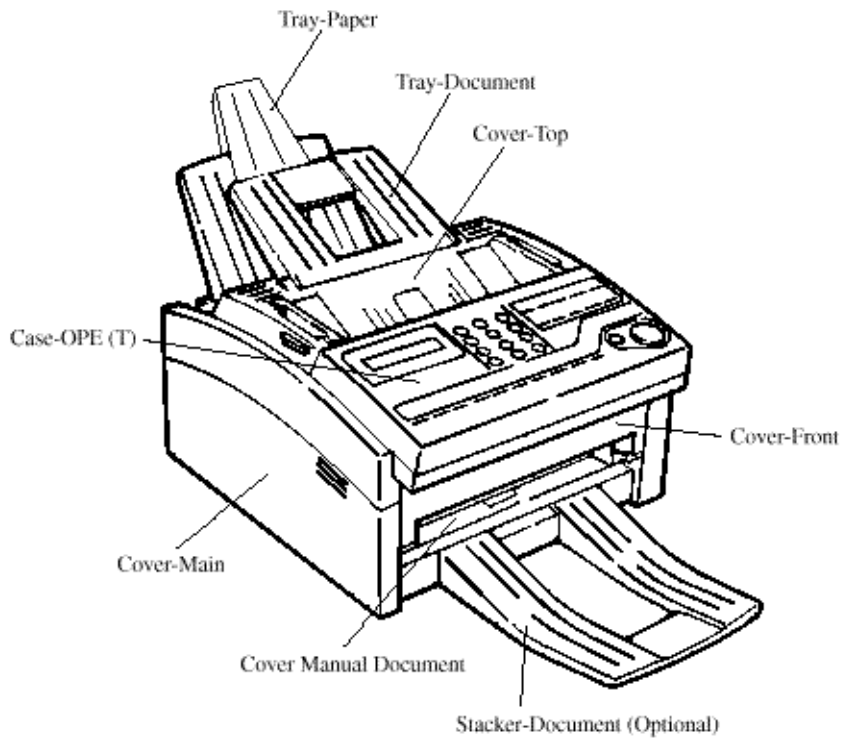
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**1.4.1 General Appearance of OKIOFFICE 84**

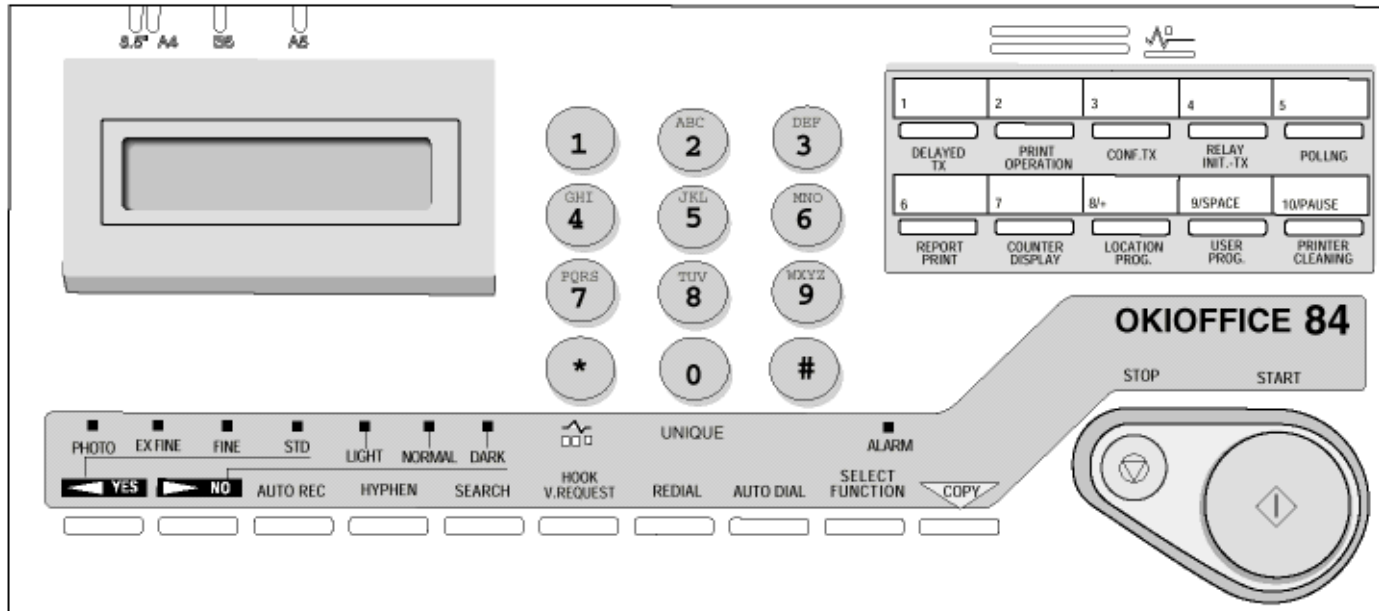
Figure 1.4.1 shows the general appearance of the OKIOFFICE 84



**Figure 1.4.1 General Appearance of OKIOFFICE84**

## Service Guide OKIOFFICE 84 Chapter 1 General Information

### 1.4.2 Control Panel





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**1.5 Basic Performance Specifications**

**Table 1.5.1 (1/9) Basic Performance Specifications**

**Table 1.5.1 (2/9) Basic Performance Specifications**

**Table 1.5.1 (3/9) Basic Performance Specifications**

**Table 1.5.1 (4/9) Basic Performance Specifications**

**Table 1.5.1 (5/9) Basic Performance Specifications**

**Table 1.5.1 (6/9) Basic Performance Specifications**

**Table 1.5.1 (7/9) Basic Performance Specifications**

**Table 1.5.1 (8/9) Basic Performance Specifications**

**Table 1.5.1 (9/9) Basic Performance Specifications**



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**Table 1.5.1 (1/9) Basic Performance Specifications**

No.	Item	Specifications
1	Applicable line	1) General switched telephone network (GSTN) 2) Private branch exchange (PBX) (OT9+2)
2	Line interface	
	1) Impedance	600 Ohms balanced Note: Impedance may differ by the requirement of PTT.
	2) Sending power level	0 dBm to -15 dBm range (Adjustable in 1 dB steps. TF + 21)
	3) Receiving power level	0 dBm to -40 dBm or -6 dBm to -43 dBm
3	Type of document to be transmitted	
	1) Width	Max. 216 mm (NA Letter) Min: 148 mm (ISO A5 size) Note: Effective reading width is NA Letter 215 mm)
	2) Length	Min. 128 mm Max. 356 mm (14 inches)  Long document detection: 380 mm, or 150 mm * TF + 10 (To enable or disable the long document scanning)
	3) Thickness	Based on common bond paper a) 0.08 to 0.13 mm for multiple page feeding b) 0.06 to 0.15 mm for single page feeding
	4) Shape	Rectangular
	5) Opacity	Documents allowing less than 40% of the scanner source light to pass through them.



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**Table 1.5.1 (2/9) Basic Performance Specifications**

No.	Item	Specifications
4	Effective reading width	

Document width	Communication Mode/Paper width	Effective reading width	Copy size
ISO A4 (210 mm) [INTL/FTZ]	G3/A4	208 mm for TX 203.2 mm for local copy (208 mm for local copy with Horizontal Reduction = ON)	A4
NA letter (216 mm) [US/CANADA]	G3/A4	215 mm for TX 203.2 mm for local copy (214 mm for local copy with Horizontal Reduction = ON)	Letter
NA legal (216 mm) [US/CANADA]	G3/A4	215 mm for TX 203.2 mm for local copy 214 mm for local copy with Horizontal Reduction = ON)	Legal

**Note: Local copy: Printable reading width in local copy mode**

No.	Item	Specifications
5	Automatic document feeder (ADF)	Max. 20 documents for OKIOFFICE 84: NA Letter or A4 (20-lb./75 gm) Max. 15 documents: NA or A4 (16-28 lb.-60-105 gm bond paper) Documents shall be placed facedown on ADF stacker. The first sheet will be fed first in the feeder and will exit facedown in the document stacker.
6	Document skew	Max. 2.6 mm skew over a document of A4 length. For a document longer than A4 length, occurrence of skew exceeding 2.6 mm over any A4 length is 0.5% or less. (Except 13 lb.)
7	Document jam detection	1) Transmission will stop and line disconnection will occur when the end of a document is not detected within 356 mm after scanning begins (except for the long document scanning. TF + 10)  2) A jam will also be declared if the document does not reach the scanning position within 10 seconds after the start of a document feed.  Note: When a jam is detected during message transmission from the feeder, the machine will stop scanning and disconnect the line, but its receiving capability will remain valid.
8	Document jam removal	Manual release



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**Table 1.5.1 (3/9) Basic Performance Specifications**

<b>No.</b>	<b>Item</b>	<b>Specifications</b>
<b>9</b>	Recording paper or sheet	<p>For tray-paper:</p> <ol style="list-style-type: none"><li>1) Type: Plain paper cut (Bond paper)</li><li>2) Size: ISO A4 (210 mm x 297 mm) NA Letter (215.9 mm x 279.4 mm)/(8.5 inch x 11 inch) NA Legal (215.9 mm x 355.6 mm)/(8.5 inch x 14 inch)</li><li>3) Weight: 16 lb-24 lb/60-90 gm base weight Base weight is defined as the weight of 500 sheets of 431.8 mm (17 inch) by 558.8 mm (22 inch) or 1 sheet size 1000 mm by 1000 mm.</li><li>4) Thickness: 0.08 mm to 0.12 mm</li><li>5) Condition: New paper</li></ol> <p>For the manual loading feeder</p> <ol style="list-style-type: none"><li>1) Type: Plain paper, transparency for overhead projector, colored paper, printed paper</li><li>2) Size: A4/NA Letter/NA Legal</li><li>3) Weight, thickness and condition: Same as above</li></ol> <p>Note: One single sheet should be loaded on the manual paper feeder for one occasion.</p> <p>For best results use Oki Data recommended papers</p> <ol style="list-style-type: none"><li>1) Xerox 4200 (20 - lb/base weight paper)</li><li>2) L-type paper for photo-printers</li></ol>
<b>10</b>	Recording paper cassette	100 sheets / tray (Oki Data recommended paper)

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**Table 1.5.1 (4/9) Basic Performance Specifications**

No.	Item	Specifications
11	Effective recording area  Note: These tables do not include vertical and horizontal addressing deviations (+ or =3 mm) of recording paper.	

**1) Printable area**

	NA LETTER	SIZE	ISO A4	SIZE	14 inch	LEGAL SIZE	13 inch	LEGAL SIZE
	inch	mm	inch	mm	inch	mm	inch	mm
PL	11	279.4	11.7	297	14	355.6	13	330.2
PW	8.5	216	8.27	210	8.5	216	8.5	216
EL	10.76	273.4	11.46	291	13.76	349.6	12.76	324.2
EW	8.0	203.2	8.0	203.2	8.0	203.2	8.0	203.2
T	.12	3	0.12	3	0.12	3	0.12	3
B	.12	3	0.12	3	0.12	3	0.12	3
L	.25	6.35	0.13	3.4	0.25	6.35	0.25	6.35
R	.25	6.35	0.13	3.4	0.25	6.35	0.25	6.35

**1) Guaranteed printing area**

	NA LETTER	SIZE	ISO A4	SIZE	14 inch	LEGAL SIZE	13 inch	LEGAL SIZE
	inch	mm	inch	mm	inch	mm	inch	mm
PL	11	279.4	11.7	297	14	355.6	13	330.2
PW	8.5	216	8.27	210	8.5	216	8.5	216
EL	10.76	266.7	11.2	284.3	13.5	342.9	12.5	317.5
EW	8.0	203.2	7.77	197.3	8.0	203.2	8.0	203.2
T	0.25	6.35	0.25	6.35	0.25	6.35	0.25	6.35
B	0.25	6.35	0.25	6.35	0.25	6.35	0.25	6.35
L	0.25	6.35	0.25	6.35	0.25	6.35	0.25	6.35
R	0.25	6.35	0.25	6.35	0.25	6.35	0.25	6.35



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**Table 1.5.1 (5/9) Basic Performance Specifications**

No.	Item	Specifications
12	Copy stacking	The fax can discharge printed copies and stack them faceup. Maximum sheets on the copy stacker: 30* Note*: Oki Data recommended paper
13	Scanning resolution	Horizontal: <ul style="list-style-type: none"> <li>● 300 dot/inch</li> </ul> Vertical: Transmission mode: <ul style="list-style-type: none"> <li>● 3.85 line/mm (STD), 7.7 line/mm (FINE) or 15.4 line/mm (EX.FINE)</li> </ul> COPY mode: <ul style="list-style-type: none"> <li>● 3.85 line/mm, 7.7 line/mm, 15.4 line/mm or 300 dot/inch.</li> </ul>
14	Image scanning method	NA Letter size (2592-bit) contact image sensor
15	Contrast control	1) Automatic background sensing A continuous document background of 0.3 OD (optical density) or less will be transmitted as white. 2) The LIGHT and DARK contrasts will automatically be adjusted to improve image quality.
16	Recording solution	Horizontal: <ul style="list-style-type: none"> <li>● 300 dot/inch</li> </ul> Vertical: <ul style="list-style-type: none"> <li>● Fixed: 3.85 line/mm (STD), 7.7 line/mm (FINE), 15.4 line/mm (EX-FINE) 300 dot/inch (EX-FINE)</li> <li>● Variable: Automatically adjusted to the paper length.</li> </ul> <ul style="list-style-type: none"> <li>● 300 to 412 dot/inch</li> <li>● 3.85 to 5.06 line/mm (STD)</li> <li>● 7.7 to 10.13 line/mm (FINE)</li> <li>● 15.4 to 20.24 line/mm (EX. FINE)</li> </ul>
17	Recording system	Electro-photographic printing 1) 211.3mm (2496 bit) or 216.7mm (2560 bit) LED print head
18	Skew of recording paper	Maximum allowable skew is + or - 1 mm over an advance of 100 mm.
19	Copy darkness	1) Black image: Greater than 1.2 OD (Optical density) 2) White background: Not greater than 0.2 OD (Optical density)
20	Copy uniformity	Printed copies will exhibit a uniform density of the printed and background area: 1) From edge to edge: 25% 2) From copy to the next copy: 30%
21	Recording paper running out	The fax can detect the no-paper condition by a photosensor. When the paper has run out in the local copy operation, the scanning will stop with "PAPER OUT/JAM" on the LCD and an ALARM LED turns on without an alarm tone. When the paper has run out while a message is being received and the no-paper reception is activated, the LCD display will show "MSG. IN MEMORY", and the ALARM LED turns on.

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**Table 1.5.1 (6/9) Basic Performance Specifications**

No.	Item	Specifications
22	Minimum scan line time for receiving	0 ms, when receiving in ECM mode or from an Oki Data facsimile. 5 ms at 15.4 line/mm or 7.7 line/mm and 10 ms at 3.85 line/mm when receiving from a non-Oki Data facsimile or non-ECM mode.
23	Coding scheme	1) One-dimensional coding scheme: Modified Huffman (MH) 2) Two-dimensional coding scheme: Modified READ (MR) Modified modified READ (MMR)
24	MODEM	
	1) High-speed Modem	a) ITU-T Rec. V.29 (9600/7200 bps) b) ITU-T Rec. V.27 ter (4800/2400 bps) c) ITU-T Rec. V.17 (14400/12000/9600/7200 bps)
	2) Low-speed Modem	ITU-T Rec. V.21 channel 2 (300 bps)
25	Fallback	Automatic fallback will occur according to the following sequence by FTT, RTN or PPR.

Fallback rank	Transmission speed	Activated by FTT (Times)	Activated by RTN (Times)	Activated by PR (Times)	Protocol
1st	14400 bps	1	1	4 (Note 1)	ITU-T V.17 (V.17)
2nd	12000 bps	1	1	4 (Note 1)	ITU-T V.17 (V.17)
3rd	9600 bps	1	1	4 (Note 1)	ITU-T V.17 (V.29)
4th	7200 bps	1	1	4 (Note 1)	ITU-T V.17 (V.29)
5th	4800 bps	2	1	4 (Note 1)	ITU-T V.17 V.27 ter.
6th	2400 bps	2	1	4 (Note 1)	ITU-T V.17 V.27 ter.

When the last trial fails, the transmitting station sends out a DCN signal to the remote station for disconnection.

**Note 1:** Continuous PPRs for the same partial page within each fallback rank.

No.	Item	Specifications
26	Protocol	1) ITU-T Rec. T.30 2) Oki Data special protocol High-speed protocol The T.30 protocol signal from the transmitting station is sent at message transmission speed instead of 300 bps. (This function is disable when the H/Modem rate is set to 9.6 kbit/s by TS No.13)



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**Table 1.5.1 (7/9) Basic Performance Specifications**

No.	Item	Specifications
27	Transmission time	6 sec. (approx. 6.9 sec) /ITU-T No. 1 sample document Note: This is Phase C time at 3.85 line/mm and 14400 bps for 6 sec. in MMR code transmission.
28	Error correction	ITU-T Error correction mode (ECM)
29	Communication mode	Half-duplex
30	Ring signal detection sensitivity	
	1) Voltage range	25 to 150 V r.m.s. Inoperative below 10 V Note: This range may differ by the requirement of PTT.
	2) Frequency range	20 to 68 Hz Note: This range may differ by the requirement of PTT.
	3) Ring response time	One-ringing signal or 5 to 30 seconds. (Selectable in 5 sec. steps. F + OT9 + 7 + 11)
31	Image memory	
		Memory condition [pages]
		Standard (1 M-byte) 80

**Note:** ITU-T No. 1 sample document is used to count the number of sheets. (MMR/STD/Sender ID : off)

**Note:** OKIOFFICE 84 does not back up the message received in memory for the power failure.

No.	Item	Specifications
34	Overheat protection	The heater of the fuser unit is controlled within the predetermined temperature range by the thermistor. If the temperature of the heater exceeds the range, the LCD displays "PRINTER ALARM 4".  Furthermore, the built-in thermostat in the fuser unit prevents the heater from being overheated even in the event of the failures in the above temperature control circuit.

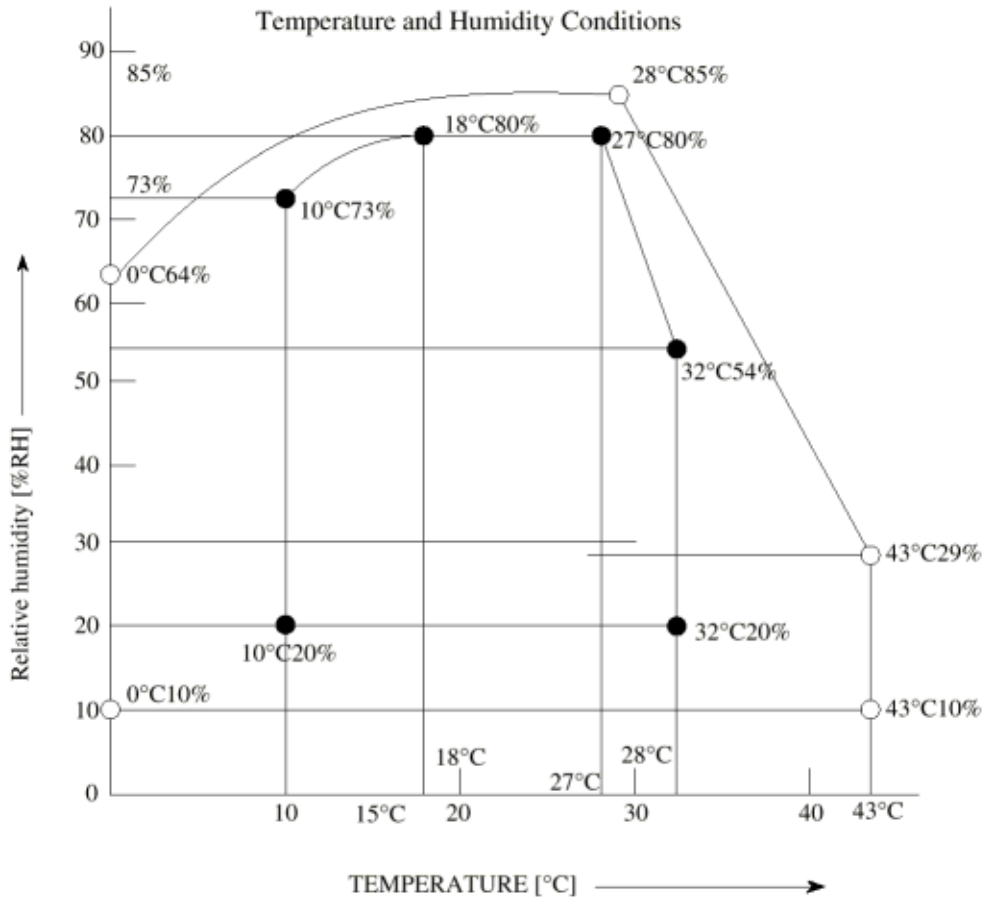


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**Table 1.5.1 (8/9) Basic Performance Specifications**

No.	Item	Specifications
35	PC interface applications (Option)  Note: This function is the standard for OKIOFFICE 84.	The following four modes are supported:  1) PC local printer function 2) PC scanner function 3) PC FaxModem function 4) Location Programming function
	36	Power supply unit and Power consumption of the machine (Typical power)
	Transmit	17W
	Receive	425W
	Local copy	428W
	Standby (Power Save OFF)	5.4W
	Standby (Power Save ON)	*
		* Since the PC interface is standard in OKIOFFICE 84, it has no power save mode.
37	Ambient condition	
	1) Operating condition 2) Storage condition	See Figure 1.5.1 See Figure 1.5.1

**Table 1.5.1 (9/9) Basic Performance Specifications**



Area enclosed by lines with ● : Range where printing is guaranteed.  
 Area enclosed by lines with ○ : Range for storage without power supply.

**(Note)** The curve connecting 28°C, 85% and 0°C, 64% is the condensation curve.

**Figure 1.5.1 Ambient Conditions**

No.	Item	Specifications
38	Dimension (Main body)	1) Width: Approx. 316 mm 2) Depth: Approx. 383 mm 3) Height: Approx. 190 mm
39	Weight (Main body)	Approx. 8 kg Excluding recording paper and packing materials.

<b>40</b>	Attachment (to the main body)	<ol style="list-style-type: none"><li>1) AC power cord x 1</li><li>2) I/D unit x 1 (Already installed)</li><li>3) Toner cartridge x 1</li><li>4) Telephone cord for (4)</li><li>5) Document stacker x 1</li><li>6) Line cord x 1</li><li>7) One touch sheet x 1 (Already installed)</li><li>8) User's guide x 1</li></ol>
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**1.6 Reports and Lists**

**Table 1.6.1 (1/2) Reports and Lists Specifications**

**Table 1.6.1 (2/2) shows Reports and Lists Specifications**

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#### 1.6.1 Reports & List Specifications (1/2)

**Note:** F +OT: Press FUNCTION and One-touch key

**FP:** Function program setting

**TF:** Technical function setting

No.	Item	Specifications
1	Call-back message	The transmitter sends a call-back message to the receiver only when the receiver does not respond to voice request of the transmitter.
2	Sender ID	The fax can transmit a programmed alphanumeric message, such as company's name, consisting of up to 32 characters.  * (Outside only)
3	Transmitting subscriber identification (TSI) printing	Received TSI can be printed at the top of the received page. * TF + 05 (To enable or disable this function)
4	Cancel report (Power outage report)	The fax will automatically print out a power outage report when the AC power is restored after the power failure.
5	Activity report	The fax can print out an activity report manually, and provides a record of your fax machine's last 30 communications. This report does not contain the results of messages which were received without errors. However it does contain messages received in memory with or without errors.  * REPORT PRINTOUT+1 (Manual printout)
6	Message confirmation report	The fax can print out a message confirmation report manually or automatically in the following cases. (1) Manual print By pressing the COPY key after a communication (2) Automatic printout When the FP+01 (to enable or disable automatic printing after a communication) is set to Enable.
7	Broadcast entry report	The fax can print out a broadcast entry report if specified during operating sequence of a broadcast.
8	Broadcast confirmation report	The fax can print out a broadcast confirmation report manually or automatically. * COPY key (Manual printout): Pressed after a broadcast. * REPORT PRINTOUT + 2 (Manual printout) * FP +02 (To enable or disable automatic printing)
9	Confidential reception report	The fax can print out this report automatically on completion of a confidential reception.
10	Memory files report	Printing the list of received but not printed yet documents and waiting documents for transmission stored in the memory.  * REPORT PRINTOUT + 3 (Manual printout)
11	Telephone directory	This directory is printed manually. (REPORT PRINTING + 4)
12	Configuration report	This report is printed manually. (REPORT PRINTING + 5)
13	Protocol dump report	This report is printed manually. (REPORT PRINTING + 6)

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**1.6.1 Shows Reports and Lists (2/2)**

**Call-back Message Format**

**Sender ID Format:**

**TSI Printing and Local Date and Time Printing Format:**

**Power Outage Report Format**

**Activity Report Format**

**Active Memory Files**

**Message Confirmation Report Format**

**Broadcast Entry Report Format**

**Broadcast Confirmation Report**

**Confidential RX Report**

**Telephone Directory**

**Configuration Report (User)**

**Service Default Report (Configuration Report: Service bit=ON)**



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Call-back Message Format: (Example)

(1)	07/01/1998 09:24	(2)	OKI SHIBAURA → OKI HONJO	(3)	NO.002
(4)	PLEASE	CALL	BACK		
(5)	OKI SHIBAURA				
(6)	☎103 5476 1234				

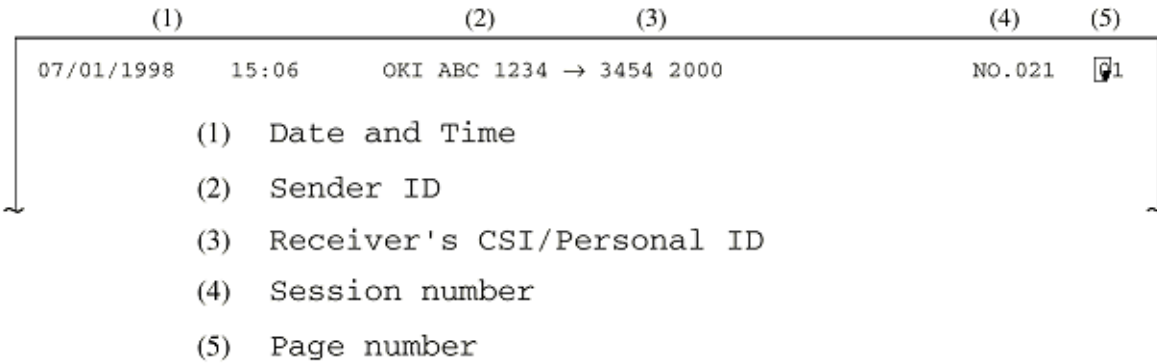
- (1) Date and time
- (2) Sender ID
- (3) CSI/Personal ID
- (4) Letters "PLEASE CALL BACK"
- (5) Sender ID
- (6) Sender's call back telephone number



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Sender ID Format: (Example)

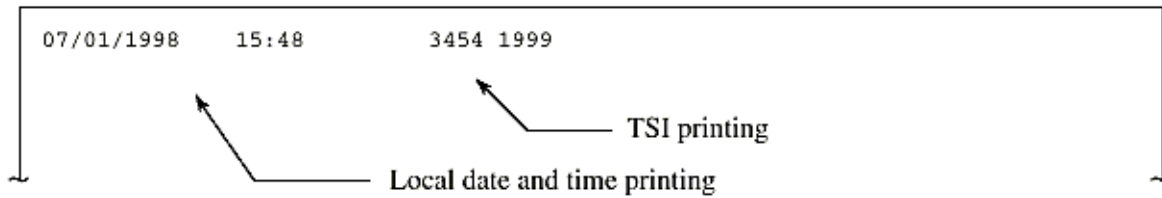




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### TSI Printing and Local Date and Time Printing Format: (Example)



**Note:** TSI printing (TF+05)  
Local date and time printing (TF+04)

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**Power Outage Report Format: (Example)**

07/01/1998 17:05  
ID=OKI

DATE	TIME	S,R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
06/30	10:10		0485-88-3385			LOST	9080
06/30	10:30		ODS TAKASAKI		03	LOST	0000
06/30	12:05	01'20"	OKI FAX	CONF=01	03	LOST	0000
06/30	13:00	00'20"	03-5476-4300	CALLED	01	LOST	0000
06/30	10:50	01'20"	0495-22-5400	CALLED	03	LOST	0000
06/30	15:00			B.C.	01	LOST	

**Note:** Memory reception only is printed on the mode in the report as called.





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### Activity Report Format: (Example)

## (1) ACTIVITY REPORT

(2) 07/01/1998 17:05

(3) ID=OKI

(4) TOTAL TIME CALLING=08:22' CALLED=17:30'

DATE (5)	TIME (6)	S,R-TIME (7)	DISTANT STATION ID (8)	MODE (9)	PAGES (10)	RESULT (11)	(12)
06/29	10:00	01'20"	OKI FAX	CALLING	02	OK	0000
06/29	10:10	01'00"	0485 88 3385	CALLING	00	STOP	9080
06/29	10:30	00'20"	ODS TAKASAKI	CALLING	00	NO	90C1
06/29	12:05	01'20"	OKI FAX	CALLING	03	OK	0000
06/29	13:00	00'20"	03 5476 4300	CALLING	01	OK	0000
06/29	15:40	03'25"	ODS TAKASAKI	CONF=02	03	OK	0000 *1
06/29	19:00	00'00"	OKI FAX		01	OK	0000 *2
06/30	10:10	02'00"	OKI SHIBAURA	CALLED	05	NO	908E
06/30	10:22	00'12"	0495 22 5400	CALLING	00	STOP	9080
06/30	10:50	01'20"	0495 22 5400	CALLED	03	NO	9090
06/30	12:05	00'20"	OKI FAX	CALLING	01	STOP	9080
06/30	15:00	01'30"		CALLED	03	OK	0000 *3
06/30	15:30	00'20"		CALLING	01	OK	0000
06/30	17:05	05'20"		B.C.		COMP.	60A0 *4
06/30	19:04	00'20"	03 5476 4300	CALLING	00	STOP	9080
07/01	09:00	01'11"		CALLING	02	OK	0000
07/01	10:20	00'20"	03 5476 4300	CALLING	02	STOP	9080
07/01	10:35	02'23"		CONF=03	02	OK	0000 *1
07/01	10:50	00'20"	ODS TAKASAKI	CALLED	01	OK	0000
07/01	11:03	00'00"	OKI FAX	CALLING	00	STOP	9080
07/01	13:00	00'24"	03 5476 4300		01	NO	9082 *5
07/01	16:00	01'20"	027 324 2117	POLL=01	01	OK	0000 *6
07/01	16:10	00'40"	ODS	POLLED	01	OK	0000 *7

- \*1 : Confidential reception
- \*2 : Manual TX
- \*3 : Memory reception
- \*4 : Broadcast TX
- \*5 : Manual reception
- \*6 : Bulletin TX wait state
- \*7 : Memory/Feeder polling TX wait state

(1) Title of the report

(2) Date and time when the report was printed

(3) Sender ID

(4) Total CALLING and CALLED time

(5) Date of transmission or reception

(6) Time when the communication started

(7) Time span of the fax communication.

(8) Identification of the remote station

Personal ID/Location ID/TSI/CSI/Dial number or space

(9) Communication mode:

CALLING (Transmission)

CALLED (Reception NG or MEMORY RX)

B. C. (Broadcast)

BOX=XX (Confidential reception)

POLLED (polling TX) in case of country code = except GER, AUT, SUI

POLLING (polling RX) in case of country code = except GER, AUT, SUI

POLL=XX (Bulletin TX) in case of country code = except GER, AUT, SUI

OUTGOING (Manual TX, polling TX, Bulletin TX) in case of country code=GER, AUT, SUI

INCOMING (Manual RX) in case of country code=GER, AUT, SUI

(10) Number of transmitted pages or received pages

(11) Result code

OK (Note1)/NO/STOP (Note 2)/BUSY/PAPER (Out of recording paper)/S\_JAM (Document

jam)/R\_JAM (Recording paper jam)/COVER/COMP (Completion of a broadcast)/PUNIT

(Printer Alarm)/CANCL (Confidential reception T.O.)

**Note 1:** The following cases are included:

- Unmatched handshaking to the received NSF.
- Unmatched password to the received NSC in the polling transmission mode.

**Note 2:** The following cases are included:

- The STOP key is pressed.
- The memory cancellation operation removes the message from the active memory files.

(12) Service code



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Active Memory Files

07/01/1998 17:05  
ID=ODC

```
(1)
RECEPTION
  ENTRIES  PAGES
    05      20

(2)
PERSONAL BOX
  BOX NO.  MODE  ENTRIES  PAGES
    01     CONF    03      20
    02     CONF    01      02
    05     POLL    01      05

(3)
POLLING TX/RX
  DATE      TIME  DISTANT STATION ID  MODE  PAGES
                POLLED
    03/19    12:05  OKI                  POLLING 03

(4)
TRANSMISSION
  DATE      TIME  DIDTANT STATION ID  MODE  PAGES
    03/20    20:00  OKI DATA SYSTEMS  CALLING 03
    03/19    12:03  0273242117         CALLING 01
    03/19    19:00  ODC TAKASAKI       CALLING 02
```

(1) RECEPTION (Memory reception)

- Prints the information of no paper/no toner reception.
- ENTRIES is the number of received communication times stored in the memory.
- PAGES is the number of total pages of the reception messages stored in the memory.

(2) PERSONAL BOX (Confidential, Bulletin Poll)

- Prints the opened condition of Personal Box.
- MODE shows the type of Box.
- ENTRIES prints the number of receipt times stored in the memory.
- PAGES prints the number of total pages of each Box.

(3) POLLING TX/RX

- Prints the information of Polling RX or Polling TX of unused Box.
- POLLING TX prints MODE column and number of read pages.  
When Feeder Polling TX, the number of read pages is a blank.
- POLLING RX prints the communication data and time, distant station ID and MODE.

(4) TRANSMISSION (Delayed transmission, Standby of redial)

- Prints the information of Delay memory transmission and Redial.  
However, Polling RX information is printed out on the above item 3.
- Prints the communication date and time, distant station ID and Mode.

#### OTHERS

- When there is no stored image data in the memory at all, this Active Memory Files is not printed out.

---

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## Service Guide OKIOFFICE 84 Chapter 1 General Information

---

### Message Confirmation Report Format: (Example)

(Example 1 of 2)

(1) MESSAGE CONFIRMATION							
(4) DATE	(5) S.R-TIME	(6) DISTANT STATION ID	(7) MODE	(8) PAGES	(9) RESULT	(10)	
07/01	00'20"	OKI FAX	CALLING	02	OK	0000	(2) 07/01/1998 08:05 (3) ID=OKI

(Example 2 of 2)

(1) MESSAGE CONFIRMATION

(2) 07/01/1998 17:05

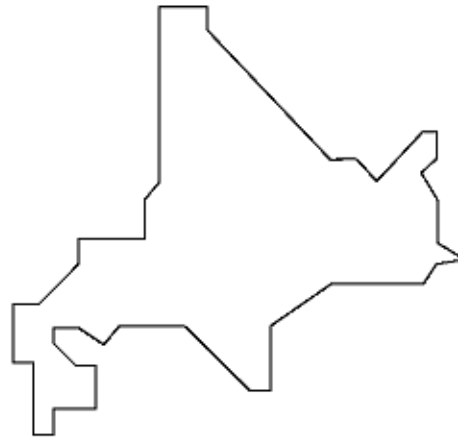
(3) ID=OKI

(4) DATE	(5) S.R-TIME	(6) DISTANT STATION ID	(7) MODE	(8) PAGES	(9) RESULT	(10)
07/01	00'20"	OKI FAX	B.C.	01	COMP	60A0

150 km



(11)



- (1) Title of the report
- (2) Date and time when the report was printed
- (3) Sender ID
- (4) Date of transmission or reception
- (5) Length of time for which the fax was connected to the line
- (6) Identification of the remote station  
Personal ID/Location ID/TSI/CSI/Dial number
- (7) Communication mode  
Reference to ACTIVITY REPORT
- (8) Number of transmitted pages or received pages
- (9) Result of the communication  
Reference to ACTIVITY REPORT
- (10) Service code
- (11) Message

---

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## Service Guide OKIOFFICE 84 Chapter 1 General Information

Broadcast Entry Report Format: (Example)

# BROADCAST ENTRY REPORT

07/01/1998 17:05  
ID=OKI

LOCATION ID	LOCATION ID	LOCATION ID
ONE TOUCH		
1 = OT1	2 = OT2	3 = OT3
4 = OT4	5 = OT5	6 = OT6
7 = OT7	8 = OT8	9 = OT9
10 = OT10		
AUTO DIAL		
01 = AD1	02 = AD2	03 = AD3
04 = AD4	05 = AD5	06 = AD6
07 = AD7	08 = AD8	09 = AD9
10 = AD10	11 = AD11	12 = AD12
13 = AD13	14 = AD14	15 = AD15
16 = AD16	17 = AD17	18 = AD18
19 = AD19	20 = AD20	21 = AD21
22 = AD22	23 = AD23	24 = AD24
25 = AD25	26 = AD26	27 = AD27
28 = AD28	29 = AD29	30 = AD30
31 = 31	32 = 32	33 = 33
34 = 34	35 = 35	36 = 36
37 = 37	38 = 38	39 = 39
40 = 40	41 = 41	42 = 42
43 = 43	44 = 44	45 = 45
46 = 46	47 = 47	48 = 48
49 = 49	50 = 50	51 = 51
52 = 52	53 = 53	54 = 54
55 = 55	56 = 56	57 = 57
58 = 58	59 = 59	60 = 60
61 = 61	62 = 62	63 = 63
64 = 64	65 = 65	66 = 66
67 = 67	68 = 68	69 = 69
70 = 70		
KEYPAD *1		
1234		
2345		
3456		
4567		

\*1 MAX.10 Locations



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**Service Guide OKIOFFICE 84**  
**Chapter 1 General Information**

Broadcast Confirmation Report Format: (Example)

## BROADCAST CONFIRMATION REPORT

07/01/1998 17:05  
 ID=OKI

PAGES = 01  
 START TIME = 07/01 17:02  
 TOTAL TIME = 00:02'30"

	LOCATION ID	PAGES	RESULT	LOCATION ID	PAGES	RESULT
<b>ONE TOUCH</b>						
	1 = HEAD OFFICE	01	OK	2 = OT2	01	OK
	3 = OT3	01	OK	4 = OT4	01	OK
	5 = OT5	01	OK			
<b>AUTO DIAL</b>						
	01 = AD1	01	OK	02 = AD2	01	OK
	03 = AD3	01	OK	04 = GERMAN	01	OK
	05 = AD5	01	OK			
<b>KEYPAD</b>						
	1234	01	OK			
	3456	01	OK			
	5678	01	OK			

\*1: Identification of remote station  
 Personal ID, TSI, Location ID or Dial number  
 (Printing in this order depending if information is programed in remote fax machine)



---

Confidential Reception Report Format: (Example)

## CONFIDENTIAL RX REPORT

07/01/1998 17:05  
ID=OKI

DATE	TIME	S,R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
07/01	13:00	00'20"	OKI FAX*2	BOX=01	02	OK	0000

\*2: Identification of remote station  
Personal ID or CSI



---

**Telephone Directory: Example**

**(Example 1 of 3)**

# TELEPHONE DIRECTORY P1

07/01/1998 17:05  
ID=OKI

	LOCATION ID		TEL NO.	PRM. ECHO	RETE
ONE TOUCH					
1	OT1 OKI OFFICE	☐ 0001	123 123 123	(ON)	(14.4)
		OR ☐ 0101	111 222 333		
2	OT2 OKI LABORATORY	☐ 0002	456 456 456	(OFF)	(14.4)
		OR ☐ 0102	444 555 666		
3	OT3 ODC TAKASAKI	☐ 0003	789 789 789	(ON)	(14.4)
		OR ☐ 0103	777 888 999		
4	OT4 ODC QA/QC LAB.	☐ 0004	1234 5678 90123	(ON)	(14.4)
		OR ☐ 0104			
5	OT5	☐ 0005		(ON)	(14.4)
		OR ☐ 0105			
6	OT6	☐ 0006		(ON)	(14.4)
		OR ☐ 0106			
7	OT7	☐ 0007		(ON)	(14.4)
		OR ☐ 0107			
8	OT8	☐ 0008		(ON)	(14.4)
		OR ☐ 0108			
9	OT9	☐ 0009		(ON)	(14.4)
		OR ☐ 0109			
10	OT10	☐ 0010		(ON)	(14.4)
		OR ☐ 0110			
AUTO DIAL					
01	AD01	☐ 1001			
02	AD02	☐ 1002			
03	AD03	☐ 1003			
04	AD04	☐ 1004			
05	AD05	☐ 1005			
06	AD06	☐ 1006			
07	AD07 ODC TAKASAKI	☐ 1007	0273 28 1234		
08	AD08	☐ 1008			
09	AD09	☐ 1009			
10	AD10	☐ 1010			
11	AD11	☐ 1011			
12	AD12	☐ 1012			
13	AD13	☐ 1013			
14	AD14	☐ 1014			
15	AD15	☐ 1015			
16	AD16	☐ 1016			
17	AD17	☐ 1017			
18	AD18	☐ 1018			
19	AD19	☐ 1019			
20	AD20	☐ 1020			
21	AD21	☐ 1021			
22	AD22	☐ 1022			
23	AD23	☐ 1023			
24	AD24	☐ 1024			
25	AD25	☐ 1025			
26	AD26	☐ 1026			
27	AD27	☐ 1027			
28	AD28	☐ 1028			
29	AD29	☐ 1029			
30	AD30	☐ 1030			
31	AD31	☐ 1031			
32	AD32	☐ 1032			
33	AD33	☐ 1033			
34	AD34	☐ 1034			
35	AD35	☐ 1035			
36	AD36	☐ 1036			

(Example 2 of 3)

## TELEPHONE DIRECTORY P2

07/01/1998 17:05  
ID=OKI

AUTO DIAL	LOCATION ID	TEL NO.
45	AD45	1045
46	AD46	1046
47	AD47	1047
48	AD48	1048
49	AD49	1049
50	AD50	1050
51	AD51	1051
52	AD52	1052
53	AD53	1053
54	AD54	1054
55	AD55	1055
56	AD56	1056
57	AD57	1057
58	AD58	1058
59	AD59	1059
60	AD60	1060
61	AD61	1061
62	AD62	1062
63	AD63	1063
64	AD64	1064
65	AD65	1065
66	AD66	1066
67	AD67	1067
68	AD68	1068
69	AD69	1069
70	AD70	1070

(Example 3 of 3)

# TELEPHONE DIRECTORY P3

07/01/1998 17:05  
ID=OKI

GROUP\_NUMBER\_=\_#1\_#2\_#3\_#4\_#5

#1\_ONE\_TOUCH

1 2 3 4 5 6 7 8 9 10

AUTO DIAL

01 02 03 04 05 06 07 .....  
26 27 28 29 30 31 32 .....

#2\_ONE\_TOUCH

AUTO DIAL

#3\_ONE\_TOUCH

AUTO DIAL

#4\_ONE\_TOUCH

AUTO DIAL

#5\_ONE\_TOUCH

AUTO DIAL



---

**Configuration Report (User)**



# CONFIGURATION

07/01/1998 17:05  
ID=OKI

## FUNCTION LIST

01:MCF (SINGLE-LOC.) ON	02:MCF (MULTI-LOC.) ON	03:ERR.REPORT (MCF) ON
04:IMAGE IN MCF ON	05:SENDER ID. ON	06:MONITOR VOLUME LOW
07:BUZZER VOLUME MIDDLE	08:CLOSED NETWORK OFF	09:TX MODE DEFAULT FINE/NORMAL
10:T/F TIMER PRG. 35SEC	11:RING RESPONSE 1RING	12:DISTINCTIVE RING OFF
13:1'ST PAPER SIZE A4	14:USER LANGUAGE ENGLISH	15:INCOMING RING ON
16:REMOTE RECEIVE OFF	17:MEM./FEEDER SWITCH MEMORY	18:POWER SAVE MODE ON
19:ECM FUNCTION ON	20:REMOTE DIAGNOSIS OFF	21:PC/FAX SWITCH*1 ON
22:NO TONER MEM.RX OFF	23:MEM.FULL SAVE OFF	24:CONTINUOUS TONE OFF
25:INSTANT DIALING ON	26:RESTRICT ACCESS OFF	27:WIDTH REDUCTION OFF

TEL NO. = 12345678901234567890  
CALL BACK NO. = 12345678901234567890

REDIAL TRIES	3TRY	REDIAL INTERVAL	3MIN
DIAL TONE DETECT	OFF	BUSY TONE DETECT	ON
MF (TONE) /DP (PULSE)	MF	PULSE DIAL RATE	10PPS
PALUSE MAKE RATIO	39%	PULSE DIAL TYPE	NORMAL
MF (TONE) DURATION	100MS	PBX LINE	OFF
PBX TYPE	NORMAL	AUTO START	ON
DIAL PREFIX	OFF		

\*1 Function 21 is printed out when the MFP Operation ON/OFF setting is set to ON from HOST to MFP.

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## Service Guide OKIOFFICE 84 Chapter 1 General Information

Service Default Report (Configuration Report: Service bit=ON)

# CONFIGURATION

07/01/1998 17:05  
ID=OKI

### FUNCTION LIST

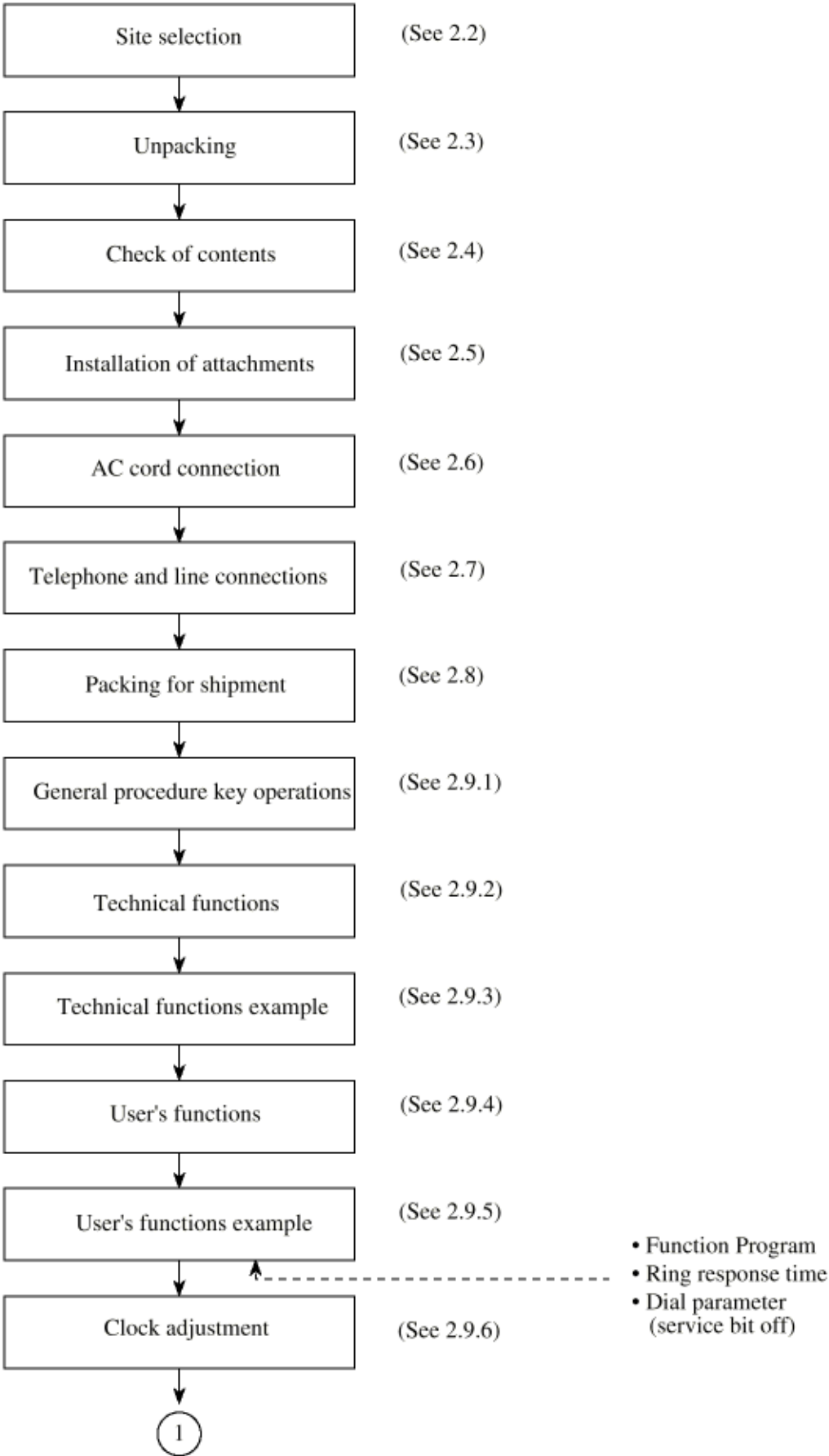
01:SERVICE BIT ON	02:MONITOR CONT. OFF	03: COUNTRY CODE USA
04:TIME/DATE PRINT OFF	05:TSI PRINT ON	06:TAD MODE TYPE2
07:REAL TIME DIAL TYPE2	08:TEL/FAX SWITCH ON	09:MDY/DMY. MDY
10:LONG DOC. SCAN OFF	11:TONE FOR ECHO OFF	12:MH ONLY OFF
13:H/MODEM RATE 14.4K	14:T1 (TX) TIMER VALUE 059	15:T1 (RX) TIMER VALUE 035
16:T2 TIMER VALUE 060	17:DIS BIT32 ON	18:ERR. CRITERION VALU 10
19:OFF HOOK BYPASS OFF	20:NL EQUALIZER 0KM	21:ATTENUATOR 10DB
22:T/F TONE ATT. 10DB	23:MF ATT. 6DB	24:RING DURA. * 10MS 12
25:CML TIMING * 100MS 03	26:LED HEAD STROBE 10100	27:LED HEAD WIDTH TYPE1
28:MEDIA TYPE MEDIUM	29:TR LATCH CURRENT +1	30:NSF SWITCH OFF
31:ID/TSI PRIORITY ID	32:TONER COUNT CLEAR OFF	33:PARALLEL PICK UP ON

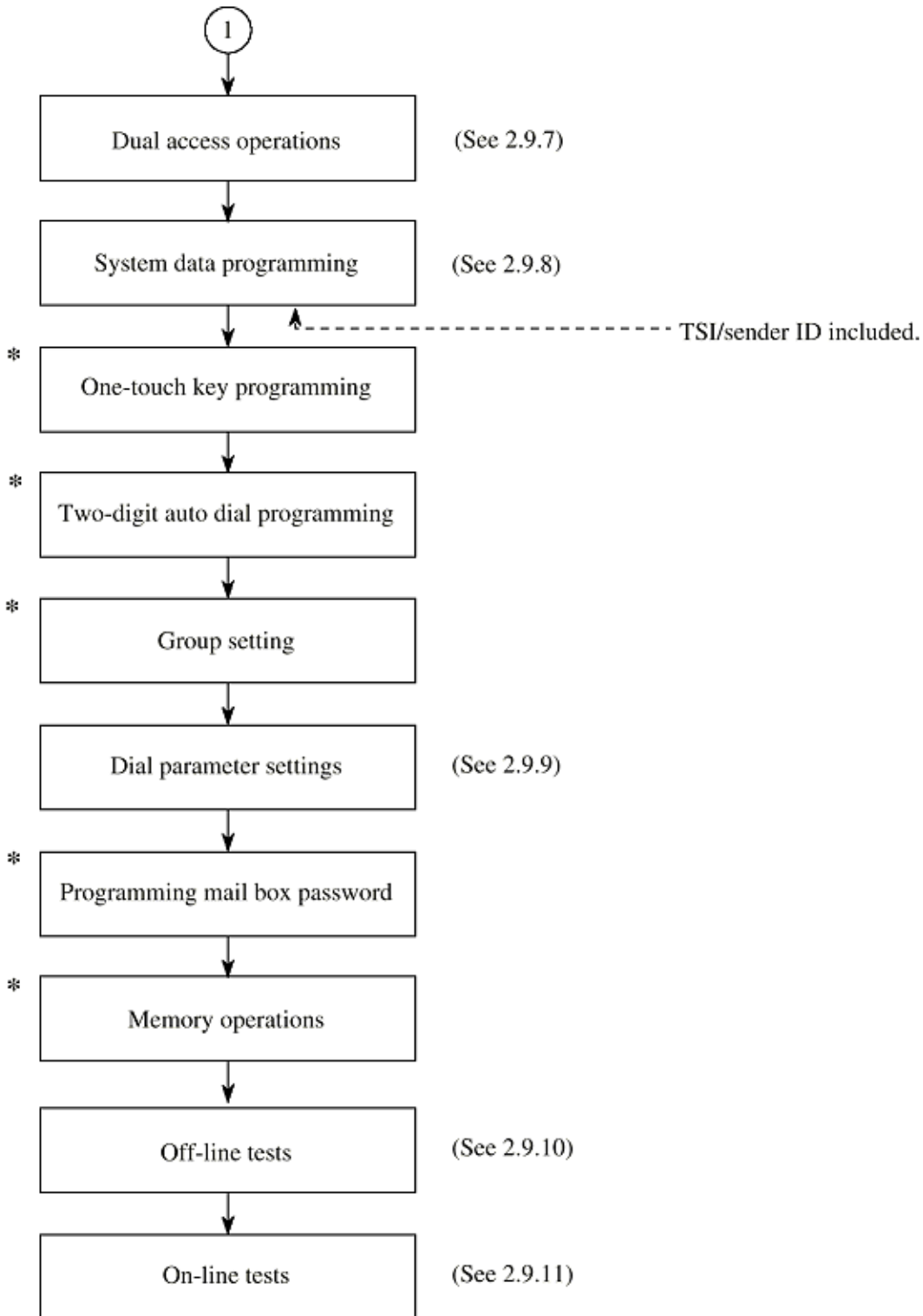


---

## **2.1 General Setup Information**

The following flowchart outlines the installation procedure.





\* : See user's guide

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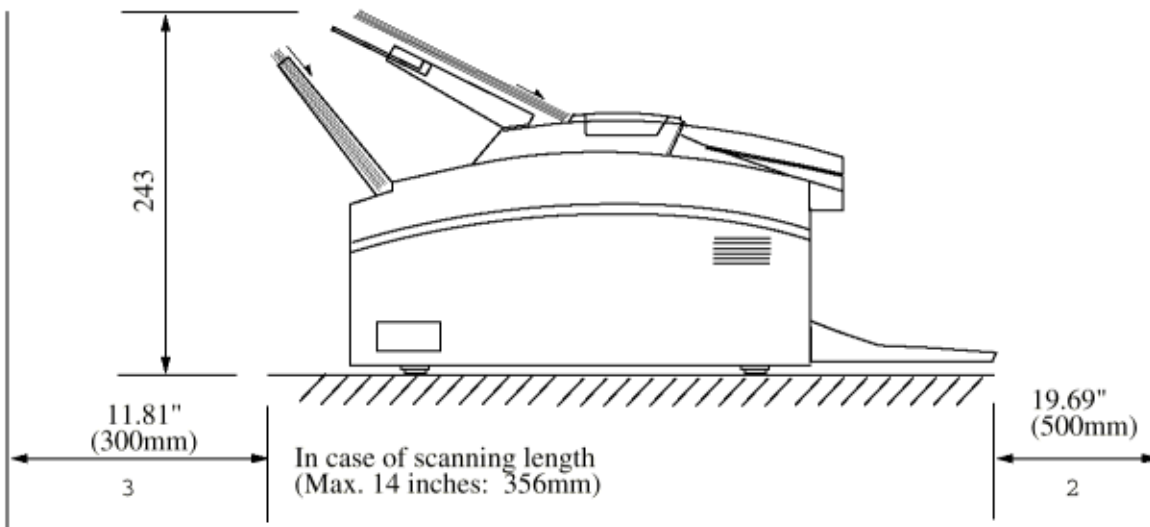
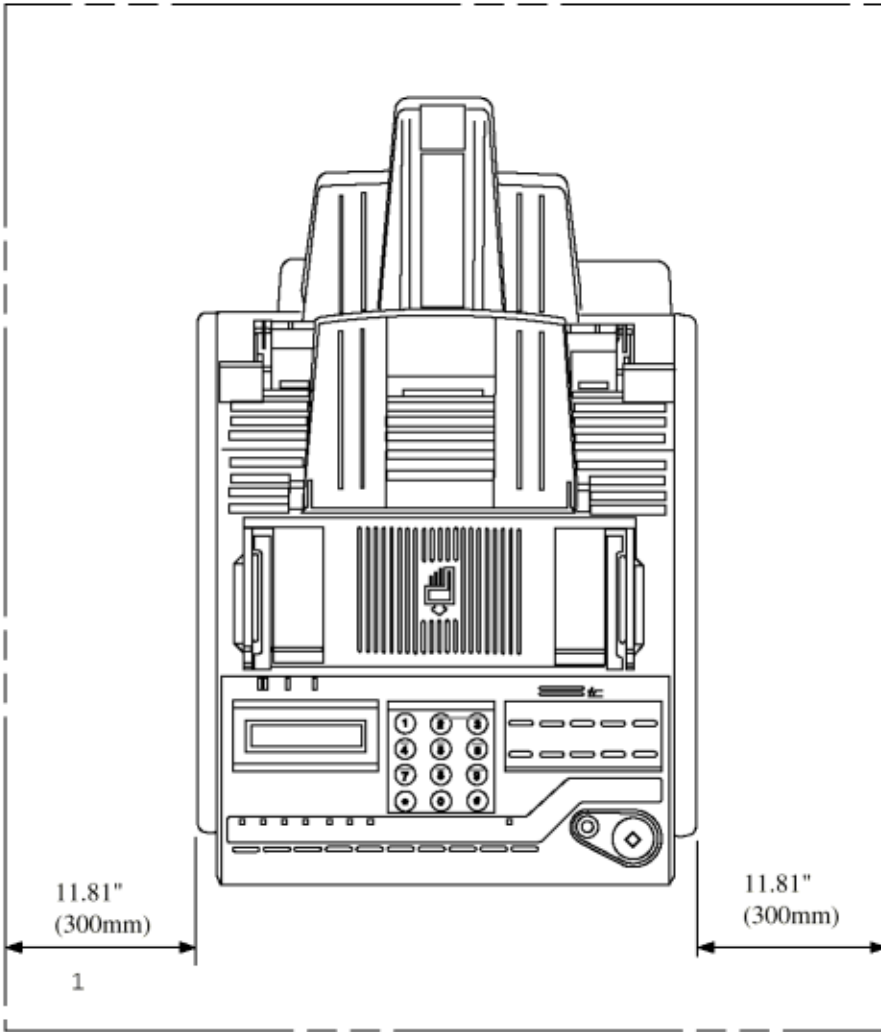
## 2.2 Site Selection

### INSTALLATION

#### Precautions for Installation

- 1 Fluctuation in line voltage
  - 120V AC (102V to 127V)
  - 230V AC (198V to 264V)
- 2 Room temperature  
50 to 90 degrees Fahrenheit (10 to 32 degrees Celsius)
- 3 Humidity  
20 to 80% RH
- 4 Operating environment  
Pressure: Equivalent to altitude of 2500 m and below.
- 5 Exposure  
Within five minutes at luminous intensity 2,000 lux (with the stacker cover opened).
- 6 Required space for installation  
The facsimile requires adequate space for safety and good operability.
- 7 Levelness of installation surface  
1 degree maximum.
- 8 Other requirements  
Avoid installing in any of the following places:
  - A place exposed to direct sunlight
  - A place near a heat source or exposed to vibration
  - A dusty place
  - A place in the atmosphere of acid gas, or steam etc.
  - A place exposed to quick temperature changes





Note:

- 1** This space is necessary for having the telephone set. (page 2-3)
- 2** This space is necessary for installing the document stacker.
- 3** This space is necessary for ventilation.

---

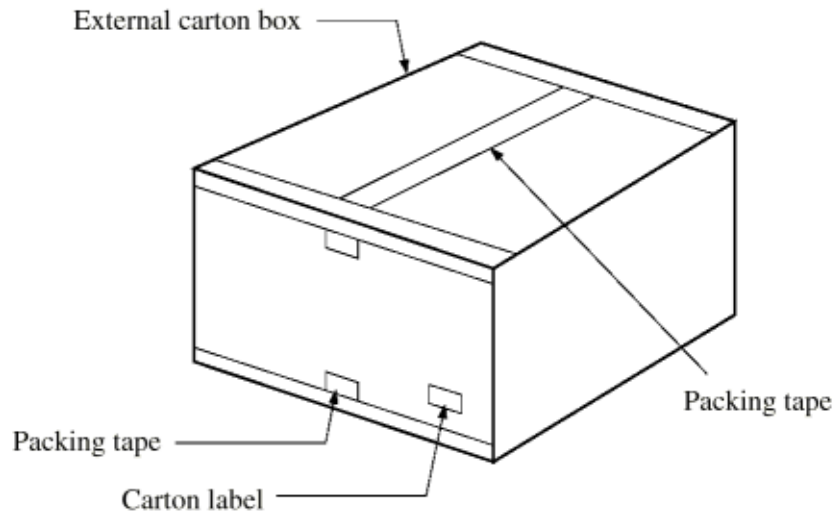
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## 2.3 Unpacking

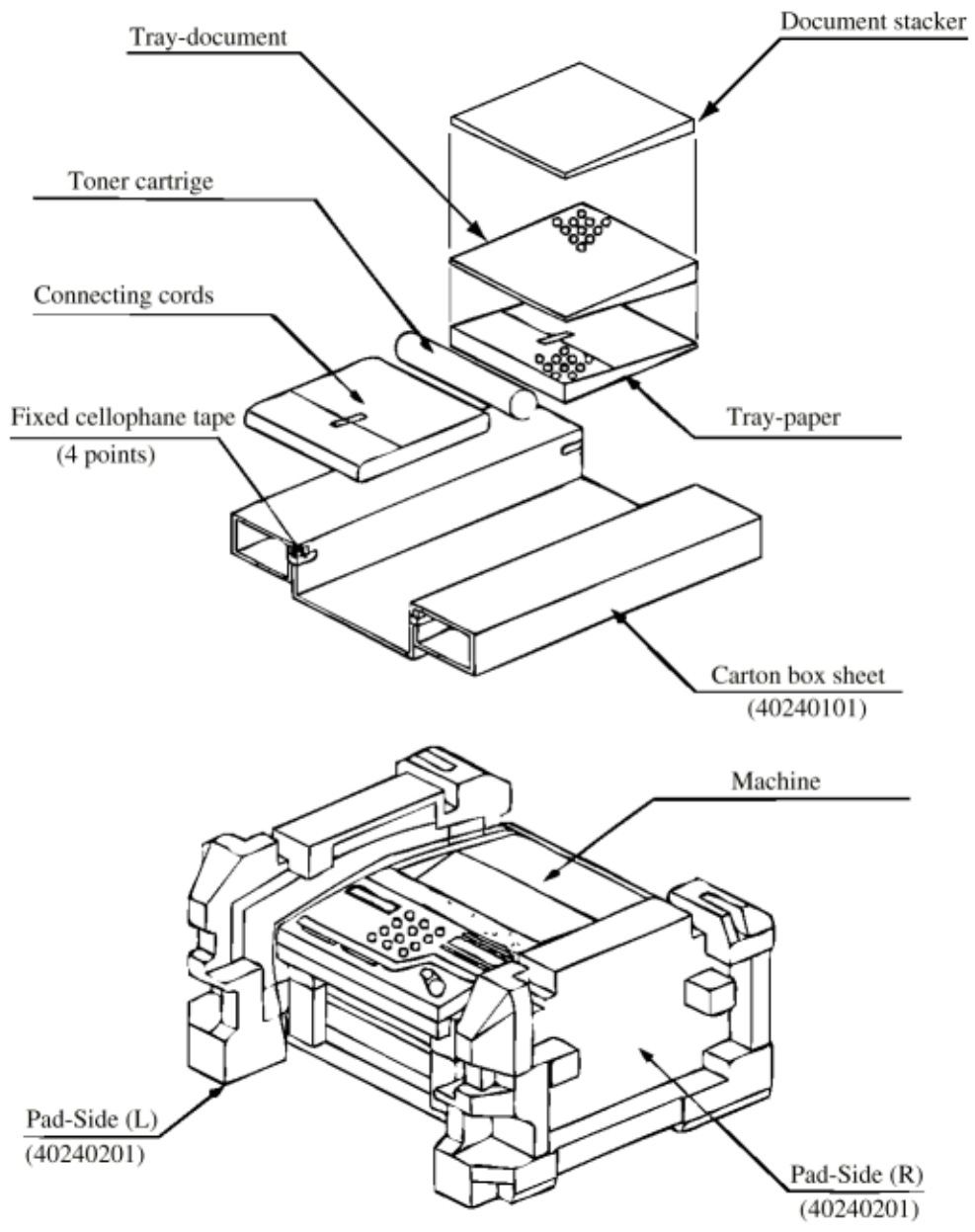
### Procedure

- 1 Remove tape on the top of the carton box and open its cover.

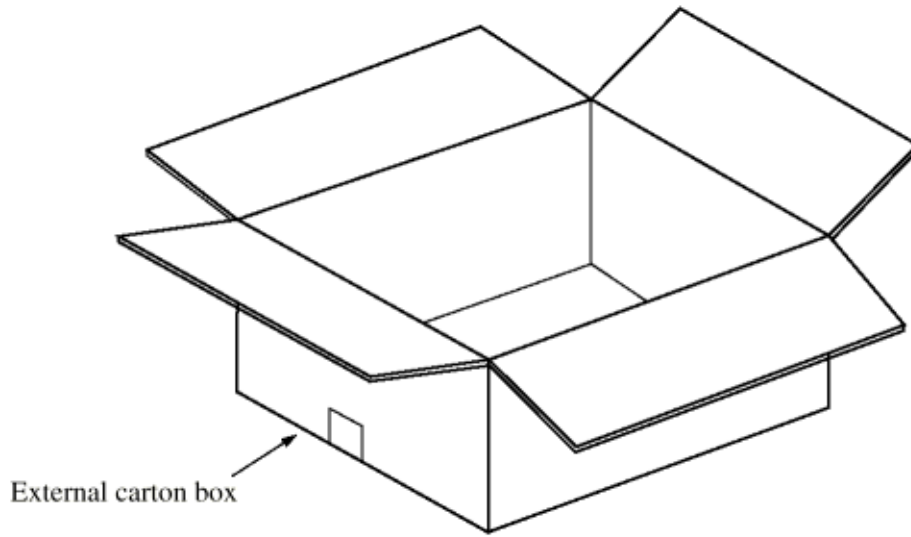


**Figure 2.3.1.1 Unpacking Procedure (1)**

- 2 Take out the accessory box from the carton box. (See Figure below 2.3)
- 3 Take out the machine with plastic wrapper from the box.



**Figure 2.3 Unpacking Procedure (2)**



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## Service Guide OKIOFFICE 84 Chapter 2 Installation

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### 2.4 Check of Contents

Table 2.4.1 Contents List for OKIOFFICE 84

After having taken out the machine and accompanied accessories from the carton box, check the contents according to the following list:

Item No.	Name	Quantity	Remarks
1	OKIOFFICE 84	1	
2	AC power cord	1	
3	I/D unit	1	Already installed.
4	Toner cartridge	1	
5	Line cord	1	
6	One touch sheet	1	Already installed.
7	User's guide	1	
8	Tray paper	1	
9	Tray document	1	
10	Document stacker	1	

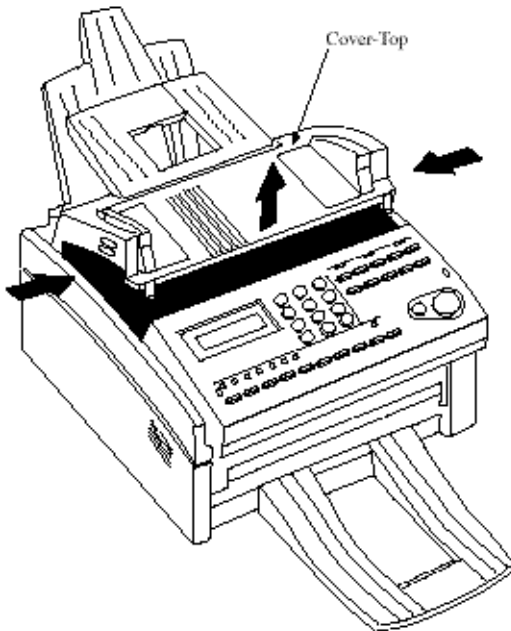
---

**2.5 Installation of Attachments****1 Items**

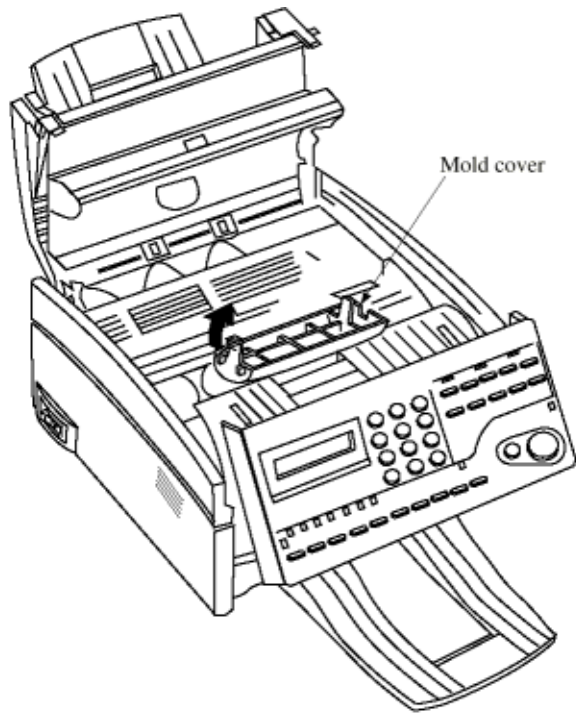
- Image Drum (ID) Unit (already installed)
- Toner cartridge
- Recording paper
- Tray-paper, Tray-document and Document-stacker

**2 Procedure****1) Toner cartridge**

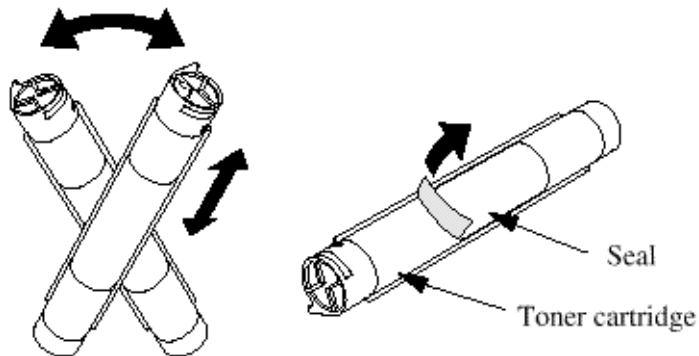
- Peel off the fixed tape attached to the cover-top.
- Open the cover-top.
- Take the plastic cover out of the ID unit.



- Take out the plastic cover out of the ID unit.



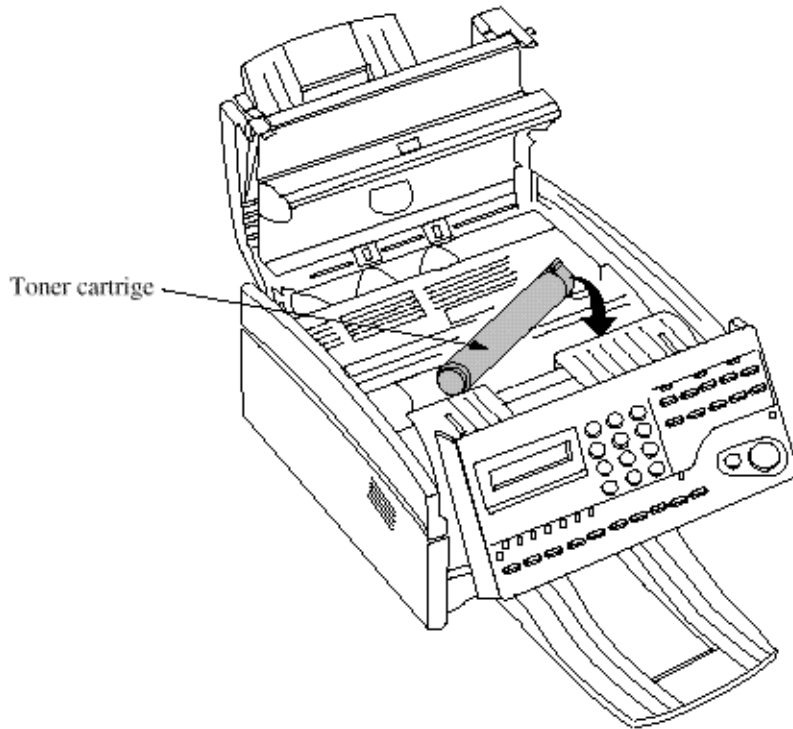
- Take out the toner cartridge from the damp proof bag, shake it five or six times as shown in the illustration to eliminate the other deflection, and peel off the seal gently.



**Figure 2.5.3 Toner Cartridge Installation (3)**

- Ensure that the plastic tab on the right-hand side of the toner cartridge recess lines up with the groove on the toner cartridge.
- Press down on both ends to make sure the cartridge is fully seated.

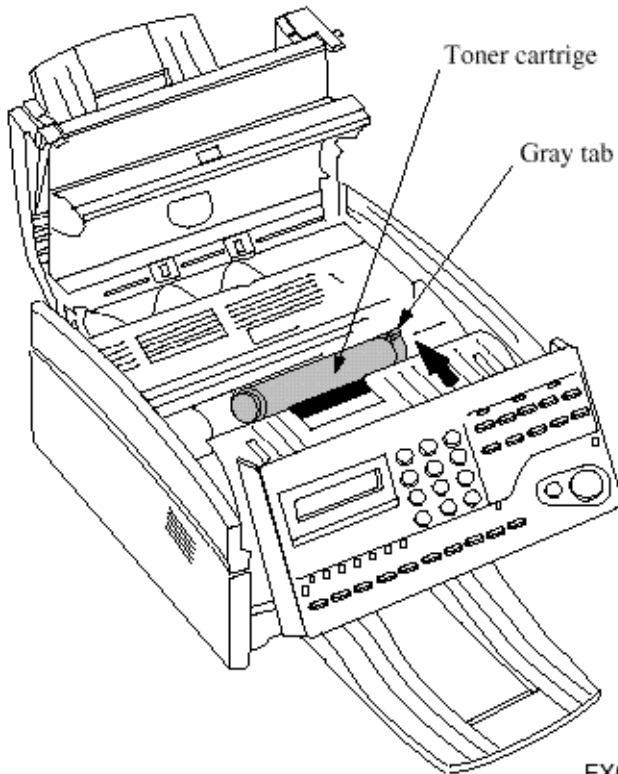




FX048-C2-009

Figure 2.5.4 Toner Cartridge Installation (4)

- Push the gray tab forward until it stops.



FX048-C2-010

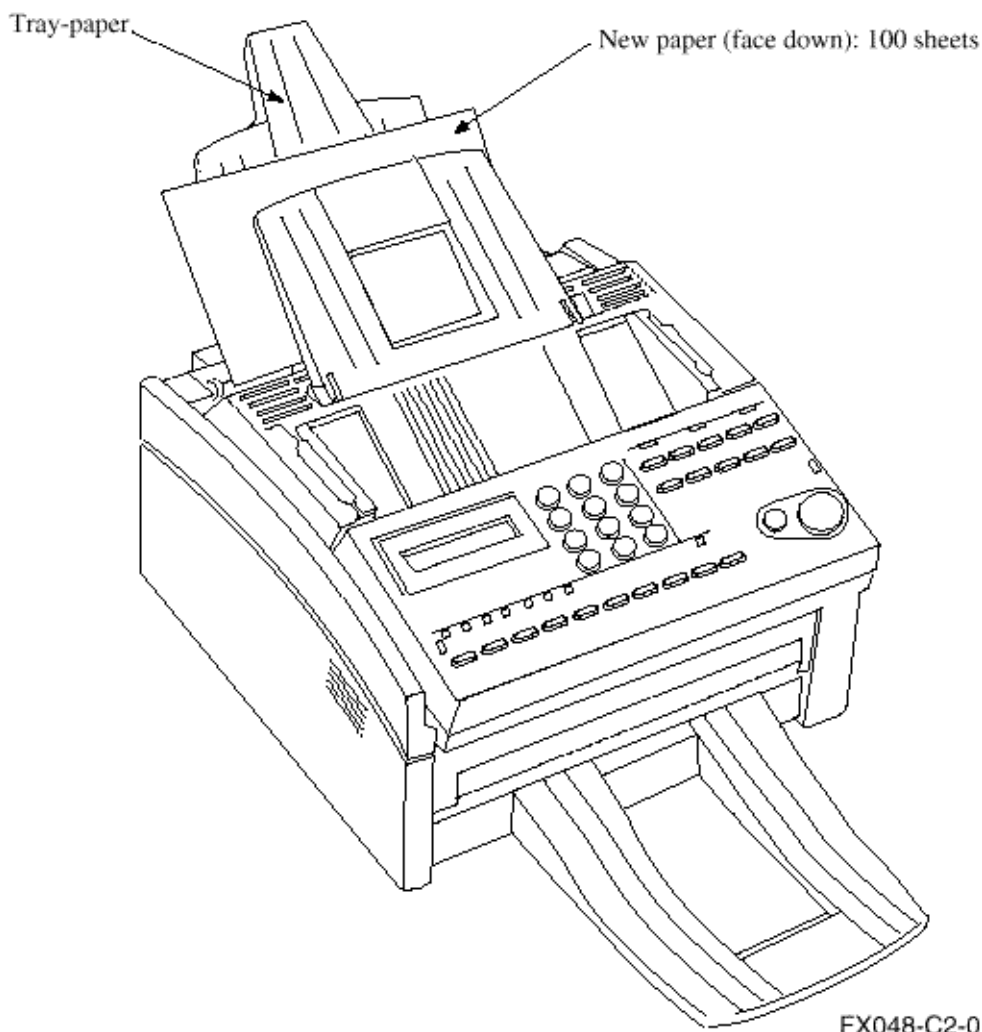
Figure 2.5.5 Toner Cartridge Installation (5)

- Clean the toner scattered in the vicinity of the toner cartridge using a cloth moistened with cold water. Do not use hot water since it makes the toner stick there.
- Close the cover assembly-top until the buttons have been locked completely.

### 3 Recording paper

**Note:** About 100 sheets of the new paper can be set on the tray-paper.  
Loading the new paper.

Sheets must not exceed 100 sheets of the new paper on the tray-paper. If excessive sheets are set, it will cause paper jams.

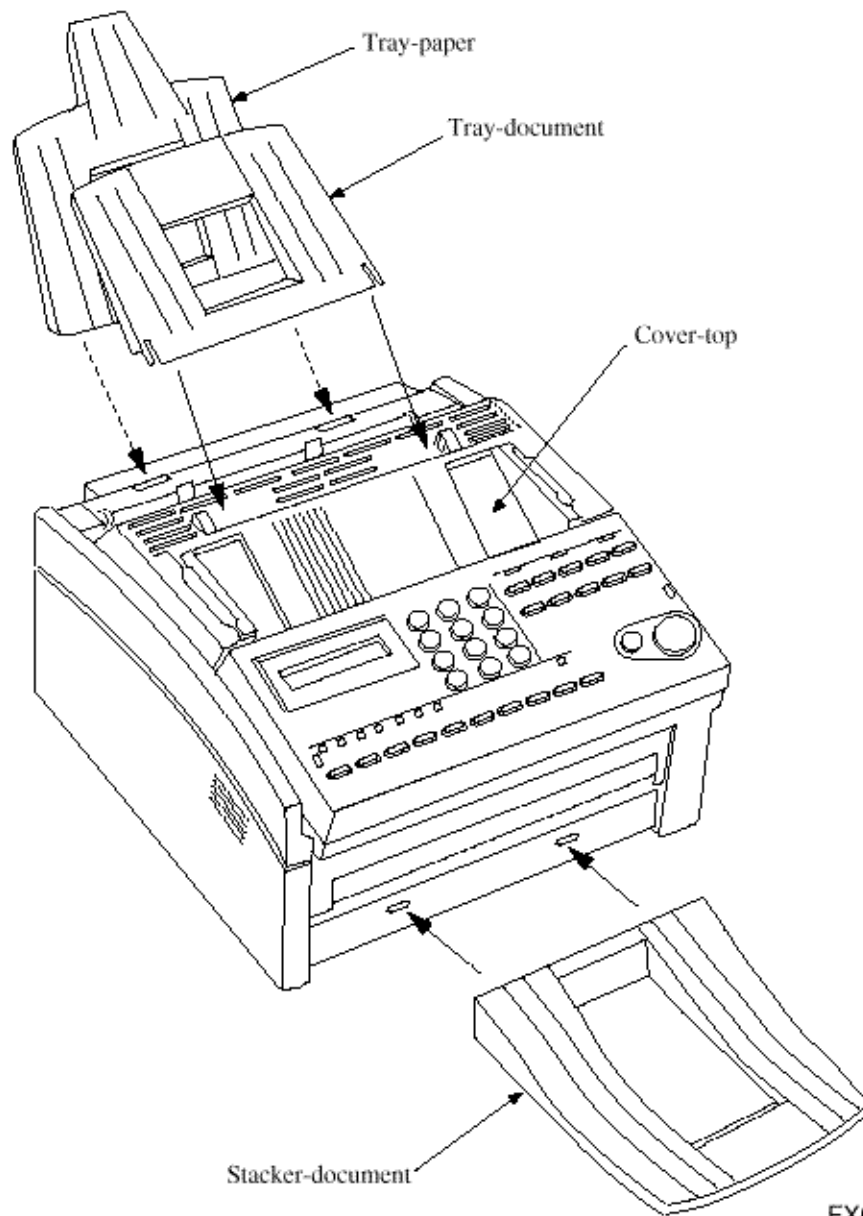


FX048-C2-012

**Figure 2.5.6 Recording Paper Cassette Installation (2)**

#### 4 Tray-paper, Tray-document and Document-stacker (option)

- Hang the tray-paper, the tray-document and the stacker-document (option) onto hanging position.



FX048-C2-013

**Figure 2.5.7 Document Stacker Installation**

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**2.6 AC Cord Connection**

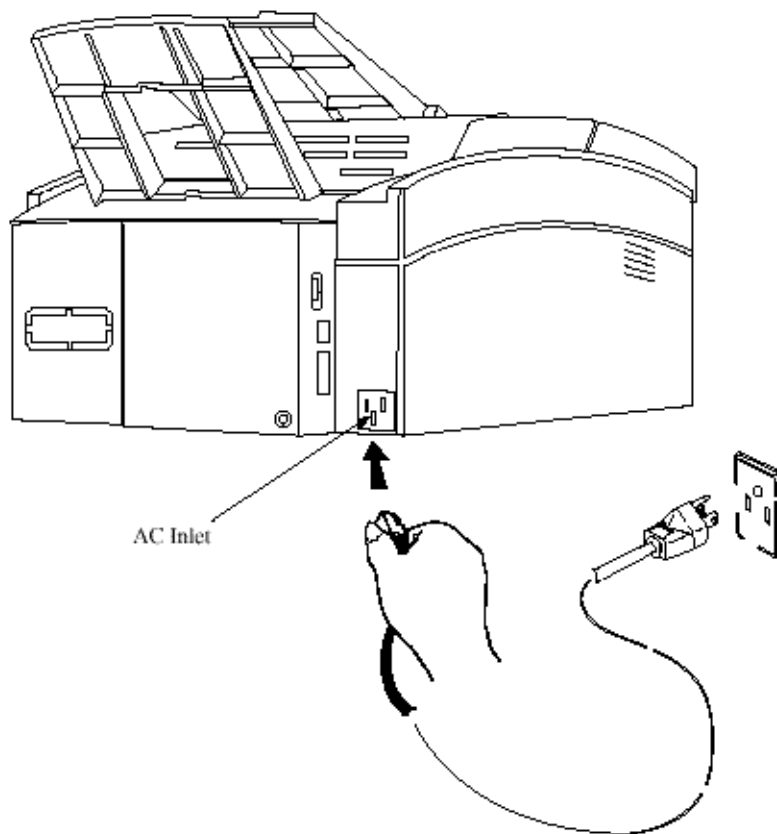
The power supply is provided as follows.

Nominal input voltage 120V AC (Voltage range 102 to 127V AC)

Nominal input voltage 230V AC (Voltage range 198 to 250 V AC)

Check whether the AC voltage of your input is within the above-mentioned voltage range and if so, check that the power switch is turned OFF. After turning off the power switch, connect the female plug of the AC cord to the machine and insert the male plug of the AC cord to the inlet receptacle.

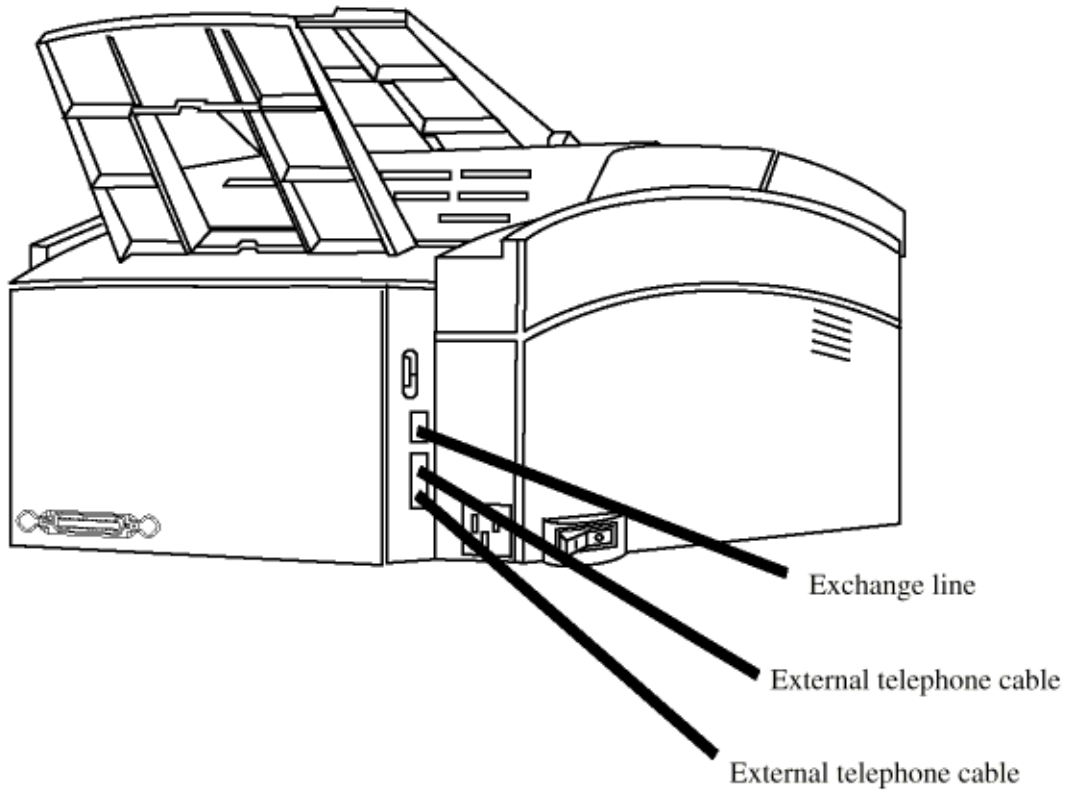
Turn the power switch ON and check that the display shows "(Time)" message indicating the standby mode.



---

**2.7 Telephone and Line Connections****1 Procedure**

- Connect the lines.





## Service Guide OKIOFFICE 84 Chapter 2 Installation

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### 2.8 Packing for Shipment

**CAUTION:** When packing the OKIOFFICE 84 for shipment, **REMOVE THE IMAGE DRUM AND TONER FROM THE UNIT AND SHIP SEPARATELY!**

Failure to do this will result in damage to the machine.

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**2.9 Initial Settings**

**2.9.1 General Procedure of Key Operation**

**2.9.2 Technical Functions**

**2.9.3 Technical Functions Example**

**2.9.4 User's Functions**

**2.9.5 Function Program**

**2.9.6 Clock Adjustment**

**2.9.7 Dual Access Operation**

**2.9.8 System Data Programming**

**2.9.9 Dial Parameter Settings**

**2.9.10 Off-line Tests**

**2.9.11 On-line Tests**

**2.9.12 Installation of Optional Units**

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**2.9.1 General Procedure of Key Operation**

Figure 2.9.1 shows the general procedure of key operation.

---

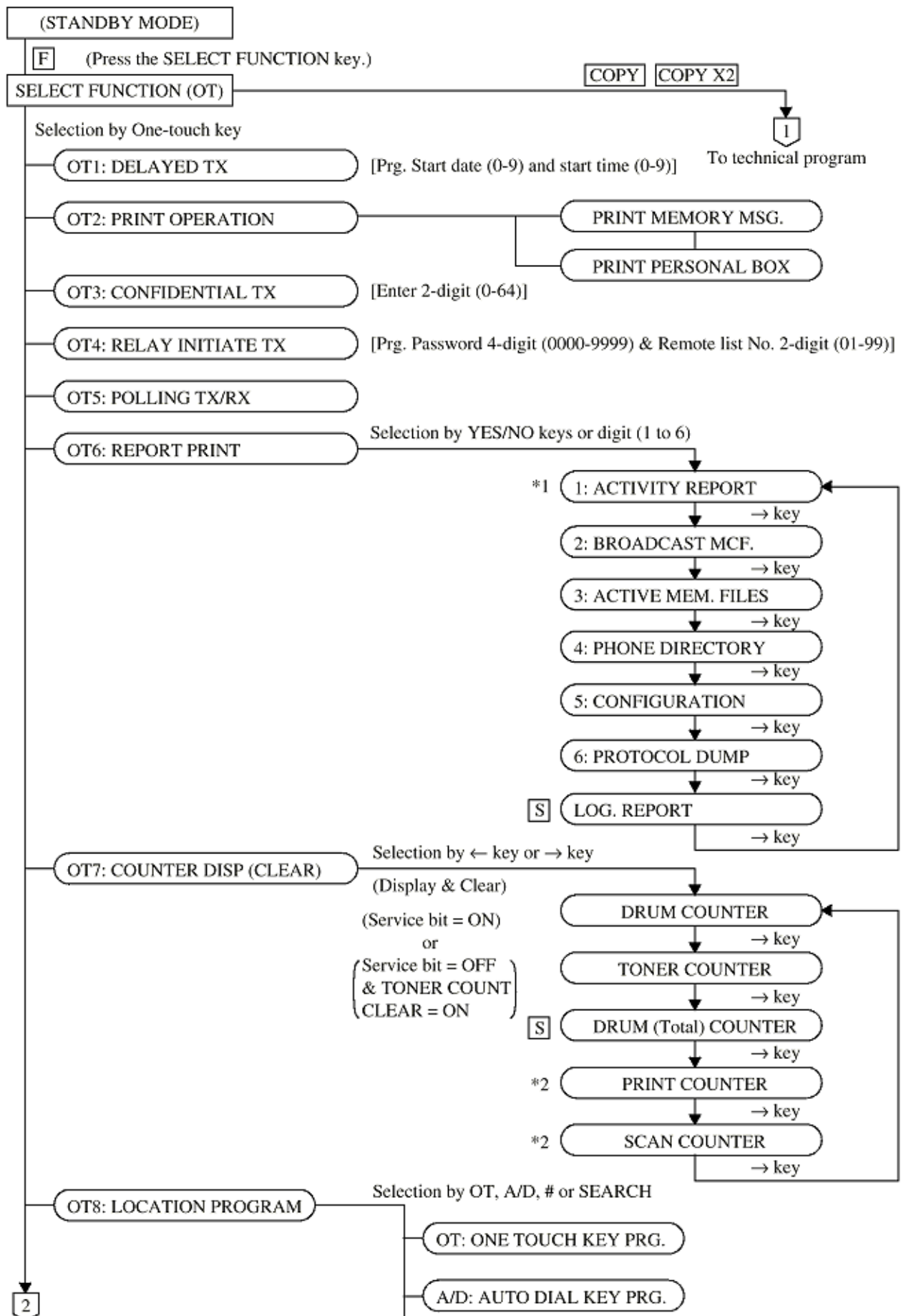
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Key Operation Flowchart

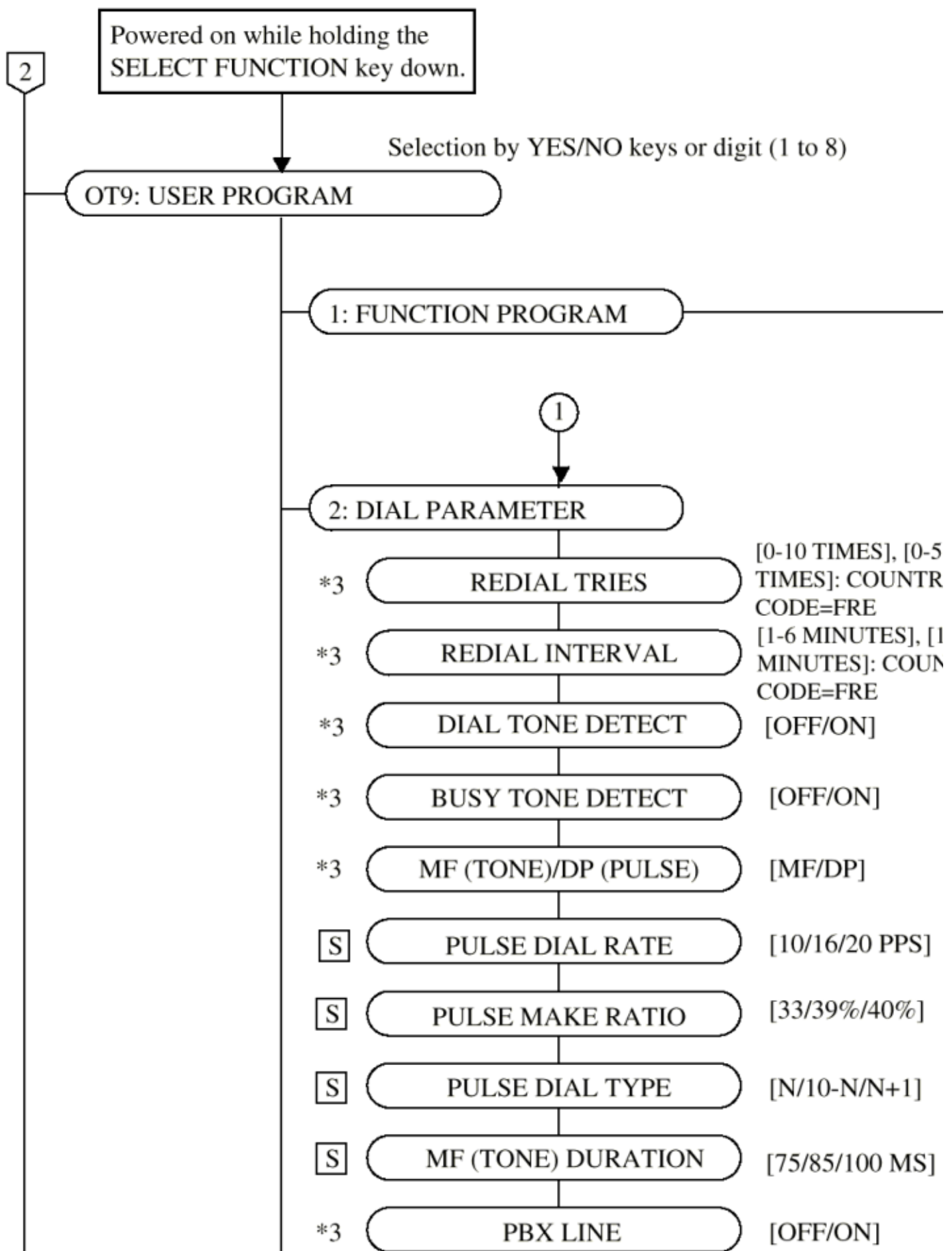


**Note:** When the machine is in POWER SAVE MODE, the machine returns to standby mode by pressing the START key.

\*1: In case of Germany, Austria and Switzerland version, ACTIVITY REPORT message does not appear on the LCD display.

\*2: User can read no. of counter in LCD but can not clear.

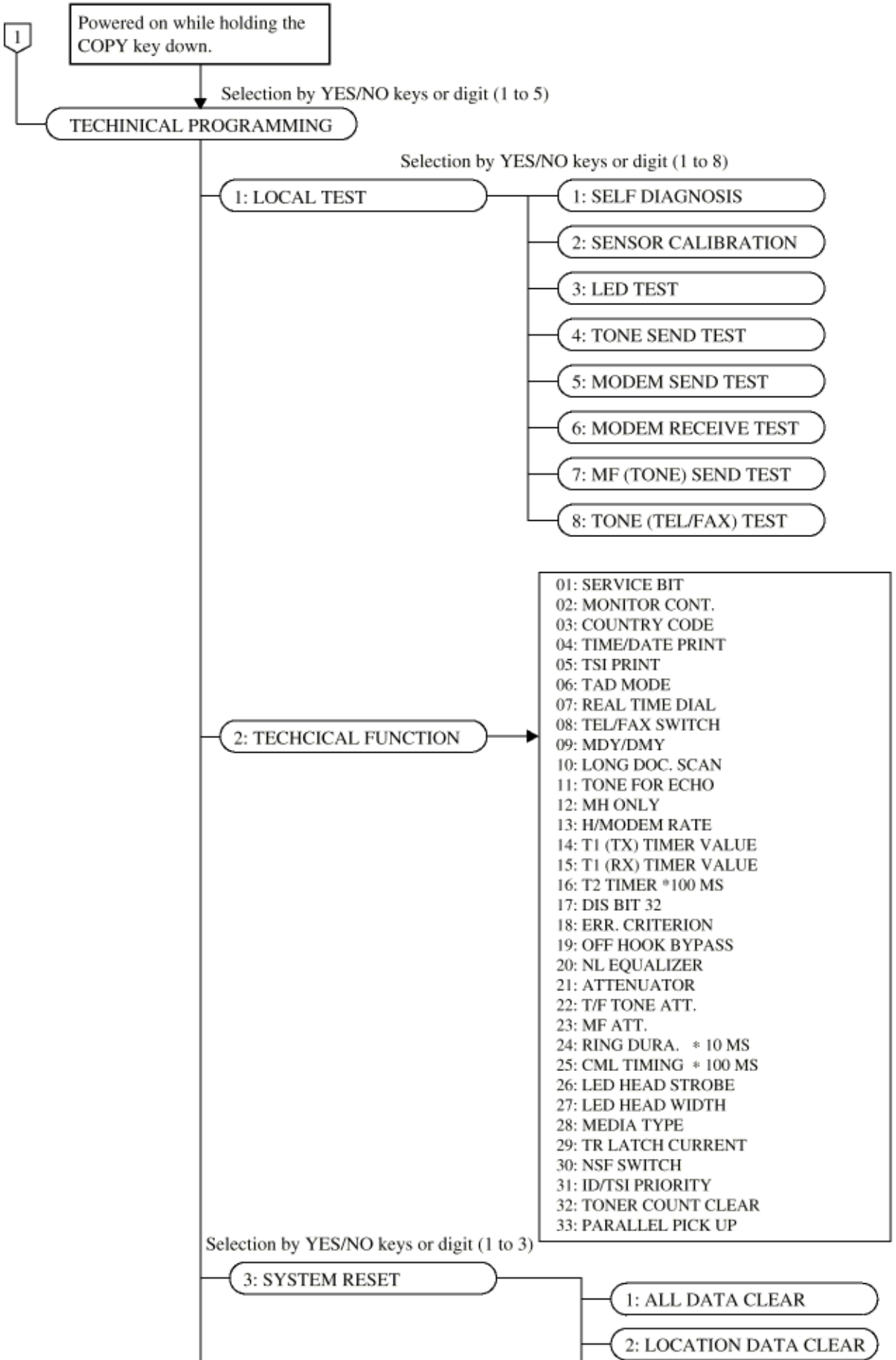
 : Effective if the service bit is set to ON.



\*3: User can not select in some countries.

\*4: When the service bit is set to OFF, ERR. REPORT (MCF.) of No. 03, RING RESPONSE of No. 11, DISTINCTIVE RING of No. 12 and POWER SAVE MODE of No. 18 are bypassed to the next function No. in some countries.

☒ : Effective if the service bit is set to ON.



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### 2.9.2 Technical Functions

This section explains setting items generally conducted by service personnel, not by users.

Table 2.9.2 (1/7) shows the initial setting items and their purposes. (The default setting is different by the individual countries.)

Each item can be accessed by entering the corresponding service number on Technical Function.

The detailed procedures of the initial setting items will be explained on the following pages.

**Note 1:**

**S-ON:** Effective if the service bit has been set to ON.

**FP:** Function program setting

**TF:** Technical function setting

**Note 2:** The fonts displayed on the LCD operation panel may differ from fonts written this manual.





## Service Guide OKIOFFICE 84

### Chapter 2 Installation

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Service Personnel Initial Settings Table 2.9.2 (1/7)

T.F. No.	Item	Specifications	Default
01	Service bit	Switching serviceman/user operation. ON : Service personnel's features are available. OFF : Service personnel's features are not available.  To enable or disable the following functions: <ul style="list-style-type: none"><li>● Drum (Total, Print, Scan), and toner counter clear</li><li>● Dial parameters</li><li>● etc</li></ul>	
02	Line monitor control	Changing the audible monitoring range. FP +06 (To select the loudness of monitoring) ON : Enable OFF : Disable <b>Note:</b> In case of transmission mode, the monitor will be available during dialing, but the monitor will be switched off automatically after the elapse of specified time (about 5 sec.). However, when TF02 is set to ON, the monitor is available during communication also.	
03	Country code	Selecting the following country code: USA, INT'L, GBR, IRL, NOR, SWE, FIN, DEN, GER, HUN, TCH, POL, SUI, AUT, BEL, HOL, FRE, ESP, ITA, GRE, AUS, NZL, SIN, HNG, POR, LTA, MEX	
04	Time and date print	Enables or disables the function of printing local date and time at the top of the received page. OFF/ONCE/ALL selectable. OFF: Time and date are not printed ONCE: Time and date are printed at the top of the first page only. ALL: Time and date are printed at the top of every page. <b>Note:</b> Set at receiver. Switches the function of printing TSI data from remote fax onto the received pages. TSI is printed at the leading edge of first reproduced copy. (Set at receiver.)	
05	TSI print	When TF04 is set to "ALL", TSI is printed for the all received pages. ON : Enable OFF : Disable (Reference) TSI; Transmitting Subscriber Identification	





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### Chapter 2 Installation

Service Personnel Initial Settings Table 2.9.2 (2/7)

T.F. No.	Item	Specifications	Default
06	TAD mode (For external telephone answering device.)	<p>Switches an automatic voice message response to the calling station. TAD mode is of three types (TYPE1/TYPE2/TYPE3). OFF/TYPE1/TYPE2/TYPE3 selectable.</p> <p>TYPE1 means: 1. RING comes. 2. The TAD answers, returns the recorded voice message in TAD to calling party. 3. The FAX machine will continue to detect CNG signal while TAD works. 4. If the FAX machine detects CNG signal, the fax will go into normal receiving mode. 5. Even though the fax does not detect CNG signal, the fax will go to receiving mode in hook-on condition.</p> <p>TYPE2 means: The function from No. 1 to No. 4 of upper TYPE2 are the same as TYPE1. 5. If the fax does not detect CNG signal during working of TAD, the machine will go to standby mode.</p> <p>TYPE3 means: The function from No. 1 to No. 2 of upper Type 1 are the same as TYPE1. 3. The fax does not detect CNG signal during 15 seconds from TAD operation starting. 4. The fax starts CNG detection after 15 seconds from TAD operation. If the CNG is detected, the fax goes to the normal receive mode. 5. If the fax does not detect the CNG during TAD operation, the fax goes to standby mode.</p>	
07	Real time dialing	<p>Enables or disables the real time dialing. 3 types selectable. (OFF/TYPE1/TYPE2) TYPE1: Real-time dialing is available when the telephone handset is OFF-HOOK. TYPE2: Real-time dialing is available when the telephone handset is OFF-HOOK or HOOK key is pressed.</p>	
08	TEL/FAX switching	<p>Enables or disables the TEL/FAX automatic switching. ON : Enable OFF : Disable (Related item: FP10, TF23)</p>	

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**Service Personnel Initial Settings Table 2.9.2 (3/7)**

T.F. No.	Item	Specifications	Default												
09	MDY/DMY	Switches LCD display and report print from month/day/year to day/month/year or vice versa. MDY/DMY selectable.													
10	Long document SCAN	Switches the function of transmitting long-size document (more than 360 mm). ON : 1500 mm or 60 min. OFF : 360 mm or 60 min. Note: 60 min is transmitting time.													
11	Tone for Echo	Switches the function to apply to poor lines with echo in overseas transmission, etc. ON: Enables OFF: Disables  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Echo Protection</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>Ignore 1st DIS</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>CED-DIS timer</td> <td>75 ms</td> <td>1.5 sec</td> </tr> <tr> <td>Tone for echo</td> <td>OFF</td> <td>ON</td> </tr> </table>	Echo Protection	OFF	ON	Ignore 1st DIS	OFF	ON	CED-DIS timer	75 ms	1.5 sec	Tone for echo	OFF	ON	
Echo Protection	OFF	ON													
Ignore 1st DIS	OFF	ON													
CED-DIS timer	75 ms	1.5 sec													
Tone for echo	OFF	ON													
12	MH only	Switches the function of limiting image compression to the MH codes only. ON : Coding scheme is MH only. When the receiving image data is affected by noise on the telephone line. OFF : Any of MH, MR and MMR.													
13	High-speed modem rate	Specifies the modem's starting speed, 14.4k, 9.6k, or 4.8kbps.													
14	T1 (TX), timeout value	T1 (TX) is a time to detect up to 3 flags of DIS sent from a called fax machine. Registers the time duration (in seconds) for which the fax waits for the remote station's answer.  This timer starts when the last dialed digit has been sent in the automatic transmission mode.  * Selects the 3 digit timer 010 to 255 sec selectable. (in one second steps)													
15	T1 (RX), timeout value	T1 (RX), timeout value (later) Registers the time duration (in seconds) for which the fax waits for the remote station's answer of individual country's specification. This timer starts after the DIS is transmitted. If T1 times out, the fax disconnects the line.  * Selects the 3 digit timer 010 to 255 sec selectable. (in one second steps)													

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## Service Guide OKIOFFICE 84 Chapter 2 Installation

Service Personnel Initial Settings Table 2.9.2 (4/7)

T.F. No.	Item	Specifications	Default
16	T2, timeout value	T2, timeout value (layer) Registers the time duration (in seconds) for which the receiving fax detects the EOL (End Of Line) signal during phase C. The fax will disconnect the line when EOL cannot be detected within T2. * Selects the 3 digit timer 001 to 255 selectable. (in 100ms steps) For example: 060 x 100 ms =6 s	
17	DIS bit32	Selects whether a called fax should transmit DIS bit 32 or not.  ON : Transmits DIS bit 32. OFF: Does not transmit DIS bit 32.  (When OFF, the following functions will not be supported: <ul style="list-style-type: none"><li>● Reception of Extra Fine (8'15.4 line/mm)</li><li>● 300 dpi</li><li>● SEP/SUB frames</li></ul> <b>Note:</b> To improve compatibility between this fax machine and other company's fax machines.  If communication error occurs frequently when a fax sender is an older version.	
18	Error criterion	Registers the threshold value whether to transmit RTN or MCF signal when the error occurs in received data.  00% to 99% selectable. (in one percent steps)	
19	Off-hook bypass	Switches the function of maintaining communication without hooking up the telephone set in normal testing etc.  ON : Enable OFF: Disable	
20	NL equalizer	Selects equalization for the following cable lengths:  0 km/1.8 km/3.6 km/ 7.2 km selectable. Note: Relative to 1700Hz for length of 0.4mm diameter cable.  Equalizer level is the difference of gain of equalized signal between 0.3kHz and 3.4kHz.	

21	Modem attenuator	<p>Adjusts the attenuation (dB) for the message send signal power level.</p> <p>Adjusting value is 0 to 15 dB in one dB steps. Since the maximum send signal power level (dB) of the fax is at 0 dB, you can select 0 dB to -15 dB in one dB steps for the send signal power level.</p> <p>0 to 15 dB. selectable</p>	
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Service Personnel Initial Settings Table 2.9.2 (5/7)

T.F. No.	Item	Specifications	Default
		<p><b>Note:</b> The send signal power level should meet your country's regulation. Some countries may specify the power level at a telephone exchange.</p> <p>In that case, you should subtract the specified level from the line cable attenuation to determine the send level of your fax.</p>	
22	T/F tone attenuator (for TEL/FAX SW)T	Adjusts the attenuation (dB) for the quasi-ring back tone send signal of TEL/FAX switching.	
23	MF attenuator	Adjusting value is 0 to 15 dB in one dB steps. Adjusts the attenuation (dB) for the send MF tone power level.  Adjusting value is 0 to 15 dB in one dB steps.	
24	Ring duration detection time	Selects the minimum ring detection time to meet country's requirements.  Adjusting time is 100 MS to 990 MS in 10 MS steps.  10 to 99 selectable.  For example: (120 ms) <u>12 x 10 ms = 120 ms</u>	
25	CML timing	Selects the time from end of ring to CML-ON. Adjusting time is 100 MS to 1900 MS in 100 MS steps.  0 to 19 selectable.  For example: (300 ms) <u>03 x 100 ms = 300 ms</u>	

26	Strobe for LED head	<p>Setting of LED print head strobe signals (00000-11111).</p> <p>Selection of strobe width in LED head. "00000" is lightest and "11111" is darkest.</p> <p><b>Note 1:</b> When the rank marking of the new replaced LED print head (new part) is same as that of the old used LED print head (old part), you do not always have to set the LED print head strobe signal.</p> <p><b>Note 2:</b> Intensity ranking is determined by the first, second and third digits from the right on the LED print head serial number. (i.e. in .... 212, 212 is the intensity ranking.)</p>	
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Setting of Technical Function No. 26

Setting Rank Marking	MSB ↑ LSB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1		
		0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	
0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0	0	0	1	1	1		
0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	1	
0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
291-313							*																							
269-290								*																						
248-268									*																					
229-247										*																				
212-228											*																			
196-211												*																		
181-195													*																	
168-180														*																
155-167															*															
143-154																*														
132-142																	*													
122-131																		*												
113-121																			*											
105-112																					*									
100-104																						*								



## Service Guide OKIOFFICE 84 Chapter 2 Installation

Service Personnel Initial Settings Table 2.9.2 (6/7)

T.F. No.	Item	Specifications	Default									
27	Head width	<p>Head width</p> <p>You should confirm the head width by the following table, and then select it by this setting.</p> <p>Head width is two types (TYPE1/TYPE2).</p> <table border="1"><thead><tr><th>Setting</th><th>Head width</th><th>Head label</th></tr></thead><tbody><tr><td>TYPE 1</td><td>2496 dots</td><td>1228G1</td></tr><tr><td>TYPE 2</td><td>2560 dots</td><td>1104G2</td></tr></tbody></table>	Setting	Head width	Head label	TYPE 1	2496 dots	1228G1	TYPE 2	2560 dots	1104G2	
Setting	Head width	Head label										
TYPE 1	2496 dots	1228G1										
TYPE 2	2560 dots	1104G2										
28	Media type	Selects the recording paper according to its quality. Medium, Medium-heavy and Heavy selectable.										
29	Transfer roller latch current	Selects the latch current for transfer roller. (-2/-1/0/+1/+2)										
30	NSF switch	<p>NSF signal transmission selectable.</p> <p>ON: Transmits NSF signal</p> <p>OFF: Disables NSF signal</p> <p><b>Note:</b> When NSF switch = OFF, the fax operation is shown as below.</p> <ul style="list-style-type: none"><li>• When transmitting, even if OKI NSF signal is detected from the remote machine, the fax transmits DCS signal (The fax does not transmit NSC signal.)</li><li>• When Remote Diag. = ON, the fax transmits NSF signal.</li></ul>										



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**Service Personnel Initial Settings Table 2.9.2 (7/7)**

T.F. No.	Item	Specifications	Default																													
31	ID/TSI priority	<p>Selects ID/TSI printing in the distant station ID col-umn of the report.</p> <p>ID: Prints NSF signal with personal ID.            TSI: Prints TSI signal without NSF.</p> <table border="1"> <thead> <tr> <th rowspan="2">Priority</th> <th colspan="2">Set to ID</th> <th colspan="2">Set to TSI</th> </tr> <tr> <th>TX</th> <th>RX</th> <th>TX</th> <th>RX</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Personal ID</td> <td>Personal ID</td> <td>CSI</td> <td>TSI</td> </tr> <tr> <td>2</td> <td>CSI</td> <td>TSI</td> <td>Dial No.</td> <td>Dial No.</td> </tr> <tr> <td>3</td> <td>Dial ID</td> <td>Dial ID</td> <td>Personal ID</td> <td>Personal ID</td> </tr> <tr> <td>4</td> <td>Dial No.</td> <td>Dial No.</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>Note: LCD display and Report printing gives preference to TSI/CSI signal than Personal ID.</p>	Priority	Set to ID		Set to TSI		TX	RX	TX	RX	1	Personal ID	Personal ID	CSI	TSI	2	CSI	TSI	Dial No.	Dial No.	3	Dial ID	Dial ID	Personal ID	Personal ID	4	Dial No.	Dial No.	-	-	
Priority	Set to ID			Set to TSI																												
	TX	RX	TX	RX																												
1	Personal ID	Personal ID	CSI	TSI																												
2	CSI	TSI	Dial No.	Dial No.																												
3	Dial ID	Dial ID	Personal ID	Personal ID																												
4	Dial No.	Dial No.	-	-																												
32	Toner Count Clear	<p>Enables or disables the clear operating of Toner Counter Clear (OT7) without Service bit ON/OFF (TF01).</p> <p>ON: Enables            OFF: Disables</p>																														
33	Parallel Pick Up	<p>To control a receiving fax by 2 digits (the same digits as remote reception) from a telephone set connected parallel to the telephone line.</p> <p>ON: To enable            OFF: To disable            (For the details, see Appendix A3, Section 4.5. Outline of Parallel Pick Up.)</p>																														



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### TEL/FAX Automatic Switching

#### 1) TEL/FAX automatic switching

This function is used for the purpose of TEL/FAX automatic switching as follows.

(1) If the machine detects a call with a CNG signal indicating an auto send facsimile call, it starts an automatic document receiving operation.

(2) If machine detects a call without a CNG signal, machine generates the buzzer sounds as a telephone call. The calling person can hear a "ring back" tone within a predetermined time.

If the operator at the called side does not lift the handset within the predetermined time, the machine automatically starts a document receiving operation.

Voice conversation will automatically be available through the internal handset by lifting up the handset while the call buzzer is sounding.

#### Note:

- 1: The predetermined time is selectable between 20 or 35 sec. (Function program No. 10)
- 2: No ringing signal is sent to the external telephone handset.
- 3: Choice of message sending level. The level is selectable from 0 to 15 dB in one dB step. (Technical function No. 22)
- 4: TEL/FAX mode is available by Technical Function No. 08.

#### 2) TAD mode

TAD: Telephone Answering Device

TAD can be connected to external telephone terminal to record your messages.

TAD records your speech and switches an automatic voice message response to the calling station.

**Note 1:** A choice of TAD mode is available by Technical Function No. 06.

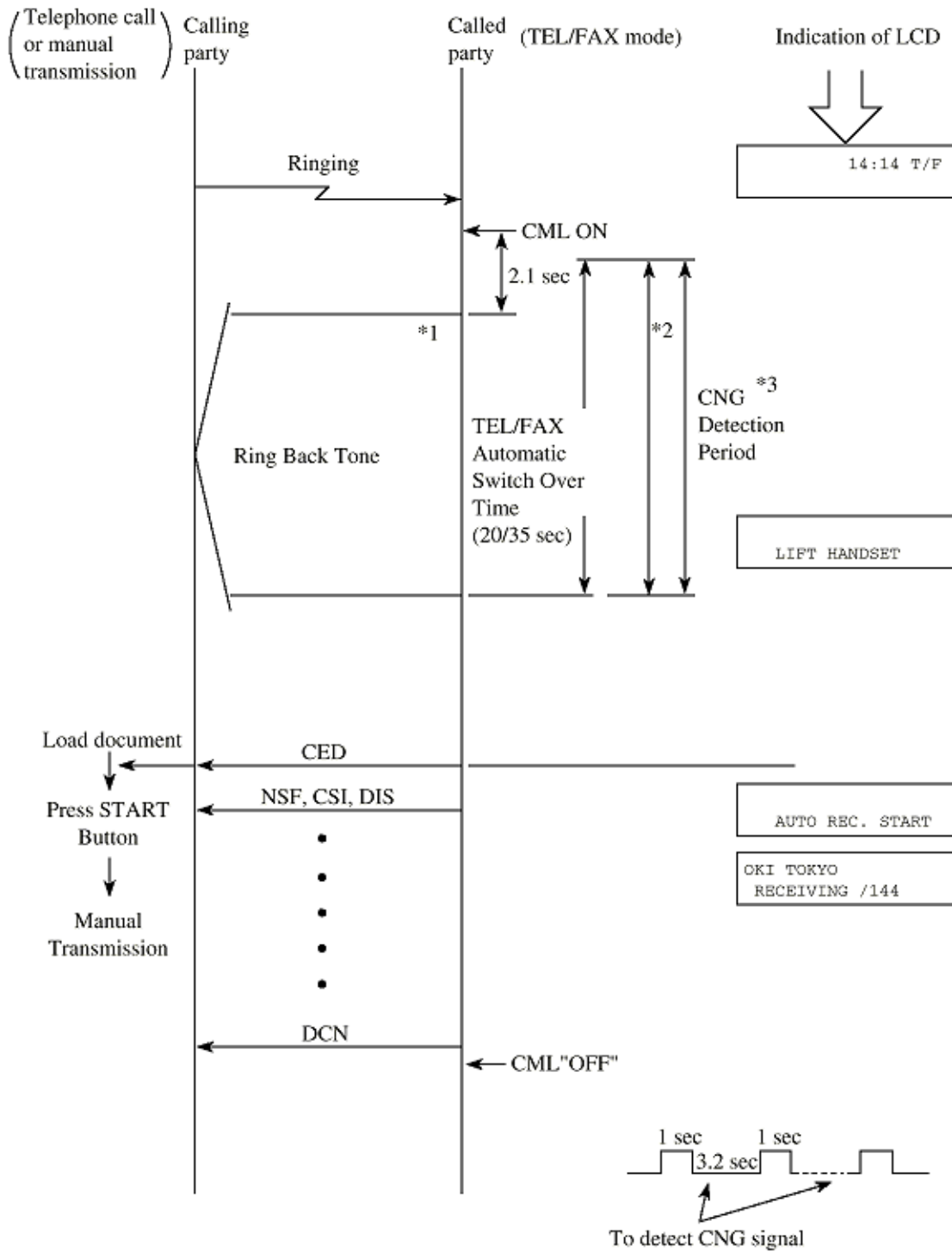
**Note 2:** The predetermined time is selectable between 20 or 35 sec.



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TEL/FAX Mode Flow Chart



**[Notes]**

\*1: Ring Back Tone -- 1 sec. ON, 3.2 sec. OFF

\*2: When you want to talk by phone, pick up handset.

\*3: The called party can send CED to the calling party immediately to start FAX communication if the CNG is

detected during the period.

**\*4:** If the fax does not detect CNG signal during working of TEL/FAX mode, LCD display indicates "LIFT HANDSET".

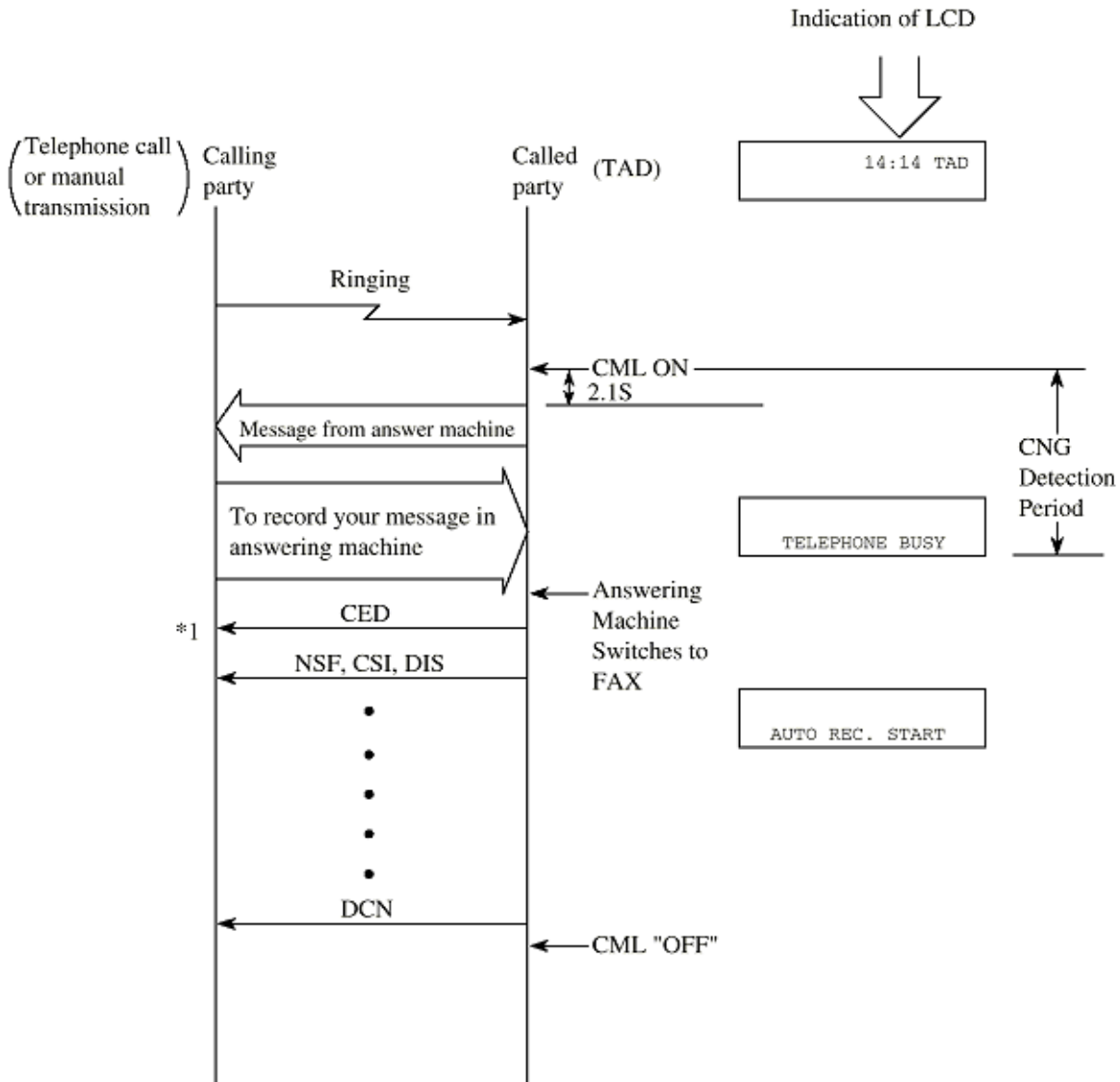
---

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### TAD Mode Flow Chart (Type 1)

Even though the fax does not detect CNG signal, the fax will go to receiving mode.



\*1 To enable the manual TX mode.

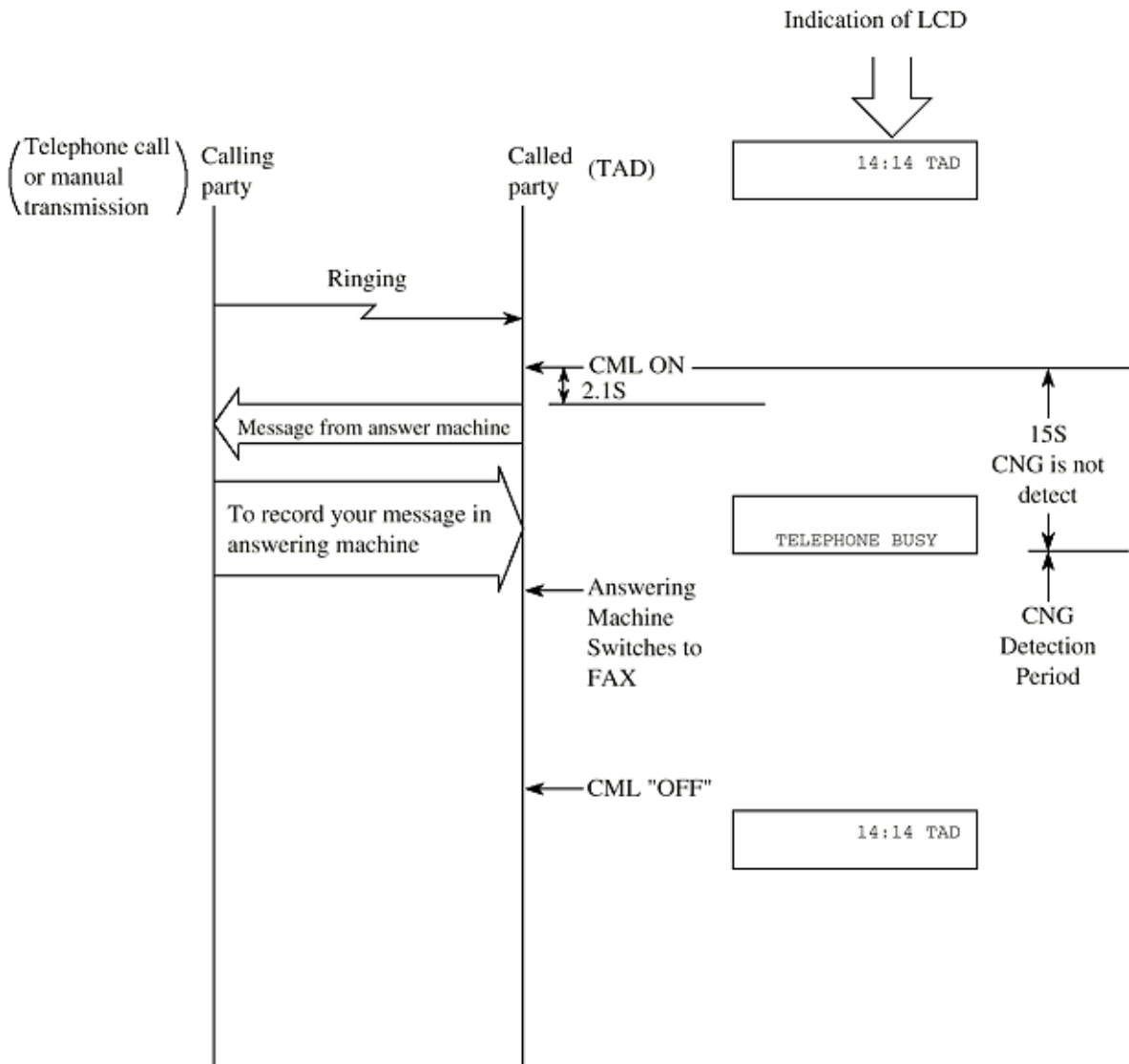
Load document ---> Press START button ---> Manual transmission

**TAD Mode Flow Chart (Type 2)**

If the fax does not detect CNG signal during working of TAD, the machine will go to standby mode.

The fax does not detect CNG signal during 15 seconds from TAD operation starting. The fax starts CNG signal detection after 15 seconds from TAD operation.

When the fax does not detect CNG signal and ends TAD operation (on-hook of TAD operation), the fax return to standby state.



**2.9.3 Technical Functions Example**

**(1) Service Bit Setting**

1) Purpose

To enable or disable the following functions:

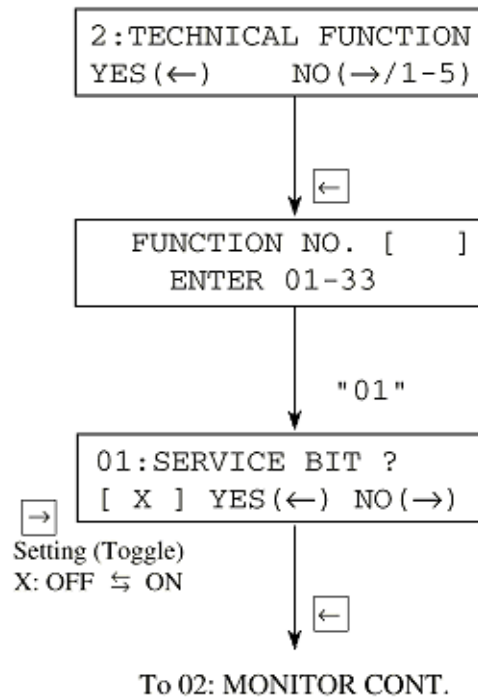
- Drum and toner counter display (clear)
- Service default report printing
- Protocol dump report printing
- Ring response time setting
- Dial parameters setting
- Printer counters clearing

2) Procedure

**Operations:**

- To bring the LCD up to the desired message press SELECT FUNCTION key once, COPY key twice and "2"key. (In case of no message in memory)
- Press  key.
- Service bit setting is T.F. No. 01. Enter "01"

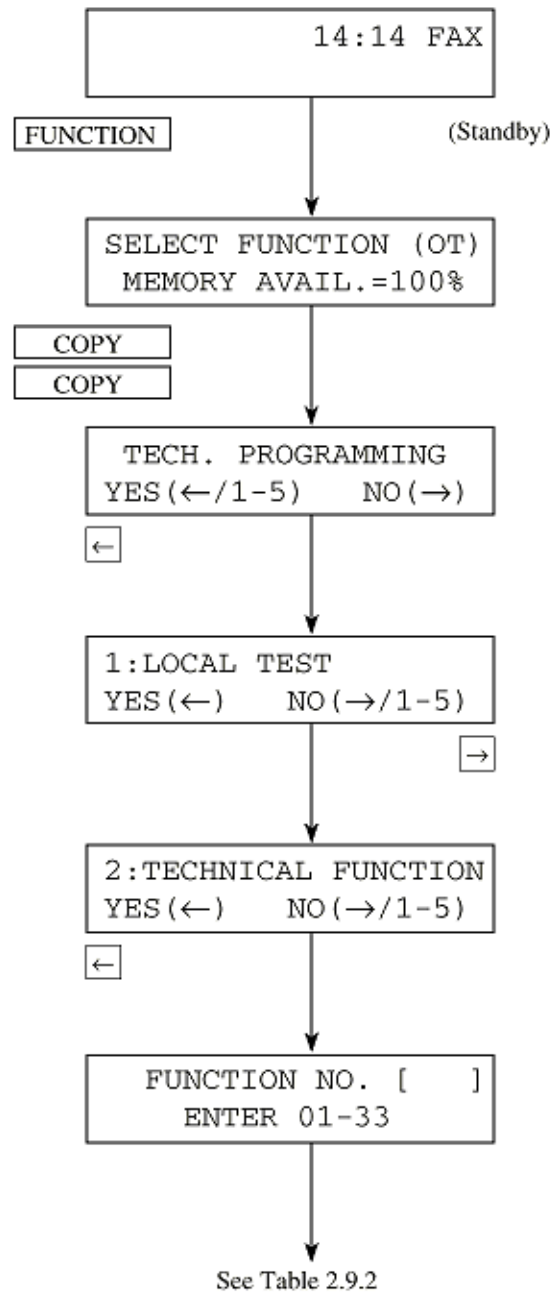
**The display shows:**



## Operations:

- Press SELECT FUNCTION key.
- Press COPY key twice.
- Press  key.
- Press  key.
- Press  key.
- Enter two-digit function number, then the display will show the set item corresponding to the number entered. If you want to set up all or several items starting with 01, then enter 01.

## The display shows:





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Technical Functions 01 to 11 (Table 2.9.3, 1/5)

T.F. No.	Name of Function	The Display Shows
01	Service bit	<div style="border: 1px solid black; padding: 5px; display: inline-block;">01:SERVICE BIT [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: OFF ⇆ ON
02	Line monitor control	<div style="border: 1px solid black; padding: 5px; display: inline-block;">02:MONITOR CONT. [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: OFF ⇆ ON
03	Country code	<div style="border: 1px solid black; padding: 5px; display: inline-block;">03:COUNTRY CODE [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting X: USA → INT → .....MEX
04	Time and date print	<div style="border: 1px solid black; padding: 5px; display: inline-block;">04:TIME/DATE PRINT [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting X: OFF → ONCE → → ALL
05	TSI print	<div style="border: 1px solid black; padding: 5px; display: inline-block;">05:TSI PRINT [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: OFF ⇆ ON
06	TAD mode (For external telephone answering device.)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">06:TAD MODE [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting X: OFF → TYPE1 → → TYPE2 → TYPE3
07	Real-time dialling	<div style="border: 1px solid black; padding: 5px; display: inline-block;">07:REAL TIME DIAL [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting X: OFF → TYPE1 → → TYPE2
08	TEL/FAX switching	<div style="border: 1px solid black; padding: 5px; display: inline-block;">08:TEL/FAX SWITCH [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: OFF ⇆ ON
09	MDY/DMY format	<div style="border: 1px solid black; padding: 5px; display: inline-block;">09:MDY/DMY [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: MDY ⇆ DMY
10	Long document transmission	<div style="border: 1px solid black; padding: 5px; display: inline-block;">10:LONG DOC. SCAN [ X ] YES(←) NO(→)</div> <input type="checkbox"/> Setting (Toggle) X: OFF ⇆ ON

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Technical Functions 12 to 16 (Table 2.9.3, 2/5)



T.F. No.	Name of Function	The Display Shows
11	Tone for echo (echo protection)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">11:TONE FOR ECHO [ X ] YES (←) NO (→)</div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
12	MH only	<div style="border: 1px solid black; padding: 5px; display: inline-block;">12:MH ONLY [ X ] YES (←) NO (→)</div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
13	High-speed modem rate	<div style="border: 1px solid black; padding: 5px; display: inline-block;">13:H/MODEM RATE [ X ] YES (←) NO (→)</div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: 4.8k → 9.6k →                → 14.4k         </div>
14	T1 (TX), timeout value (XTTO value)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">14:T1 (TX) TIMER VALUE [ X ] YES (←) NO (→)</div> <div style="margin-left: 20px;"> <input type="checkbox"/> ←            To 15 T1(RX)            TIMER VALUE            X: 010 - 255 sec         </div> <div style="margin-left: 100px; margin-top: 10px;"> <input type="checkbox"/> →         </div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">14:T1 (TX) TIMER VALUE [ _ ] ENTER 010-255</div> <div style="margin-left: 100px; margin-top: 10px;">3-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">14:T1 (TX) TIMER VALUE [060] YES (←) NO (→)</div> <div style="margin-left: 20px; margin-top: 10px;"> <input type="checkbox"/> →         </div> <p>(Example)</p>
15	T1 (RX), timeout value	<div style="border: 1px solid black; padding: 5px; display: inline-block;">15:T1 (RX) TIMER VALUE [ X ] YES (←) NO (→)</div> <div style="margin-left: 20px;"> <input type="checkbox"/> ←            To 16: T2 TIMER            VALUE            X: 010 - 255 sec         </div> <div style="margin-left: 100px; margin-top: 10px;"> <input type="checkbox"/> →         </div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">15:T1 (RX) TIMER VALUE [ _ ] ENTER 010-255</div> <div style="margin-left: 100px; margin-top: 10px;">3-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">15:T1 (RX) TIMER VALUE [035] YES (←) NO (→)</div> <div style="margin-left: 20px; margin-top: 10px;"> <input type="checkbox"/> →         </div> <p>(Example)</p>

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Technical Functions 24 to 27 (Table 2.9.3, 3/5)

T.F. No.	Name of Function	The Display Shows
16	T2, timeout value	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 16:T2 TIMER *100MS  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">←</div> <div style="text-align: right; margin-right: 20px;">To 17: DIS BIT32 X: 001 - 255</div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="text-align: center; margin: 5px 0;">→</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 16:T2 TIMER *100MS  [ - ] ENTER 001-255 </div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="text-align: center; margin: 5px 0;">3-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 16:T2 TIMER *100MS  [059] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <p>(Example)</p>
17	DIS bit 32	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 17:DIS BIT32  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <div style="text-align: right; margin-right: 20px;">Setting (Toggle) X: OFF ⇄ ON</div>
18	Error criterion	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 18:ERR. CRITERION  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">←</div> <div style="text-align: right; margin-right: 20px;">To 19: OFF HOOK BYPASS X: 00 - 99%</div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="text-align: center; margin: 5px 0;">→</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 18:ERR. CRITERION  [00] ENTER 00-99 </div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="text-align: center; margin: 5px 0;">2-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 18:ERR. CRITERION  [10] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <p>(Example)</p>
19	Off-hook bypass	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 19:OFF HOOK BYPASS  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <div style="text-align: right; margin-right: 20px;">Setting (Toggle) X: OFF ⇄ ON</div>
20	NL equalizer	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 20:NL EQUALIZER  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <div style="text-align: right; margin-right: 20px;">Setting X:0 KM → 1.8 KM → → 3.6 KM → 7.2 KM → 0 KM</div>
21	Modem attenuator	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 21:ATTENUATOR  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <div style="text-align: right; margin-right: 20px;">Setting X:0 DB → 1 DB → 2 DB → ..... → 15 DB → 0 DB → ....</div>
22	T/F tone attenuator (for TEL/FAX switch)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> 22:T/F TONE ATT.  [ X ] YES (←) NO (→) </div> <div style="text-align: right; margin-right: 20px;">→</div> <div style="text-align: right; margin-right: 20px;">Setting X:0 DB → 1 DB →</div>

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Technical Functions 17 to 23 (Table 2.9.3, 4/5)

T.F. No.	Name of Function	The Display Shows
23	MF attenuator	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           23:MF ATT.            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="→"/>            Setting            X:0 DB → 1 DB →            2 DB → ..... → 15 DB → 0 DB → .....         </div>
24	Ring duration detection time	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           24:RING DURA. *10 MS            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="←"/>            To 25: CML            TIMING            X: 10 - 99         </div> <div style="text-align: center; margin: 10px 0;">↓ <input type="button" value="→"/></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           24:RING DURA. *10 MS            [ _ ] ENTER 10-99         </div> <div style="text-align: center; margin: 10px 0;">↓ 2-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           24:RING DURA. *10 MS            [14] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="→"/> </div> <p>(Example)</p>
25	CML timing	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           25:CML TIMING *100MS            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="←"/>            To 26: LED HEAD            STROBE            X: 01 - 19         </div> <div style="text-align: center; margin: 10px 0;">↓ <input type="button" value="→"/></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           25:CML TIMING *100MS            [ _ ] ENTER 01-19         </div> <div style="text-align: center; margin: 10px 0;">↓ 2-digit timer entered.</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           25:CML TIMING *100MS            [03] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="→"/> </div> <p>(Example)</p>
26	LED Head strobe	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           26:LED HEAD STROBE            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="←"/>            To 27: LED HEAD            WIDTH            X:5digits (0/1)         </div> <div style="text-align: center; margin: 10px 0;">↓ <input type="button" value="→"/></div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           26:LED HEAD STROBE            [ _ ] ENTER 0/1         </div> <div style="text-align: center; margin: 10px 0;">↓ 0/1 entered.</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           26:LED HEAD STROBE            [01101]YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="button" value="→"/> </div> <p>(Example)</p>

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Technical Functions 28 to 31 (Table 2.9.3, 5/5)

T.F. No.	Name of Function	The Display Shows
27	LED Head Width	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           27:LED HEAD WIDTH            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: TYPE1 ⇄ TYPE2         </div>
28	Media type	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           28:MEDIA TYPE            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: M → MH → H         </div>
29	Transfer roller clutch current	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           29:TR LATCH CURRENT            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: -2 → -1 → 0 → +1            → +2         </div>
30	NSF switch	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           30:NSF SWITCH            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
31	ID/TSI priority	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           31:ID/TSI PRIORITY            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: ID ⇄ TSI         </div>
32	Toner count clear	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           32:TONER COUNT CLEAR            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
33	Parallel Pick Up	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           33:PARALLEL PICK UP            [ X ] YES (←) NO (→)         </div> <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>



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#### **2.9.4 User's Functions**

This section explains the items usually set up by general users.

Table 2.9.4 shows the initial setting items and their purposes.

Each F.P. can be accessed by entering the corresponding function number on Function Programming.

The detailed procedure of the initial setting items will be explained on the following pages.

**Note:**

S-ON: Effective if the service bit has been set on.

FP: Function program setting

TF: Technical function setting

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User's Function Table 2.9.4 (1/5)

No.	Item	Specifications
1	Auto dial	10 one-touch keys are provided.
	1) One-touch dial	Max. 32 digits for each location number. In addition to an ordinary location number, another alternate location number can be registered in to each one-touch key. Purposes of this alternate location number: 1) Fax dial A fax number is registered as an alternate location number. When a call to the first location number is not answered, the alternate location number will be automatically dialed.
	2) Two-digit dial	70 different codes are provided. * Two- digit location code: 01 to 70 Max. 32 digits for each location number.
	3) Keypad dial	With ten-key pad. Max. 40 digits for one operation
	4) Chain dial	The number of dialing digits can be expanded to longer digit numbers by chaining any number of the above 1), 2) and 3).
	5) Mixed dial	Type of dialing can be changed from pulse dial to tone dial halfway in dialing process. The changing point is specified by the * key. This feature is not available in all countries.
2	Manual dial	With a telephone handset.
3	Receive mode	
	1) Auto receive mode	Selectable by key operation.
	2) Manual receive mode	Selectable by key operation.
	3) Telephone/fax automatic switchover	Selectable by key operation. The fax recognizes a fax call from a verbal call as follows:  If the fax detects a call with a CNG signal, it starts an automatic document receive operation.  If it detects a call without a CNG signal, it sounds the buzzer to indicate a voice call. Operator can answer the call by lifting the telephone handset.  If he or she does not lift the handset within predetermined time (20 sec. or 35 sec.), the fax automatically starts a document receive operation.  * FP + 10 (To determine the timer.)



## Service Guide OKIOFFICE 84 Chapter 2 Installation

User's Function Table 2.9.4 (2/5)

No.	Item	Specifications
4	Automatic redial	PTT parameter setting disables or enables this feature, and specifies redial times and redial intervals.  * See 2.9.12 for the service bit condition depending on PTT parameters.
5	Last No. redial	"REDIAL" key is provided. There is no limit on number of repeat attempts. If machine is in Power Save mode (not available for OKIOFFICE84) manual redial with REDIAL key is not possible.
6	Group dial	<ul style="list-style-type: none"><li>• 5 dialling groups</li></ul> Max. 80 locations.  Grouping some one-touch keys and some two-digit auto dial codes to which telephone numbers have been assigned. This group setting makes broadcast operation simple.
7	Telephone directory and location ID (Alpha search)	In addition to fax numbers, an alpha/ numeric name can be assigned to each of one-touch keys and two-digit dial codes, 01 to 70. Any location ID can be searched and displayed on LCD. Then direct dialling to the ID's station can be performed.  There are two methods of searching:  (1) Search based on the first character specified.  (2) Searching by displaying all registered location IDs one after another in the lexicographical order.  Location ID: Max. 15 characters
8	Voice request	A voice request from the transmitter is available only upon completion of the total message transmission.  A voice request from the receiver is available at the end of each page being received.
9	Local copy	Printing resolution:  Horizontal: 300 dpi (Fine, EX Fine), 200 dpi (SDT) Vertical: 3.85 (STD), 7.7 (Fine) or 15.4 line/mm (EX Fine)
10	Multiple local copy	Up to 50 copies.
11	Manual loading feeder	One single sheet from the feeder below the paper exit can be copied. Example of sheets: Transparency for an overhead projector

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## Service Guide OKIOFFICE 84 Chapter 2 Installation

User's Function Table 2.9.4 (3/5)

No.	Item	Specifications
12	Broadcast (Memory transmission)	<p>Max. 90 remote locations can be specified by the following means:</p> <ul style="list-style-type: none"><li>● One-touch keys (with of without a group list).</li><li>● Two-digit auto dial codes.</li><li>● 10 keypad dial number (Max.)</li></ul> <p>One delayed time of calling for this feature can be specified unless any other delayed calling feature has been specified.</p> <p>The combination of 1 delayed broadcast and one immediate calling of broadcast is possible.</p> <p>However, the setting of delayed transmission and delayed broadcast must not exceed the total number of specified time which is different according to the machine.</p> <p>When multiple locations are specified for one broadcast</p> <p>(1) The fax prints a broadcast entry report, if specified in operating sequence.</p> <p>(2) The fax can print a broadcast confirmation report. (FP + 02 To enable or disable this printout)</p>
13	Delayed transmission from the memory	The fax can automatically transmit documents at five specified times from the memory.
14	Polling transmission (To be polled)	Document(s) placed on the feeder can be collected by a remote station.
15	Polling reception	The fax can collect documents from one remote station.
16	Bulletin polling	A kind of polling transmission. Bulletin polling enables polling transmission many times until deleting the documents stored in the memory.
17	Transmission preparation (Hopper)	<p>An operator can prepare documents for transmission even while the fax is engaged in message reception. They will be automatically transmitted upon completion of the reception.</p> <p>An operator can also prepare documents for transmission during transmission from memory.</p>



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User's Function Table 2.9.4 (4/5)

No.	Item	Specifications
18	No toner reception	<p>The fax can temporarily store received messages in memory when toner has run out. The messages are printed when toner has been newly supplied or an operator presses the SELECT FUNCTION key followed by the one-touch key No. 2 under the LCD message "PRINT MEMORY MSG." in the standby mode.</p> <p>*FP + 22 (To enable or disable this function)</p>
19	Smooth printing	<p>The documents received in the STD mode can be printed at the FINE resolution by means of generating one line based on the two consecutive original lines and printing it between them.</p>
20	Dual Access	<p>The documents for transmission can be read into the memory even while the fax is engaged in another memory transmission, reception in the ECM or non-ECM mode.</p> <p>1) Operation of memory transmission while the fax is engaged in a communication (memory TX, memory RX or print mode RX).</p> <p>2) Copy while the fax is engaged in a communication (memory TX or memory RX).</p> <p>Note: Condition for operation</p> <p>a) Copy is invalid when the machine is already engaged in an operation which is using or could use the printer.</p> <p>3) Call reception while the fax is engaged in scanning documents for memory transmission when the auto receive mode is in "FAX" or "T/F" mode, although "TEL" mode is not valid.</p> <p>Refer to sub-section 2.9.7 for dual access operation.</p> <p>For the patterns of dual access refer to the following, Dual Access Combination Table.</p>



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User's Function Table 2.9.4 (5/5)

		PC1 ON				
		Reception	Prefeed	Remote input display	Preparation TX	Scanning to Memory
1'st						
2'nd						
ON HOOK	Standby	○	○	○	○	○
	During FAX Calling	X	○	X	X	○
Call Reception	During RING RESPONSE	X	○	○	○	○
	During detection of TEL/FAX	X	○	X	X	X
	During TAD detection	X	○	X	X	X
	1st Phase B	X	○	○	○	○
Feeder TX	Calling – Transmission	X	X	X	X	○
	Transmission after scanning	X	○	○	○	○
Memory TX	During Scanning	○	X	X	X	○
	Dialling and Calling	X	○	○	○	○
	During TX	X	○	○	○	○
Polling RX	Dialling and Calling	X	○	○	○	○
Memory RX		X	○	○	○	○
Paper RX	Reception and print	X	○	○	○	○
	Residual Print Processing	○	○	○	○	○
	Memory reception	X	○	○	○	○
During voice request is initiated.		X	○	X	X	X
During copy		○	○	X	X	X
During automatic printing of received messages		○	○	○	○	○
During automatic printing of reports		○	○	○	○	○
During operation		X	○	X	X	X

\* Operation during communication is not determined yet.

<Note> ○: Available, X: Not available



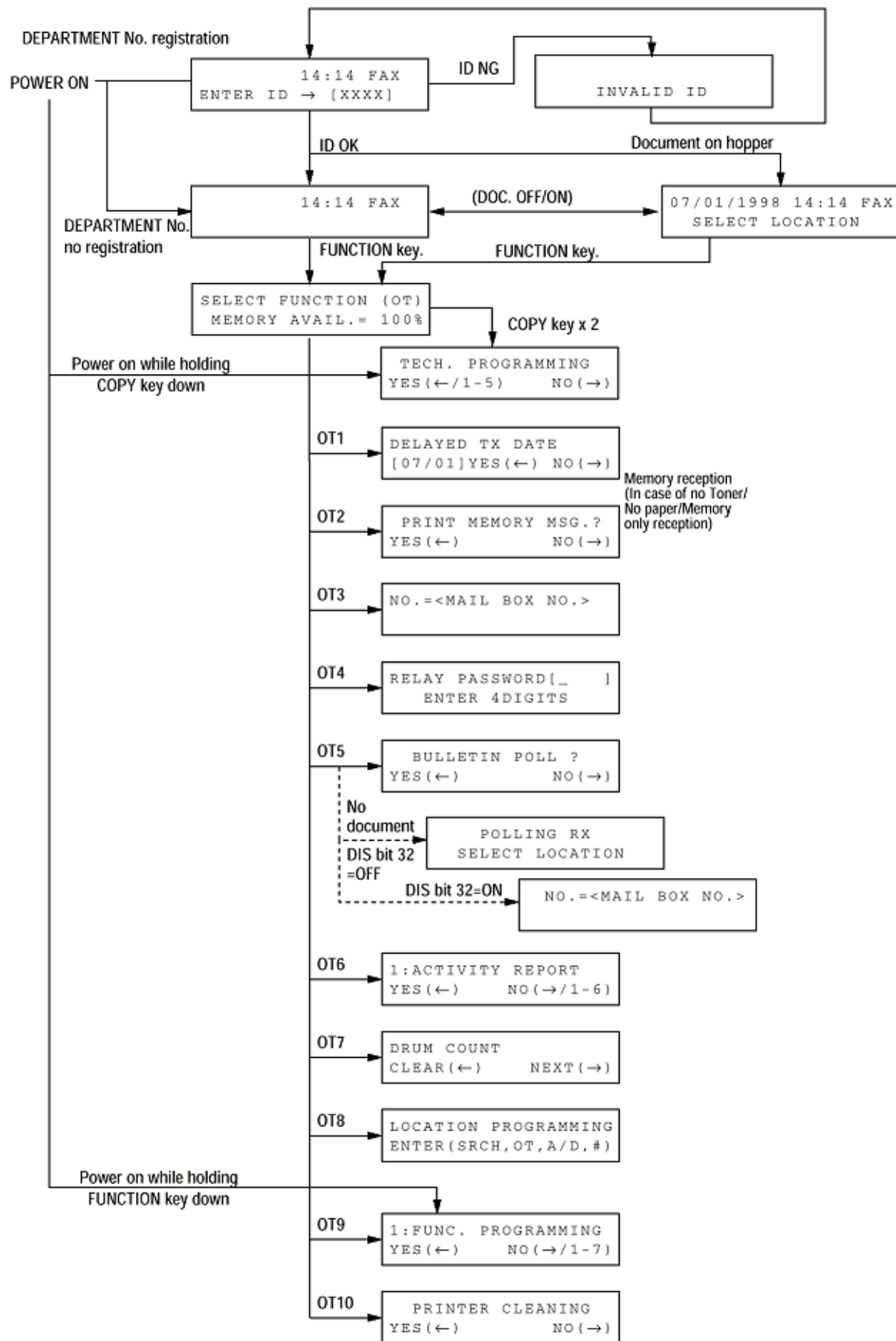


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**User's Initial Settings**

**Note:** The font displayed on the LCD operation panel may differ from fonts written in this manual.

2)-1 One Touch Key Operations



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## Service Guide OKIOFFICE 84

### Chapter 2 Installation

**Table 2.9.4 (1/5) User's Initial Settings (One-touch key Program)**

F+OT No.	Item	Specifications
1	Delayed transmission (TX)	This function enters a message transmission time(s) and location(s) for execution at a specified time. 5 specified times can be registered (within 3 days).
2	Print from Message in Memory (Print Memory MSG)	To print out the received messages from memory in "MSG. IN MEMORY" mode, or when the machine has run out of recording paper (including the door open and no toner state). When received messages are in the memory. "MSM. IN MEMORY" is indicated on the LCD. When printing in the Memory Only Reception, an operator has to print the received message by the Memory message printing operation.
2	Print from Confidential Reception Message (Print Personal Box)	To print out the confidential received messages in the memory with 1-digit personal box number. The maximum number of personal boxes is 8. Personal boxes are numbered 1 to 8. When confidential received messages are in the memory, "MESSAGE IN MEMORY" is indicated on the LCD.
3	Confidential transmission	This function transmits a Confidential-marked message to any one of 64 predesignated mailboxes provided in a distant machines.  To program the mail box number 01 to 64. Available remote station's mail box numbers:  OKIFAX 2400/2600: 01 to 40 OKIFAX 1000: 01 to 16 OKIFAX 2300: 01 to 16 OKIFAX 2350/1050: 01 to 08 OKIFAX 2450: 01 to 16 OKIFAX 5300: 01 to 08 OKIFAX 5600: 01 to 16 OKIOFFICE 84: 01 to 08
4	Relay broadcast initiate transmission	This function automatically originates a message call via relay key station which must be equipped with OKIFAX 2600, up to 120 locations for OKIFAX 2600.  To program relay password. To enable or disable the relay report.  When auto dial code number 70 is not assigned, relay broadcast report is not transmitted. When it is assigned, relay report is transmitted to fax number assigned to auto dial code 70.

5	Polling transmission/reception	Polling TX: The documents placed on the feeder can be collected by a remote station.
5	Polling transmission/reception	Bulletin polling: A kind of polling transmission. Bulletin polling enables polling transmission many times until deleting the documents from one remote station.
5	Polling transmission/reception	Polling RX: The fax can collect documents from one remote station.

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**Table 2.9.4 (2/5) User's Initial Settings (One-Touch Key)**

F+OT No.	Item	Specifications
6	Report Printing	The report print in 6 items are as follows:  1. Activity report 2. Broadcast message confirmation report (Multi location) 3. Activity memory files report 4. Phone directory report 5. Configuration list without service default (Service default report if service bit sets to ON.) 6. Protocol dump list 7. Log report (Set to on Service bit)  * Refer to Reports and Lists in Chapter 1.

7	Counter display (clear)	<p>The operation for displaying and clearing the print counters in five ways are as follows:</p> <ol style="list-style-type: none"> <li>1. Drum counter When I/D unit reaches run-out time, "CHANGE DRUM" is appeared in LCD. Under above condition, user can see the Drum message and clear. However, No. of counter is not shown for user (Service bit=OFF). After user changed the Drum and clear operation, "CHANGE DRUM" in CD is displayed. However, the drum counter clear is possible even if the drum is not at the end of its lifespan.</li> <li>2. Toner counter This counter provided to serviceman to check the number of toner counter. When service bit=OFF, this counter message is skipped. When service bit=ON, this counter is cleared by operation. When TF32=ON, this counter is cleared by operation without Service bit ON/OFF (TF01). (User can clear the toner counter.)</li> <li>3. Drum (T) counter This counter to serviceman to know the total number of DRUM counter for the machine. When service bit=OFF, this counter message is skipped. When service bit=ON, this counter is cleared by operation.</li> <li>4. Print counter This counter is provided to user. Display shows how many times recording paper has been printed. But user cannot clear this number.</li> <li>5. Scan counter This counter is provided to user. Display shows how many times document has been passed the ADF. But user cannot clear this number.</li> </ol>
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## Service Guide OKIOFFICE 84 Chapter 2 Installation

Table 2.9.4 (3/5) User's Initial Settings (One-Touch Key Program)

F+OT No.	Item	Specifications
8	Location program 1. One-touch key	One-touch keys allow registering: (1) Telephone number (numeral, -, P and space) in 32 digits. (2) Alternate fax telephone number in 32 digits. (additional registration) (3) ID for the telephone directory function in 15 characters (alphabetic, numeric and symbolic). (4) 10 one-touch keys are provided.
8	2. Two-digit auto dial program	Auto-dial No. 01 to 70 allows registering telephone number in 32 digits (numeral, -, P and space) and ID for the telephone directory maximum 15 characters (alphabetic, numeric and symbolic).
8	3. Group setting	Grouping some one-touch keys and some two-digit auto dial codes to which telephone numbers have been assigned. Five group programming are available. The group programming makes multiple polling reception and broadcast operation simple.



9	User's programs 1. Function program	01: MCF (SINGLE-LOC.) 02: MCF (MULTI-LOC.) 03: ERR. REPORT (MCF.) 04: IMAGE IN MCF. 05: SENDER ID 06: MONITOR VOLUME 07: BUZZER VOLUME 08: CLOSED NETWORK 09: TX MODE DEFAULT 10: T/F TIMER PRG. 11: RING RESPONSE 12: DISTINCTIVE RING 13: 1'ST PAPER SIZE 14: USER LANGUAGE 15: INCOMING RING 16: REMOTE RECEIVE 17: MEM./FEEDER SW. 18: POWER SAVE MODE 19: ECM FUNCTION 20: REMOTE DIAGNOSIS 21: PC/FAX SWITCH 22: NO TONER MEM RX 23: MEM FULL SAVE 24: CONTINUOUS TONE 25: INSTANT DIALING 26: RESTRICTED ACCESS 27: WIDTH REDUCTION 28: ONE TOUCH PARAMETER  Refer to Table 2.9.4 for specification of the function programs No. 01 through 28.
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**Table 2.9.4 (4/5) User's Initial Settings (One-Touch Key Program)**

F+OT No.	Item	Specifications
9	2. Dial parameters	1. REDIAL TRIES 2. REDIAL INTERVAL 3. DIAL TONE DETECT 4. BUSY TONE DETECT 5. MF (TONE)/DP (PULSE) 6. PULSE DIAL RATE 7. PULSE MAKE RATIO 8. PULSE DIAL TYPE 9. MF(TONE) DURATION 10. PBX LINE 11. FLASH/EARTH/NORMAL 12. AUTO START 13. DIAL PREFIX Refer to Table 2.9.6 for specification of dial parameter settings.
9	3. Clock adjustment	Date and time adjustment.
9	4. System data program	(1) TSI/CSI (except for SUI and AUT) Registration of TSI/CSI/CIG (numbers, + and space) in 20 digits.  TSI: Transmitting Subscriber Identification CSI: Called Subscriber Identification CIG: Calling Subscriber Identification  (2) SENDER ID Registration of sender ID (alphabetic, numeric and symbolic) in 32 digits.  (3) CALL BACK NO. Registration of telephone number for call-back message (alphabetic, numeric and symbolic) in 20 digits.
	5. Personal box programming	To allow the operator (in this case, a person who wishes to assign a password to personal box) to assign a two functions to 8 personal-box.  (a) Confidential RX  (b) Bulletin Polling TX Used with confidential RX and Bulletin polling TX and Advanced T30 protocol. Personal box setting for Bulletin poll using SEP frame and Confidential using SUB frame when remote machine has a SEP/SUB capability.  The box No. 0 is used for only global Bulletin Polling TX.

	6. Memory password programming	Registering the password required (4-digit numerals) for outputting the data received by Memory Only Reception mode or change from Memory Only Reception mode. When the four-digit numeric password is registered. The password input is required upon outputting documents or change from Memory Only reception mode.
	7. Restrict ID programming	Restrict ID is a function available only person who knows Password, and this function can register 24 types of ID (Department No.) when Restrict Access of user's setting No. 26 is set to ON.

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**Table 2.9.4 (5/5) User's Initial Settings (One-Touch Key Program)**

<b>F+OT No.</b>	<b>Item</b>	<b>Specifications</b>
10	Printer cleaning	This drum cleaning function removes the residual toner on the I/D (image drum) Unit surface by printing.

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## Service Guide OKIOFFICE 84 Chapter 2 Installation

Table 2.9.4 (1/5) User's Initial Settings (Functions Program)

2)-2 Function Program

F+OT No.	Item	Specifications
01	Message confirmation report (Single location)	Enables or disables the automatic message confirmation report printing after a single location call.  ON: Printing the MCF report. OFF: Disables this function.
02	Message confirmation report (Multiple locations)	Enables or disables the automatic message confirmation report printing after a multiple polling or broadcast.  ON: Prints the MCF report. OFF: Disables this function.
03	Error report (MCF)	Enables or disables the automatic error report printing when transmission error occurs.  (Excepts for service bit "0".) ON: Printing the error report. OFF: Disables this function.
04	Image in MCF	Enables or disables the automatic printing of the image on the first sheet below the message confirmation report.  ON: Printing the image in MCF report. (Memory transmission and if the report is printed automatically.) OFF: Disables this function.
05	Sender ID	The fax can transmit programmed alphanumeric message, such as company's name consisting of up to 32 characters.  Enables or disables the sender ID function. * (Outside only) ON: Enables OFF: Disables
06	Line monitor volume	Controls the volume.  OFF/Low/High selectable.
07	Buzzer volume	Selects the sound volume of each buzzer (end of communication buzzer, voice request buzzer and off-hook alarm) and software ringer from high, low and middle levels.  Low/Mid/High selectable.  <b>Note:</b> Fixed a low level for key touch tone.

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**Table 2.9.4 (2/5) User's Initial Settings (Functions Program)**

F+OT No.	Item	Specifications
08	Closed network	<p>The fax compares lower four digits of TSI/CSI received from remote station with fax numbers registered locally for one-touch dial and two-digits autodial. If unmatched, the communication will be automatically disconnected.</p> <p>OFF/RX only/TX and RX selectable.</p> <p>* Prevention of direct mail or wrong number calls.</p> <p>(Reference) TSI: Transmitting subscriber identification CSI: Called subscriber identification</p>
09	TX mode default	<p>Selects automatically the mode set up when a document is loaded on the feeder.</p> <p>The following combinations are selectable.</p> <p>STD/NORMAL--&gt;STD/DARK--&gt;STD/LIGHT--&gt; FINE/NORMAL--&gt;FINE/DARK--&gt;FINE/LIGHT--&gt; EX.FINE/NORMAL--&gt;EX.FINE/DARK--&gt; EX.FINE/LIGHT--&gt;PHOTO/NORMAL--&gt; PHOTO/DARK--&gt;PHOTO/LIGHT--&gt; STD/NORMAL--&gt;***</p>
10	Telephone/fax automatic switchover time	<p>Specifies the time for which the fax alerts an operator on reception of a call in the telephone/fax automatic switchover mode.</p> <p>20 sec./35 sec. selectable</p>
11	Ring response time	<p>User can register ring response time if National code is:</p> <p>INT'L, GBR, NOR, SWE, USA, HOL, ESP. ITA, GRE or GER</p> <p>Selects the ring response time.</p> <p>1 ring/5/10/15/20 sec. selectable.</p>
12	Distinct ring	<p>Specifies the detected distinct ring. (not available in all countries)</p> <p>OFF/ON/SET selectable.</p>

13	1'st cassette paper size	<p>Selects A4, LETTER or LEGAL 13", LEGAL 14" OTHER by this function.</p> <p>The operator must select the preferable paper size as the machine cannot detect the paper size automatically.</p> <p><b>Note:</b> OTHER message appears when operating with MFP terminal.</p>
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**Table 2.9.4 (3/5) User's Initial Settings (Functions Program)**

<b>F+OT No.</b>	<b>Item</b>	<b>Specifications</b>
14	User language	A choice of 2 languages for LCD and print message are available. GER, FRE etc. are displayed instead of ANOTHER.  ENGL1/ANOTHER selectable.
15	Incoming ring	Instead of ringer circuit, software can control built-in speaker to ring sound.  To enable (ON) or disable (OFF) or distinctive ring (DRC) a software generated ring sound to indicate arrival of an incoming bell.
16	Remote receive	This function is used to transfer a call received by an external telephone set (connected to fax) by entering two-digit MF tones if the remote receive setting is not OFF  The following combinations are selectable. 00/11/22/33/44/55/66/77/88/99/**/##/OFF selectable.
17	Memory and feeder switch	Switches the transmission mode between the memory and feeder.  MEM. TX/FEEDER TX selectable. <b>Note:</b> This function becomes effective when Instant Dial of No. 25 is set to OFF.
18	Power save mode	The power supply will be fed to all circuits of a fax machine whenever the fax goes to the operating state. The power save mode has reduced the power consumption at standby to below 0.5 W.  <b>Note:</b> Power save mode is not available for ODA version. (including LTA, MEX)  Pre-heating time (Standby to print): Approx 30 sec  Enables or disables power save mode ON: Enables OFF: Disables
19	ECM function	Enables or disables ECM (error correction mode) communication.  ON: Enables OFF: Disables

20	Remote diagnosis	Enables or disables the remote diagnosis function when the machine can allow remote diagnosis from remote center.  ON: Enables OFF: Disables
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**Table 2.9.4 (4/5) User's Initial Settings (Functions Program)**

F+OT No.	Item	Specifications
21	PC/FAX switch	<p>To enable or disable PC interface function. When PC reception is not available, for example, application is not activated on the PC or cable is missing between PC and fax etc., this setting allows to switch from PC to fax reception automatically.</p> <p>ON: Automatically change to fax reception OFF: No reception</p>
22	No toner memory reception (NO Toner MEM RX)	<p>Enables or disables the memory reception when the fax is the toner low condition.</p> <p>ON: Receives the message in the memory reception when the fax is the toner low condition. The messages are printed when toner has been newly supplied.</p> <p>OFF: Prints the message even the remaining toner level is low or none. Print quality is not guaranteed.</p>
23	Memory full save (MEM Full Save)	<p>Broadcast transmission and other features originate calls after all the document read in memory. When Memory Full occurs during reading documents and operator time out occur, all the readout data must be deleted (OFF setting) or all the data must be sent (ON setting).</p> <p>Select either ON or OFF setting as follows:</p> <p>ON: Selecting display OFF: Selecting delete at all times.</p> <p><b>Note:</b> Operator timeout means operator does not respond during 59 seconds.</p>
24	Continuous Tone	<p>Setting of sounding warning tone after reception.</p> <p>ON: Warning tone sounding stops by operator's STOP key pressing OFF: No warning tone</p>
25	Instant Dialing	<p>Setting to start reading documents upon call origination when transmitting.</p> <p>ON: Dialing while document scanning OFF: Dialing after document scanning</p>

26	Restricted Access	Restricted Access limits accessible users by setting a password beforehand. Inputting the password then enables the user's access to the machine (FAX terminal).  ON: Enables Restricted Access OFF: Disables
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**Table 2.9.4 (5/5) User's Initial Settings (Functions Program)**

F+OT No.	Item	Specifications																
27	Width Reduction	<p>This function can print characters written at the edges of a document.</p> <p>Switches the reduction of the horizontal scanning direction.</p> <p>ON: Reduction printing (216 mm to 203 mm) Reduction rate is shown as below.</p> <p>Copy</p> <table border="1" data-bbox="761 762 1247 913"> <thead> <tr> <th></th> <th>STD</th> <th>Fine</th> <th>EX Fine</th> </tr> </thead> <tbody> <tr> <td>A4 size</td> <td>97.9%</td> <td>97.5%</td> <td>97.5%</td> </tr> <tr> <td>Except A4 size</td> <td>94.5%</td> <td>95.0%</td> <td>95.0%</td> </tr> </tbody> </table> <p>Reception message</p> <table border="1" data-bbox="766 968 1118 1077"> <tbody> <tr> <td>8 dot/mm</td> <td>300 DPI</td> </tr> <tr> <td>94.1%</td> <td>92.6%</td> </tr> </tbody> </table> <p>OFF: 203 mm printing</p>		STD	Fine	EX Fine	A4 size	97.9%	97.5%	97.5%	Except A4 size	94.5%	95.0%	95.0%	8 dot/mm	300 DPI	94.1%	92.6%
	STD	Fine	EX Fine															
A4 size	97.9%	97.5%	97.5%															
Except A4 size	94.5%	95.0%	95.0%															
8 dot/mm	300 DPI																	
94.1%	92.6%																	
28	One-touch keys parameter	<p>1. To assign the following features combined together as echo protection to each one-touch key.</p> <p>ON: Enables OFF: Disables</p> <table border="1" data-bbox="766 1323 1157 1436"> <tbody> <tr> <td>Echo Protection</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>Protective Tone</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>Ignoring 1st DIS</td> <td>OFF</td> <td>ON</td> </tr> </tbody> </table> <p>2. High speed modem rate Specifies the modem's starting speed 14.4k, 9.6k or 4.8kbps.</p>	Echo Protection	OFF	ON	Protective Tone	OFF	ON	Ignoring 1st DIS	OFF	ON							
Echo Protection	OFF	ON																
Protective Tone	OFF	ON																
Ignoring 1st DIS	OFF	ON																

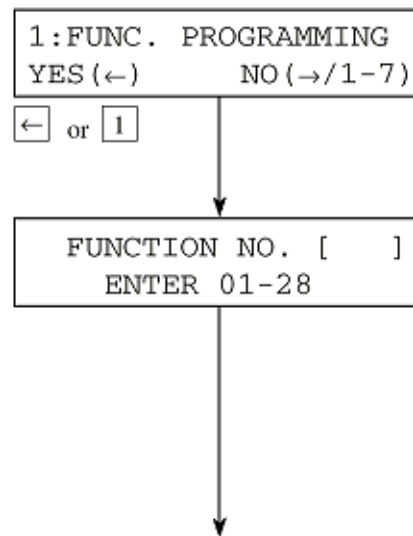
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**2.9.5 User's Functions Example**

**Note:** The fonts displayed on the LCD operation panel may differ from fonts written in this manual.

**1) Function Program****Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 9 in the standby mode. (In case of no message in memory)
- Press  key.
- Enter two-digit function number, then the display will show the set item corresponding to the number entered. If you want to set up all or several items starting with 01, then enter 01.

**The display shows:**



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**Table 2.9.5 (1/3) User's Functions**

Tap No.	Name of Function	The Display Shows
0 1	Message confirmation report (Single location)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">01 : MCF ( SINGLE-LOC . ) [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: OFF ⇄ ON         </div>
0 2	Message confirmation report (Multiple locations)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">02 : MCF ( MULTI-LOC . ) [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: OFF ⇄ ON         </div>
0 3	Error report	<div style="border: 1px solid black; padding: 5px; display: inline-block;">03 : ERR . REPORT ( MCF . ) [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: OFF ⇄ ON         </div>
0 4	Image in MCF.	<div style="border: 1px solid black; padding: 5px; display: inline-block;">04 : IMAGE IN MCF . [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: OFF ⇄ ON         </div>
0 5	Sender ID	<div style="border: 1px solid black; padding: 5px; display: inline-block;">05 : SENDER ID [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: OFF ⇄ ON         </div>
0 6	Line monitor volume	<div style="border: 1px solid black; padding: 5px; display: inline-block;">06 : MONITOR VOLUME [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting X: OFF → LOW → HIGH ↑         </div>
0 7	Buzzer volume	<div style="border: 1px solid black; padding: 5px; display: inline-block;">07 : BUZZER VOLUME [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: MID → HIGH → LOW ↑         </div>
0 8	Closed network	<div style="border: 1px solid black; padding: 5px; display: inline-block;">08 : CLOSED NETWORK [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting X: T/R → RX → OFF ↑         </div>
0 9	TX mode default	<div style="border: 1px solid black; padding: 5px; display: inline-block;">09 : TX MODE DEFAULT YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting NOTE 1: RESOLUTION &amp; ORIGINAL         </div>
1 0	Telephone/fax automatic switchover timer	<div style="border: 1px solid black; padding: 5px; display: inline-block;">10 : T/F TIMER PRG . [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) X: 20SEC ⇄ 35SEC         </div>
1 1	Ring response time	<div style="border: 1px solid black; padding: 5px; display: inline-block;">11 : RING RESPONSE [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting NOTE 2: X: 1RING → 05SEC → 10SEC → 15SEC ↑ 20SEC ←         </div>
1 2	Distinctive ring	<div style="border: 1px solid black; padding: 5px; display: inline-block;">12 : DISTINCTIVE RING [ X ] YES (←) NO (→)</div> <div style="display: inline-block; vertical-align: top; margin-left: 20px;"> <input type="checkbox"/> Setting (Toggle) NOTE 2: X: OFF → ON → SET ↑         </div>



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**Table 2.9.5 (2/3) User's Functions**

Tap No.	Name of Function	The Display Shows
1 3	1st cassette paper size	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           13:1'ST PAPER SIZE            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting         </div> <p style="text-align: center;">X: A4 → LET → LGL 13 → LGL 14            ↑ OTHER ←</p>
1 4	User language	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           14:USER LANGUAGE            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: ENG. ⇄ (Other)         </div>
1 5	Incoming ring	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           15:INCOMING RING            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF → ON → DRC            ↑         </div>
1 6	Remote receive	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           16:REMOTE RECEIVE            [ X ] YES (←) NO (→)         </div> <p style="text-align: center;">OFF → 00 → 11 → 22 → 33 → 44 → 55 → 77 → 88 → 99            ↑ ## ← ** ←</p>
1 7	Memory and feeder selection	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           17:MEM/FEEDER SW.            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: MEM. ⇄ FEED.         </div>
1 8	Power save mode (not available for ODA version)	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           18:POWER SAVE MODE            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
1 9	ECM function	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           19:ECM FUNCTION            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
2 0	Remote diagnosis	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           20:REMOTE DIAGNOSIS            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>
2 1	PC/FAX switch	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           21:PC/FAX SWITCH            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇄ ON         </div>

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**Table 2.9.5 (3/3) User's Functions**

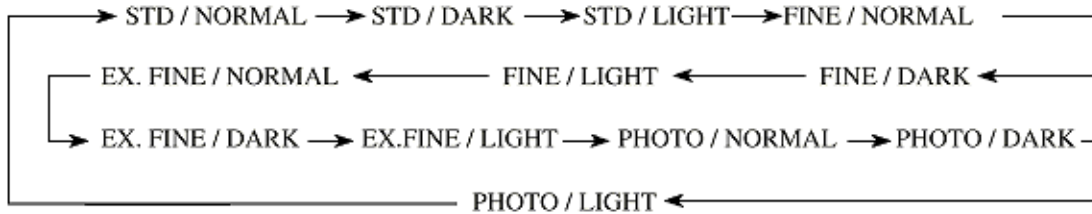
Tap No.	Name of Function	The Display Shows
2 2	No toner memory reception	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           22:NO TONER MEM. RX            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 3	Memory full save	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           23:MEM FULL SAVE            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 4	Continuous tone	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           24:CONTINUOUS TONE            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 5	Instant dialing	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           25:INSTANT DIALING            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 6	Restricted access	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           26:RESTRICT ACCESS            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 7	Width reduction	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           27:WIDTH REDUCTION            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div>
2 8	One-touch key parameters	<div style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;">           28:ONE TOUCH PARAM.            YES (OT) NO (→)         </div> <div style="text-align: right;"> <input type="checkbox"/> →            To: FUNCTION NO.         </div> </div> <p style="text-align: center;">One-touch key pressed.</p> <p style="text-align: center;">↓</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto;">           ECHO PROTECTION            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting (Toggle)            X: OFF ⇆ ON         </div> <p style="text-align: center;">←</p> <p style="text-align: center;">↓</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto;">           FAX SPEED            [ X ] YES (←) NO (→)         </div> <div style="margin-left: 20px;"> <input type="checkbox"/> →            Setting            X: 4.8k → 9.6k → 14.4k         </div> <p style="text-align: center;">←</p> </div>

---

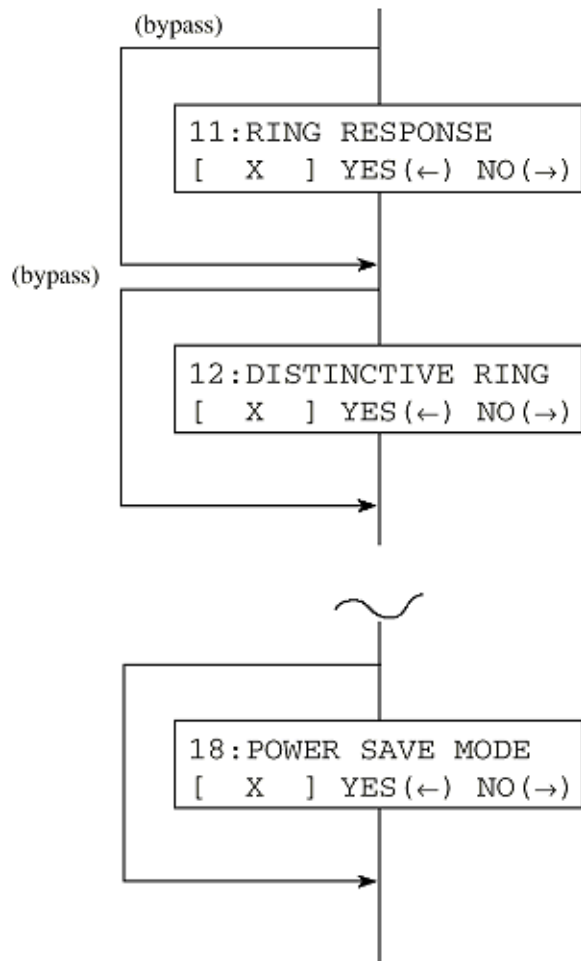
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**2.9.5 User's Functions**

**Note1:** RESOLUTION & ORIGINAL of TX mode default setting can be selected by using --> key.



**Note2:** When the service bit is set to "off" and the corresponding bit of XPARA of national code is set to "off", Ring response and/or Distinctive ring is bypassed as follows:





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**2.9.5 User's Functions Example**

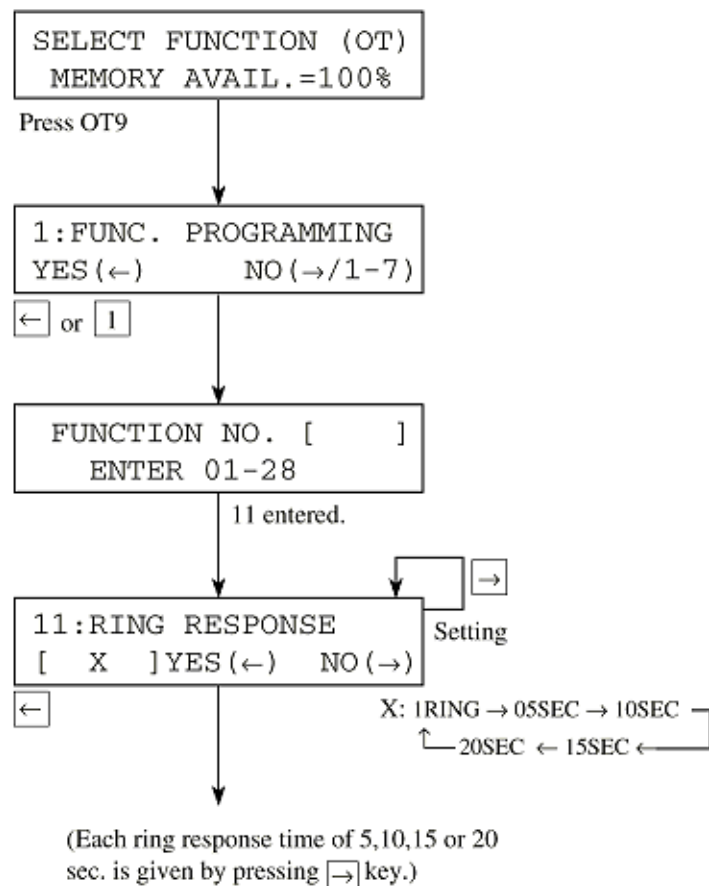
**2) Ring response time**

Before specifying the ring response time, set the service bit on following the operations shown in 2.9.3 (1). (Service Bit Setting).

**Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 9 in the standby mode. (In case of no message in memory)
- Press  key enter using the ten-key pad.
- Enter 11 using the ten-key pad.
- Press  key until the setting you want is displayed, then press  key.

**The display shows:**



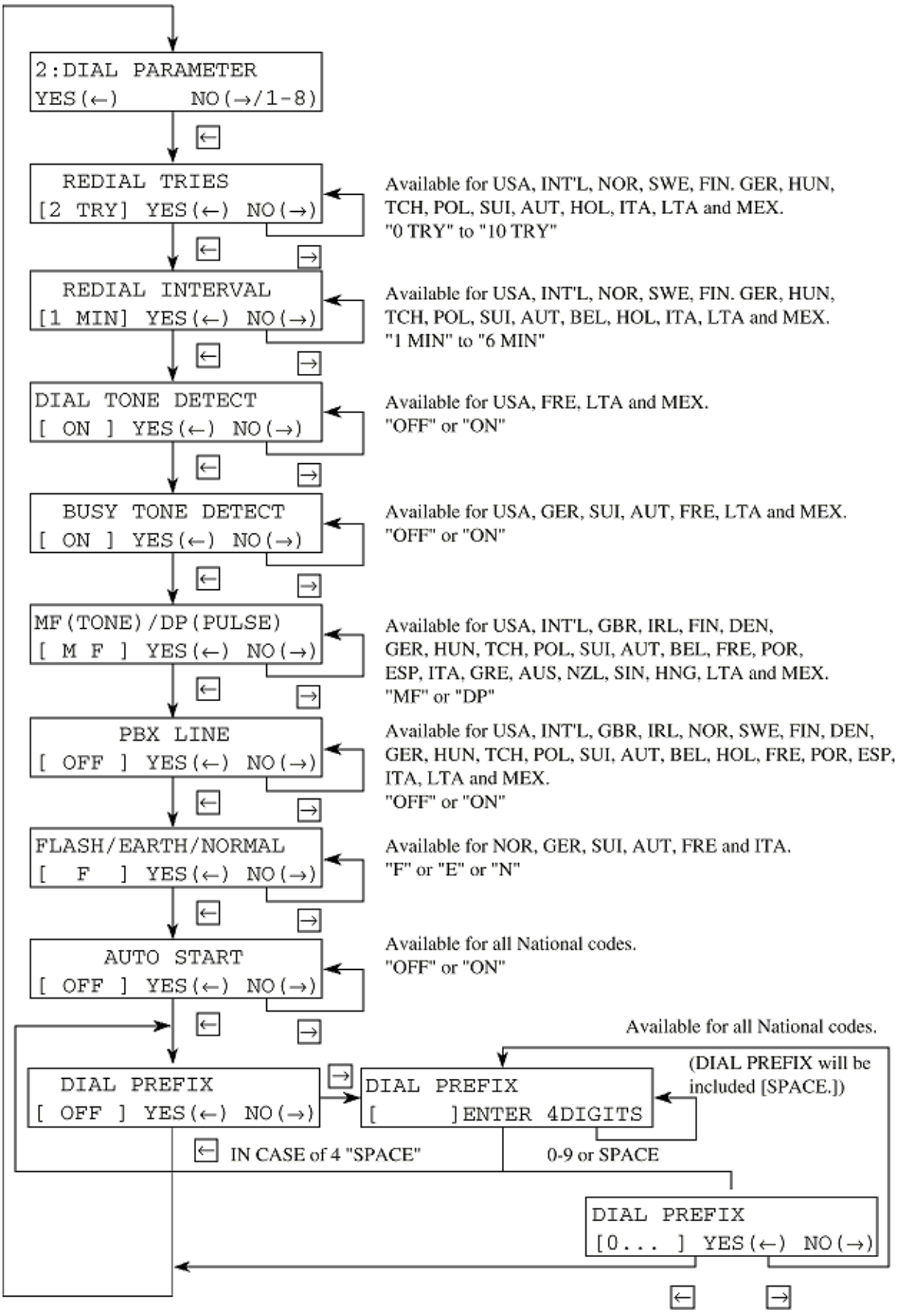


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**2.9.5 User's Functions Example**

**3) Dial parametes (In case the service bit is "OFF".)**

To get the "DIAL PARAMETER" message on the display, perform the same operation as Table 2.9.6. (Dial parammeters settings).



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NATIONAL CODE	SUI	AUT	BEL	HOL	FRE	POR	ESP	ITA	GRE	AUS	NZL	SIN	HNG	LTA	MEX
Redial tries	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>				<input type="radio"/>						<input type="radio"/>	<input type="radio"/>
Redial interval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>						<input type="radio"/>	<input type="radio"/>
Dial tone detect					<input type="radio"/>									<input type="radio"/>	<input type="radio"/>
Busy tone detect	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>									<input type="radio"/>	<input type="radio"/>
MF/DP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulse dial rate															
Pulse make ratio															
Pulse dial type															
MF duration															
PBX line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>						<input type="radio"/>	<input type="radio"/>
Flash/Earth/Normal	<input type="radio"/>	<input type="radio"/>			<input type="radio"/>			<input type="radio"/>							
Auto start	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dial	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

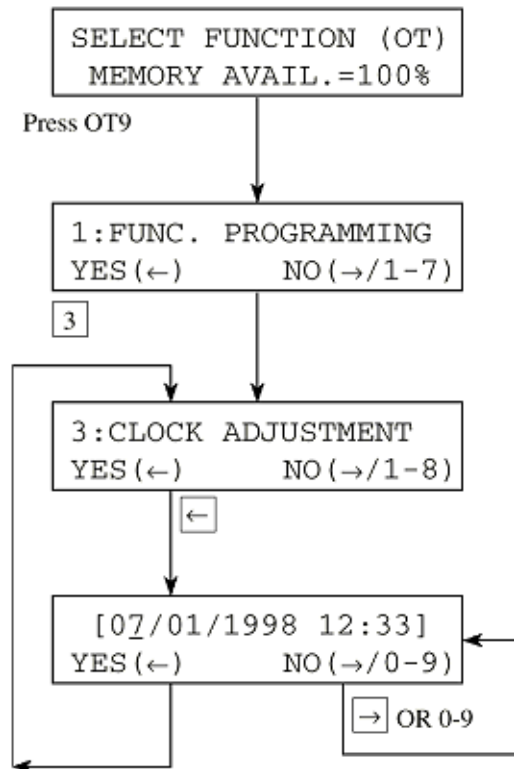
**Note:** The blank in the table is not indicated on the LCD.

2.9.6 Clock Adjustment

**Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 9 in the standby mode. (In case of no message in memory)
- Enter 3 using the ten-key pad.
- Press  key.
- Enter date and time by using the ten-key pad (0 to 9 keys).

**The display shows:**

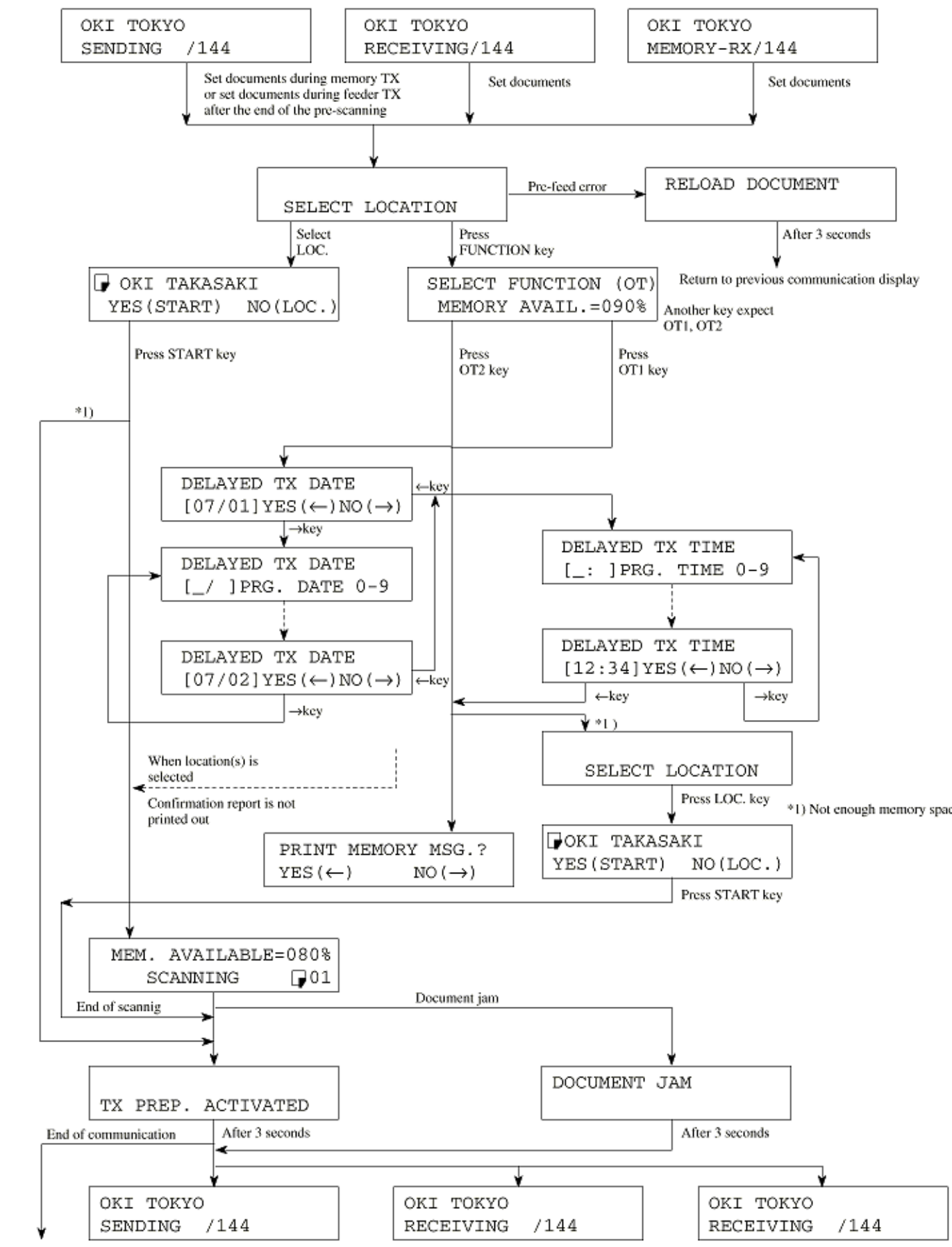






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**2.9.7 Dual Access Operation**



Go to stand by

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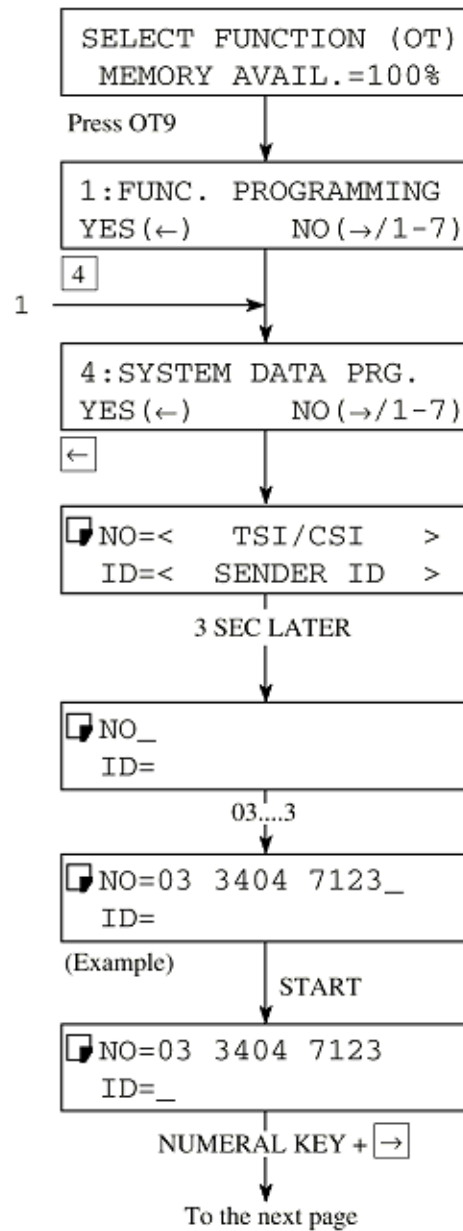
### **2.9.8 System Data Programming**

- TSI/CSI (Default: Blank)
- Registration of sender ID (Default: Blank)
- Registration of telephone number for the call-back message (Default: Blank)

### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 9 in the standby mode.  
(In case of no message in memory)
- Enter 4 using the ten-key pad.
- Press  key.

### The display shows:



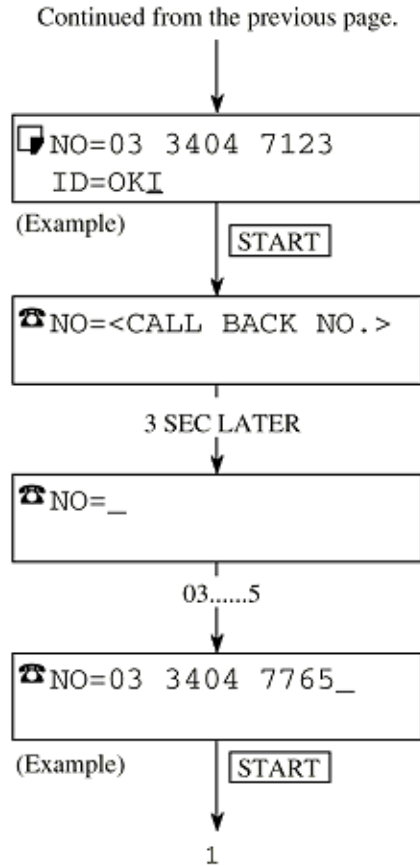
**Note:** Use the UNIQUE key to input special symbols.

## Operations:

- Press **START** key.

- Press **START** key.

## The display shows:





---

### **2.9.9 Dial Parameter Settings**

- Procedure
- Default Settings of Dial Parameters
- Dial Parameter Settings (Table 2.9.9)

---

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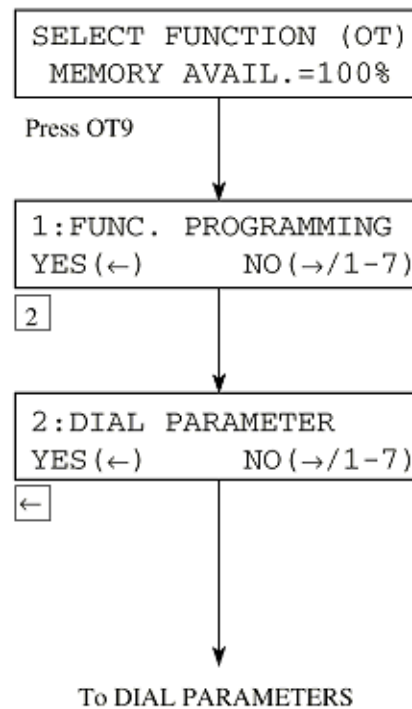
**Procedure**

## 1) Procedure

The following shows the case in which the serve bit is on.

**Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 9 in the standby mode. (In case of no message in memory)
- Enter 2 using the ten-key pad.
- Press  key.

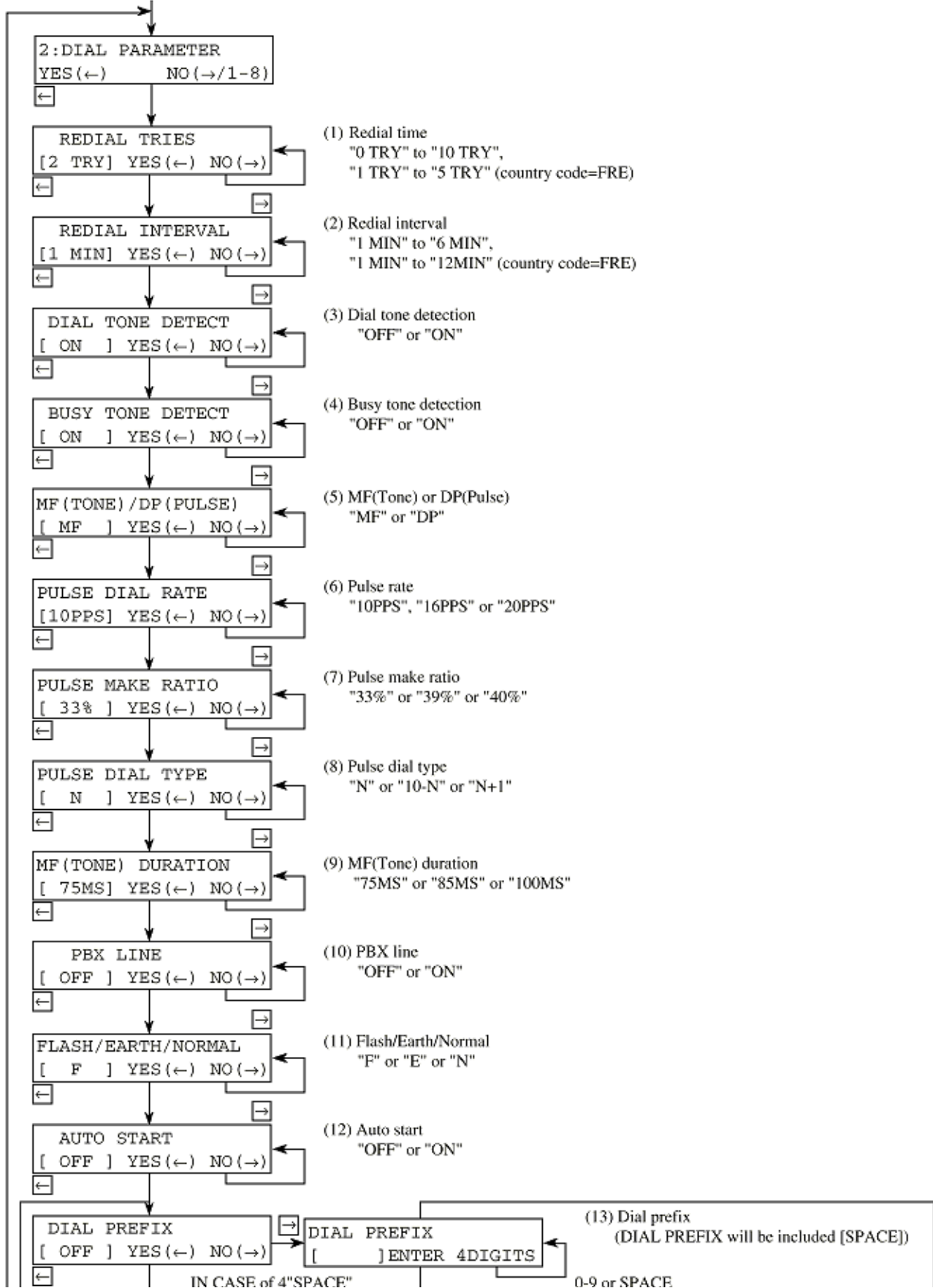
**The display shows:**

\*1 Not all of the following dial parameters are released to the users (depending on National codes and if the Service bit is OFF)



## The display shows:

Continued from the previous page.



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**Service Guide OKIOFFICE 84**  
**Chapter 2 Installation**

**Default Settings of Dial Parameters**

2) Purpose

No.	User Setting Items	Setting Selection	COUNTRY CODE															
			1 USA	2 INT'L	3 GBR	4 IRL	5 NOR	6 SWE	7 FIN	8 DEN	9 GER	10 HUN	11 TCH	12 POL	13 SUI	14 AUT	15 BEL	16 HOL
1	REDIAL TRIES	0 - 10 TRIES	3	3	2	2	5	10	3	5	10	10	2	2	10	10	3	2
2	REDIAL INTERVAL	1 - 6 min	3	3	3	3	2	3	3	3	1	1	3	3	1	1	3	3
3	DIAL TONE DETECT	ON/OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
4	BUSY TONE DETECT	ON/OFF	ON	ON	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	ON	ON	ON	ON
5	MF (TONE)/DP (PULSE)	DP/MF	MF	MF	MF	MF	MF	MF	MF	MF	DP	DP	MF	DP	MF	DP	MF	MF
6	PULSE DIAL RATE	10 PPS/16 PPS/ 20 PPS	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
7	PULSE MAKE RATIO	33%/39%	39%	33%	33%	33%	33%	39%	39%	39%	40%	33%	39%	33%	40%	40%	33%	39%
8	PULSE DIAL TYPE	N/10-N/N+1	N	N	N	N	N	N+1	N	N	N	N	N	N	N	N	N	N
9	MF (TONE) DURATION	75 ms/85 ms/100 ms	100	85	85	85	75	85	85	100	85	100	100	100	85	85	85	100
10	PBX LINE	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
11	FLASH/EARTH/NORMAL	NORMAL/FLASH/ EARTH	N	N	N	N	N	N	N	N	EARTH	N	N	N	FLASH	EARTH	N	N
12	AUTO START	ON/OFF	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	OFF
13	DIAL PREFIX	OFF/(max. 4 digits)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0...	OFF	OFF	OFF	0...	0...	OFF	OFF

Note: User settings are possible for items without mesh (Meshed items are displayed at service bit=ON.)  
The contents of tables are subject to change by the requests of OEM companies and customers without notice.



## Service Guide OKIOFFICE 84 Chapter 2 Installation

Dial Parameters Settings (Table 2.9.9)

No.	Item	Specifications
01	Redial tries	Switches on the redial times to meet the regulations of the installed country. 0 to 10 tries (in one-try steps) 1 to 5 tries for FRE.
02	Redial interval	Switches on the radial intervals to meet the regulations of installed country. 1 to 6 minutes (in one-minute steps) 1 to 12 minutes for FRE.
03	Dial tone detect	Selects the dial tone detection. ON/OFF selectable. ON: Enable OFF: Disable
04	Busy tone detect	Selects the busy tone detection. ON/OFF selectable. ON: Enable OFF: Disable
05	MF (TONE) or DP (Pulse)	Selects dialing by multifrequency or dial pulse.
06	Pulse dial rate	Selects the dialling pulse rates for the line. 10 pps/16 pps/20 pps selectable.
07	Pulse make ratio	Selects pulse dial rate. 33%/39%/40% GER, SUI, AUT = 40%
08	Pulse dial type	Selects pulse dial type. Normal(N)/10-N/N+1
09	MF (Tone) duration	Selects MF (Tone) duration. 75/85/100 ms selectable.
10	PBX line	Selects PBX line. ON/OFF selectable. ON: PBX line OFF: PSTN
11	Flash/Earth/Normal	Selects the PBX type to meet the exchange requirements. NORMAL/EARTH/FLASH selectable. (PBX line origination types)
12	Auto start	Enables or disables the function of dialing without pressing the START key in one-touch dial and 2-digit auto dial modes. ON: Enable OFF: Disable
13	Access digit	Prefix dialing digits with which PBX connects the fax to the public line. OFF/max. 4 digit(s) selectable. Digit: Enable OFF: Disable
14	IT2 detect (FRE only)	Selects 2nd dial tone detection ON/OFF selectable. (FRE only) ON: Enable OFF: Disable



### 2.9.10 Off-line Tests

#### (1) Purpose

Activate self-diagnosis which includes:

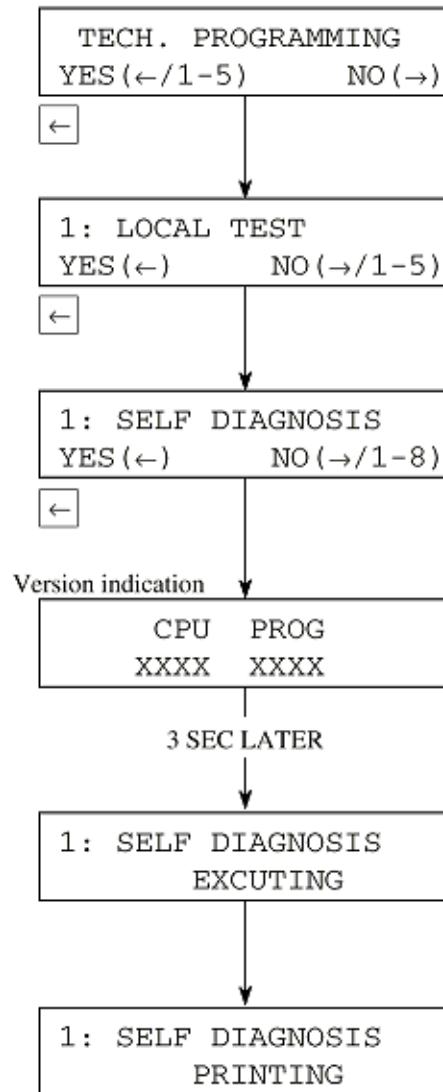
- Print test
- CPU-ROM version printing
- CPU-RAM check
- PROG version printing
- LANGUAGE version printing
- DEFAULT version printing
- RAM check
- RAM check (memory board: optional)

#### (2) Procedure

## Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and COPY key twice in the standby mode. (In case of no message in memory)
- Press  key.
- Press  key.
- Press  key for cheking and test printing. (An example of printed data is shown in Figure 2.9.4)

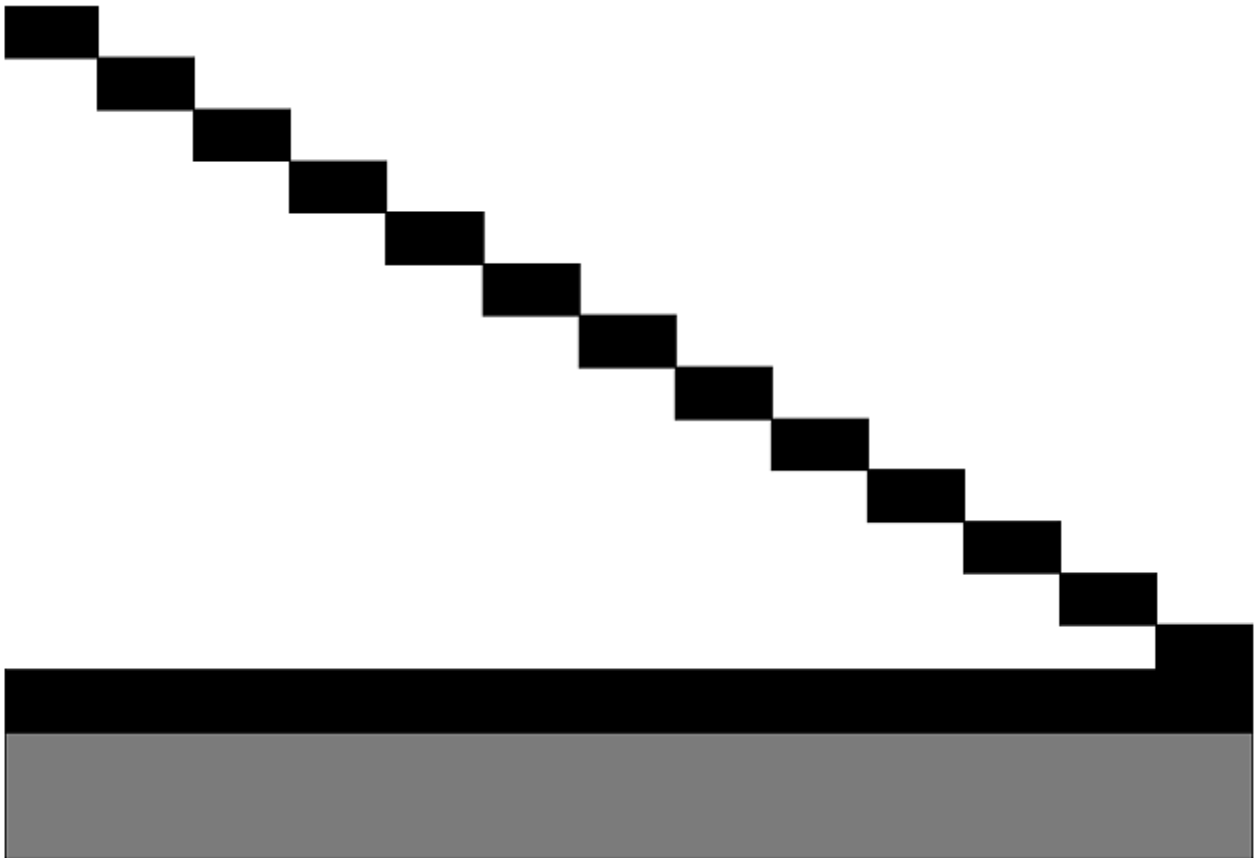
## The display shows:





---

**Self-Diagnosis Print Test (Example)**



```
CPU-ROM  VERSION  AA00
          HASH    OK    DACD
CPU-RAM   VERSION  AA00
          HASH    OK
PROG      VERSION  AA00
          HASH    OK    3142

LANGUAGE  VERSION  LL10
          HASH    OK    3F06
DEFAULT  VERSION  DD10
          HASH    OK    A683
*1 RAM1   2.5M   OK
*2 RAM2   OK
DEFAULT TYPE  01    07/01/1998  10:30
```

\*1 marked item is shown for condition of all RAM except EXCEED RAM.  
\*2 marked item is shown to SRAM for EXCEED.

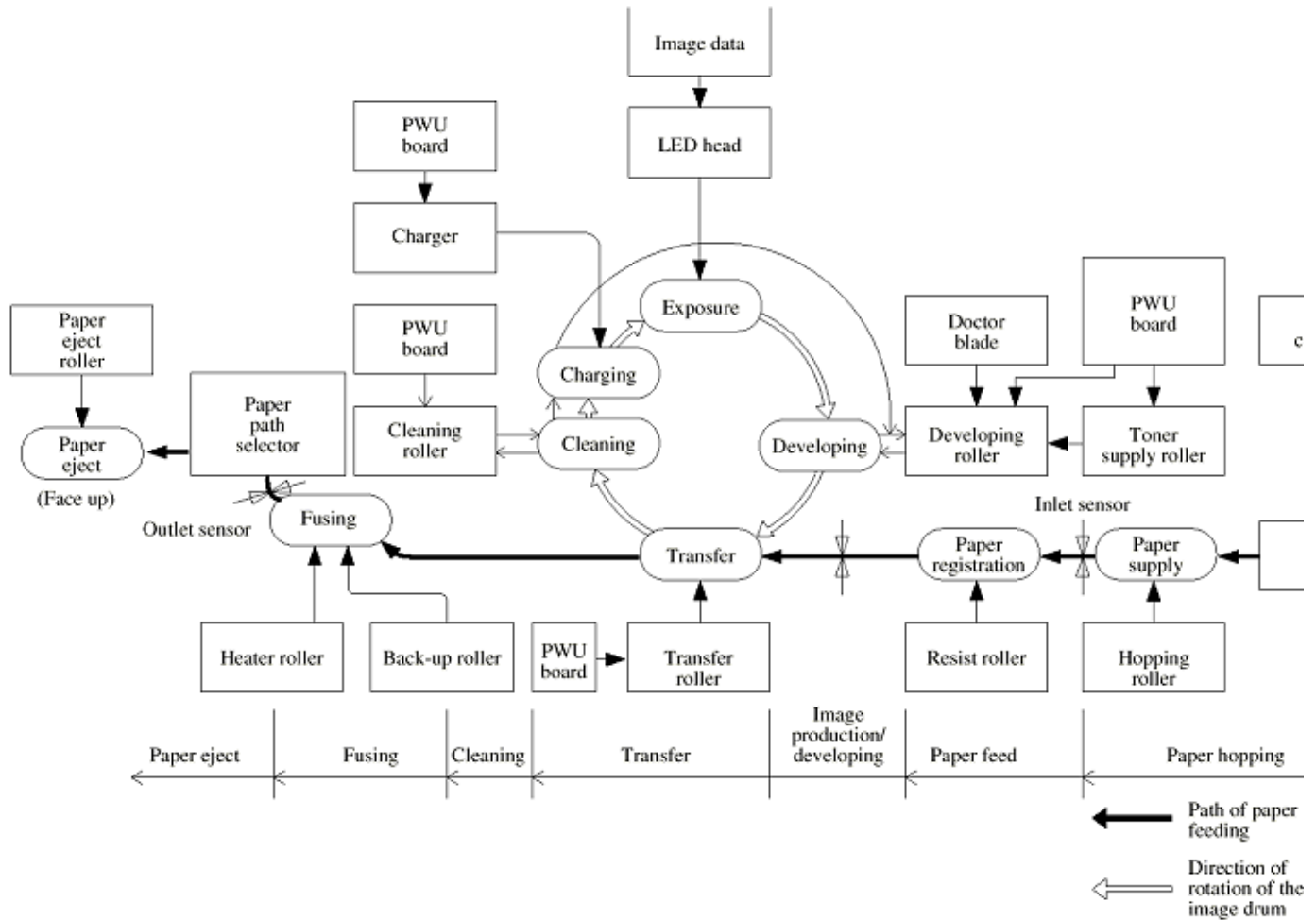


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## Service Guide OKIOFFICE 84 Chapter 3 Brief Technical Description

### Electrophotographic Process Flow



**Service Guide OKIOFFICE 84**  
**Chapter 3 Brief Technical Description**

**3.1 Fundamentals of the Electro-Photographic Process**

The electro-photographic process involves six sub-processes:

- (1) Charging (2) Exposure (3) Development (4) Transfer (5) Fusing (6) Cleaning

Outline of each process is explained below.

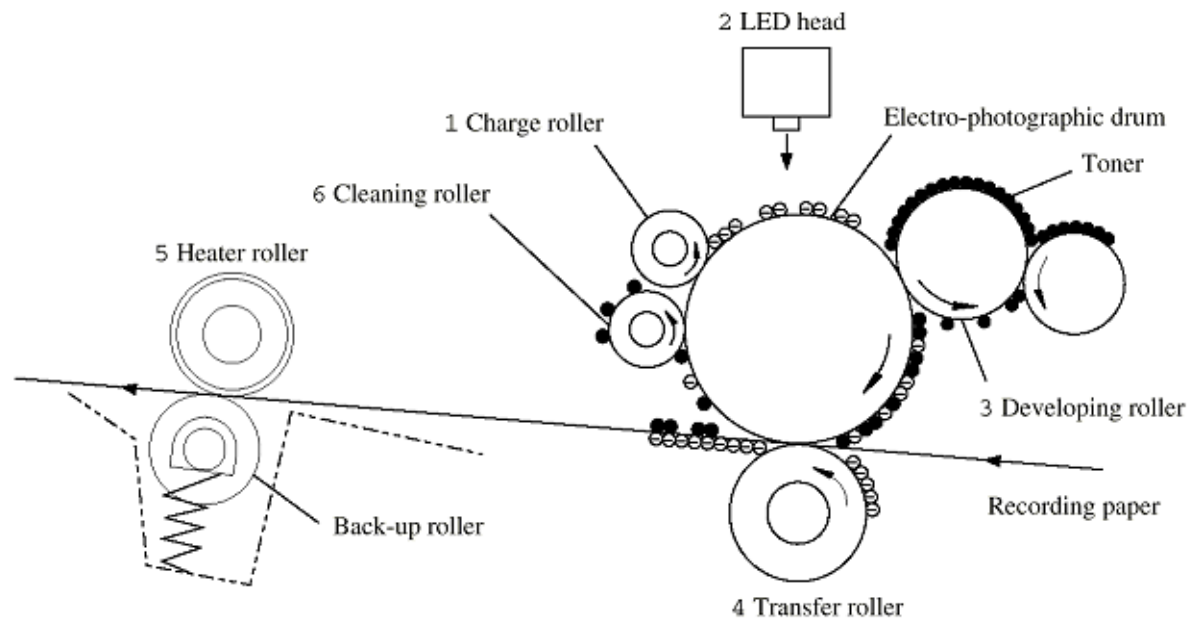
Process	Illustration	Description
<p><b>1 Charging</b></p>		<p>The surface of the electro-photographic Image drum is uniformly charged with negative charges by applying a negative voltage to the charge roller.</p> <p>When the applied DC voltage exceeds a threshold value, charging of the drum begins.</p>
<p><b>2 Exposure</b></p>		<p>Light emitted from the LED head irradiates the negatively charged surface.</p> <p>The potential of the irradiated part of the Image drum surface is raised, so that an electrostatic latent image associated with the print image is formed.</p>
<p><b>3 Development</b></p>		<p>Toner is attracted to the exposed part (high-potential part) of the Image drum at the contact between the Image drum and the developing roller, making the electro-static latent image visible.</p> <p>At the same time, the residual toner on the Image drum is attracted to the developing roller by static electricity.</p>

<p><b>4 Transfer</b></p>		<p>The recording paper is placed over the Image drum surface and a positive charge, opposite in polarity to the toner, is applied to the reverse side of the paper from the transfer roller. The toner is attracted by the positive charge and is transferred to the paper. The toner charged negative that is attracted to the Image drum surface is transferred to the upper side of the recording paper by the positive charge on the lower side of the paper.</p>
<p><b>5 Fusing</b></p>		<p>The unfused toner image is fused on the paper under heat and pressure as it passes between the heater roller and the back-up roller.</p>
<p><b>6 Cleaning</b></p>		<p>Residual toner on the Image drum is attracted to the cleaning roller temporarily by static electricity on the Image drum surface.</p>

**3.2 Actual Electrophotographic Process**

The electrophotographic process of the unit consists of six essential processes.

The following Figure 3.2.1 provides a general description.



\* Process:

- 1 : Charging
- 2 : Exposure
- 3 : Developing
- 4 : Transfer
- 5 : Fusing
- 6 : Cleaning

**Figure 3.2.1 Actual EP Process**



## Service Guide OKIOFFICE 84

### Chapter 3 Brief Technical Description

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#### 3.3 Board and Units

The following one board, Main control board, and three units constitute the facsimile transceiver machine.

- Main control board MCNT: (R51)
- Network control unit board NCU: (UNC; WN5, DN5; FN5)
- Operation panel assembly unit OPE: (O4W)
- Power supply unit POW UNIT: (MPW1446; 230V/MPW1546; 120V, P2H, P6L)
- Printer unit

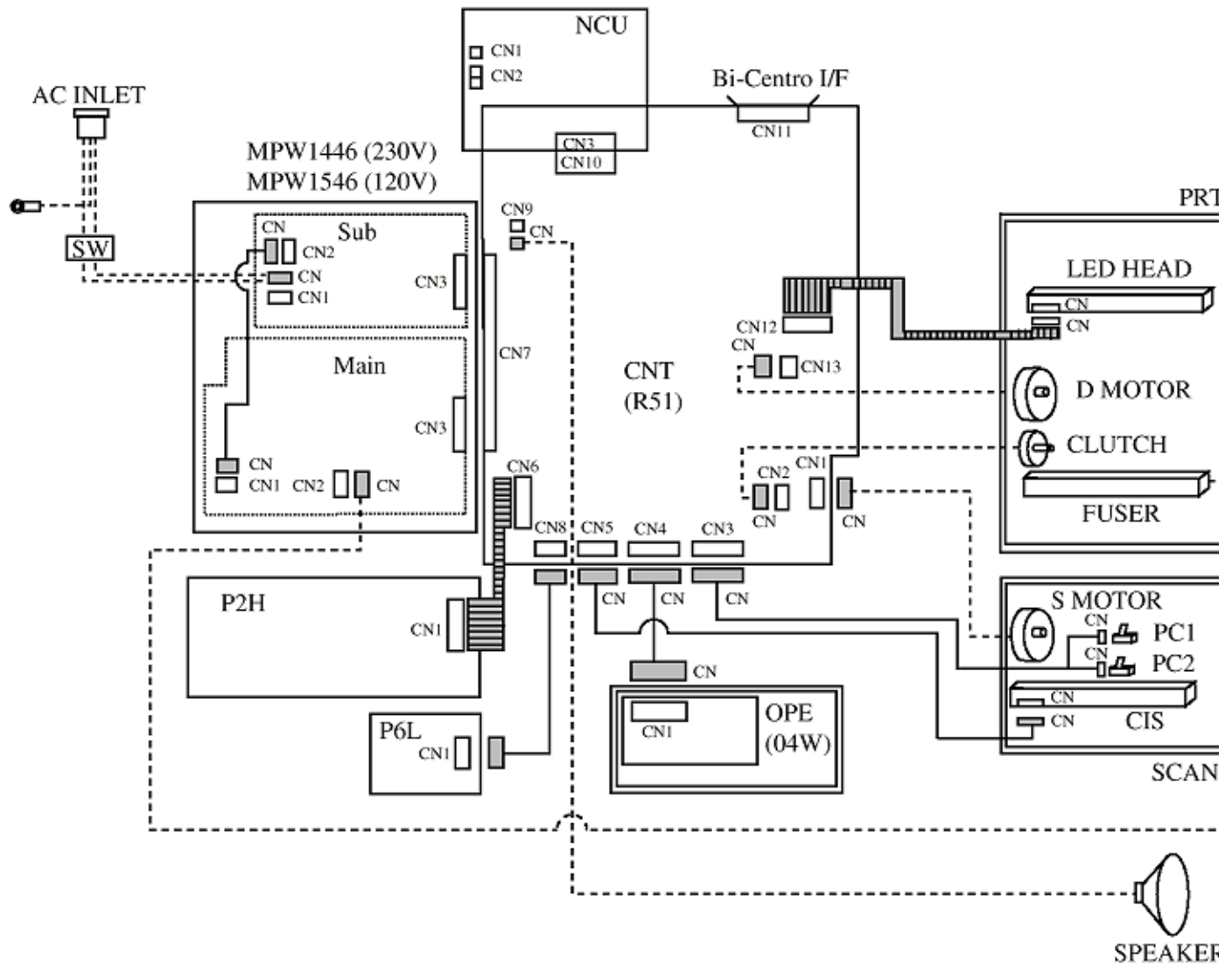
Figure 3.3.1 shows the related drawing of the facsimile transceiver.

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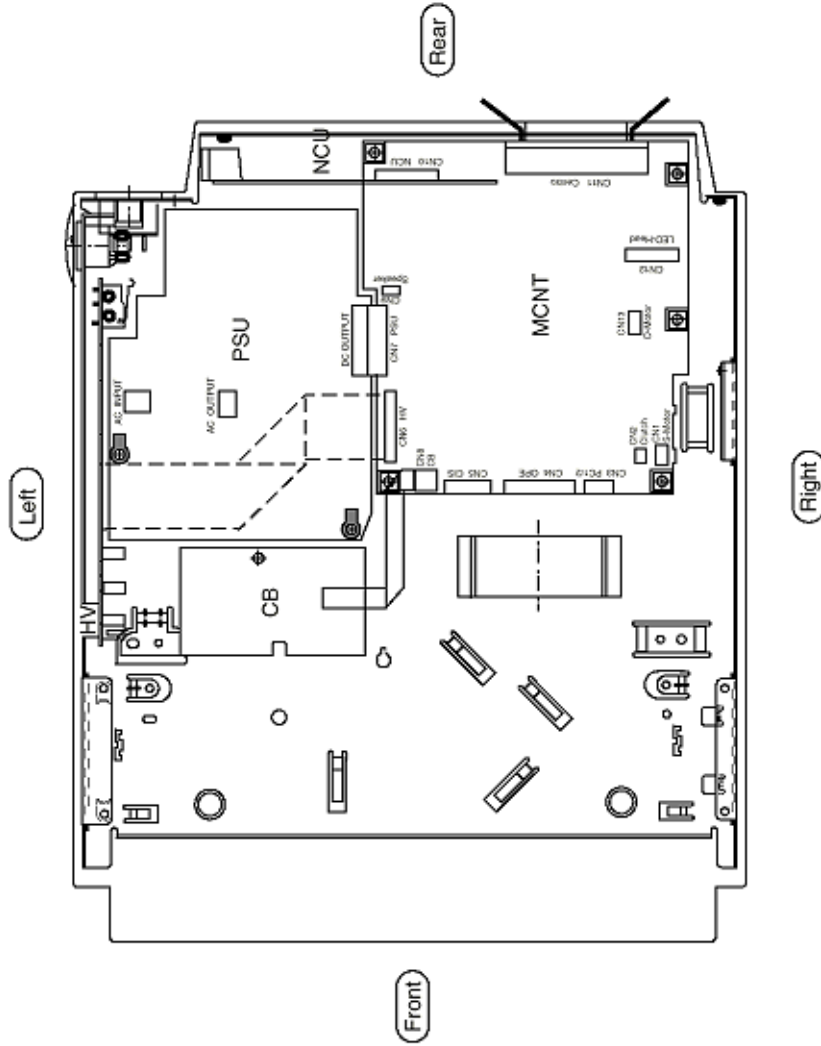
### Service Guide OKIOFFICE 84 Chapter 3 Brief Technical Description

Block Diagram (Figure 3.3.1)

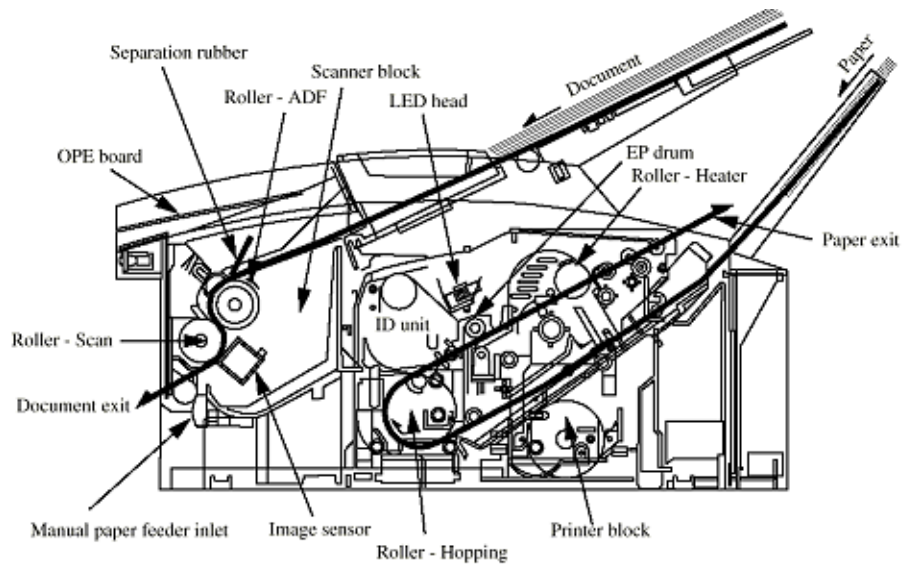


### Service Guide OKIOFFICE 84 Chapter 3 Brief Technical Description

#### 3.4 Overall Dimension and Mechanical Structure







**Figure 3.4.1 Overall Dimension and Mechanical Structure**

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## Service Guide OKIOFFICE 84 Chapter 4 Disassembly

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### 4.1 General

This chapter explains the procedures for replacement of assemblies and units in the field.

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#### 4.1 Precautions for Parts Replacement

- 1 Before starting disassembly and reassembly, always turn the AC power switch OFF, and pull out the AC plug.  
**Note:** Unplug the AC power cord from the wall outlet first and then from the facsimile.
- 2 Do not try to disassemble as long as the facsimile is operating normally.
- 3 Do not remove unnecessary parts: Try to keep disassembly to a minimum.
- 4 When disassembling, follow the prescribed sequence. Otherwise, parts may be damaged.
- 5 Since screws and small parts are likely to be lost, they should temporarily be attached to their original positions.
- 6 When handling items such as printed circuit boards, do not wear gloves that are likely to generate static electricity.
- 7 Using a wrist band connected to the ground will protect semiconductors on printed circuit boards from damage by the static electricity.
- 8 Do not place printed circuit boards directly on the equipment or on the floor.

##### Board or Part Adjustment

- (a) NCU board - DIP switches to be placed in the same position as on the removed board.

**Note:** The DIP switches setting is subject to change by PTT parameters. WN5, DN5 and FN5 board (Except for USA/Canada version).








- (b) LED print head - When the rank marking of the replaced LED print head (new part) is the same

as that of the used LED print head (old part), you do not always have to set the LED print head strobe time by the technical function No. 26, and the LED printhead width by the technical function No. 27 (Refer to table 2.9.1).

**4.2 Tools**

Table 4.1 shows the tools required for the replacement of parts such as circuit boards and mechanical units.

**Table 4.1 Tools**

No.	Service tools	Q'ty	Remarks
1		1	
2		1	
3		1	
4		1	
5		1	
6		1	
7		1	Short-ciucuit test



## Service Guide OKIOFFICE 84 Chapter 4 Disassembly

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### 4.3 How to Disassemble and Reassemble

This section explains how to disassemble and reassemble the fax.

- Figure 4.3 shows the disassembly procedure flow as generalization.
- The detailed disassembly procedure is explained from sub-section 4.3.1 to 4.3.18.

---

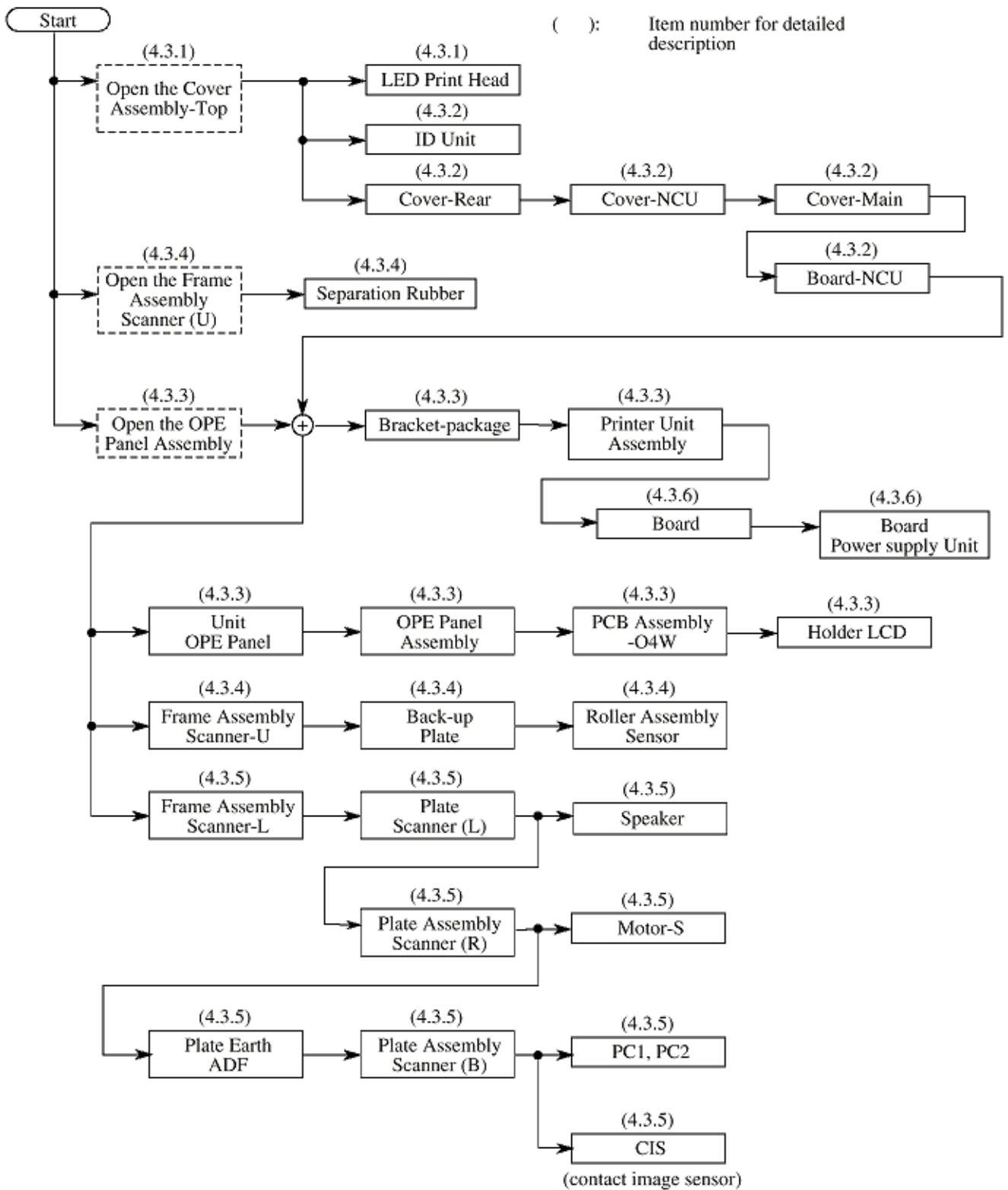
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**Service Guide OKIOFFICE 84**  
**Chapter 4 Disassembly**

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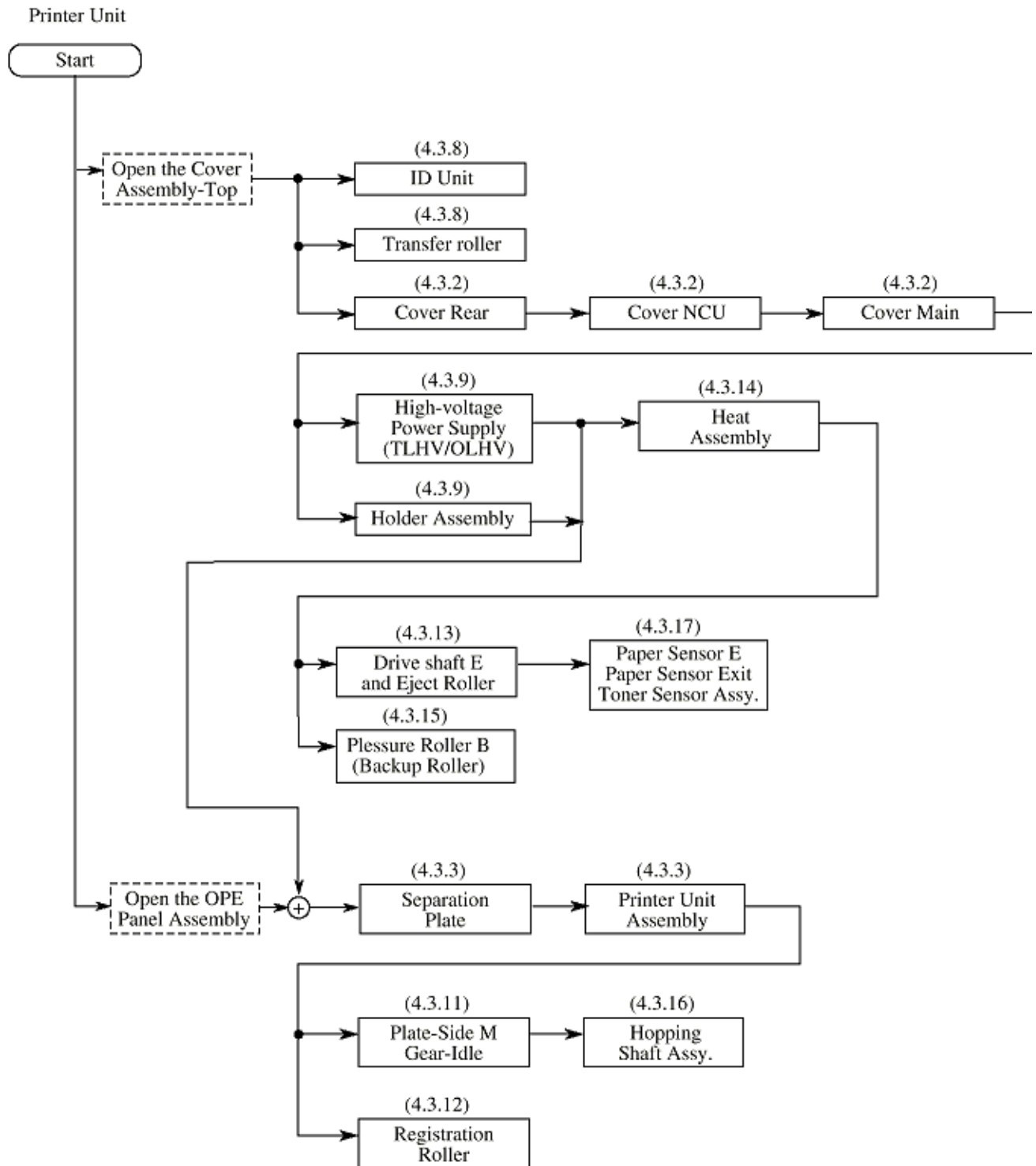
Disassembly Procedure Flow Figure 4.3 (1/2)



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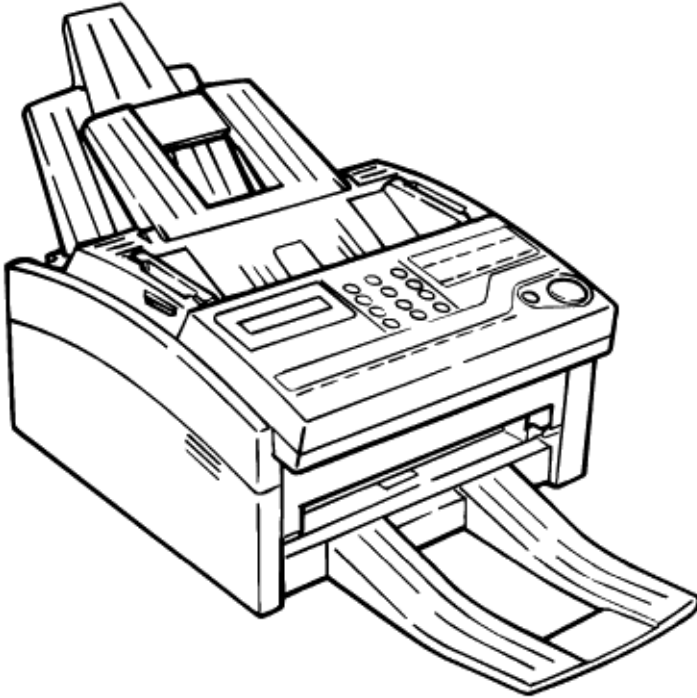
Disassembly Procedure Flow Figure 4.3 (2/2)



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**Whole Unit Picture**

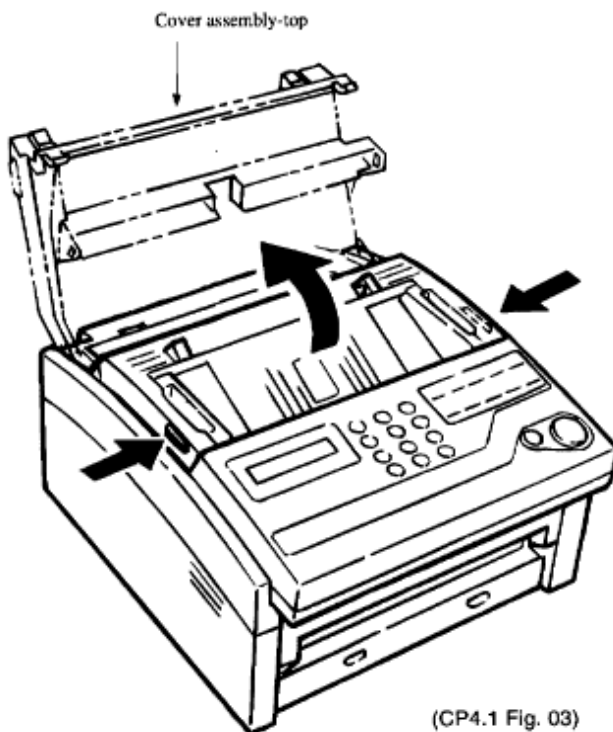
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### 4.3.1 LED Print Head

Two LED print heads are available.. (208 mm (8.18 inch) width or 216 mm (8.5 inch) width)

- 1 Disassembly procedure
  - a) Open the cover assembly-top by raising the cover in the direction of the arrow.
  - b) Disconnect the PC connector from the LED print head.
  - c) Remove the LED head while spreading the left clamp on the cover assembly-top. **Note:** Be sure not to touch directly or push the SLA part of the print head.



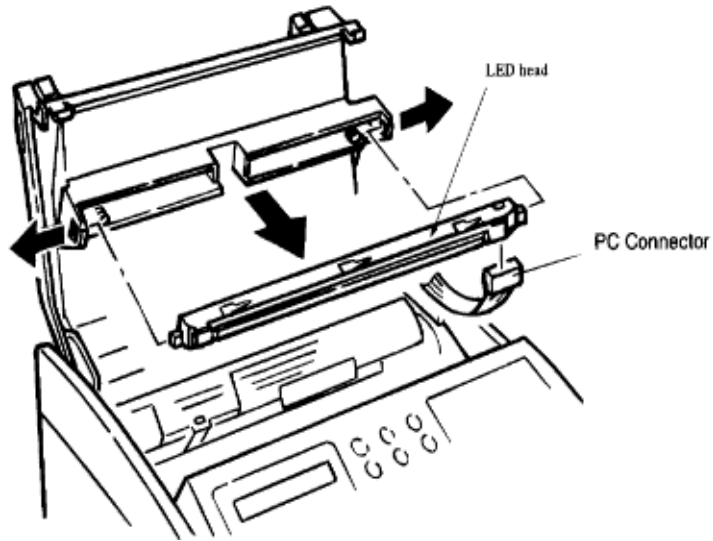
(CP4.1 Fig. 03)

- 2 Reassembly procedure

Reverse the disassembly procedures.

**Note:** After replacing the LED print head, set drive time of the LED print head following the marking. (Refer to section 5.1).

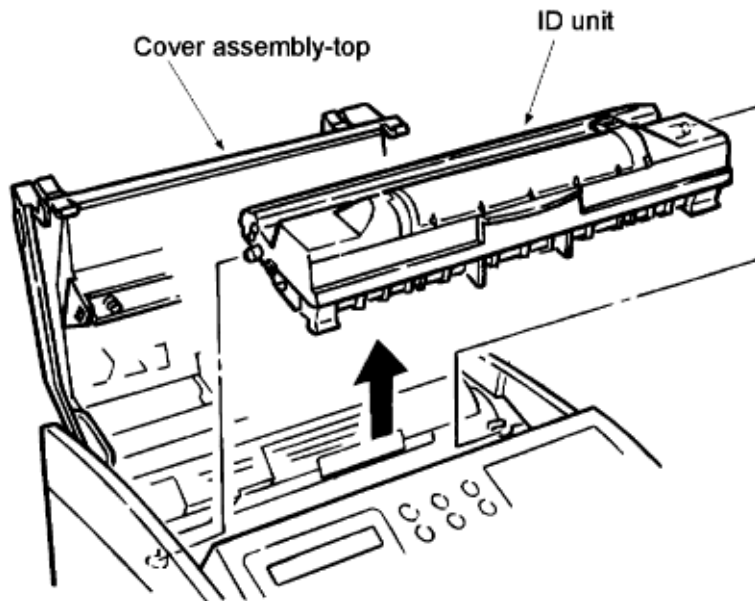
When you replace the LED print head, if the width of the LED head to be used is changed from current version, you should select the head width by the service personnel initial setting. (Refer to Table 2.9.1 TF No. 26 and 27)



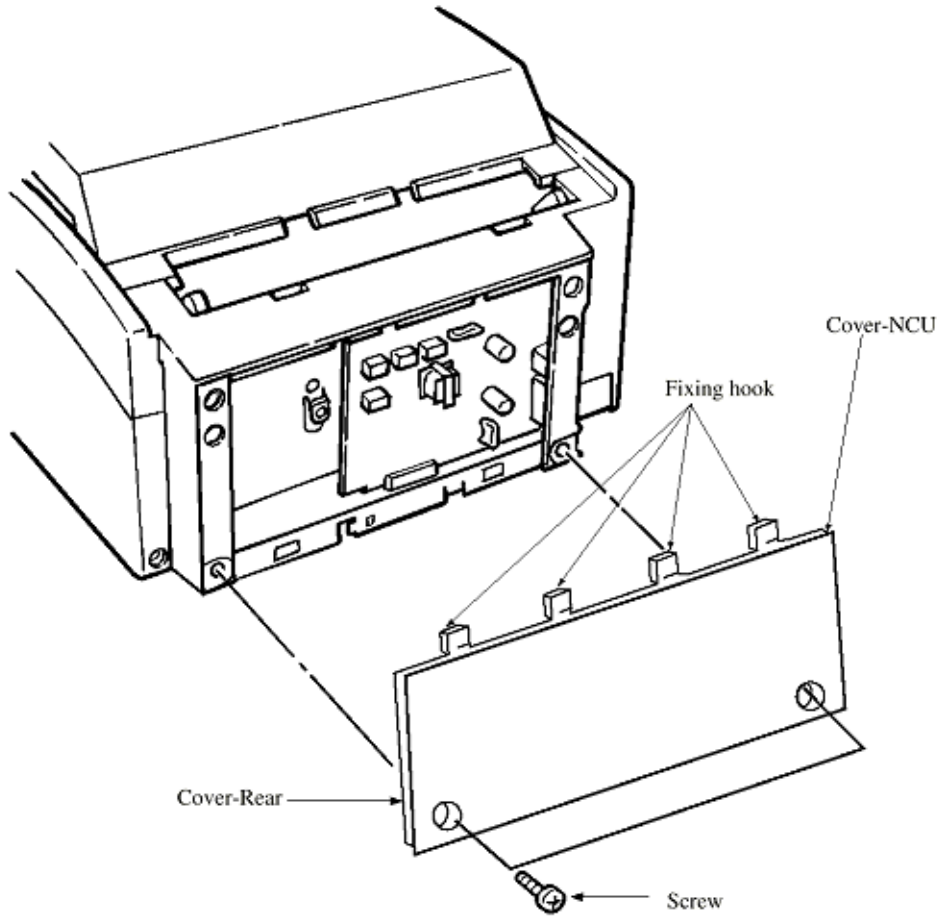
---

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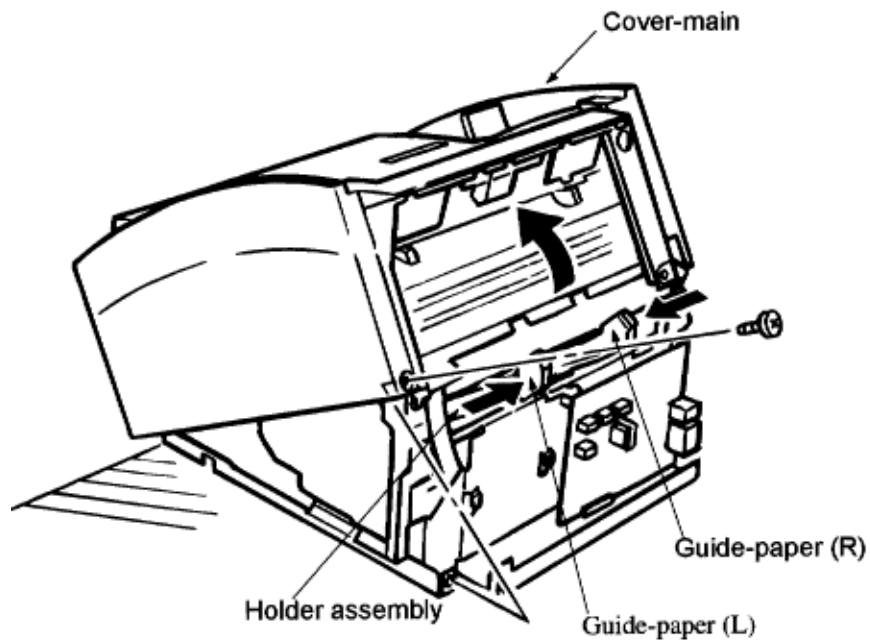
---

**4.3.2 Image Drum Unit, Rear-cover, Cover-Main and Board-NCU**

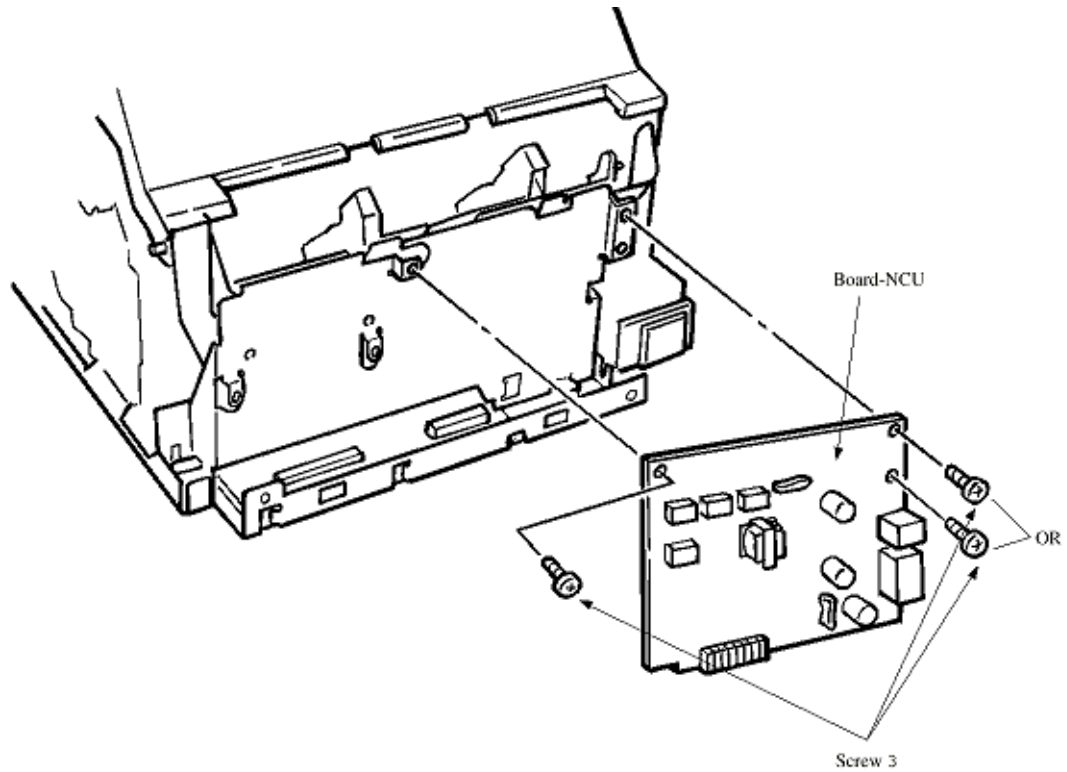
- 1 Disassembly procedure
  - a) Open the cover assembly-top by raising.
  - b) Remove the image drum unit.
  - c) Cover-Rear: Remove the Cover-Rear by removing the screw 1 and the detach the fixing hooks (4).



d) First, move the center of Guide-paper (L) and (R) of Holder assembly, and then, open the Cover-Main from the rear side.



e) Board-NCU: Remove the Board-NCU by removing the two screw 3 and disconnect the connector (CN3) from Board-NCU. **Note:** Board-NCU can be removed without removing the Cover-Main.



2 Reassembly procedure



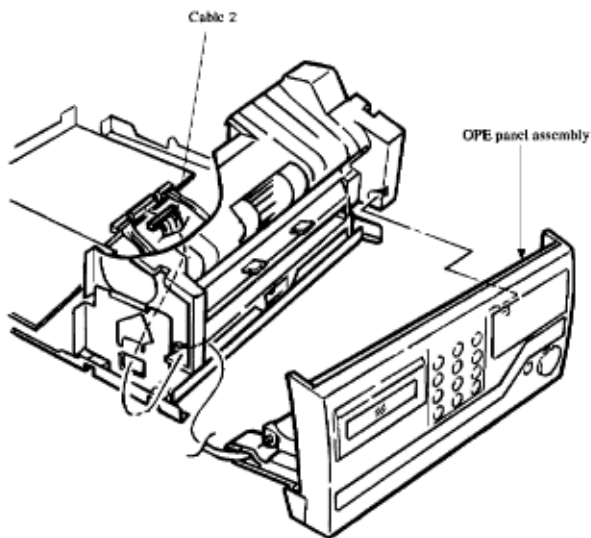
Reverse the disassembly procedures.

---

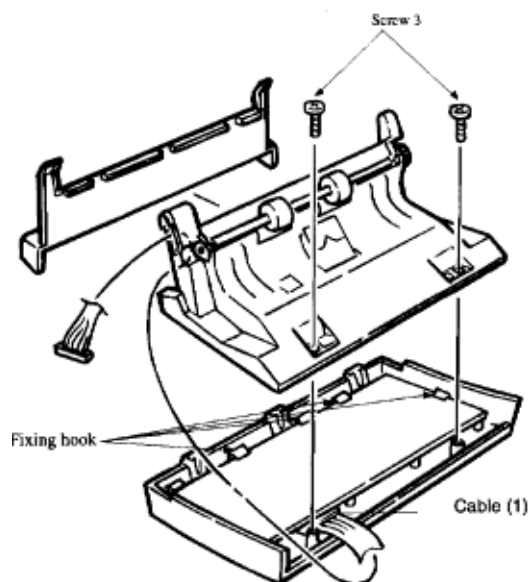
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**4.3.3 Unit 0-48 OPE-Panel**

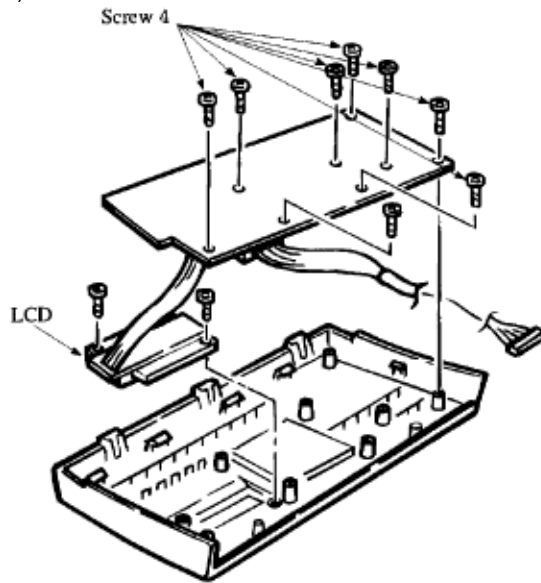
- 1 (1) Disassembly procedure
  - a) First, carry out the disassembly procedure up to the point of the (Item (e). Cover-main).
  - b) Dismount the Printer-Unit.
  - c) Open the OPE-panel assembly.



- d) OPE panel assembly: Remove the OPE panel assembly by detaching the cable (1), removing the two screws (3), removing the eight screws (4), and detaching the fixing hooks.



e) Remove the two screws and remove the LCD.

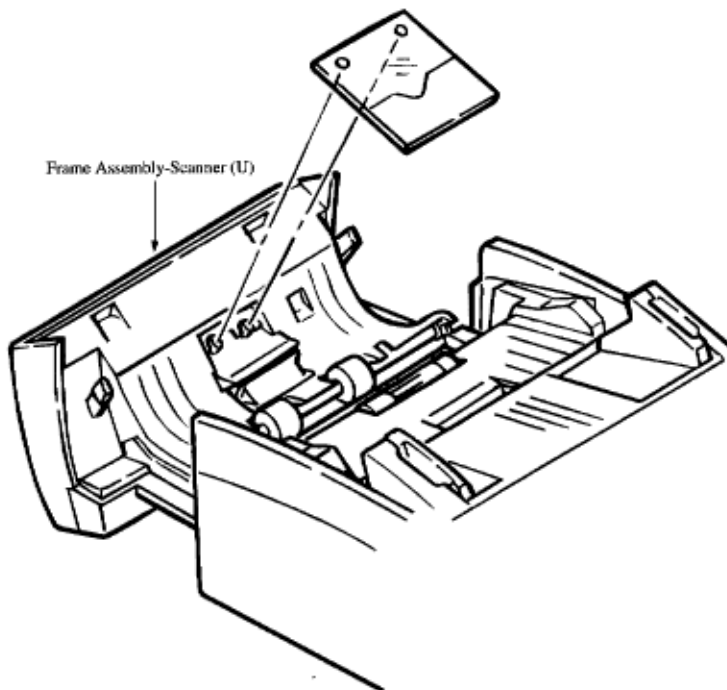


- 2 Reassembly procedure  
Reverse the disassembly procedures.

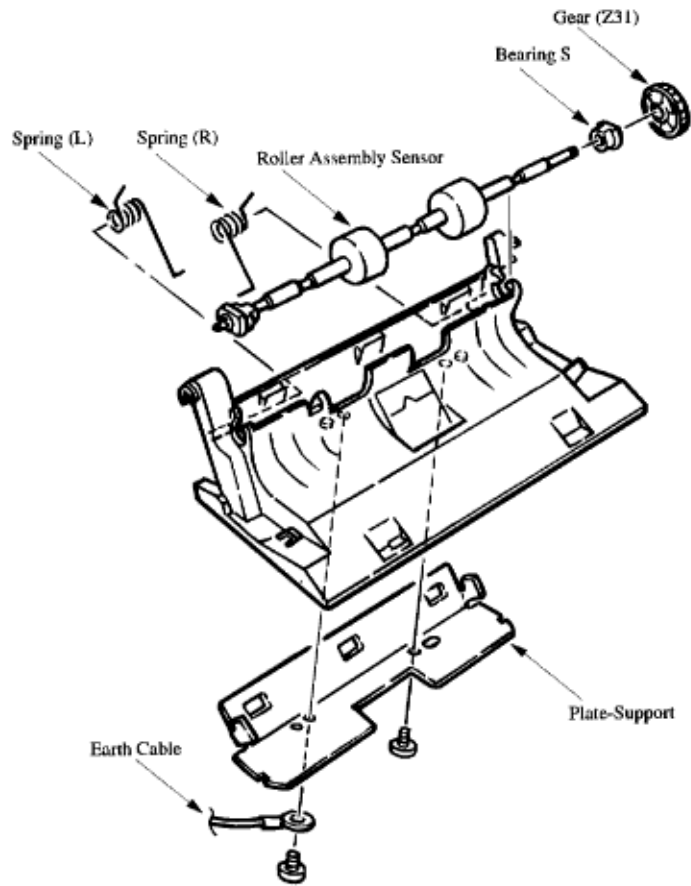
**4.3.4 Separation Rubber, Sensor Frame Roller Assembly (U)**

## Frame Assembly-Scanner (U)

- 1 Disassembly procedure
  - a) Separation rubber: The separation rubber can be removed from the Frame Assembly-Scanner (U).



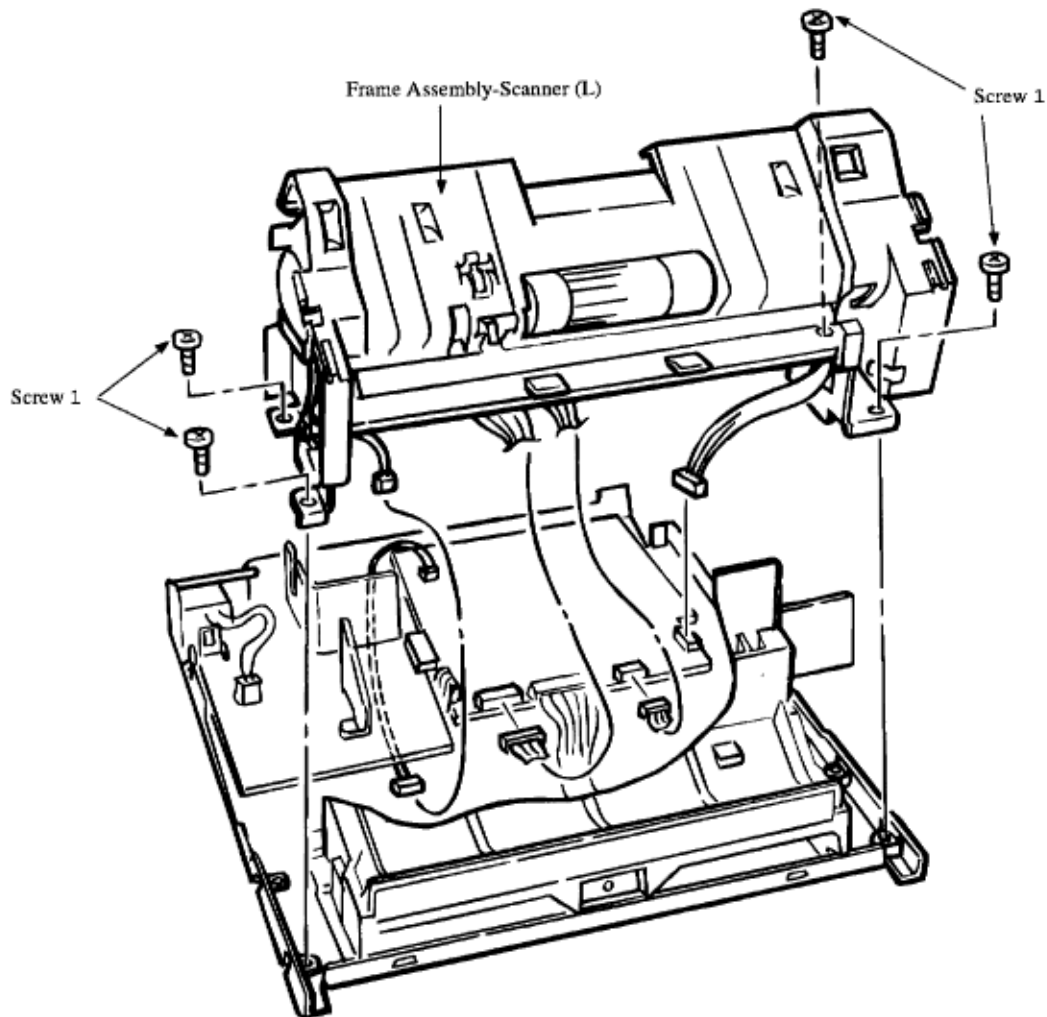
- b) Roller Assembly Sensor: Remove the Plate-Support by removing the two screws (1). **Note:** Just fitting to two bosses.
    - c) Remove the two springs (L) and (R).
    - d) Remove the Roller Assembly-Sensor by removing the Gear (Z31).

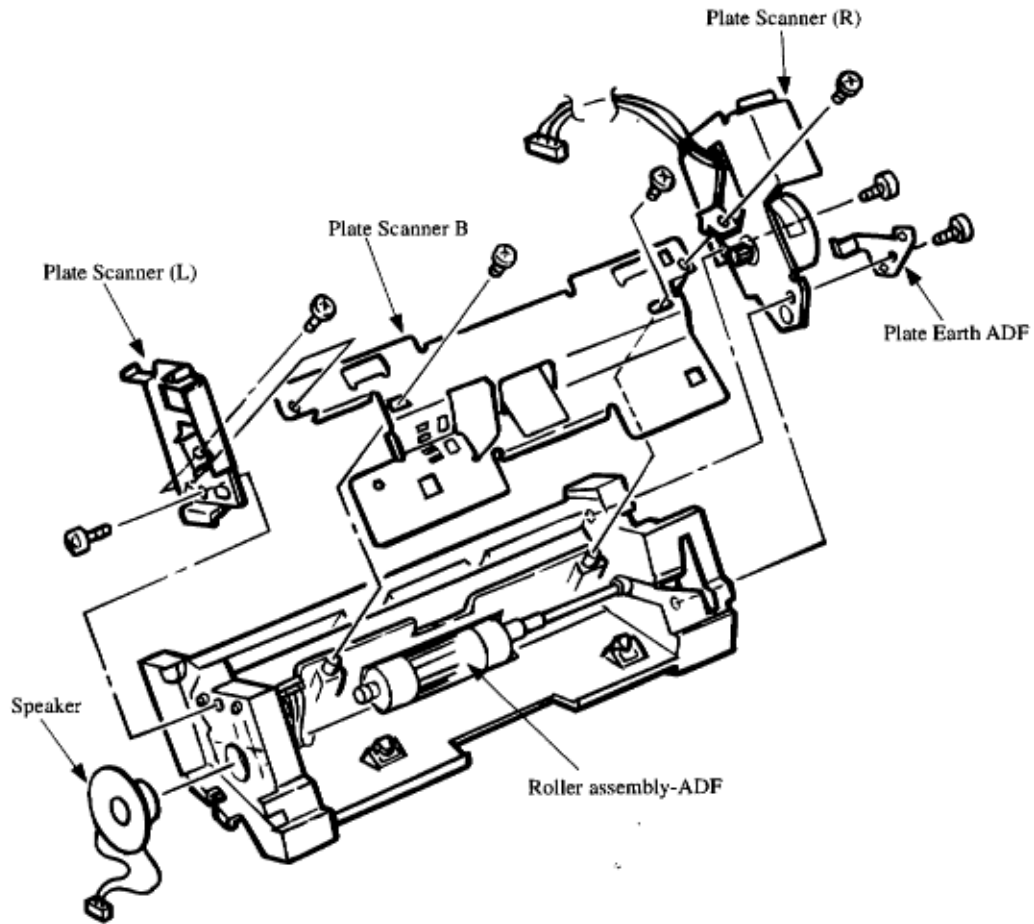


- 2 Reassembly procedure  
Reverse the disassembly procedure.

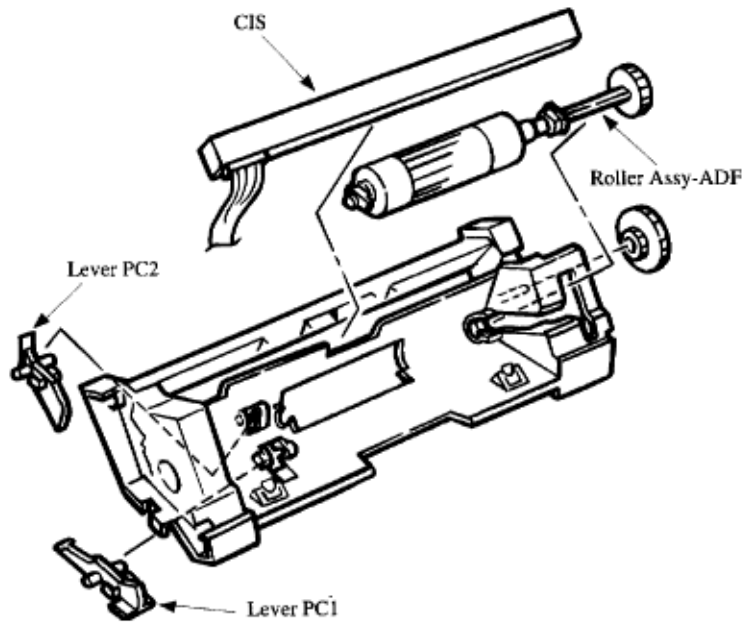
**4.3.5 Roller Assembly-ADF, CIS, Lever-PC1 and PC2****CIS = Contact Image Sensor****1 Disassembly procedure**

- a) First, carry out the disassembly procedures up to the point of the 4.3.
- b) Dismount the Printer-Unit. (See Section 4.3.18)
- c) Remove the Frame assembly-Scanner (L) by removing the four screws 1 and the four connectors.

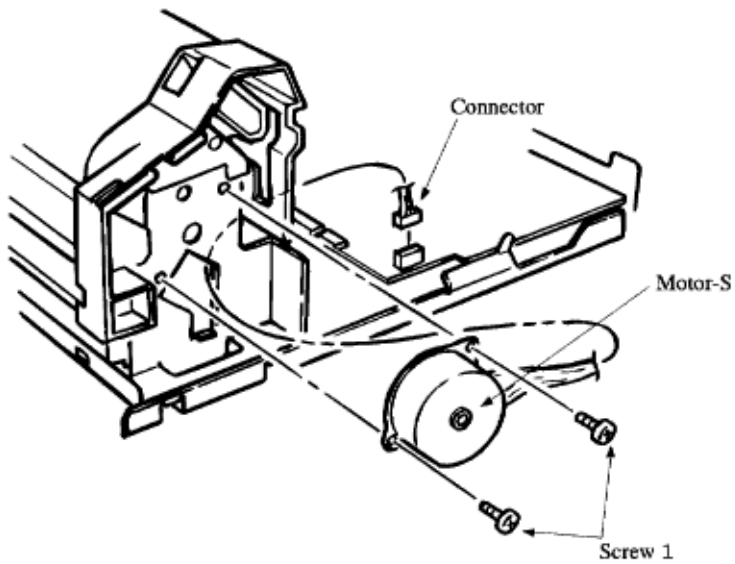




- d) Turn the Frame Assembly-Scanner inside out and perform the disassembly procedure.
- e) Remove the Plate Scanner (L) by removing the two screws.
- f) Remove the Speaker.

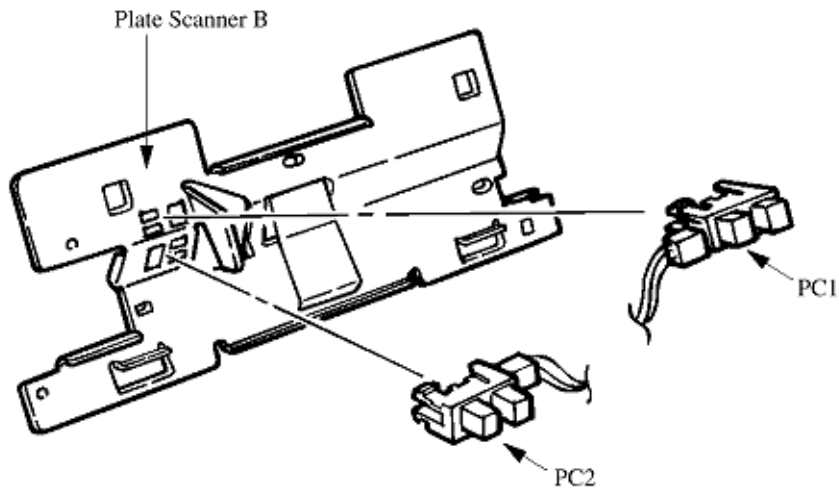


- g) Remove the Plate Assembly-Scanner (R) and Plate Earth ADF by removing the three screws.
- h) Remove the Plate Scanner (B) by removing the two screws and the part of the fixing hooks.
- i) Remove the CIS (contact image sensor).
- j) Motor-S: Remove the Motor-S by removing the connector of motor and the two screws



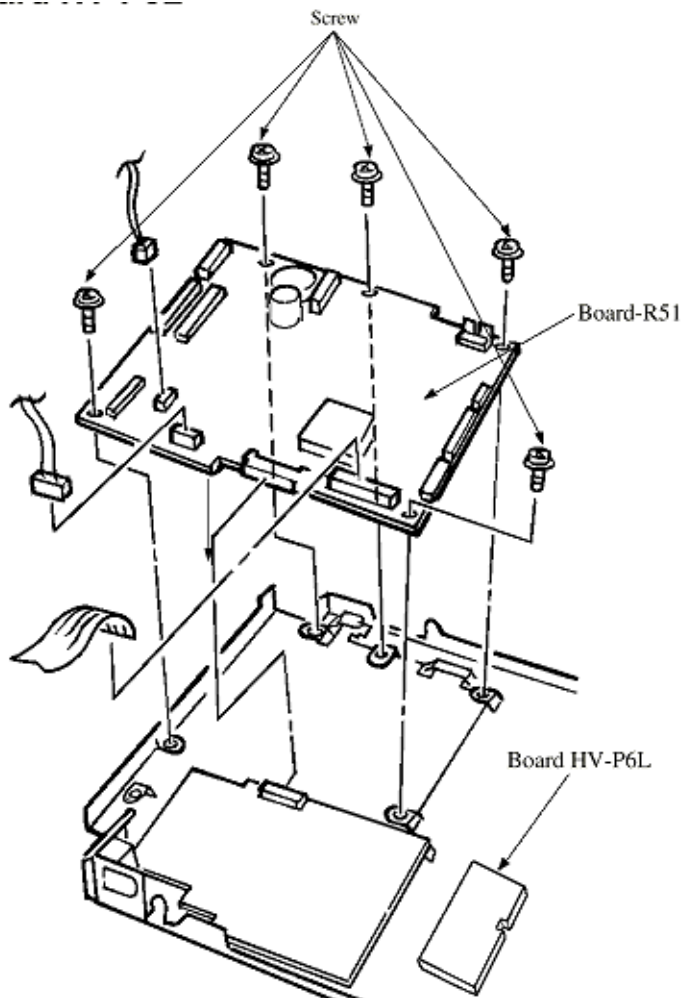


k) Photo-Sensor (PC1, PC2): After disconnecting the two connectors, remove the photo-coupler sensors PC1 and PC2 on the Plate Scanner B by pressing the latch using the flat screwdriver or like.

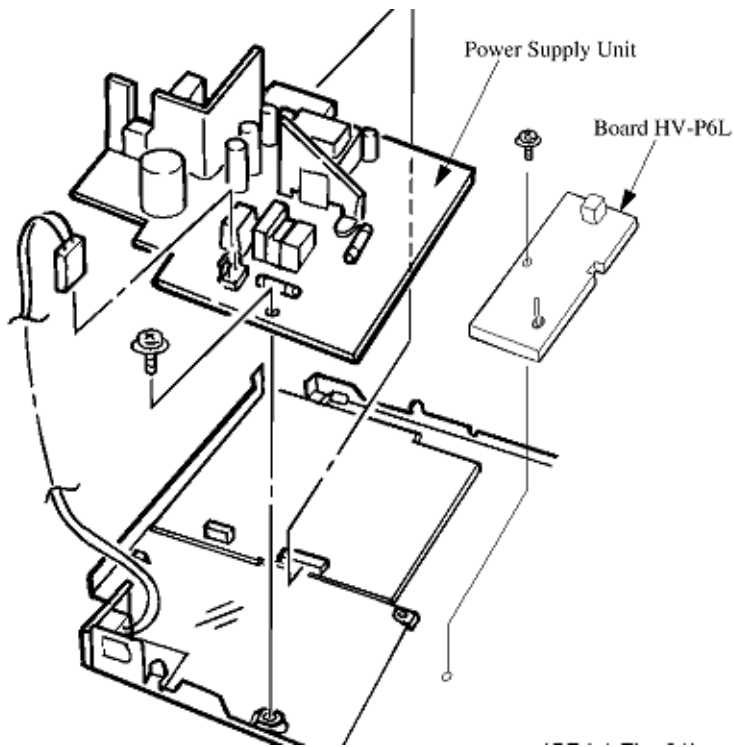


2 Reassembly procedure

Reverse the disassembly procedures.

**4.3.6 Board-R51, Power Supply Unit, Board HV-P6L****1 Disassembly procedure**

- a) First, carry out the disassembly procedures up to the point of the 4.3.2 (Cover-Rear, Cover-Main, etc).
- b) Board-R51: Disconnect all connectors.
- c) Remove the five screws and remove the Board R51.
  
- d) OKIOFFICE 84 Power Supply Unit: Disconnect all connectors.
- e) Remove the screws and remove the OKIOFFICE 84 Power Supply Unit.



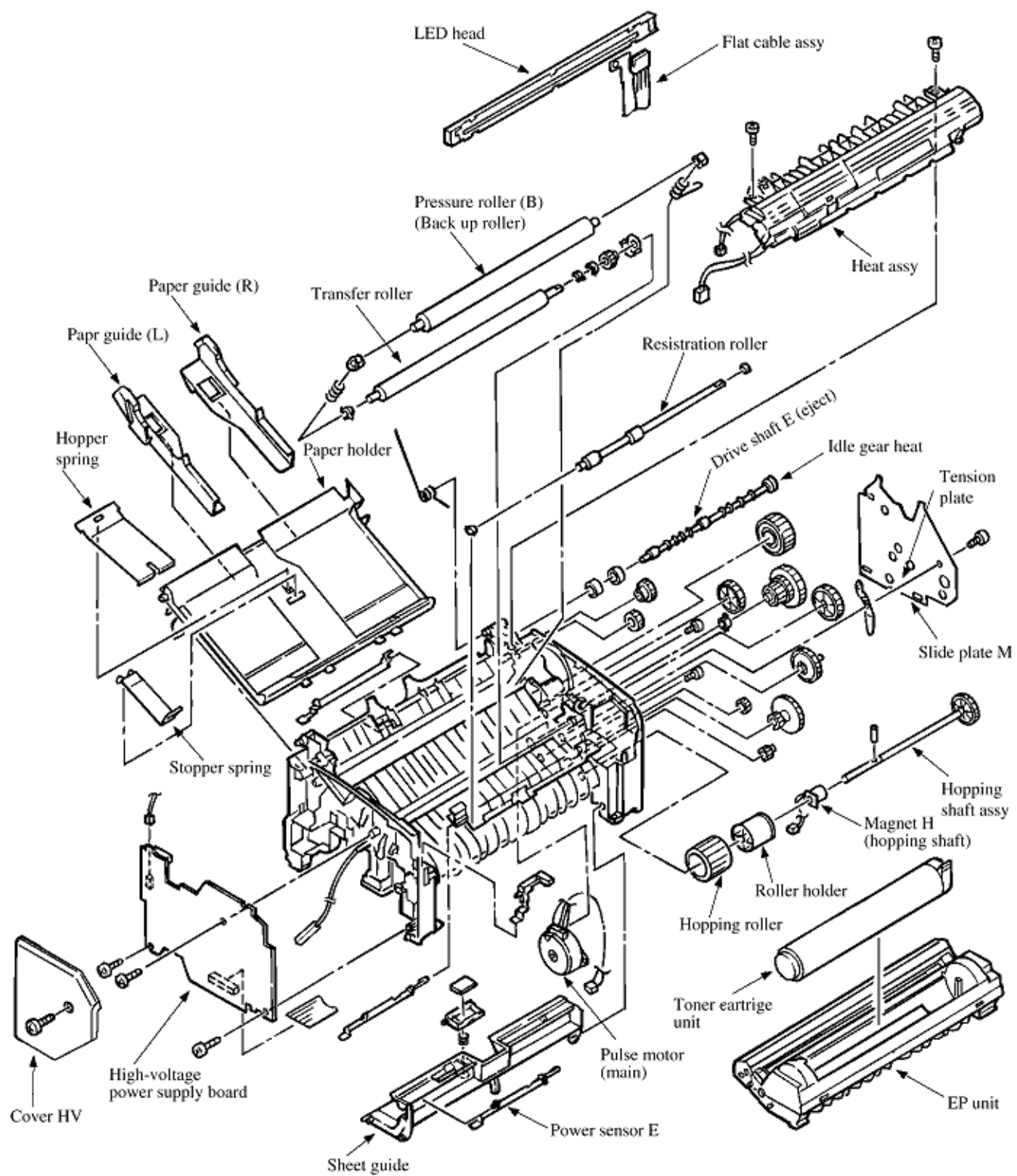
2 Reassembly procedure  
Reverse the disassembly procedures.



---

**4.3.7 Printer Unit Section**

[Base Frame Unit]

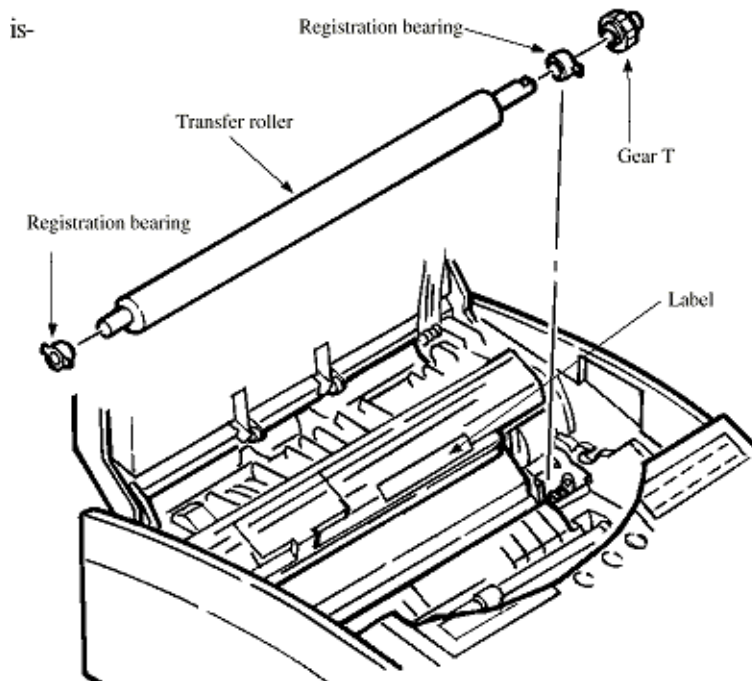


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**4.3.8 Transfer Roller****(1) Disassembly procedure**

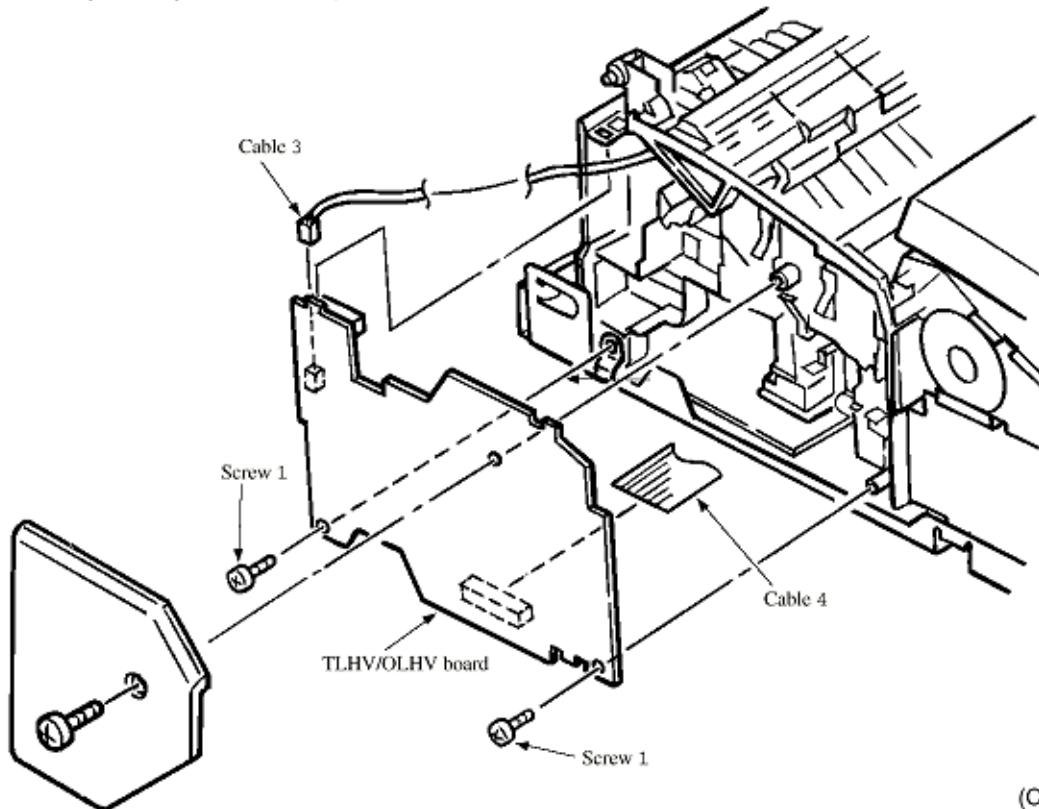
- a) Open the cover assembly-top by raising and remove the ID unit
- b) Remove the right claw. Then, dismount transfer roller, two registration bearing, and gear T.

**(2) Reassembly procedure**

Reverse the disassembly procedures.

**4.3.9 High-Voltage Power Supply Unit (TLHV/OLHV)****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Remove the three screws (1) and draw out high-voltage power supply board (HV-P2H).
- c) Disconnect all the cables (3) and (4) from high-voltage power supply board (HV-P2H) and dismount high-voltage power supply board.



**Caution:** Note the following when assembling the high-voltage power supply board:

- Mount the high-voltage power supply board with Cover-top assembly removed or open.
- Take care that cable (3) will not interfere with the paper sensor exit when it is connected.

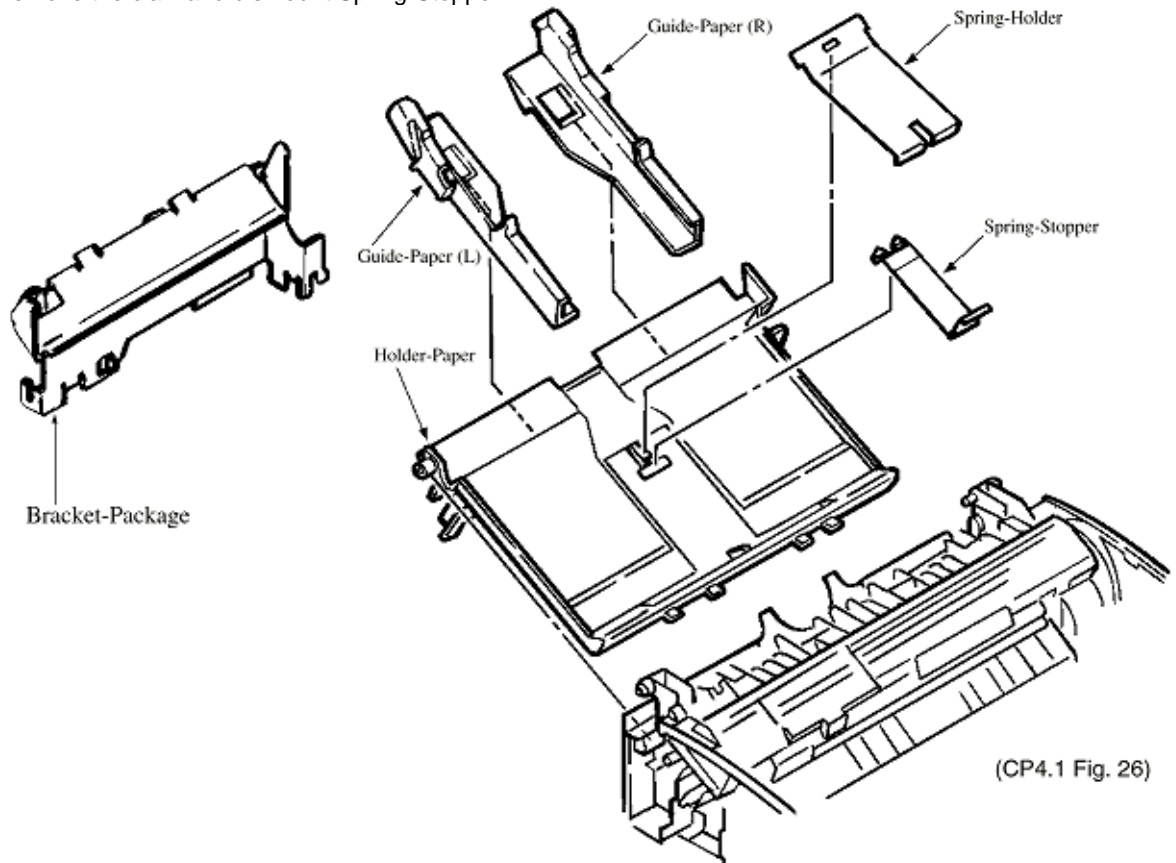
**2 Reassembly procedure**

Reverse the disassembly procedures.



**4.3.10 Holder Assembly****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Dismount the Bracket-Package.
- c) Dismount the Holder-Paper.
- d) Unlock and dismount the Guide-Paper (L) and Guide Paper (R).
- e) Remove the claw and dismount Spring-Holder.
- f) Remove the claw and dismount Spring-Stopper.

**2 Reassembly procedure**

Reverse the disassembly procedures.

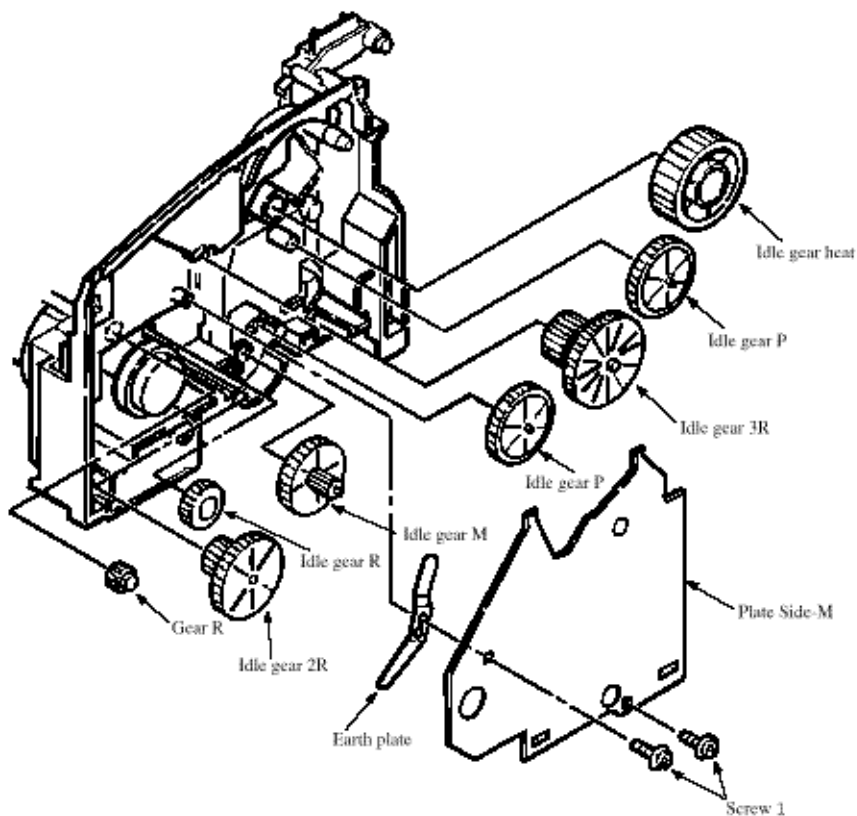
**4.3.11 Plate-Side M and Gear-Idle****1 Disassembly procedure**

Perform parts replacement while making the base frame assembly stand so that Plate-Side M will face upward.

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Remove two screws 1 and two claws, then dismount Plate-Side M.
- c) Dismount Plate-Earth, two idle gears P, idle gear M, idle gear 3R, idle gear 2R, idle gear heat idle gear R, and gear R.

**2 Reassembly procedure**

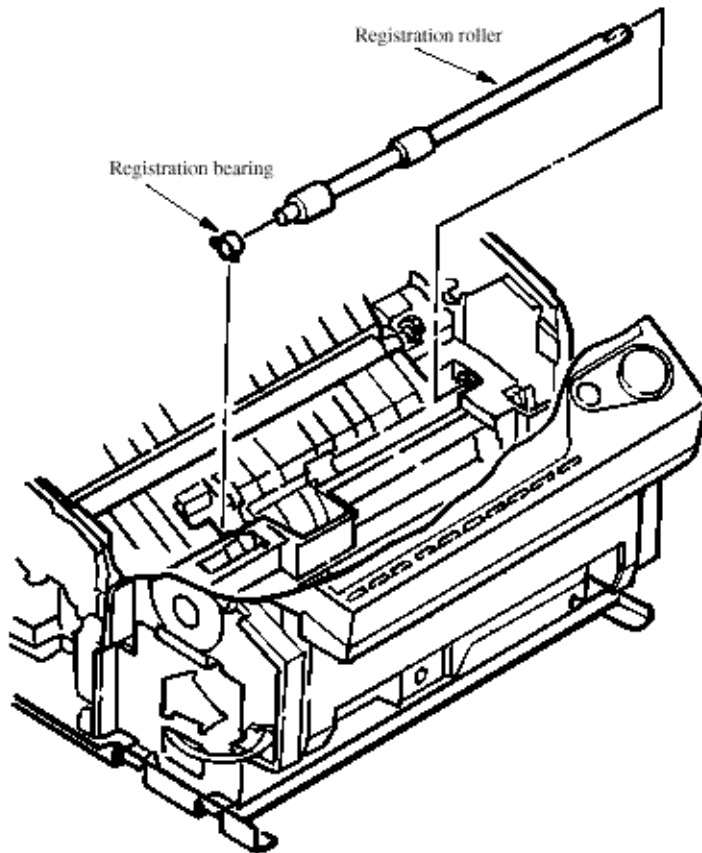
Reverse the disassembly procedure.



---

**4.3.12 Registration Roller****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Move registration roller to the right and dismount it by lifting. (Two registration bearings also come off at the same time. Take care not to lose them.)

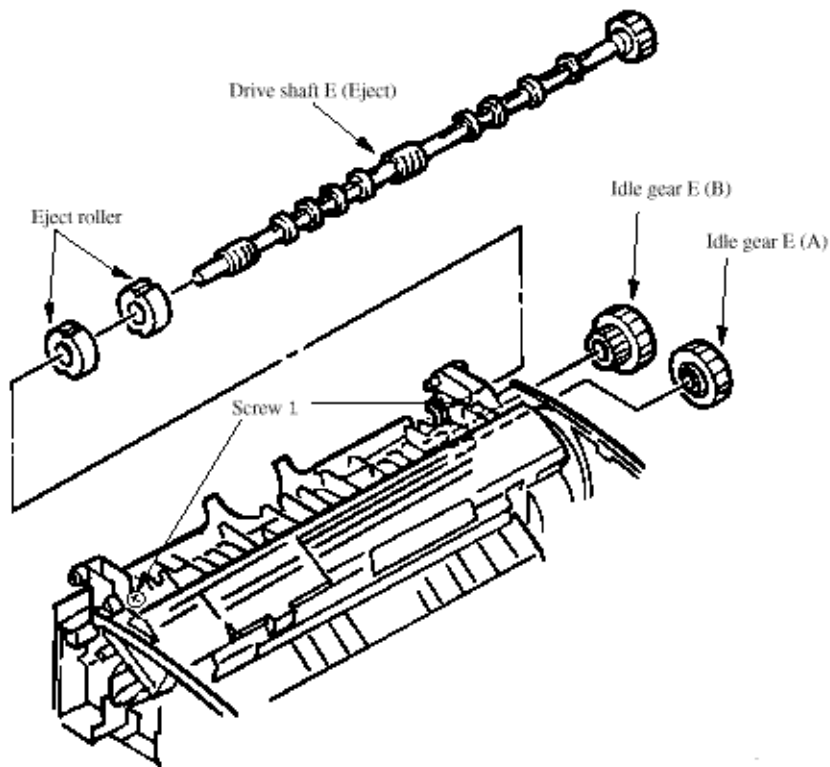
**2 Reassembly procedure**

- Reverse the disassembly procedures.

---

**4.3.13 Drive Shaft E (Eject) and Eject Roller****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Remove two screws 1 from Cover Heat Assembly (section 4.3.14), lift the heat assy, and dismount idle gear E (A) and idle gear E (B).
- c) Unlock and dismount drive shaft E (Eject).
- d) Dismount two eject rollers.

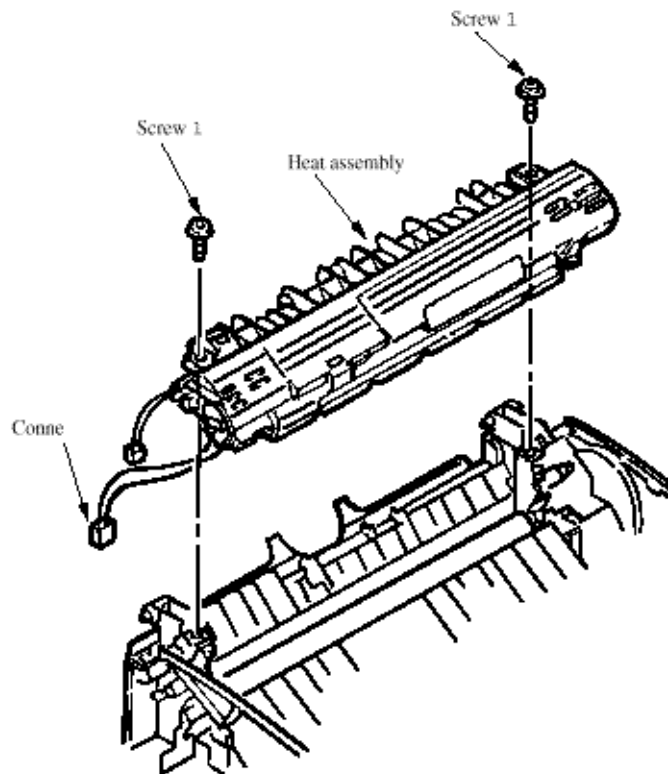
**1 Reassembly procedure**

- Reverse the disassembly procedures.

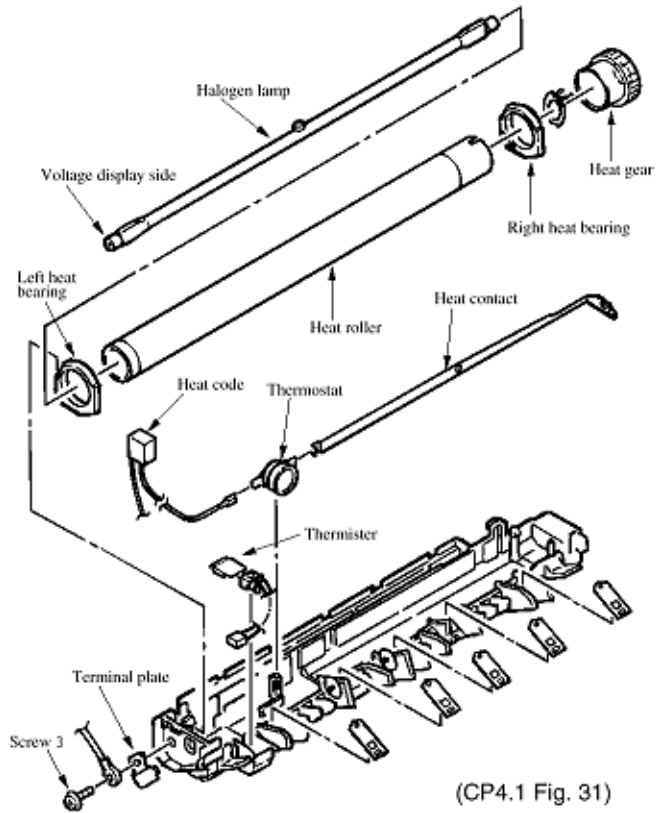
**4.3.14 Heat Assembly**

This section explains how to dismount the heat assembly and parts in the assembly.

- 1 Disassembly procedure <Dismounting the heat assembly>
  - a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
  - b) Dismount the high-voltage power supply board. (See Section 4.3.9)
  - c) Remove NCU-Board with two screws.
  - d) Remove Bracket-Package with three screws, then disconnect Cable-Flat from connector on R51-Board (M-CNT). (See Section 4.3.19)
  - e) Pull out the Holder-Assy. (See Section 4.3.11)
  - f) Disconnect connector 2, remove two screws 1, and dismount the heat assembly.



- 1 Disassembly procedure <Dismounting the heat assembly>
  - a) Dismount the heat separator.
  - b) Remove the screw and discount terminal plate. (Handle heat assembly carefully because Halogen lamp comes off).
  - c) Turn left and right heat bearings in the arrow direction to unlock. Then, dismount halogen lamp, heat bearing, heat roller, and heat gear together. (Take care not to drop the Halogen lamp).
  - d) Dismount thermistor.
  - e) Dismount the clamp, then thermostat, heat contact, and heat cord together.
  - f) Dismount the heat contact and heat cord from thermostat.

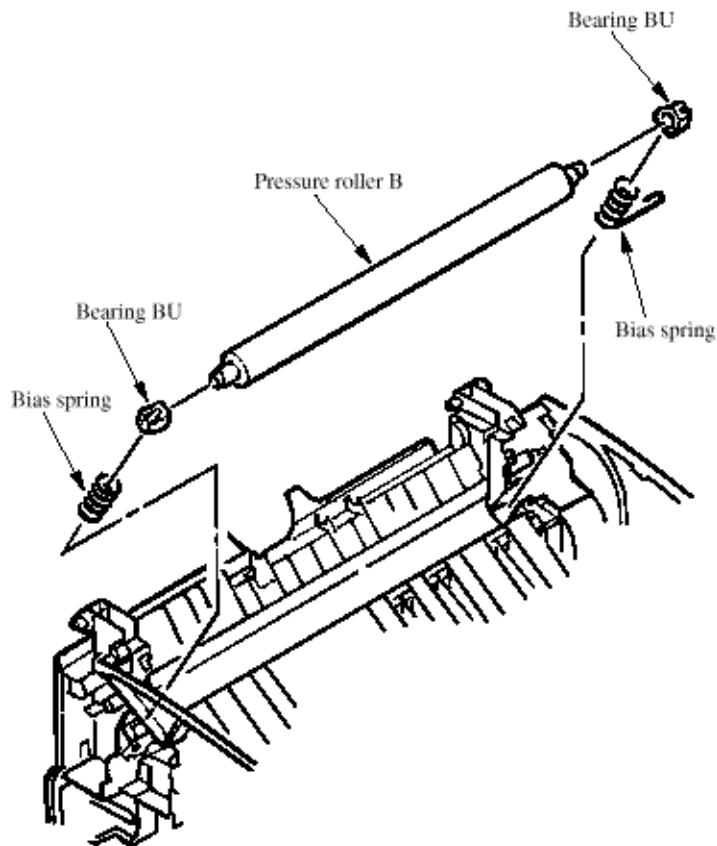


- 2 Reassembly procedure**  
Reverse the disassembly procedures

---

**4.3.15 Pressure Roller B (Back Up Roller)****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Dismount the high-voltage power supply board. (See Section 4.3.10)
- c) Dismount heat assembly. (See section 4.3.15)
- d) Dismount the engagement with the left ground, then pressure roller B. (Two bearing BUs and two bias springs also come off at the same time.)

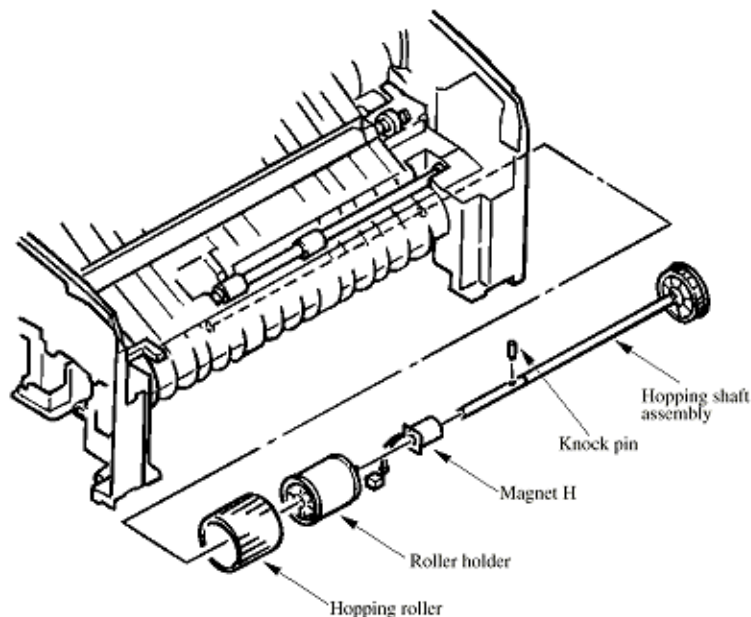
**2 Reassembly procedure**

Reverse the disassembly procedures

---

**4.3.16 Hopping Shaft Assembly****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Dismount the high-voltage power supply board. (See Section 4.3.10)
- c) Dismount the paper holder assembly. (See Section 4.3.11)
- d) Dismount the sheet guide. (See Section 4.3.12)
- e) Dismount the side plate M. (See Section 4.3.12)
- f) Raise up roller holder, slide hopping shaft assembly, and dismount roller holder and hopping roller. (Knock pin also comes off at the same time. Take care not to lose it.)
- g) Draw out hopping shaft assembly to the right and dismount magnet H.



(CP4.1 Fig. 33)

**2 Reassembly procedure**

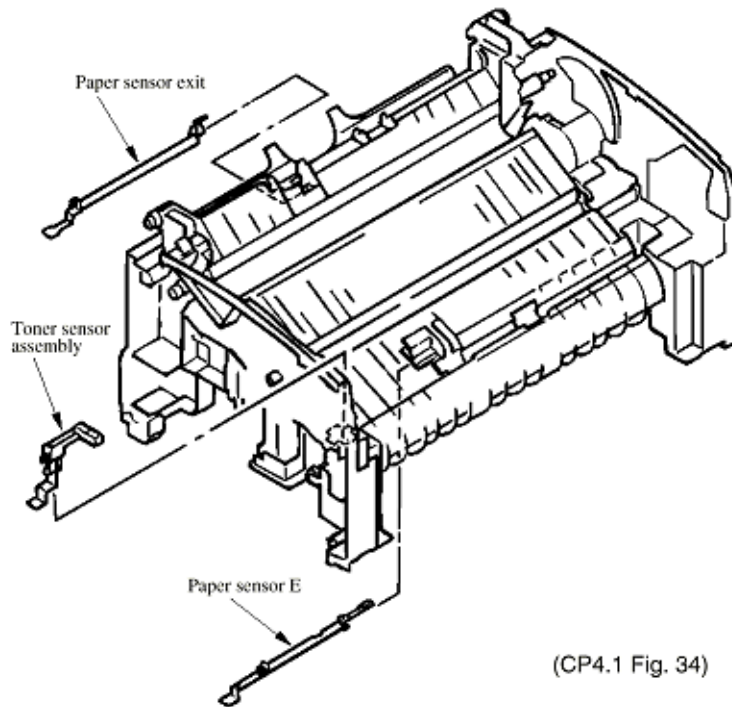
Reverse the disassembly procedures.



---

**4.3.17 Paper Sensor E, Paper Sensor Exit and Toner Sensor Assembly****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Dismount the high-voltage power supply board. (See Section 4.3.10)
- c) Dismount the paper holder assembly. (See Section 4.3.11)
- d) Dismount the heat assembly. (See Section 4.3.15)
- e) Dismount the drive shaft E. (See Section 4.3.14)
- f) Dismount the paper sensor E.
- g) Dismount the paper sensor exit.
- h) Dismount the toner sensor assembly.



(CP4.1 Fig. 34)

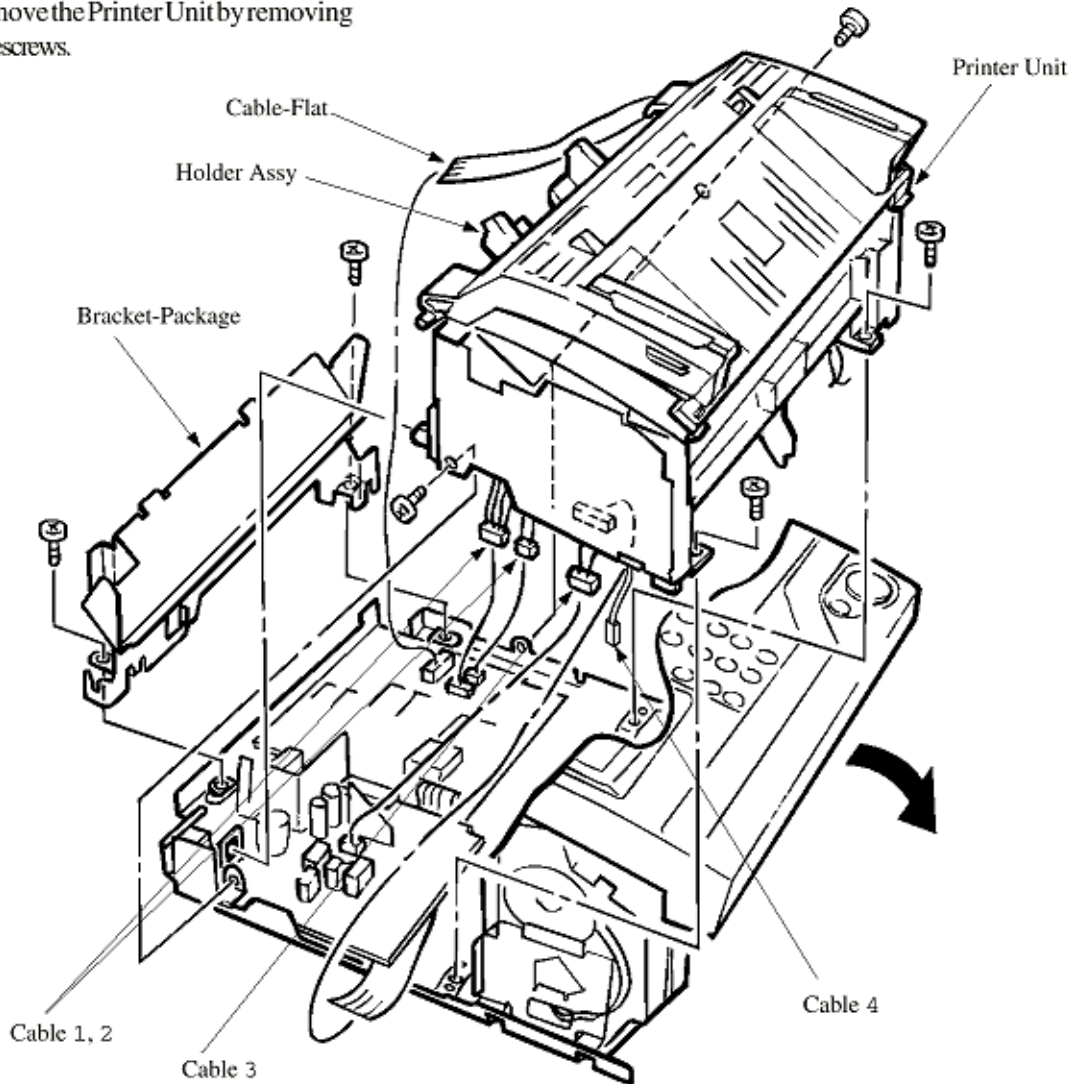
**2 Reassembly procedure**

Reverse the disassembly procedures.

**4.3.18 Printer Unit****1 Disassembly procedure**

- a) First, carry out procedure up to the point of the 4.3.2 (ID Unit, Cover-Rear, Cover-NCU and Cover-MAIN).
- b) Remove Bracket-Package with three screws, then disconnect Cable-Flat from connector on R51-Board (M-CNT).
- c) Dismount the high-voltage power supply board. (See Section 4.3.10)
- d) Disconnect cable 1 and 2 from connector on Board-R51 (M-CNT), and disconnect cable 3 from Connect on Power Supply Unit.
- e) Remove the Printer Unit by removing three screws.
- f) Detach the four clamps from underneath, push inward on the top two tabs while lifting up to remove the Holder-Assy.

Remove the Printer Unit by removing three screws.



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### 5.1 Setting of LED Print Head Drive Time

- Adjustment point: Technical Function No. 26.

\* To bring the LCD up to Technical Function, press SELECT FUNCTION key once, COPY key twice and "2" key (In case of no message in memory).

**Note:** When the rank marking of the replaced LED print head (new part) is the same as that of the used LED print head (old part), you do not always have to set the LED print head drive time.

Adjustment:

- 1) Turn AC power ON.
- 2) Setting of LED print head should be according to the Table 5.1.1 (See next section in this chapter).

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## Service Guide OKIOFFICE 84 Chapter 5 Adjustments

**Settings of Technical Function No. 26 (Table 5.1.1)**

Rank Marking	Setting ↑ MSB ↓ LSB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1																												
		0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1																												
		0 0 0 0 1 1 1 1 0 0 0 0 1 1 1 1 0 0 0 0 1 1 1 1 0 0 0 0 1 1 1 1																												
		0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1																												
0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1																														
291 – 313											*																			
269 – 290											*																			
248 – 268											*																			
229 – 247												*																		
212 – 228													*																	
196 – 211														*																
181 – 195															*															
168 – 180																*														
155 – 167																	*													
143 – 154																		*												
132 – 142																			*											
122 – 131																				*										
113 – 121																					*									
105 – 112																						*								
100 – 104																							*							

**Notes:**

The luminous intensity ranking is determined by the first, second and third digits from the right in the LED print head (i.e. in ---XX122, 122 is the luminous intensity ranking.)

This adjustment should be made whenever the main control board (R44 PCB) or the LED Head are replaced.

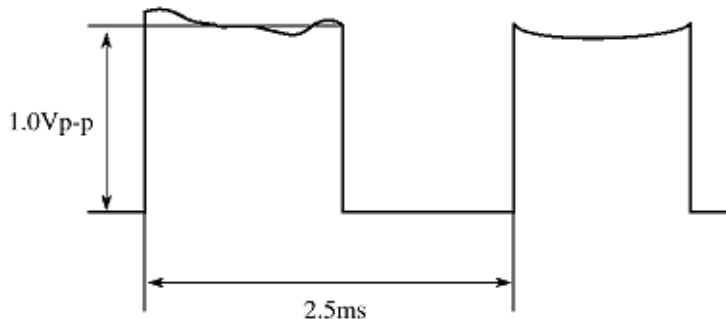
In addition, this setting should be verified on initial unit install, or whenever firmware is updated.

---

**5.2.1 Confirmation Items**

The clock frequency and power voltage of the machine are not possible to adjust in the field. However, their measurement procedures are described here for confirmation of clock frequency and each voltage.

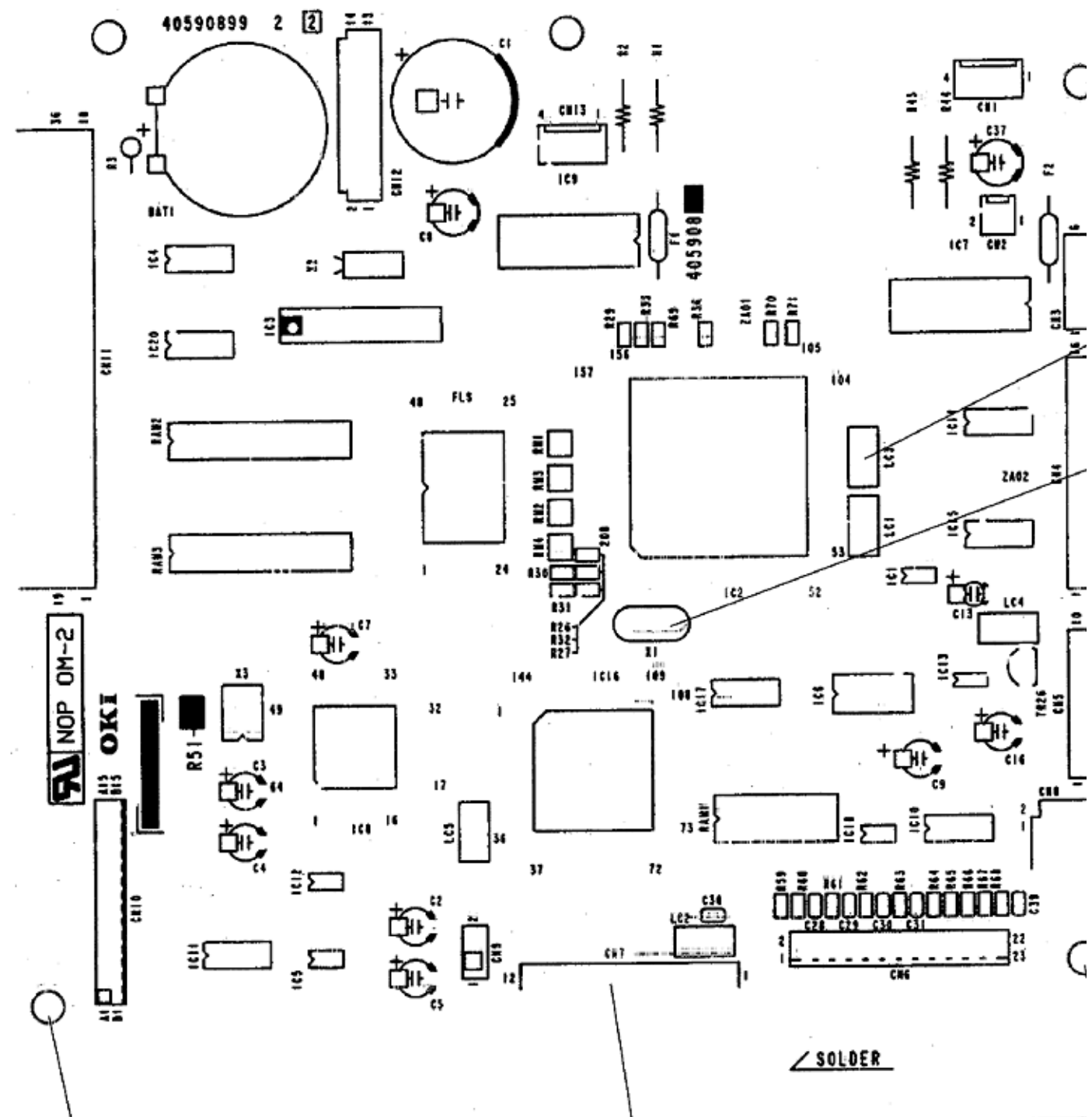
- 1 Clock Frequency
  - Measurement point: R51 board; LC3-3 pin and ground terminal
  - Specification: 20.000 MHz  $\pm$  50 PPM
  - **Note:** If the counter does not read with 20.000 MHz, replace with a new crystal oscillator (X1).
- 2 +5V DC Voltage (SUB)
  - Measurement point: R51 board; CN7-12 pin and ground terminal
  - Specification: +5V  $\pm$  4% (+4.5V to 5.2V)
- 3 +5V DC Voltage
  - Measurement point: R51 board; CN7-2 & 3 pin and ground terminal
  - Specification: +5V  $\pm$  4% (+4.5V to 5.2V)
- 4 8V DC Voltage
  - Measurement point: R51 board; CN7-9 pin and ground terminal
  - Specification: -12V to -6.5V
- 5 +30V DC Voltage
  - Measurement point: R51 board; CN7-1 pin and ground terminal
  - Specification: +24V to  $\pm$ 5V
- 6 +30V DC Voltage
  - Measurement point: R51 board; CN7-8 pin and ground terminal
  - Specification: +26V to +40V
  - Test chart: White sheet (A4 size)
- 7 Contact Image Sensor Output (SIG signal)
  - Measurement point: R51 board; CN5-1 pin and ground terminal
  - Specification: A waveform sample is shown below.
  - Test chart: White sheet (A4 size)





### **5.2.2 Measurement**

- 1** Turn the AC power OFF.
- 2** Carry out the disassembly procedure up to Cover assembly-top, Frame assembly-scanner, and Unit-printer. (Refer to the Mechanical Disassembly and Reassembly in Chapter 4.)
- 3** Connect extension cables to the R51 board.
- 4** Connect the frequency counter (for clock frequency), digital voltmeter (for power voltage) and Oscilloscope (for SIG signal). See figure 5.2.1 below.
- 5** Reconnect the AC power cord. Main power supply is set to "ON" (PC1 ON) by loading the document on the cover-top. (except +5V SUB)
- 6** Measurement
- 7** Turn the AC power OFF.
- 8** Reverse the disassembly procedures.



Ground Terminal

- Connector CN7  
 CN7-1 (+24VDC)  
 CN7-2, 3 (+5VDC)  
 CN7-8 (+30VDC)  
 CN7-9 (-8VDC)  
 CN7-12 (+5V SUB)

Gr



### Figure 5.2.1 Measurement Points on R51Board

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### 6.1 Replacement of Consumables

The user (or service personnel) is required to replace the following items as consumable parts.

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**User Replaceable Items Life**

No.	Part name	Expected Use Before Replacement	Reference Item No. in Fig.6.1.1
1	Toner Cartridge	1500 sheets/5% duty (ITU-T document sample No.1) (For the second or later cartridge to a new I/D Unit) * The first toner cartridge installed in a new I/D unit will have a decreased yield.	(1)
2	I/D Unit (Image drum unit)	4,500 sheets: 1 page/job, 8,000 sheets: 3 page/job , 10,000 pages/continuous @ 5% density	(2)

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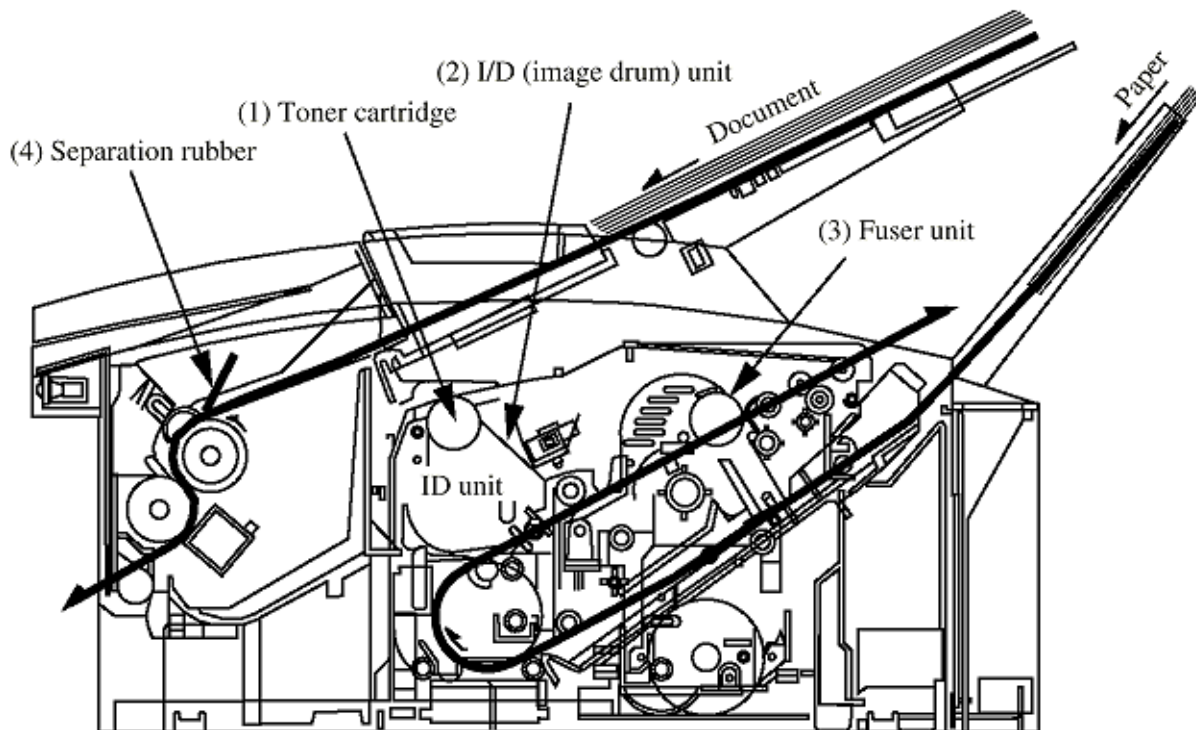
**Service Parts Life**

No.	Part name	Expected Use Before Replacement	Reference Item No. in Fig.6.2.1
1	Fuser Unit	30,000 sheets for OKIOFFICE 84.	(3)
2	Separation Rubber	The Separation Rubber will not require replacement for at least 30,000 documents fed.	(4)

---

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Consumables Diagram (Figure 6.1.1)





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**Reliability Table (6.1.1)**

No.	Item	Specifications
1	Document feeder	Jam occurrence and misfeeds in the automatic document feeder will be less than one in 500 operations for all specified documents.
2	Recording paper feeder	Jam occurrence in the automatic paper feeder will be less than one in 1,500 operations and misfeeds will be less than one in 500 operations for all specified recording paper.
3	MTBF	The MTBF for the overall machine will exceed 3,000 hours of actual operation.  The MTBF will be measured at a confidence level of 95% under controlled laboratory conditions.  The MTBF will be based on 50% transmit and 50% receive activities.
4	Battery (for RTC)	5 years Lithium battery: Not rechargeable



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### 6.2 Preventative Maintenance

The recommended preventative maintenance of the following items should be performed twice a year (once a year is the absolute minimum) after the machine is installed. Table 6.2.1 describes the preventative maintenance procedures..

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### Chapter 6 Cleaning and Maintenance

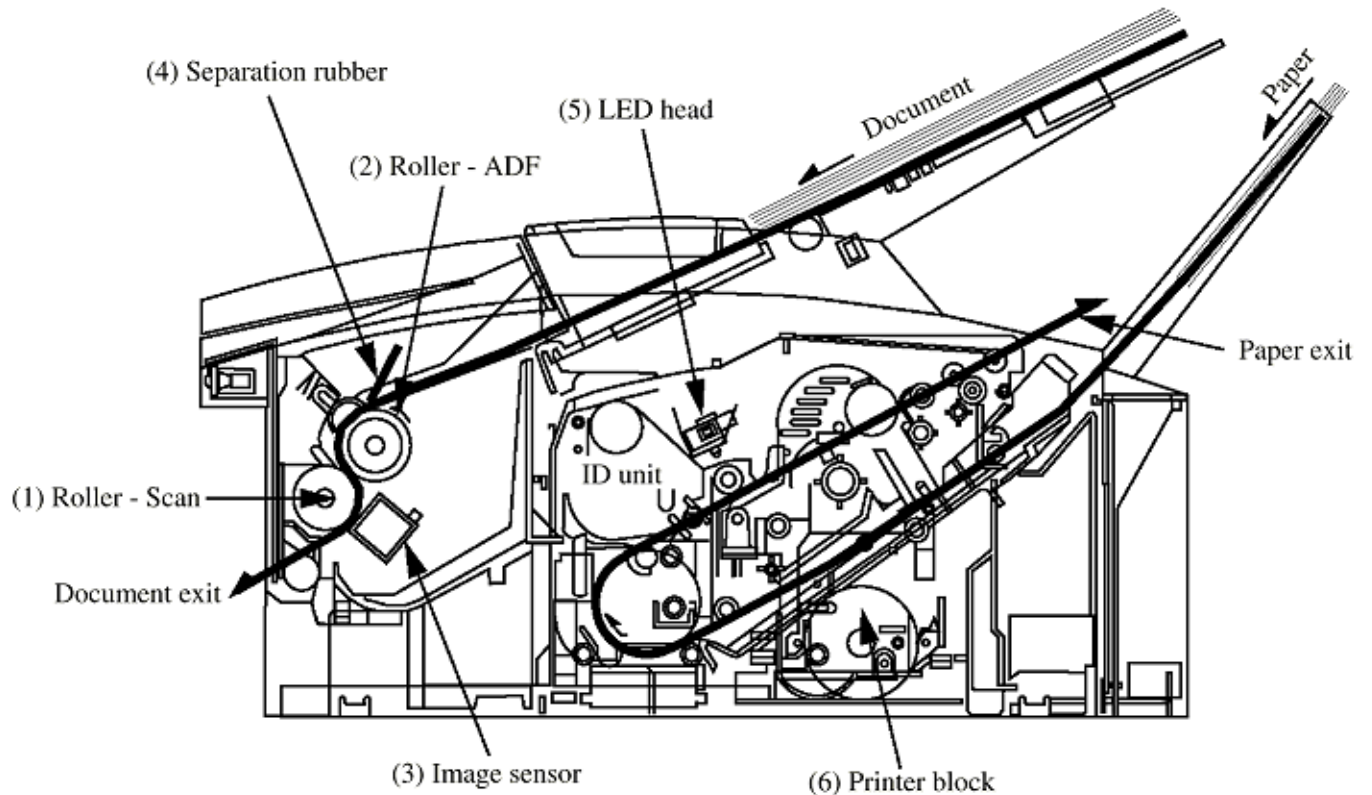
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#### Preventative Maintenance (Table 6.2.1)

No.	Part name	Maintenance Procedure	Reference Item No. in Fig.6.2.1
1	Roller-scan	Clean with water.	(1)
2	Roller-ADF	Clean with water. If the surface of this roller becomes dirty and the dirt causes misfeeding of documents, perform this cleaning.	(2)
3	Contact Image Sensor	Check for accumulation of paper dust, etc. Clean with ethyl alcohol if necessary.	(3)
4	Separation Rubber	Clean with water. If this rubber is worn out, replace it. (once a year)	(4)
5	LED print head	Clean the surface of the head by moving the tissue paper back and forth several times.	(5)
6	Printer unit	Clean the inside of the printer unit by using a cloth moisturized with cold water.	
7	Lubrication	Apply silicone oil to the following parts: a. Gears (once a year)	
8	Cleaning	Remove materials that have fallen from outside, if any.	



---

**Preventative Maintenance Diagram (Figure 6.2.1)**

### 6.3 Printer Counter Display/Clear (User)

**Note:** The fonts displayed on the LCD operation panel may differ from the fonts written in this manual.

#### 1. Purpose

A user can clear the image drum counter (only when "Change Drum Soon" message is displayed) and also check some of the other counters (such as the print counter, scan counter) by using the <--- key or ---> key.

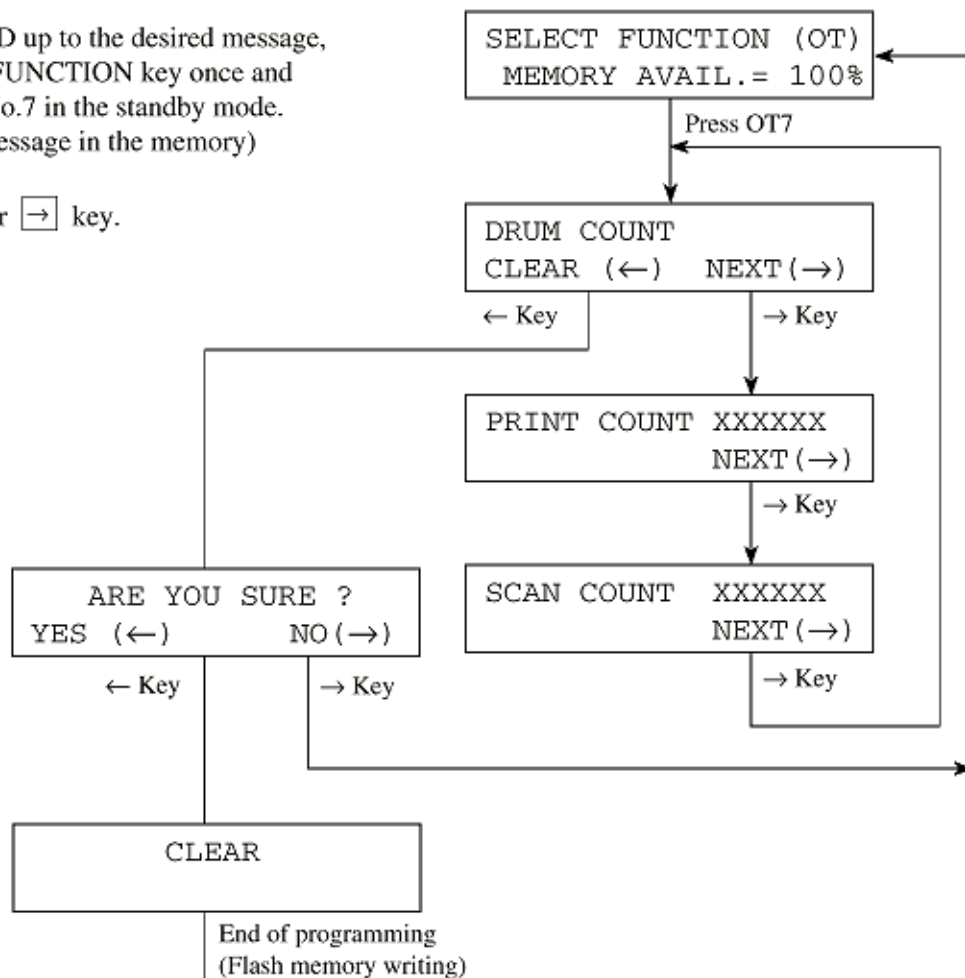
#### 2-1. Procedure

The following shows the case when the service bit has been set OFF and TONER COUNT CLEAR = OFF.

#### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No.7 in the standby mode. (In case of no message in the memory)
- Press  key or  key.

#### The display shows:



**Note:** Clear Operation

No. of print counter and scan counter (pages) will appear but cannot be cleared by user.

User can clear only DRUM counter.

After having cleared the drum counter, warning message will disappear.

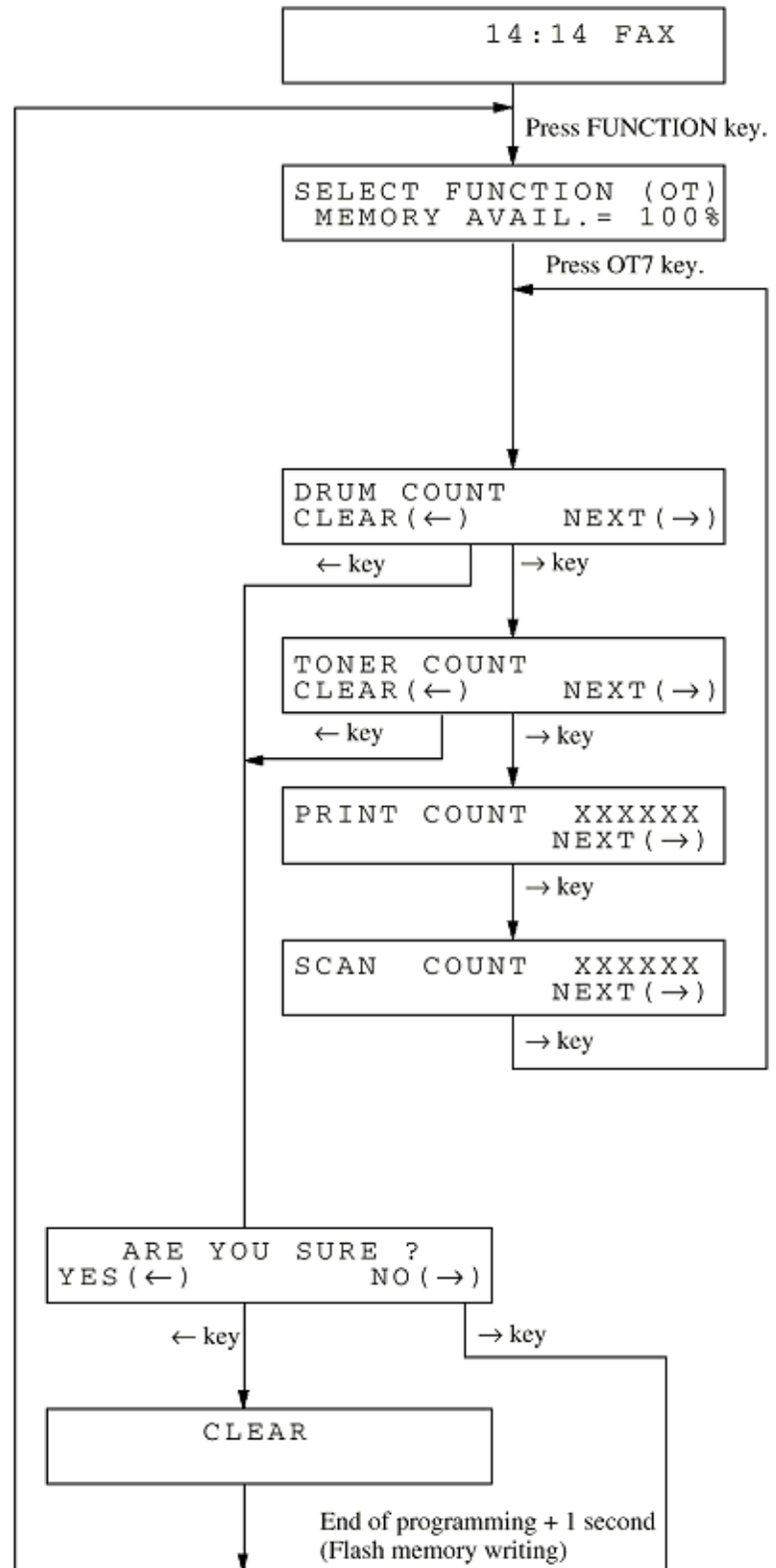
**2-2. Procedure**

The following shows the case when the service bit has been set OFF & TONER COUNT CLEAR = ON.

## Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 7 in the standby mode. (In case of no message in the memory)
- Press  key or  key.

## The display shows:



**Note:** Clear Operation

No. of print counter and scan counter (pages) will appear but cannot be cleared by user.

User can clear DRUM counter and TONER counter.

After having cleared the drum counter, warning message will be disappeared.

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#### **6.4 Printer Counter Display/Clear (Service)**

##### **1. Purpose**

The service personnel can clear and check the following counters.

- Image Drum
- Toner
- Image Drum (Total)
- Print
- Scan

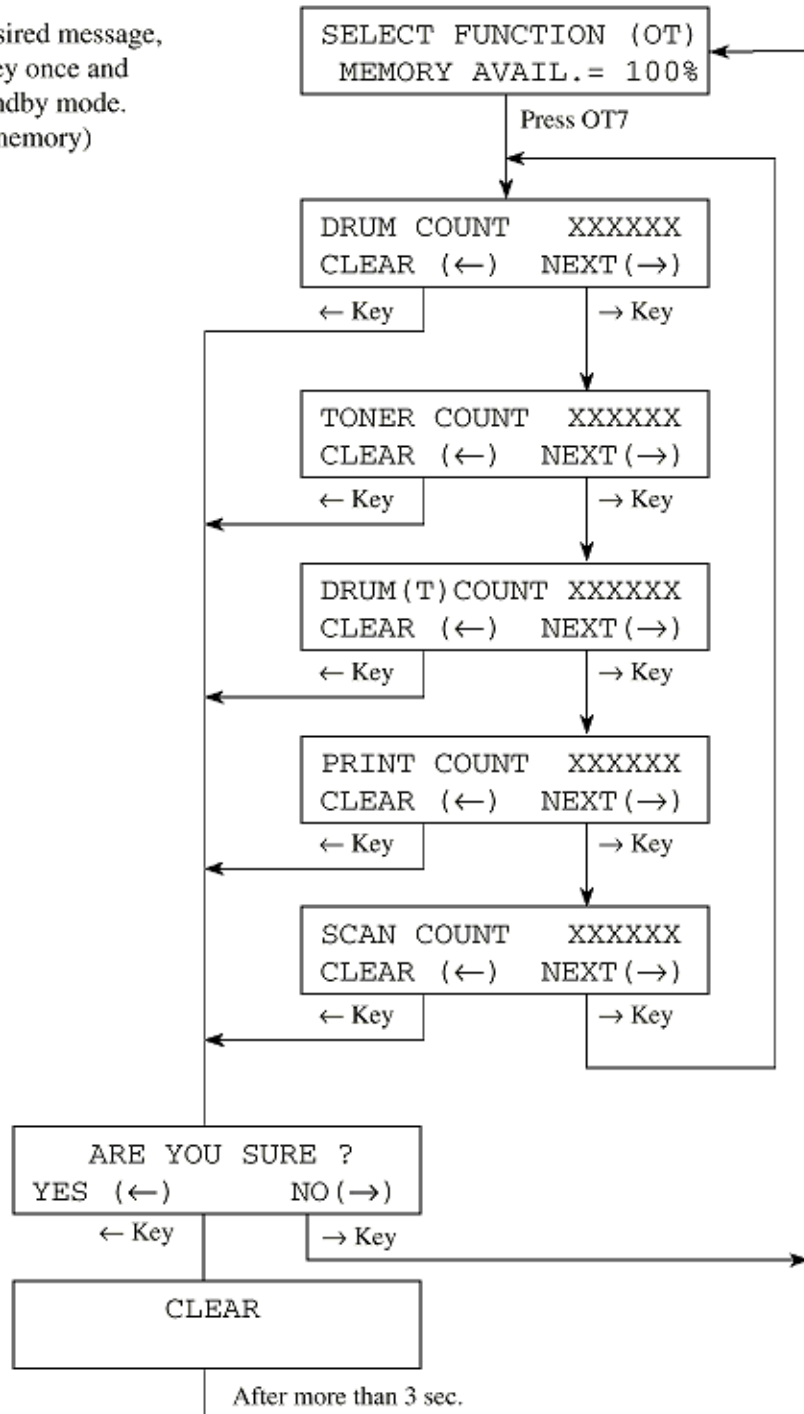
##### **2. Procedure**

The following shows the case when the service bit has been set ON.

### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and one-touch key No. 7 in the standby mode. (In case of no message in the memory)
- Press  key or  key.

### The display shows:



**Note:** DRUM (T) will be used to know the total in-use life of the machine.

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### 6.5 Self-Diagnosis Test

**1. Purpose**

To check ROMs, RAMs and printing function.

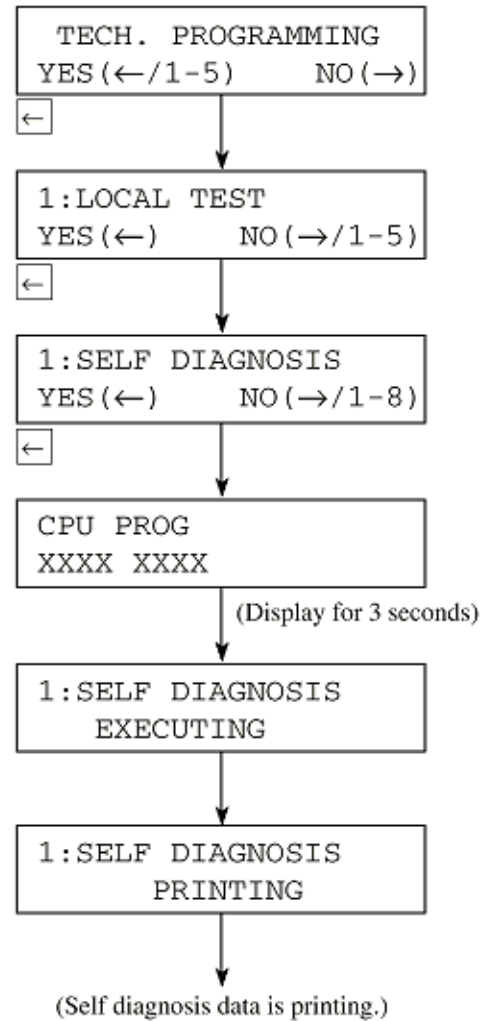
**2. Procedure**

**Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and COPY key twice in the standby mode. (In case of no message in the memory)
- Press  key.
- Press  key.
- Press  key to activate self-diagnosis.

(Figure 6.5.1 shows the printed data.)

**The display shows:**



- Test report will be automatically printed out with the following items:

a)	Pattern 1	All white (32 lines)
b)	Pattern 2	Stair pattern (32 lines in each step)
c)	Pattern 3	All black (32 lines)
d)	Pattern 4	Alternate printing of black dots and white dots (32 lines x 2)
e)	Pattern 5	All white (32 lines)

f)	CPU-ROM VERSION	
	CPU-ROM	In case CPU-ROM is good. HASH OK In case CPU-ROM is not good. HASH NG
	CPU-RAM	In case CPU-RAM is good. OK In case CPU-RAM is not good. NG
g)	PROG VERSION	
	PROG	In case PROG is good. HASH OK In case PROG is not good. HASH NG
h)	LANGUAGE VERSION	
	LANGUAGE	In case LANGUAGE is good. HASH OK In case LANGUAGE is not good. HASH NG
i)	DEFAULT VERSION	
	DEFAULT	In case DEFAULT is good. HASH OK In case DEFAULT is not good. HASH NG
j)	RAMi	In case RAMi is good. OK In case RAMi is not good. NG ("i" is RAM's number)

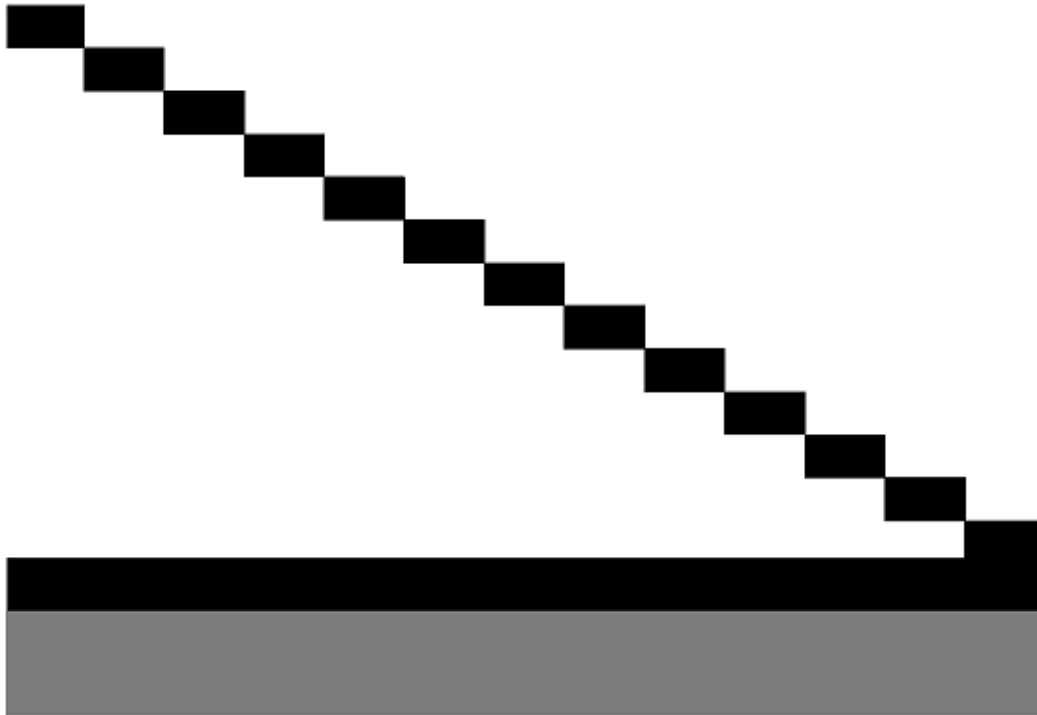
- Figure 6.5.1 shows a printed sample.

---

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---

Self-Diagnosis Test Sample (Figure 6.5.1)



```
CPU-RCM  VERSION  AA00
          HASH     OK   DACD
CPU-RAM   VERSION  AA00
          HASH     OK
PROG      VERSION  AA00
          HASH     OK   3142

LANGUAGE  VERSION  LL10
          HASH     OK   3F06
DEFAULT   VERSION  DD10
          HASH     OK   A683
*1 RAM1   VERSION  2.5M OK
*2 RAM2   VERSION  OK
DEFAULT TYPE  01   07/01/1998  10:30
```

\*1 marked item is shown for condition of all RAM except EXCEED RAM.  
\*2 marked item is shown to SRAM for EXCEED.

---

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## 6.6 Sensor Calibration Test

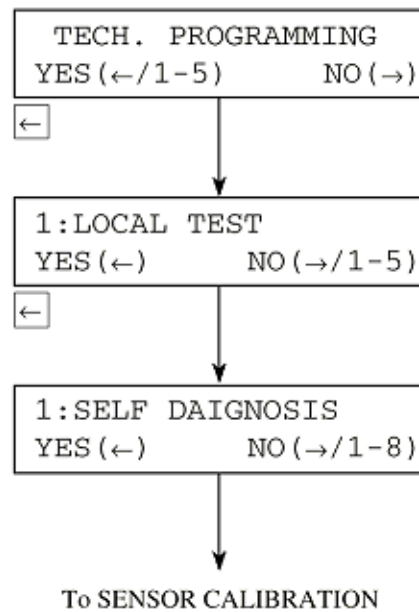
### 1. Purpose

To adjust the linearity of the contact image sensor output levels.

### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once and COPY key twice in the standby mode. (In case of no message in the memory)
- Press  key.
- Press  key.

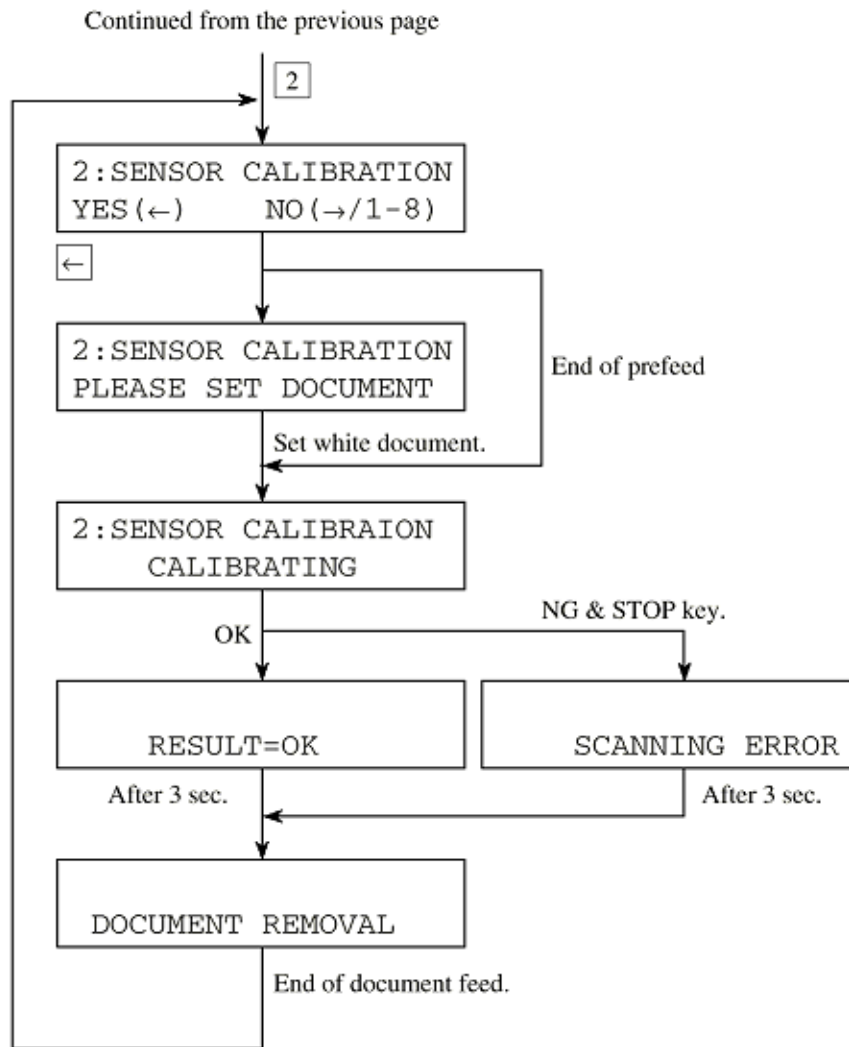
### The display shows:



## Operations:

- Enter "2".
- Press  key.
- Load document(s).  
For adjustment of levels, use white plain bond paper(s) of NA Letter or A4 size.
- Observe and check the document feed operation.  
Check that the followings do not occur:
  - Document skew.
  - Multiple document feeding.
  - No feeding.

## The display shows:



**NOTE:** After adjustment of levels, check the copy quality by copying test charts or documents



### **6.7 LED Test**

#### **1. Purpose**

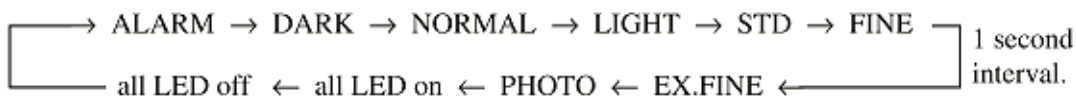
To check all LEDs on operation panel by lighting.

#### **2. Procedure**

## Operations:

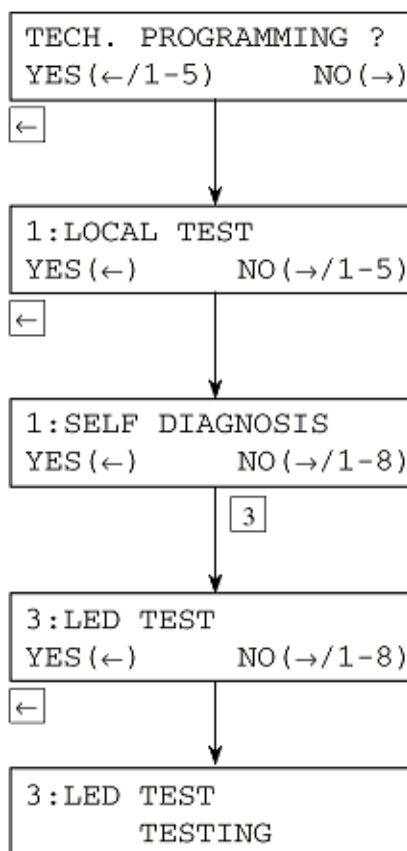
- To bring the LCD up to the desired message, press SELECT FUNCTION key once and COPY key twice in the standby mode. (In case of no message in memory)
- Press  key.
- Press  key.
- Enter "3".
- Press  key.
- Observe and check that LEDs are blinking.
  - All LEDs will be sequentially turned on for one second in the following order.

(Start)



- After the checking, press STOP key.

## The display shows:





### 6.8 Tone Send Test

#### 1. Purpose

To send the G3 tonal frequencies to the line.

#### 2. Procedure

##### 1. Purpose

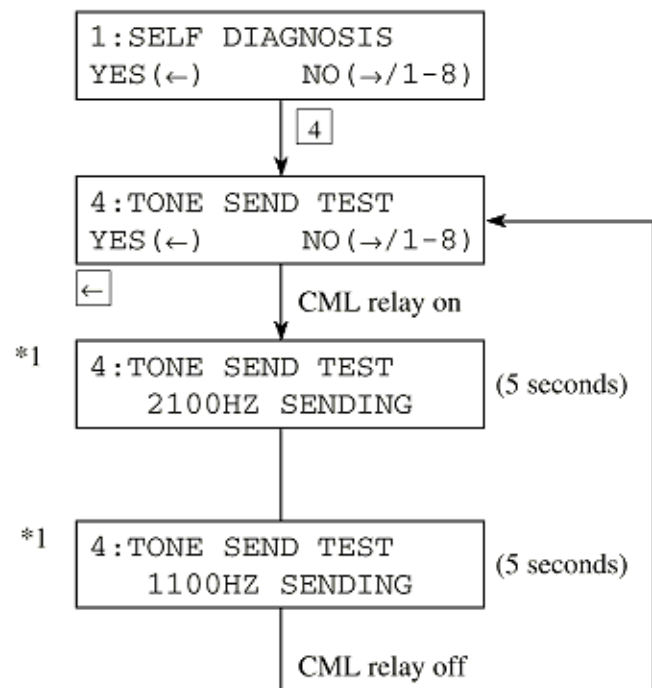
To send the G3 tonal frequencies to the line.

##### 2. Procedure

### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once, COPY key twice and key twice. (In case of no message in memory)
- Enter "4".
- Press key.
- After the checking, press STOP key or end of the transmission.

### The display shows:



\*1: When indicating "2100Hz or 1100Hz SENDING", extend the tone send test for 30 more seconds by pressing the START key.

\*1: When indicating "2100Hz or 1100Hz SENDING", extend the tone send test for 30 more seconds by pressing the START key.

---

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**6.9 High-Speed Modem Send Test**

**1. Purpose**

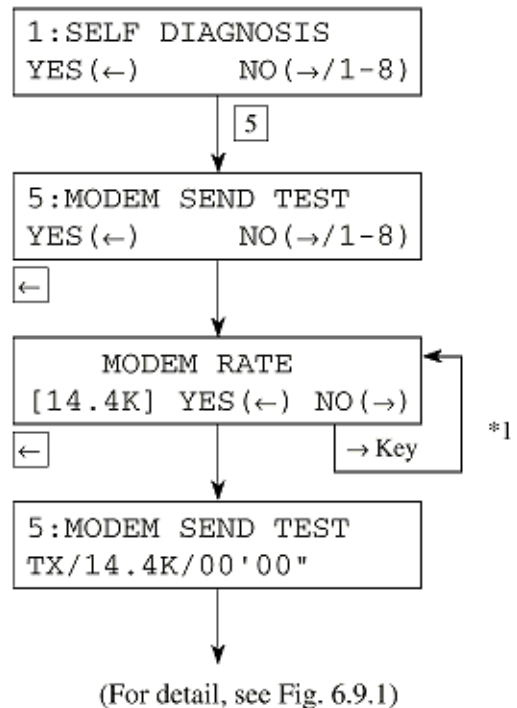
To check the telephone line quality in combination with a remote station programmed to the high-speed modem receive test mode.

**2. Procedure**

**Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once, COPY key twice and  key twice. (In case of no message in memory)
- Enter "5".
- Press  key.
- Set MODEM rate by  key.
- Press  key.  
All zero data will be continuously sent.
- After the test, press STOP key.

**The display shows:**

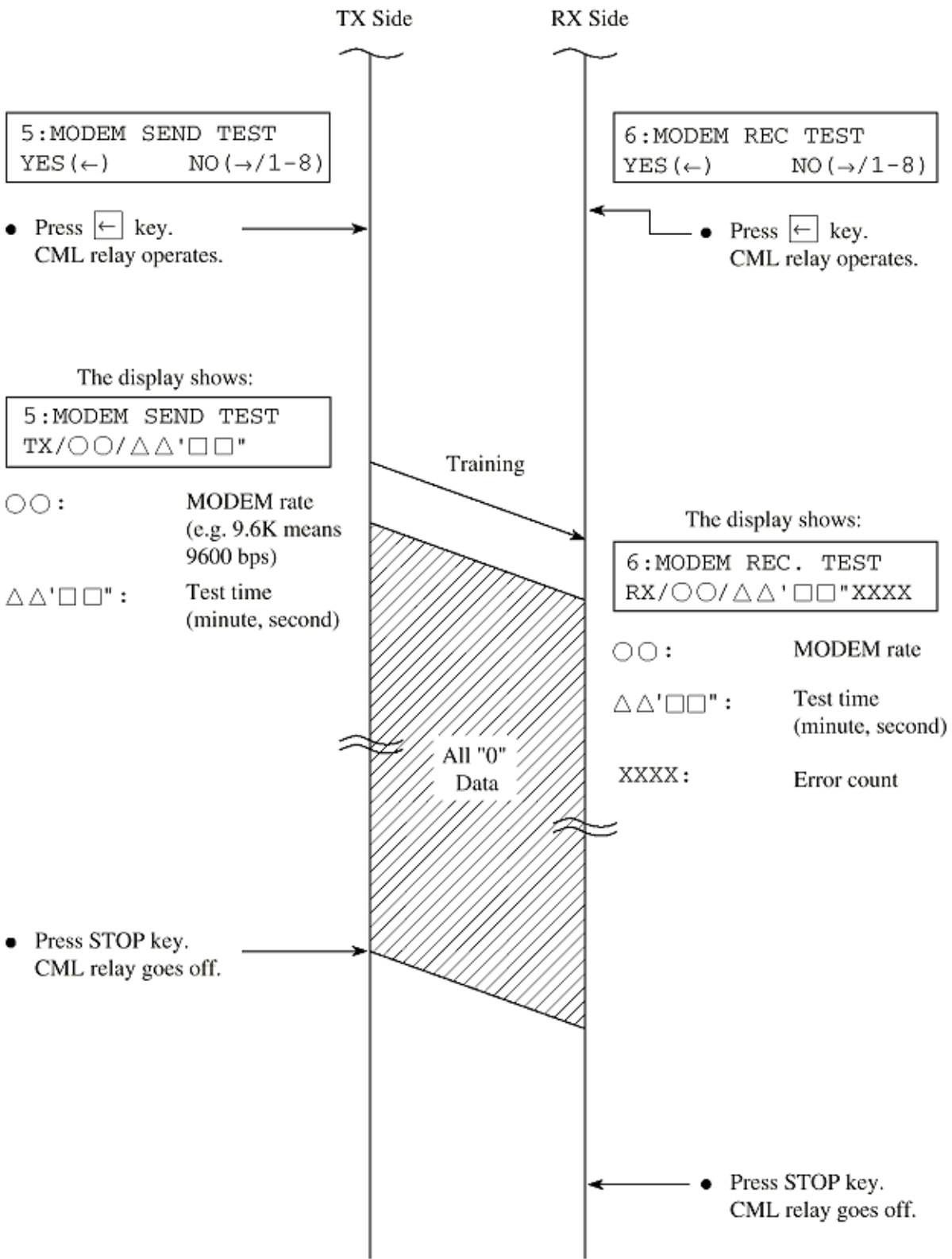


\*1: → 14.4K → 12.0K → 9.6KT (V.17) → 7.2KT (V.17) → 9.6K (V.29) →  
 ← 0.3K ← 2.4K ← 4.8K ← 7.2K (V.29) ←



---

High-Speed Modem Send and Receive Test Diagram (Figure 6.9.1)



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### 6.10 High-Speed Modem Receive Test

**NOTE:** This procedure requires coordination with technical staff at the remote location.

In addition, both locations must have a telephone handset connected to each machine.

#### 1. Purpose

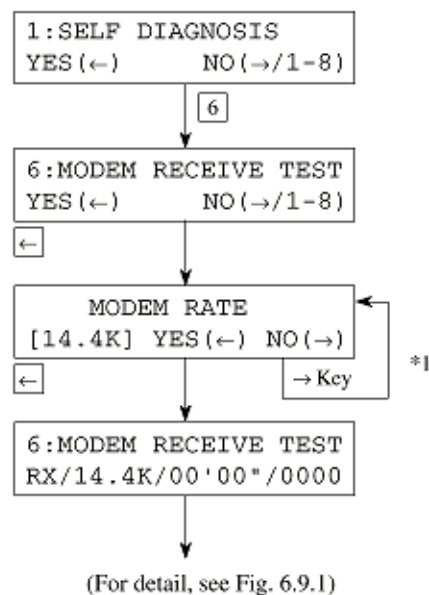
To check the telephone line quality in combination with a remote station programmed to the high-speed modem send test mode.

#### 2. Procedure

##### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once, COPY key twice and  key twice. (In case of no message in memory)
- Enter 6.
- Press  key.
- Set MODEM rate by  key.
- Press  key.
- After the test, press STOP key.

##### The display shows:



\*1: → 14.4K → 12.0K → 9.6KT (V.17) → 7.2KT (V.17) → 9.6K (V.29) → 7.2K (V.29) → 4.8K → 2.4K →

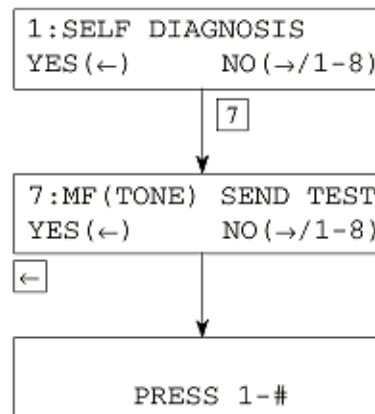
**6.11 MF Send Test****1. Purpose**

To send the multi-frequencies of tone dialing to the line.

**2. Procedure****Operations:**

- To bring the LCD up to the desired message, press SELECT FUNCTION key once, COPY key twice and  key twice. (In case of no message in memory)
- Enter 7.
- Press  key.
- Press 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, \* or # key.  
MF tone corresponding to the key pressed will be sent until the next key is pressed.
- After the test, press STOP key.  
Frequencies of MF tones are as follows:

1	697 Hz/1209 Hz
2	697 Hz/1366 Hz
3	697 Hz/1477 Hz
4	770 Hz/1209 Hz
5	770 Hz/1366 Hz
6	770 Hz/1477 Hz
7	852 Hz/1209 Hz
8	852 Hz/1366 Hz
9	852 Hz/1477 Hz
0	941 Hz/1366 Hz
*	941 Hz/1209 Hz
#	941 Hz/1477 Hz

**The display shows:**



---

## 6.12 Tone (TEL/FAX)

### 1. Purpose

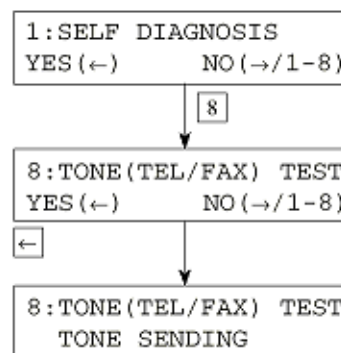
To check the pseudo-ring back tone of TEL/FAX automatic switching.

### 2. Procedure

#### Operations:

- To bring the LCD up to the desired message, press SELECT FUNCTION key once, COPY key twice and  key twice. (In case of no message in memory)
- Enter 8.
- Press  key.
- After the test, press STOP key.

#### The display shows:



---

### 6.13 Protocol Data Dump Printing

#### 1. Purpose

To analyze the transmitted/received G3 protocol signals.

#### 2. Procedure

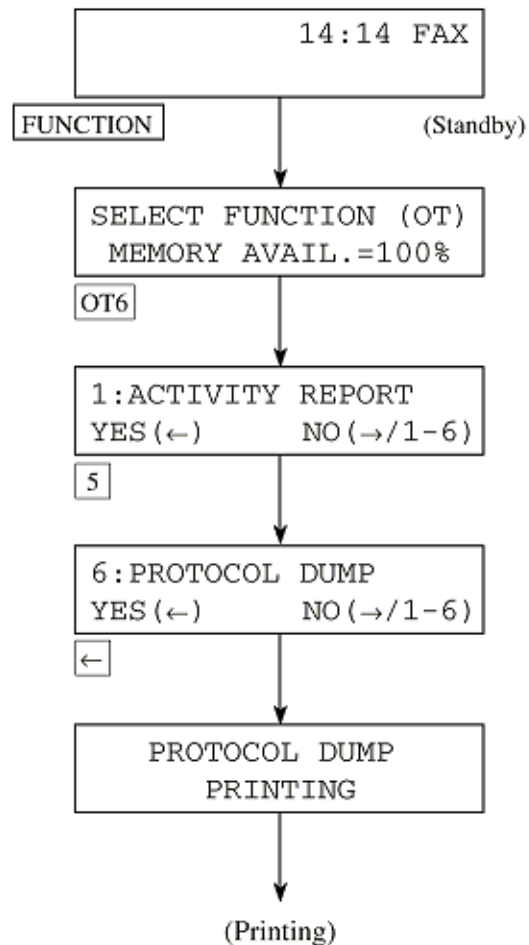
- Manual printout of the last communication.

(a) Manual printout

#### Operations:

- Press SELECT FUNCTION key, provided that the service bit is ON.
- Press one-touch key No.6
- Enter 6.
- Press  key.

#### The display shows:





Data Dump description (Figure 6.13.1)

1) Data sample

Figure shows the printer data as a sample.

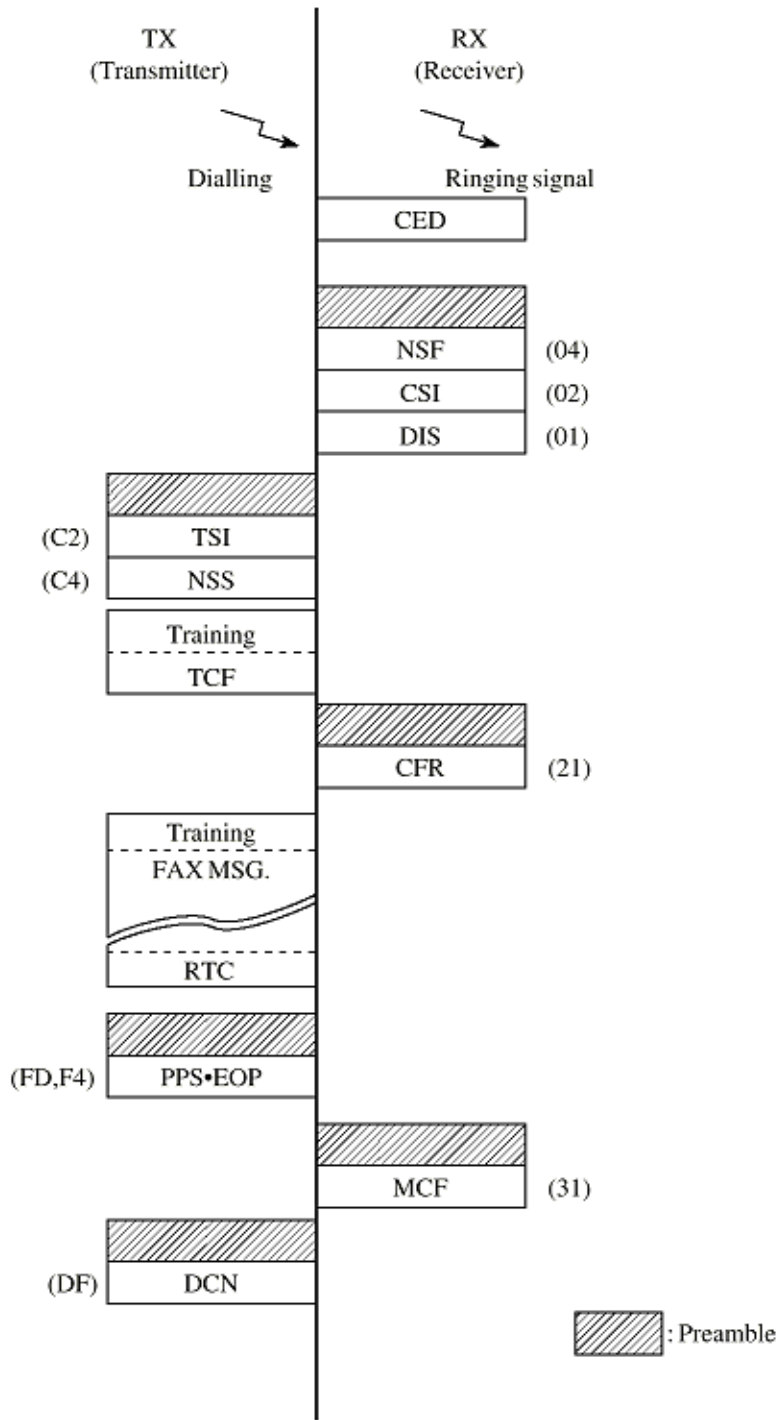




---

**Analysis from the Data (Figure 6.13.2)**

The printed out data permits to analyze G3 facsimile communication protocol signals between two facsimile machines. Figure 6.13.2 (below) shows the result of an analysis on the printed data referring to Figure 6.13.1 (Protocol Data Dump).





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#### Facsimile Control Field Conversion Table

Table 6.14.1 (below) shows all Facsimile Control Field (FCF) signals which are needed to analyze the printed out protocol dump data.

Some signals have two different hexadecimal codes in accordance with the calling party or called party.

**Table 6.14.1 FCF Signals Conversion Table**

Abbreviation	Hex. Codes	Description of function
NSF	04	Non-Standard Facilities
CSI	02	Called Subscriber Identification
DIS	01	Digital Identification Signal
NSC	84	Non-Standard Facilities Command
CIG	82	Calling Subscriber Identification
DTR	81	Digital Transmit Command
NSS	44 C4	Non-Standard Set-Up
TSI	42 C2	Transmitting Subscriber Identification
DCS	41 C1	Digital Command Signal
CFR	21 A1	Confirmation to Receive
MCF	31 B1	Message Confirmation
FTT	22 A2	Failure to Train
MPS	72 F2	Multi-Page Signal
EOM	71 F1	End of Message
EOP	74 F4	End of Procedure
RTP	33 B3	Retrain Positive
RTN	32 B2	Retrain Negative
PIP	35 B5	Procedure Interrupt Positive
PIN	34 B4	Procedure Interrupt Negative
PRI-MPS	7A FA	Procedure Interrupt-MPS
PRI-EOM	79 79	Procedure Interrupt-EOM
PRI-EOP	7C FC	Procedure Interrupt-EOP
DCN	5F DF	Disconnect
CRP	58 D8	Command Repeat
CTC	48 C8	Continue to Correct
CTR	23 A3	Response to Continue to Correct
EOR	73 F3	End of Retransmission
ERR	38 B8	Facsimile Coded Data
FCD	60	Partial Page Signal
PPS	7D FD	Partial Page Request
PPR	3D BD	Return to Control for Partial Page
RCP	61	Receiver not Ready
RNR	37 B7	Receiver Ready
RR	76 76	



#### **6.14 System Reset**

##### **1. Purpose**

To clear or initialize the following data to factory default settings.

- (a) Location data
- (b) Configuration data (default)

##### **2. Procedure**

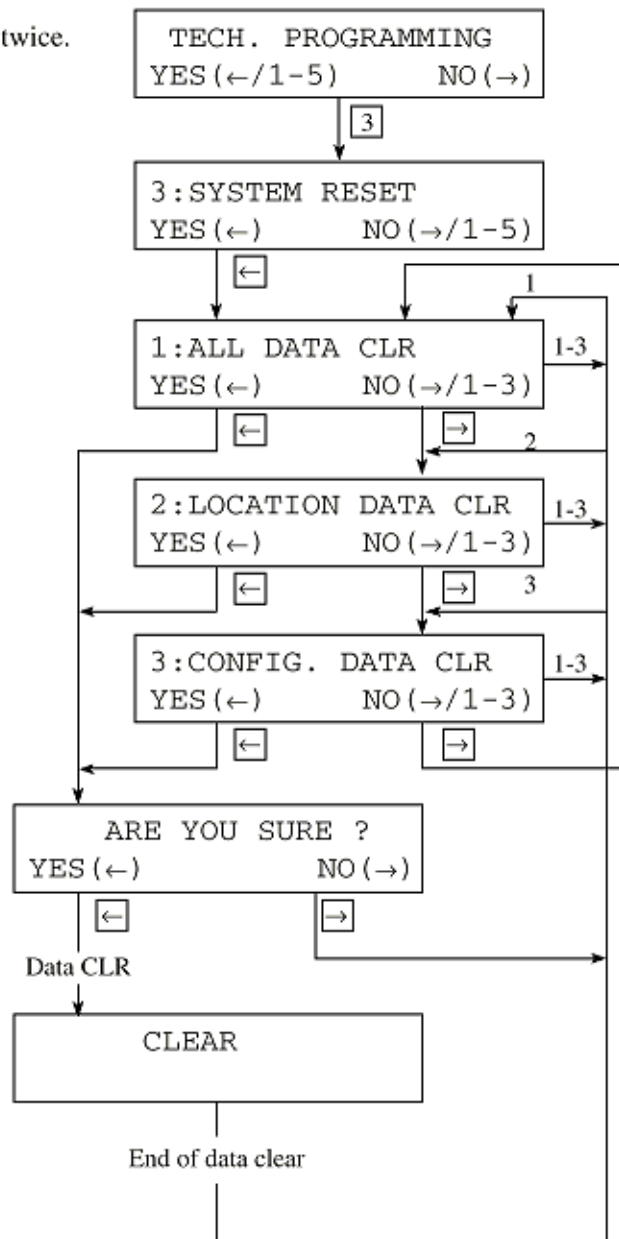


## Operations:

- Press SELECT FUNCTION key, COPY key twice.  
(In case of no message in the memory)
- Enter 3.
- To bring the LCD up to the desired message, press  key and  key.

**Note:** ALL DATA CLEAR is to clear or initialize (a) to (b).

## The display shows:





---

**6.15 Service Code**

1. The service code can be printed on Activity Report to recognize the result of each communication.
2. The activity report indicates the code "0000", should a communication terminates on normal status as a service code.
3. The activity report indicates one of the codes of "90XX", should a communication terminates on abnormal status, as an error code.
4. Besides the above codes of "90XX", the following codes are prepared for identifying an abnormal status in details.

-21XX: For error codes in Group 3 transmission phase B  
-29XX: For error codes in Group 3 reception phase B  
-39XX: For error codes in Group 3 reception phase C  
-41XX: For error codes in Group 3 transmission phase D  
-49XX: For error codes in Group 3 reception phase D



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Service Code list [Table 6.15.1] (1/2)

Code	Description
0000	Successful end of communication.
1080	STOP key has been pressed while calling a remote fax.
10A2	Busy tone detected.
14C0	Dial tone not detected.
14C1	Line current not detected.
14C2	Calling-and-waiting for line connection time out.
14C3	dialing limit time out.
21A0	Received signal other than DIS/DTC.
21A1	Contents of received DIS/DTC are faulty.
21A3	Each time there is no response from the receiver for sending TCF three times.
21A4	TSF fall back is not possible.
21A5	Received signal other than the desired signal in response to sending TCF.
21B0	Transmitter tried to transmit by confidential transmission function but the remote fax has not the capability of confidential reception.
21B1	Transmitter tried to transmit by Broadcast Initiate function but the remote fax has not the broadcast capability.
21C0	In Closed Network setting, TSI/CIG/CSR is either not received, or if received, it is not authorized one.
21E0	Contents of CM/JM are faulty at transmission side.
21E1	Phase 2 time out at transmission side.
21E2	Phase 3 time out at transmission side.
21E3	Training time out of phase B control channel at transmission side.
29B6	In Confidential Reception, the mail box specified by transmitter is not set up and open.
29C1	In closed Network setting, TSI/CSI is either not received, or if received, is it not authorized one.
29E0	Contents of CM/JM are faulty at receive side.
29E1	Phase 2 time out at receive side.
29E2	Phase 3 time out at receive side.
29E3	Training time out of phase B control channel at receive side.
39A0	The number of continuous-error lines have exceeded the specified limit.
39A1	The number of random-error lines have exceeded the specified limit.
39B0	Memory Overflow has occurred while receiving in memory.
39B1	Memory Overflow has occurred during Confidential Reception.
39C0	DECODER hardware error, (cannot reproduce picture).



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Service Code list [Table 6.15.1] (2/2)

Code	Description
39C1	DECODER hardware error, (cannot detect end of picture).
41A0	There was no response each time in response to the three post commands.
41A6	Received signal other than the desired signal in response to the post command.
41A9	Fall back in Phase C is not possible.
41C8	T5 time out.
41CE	Received negative signal in response to the post command.
41E0	Control channel data. time out in Phase D.
49CC	Received signal other than the desired signal in response to RNRN.
49CD	Command not received in response to RNR.
49E0	Data time out of
49E1	Fall back in Phase C is not possible.
60A0	Broadcast completed.
6803	DCN received in response to NSF/DIS without sending a signal picture.
9080	Pressed STOP key.
9081	T1 time out.
9082	T2 time out.
9083	T3 time out.
9084	No recording paper.
9087	Document jam.
9088	60-minute or 70-minute time out.
9089	Document length has exceeded its maximum limit.
908E	Recording paper jam.
9090	Received DCN.
90B1	Picture memory hash error.
90C1	Document removed prior to transmission.
90C6	Normal or error-free lines not received for 13 seconds.
90C7	Error frame protocol received.
90D4	Hardware error in transmission system, (response of modem not detected).
90D5	ENCODER error. (Picture storage fault)
90F0	Option (2'nd tray) error.
90F1	Fan motor error.
90F2	Fuser error.
90F3	Recording paper size error
90F4	Cover open.



---

## 7.1 Overview

This chapter contains:

- (a) Troubleshooting flow charts related to general operations
- (b) Troubleshooting flow charts by test operations
- (c) Troubleshooting flow charts placing an emphasis on mechanical portions

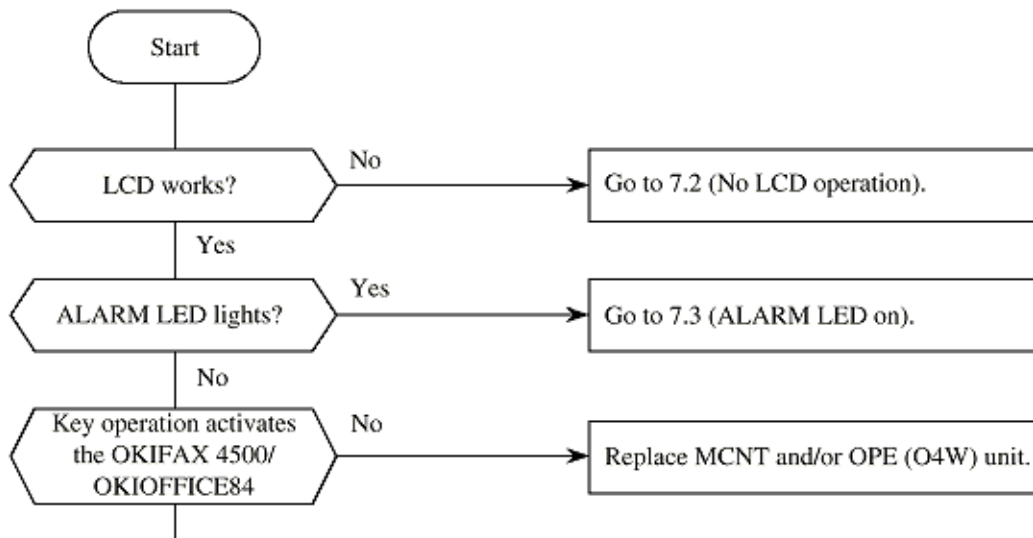
<u>Section No.</u>	<u>Name of Flow Chart</u>	<u>(a)</u>	<u>(b)</u>	<u>(c)</u>
7.1	Overall troubleshooting flow chart	X	X	
7.2	No LCD operation	X		
7.3	ALARM LED on	X		
7.4	Printing test failure	X	X	
7.5	No local copy	X	X	
7.6	Auto dial failure	X		
7.7	Transmission problem	X		
7.8	Auto reception failure	X		
7.9	Reception problem	X		
7.10	Sensor calibration test		X	
7.11	LED test		X	
7.12	Tone send test		X	
7.13	High-speed modem test		X	
7.14	MF (Tone) send test		X	
7.15	Tone (TEL/FAX) send test		X	
7.16	No acoustic line monitor	X		
7.17	Power supply unit	X		
7.18	No document feeding			X
7.19	Multiple document feeding			X
7.20	Document skew			X
7.21	Document jam			X
7.22	Printer unit			



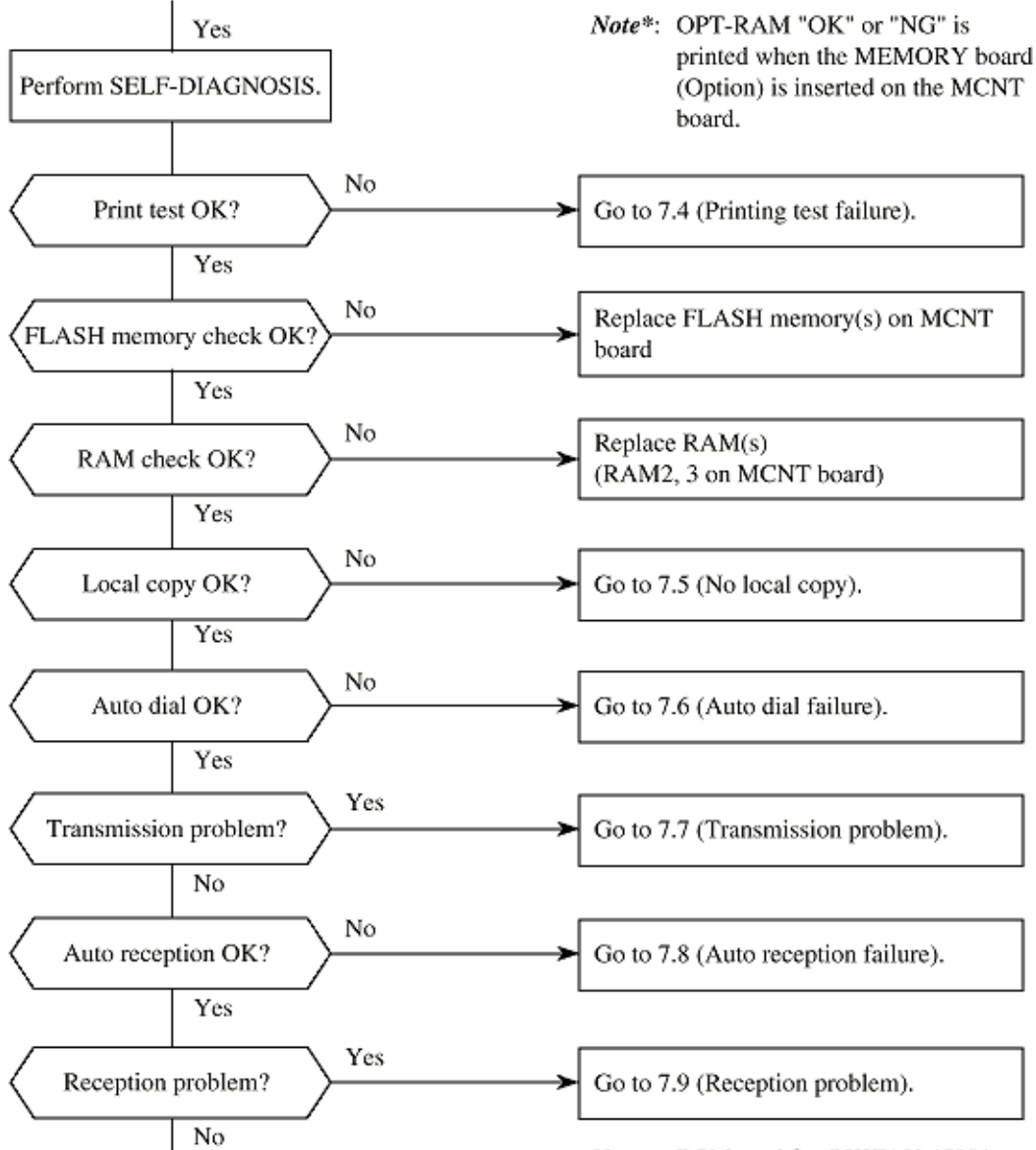
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**7.1 Overall Troubleshooting Flow Chart**

**NOTE:** R51 Board for OKIOFFICE 84 is designated as the MCNT Board in this flowchart.



(Pressing SELECT FUNCTION key causes "SELECT FUCTION (OT) MEMORY AVALI=100%" to appear on LCD?  
Pressing STOP key makes a key touch-tone?)



---

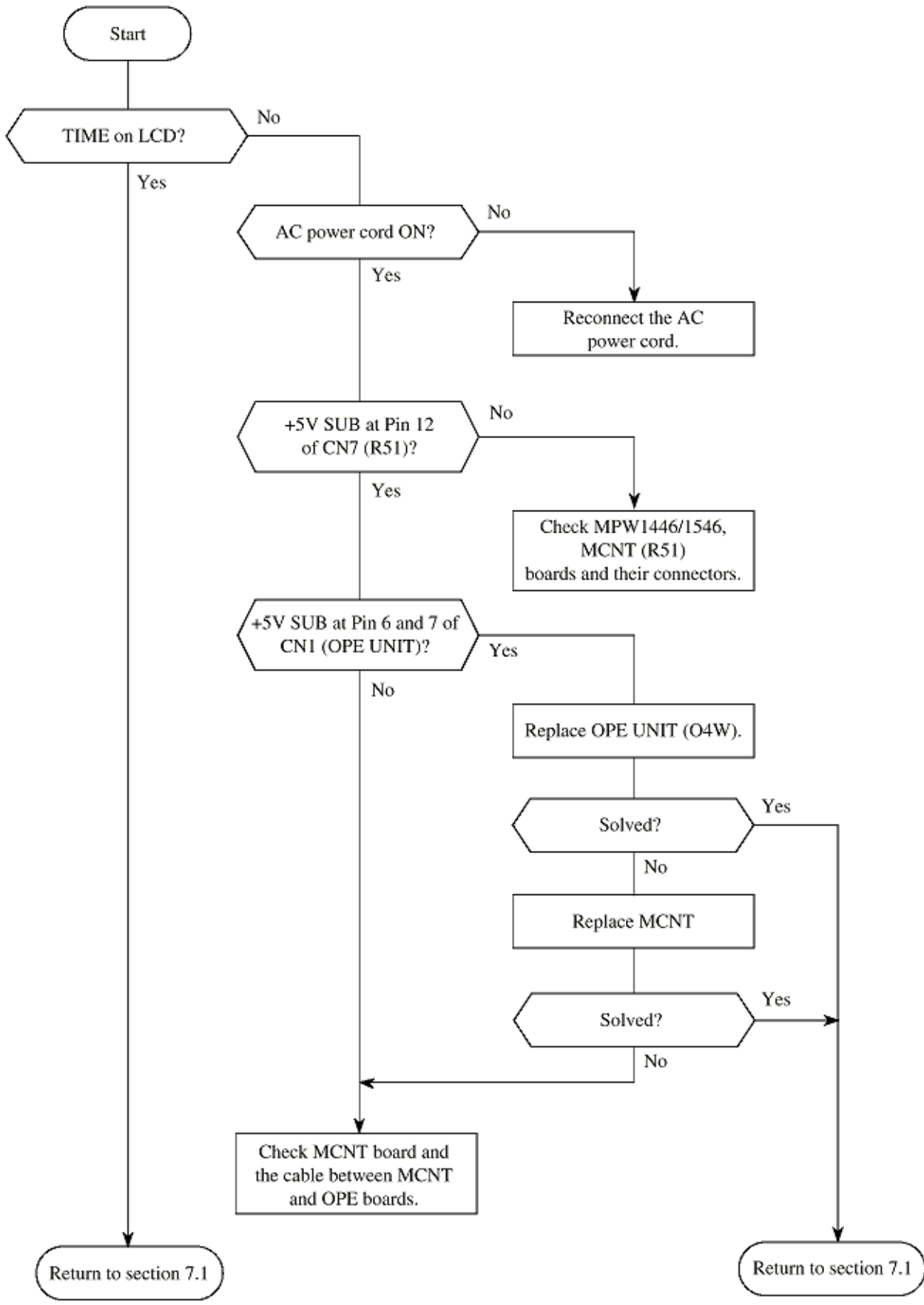
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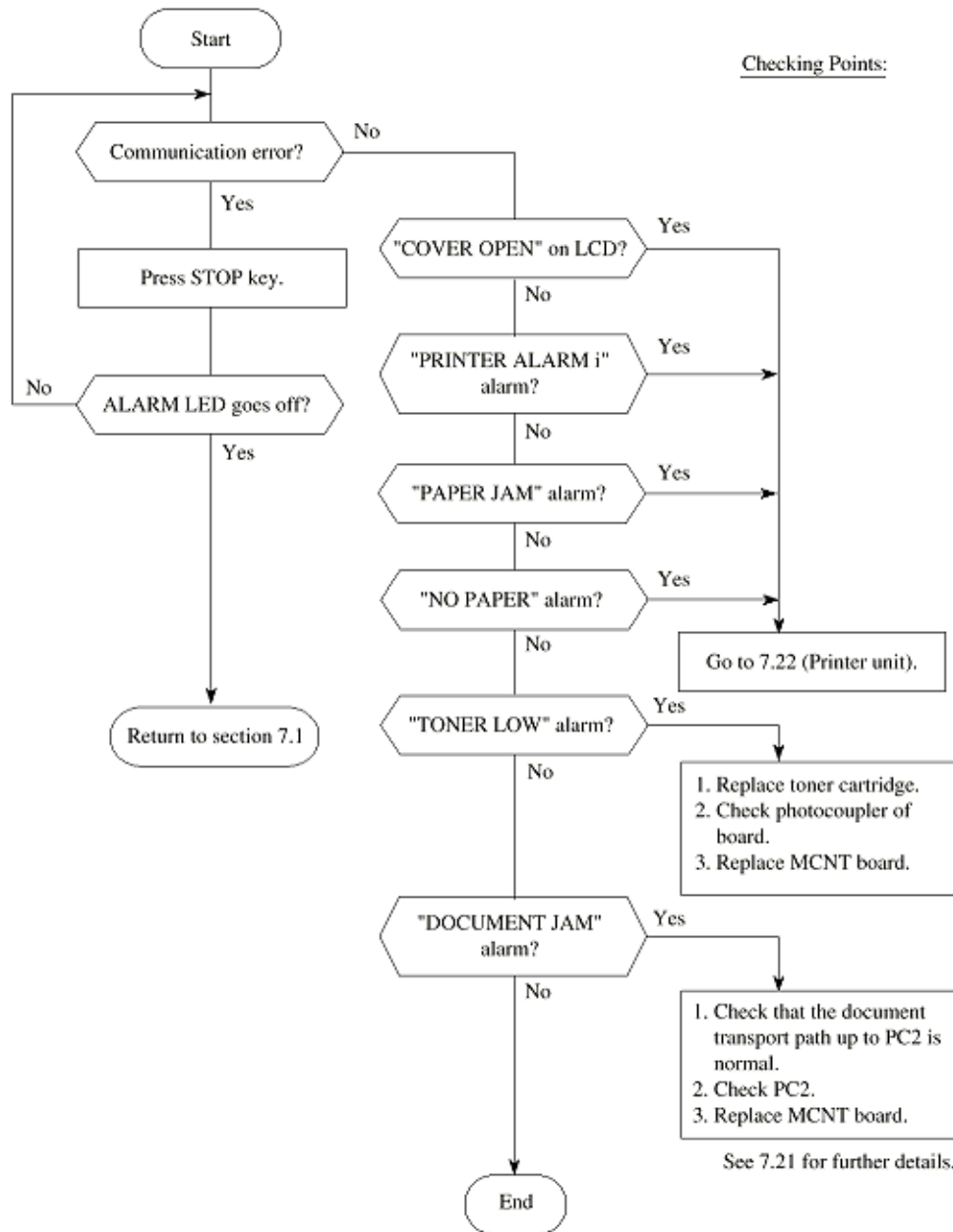
**7.2 No LCD Operation**



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7.3 ALARM LED On

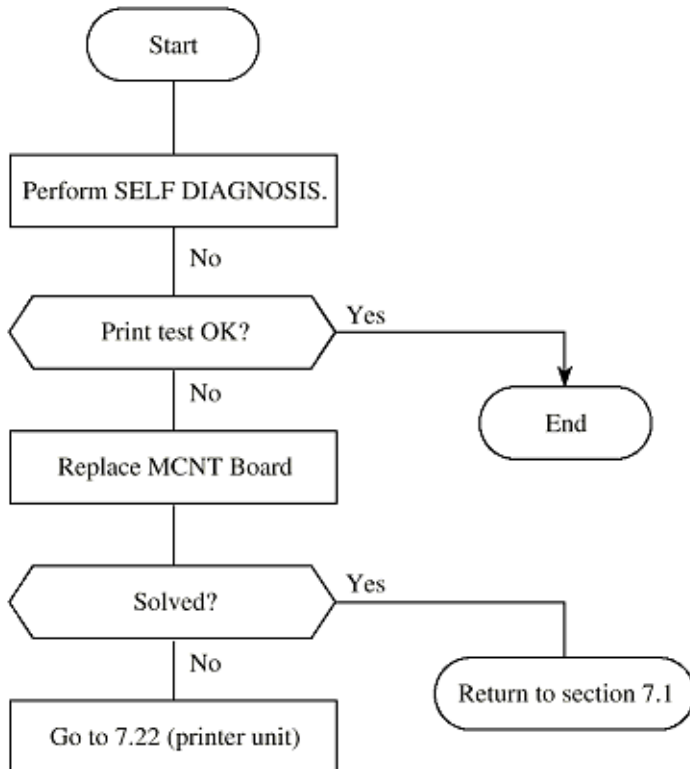


*Note\** : "PRINTER ALARM i" will be shown as follows:  
PRINTER ALARM 2 and PRINTER ALARM 4.

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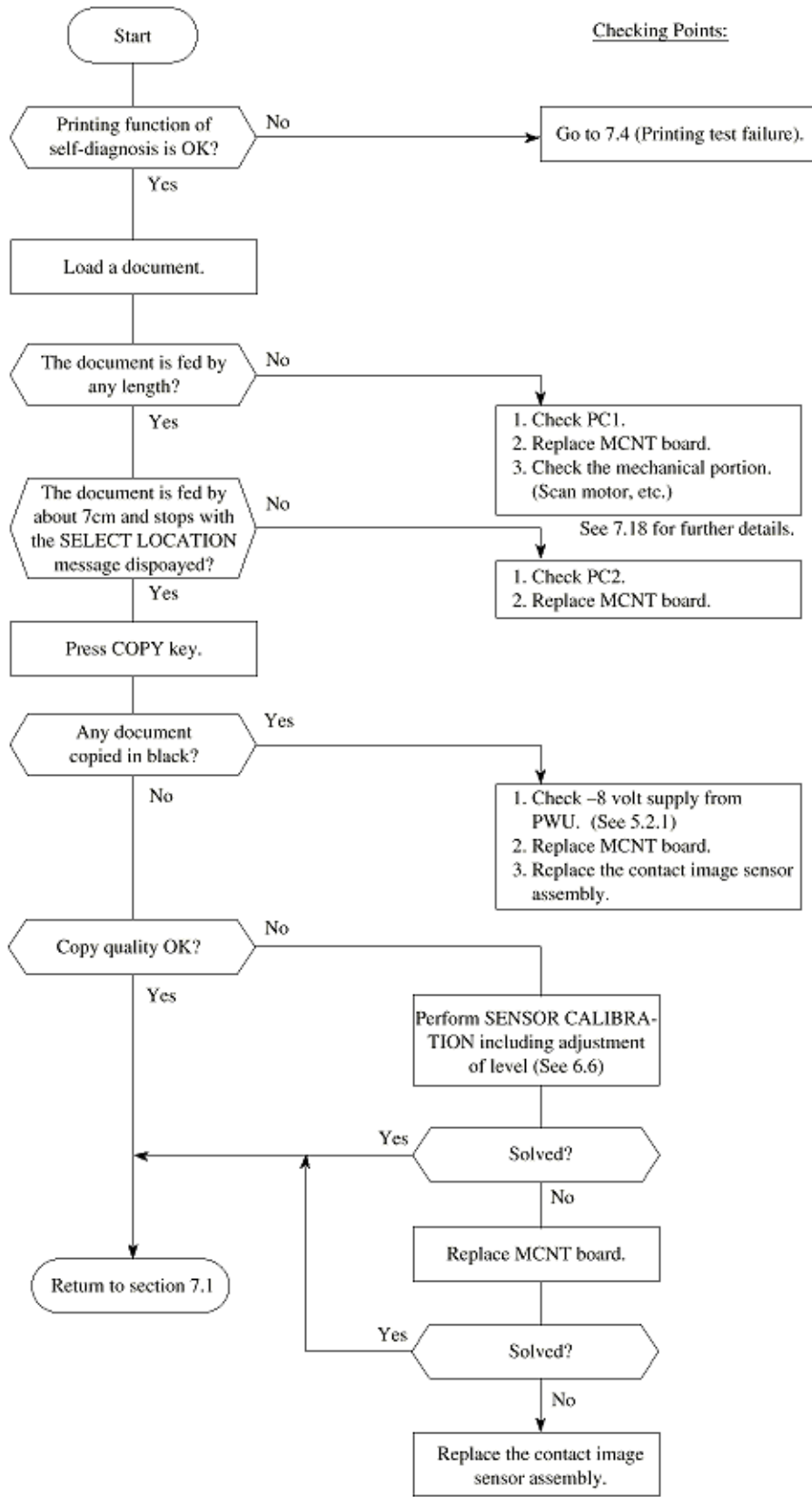
7.4 Printing Test Failure





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**7.5 No Local Copy**



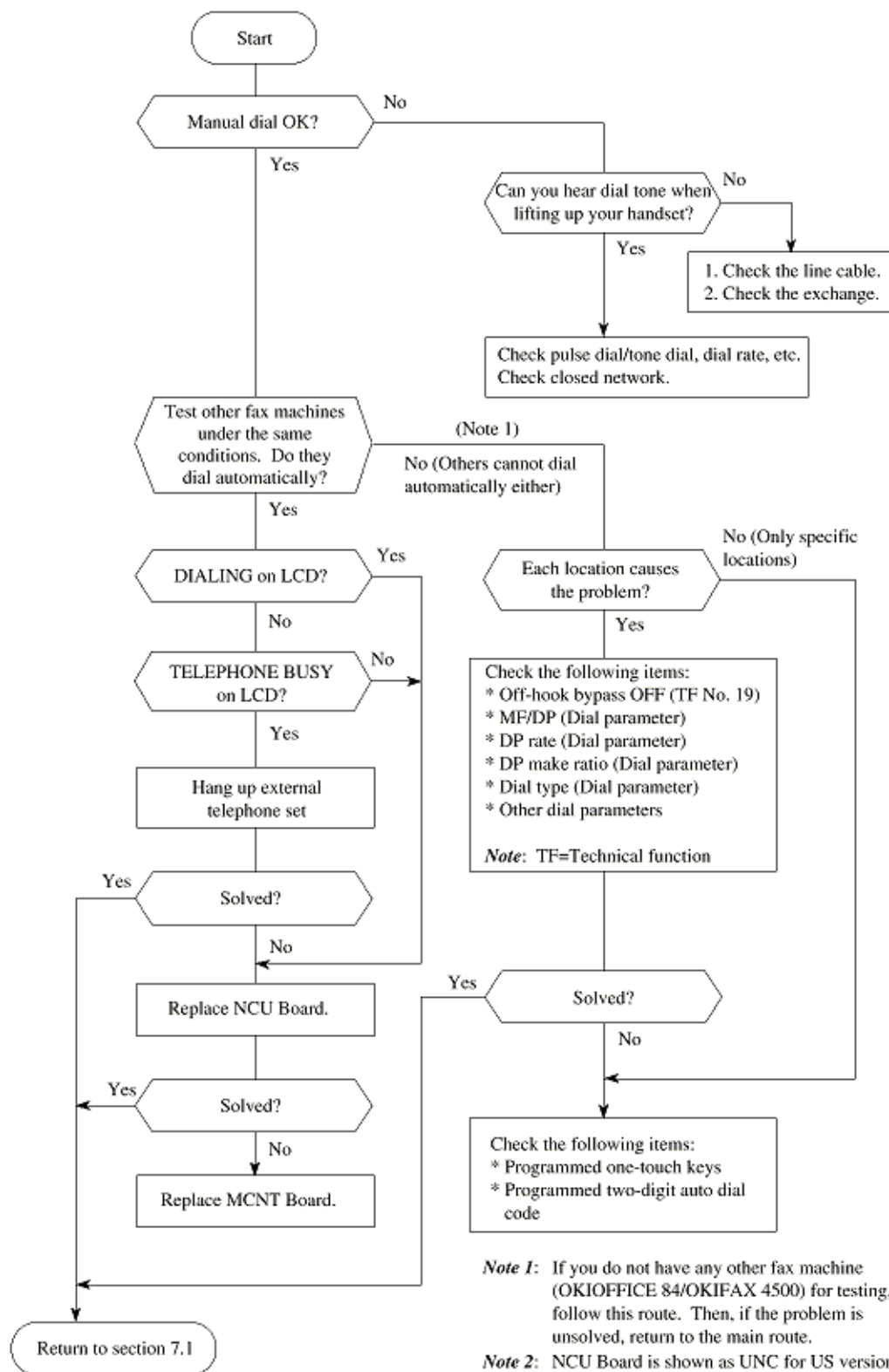


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**7.6 Auto Dial Failure**



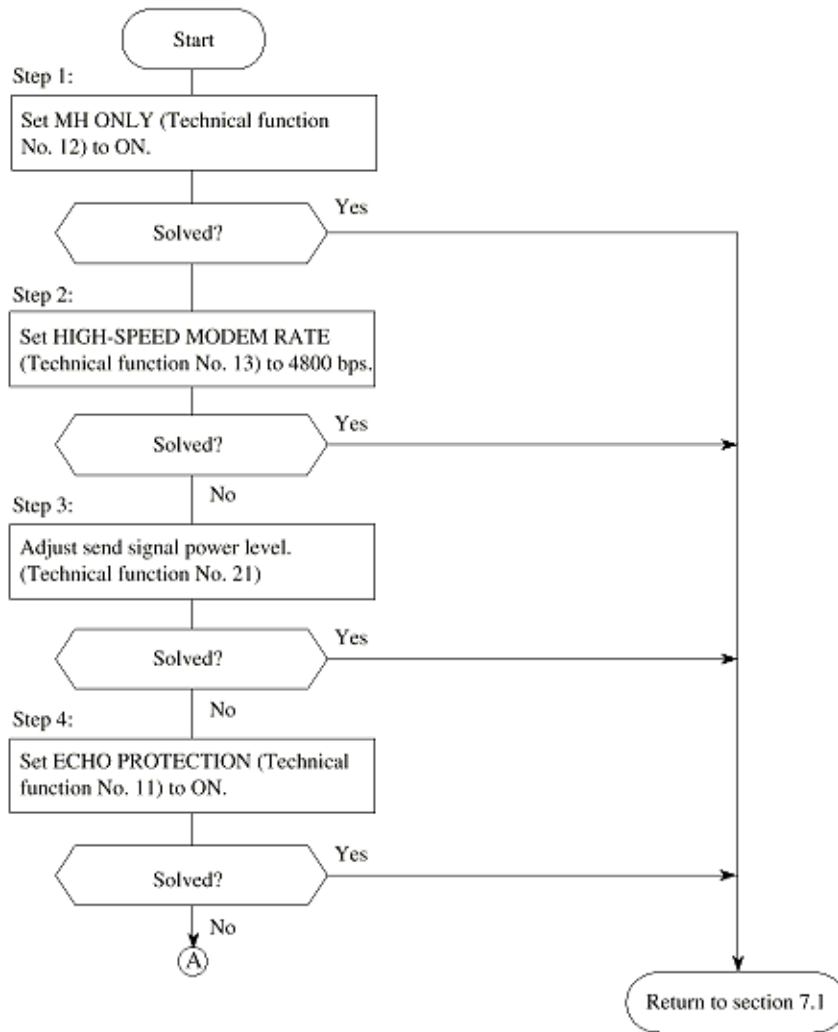
**Note 1:** If you do not have any other fax machine (OKIOFFICE 84/OKIFAX 4500) for testing, follow this route. Then, if the problem is unsolved, return to the main route.

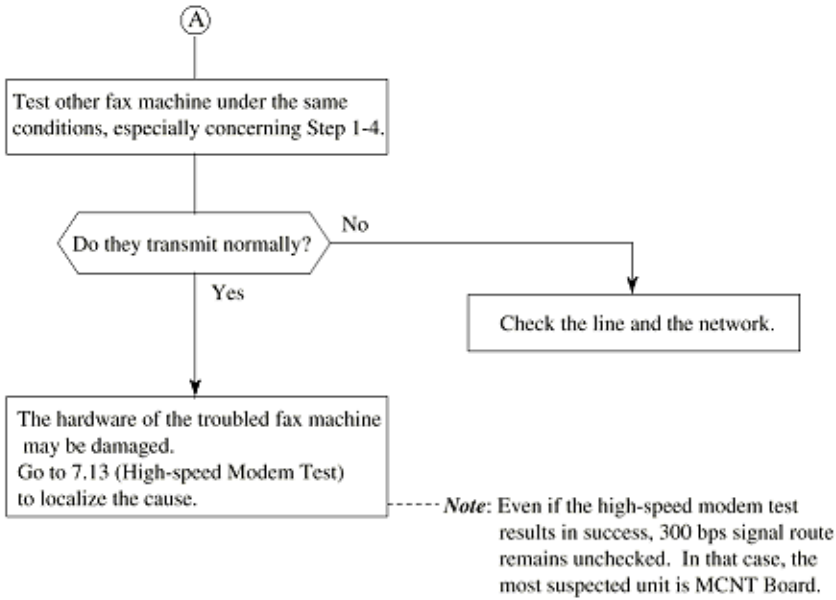
**Note 2:** NCU Board is shown as UNC for US version, WN5 for INT'L version, DN5 for FTZ version and FN5 for France, and UK version.

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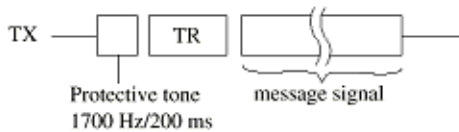
### 7.7 Transmission Problem

This section explains how to localize the cause of problems occurred after completion of connection with a remote station.





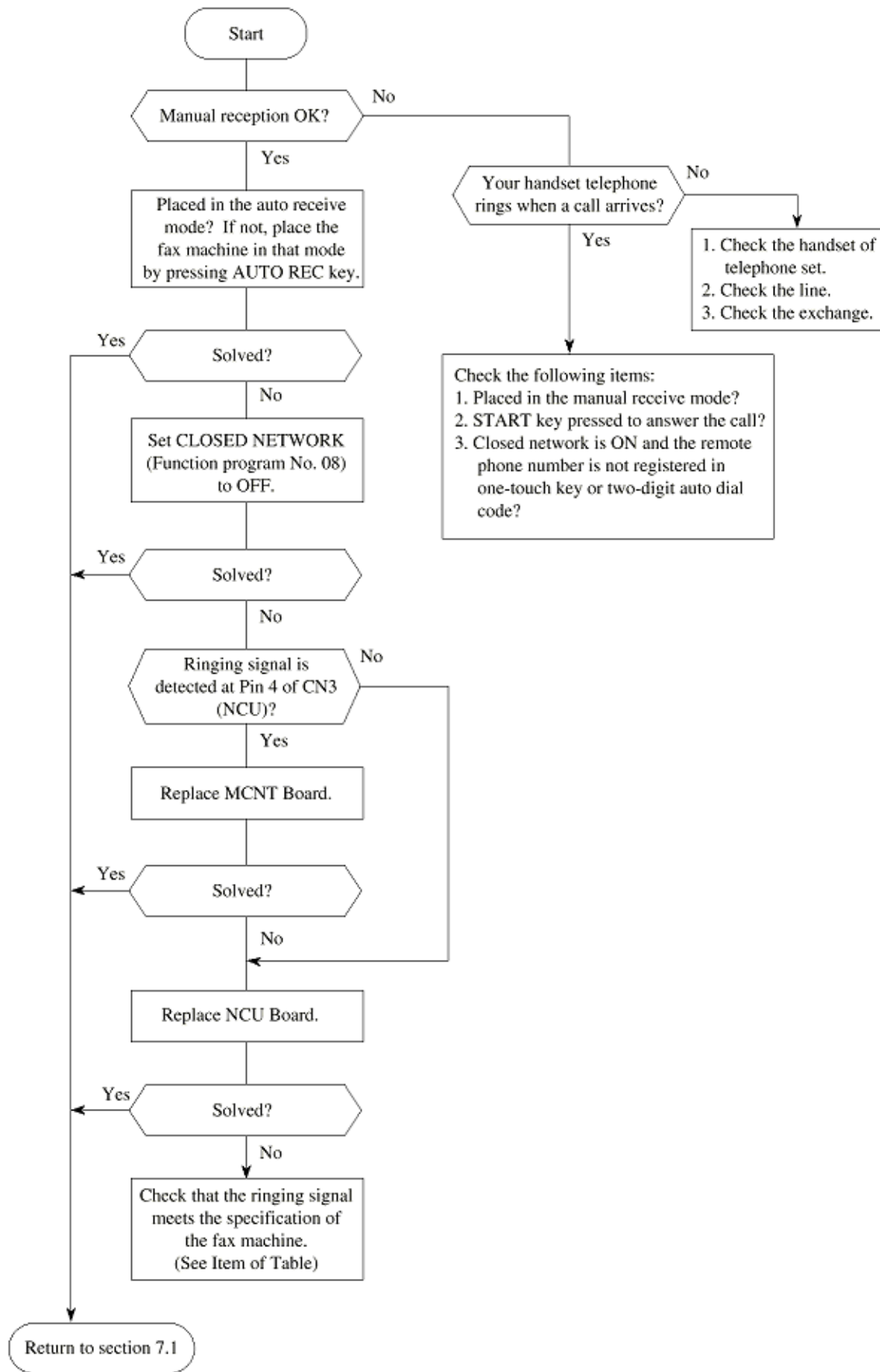
Description: Protective tone is 1700 Hz/200 ms.  
 This signal is added to training signal to protect the training signal against echo as follows.





---

**7.8 Auto Reception Failure**



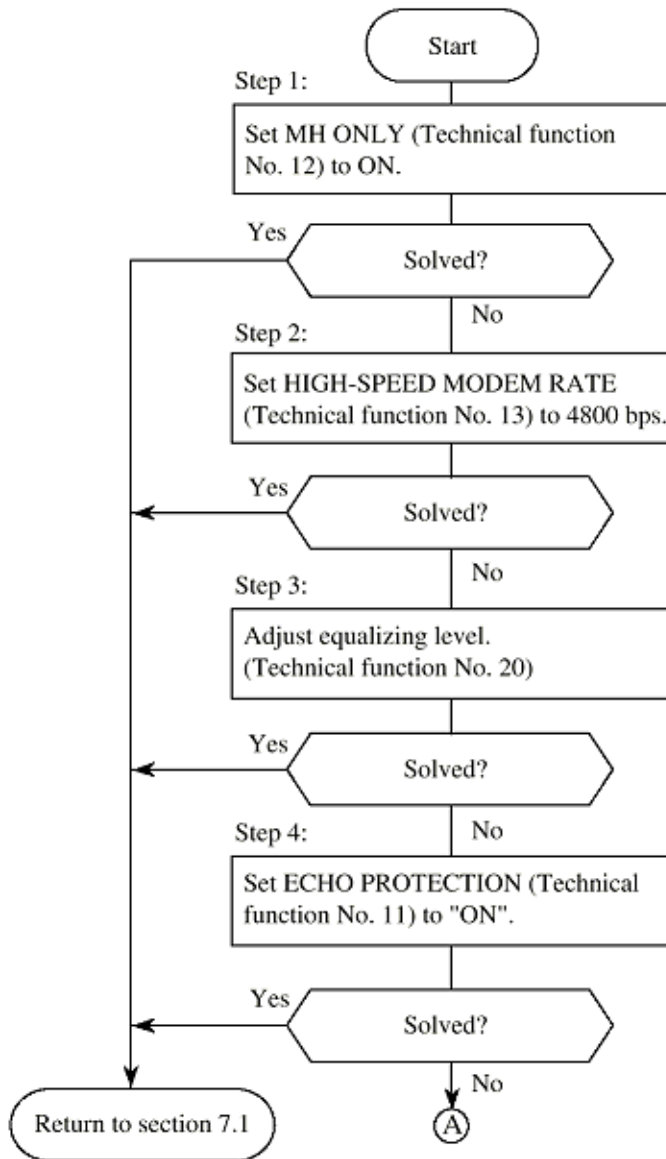


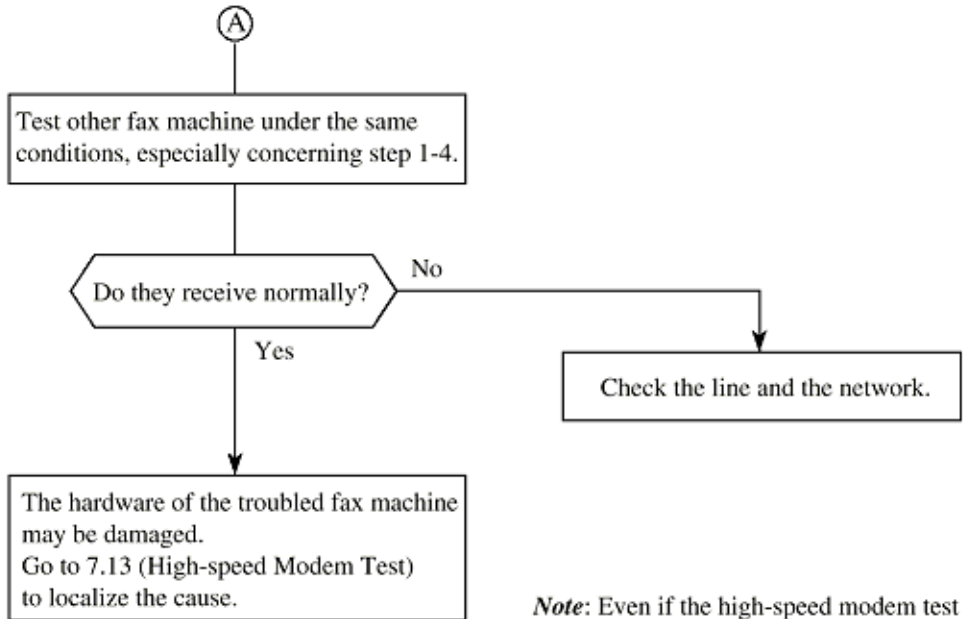
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### 7.9 Reception Problem

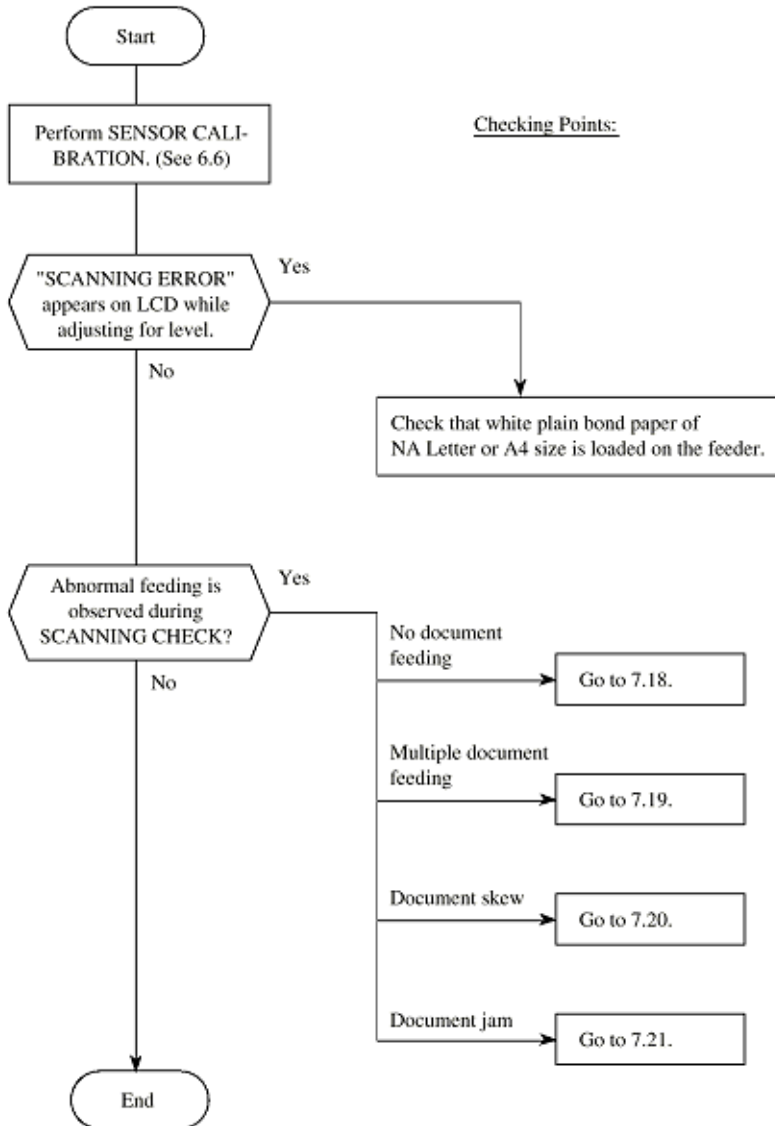
This section explains how to localize the cause of problems occurred after completion of connection with a remote station.



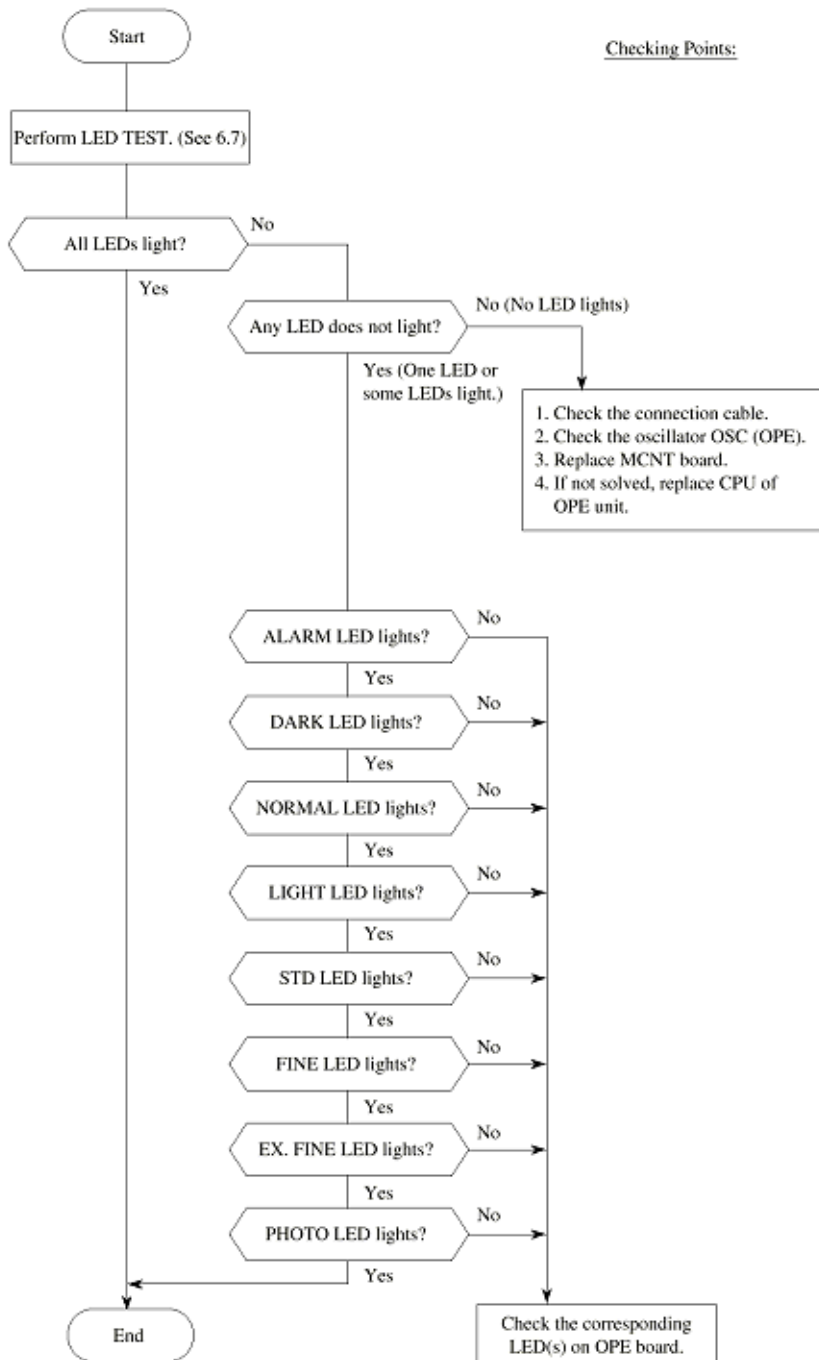


**Note:** Even if the high-speed modem test results in success, 300 bps signal route remains unchecked. In that case, the most suspected unit is MCNT board.

7.10 Sensor Calibration Test

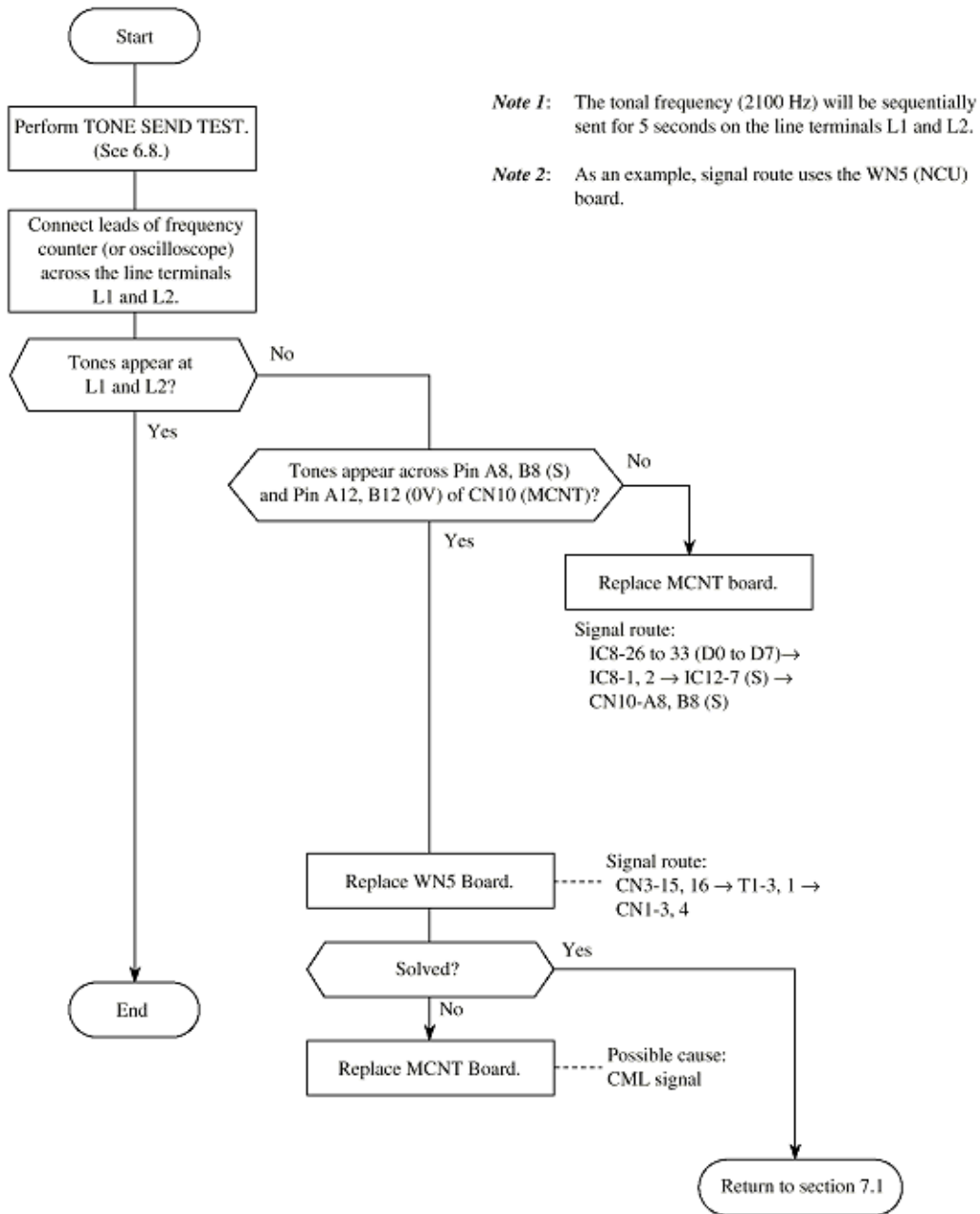


7.11 LED Test

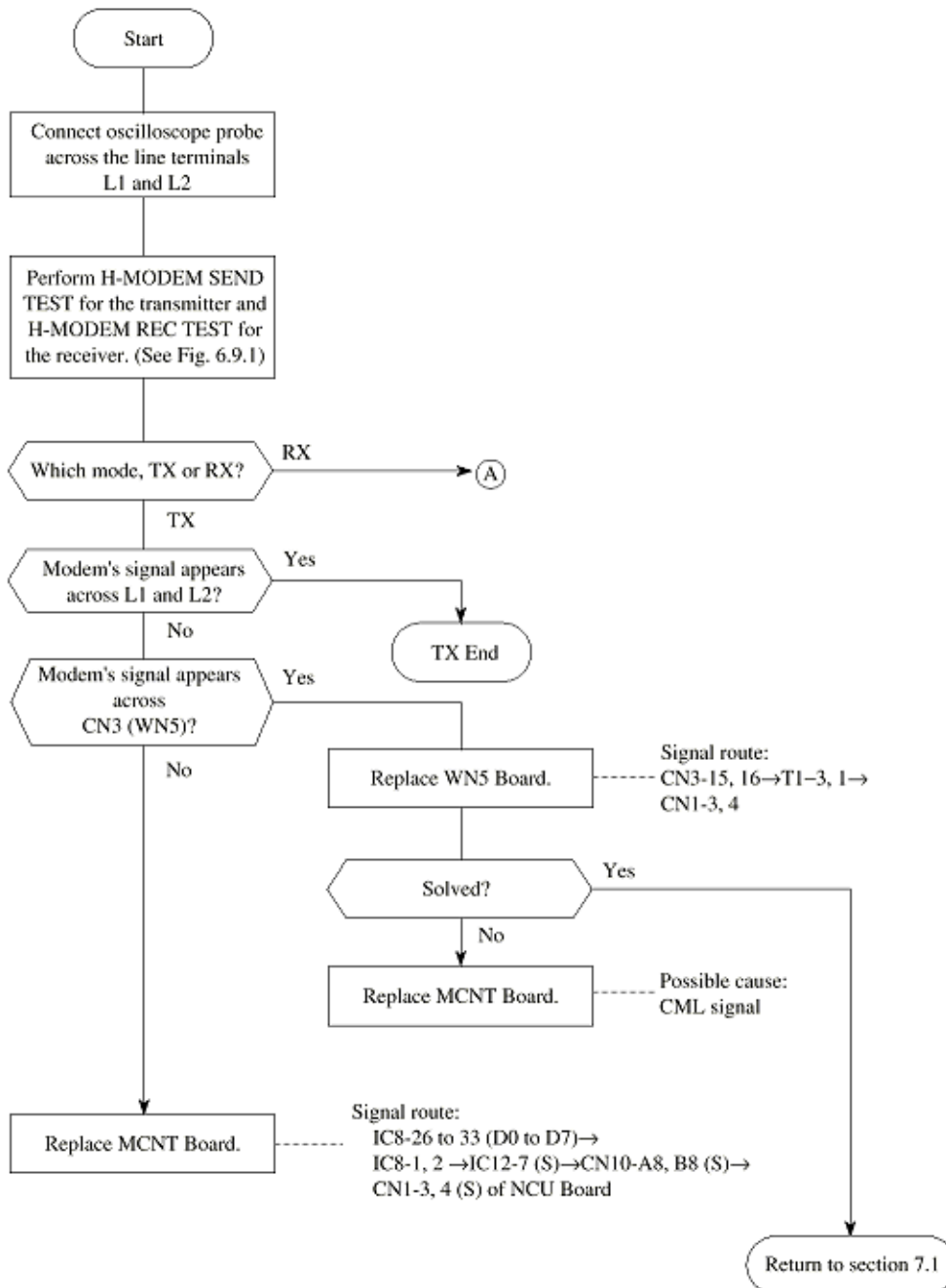


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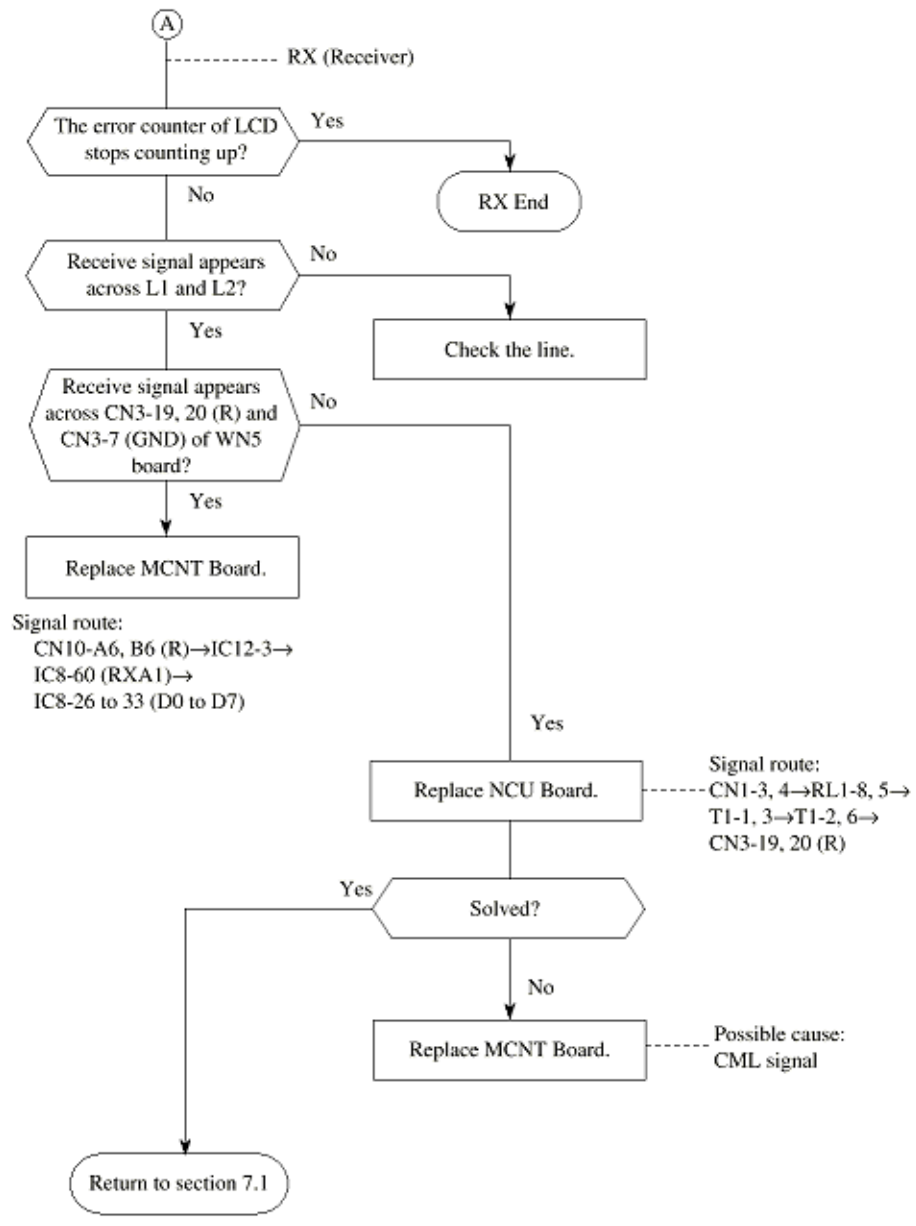
**7.12 Tone Send Test**



7.13 High-Speed Modem Test



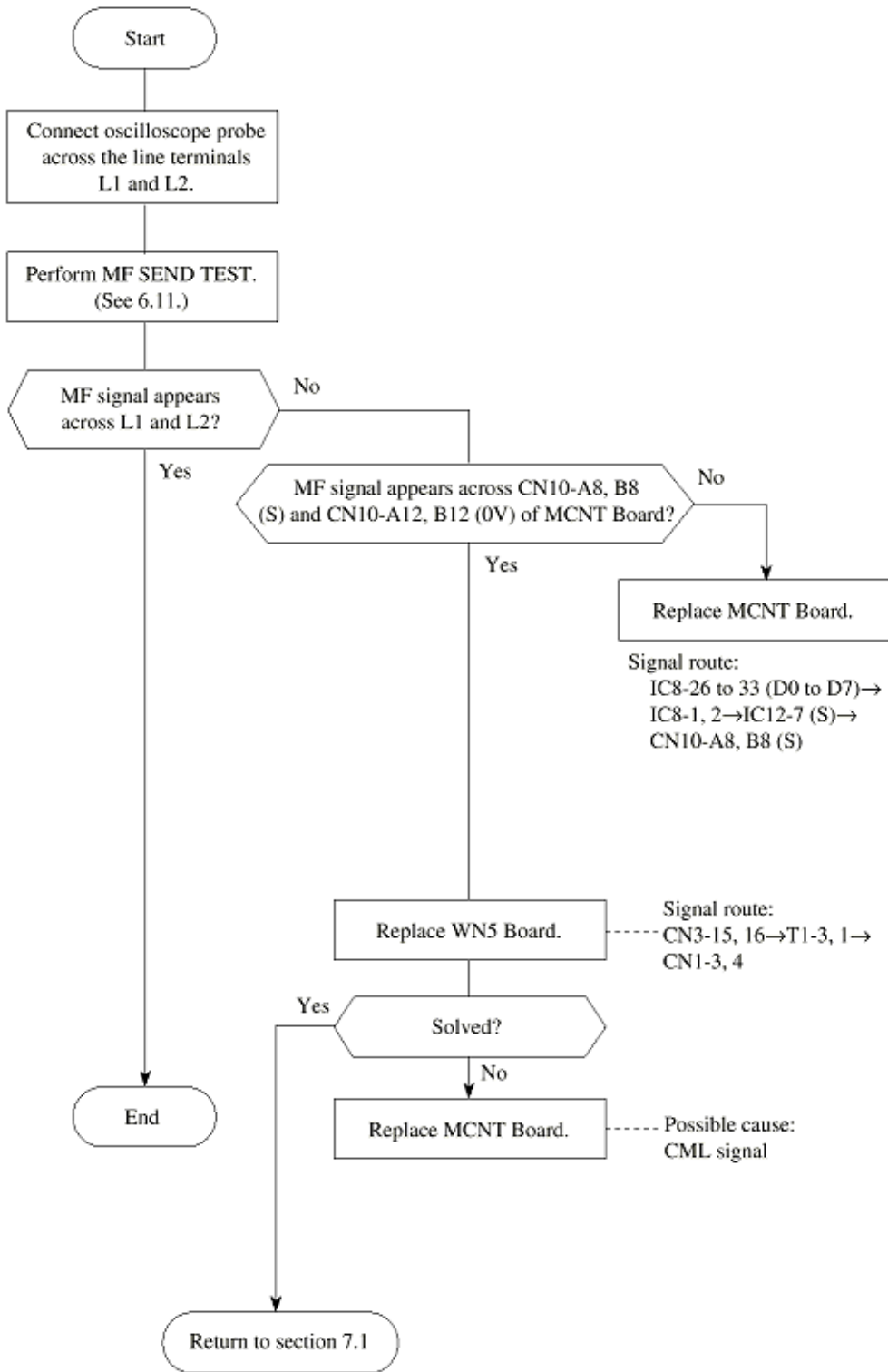






---

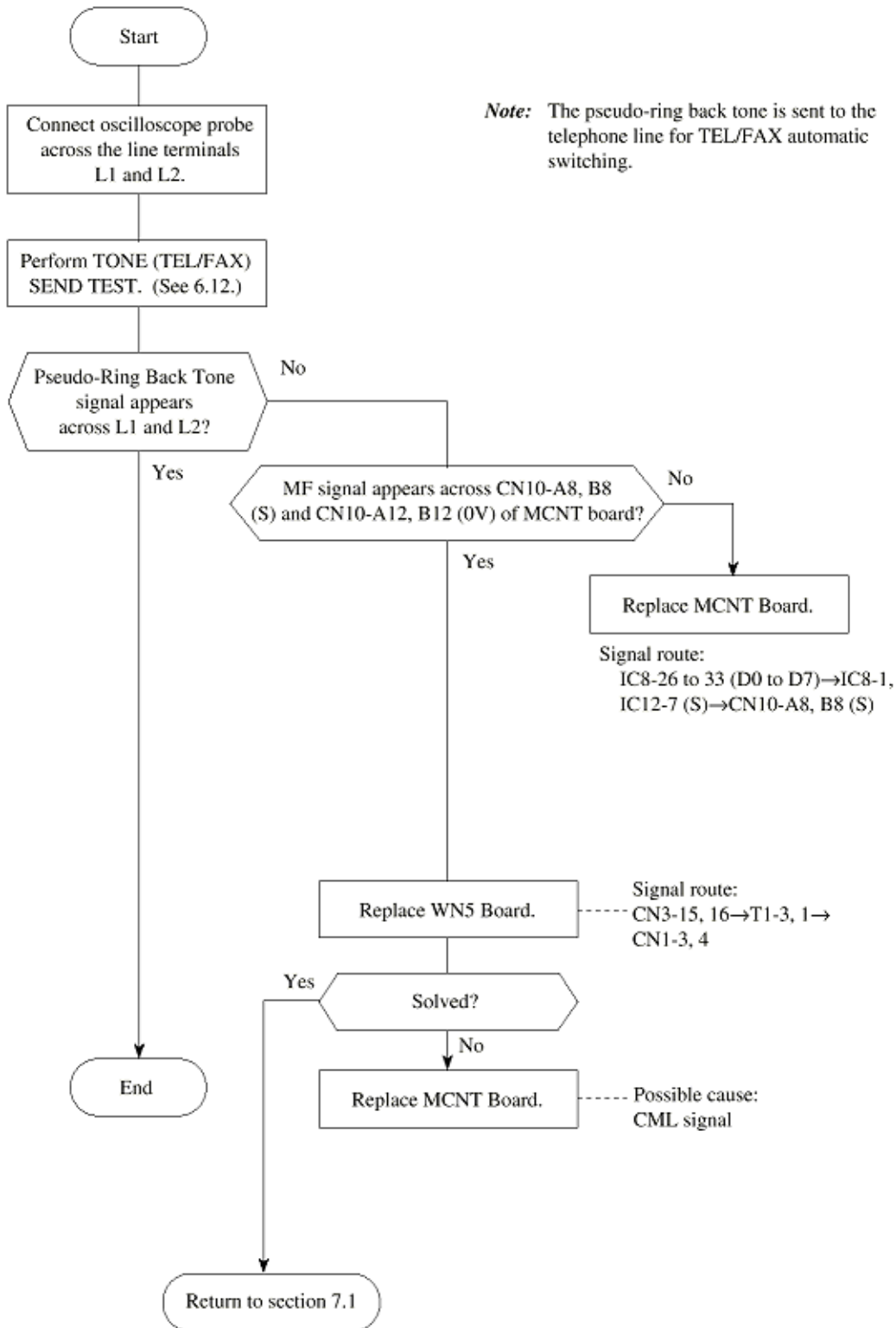
**7.14 MF Send Test**





---

**7.15 Tone (TEL/FAX) Send Test**



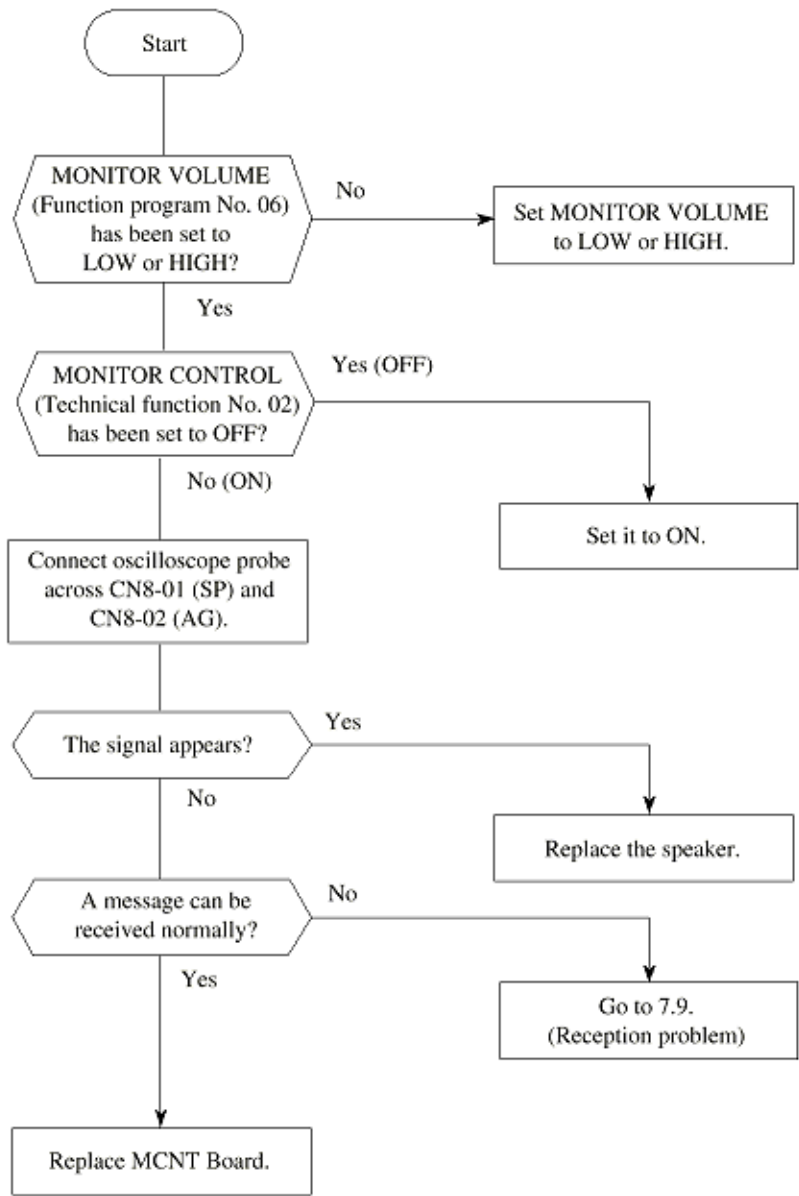




#### **7.16 No Acoustic Line Monitor**

There are two source routes of acoustic line monitor:

- (a) General communication signal
- (b) DP pulse signal



Signal route:  
 CN10-A6, B6→IC12-1 (RM)→  
 TR513-2→IC11-1→IC11-3→  
 IC5-5





---

**7.17 Power Supply Unit**

(A) Low-voltage Selection

Replace the Power Supply Unit when output voltage written on the item A3 in the Appendix A is not normal.

(B) High-voltage Selection

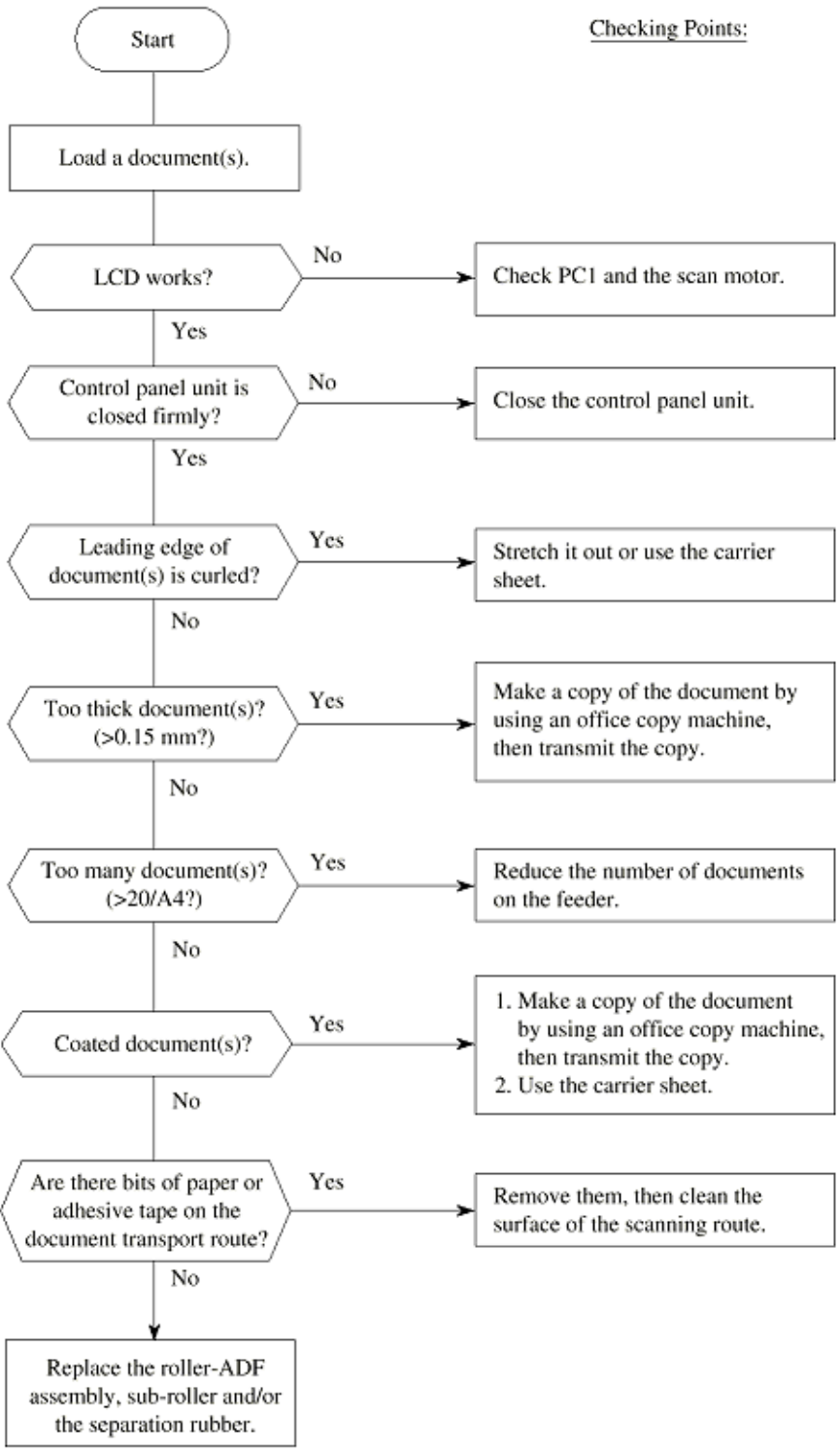
T.B.D. (To be determined)



---

**7.18 No Document Feeding**

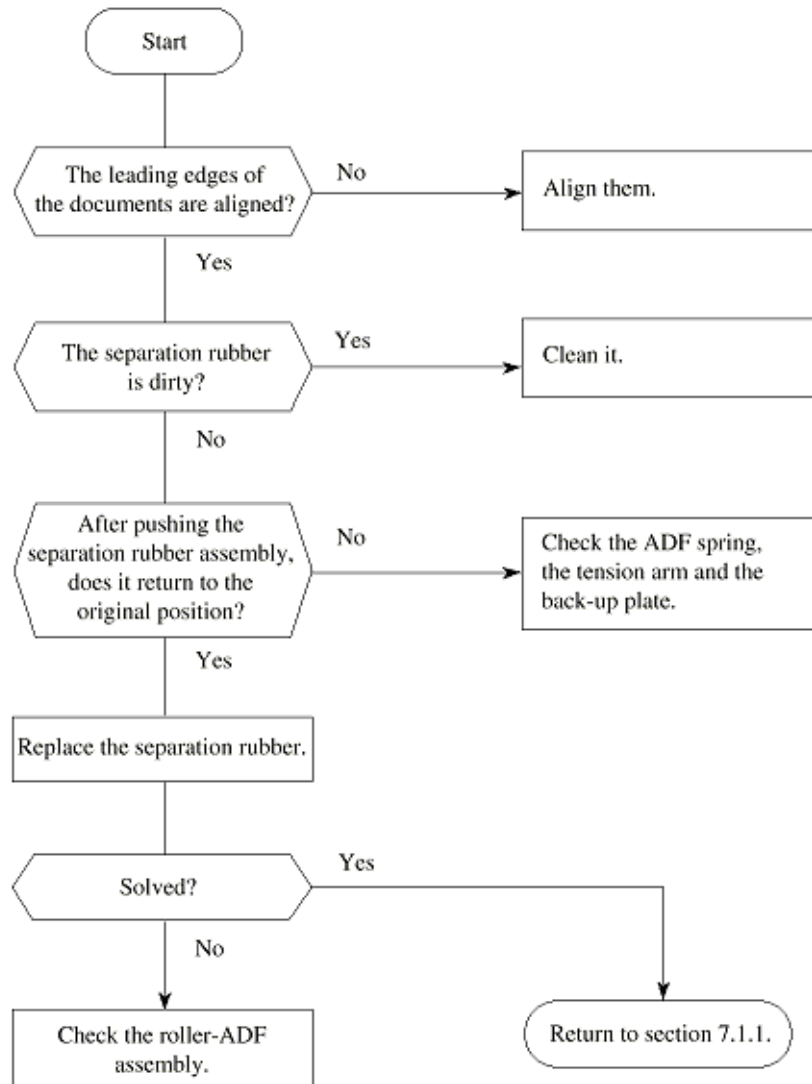
**Note:** This section places an emphasis on troubleshooting of mechanical portions. Therefore, it is recommended to replace the MCNT Board first and, then if not solved, follow this flow chart.



**7.19 Multiple Document Feeding**

**Definition:** Multiple document feeding.

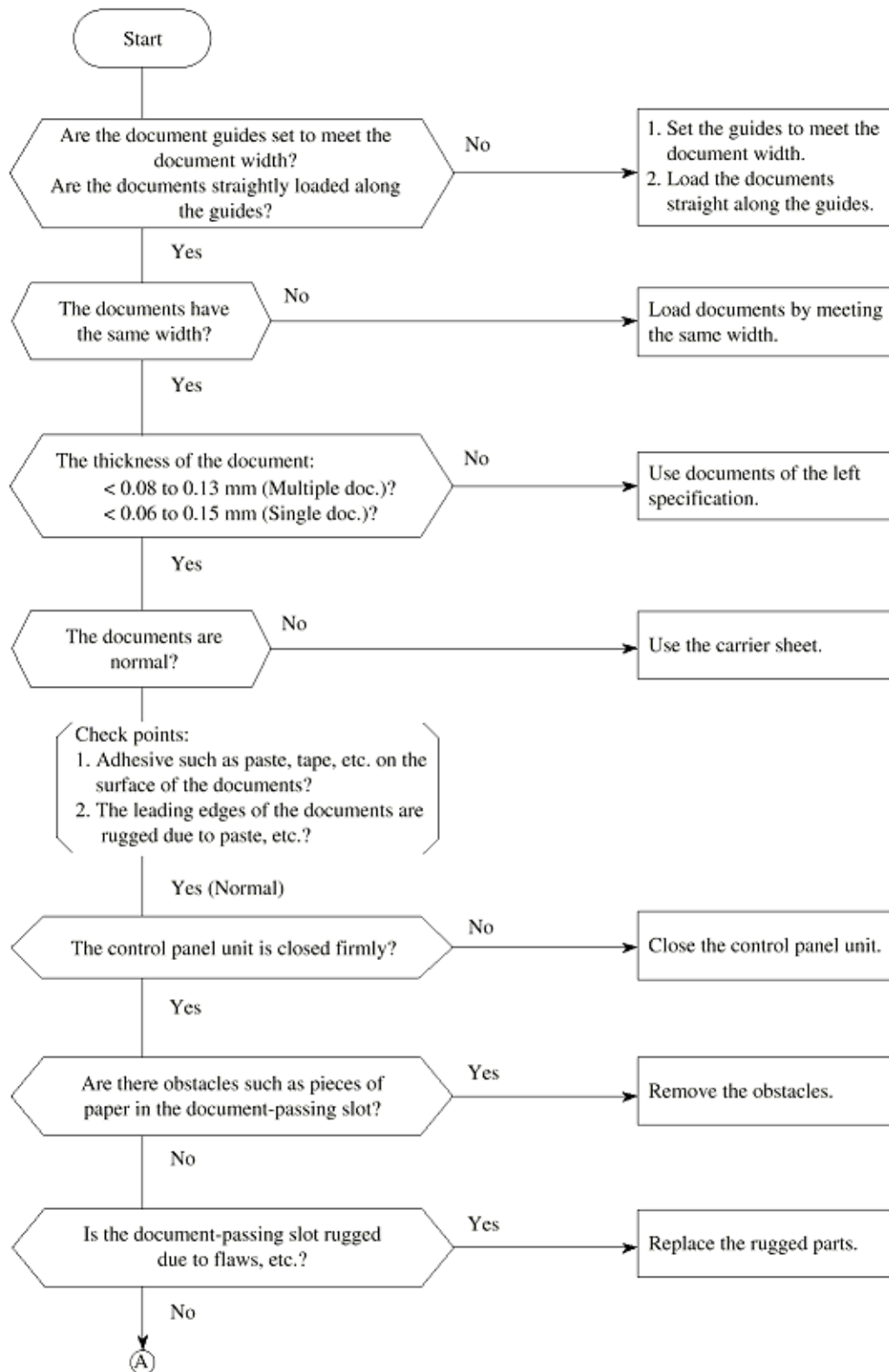
Multiple documents are not separated and they are fed at the same time during one feeding operation.

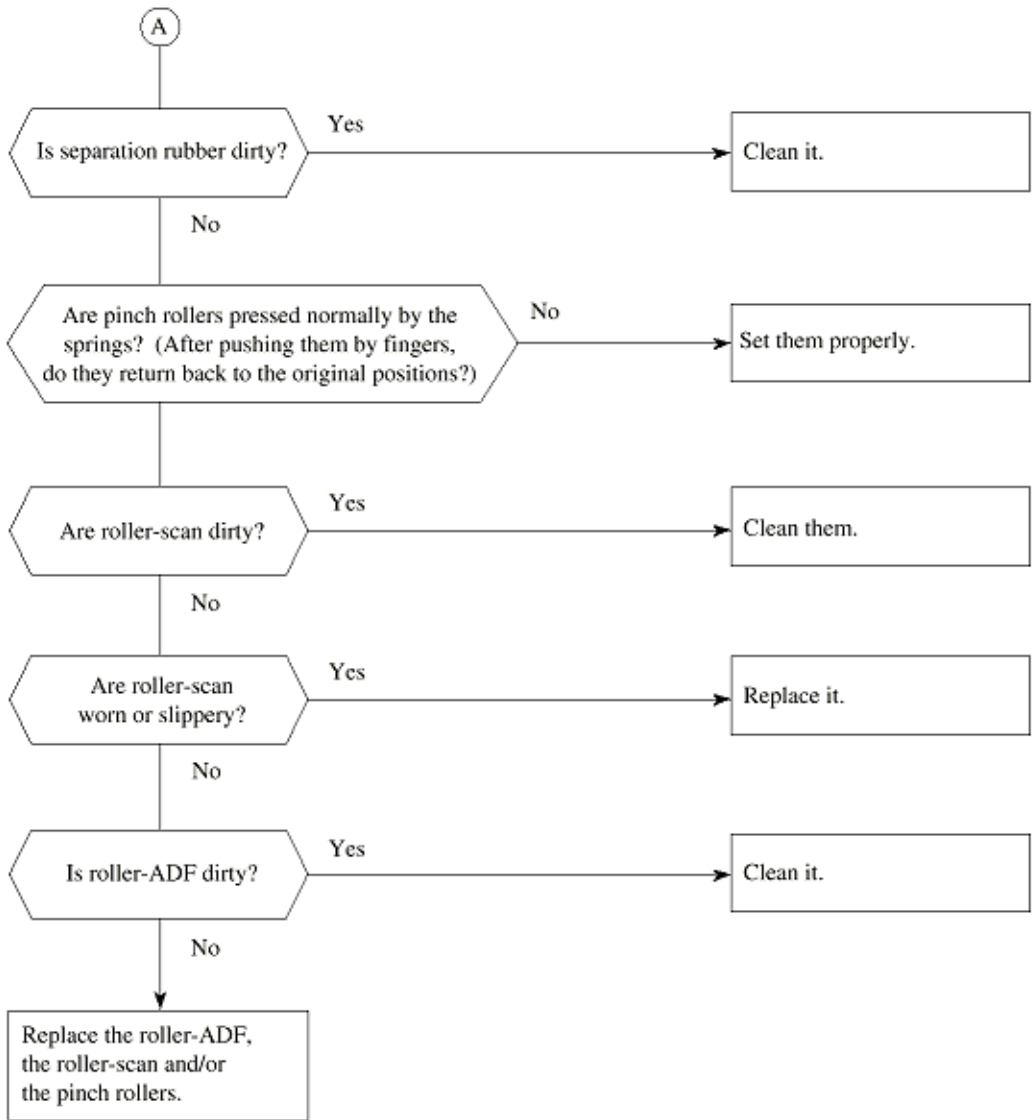




---

**7.20 Document Skew**



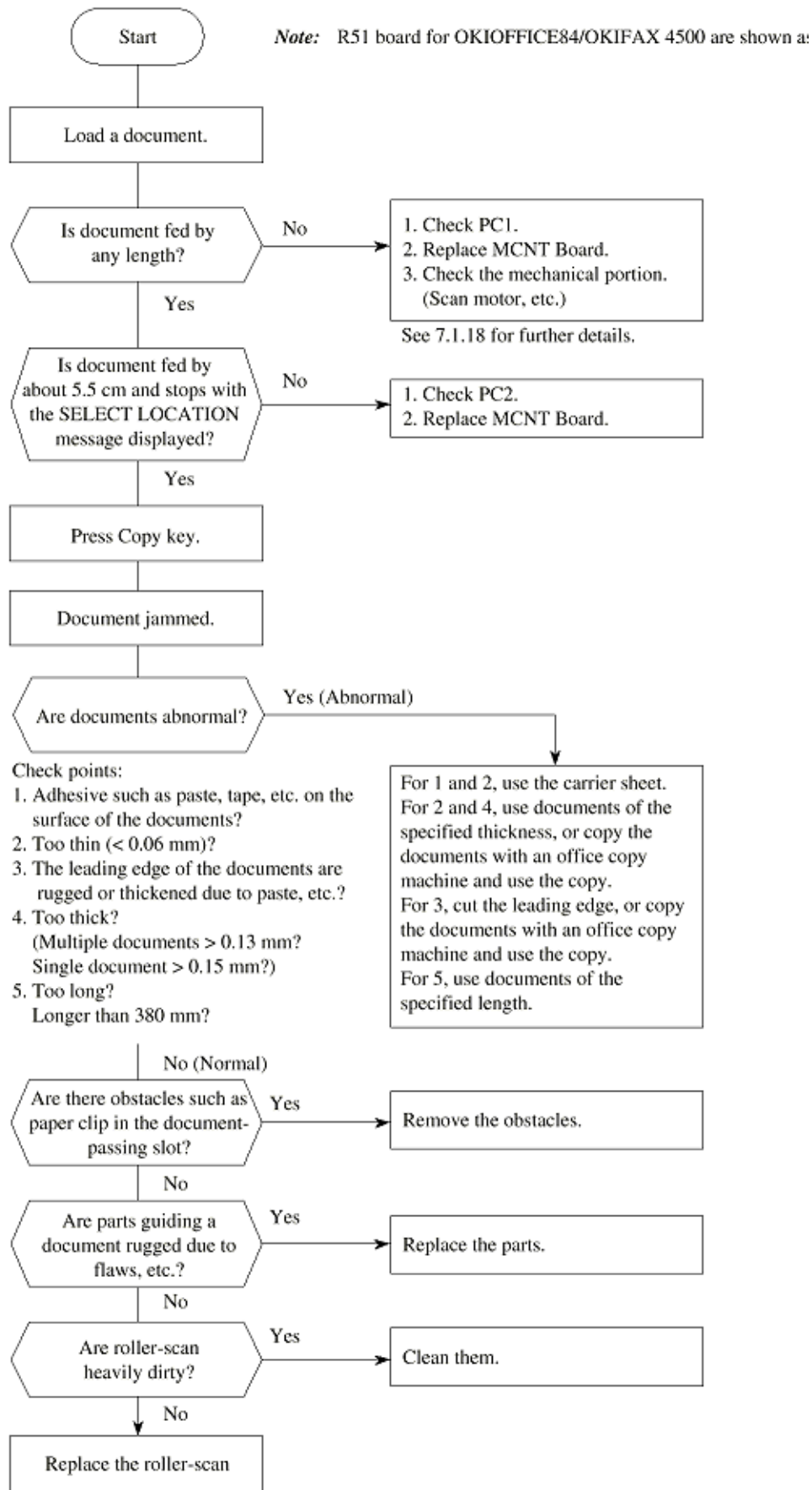




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**7.21 Document Jam**





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**7.22 Printer Unit**

7.22.1 Precautions

7.22.2 Troubleshooting Flow Charts of Printer Unit

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**7.22.1 Precaution**

**1. Points to check before correcting image troubles**

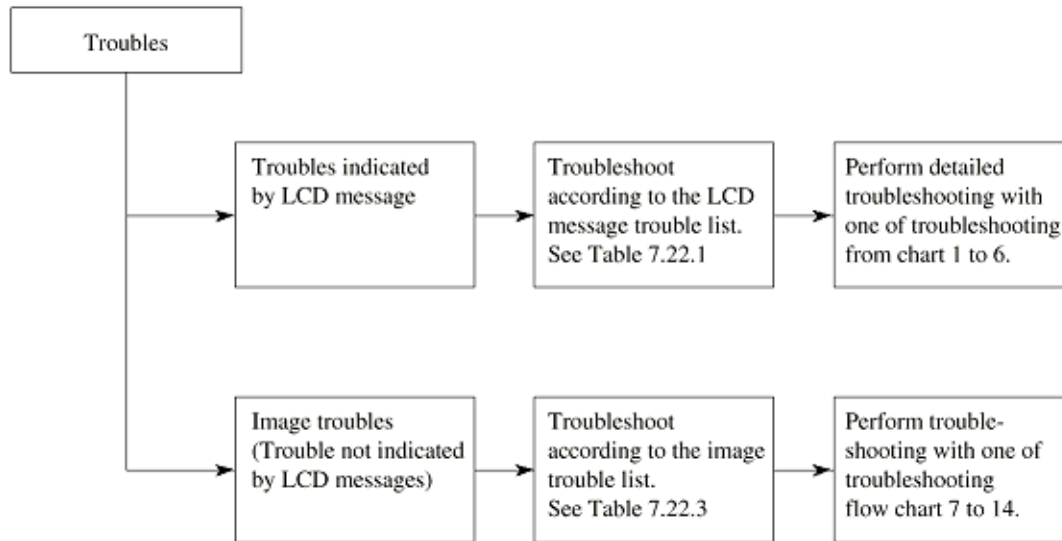
- (1) Is the printer being run in proper ambient conditions?
- (2) Have the supplies (toner) and the routine replacement part (EP unit) been replaced properly?
- (3) Is the recording paper normal?
- (4) Has the EP unit been loaded properly?

**2. Tips for correcting image troubles**

- (1) Do not touch, or bring foreign matter into contact with the surface of the drum.
- (2) Do not expose the drum to direct sunlight.
- (3) Keep hands off the fuser unit as it is heated during operation.
- (4) Do not expose the drum to light for longer than 5 minutes at room temperature.

**7.22.2 Troubleshooting Flow Charts of Printer Unit**

Overall troubleshooting flow chart.

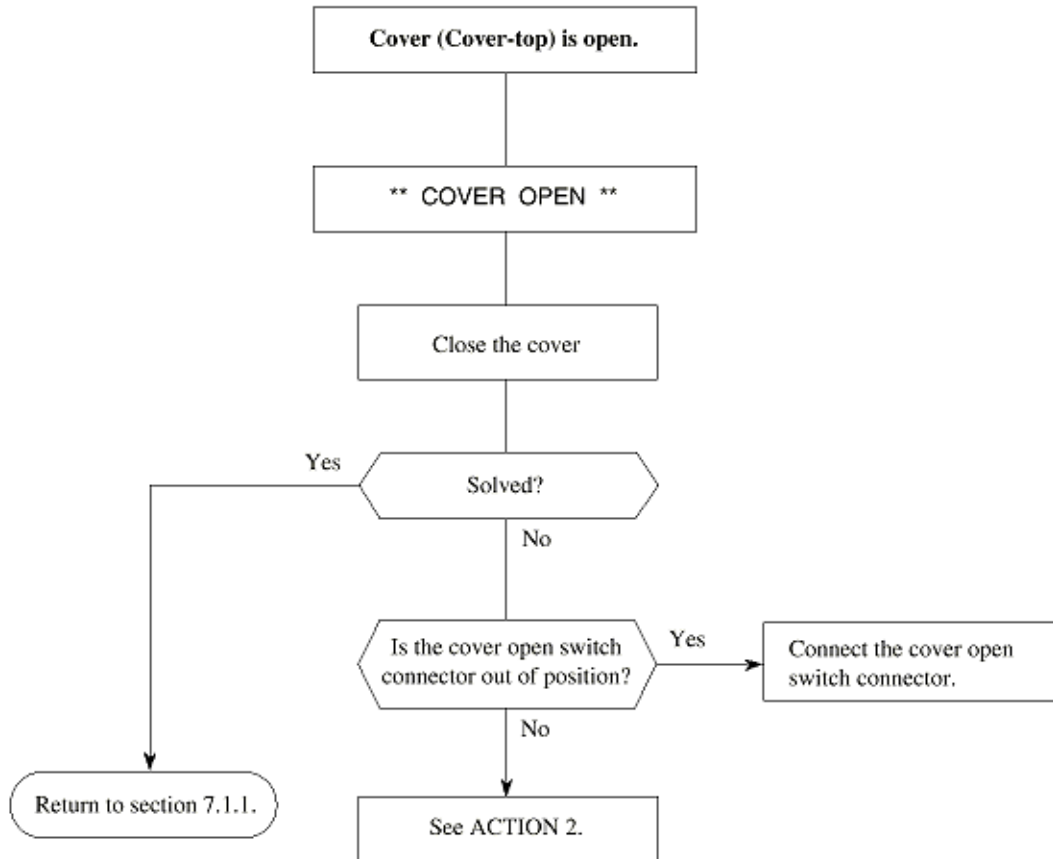


**Table 7.22.1 LCD Message Trouble List**

Category	LCD message display	Trouble	Troubleshooting flow chart number
Cover open	14:14 [FAX] COVER OPEN	The cover (cover-top) is open.	1
Image drum alarm	14:14 [FAX] CHANGE DRUM SOON	Warning message to replace EP unit because of its life.	2
Engine errors	PRINTER ALARM 2 [TEL] PLEASE CONFIRM	Engine controller error	3
	PRINTER ALARM 4 [TEL] PLEASE CONFIRM	Fuser unit thermal error	4
Recording paper/jam error	PAPER OUT/JAM [FAX] REPLACE PAPER	Recording paper feed jam, transport jam, ejection jam, recording size error	5
Paper cassette request	PAPER OUT/JAM [FAX] REPLACE PAPER	No recording paper tray or no recording paper	6
Daily status	TONER LOW [FAX] REPLACE TONER CART.	Toner is running short. Note: No toner memory RX is ON.	
	14:14 [FAX] REPLACE TONER CART.	Toner is running short. Note: No toner memory RX is OFF.	

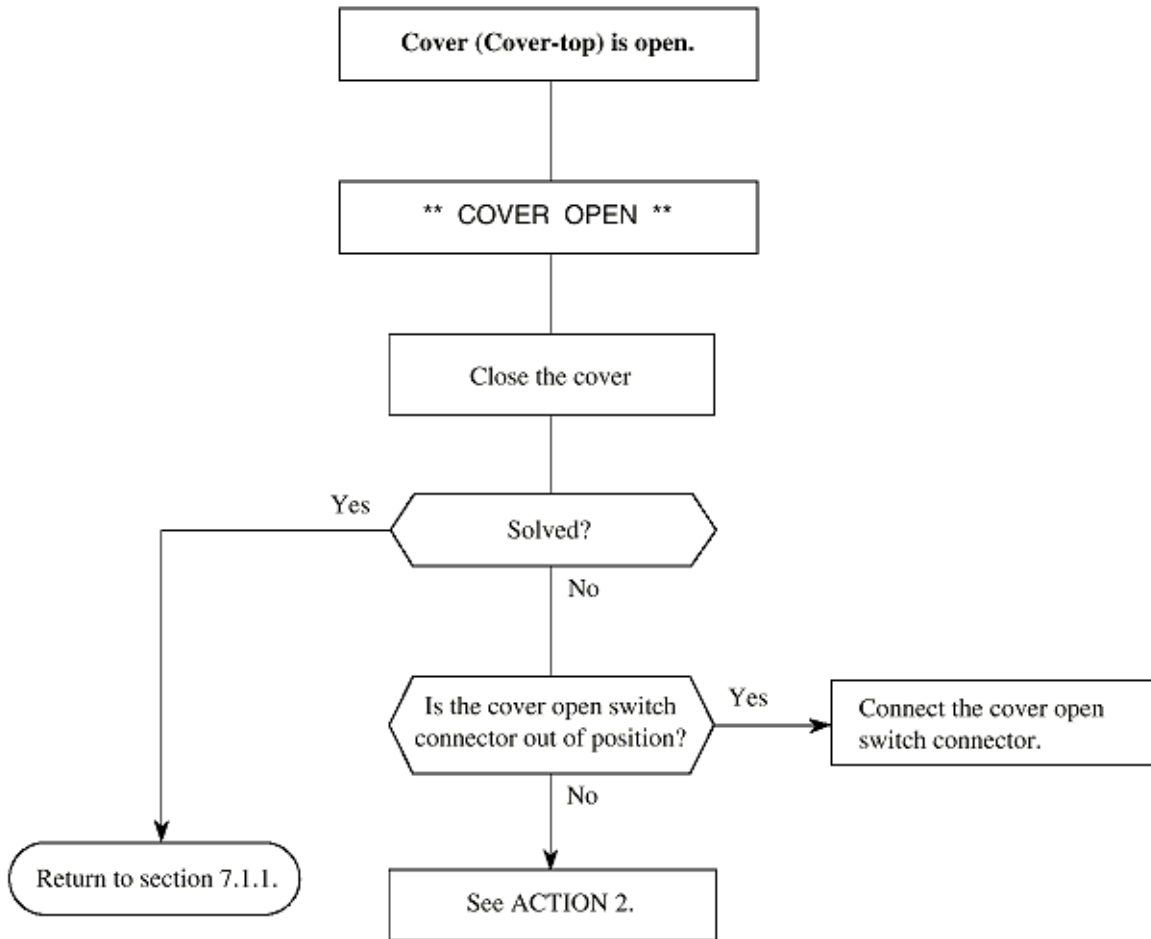
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Troubleshooting flow chart 1:



### Service Guide OKIOFFICE 84 Chapter 7 Troubleshooting

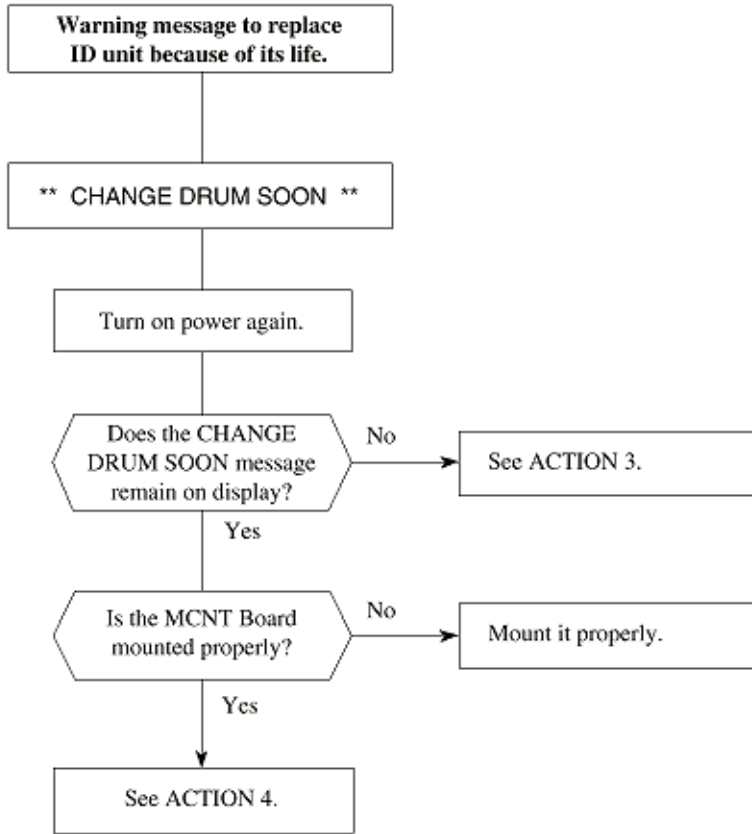
1: Top Cover is Open





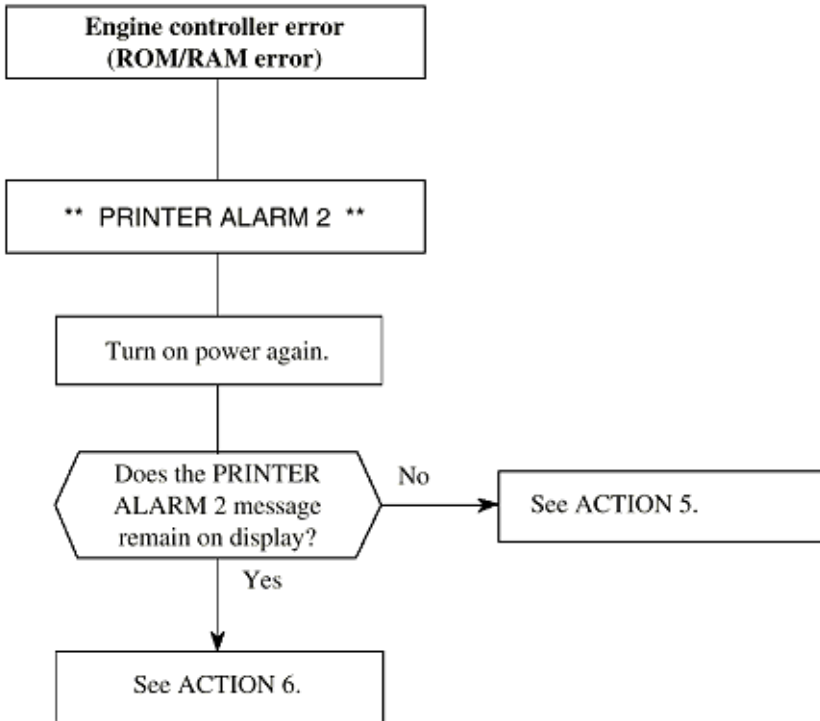
---

2: Replace Image Drum Message

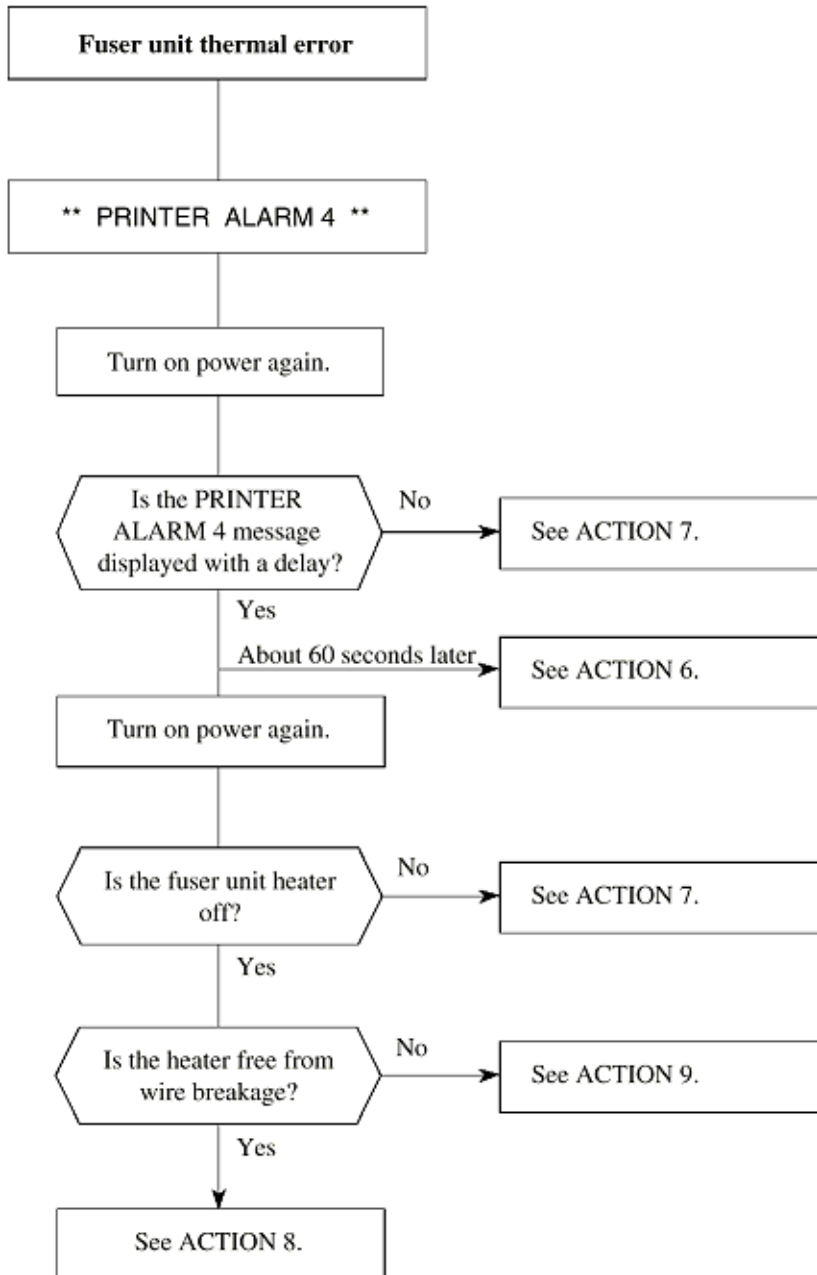


---

3: Engine Controller Error



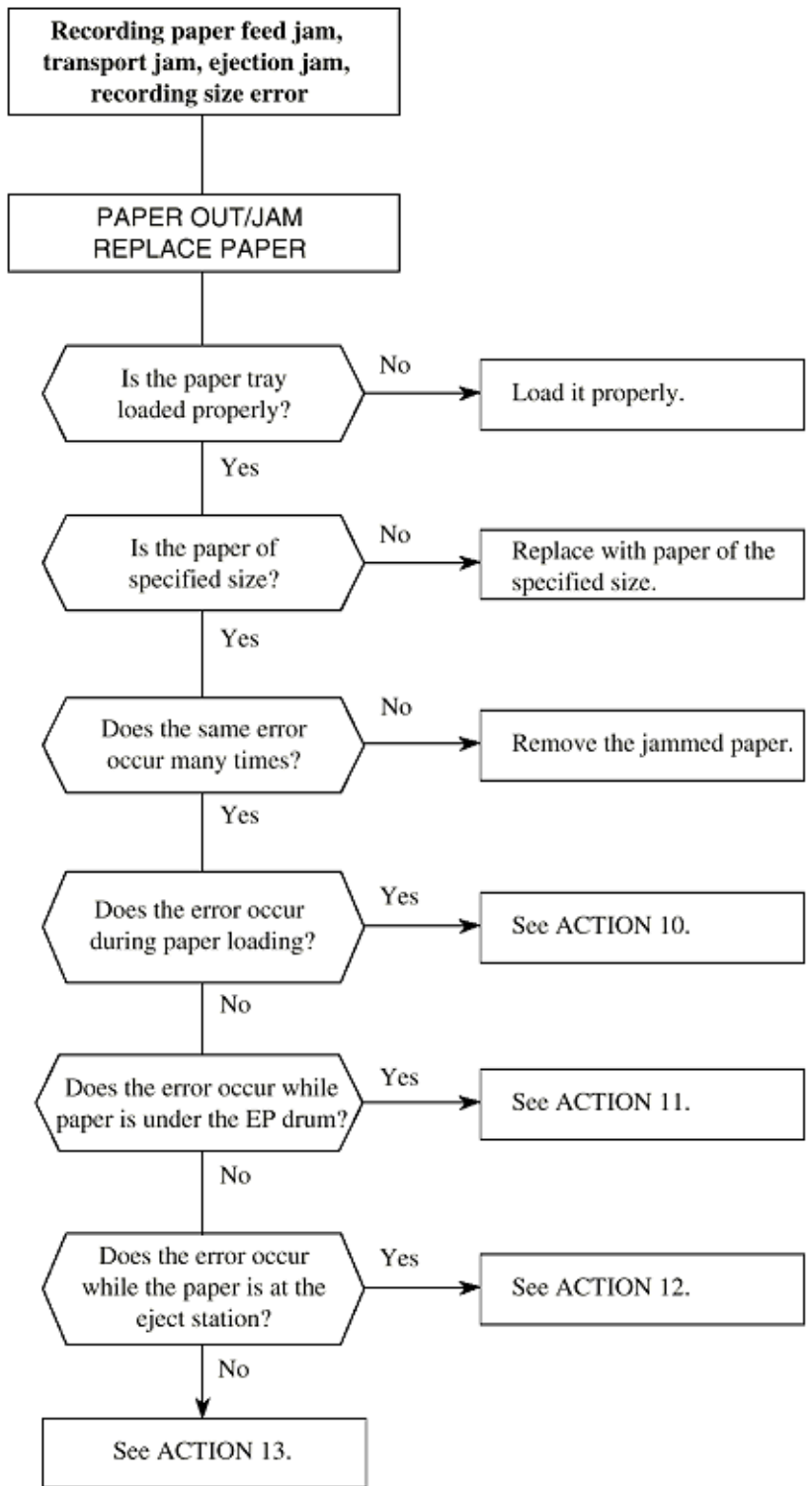
4: Fuser Unit Thermal Error





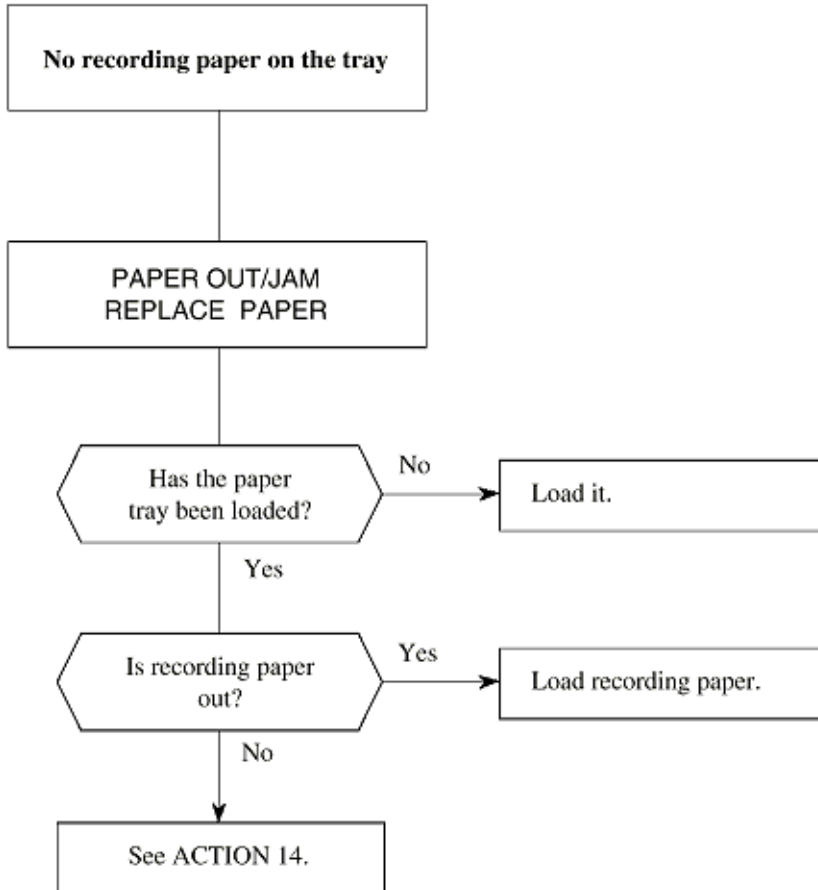
---

**5: Paper Jams**



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6: No Paper Tray or No Paper

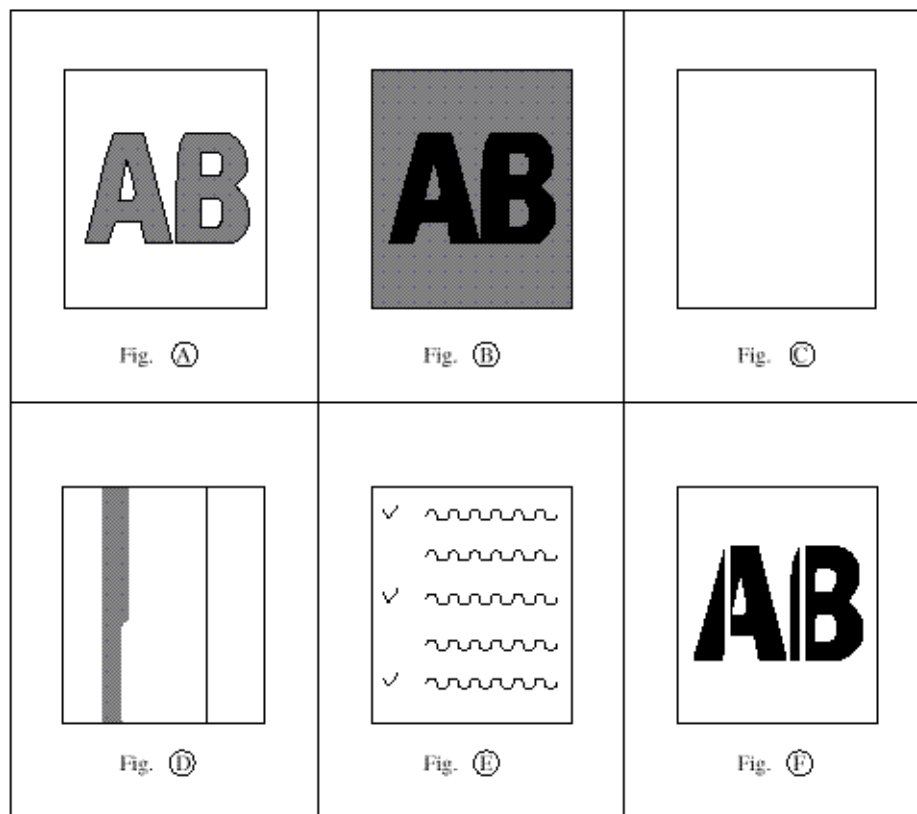


Sample Image Problems (Figure 7.22.1)

Table 7.22.3 Image Troubles

Abnormal Symptom	Reference Figure	Troubleshooting Flow Chart No.
Images are light or blurred as a whole.	Fig. (A)	7
The blank background is smeared.	Fig. (B)	8
Blank paper is output.	Fig. (C)	9
Black belts or black stripes in vertical direction.	Fig. (D)	10
Periodic abnormal printing.	Fig. (E)	11
Some parts not printed.	----	12
White belts or some white stripes in vertical direction.	Fig. (F)	13
Poor fusing (Images are blurred or peeled off when touched by hands)	---	14

Figure 7.22.1 Abnormal Symptoms of Image Troubles (Example)





**Service Guide OKIOFFICE 84**  
**Chapter 7 Troubleshooting**

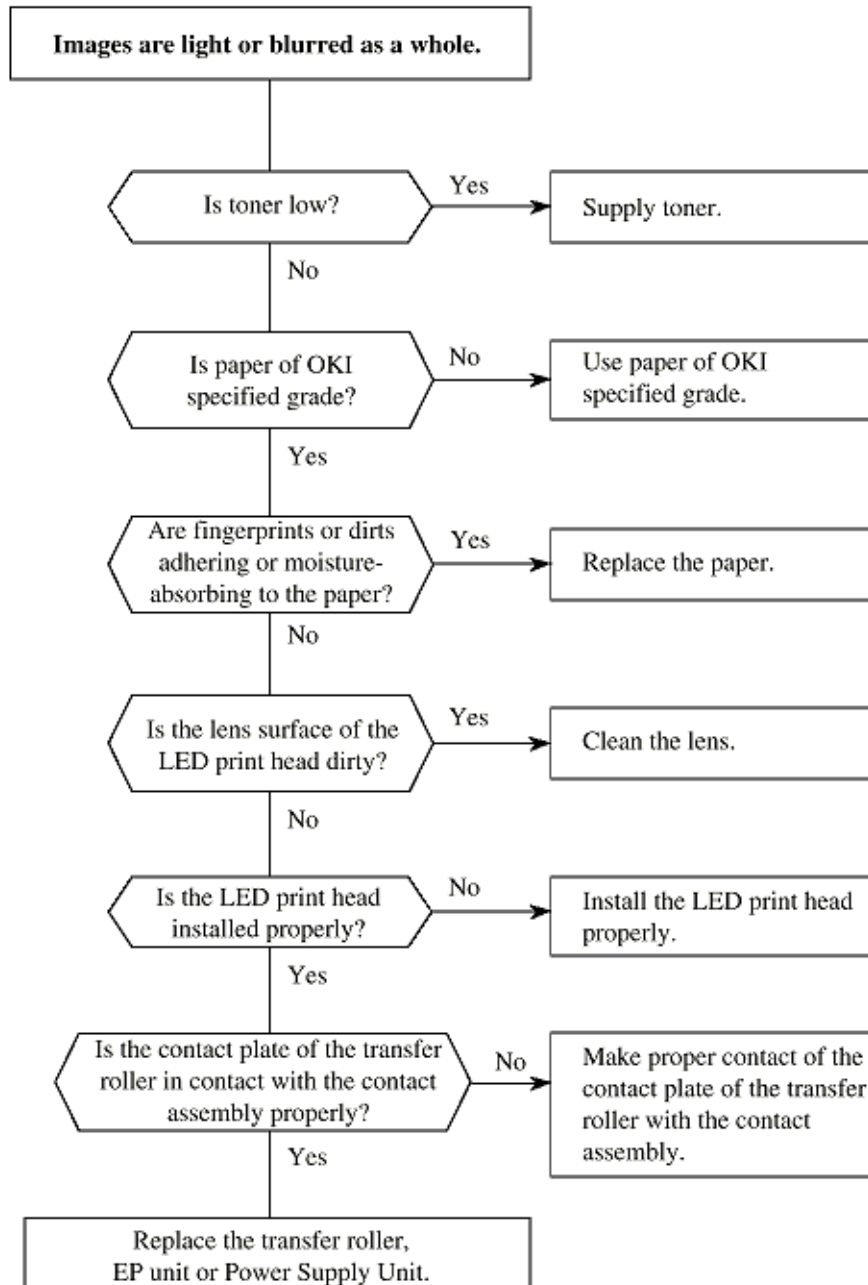
---

**Action Items (Printer Unit-LCD Message) Table 7.22.2**

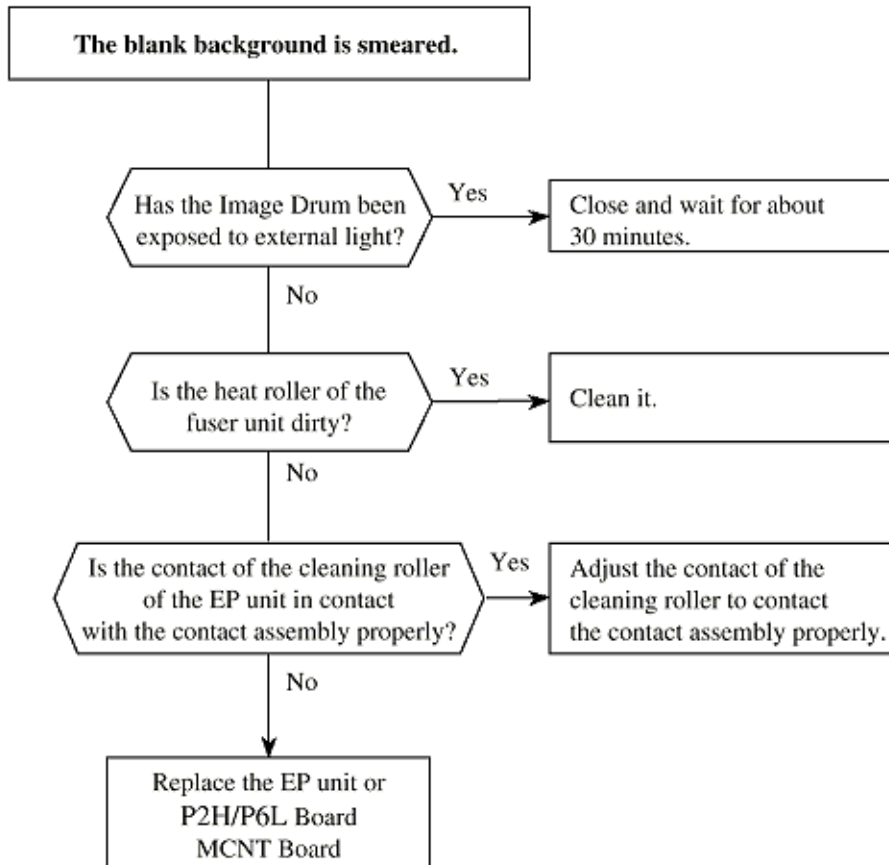
<b>No.</b>	<b>ACTION</b>
1	Check MCNT Board.
2	Check P2H/P6L Board cover open switch, cover open switch connection. Check MCNT Board.
3	Return to Section 7.1.
4	Replace the Image Drum (EP) Unit.
5	Check installation of MCNT board, Power Supply Unit Board.
6	Check MCNT Board.
7	Check thermister (resistance of about 200 kilo ohms at room temperature and about 140 kilo ohms at high temperature), POWER SUPPLY UNIT.
8	Check connection between the PWU and the fuser assembly, heater, thermostat.
9	Check PWU.
10	Check Sensor-E, magnet-H, hopping roller, pulse motor, MCNT Board, Action of Idle gear-P.
11	Check Gear-T, MCNT Board, P2H/P6L Board.
12	Check exit sensor lever, PWU
13	Check MCNT Board.
14	Check PWU, MCNT board.

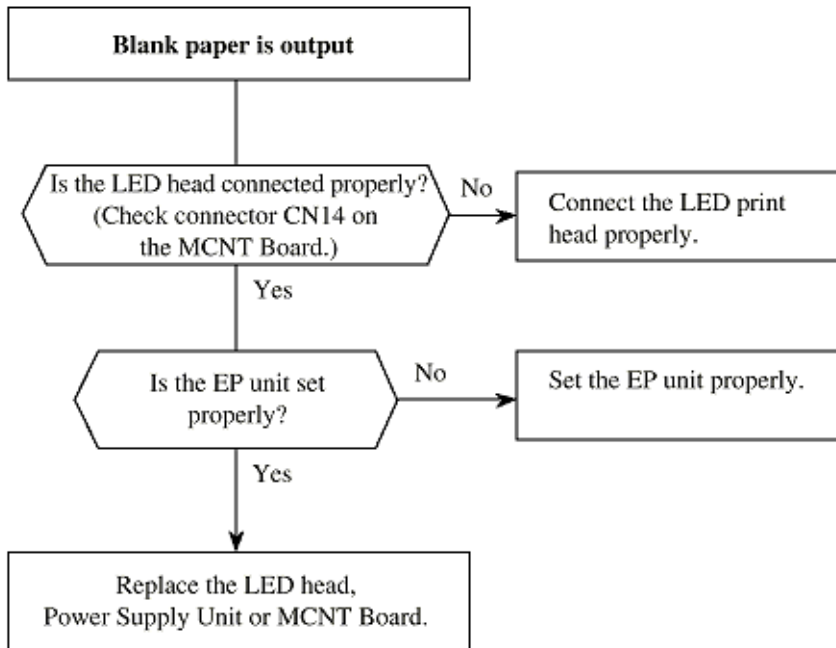


7: Light or Blurred Output

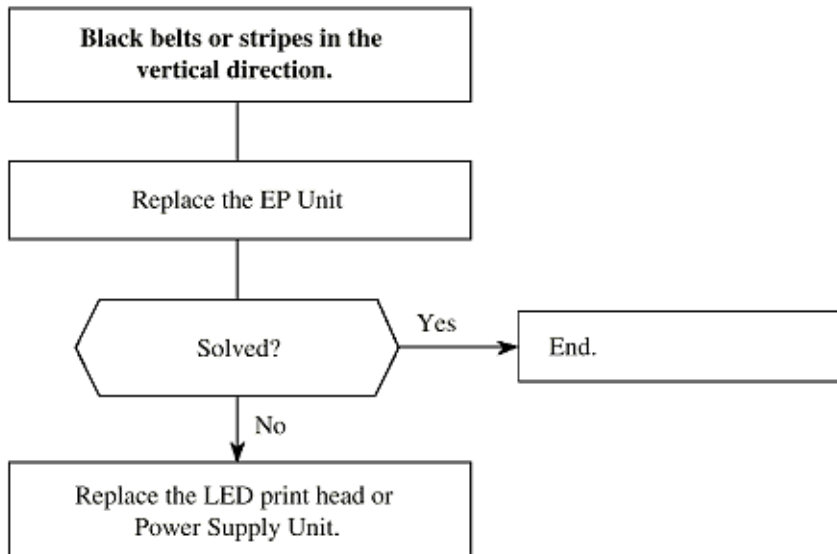


---

**8: Smearred Background on Output**

**9: Blank Output**

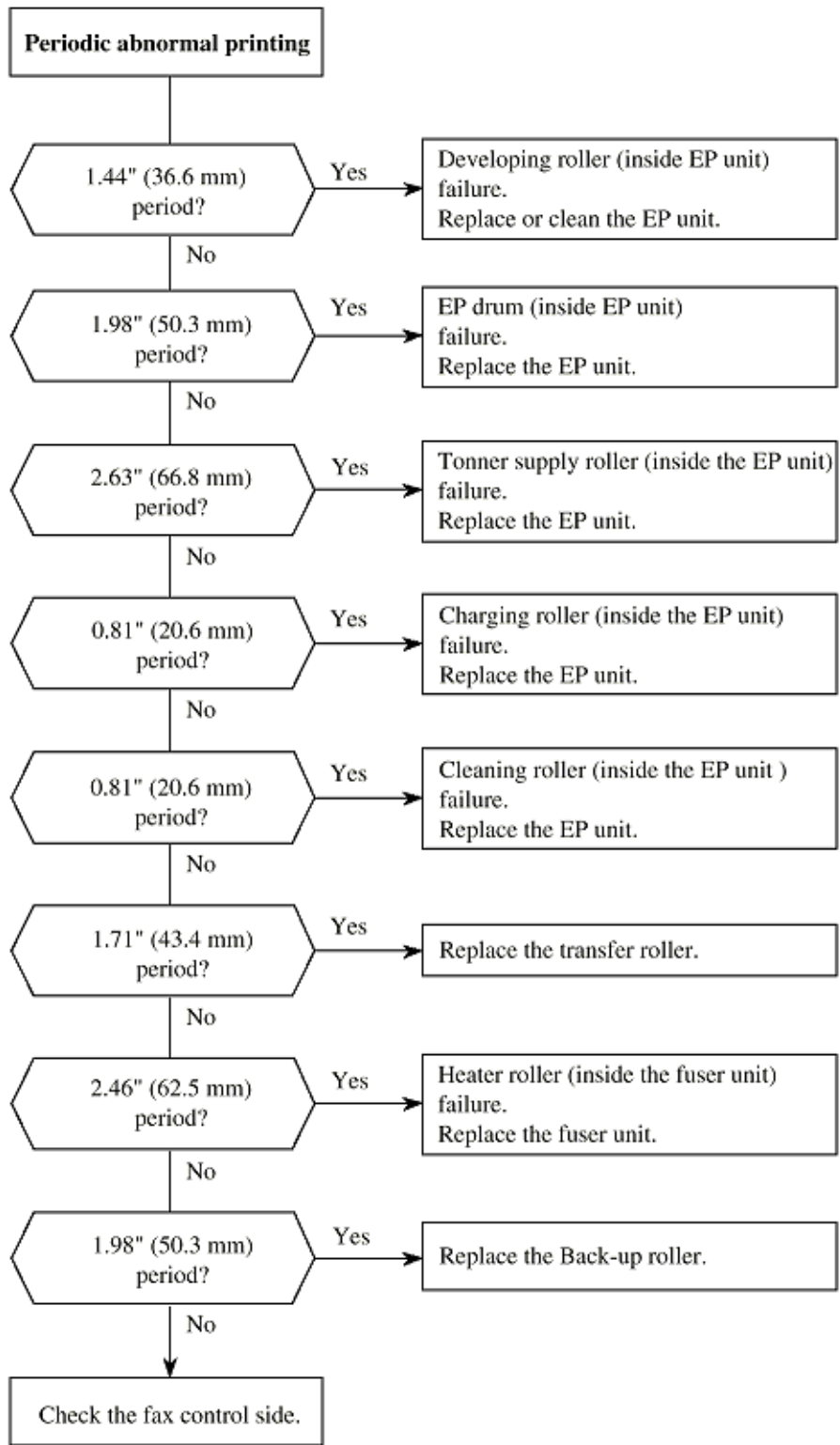
---

**10: Vertical Black Stripes on Output**



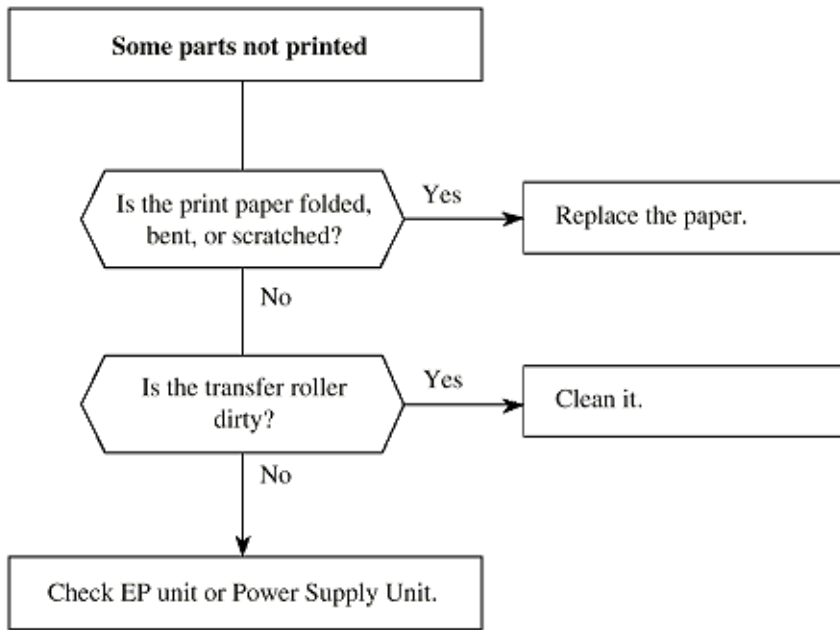
---

**11: Evenly Spaced Marks on Output**



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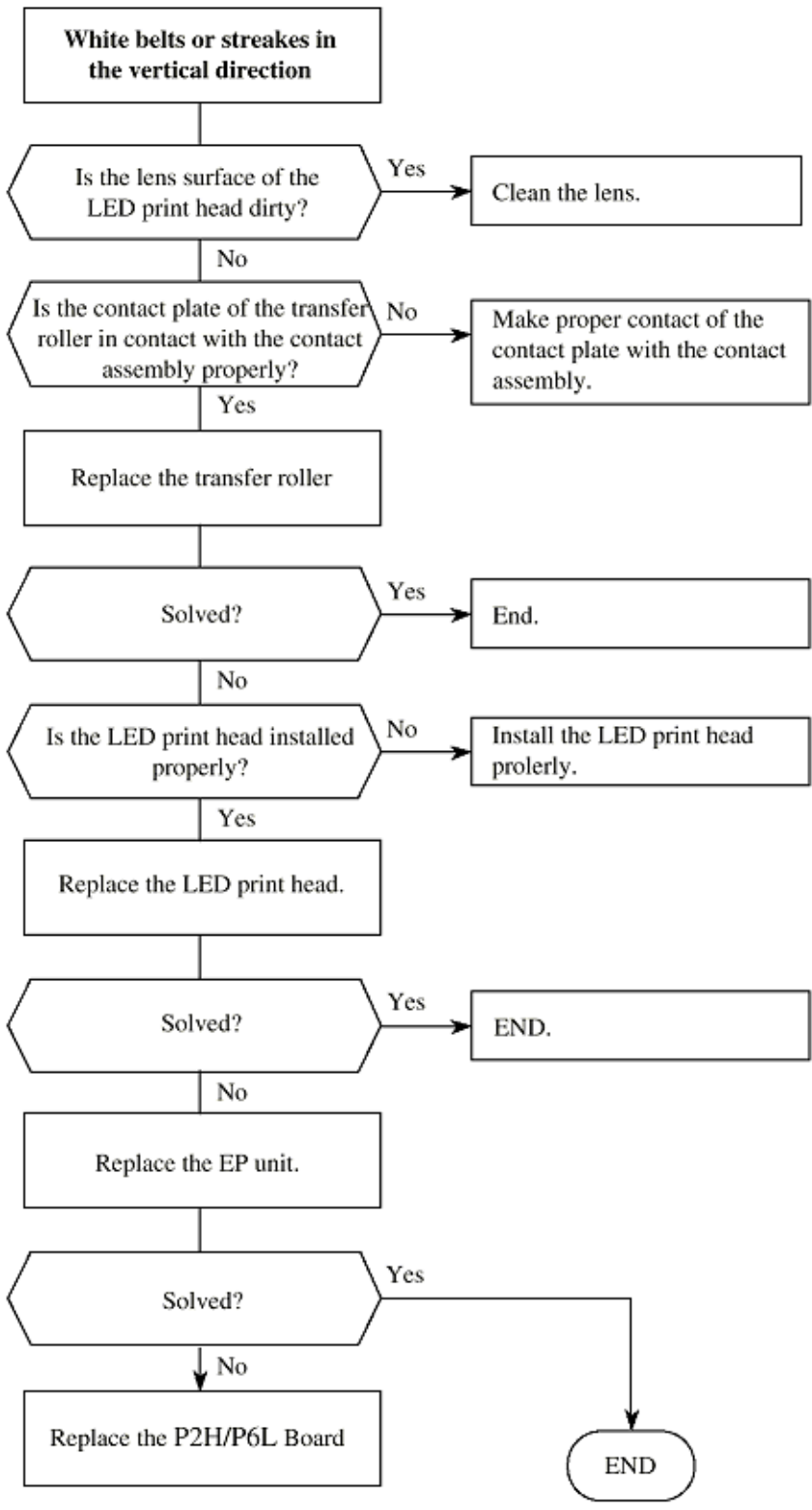
**12: Missing Print on Output**





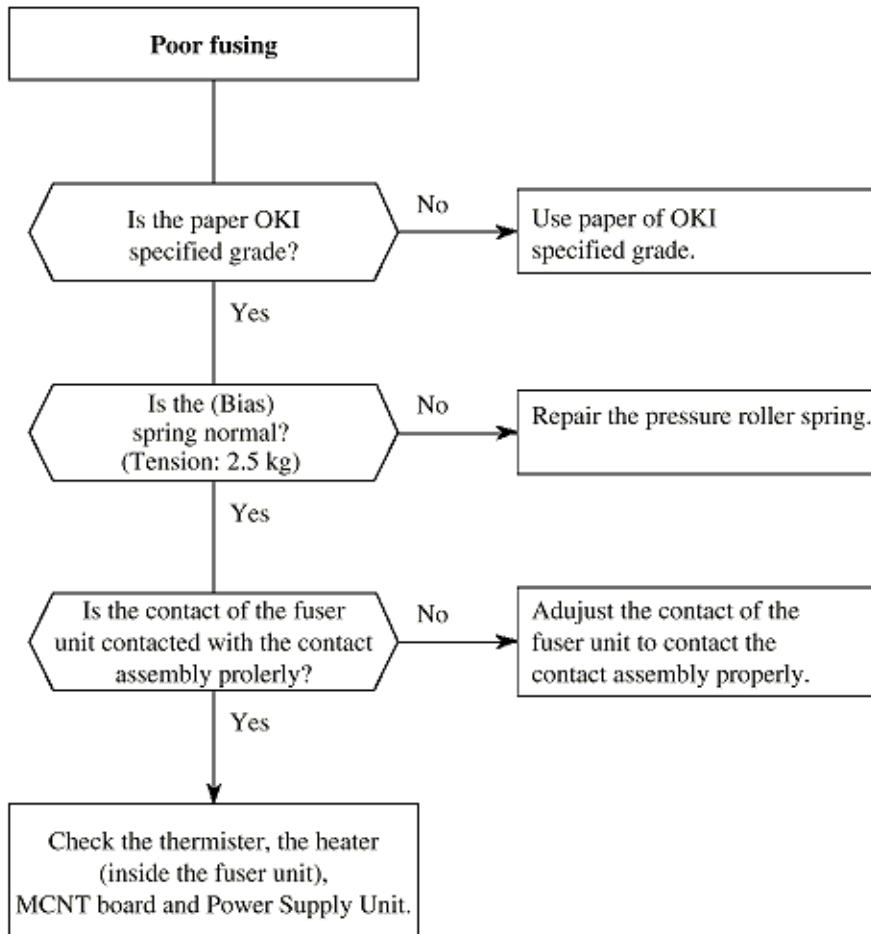
---

**13: Vertical White Stripes on Output**



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14: Poor Fusing





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### Preface

This manual has been designed to provide basic information concerning the electric section for the component-level maintenance of the OKIOFFICE 84/OKIFAX 4500 facsimile transceiver. It includes such information which will help maintenance personnel to understand the circuit operations.

This manual will also provide the reader information concerning the functions of units and the relationships among the units which will assist you in conducting unit-level maintenance.

Detailed circuit diagram has been omitted from this manual to avoid duplications of contents with other associated manuals, For information not contained in this manual, refer to:

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Service Caution

**DANGER**

Do Not  
Touch !

HIGH VOLTAGE

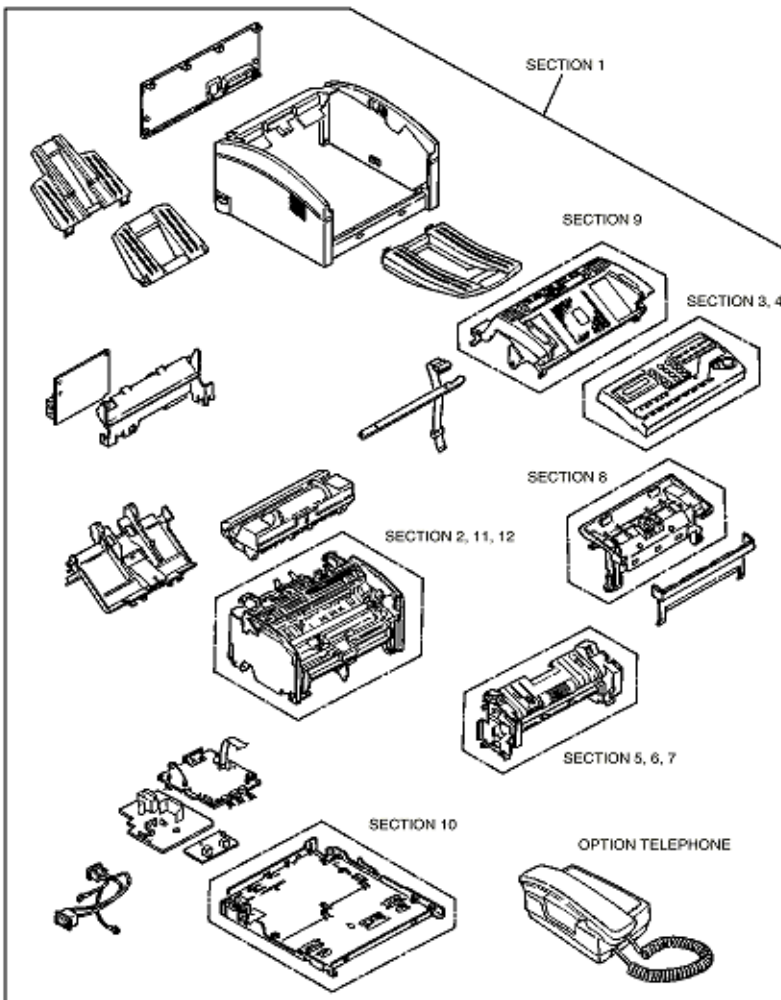


You may be subjected to high-voltage electric shock by touching the following parts without an insulating material:

- a. High-voltage unit
- b. Contact ass'y

**A1.1 Unit Configuration and Block Diagram**

1. The unit configuration is as follows:

**OKIOFFICE84****Figure A.1.1 Unit Configuration (Modifying)**

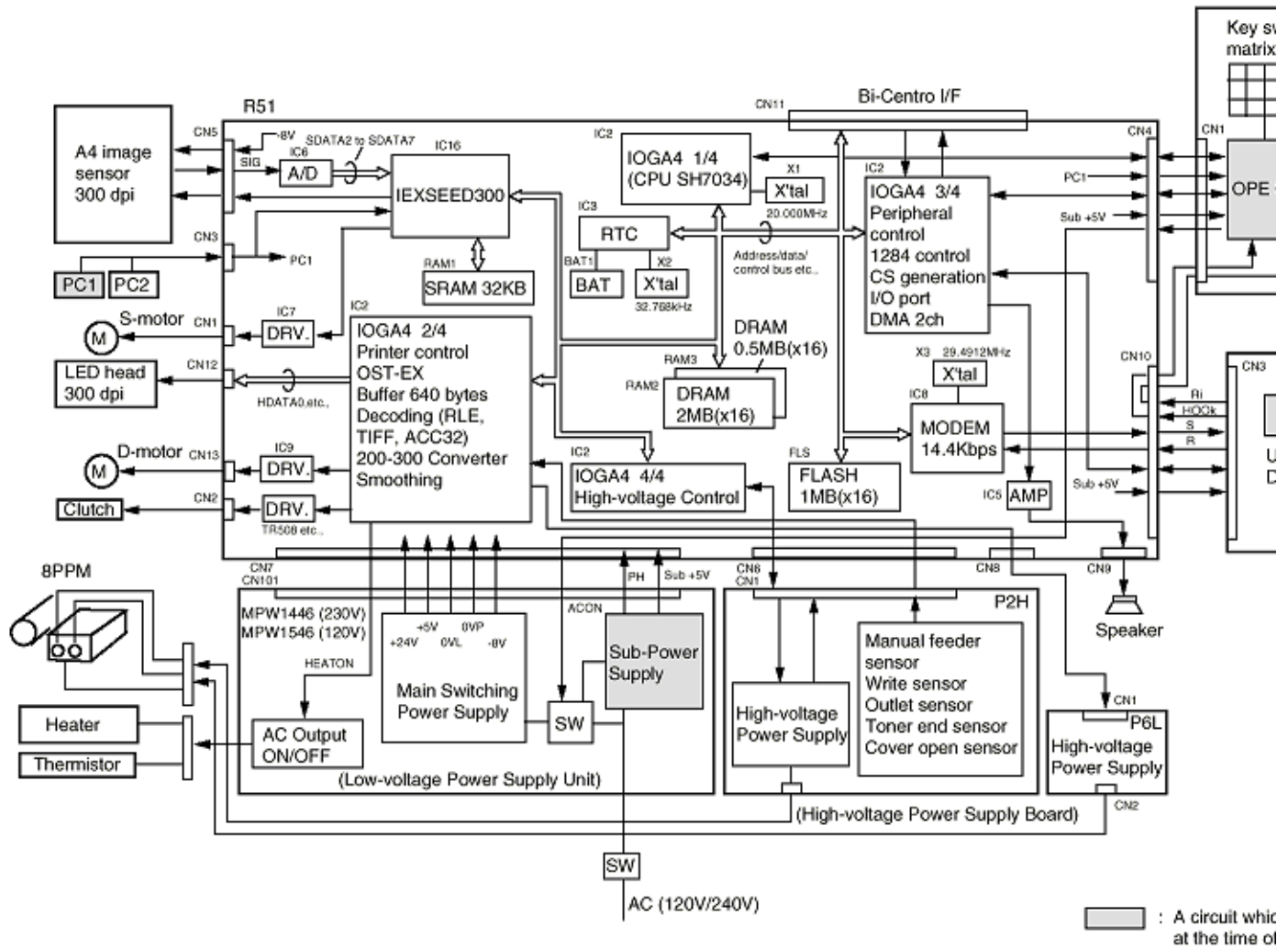
- (1) Main control board (R51)
- (2) Network control unit (NCU)
- (3) Power supply unit (MPW1446 (230V), MPW1546 (120V))
- (4) Operation panel board (04W)
- (5) High Voltage Board (P2H)
- (6) High Voltage Board (P6L)

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OKIOFFICE 84 Block Diagram Figure (A1.2.1)



: A circuit which is active at the time of printing



## Service Guide OKIOFFICE 84

### Chapter A Board Descriptions

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#### Block Diagram Abbreviations

A/D	Analog-to-digital converter
AMP	Amplifier
BATT	Battery
CNi	Connector number i
CPU	Central processing unit
D-MOTOR	Drum motor
DRV	Motor drive
DRAM	Dynamic random-access memory
IEXSEED300	Image processing gate array
FLASH	Flash memory
IOGA 4	Input output gate array
PCi	Photocoupler number i
POW.UNIT	Power supply unit
RTC	Real time clock
S-MOTOR	Send motor
SRAM	Static random-access memory
X'tal	Crystal oscillator



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### A1.2 Function of Each Unit

The section describes the principal functions of the individual units of the OKIOFFICE84 electrical sections.

Figure A1.2.1 shows the pertinent block diagram.

#### **Main Control (R51) Board**

**Operation Panel Unit: O4W board**

**NCU Board**

**Power Supply Unit**

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### Main Control (R51) Board

- IOGA4 (Input/output gate array 4) 1/4: CPU SH7034  
Basic processor  
Scanning control  
Picture processing control  
Printing control  
SIO (Serial input/output) control
- IOGA4 (Input/output gate array 4) 2/4, 3/4, 4/4  
Scanning control  
Printing control  
Peripheral input/output control
- Flash memory (Instead of EP-ROM and SRAM)  
Memory storage for work area.
- DRAM  
Memory storage for ECM operations, memory broadcast, delayed broadcast, etc.
- Back-up battery circuit
- Real-time clock IC
- Audio monitor circuit
- Contact image sensor control
- I EXSEED300  
Image data processing
- SRAM  
Memory storage for image picture data
- Supervision of the following external statuses:  
Presence of document on hopper  
Presence of document at scanning position
- Send motor control
- Drum motor control
- Modem chip  
Modulation and demodulation for V.33 and V.17  
Modulation and demodulation for V.29 and V.27 ter  
Modulation and demodulation for V.21  
Generation of single-frequency signals for tonal signals  
Detection of single-frequency tonal signals  
Generation of dual time multiple-frequency signals for tone dialing



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### Operation Panel Unit: O4W board

- Supervision of switches on operation panel
- Control of LEDs on operation panel
- Control of LCD on operation panel  
LED : Light-emitting diode  
LCD : Liquid crystal display

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**NCU Board**

UNC5 ----- For US and Canada

WN5 ----- For Denmark, Norway, Sweden, Finland, The Netherlands, Ireland, Portugal, New Zealand, Australia, Belgium, Spain, Greece and Other countries

DN5 ----- For Germany, Switzerland and Austria

FN5 ----- For France and UK

- Conversion of receive data and receive signals to internal signal level
- Conversion of send data and send signals to external signal level
- Generation of dial pulses to telephone line
- Detection of ringing signal
- Detection of busy tone (conjunction with Modem unit)
- Detection of hook up signal
- Interface with telephone handset (option)
- Output of send data and send signals to telephone line
- Input of receive data and receive signals from telephone line



---

**Power Supply Unit**

- Conversion of main alternating current to the following direct currents:
  - +5V DC power supply
  - 8V DC power supply
  - +24 V DC power supply
  - +30 V DC power supply
- Supplying of main alternating current to fuser unit
- Generation of medium voltages +300V, -300V, +400V, -450V and 0V
- Generation of high voltages -1.35 kV, -0.75 kV and +3.5 kV



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**A2.1 Signal Flow Explanation**

**Copy Mode**

**G3 Send Mode**

**G3 Receive Mode**

**300bps Send Mode**

**300bps Receive Mode**

**Report Printing**

**Memory Transmission**

**Memory Reception**

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**Copy Mode**

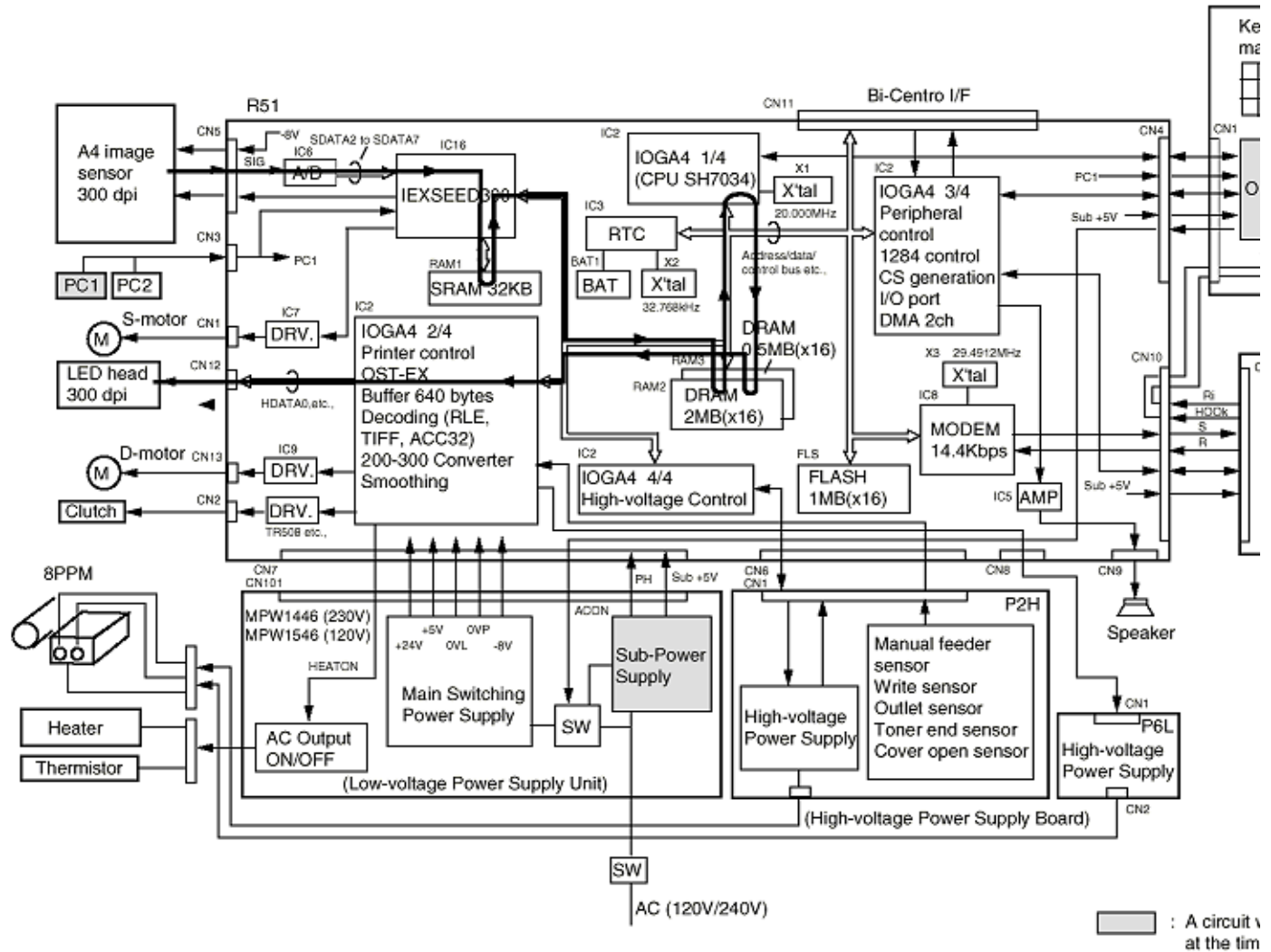
Figure A2.1 shows the picture signal route in local copy mode.

One-line picture data is transferred to A/D converter (analog/digital) via operational amplifier from the scanning unit (CIS: contact image sensor) as an analog data. After conversion from analog data to 6-bit digital data by A/D converter, the picture data is sent to IEXSEED (image processing LSI) and SRAM. Here, the picture data undergoes various kinds of picture processings (IEXSEED and SRAM), converted to two-level binary data (black and white) and then sent to IOGA4 (scanning control). The one-line binary picture data from IOGA4 is stored into DRAM. When the data for one page has been stored in the DRAM, the data is read out from the DRAM and sent to IOGA4. The data is converted into a serial data by the picture control of IOGA4 and transferred to the LED print head for printing as HDATA0. Writing of data into the page memory is also possible during the printing operation.

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Copy Picture Signal (Figure A2.1)





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### **G3 Send Mode**

Figure A2.2 shows the G3 send picture signal route.

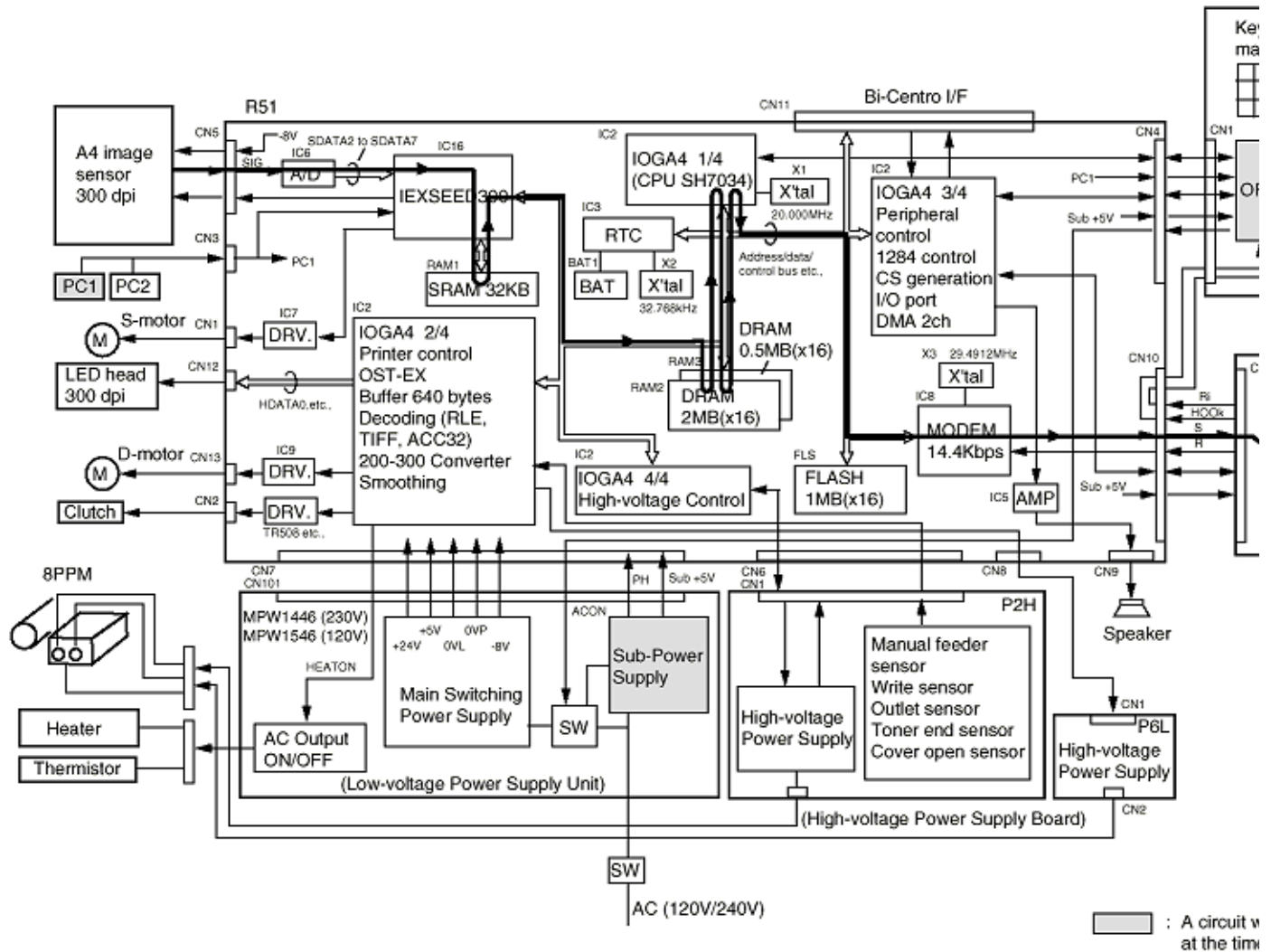
In the G3 mode, the data transfer route from the scan unit up to the DRAM is the same as in the copy mode described in (1).

The picture data for one-line is transferred from DRAM to IOGA4 (CPU). The IOGA4 (CPU) performs the picture data processing (encode) for this picture data (FILLER, fill bits are inserted etc.) and again stores into the DRAM. The stored encoded data is output from DRAM to the MODEM under the control of IOGA4 (CPU). After modulation, the picture signal "S" is sent to the NCU board as the transmission data. The transmission data "S" goes through the amplifier and is sent to the telephone line L1 and L2 via the transformer T1 as high speed signal.

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G3 Send Picture Signal (Figure A2.2)





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### **G3 Receive Mode**

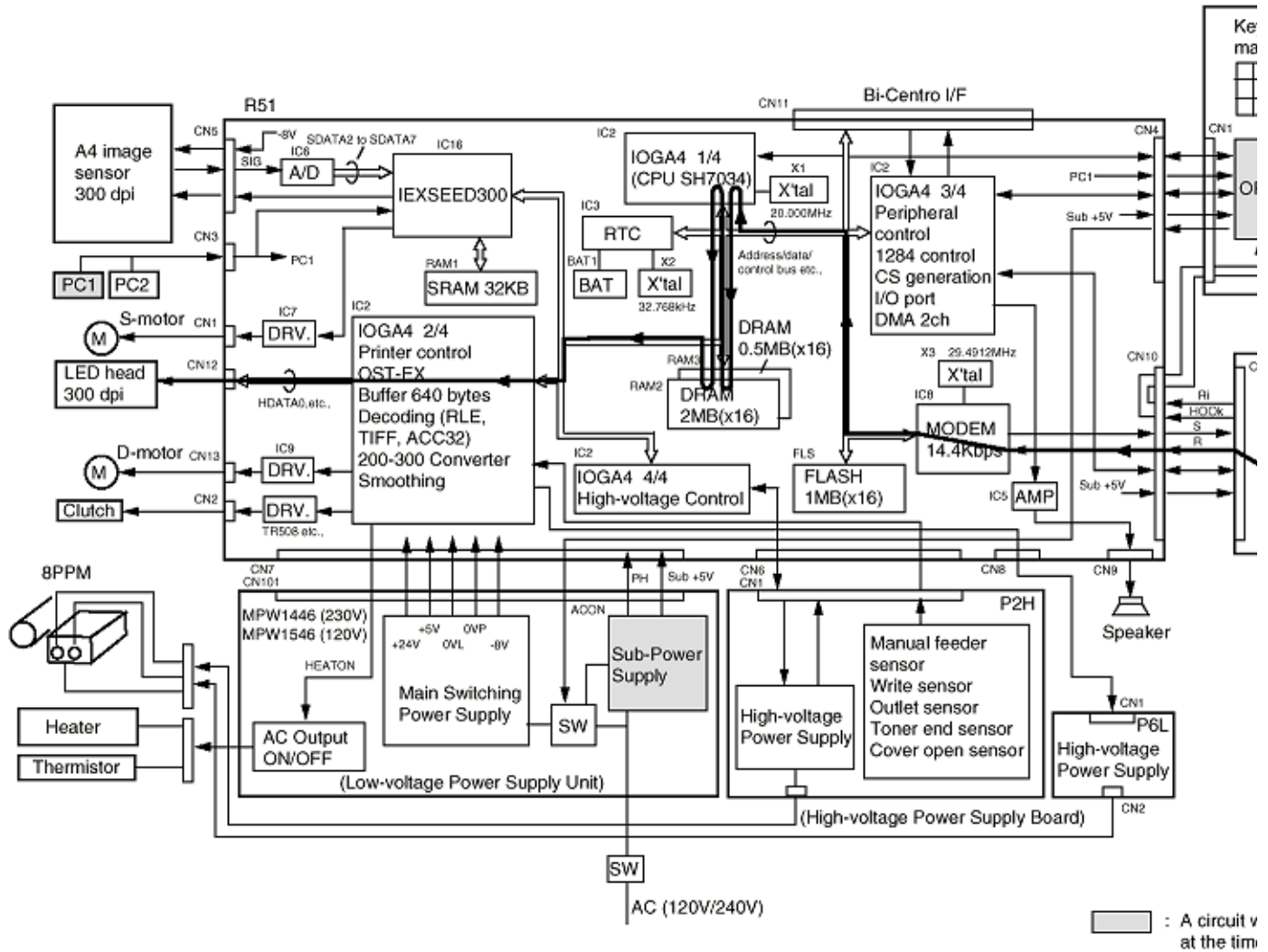
Figure A2.3 shows the G3 receive picture signal route.

In the G3 mode, the high-speed picture signal arriving from the telephone line at L1 and L2 of NCU passes through the transformer T1 and the amplifier and is input to the MODEM as "R" signal. After demodulation by modem, the picture data is sent to IOGA4 (CPU). The IOGA4 (CPU) performs the picture data processing (decode) for this picture data and stores into the DRAM. Then, the stored picture data is again written into DRAM (as a page memory) by the picture processing control of IOGA4 (CPU). When the data for one page has been stored in the DRAM, the data is read out from the DRAM and sent to IOGA4. The picture data is converted into a signal data by the printer control of IOGA4 and transferred to the LED print head for printing as HDATA 0.

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G3 Receive Picture Signal (Figure A2.3)





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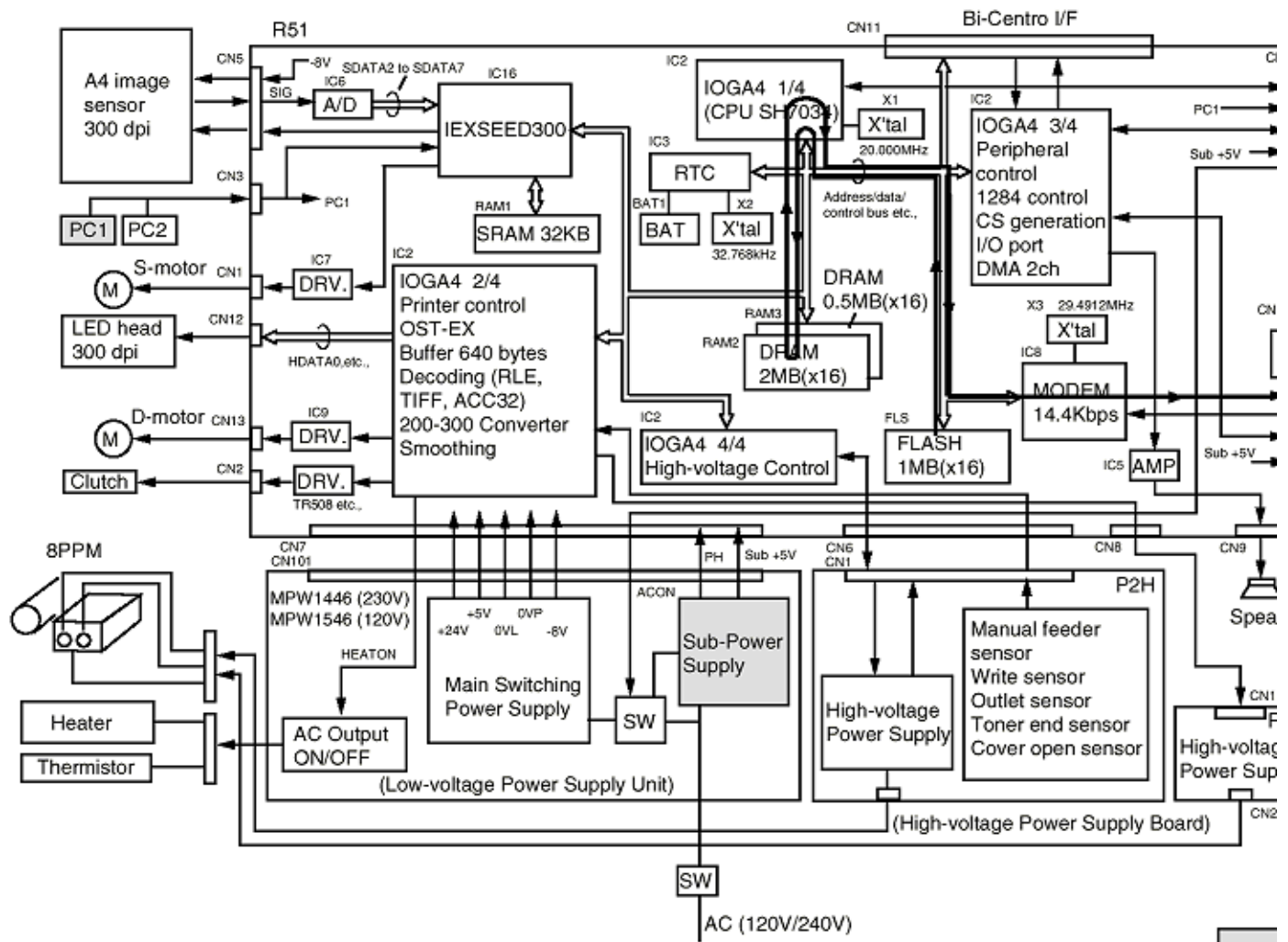
### **300 bps Send Mode**

Figure A2.4 shows the 300bps send protocol signal route.

In G3 communication, this is the route of the procedural control signals (pre-message, post-message phases etc.) at 300bps.

The protocol send data is read into DRAM in the sequence the contents of various data stored in the FLASH memory area in advance under the control of IOGA4 (CPU). The contents of the frame has been edited on the DRAM by IOGA4 (CPU) and sent to MODEM via IOGA4 (CPU). HDLC (high level data link control) frame of the data is structured by the modem and converted to serial data in synchrony with the modem's DCLK (data clock). After modulation, the protocol signal is output from "S" of the modem and sent to the telephone line L1 and L2 via the transformer T1 of NCU.

300 bps Send Signal (Figure A2.4)







## Service Guide OKIOFFICE 84

### Chapter A Board Descriptions

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#### 300 bps Receive Mode

Figure A2.5 shows 300bps receive protocol signal route.

In G3 communication, this is the route of the procedural control signals (pre-message, post-message phases etc.) at 300bps.

The 300bps modulated signals received via the telephone line L1 and L2 of the NCU are sent from pin R to Pin RXA1 of the modem. After demodulation by the modem, the demodulated digital signals are sent to the IOGA4 (CPU) via the data bus from the modem. The data is read and decoded by the IOGA4 (CPU) and written into the DRAM. The written data is interpreted according to bit assignment of the binary procedural signals in the ITU recommendations. The successive modes of communication (for example, line density, encoding scheme, etc.) are determined.

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### **Report Printing**

Figure A2.6 shows the report printing signal route.

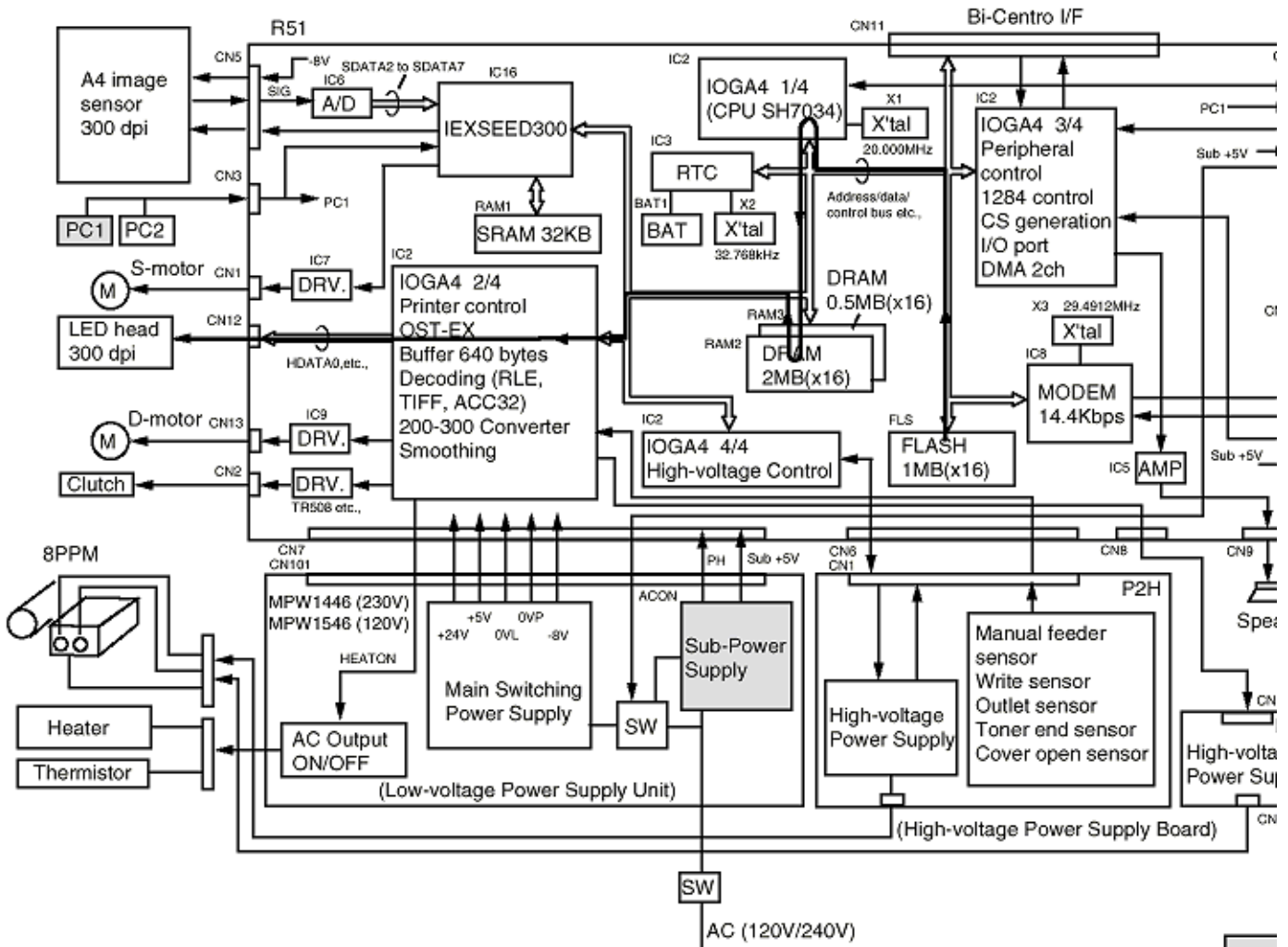
This signal route describes the printing route of character data used to print Activity Report, Message Confirmation Report, etc.

The report data is read into DRAM in the sequence the contents of data stored in the FLASH memory in advance under the control of CPU. The contents of data is edited on the DRAM. The data is read out from the DRAM and sent to IOGA4. The data is converted into a serial data by the picture control of IOGA4 and transferred to the LED print head for printing as HDATA 0.

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Report Print Signal (Figure A2.6)





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**Memory Transmission**

This signal route describes the memory transmission used in broadcast mode, delayed broadcast mode, etc.

The stored encoded data undergoes buffering, passes through CPU, MODEM and NCU and then sent out to the telephone line.

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### Memory Reception

This signal route describes the memory reception used in no-paper mode, no-toner reception, confidential mode, etc.

The encoded data received by the same route of (3) G3 receive mode undergoes the picture data processing and stored into memory (DRAM) as such. In case of printing, When the data for one page has been stored in the memory (DRAM), the data is read out from the memory and sent to IOGA4 (CPU). The printed data is converted into a serial data by the printer control of IOGA4 (CPU) and transferred to the LED print head for printing as HDATA 0.

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**A3.1.1 R51 Circuit Diagram (Page 1/12)****1. Block diagram**

The circuit diagram shown on page 1/12 consists of an input/output gate array IC2 (IOGA4), crystal oscillator circuit and reset signal generator.

Figure A3.1.1 shown the block diagram of IC2 (IOGA4) and the peripheral circuits.

**2. Function**

1) IOGA4 is newly developed LSI for scanning, printing control and provided with a built-in CPU.

- IOGA4 contains the following functions:

- Scanning sensor control
- Various image data processing control for scanning data
- Strobe signals control for LED head
- Smoothing control for printing data
- Interface of the peripheral LSI

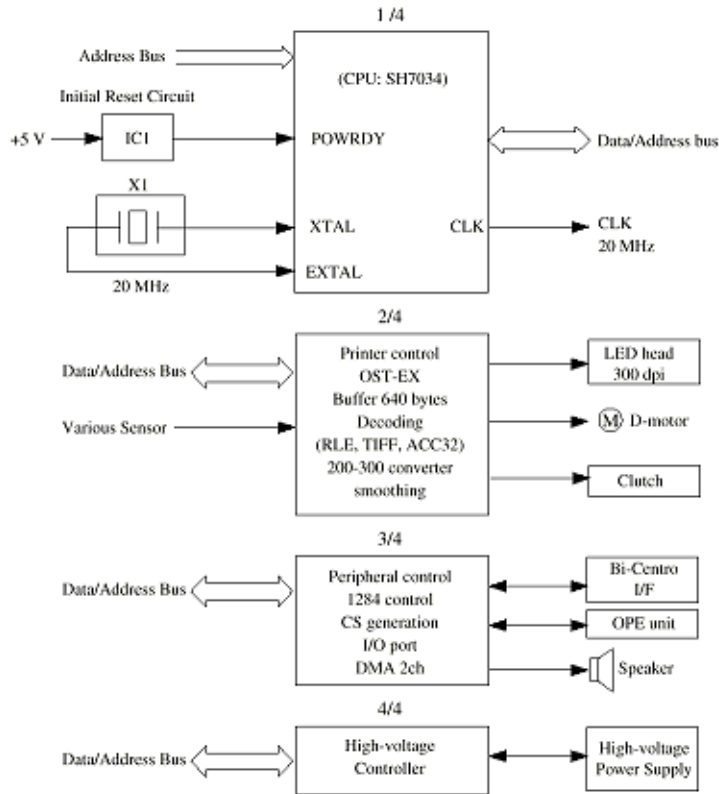
- CPU

CPU controls the following functions in addition to the basic processor.

- DMA (Direct Memory Access) control
- Interrupt procedure control
- A/D converter
- Bus state control
- Programmable pattern control
- 16 bit integrated timer pulse unit (ITU)
- Timing pattern control (TPC)
- Serial communication interface (SCT)

**2) Crystal oscillator circuit**

X1 is 20MHz crystal oscillator. The output wave is fed to the IOGA4 (CPU) through pin 14 and 15. CLK (20MHz) signal output from pin 94 is used as the system clock.



**Figure A3.1.1 Related Signals of IOGA4**



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### A3.1.2 R51 Circuit Diagram (Page 2/12)

#### 1. Block diagram

The circuit diagram shown on page 2/12 consists of Flash memory, DRAM, Real time clock IC and Back up battery circuit.

Figure A3.1.2 shows the block diagram of Flash memory, DRAM and Real time clock.

#### 2. Function

##### 1) Flash memory (FLS)

Flash memory (electrically erasable and programmable device) is used for the main software program, which is stored in EP-ROM of the current OKIFAX. Other than the function of EP-ROM, Flash memory is also used for the user data area instead of SRAM chips.

- 1M Byte Flash memory x 1 (FLS)

Used for work area, report recording etc.

##### 2) DRAM

RAM2: 2MB (x16) and RAM3: 0.5MB (x16)

- Used as follows:

Picture memory for the ECM send/receive mode.

Picture memory for the memory transmission mode.

Picture memory for the retransmission mode.

Picture memory for the reception in memory.

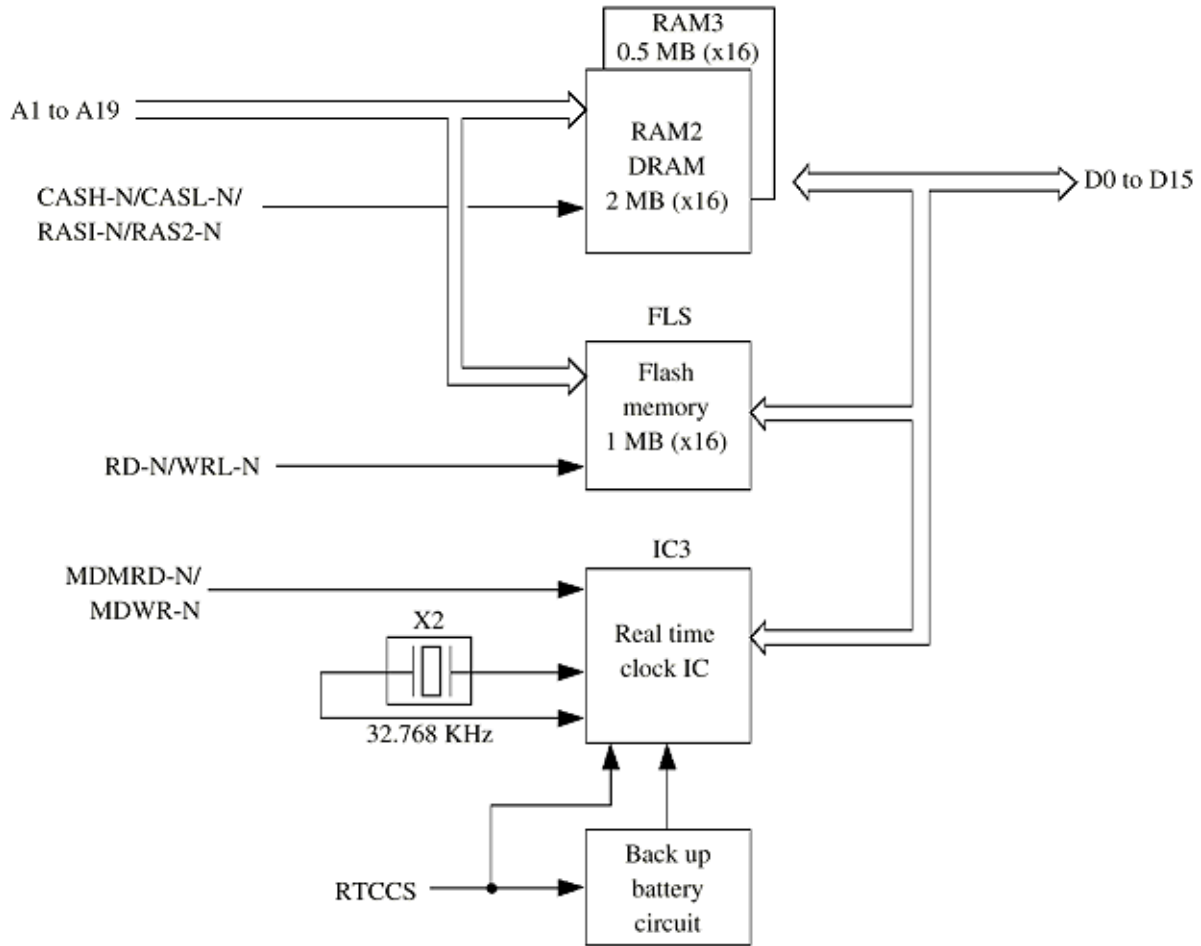
Editing for report printing.

##### 3) Back-up battery circuit

The non-rechargeable lithium battery supplies voltage to a real-time clock IC at AC main interruption.

##### 4) Real-time clock IC (IC3)

IC3 is a real-time clock IC used as a timepiece to display the data and time in year, month, day, hour, minute, and second units. Its input/output signals are the 4-bit data bus (D0 -D3), 4-bit address bus (A1 - A4) and the control signals, RTCCS, MDMRD-N and MDWR-N which perform a CPU-controlled read operation (M/D/Y H:M, Data read) and write operation (M/D/Y H:M, Data setting).



**Figure A3.1.2 Block Diagram of DRAM/Flash Memory and Real-time Clock IC**

---

**A3.1.3 R51 Circuit Diagram (Page 3/12)****1. Block diagram**

The audio monitor circuit on page 3/12 that consists of IC11 (analog switch IC) and IC5 (amplifier) generates the following audio monitor.

- Line monitoring
- Buzzer signals

Figure A3.1.3 shows the block diagram of audio monitor circuit.

**2. Function**

## 1) Line monitoring

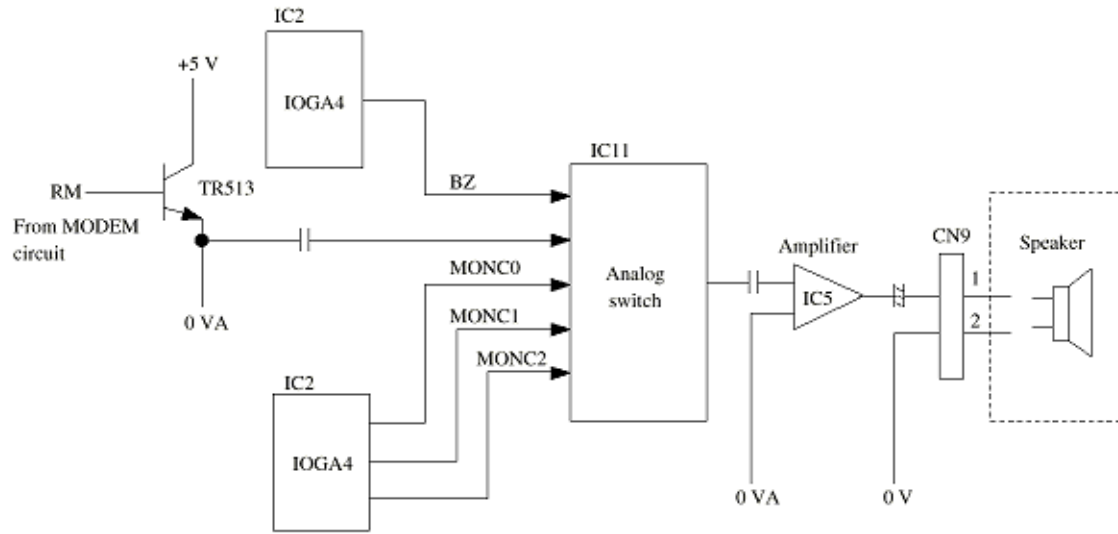
Send and receive signals are input from the transformer on the NCU board to this circuit as a R signal and the signal power is input to the IC11. The IC11 adjusts the monitor volume by MONC0, MONC1 and MONC2 signal under the control of IOGA4. Output (high and low) from IC11 passes through the amplifier and is fed to the speaker as a SP signal.

\* MONC0/MONC1/MONC2 signal: Volume control signal.

Note: In case of transmission mode, the monitor will be available during dialing, but the monitor will be switched off automatically after the elapse of specified time (about 5 sec).

## 2) Buzzer control

Alarm and other signals are input from IOGA4 to this circuit as BZ signals. The various buzzer signals are sounded under the control of IOGA4 (CPU).



**Figure A3.1.3 Block Diagram of Audio Monitor Circuit**

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**A3.1.4 R51 Circuit Diagram (Page 4/12)****1. Block diagram**

The circuit diagram shown on page 4/12 consists of the following functions:

- IC6 (A/D converter)
- Connector CN5 that provides an interface between R51 board and CIS (contact image sensor).

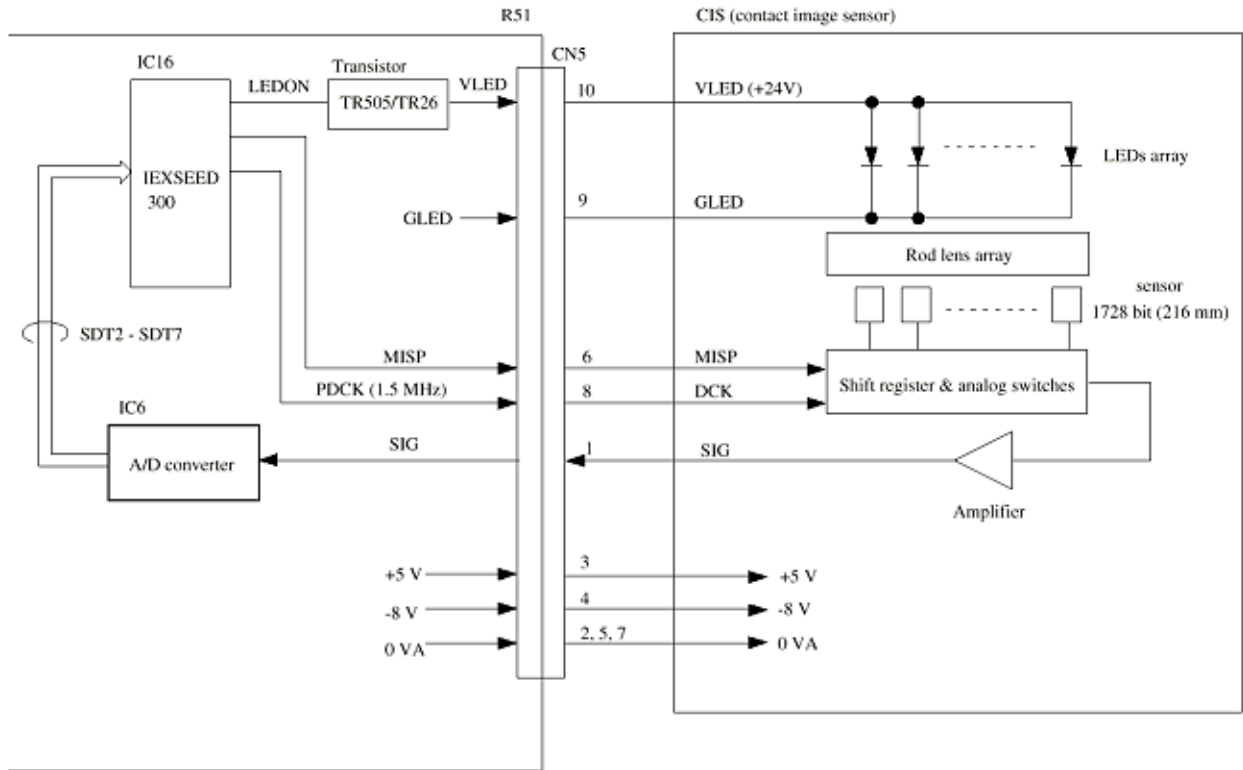
Figure A3.1.4 shows the related signals and block diagram of CIS.

**2. Function**

One-line picture data is read in the sequence from the scanning unit (CIS) as SIG signal (analog data) to A/D converter (analog/digital converter) of IC6. After conversion from analog data to 6-bit digital signal (SDT2 - SDT7) under the control of IC6, this picture data is sent to IEXSEED300 (Scanning control LSI) of IC16. Here, the picture data undergoes various kinds of picture processings.

Sensor interface signal output from IOGA4

- LEDON : LED on/off control signal
- SNSCLK : Scanning sensor drive clock (1.25 MHz)
- MISP : Scanning synchronous signal (2.5 msec)
- ADCLK : Sampling clock for A/D converter (1.25 MHz)



**Figure A3.1.4 Related Signals and Block Diagram of CIS (contact image sensor)**

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**A3.1.5 R51 Circuit Diagram (Page 5/12)****1. Block diagram**

The circuit diagram shown on page 5/12 consists of Modem (14.4 kbps).

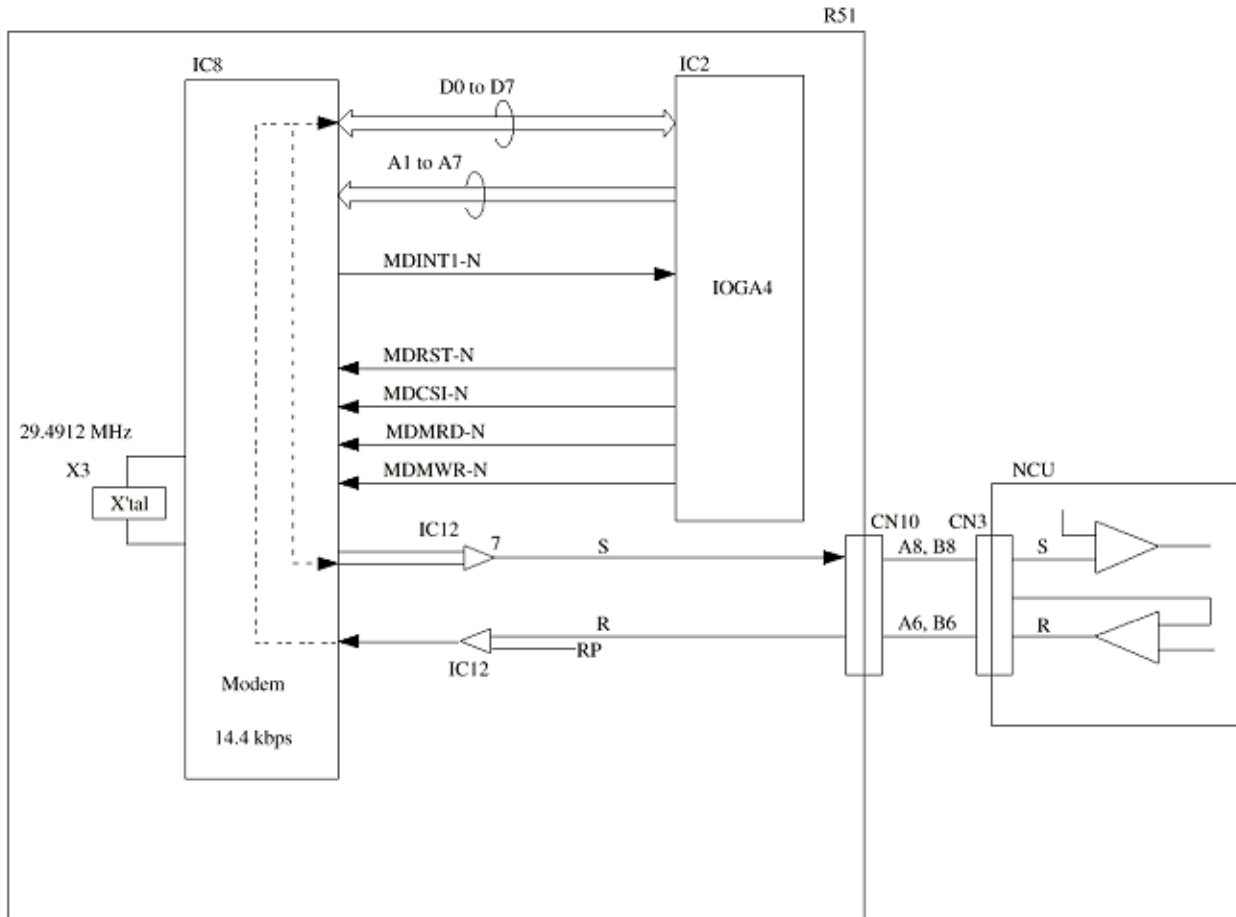
Modem consists the following functions:

- Modulation/demodulation

Modulation type:

- 1) ITU-T Rec. V17 (14400/12000/9600/7200 bps) for G3 picture data.
- 2) ITU-T Rec. V29 (9600/7200 bps) for G3 picture data.
- 3) ITU-T Rec. V27 ter (4800/2400 bps) for G3 picture data.
- 4) ITU-T Rec. V21 channel 2 (300 bps) for binary signals defined in ITU-T Rec. T.30.
  - Automatic adaptive equalizer for G3 receive data with 300 bps data excluded.
  - Generation of signal tones
  - PB tone (multi-frequency tone) generation
  - Detection of single tones
  - D/A converter for send data (TX)
  - A/D converter for receive data (RX)
  - Amplitude equalizer for RX
  - Selectable attenuation for TX
  - Automatic gain control

**Figure A3.1.5 shows the related signals of Modem.**



**Figure A3.1.5 Related Signals of Modem**



**A3.1.6 R51 Circuit Diagram (Page 6/12)**

**1. Block diagram**

The circuit diagram shown on page 6/12 consists of connector CN12 that provides an interface between R51 board and LED print head.

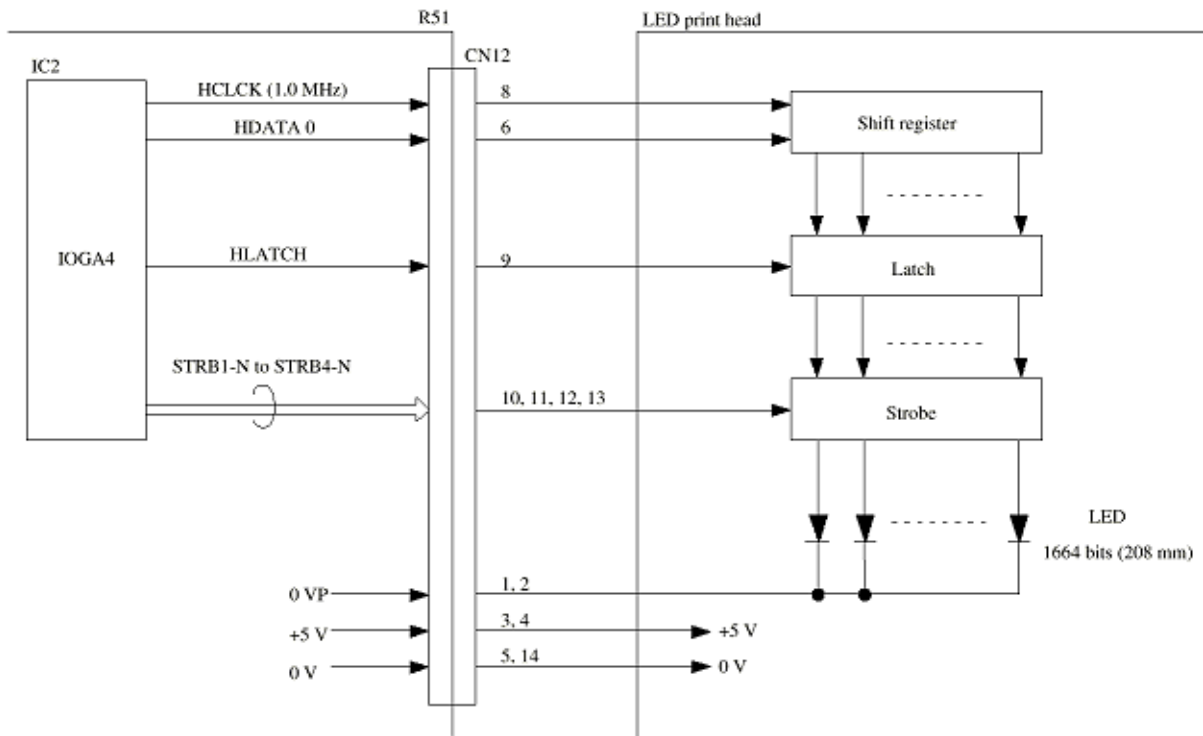
Figure A3.1.6 shows the related signals and block diagram of LED print head.

**2. Function**

Data of 1664 LEDs on the LED print head is loaded into the shift registers by the HCLCK (4MHz or 6.7 MHz) signal. After the 1664 bit (208 mm) data is loaded in the shift registers, it is then loaded in the latch circuit by the HLATCH signal. The turning -on and off of the LEDs are controlled by STRB1-N to STRB4-N signals.

LED head interface signals output from IOGA4

- HDATA 0 : Print data i.e., data to be printed
- HCLCK : Transfer clock for print data (4.0 MHz or 6.7 MHz)
- HLATCH : Latch signal for print data
- STRB1-N to STRB4-N : LED head strobe signals



**Figure A3.1.6 Related Signals and Block Diagram of LED Head**

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**A3.1.7 R51 Circuit Diagram (Page 7/12)****1. Block diagram**

The circuit diagram shown on page 8/12 consists of the following connectors:

- Connector CN10 that provides an interface between R51 board and NCU board.
- Connector CN3 that provides an interface between R51 board and external electro-mechanical components (PC1 and PC2).
- Connector CN4 that provides an interface between R44 board and OPE (O4W) unit.

Figure A3.1.7 shows an interface between R51 board and NCU board.

Figure A3.1.8 shows an interface between R51 board and OPE unit.

Figure A3.1.9 shows the related signals of PC1 and PC2.

**2. Function****1) External status supervising interface (PC1/PC2)**

External status is detected by the photocouplers (PC1/PC2) in the mechanism and the signal is output to the input port of CPU via this interface circuit.

- PC1: Presence of document on hopper.

When sub-power supply is applied to the fax machine, this signal is output to OPE unit which will control the main-power supply.

- PC2: Presence of document at scanning position.

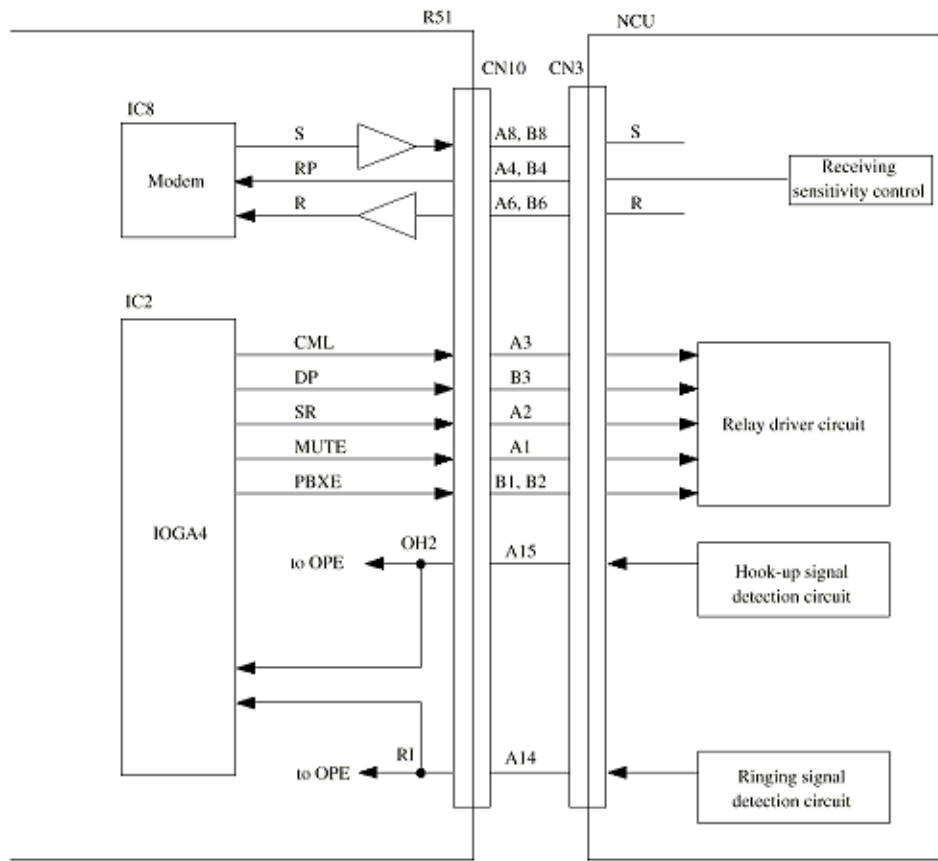
**3. Others****NCU interface signal**

- CML : Line seizure control signal
- DP : Dial pulse control signal
- SR : Control signal for connection between LINE and TEL terminals
- MUTE : Control signal for pulse dial improvement and bell shunt relay
- PP : Relay control signal for special service code detection at parallel pickup or remote reception
- PBXE : Control signal for connecting one of LINE terminal to the PBXE terminal
- OH2-N : Detection of off-hook of terminal connected to TEL-1 or TEL-2
- OH1-N : Output upon circuit current detection after fax line seizure
- RP : Receiving sensitivity determination terminal
- RI : Ringing detection signal

- S : Send signal (picture data/protocol/tonal signals/PB tone etc.)
- R : Received signal (picture data/protocol/tonal signals etc.)

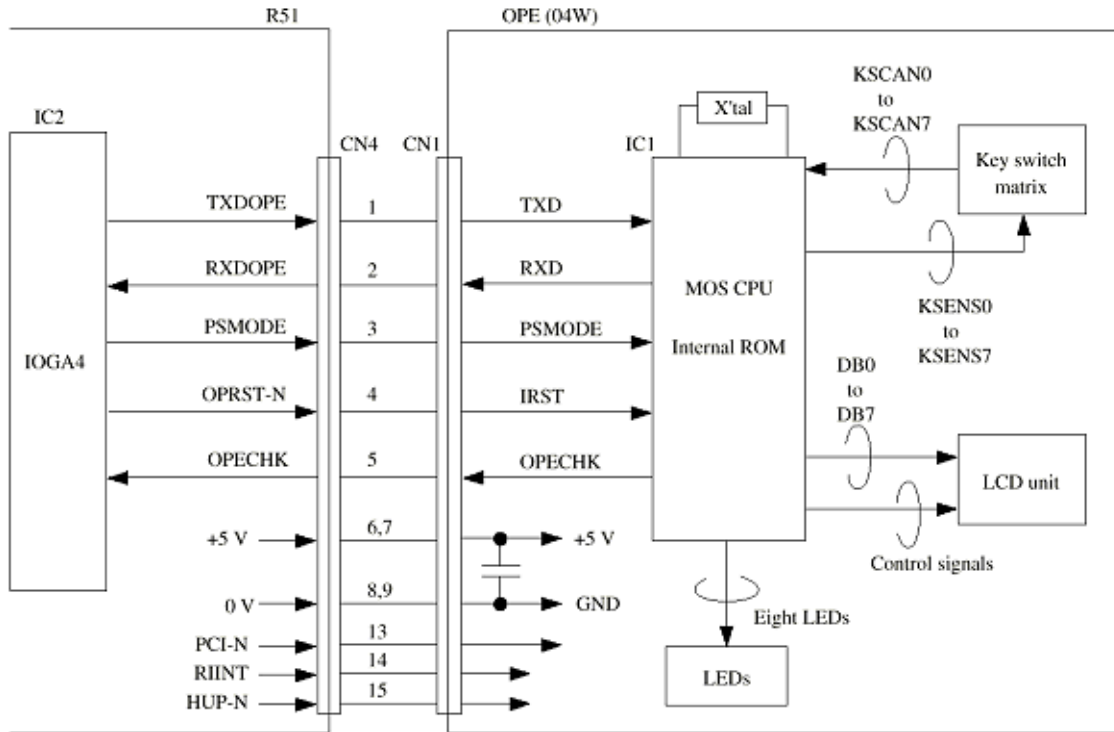
**OPE interface signals**

- TXDOPE : This signal transmits sequentially the contents of each data of TXD (LED on/off information, etc.) to OPE in serial data from CPU.
- RXDOPE : This signal transmits sequentially the contents of each data of RXD (key code information, etc.) to CPU in serial data from OPE.
- OPECHK : Use to monitor the operation of the OPE unit.
- OPERST : Reset signal for OPE unit



**Figure A3.1.7 Interface between R51 Board and NCU Board**

**A3.1.8 R51 Circuit Diagram (Page 8/12)**



**Figure A3.1.8 Interface between R51 Board and OPE (operation unit)**

**1. Block diagram**

The circuit diagram shown on page 8/12 consists of the following functions and connectors:

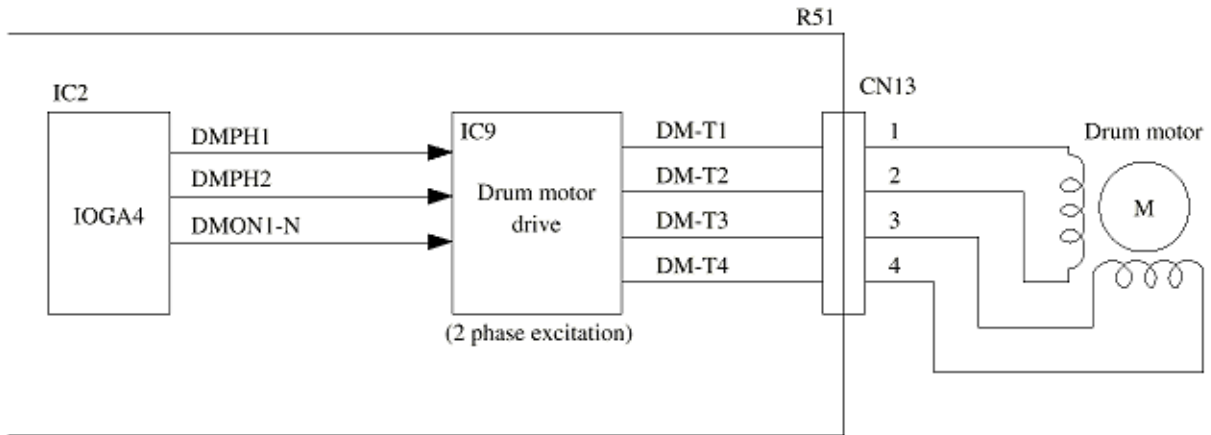
- IC9 (Drum motor driver)
- Connector CN13 that provides an interface between R51 board and the drum motor.

Figure A3.1.11 shows the related signals of the drum motor and clutch.

**2. Function**

- 1) Drum motor control

This drum motor is driven by the motor driver IC9. It is two-phase excited and bipolar-driven according to the DMPH1, DMPH2 and DMON1-N signals that are generated from the IOGAA (CPU). This drum motor rotates the image drum.

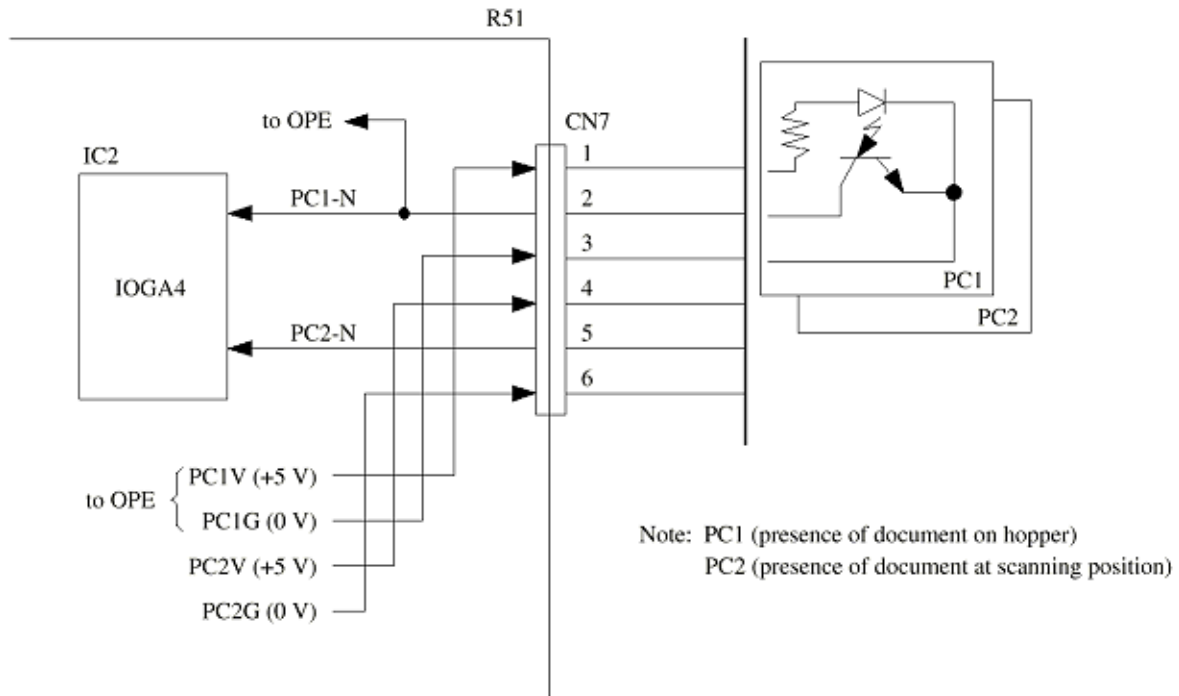


**Figure A3.1.10 Related Signals of Drum Motor**

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A3.1.9 R51 Circuit Diagram (Page 9/12)



1. Block diagram

The circuit diagram shown on page 9/12 consists of the following function and connectors:

- TA1 (Send motor driver)
- TR508/TR507 (Clutch driver)
- Connector CN1 that provides an interface between R51 board and the send motor.
- Connector CN2 that provides an interface between R51 board and the clutch.

Figure A3.1.11 shows the related signals of the send motor and clutch.

2. Function

1) Send motor rotation and chopper control

Send motor drive signals are generated by the IEXSEED300 and output to send motor via IC7 (motor drive IC) of this circuit.

**Note:** The built-in motor control circuit of IEXSEED300 consists of the following blocks:

- Setting of the excitation operation

- Setting of the chopping operation
- Setting of the motor exciting method (1-2/2-1 phase excitation)

a) Send motor rotation control

There are several cases of the rotation operation:

Forward rotation for feeding documents.

- Case 1: Feeding document from hopper to the position where one line data is read.
- Case 2: Feeding document while reading.
- Case 3: Feeding document after a page has been read.

b) Send motor chopper control

The purpose of chopper control is to reduce the current to the motor by setting the phase signal on and off intermittently when a time lapse exceeding a specific time occurs without a phase update.

## **2) Clutch**

When starting to print, performs the paper supply of recording paper by using this clutch. Clutch is driven by clutch signal generated from IOGA4.

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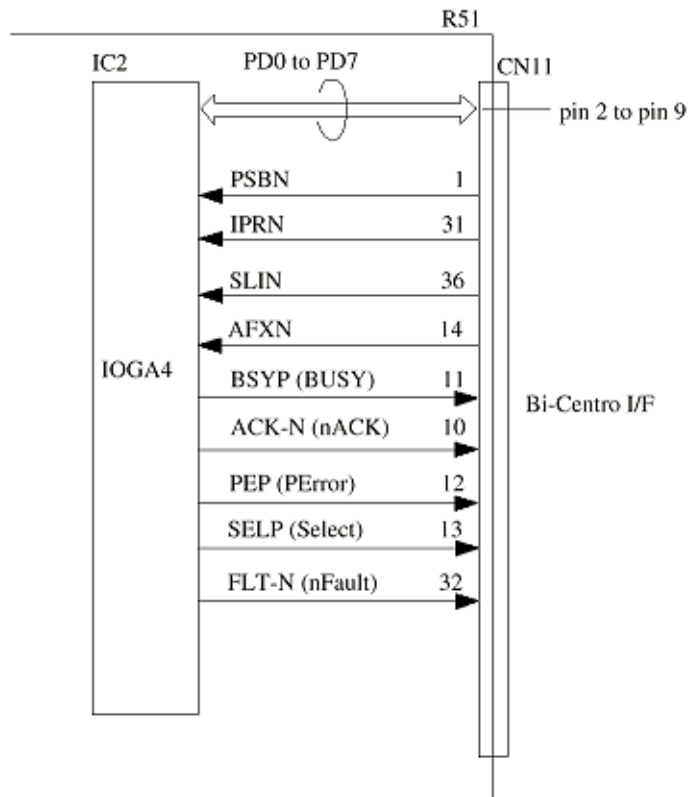
**A3.1.10 R51 Circuit Diagram (Page 10/12)**

**1. Block diagram**

The circuit diagram shown on page 10/12 consists of the following connectors:

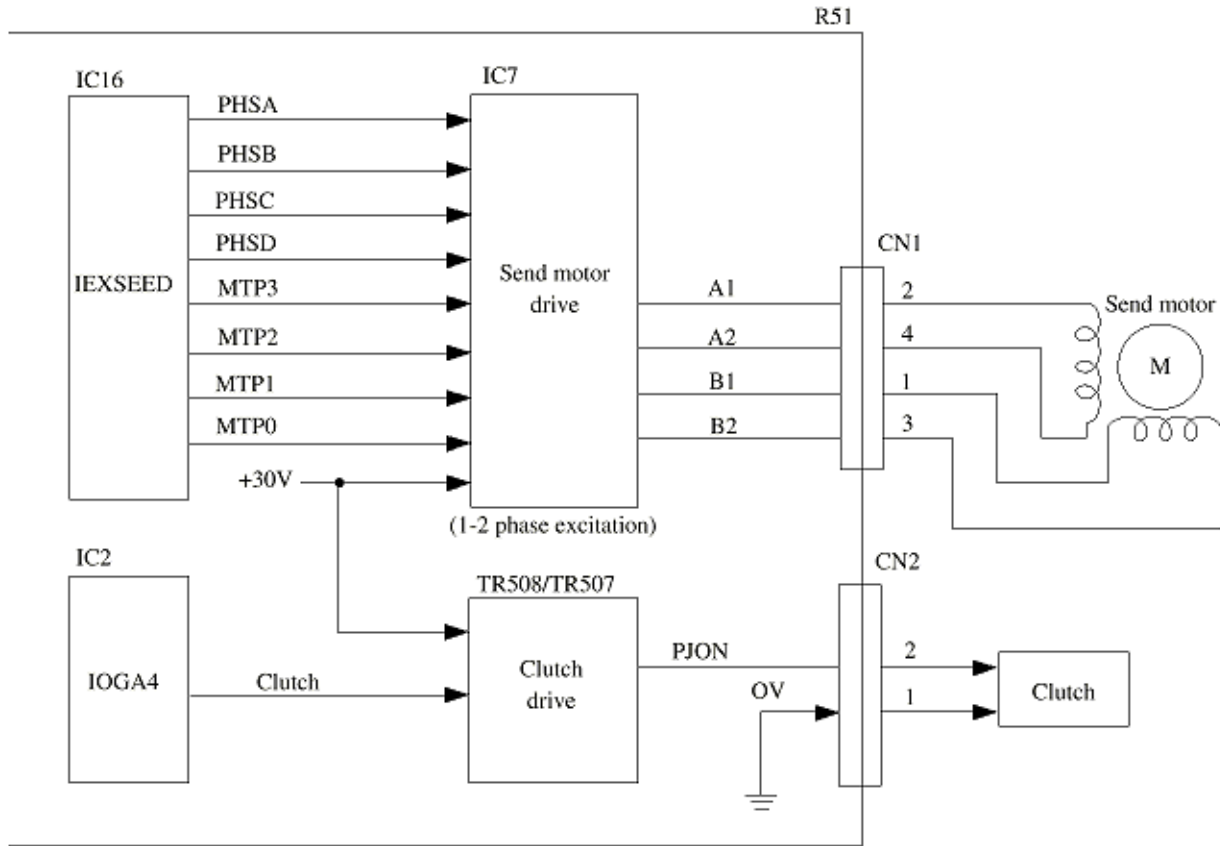
- Connector CN11 that provides an interface between R51 board and Bi-Centro I/F.

Figure A3.1.12 shows the interface between R51 and Bi-Centro I/F.



**Figure A3.1.12 Interface between R51 Board and Bi-Centro I/F**

**A3.1.11 R51 Circuit Diagram (Page 11/12)**



**Figure A3.1.11 Related Signals of Send Motor and Clutch**

**1. Block diagram**

The circuit diagram shown on page 11/12 consists of the following connector:

- Connector CN6 that provides an interface between R51 board and power supply unit (P2H).
- Connector CN7 that provides an interface between R51 board and power supply unit (MPW1446/MPW1546).
- Connector CN8 that provides an interface between R51 board and power supply unit (P6L).

**2. Function**

1) Sensor and switch control

Five types of sensors are used in the printer as listed below. All of their output enter

IOGA4 ports for referring to and processing by the IOGA4 (CPU).

Figure A3.1.13 shows sensors and switch control.

- Inlet sensor 1
- Write sensor (To detect the paper top position for printing)
- Outlet sensor
- Toner end sensor
- Cover status switch

The functions of various sensors are described in the following table.

Sensor Type	Sensor Name	Function
PSIN-N	Inlet sensor	This photosensor is positioned before the resist roller to detect whether the paper has entered into the printer section.
WRNS-N	Write sensor	Detects the arrival of paper at designated position on the paper transport route inside the printer in order to turn on the light of the LED head.  0: Paper exists, 1: Paper does not exist
PSOUT-N	Outlet sensor	Located at the exit of the printer to supervise the paper exit operation.  0: Paper exists, 1: Paper does not exist
TNRSNS-N	Toner sensor	Detects the remaining toner in the toner cartridge. "The length of time of low-toner state within fixed time interval" detects a low-toner state.
CVOPN-N	Cover open sensor	Detects whether the cover of the printer section is open or not.  0: Cover is open, 1: Cover is close

## 2) Fuser unit temperature control

The heater in the fuser unit is controlled by the thermister, IOGA4 keeps the heater roller surface within a prescribed temperature range. The IOGA4 supervises the status of THCHK (A/D converter input section) periodically, turning HEATON signal on and off according to IOGA4 of THCHK status to exercise temperature control.

At power on time, the IOGA4 switches the output signal THON from pin 59 (between high and low states) to check for a blown or shorted thermister according to the status of the THCHK signal.

A built-in thermostat in the fuser unit prevents the heater from being overheated in event of failures in the thermister, or temperature control circuit, etc.

Figure A3.1.14 shows the fuser unit temperature control.

### Note: Heater control

Temperature of the heater at the time of printing is 150 °C to 180 °C. This temperature is maintained by controlling the on and off operation of heater according to the input of the thermister converted into analogue-digital (A/D) values by the IOGA4.

#### 2)-1 Heater control

The ACON control signal on the secondary side is transmitted to the primary side via PC4 to turn triac TRA1 for AC voltage supply to the heater.

### 3) High-voltage and medium-voltage control

High voltages are activated by IOGA4 and generated by the high-voltage circuit inside the power supply unit. The CH (charge) voltage of about -1.30kV is used for the charge roller. The TR1/TR2 (transfer) voltage of about +3.9kV/-0.75kV is used for the transfer roller.

Medium voltages are activated by IOGA4 and generated by the medium-voltage circuit inside the power supply unit. The SB1/SB2 (toner supply) voltage of about +0V/-450V is used for the toner supply roller. The DB1/DB2 (developing) voltage of about +265V/-265V is used for the developing roller. The CB (cleaning) voltage of about +400V/-1.35kV is used for the cleaning roller.

Figure A3.1.15 shows high/medium voltages control.

\* Signals used to control the high/medium-voltages are listed below.

Signal Name	Description
CHON	"1": CH is output. (-1.30kV)
DBON1	"1": + ive polarity voltage of DB/SB is output. (+265V)
DBON2	"1": - ive polarity voltage of DB/SB is output. (-265V)
TRON1	"1": + ive polarity voltage of TR is output. (+3.9kV)
TRON2	"1": - ive polarity voltage of TR is output. (-3.9kV)
CB1ON	"1": - ive polarity voltage of CB is output. (+400V)
CB2ON	"1": - ive polarity voltage of CB is output. (-1.35kv)

**A3.1.12 R51 Circuit Diagram (Page 12/12)**

**1. Block diagram**

The circuit diagram consists of the following connector:

- Connector CN6 that provides an interface between R51 board and power supply unit.

**2. Function**

1) Sensor and switch control

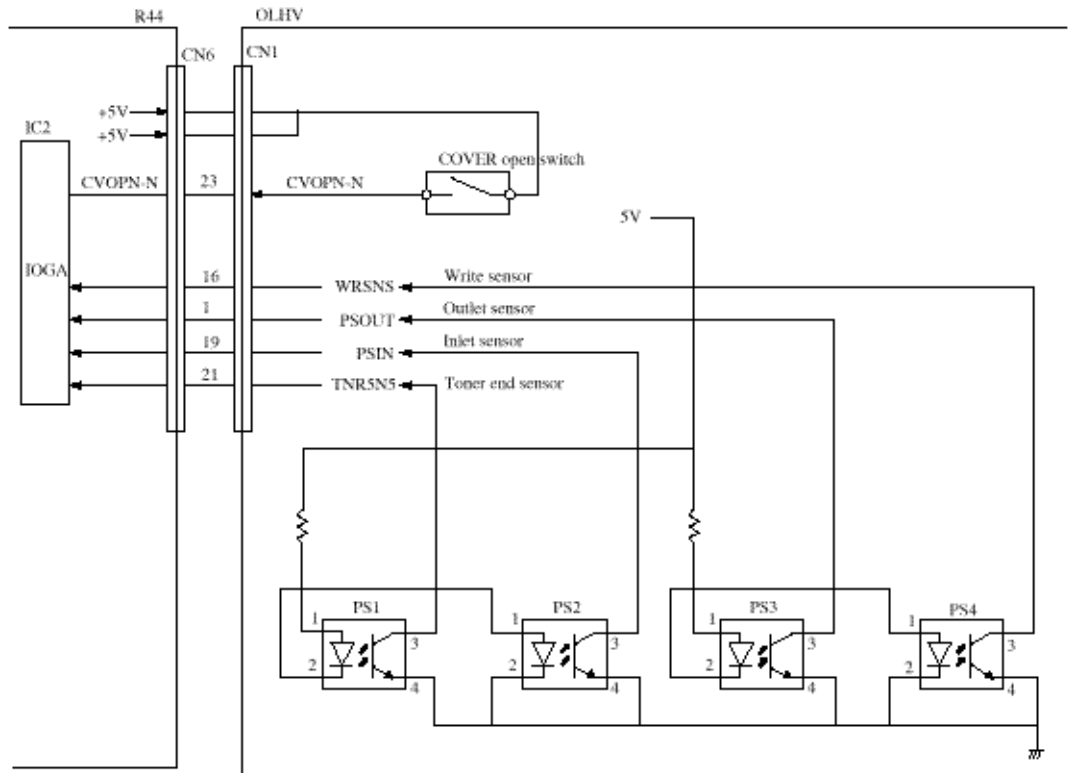
Five types of sensors are used in the printer as listed below. All of their output enter IOGA ports for referring to and processing by the CPU.

Figure A3.1.15 shows sensors and switch control.

- Inlet sensor 1
- Write sensor (To detect the paper top position for printing)
- Outlet sensor
- Toner end sensor
- Cover status switch

The functions of various sensors are described in the following table.

Sensor Type	Sensor Name	Function
PSIN1-N	Inlet sensor 1	This photosensor is positioned before the resist roller to detect whether the paper has entered into the printer section.
WRSNS-N	Write sensor	Detects the arrival of paper at designated position on the paper transport route inside the printer in order to turn on the light of the LED head. 0: Paper exists, 1: Paper does not exist
PSOUT-N	Outlet sensor	Located at the exit of the printer to supervise the paper exit operation. 0: Paper exists, 1: Paper does not exist
TNRSNS-N	Toner sensor	Detects the remaining toner in the toner cartridge. "The length of time of low-toner state within fixed time interval" detects a low-toner state.
CVOPN-N	Cover open sensor	Detects whether the cover of the printer section is open or not



**Figure A3.1.15 Sensor and Switch Control**

## 2) Fuser unit temperature control

The heater in the fuser unit is controlled by the thermistor, IOGA and CPU to keep the heater roller surface within a prescribed temperature range. The CPU supervises the status of PC0 (A/D converter input section) periodically, turning HEATON- N signal on and off according to CPU of PC0 status to exercise temperature control.

At power on time, the CPU switches the output signal THON from pin 65 (between high and low states) to check for a blown or shorted thermistor according to the status of the THCHK signal.

A built-in thermostat in the fuser unit prevents the heater from being overheated in event of failures in the thermistor, or temperature control circuit, etc.

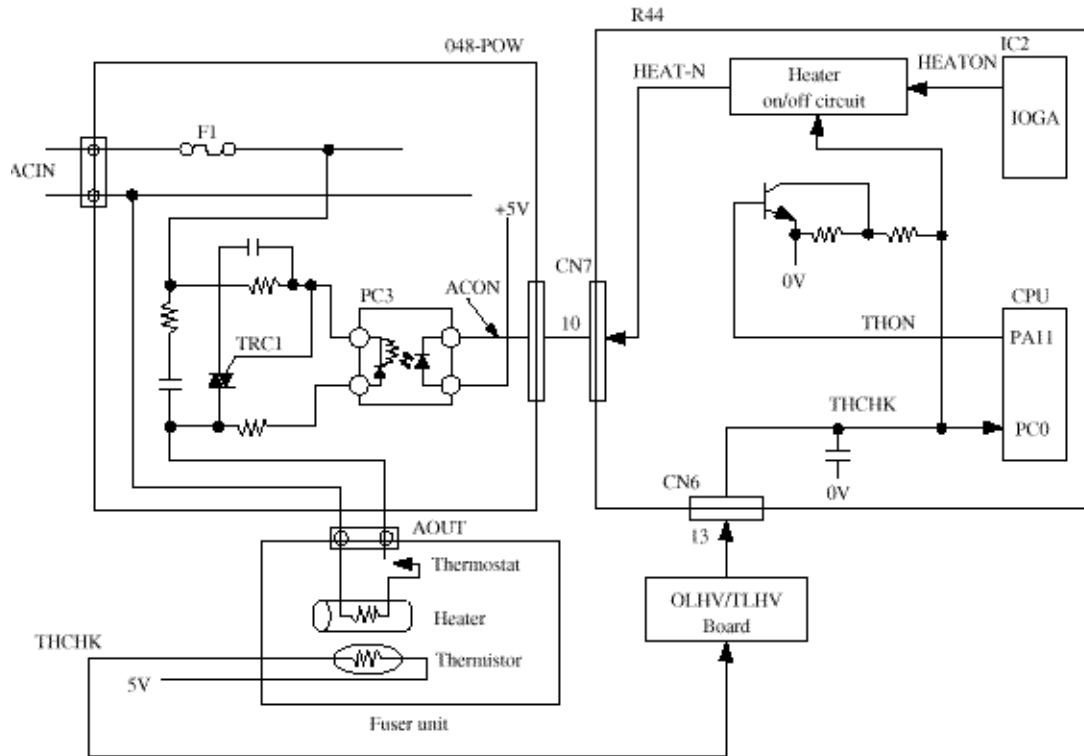
Figure A3.1.16 shows the fuser unit temperature control.

### **Note:** Heater control

Temperature of the heater at the time of printing is 150 °C to 180 °C. This temperature is maintained by controlling the on and off operation of heater according to the input of the thermistor converted into analogue-digital (A/D) values by the CPU.

## 2)-1 Heater control

The ACON control signal on the secondary side is transmitted to the primary side via PC3 to turn TRC1ON for AC voltage supply to the heater.



**Figure A3.1.16 Fuser Unit Temperature Control**

3) High-voltage and medium-voltage control

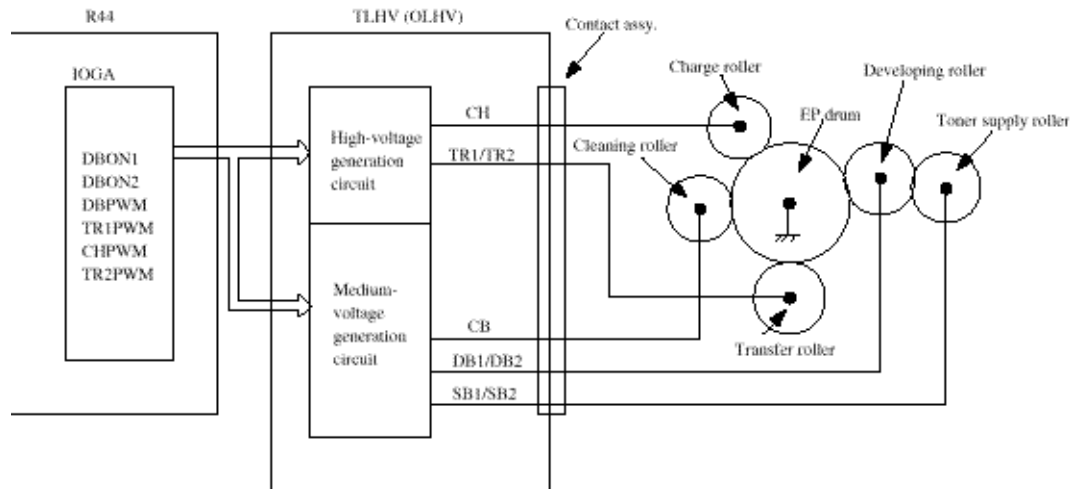
High voltages are activated by IOGA and generated by the high-voltage circuit inside the power supply unit. The CH (charge) voltage of about -1.35kV is used for the charge roller.

The TR1/TR2 (transfer) voltage of about +3.5kV/-0.75kV is used for the transfer roller. Medium voltages are activated by IOGA and generated by the medium-voltage circuit inside the power supply unit. The SB1/SB2 (toner supply) voltage of about +0V/-450V is used for the toner supply roller. The DB1/DB2 (developing) voltage of about +300V/-300V is used for the developing roller. The CB (cleaning) voltage of about +400V is used for the cleaning roller.

Figure A3.1.17 shows high/medium voltages control.

\* Signals used to control the high/medium-voltages are listed below.

Signal Name	Description
CHON	"1": CH is output.
DBON1	"1": + ive polarity voltage of DB/SB is output.
DBON2	"1": - ive polarity voltage of DB/SB is output.
TRON1	"1": + ive polarity voltage of TR is output.
TRON2	"1": - ive polarity voltage of TR is output.



**Figure A3.2.17 High/Medium Voltages Control**

### 1. Block diagram

The circuit diagram shown on page 12/12 consists of the IEXSEED300 (image processing LSI) of IC16 and SRAM.

Figure A3.1.16 shows the related signals of IEXSEED300.

### 2. Functions

IEXSEED300 is developed LSI for the image processing.

IEXSEED300 contains the following functions:

- Contact image sensor driver
- Send motor forward rotation/chopping control
- Line buffer control

### 3. SRAM

32 KByte SRAM x 1 (RAM1)

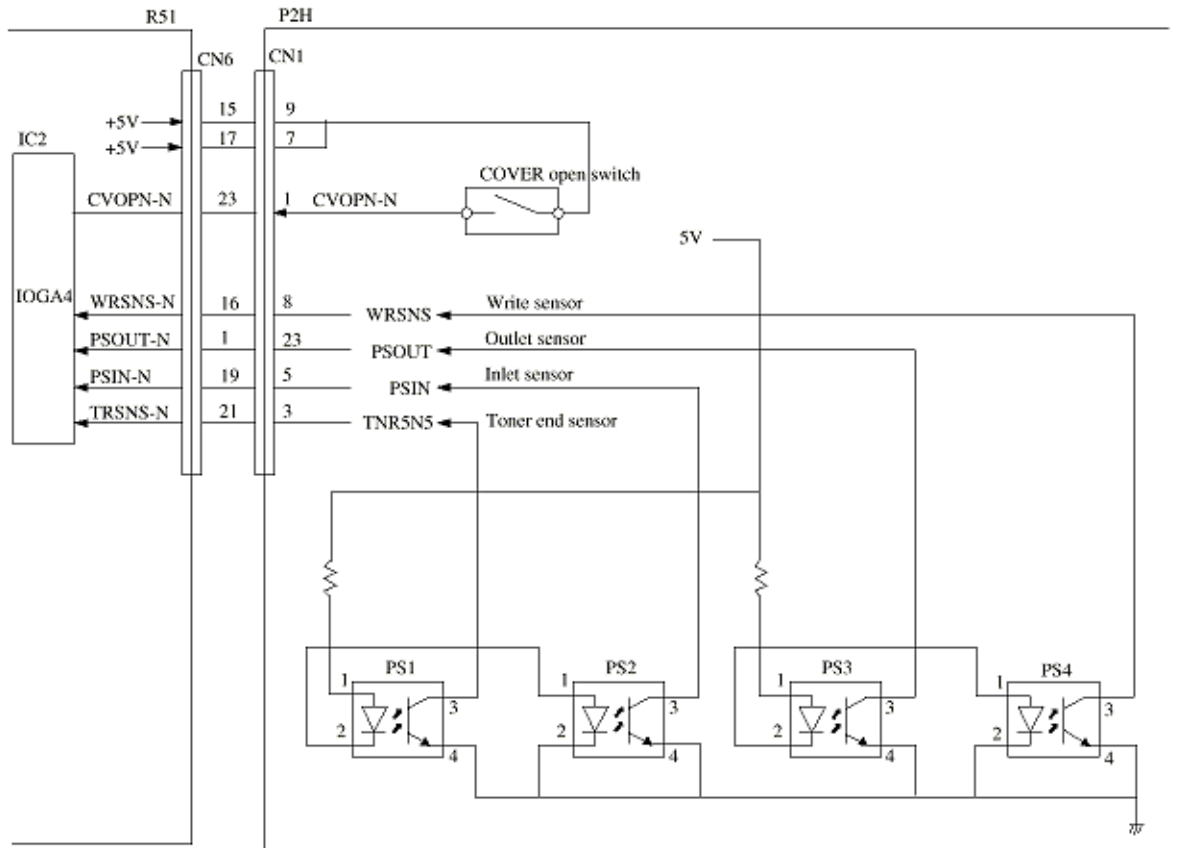
Stores the dark/light level correction data.

Error diffusion data and image separation data are processed by IEXSEED.



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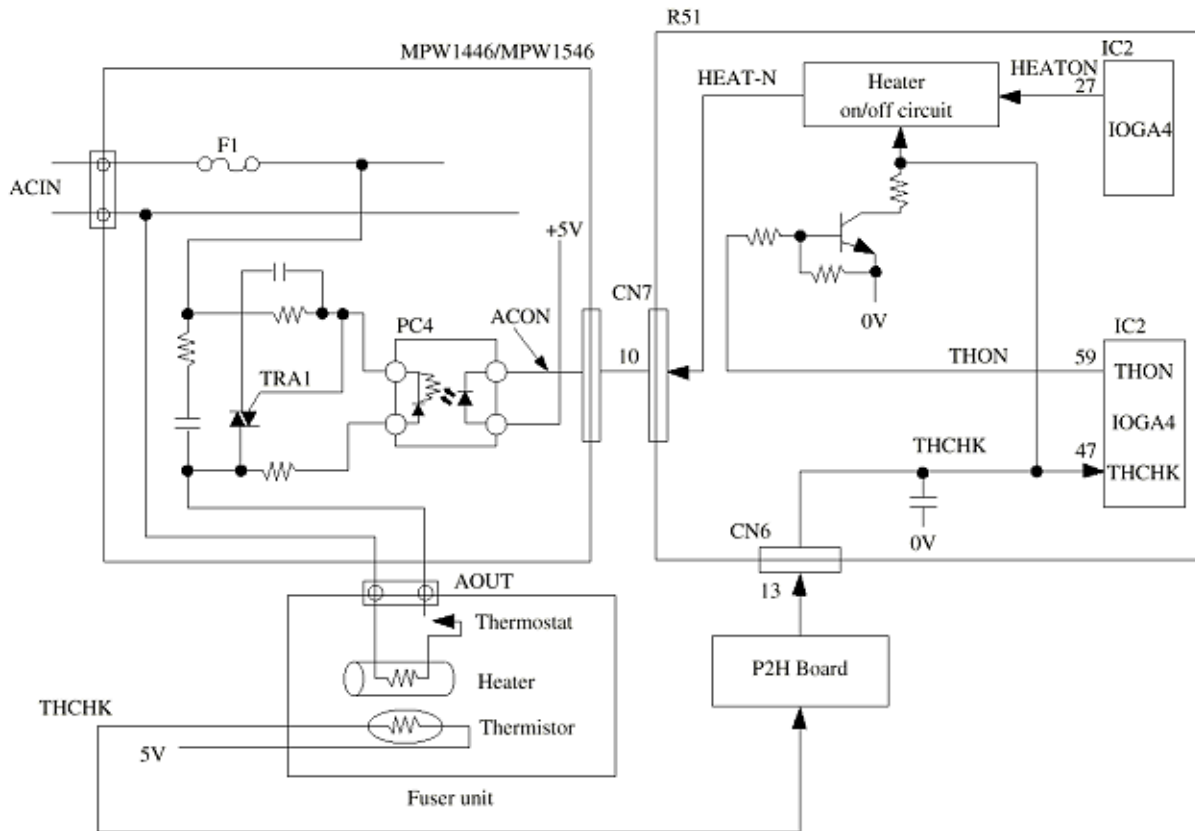
### A3.1.13 Sensor and Switch Control Figure



**Figure A3.1.13 Sensor and Switch Control**

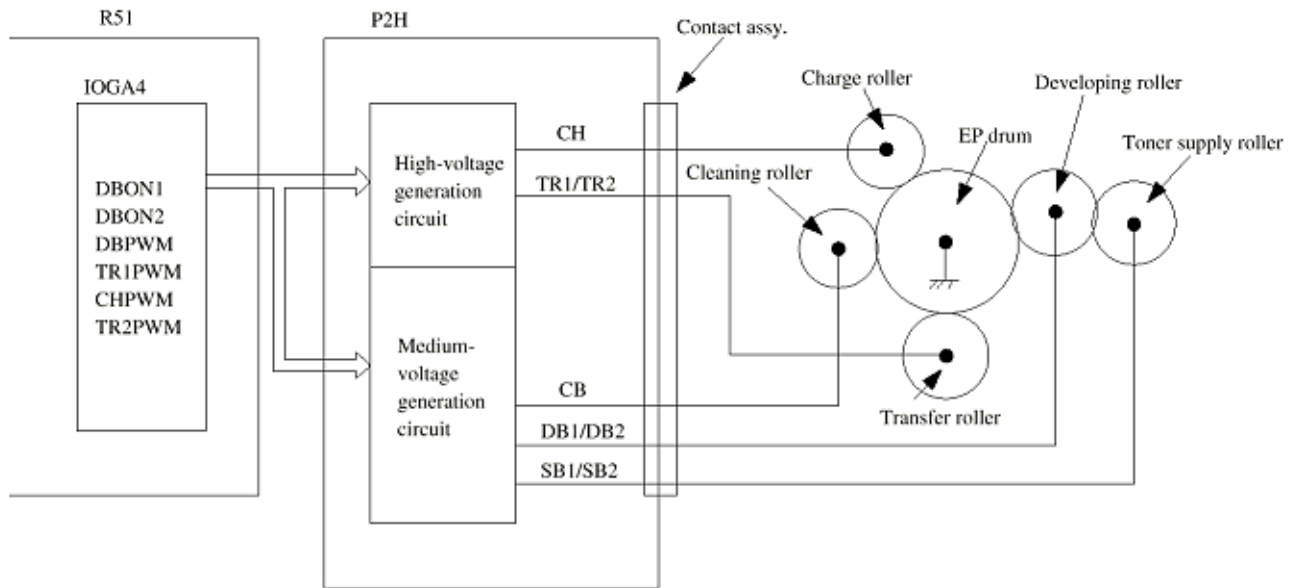
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**A3.1.14 Fuser Unit Temperature Control Figure**



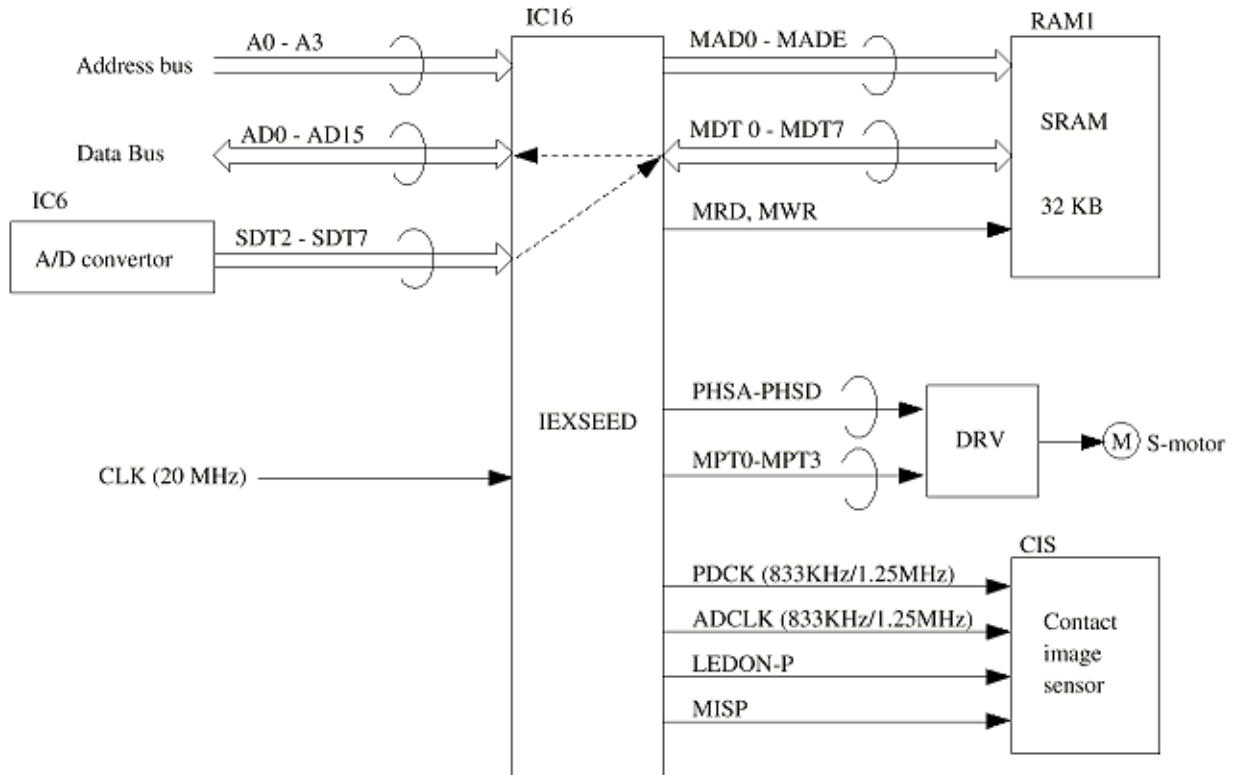
**Figure A3.1.14 Fuser Unit Temperature Control**

**A3.1.15 High/Medium Voltages Control Figure**



**Figure A3.1.15 High/Medium Voltages Control**

**A3.1.16 Related Signals of IEXSEED Figure**



**Figure A3.1.16 Related Signals of IEXSEED**

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**A3.2 OPE (04W) Circuit Diagram****1. Block diagram**

Figure A3.2.1 shows a block diagram of OPE (04W).

The 04W (operation unit) circuit consists of the following blocks:

**1) IC1 (one chip MOS-CPU)**

- Output ports

Setting LEDs on and off: 8 ports

Specifies the row during key switch matrix scanning: 8 ports

- Input ports

Detect the column whose key is pressed: 8 ports

**2) Key switch matrix (8 rows x 8 columns)****3) LEDs (8 LEDs)****4) LCD unit****2. Key switch scanning**

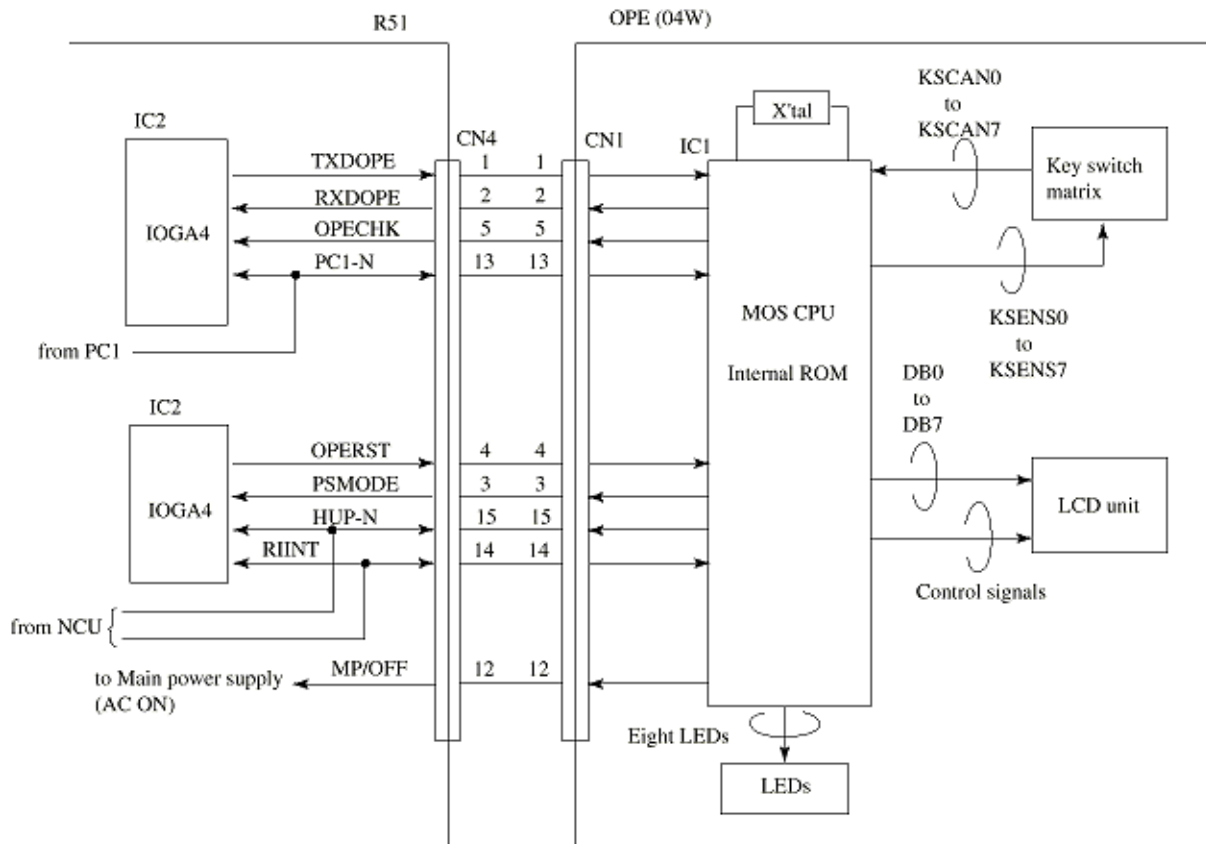
Output ports (KSCAN0 to KSCAN7 signal) corresponding to 8 rows of key matrix are scanned sequentially by the software. In the case 1 is any of output from KSCAN0 to KSCAN7 signal which corresponds to the row 8 in the block diagram, the software reads input port, KSENS0 to KSENS7, and determines which in the row 8 is pressed.

**3. LED drives and LEDs**

Eight LEDs (ALARM, PHOTO, LIGHT, etc.) on the control panel are driven by output of IC1 via resistors R1, R4-9 and R11 respectively. An LED lights on when a port output is 1.

4. In case sub-power supply is applied to the fax machine: when PC1-N, HUP-N or RIINT signal is input to OPE unit, OPE unit controls the main power supply (TLHV board) by outputting the MP/OFF (ACON) signal.

- PC1-N: Presence of document on hopper
- HUP-N: OFF-Hook detection for TEL 1 and TEL 2 terminal
- RIINT: Ringing detection signal



**Figure A3.2.1 Block Diagram of OPE (operation unit)**



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### Chapter A Board Descriptions

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#### A3.3 Power Supply Unit for OKIOFFICE 84

##### A3.3.1 048 POW (120V/230V) Circuit Diagram

##### A3.3.2 OLHV/TLHV Circuit Diagram (2/2)

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## Service Guide OKIOFFICE 84

### Chapter A Board Descriptions

#### A3.3.1 048 POW (120V/230V) Circuit Diagram

**IMPORTANT:**

Oki Data Corporation recommends that maintenance of the Power supply unit (MPW1446 (230V)/MPW1546 (120V)) be performed by replacement of a unit, not by replacement of components.

Therefore,

- 1) circuit descriptions in this section are for reference.
- 2) orders for components of the power supply unit cannot always be accepted.

Functions of unit:

The circuit generates the following direct currents (DC) based on the alternating current,

AC 120 V +6%, -15%

AC 230 V +15%, -14%

1. Low-voltage power supply circuit

This circuit generates the following voltages.

Output Voltage	Output Voltage
+5 V	Logic circuit supply voltage (IC, LSI), and high-voltage source voltage
-8 V	CIS (contact image sensor)
+24 V	Send motor, drum motor, fan drive, flash memory, CIS, and clutch

#### 2. Input ratings

- Voltage : AC 120 V+6%, -15% (AC 102 V to 127 V) ; AC 230 V+15%, -14% (AC 198 V to 264 V)
- Frequency : 50 Hz/60 Hz +/-2%

#### 3. Output ratings

Pin No. CN-003	Rated Voltage	Rated Current	Current Range	Voltage Range	Output Ripple	Output Noise
2, 3	+5V	1.2A	0.2 to 3.9A	+4.9~5.3V	100 mV	250 mVP-P
8	+26V	1.3A	0 to 1.3A	+26~+40V	500 mV	-----
1	+24V	1.0A	0-0.2A	+22.8~+25.2V	50mV	100mV
9	-8V	0.1A	0 to 0.1A	-6.5~-12V	100 mV	250 mV
CN3-12	+5VS	20mA	15 to 50mA	+5.0~5.4V	100 mA	250 mVA

#### 4. Block diagram

Figure A3.3.1 shows a block diagram.

\* The information contained herein can change without notice owing to product and/or technical improvements.



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### Service Guide OKIOFFICE 84 Chapter A Board Descriptions

Block Diagram of 048 POW (Figure A3.5.1)

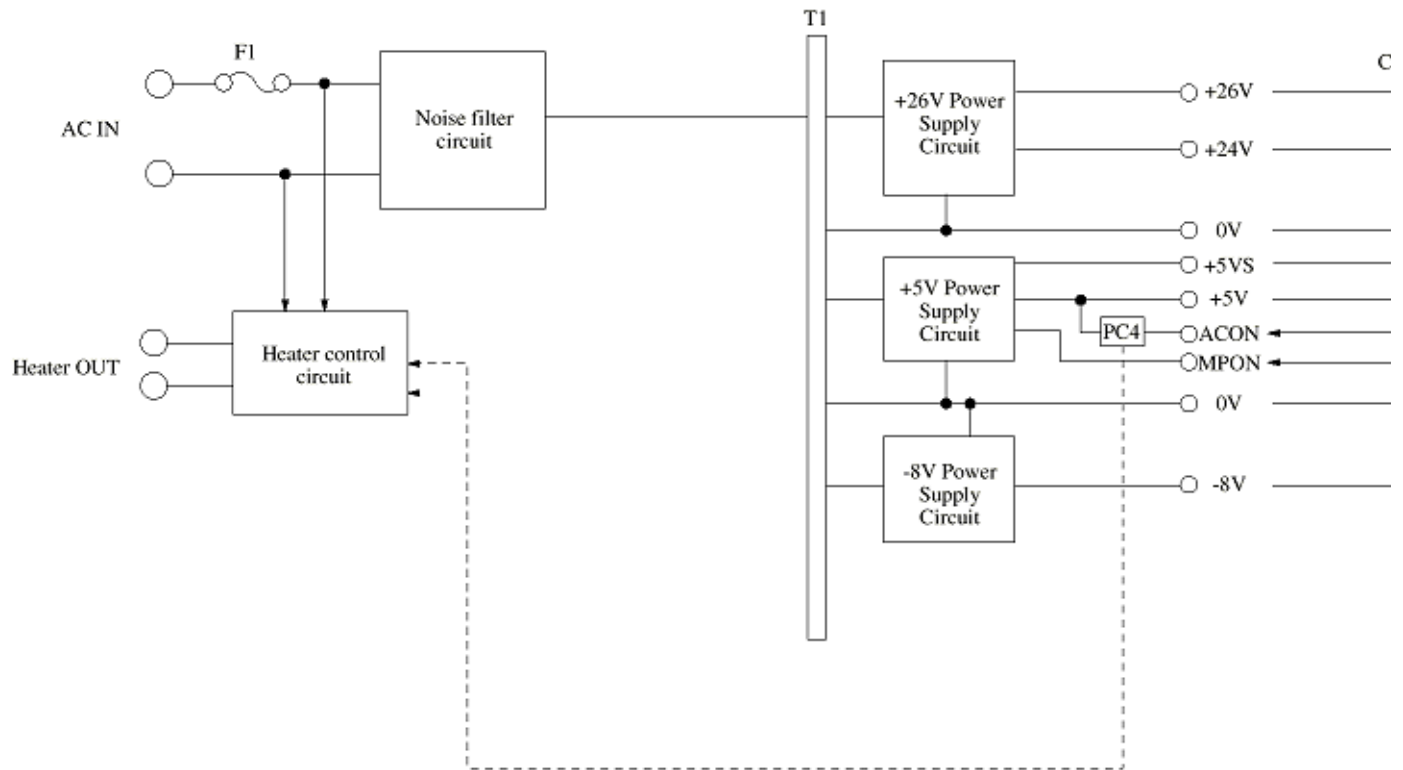


Figure A3.3.1 Block Diagram



## Service Guide OKIOFFICE 84

### Chapter A Board Descriptions

#### A3.4 P2H Circuit Diagram

This circuit consists of photo-sensors and high voltage generation unit.


**Note:** If the high-voltage unit inside the OLHV/TLHV circuit board is replaced, the output voltage and current output from the terminals must be checked and adjusted. This section does not describe the checking and adjustment methods, however.

#### DANGER:

**DANGER**

**Do Not Touch !**

**HIGH VOLTAGE**



You may be subjected to high-voltage electric shock by touching the following parts without an insulating material:

- a. High-voltage unit
- b. Contact ass'y

#### 1. High-voltage section

##### 1.1 Functional overview

The high-voltage outputs consist of TR1 (3.9 kV), TR2 (-0.75 kV), DB1 (+265 V), DB2 (-265 V), SB2 (-550V), CB1 (+400 V), CB2 (-1.35 kV) and CH (-1.30 kV) and are obtained as follows.

The control signal obtained from IOGA4 of R51 board is applied to High-voltage power supply circuit. As result, the driver current is applied to the drive circuit, which will provide the high-voltage outputs.

#### Note:

Signal Name	Output Voltage	Application	
SB1/SB2	0±5 V/-450 V	Voltage applied to toner supply roller.	P2H
DB1/DB2	+300 V/-300 V	Voltage applied to developing roller.	P2H
TR1/TR2	+3.5 kV/-0.75 kV	Voltage applied to transfer roller.	P2H
CH	-1.35 kV	Voltage applied to charging roller.	P2H
CB1	+400 V	Voltage applied to cleaning roller.	P6L
CB2	-1.35 kV		P6L

##### 1.2 SB2, DB1, DB2 (P2H)

- 1) These four high-voltage outputs are obtained from the flyback voltage of Q10.
- 2) The positive and negative voltages of DB1 and DB2 are obtained by switching the charging direction under the triac and thyristor.
- 3) Feedback is not applied to these outputs. However, SB2 is limited by D85 and DB2 is limited by D84 so as not to

provide an output exceeding a preset voltage.

### 1.3 TR1 and TR2 (P2H)

- 1) The TR1 high-voltage is obtained by rectifying the secondary output of Q17 switching circuit by a voltage-doubler rectifier.
- 2) TR1 output circuit has both constant current (hereinafter called CC) and constant voltage (hereinafter called CV) modes.
- 3) At first, TR1 output circuit operates in the CC mode. Once the voltage determined by parameters such as roller and medium is obtained, this circuit changes to operate in the CV mode by the control signal.
- 4) The TR2 output voltage is regulated by keeping the voltage obtained by switching operation of Q15 at a constant voltage by D66 and D65.

### 1.4 CH (P2H)

- 1) The CH output voltage is stabilized by keeping the primary flyback voltage obtained by switching operation of Q16 at a constant voltage by D76 and D82.

### 1.5 CBI, CB2 (P6L)

- 1) The CB1 output voltage is stabilized by keeping the primary flyback voltage obtained by switching operation of Q2 at a constant voltage by D7 and D6 and D5.
- 2) The CB2 output voltage is stabilized by keeping the primary flyback voltage obtained by switching operation of Q1 at a constant voltage by D7 and D6 and D5.

## 2. Photosensors

The photosensors mounted on this circuit board/sensor board supervise the paper running state during printing. These four photosensors are used in this printer as listed below. All of their outputs enter IOGA4 for referring to and processing by the IOGA4 (CPU).

- 1) PS1 (photosensor 1): TNRSNS

Detects the lack of the toner.

- 2) PS2 (photosensor 2): PSIN

Detects the leading part of the paper and gives the supervision timing for switching from hopping operation to feeding operation. Supervises the paper running state and the paper size according to the paper arrival time and running time.

- 3) PS3 (photosensor 3): PSOUT

Supervises the paper feed according to the time of arrival at the sensor and the time of passage of paper.

- 4) PS4 (photosensor 4): WRSNS

Detects the leading part of sensor.

Supervises the paper running state.

## 3. Cover open circuit

The cover open circuit consists of CVSW. When the Cover-Main is opened, the cover open microswitch (CVSW) on the OLHV/TLHV board is turned off to cut the supply of H5V to the high-voltage power supply circuit. As a result all high-voltage outputs are interrupted. At the same time, the CVOPN-N signal is sent to the control board to notify it the off state of the microswitch, and the control board performs the cover open processing.

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### **A3.5 UNC, WN5, FN5 and DN5 Circuit Diagram**

The NCU board is selected from UNC, WN5, FN5 and DN5 because it differs depending on country's specifications. Therefore, the NCU circuit diagram is destined for the following countries.

- UNC circuit diagram

US and Canada.

- WN5 circuit diagram

Sweden, Finland, The Netherlands, Ireland, Portugal, New Zealand, Australia, Belgium, Spain, Greece, Norway, Denmark, Italy, and other countries.

- FN5 circuit diagram

France and UK

- DN5 circuit diagram

Germany, Switzerland and Austria.

#### 1. Block diagram

- Figure A3.5.1 shows a block diagram of UNC circuit.
- Figure A3.5.2 shows a block diagram of WN5 circuit.
- Figure A3.5.3 shows a block diagram of FN5 circuit
- Figure A3.5.4 shows a block diagram of DN5 circuit.

#### 2. General functions of this circuit are as follows:

1) Generates and detects signals to be exchanged with a telephone exchange or network in Phases A and E defined by ITU T.30.

- Loop formation for call origination
- Line current detection (see note 1) before call origination
- Dial tone detection (see note 1)
- Generation of dial pulses (see note 2)
- Busy tone detection (see note 1)
- Ringing signal detection

2) Sends various data and signals from the R51 board to the telephone line after amplification.

- Picture data/Protocol/Tonal signals/PB tone, etc.

3) Sends the following signals received from the line to the R51 board as data after amplification.

- Picture data/Protocol/Tonal signals, etc.

**Note 1:** This procedure may be omitted depending on the dial parameters.

**Note 2:** MF (Multi-frequency) tone is generated by the modem and transferred to the telephone line via the NCU board.

### 3. Explanation of CN3 Terminals

CN3 pin No.	Terminal name	Explanation	UNC (US, CA)
1	REV2	Detection and output of the direction of DC line current.	*
2	OH2	Detection of off-hook of terminal connected to TEL-1 or TEL-2.	
3	OH1	Output upon circuit current detection after fax line seizure.	*
4	RI	0 - 5 V signal output synchronized with the ringing signal frequency.	
5	NC	Unused terminal.	*
6	PP	Relay control signal for special service code detection at parallel pickup or remote reception	
7, 8	E	GNC	
9, 10	sub +5 V	Sub power supply for OH2 and RI detection	
11, 12	+ 5 V	Power supply for relays and logic circuits	
13, 14	+ 5 V A	=% V power supply for analog circuit	*
15, 16	S	TX Signal	
17, 18	- 5 VA	- 5 V power supply for analog circuit	*
19, 20	R	RX Signal	
21, 22	SG	Signal ground	
23, 24	Rp	Receiving sensitivity determination terminal	
25	DP	Pulse dial control signal	
26	CML	Line seizure control signal	
27	F, ICC	Loop current control signal upon line seizure	*
28	SR	Control signal for connection between LINE and TEL terminals.	
29	PBXE	Control signal for connecting one of LINE terminal to the PBXE terminal	*
30	MUTE	Control signal for pulse dial improvement and bell shunt relay.	*

### 4. Description on the NCU Block Diagram

#### 4.1 UNC circuit diagram

##### 1 Lightning arresters (AR1, 2)

The nominal operating voltage is 350 V.

When connecting the ground of the arrester to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable. The TB1 arrester ground terminal can also be used to connect to the earth directly.

##### 4 DC circuits (R10, R11, C4)

These circuits provide DC characteristics according to the line requirements using the primary DC resistor in the line transformer T1 and the R10 and R11 resistors. The capacitor C4 bypasses AC signals.

##### 5 Impedance matching network (R523, R536, C503)

This circuit matches the impedance between the line and equipment to reduce reflection of transmitted signals.

##### 6 Receiving sensitivity (R574, R504)

The receiving sensitivity at line seizing is determined by R574 and the MF tone receiving sensitivity at parallel pickup is determined by R504.

##### 7 CML (RL1)

This circuit selectively switches the line between the telephone or facsimile.

### 8 SR (RL2)

This circuit connects the line with the telephone. During facsimile transmission, it disconnects the telephone.

### 11 PP (RL6)

If this circuit detects MF or CNG tones without seizing a line, it sets a proper receiving sensitivity.

### 12 DP (RL3)

This circuit generates pulse dials.

If the circuit detects MF or CNG tones without seizing a line, it opens to increase the impedance.

### 13 Pickup RC (R5, C31)

These circuits insert a high-impedance resistor and capacitor serially to prevent the line impedance from dropping by the line transformer T1.

### 14 Ring detectors (IC1)

These circuits detect a ring signal arriving to the line. If the input ring signal exceeds a specific voltage, the circuits output a signal having of RI the same frequency as incoming RI.

### 15 Line transformer (T1)

This circuit processes send/receive signals required for facsimile transmission, dial tone receive signals required for automatic dialing, and MF tone send and remote receive signals. It separates between the line and equipment in terms of DC and also keeps a balance between the line and the ground. The transformer on the UNC board for OKIFAX 5600 is covered with the shield case for the low-level receiving countermeasure.

### 16 Off-hook detector (IC2)

This circuit detects the off-hook state of the telephone connected to the TEL1, TEL2 through LINE terminals.

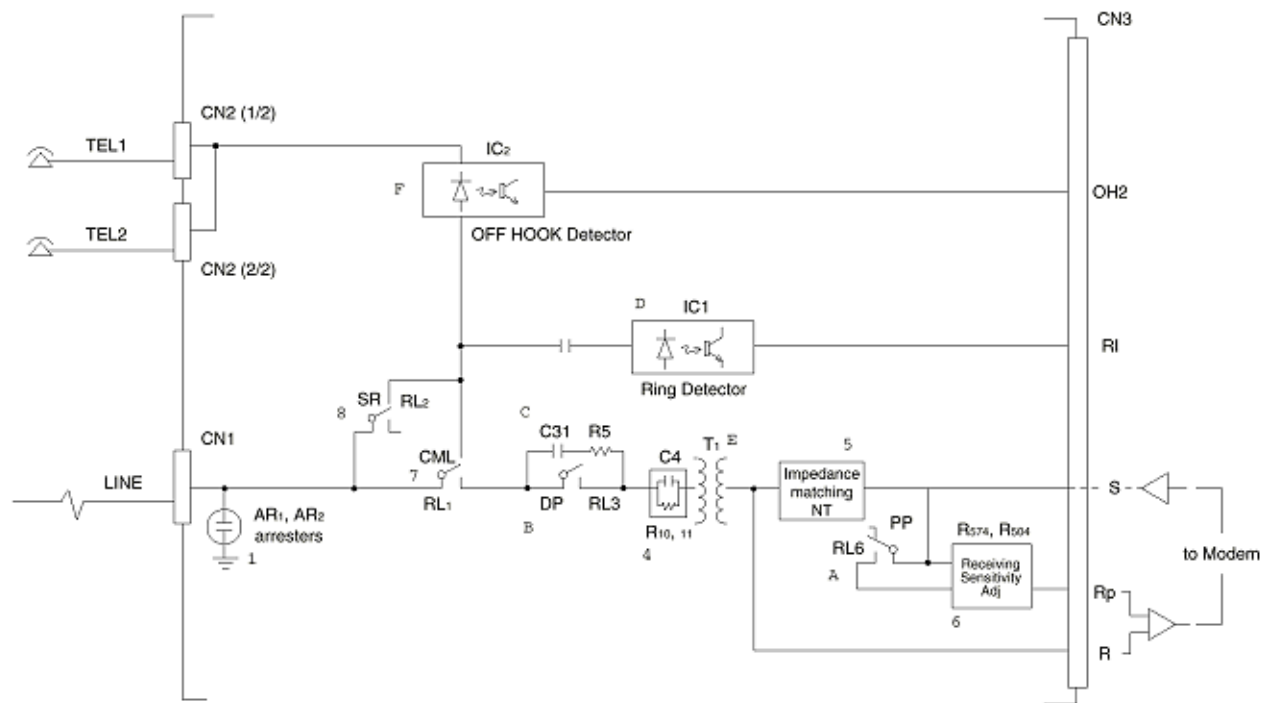


Figure A3.5.1 Block Diagram of UNC

## 4.2 WN5 circuit diagram



### **1 Lightning arresters (AR1, 2)**

The nominal operating voltage is 500 V.

When connecting the ground of the arrester to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable. The TB1 arrester ground terminal can also be used to connect to the earth directly.

### **2 Loop current detector (IC4) -- Optional**

When a line is seized, this circuit detects a DC loop current to notify the fact. For detection (OH1), it outputs the low level to the nominal input current of 10 mA or more.

### **3 Diode bridge (DB1)**

This circuit rectifies the loop current so that the DC circuit characteristics are not affected by a polarity change over the line.

### **4 DC circuits (Q3, R540, R541, C13, R9, R209, and R309)**

These circuits provide DC characteristics according to the line requirements depending on the DIP SW (S3) position.

### **5 Impedance matching network (R523, R536, C503 ... R823, R836, C803)**

This circuit matches the impedance between the line and equipment to reduce reflection of transmitted signals. It provides impedance (return loss) characteristics to meet the line requirement using the connector keys (CN15 to CN45).

### **6 Receiving sensitivity (R537, R539...R837, R839)**

The receiving sensitivity at line hunting is determined by R539 to R839 depending on the line impedance. Similarly, the MF tone receiving sensitivity at parallel pickup is determined by R537 to R837. The receiving sensitivity is set using connector keys (CN15 to CN45).

### **7 CML (RL1)**

This circuit selectively switches the line between the telephone or facsimile.

### **8 SR (RL2)**

This circuit connects the line with the telephone. During facsimile transmission, it disconnects the telephone.

### **9 DP (IC5)**

This circuit generates pulse dial signals.

### **10 MUTE (IC7)**

During pulse dialing, this circuit closes to reduce the DC loop resistance.

### **11 PP (RL6)**

If this circuit detects MF or CNG tones without seizing a line, it disconnects Impedance matching Network (5) to increase the input impedance and also sets the receiving sensitivity.

### **12 MUTE (RL3)**

During pulse dialing, this circuit opens to prevent pulse distortion caused by capacitor C11. If it detects MF or CNG tones without seizing a line, it opens to increase the impedance.

### **13 Pickup RC (R590, C31)**

These circuits insert a high-impedance resistor and capacitor serially to prevent the line impedance from dropping by the line transformer T1.

### **14 Ring detectors (IC1)**

These circuits detect a ring signal arriving to the line. If the input ring signal exceeds a specific voltage, the circuits output a signal of RI having the same frequency as incoming RI.

### **15 Line transformer (T1)**

This circuit processes send/receive signals required for facsimile transmission, dial tone receive signals required for automatic dialing, and MF tone send and remote receive signals. It separates between the line and equipment in terms of DC and also keeps a balance between the line and the ground.

### **16 Off-hook detectors (IC2, RL7)**

These circuits detect the off-hook state of the telephone connected to the TEL1, TEL2, through LINE terminal. IC2 uses a high detection sensitivity than of RL7. In TEL/FAX mode, the higher sensitive IC2 is used to detect the

off-hook state of the telephone while the main equipment is hunting a line. Usually, IC2 is short-circuited by the CML relay (7) in the standby state and RL7 is used for off-hook detection.

#### 17 Impedance switches (CN15 to CN45)

These circuits set the impedance according to the line requirement.

220: 220 ohm + 820 ohm//115 nF (CN15)

275: 275 ohm + 850 ohm//150 nF (CN25)

370: 370 ohm + 620 ohm//310 nF (CN35)

600: 600 ohm (CN35)

#### 18 DC resistance switch (SW3)

This switch sets the DC resistance according to the line requirement.

#### 19 Ring impedance switches (S1-3 to S1-6)

These switches set the ring impedance according to the line requirement.

#### 20 Ring sensitivity switch (S4)

This switch sets the ring sensitivity according to the line requirement.

#### 21 Telephone cascade/parallel switches (S1-1 to S1-2)

To connect the telephone connected to the TEL1 terminal and an external telephone in parallel, set the switches to ON.

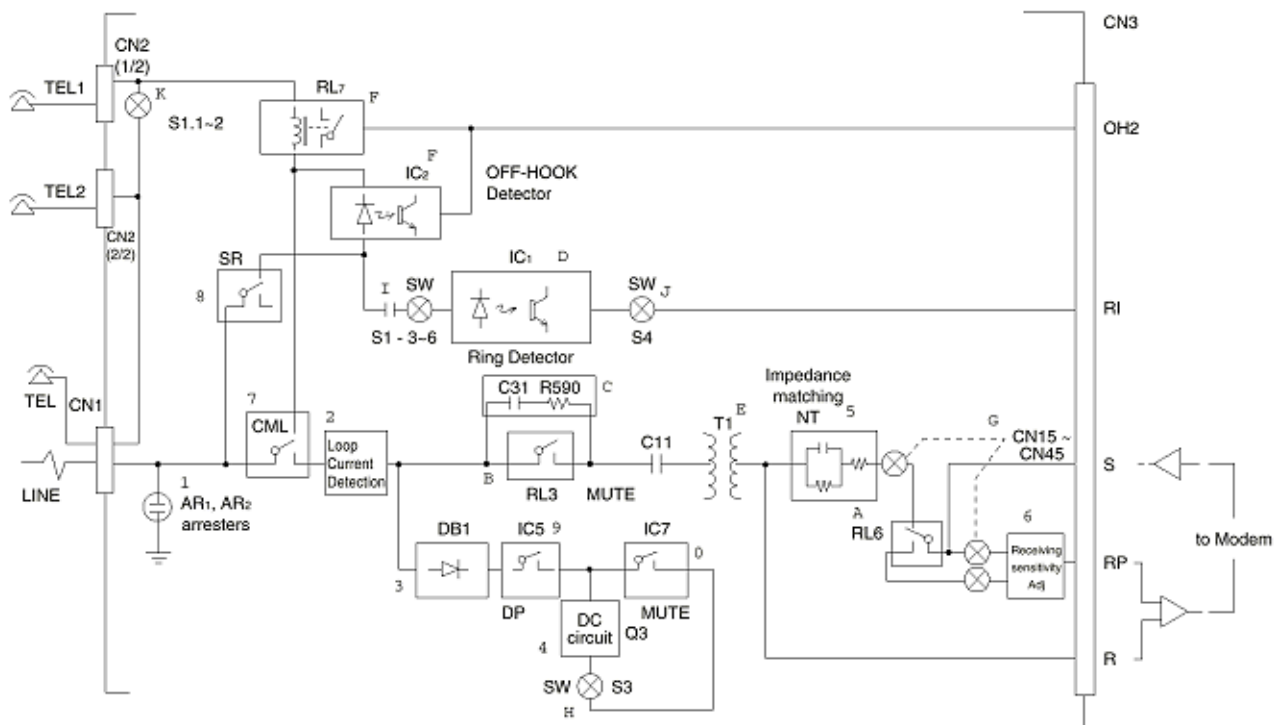


Figure A3.5.2 Block Diagram of WNS

### 4.3 FN5 circuit diagram

#### 1 Lightning arresters (AR1, 2)

The nominal operating voltage is 500 V. When connecting the ground of the arrester to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable. The TB1 arrester ground terminal

can also be used to connect to the earth directly.

### **3 Diode bridge (DB1)**

This circuit rectifies the loop current so that the DC circuit characteristics are not affected by a polarity change over the line.

### **4 DC circuits (Q3, R540, R541, C13, R9, R209)**

These circuits provide DC characteristics according to the line requirements.

### **5 Impedance matching network (R523, R536, C503, R623, R636, C603)**

This circuit matches the impedance between the line and equipment to reduce reflection of transmitted signals. It provides impedance (return loss) characteristics to meet the line requirement using the S5-1 and 5-2.

### **6 Receiving sensitivity (R537, R539, R637, R639)**

The receiving sensitivity at line hunting is determined by R539 or R639 and the MF tone receiving sensitivity at parallel pickup is determined by R537 or R639. The receiving sensitivity set using DIP switch S5-3 to S5-6.

### **7 CML (RL1)**

This circuit selectively switches the line between the telephone or facsimile.

### **8 SR (RL2)**

This circuit connects the line with the telephone. During facsimile transmission, it disconnects the telephone.

### **9 DP (IC5)**

This circuit generates pulse dial signals.

### **10 MUTE (IC7)**

During pulse dialing, this circuit closes to reduce the DC loop resistance.

### **11 PP (RL6)**

When it detects MF or CNG tones without seizing a line, it disconnects NT (5) to increase the input impedance and also sets the receiving sensitivity.

### **12 MUTE (RL3)**

During pulse dialing, this circuit opens to prevent pulse distortion caused by capacitor C11. When it detects MF or CNG tones without seizing a line, it opens to increase the impedance.

### **13 Pickup RC (R590, C31)**

These circuits insert a high-impedance resistor and capacitor serially to prevent the line impedance from dropping by the line transformer T1.

### **14 Ring detectors (IC1)**

These circuits detect a ring signal arriving to the line. If the input ring signal exceeds a specific voltage, the circuits output a signal of RI having the same frequency as the incoming RI.

### **15 Line transformer (T1)**

This circuit processes send/receive signals required for facsimile transmission, dial tone receive signals required for automatic dialing, and MF tone send and remote receive signals. It separates between the line and equipment in terms of DC and also keeps a balance between the line and the ground.

### **16 Off-hook detectors (IC2, RL7)**

These circuits detect the off-hook state of the telephone connected to the TEL1, TEL2, through LINE terminals. IC2 uses a high detection sensitivity than of RL7. In TEL/FAX mode, the higher sensitive IC2 is used to detect the off-hook state of the telephone while the main equipment is hunting a line. Usually, IC2 is short-circuited by the CML relay (7) in the standby state and RL7 is used for off-hook detection.

### **17 Impedance switches (S5-1 to 5-2)**

These circuits set the impedance according to the line requirement.

S5-1: 370 ohm + 620 ohm//310 nF (UK)

S5-2: 600 ohm (F)

### **18 DC resistance switches (CN26 and CN36)**

These switches set the DC resistance according to the line requirement.

### 27 FICC (IC6)

This circuit reduces the DC resistance to increase the loop current momentarily to assure operation of the switch at line seizing.

### 28 Constant current circuits (Q1 and Q2)

These circuits provide DC characteristics according to the French line requirement.

### 29 Shunt (RL5)

This circuit prevents bell resonances in the telephone sets connected in parallel during pulse dialing and also reduces distortions of the pulse waveform.

### 30 Communication line terminal switches (CN26 and CN36)

Unlike other countries, pines 2 and 5 are connected to the line for the UK communication line. Set the switches to "F" for France and "UK" for UK.

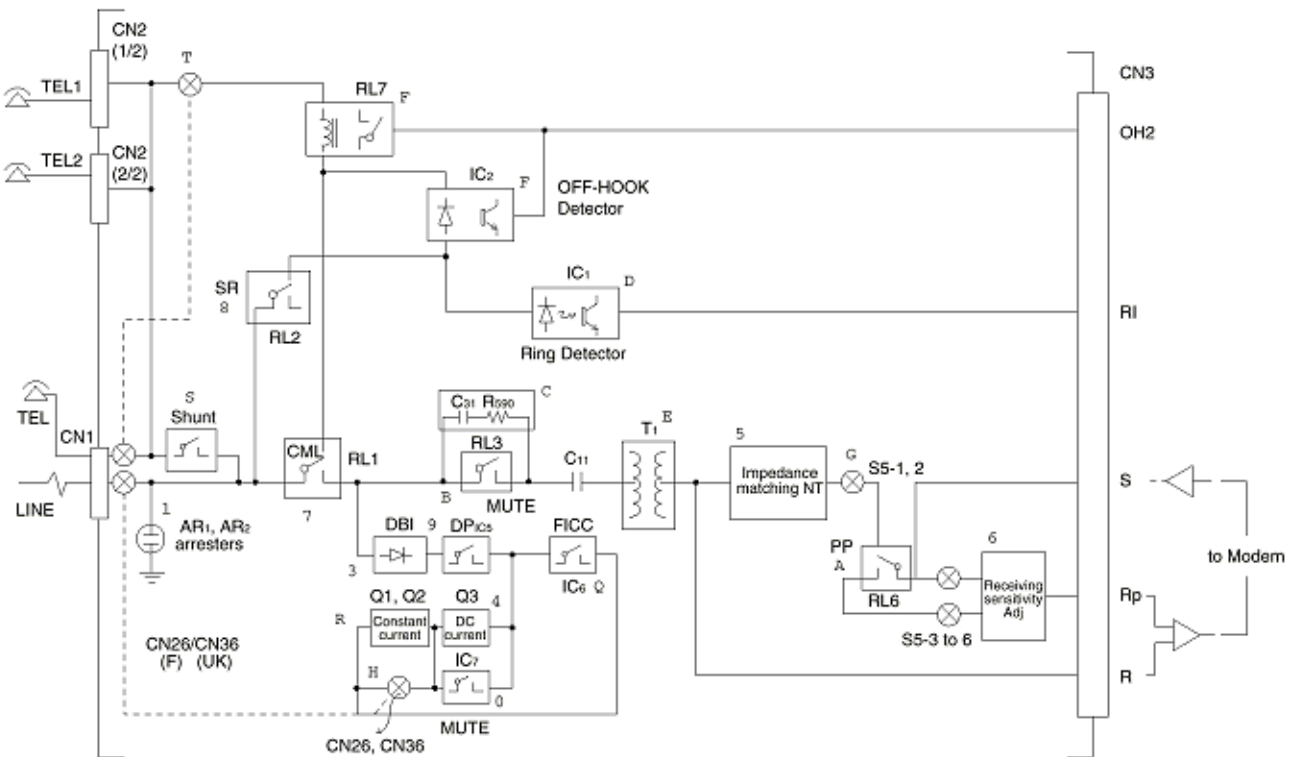


Figure A3.5.3 Block Diagram of FNS

## 4.4 DN5 circuit diagram

### 1 Lightning arresters (AR1, 2)

The nominal operating voltage is 500 V. When connecting the ground of the arrester to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable. The TB1 arrester ground terminal can also be used to connect to the earth directly.

### 2 Loop current detector (IC4) - Optional

When a line is hunt, this circuit detects a DC loop current to notify the fact. For detection (OH1), it outputs the low level to the nominal input current of 10 mA or more.

### 3 Diode bridge (DB1)

This circuit rectifies the loop current so that the DC circuit characteristics are not affected by a polarity change over the line.

#### **4 DC circuits (Q3, R540, R541, C13, R9, R209)**

These circuits provide DC characteristics according to the line requirements.

#### **5 Impedance matching network (R523, R536, C503, ...)**

This circuit matches the impedance between the line and equipment to reduce reflection of transmitted signals. It provides impedance (return loss) characteristics to meet the line requirement using the S4-3 and S4-4.

#### **6 Receiving sensitivity (R537, R539, R637, R639)**

The receiving sensitivity at line hunting is determined by R539 to R639 depending on the line impedance. Similarly, the MF tone receiving sensitivity at parallel pickup is determined by R537 or R637. The receiving sensitivity is set using the DIP switches S4-5 to S4-8.

#### **7 CML (RL1)**

This circuit selectively switches the line between the telephone or facsimile.

#### **8 SR (RL2)**

This circuit connects the line with the telephone. During facsimile transmission, it disconnects the telephone.

#### **9 DP (IC5)**

This circuit generates pulse dial signals.

#### **10 MUTE (IC7)**

During pulse dialing, this circuit closes to reduce the DC loop resistance.

#### **11 PP (RL6)**

If this circuit detects MF or CNG tones without seizing a line, it disconnects NT (5) to increase the input impedance and also sets the receiving sensitivity.

#### **12 MUTE (RL3)**

During pulse dialing, this circuit opens to prevent pulse distortion caused by capacitor C11. If it detects MF or CNG tones without seizing a line, it opens to increase the impedance.

#### **13 Pickup RC (R590, C31)**

These circuits insert a high-impedance resistor and capacitor serially to prevent the line impedance from dropping by the line transformer T1.

#### **14 Ring detectors (IC1)**

These circuits detect a ring signal arriving to the line. If the input ring signal exceeds a specific voltage, the circuits output a signal of RI having the same frequency as incoming RI.

#### **15 Line transformer (T1)**

This circuit processes send/receive signals required for facsimile transmission, dial tone receive signals required for automatic dialing, and MF tone send and remote receive signals. It separates between the line and equipment in terms of DC and also keeps a balance between the line and the ground.

#### **16 Off-hook detectors (IC2, RL7)**

These circuits detect the off-hook state of the telephone connected to the TEL1, TEL2, through LINE terminals. IC2 uses a high detection sensitivity than of RL7. In TEL/FAX mode, the higher sensitive IC2 is used to detect the off-hook state of the telephone while the main equipment is hunting a line. Usually, IC2 is short-circuited by the CML relay (7) in the standby state and RL7 is used for off-hook detection.

#### **17 Impedance switches (S4-3 to S4-4)**

These circuits set the impedance according to the line requirement.

S4-3: 220 ohm + 820 ohm//115 nF

S4-4: 600 ohm

#### **19 Ring impedance switches (S1-4)**

These switches set the ring impedance according to the line requirement.

#### **20 Ring sensitivity switch (S4-4, S4-2)**

This switch sets the ring sensitivity according to the line requirement.

### 21 Telephone cascade/parallel switches (S1-1 to S1-2)

To connect the telephone connected to the TEL1 terminal and an external telephone in parallel, set the switches to ON.

### 22 16 kHz LPF (L7, L8, C7, C507, C9)

This low-pass filter removes 16 kHz metering pulses.

### 23 Transmitter amplifier (IC501 1/2)

This transmitter buffer amplifier amplifies DTMF signals and FAX send signals.

### 24 Receiver amplifier (IC501 2/2)

This amplifier amplifies MF tones, dial tones, and FAX receive signals.

### 25 16 kHz LPF (IC502)

This active low-pass filter removes 16 kHz metering pulses.

### 26 PBXE (RL4)

This circuit connects one end of the LINE terminal to the PBXE terminal when requested from the PBX line.

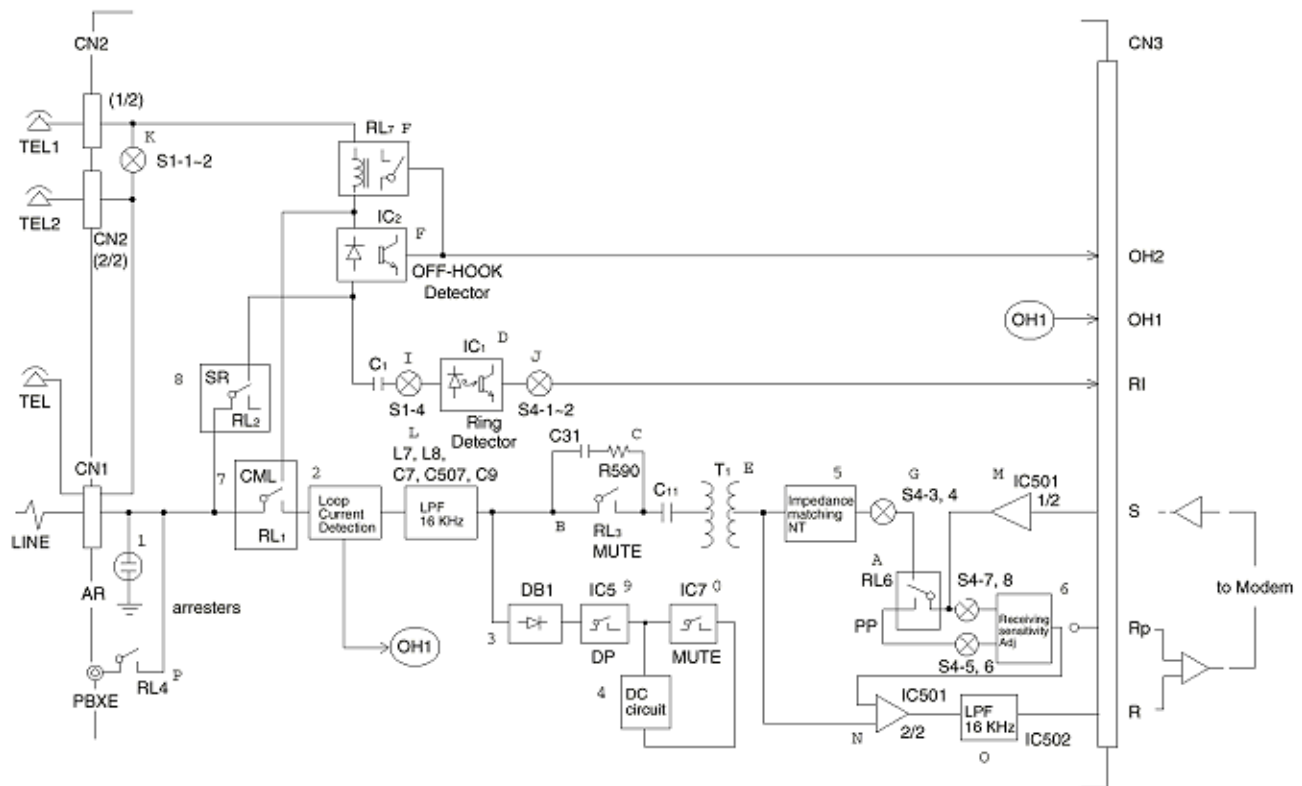
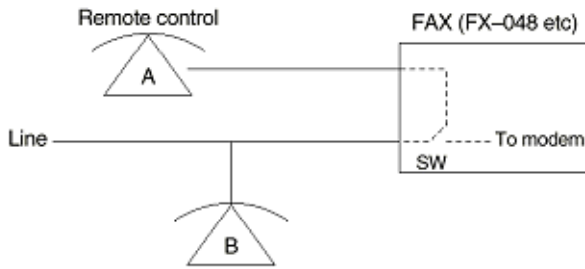


Figure A3.5.4 Block Diagram of DN5

### 4.5 Outline of Parallel Pick Up

Parallel pick up is a function that controls a fax (to make a fax in receive mode) from a telephone set connected parallel to a fax. The two possible parallel connections of telephone sets A and B are shown in the figure.



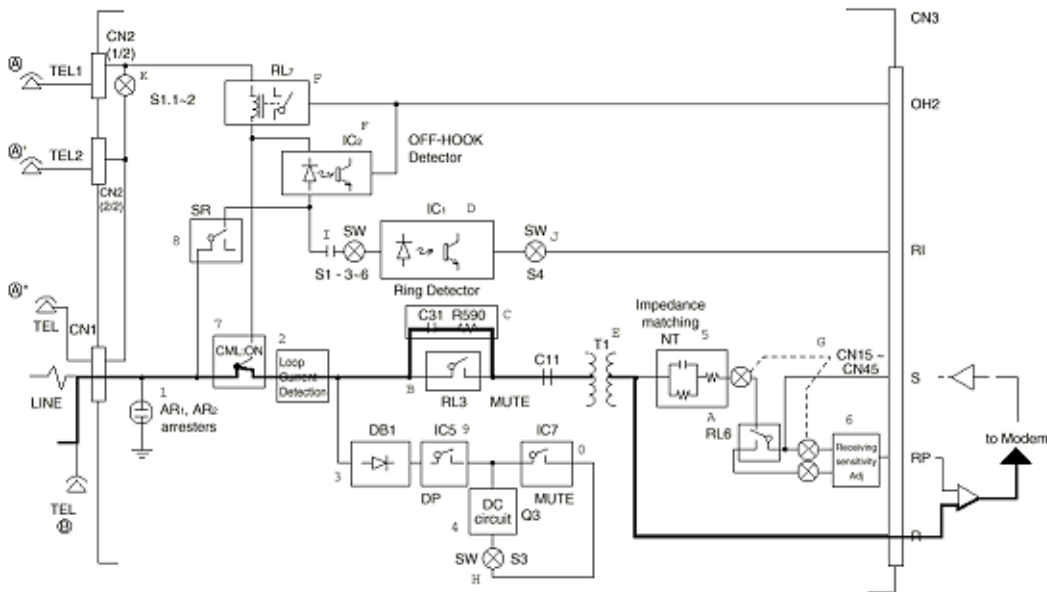
Remote control: To control a fax from telephone set A.  
 Parallel Pick UP (PP): To control a fax from telephone set B.

- **Why a PP function is needed!**

As shown in the following block diagram, telephone sets B, A, A' and A'' are connected to a telephone line. Since A, A' and A'' are connected to the line via fax, off-hook status of any of the telephone sets can be detected by the OFF-HOOK Detector 16 in the block diagram. However, off-hook status of telephone set B cannot be detected by the fax side.

- **PP Control**

When a normal ring arrives at the fax from the line, the CML 7 turns on resulting in the formation of an AC loop via circuit 13. The AC loop makes it possible for the modem to detect the AC signals. If a user hooks up telephone set B after the first ring and enters the MF 2-digit special code in order to make the fax in the receive mode, then it becomes possible to detect the MF signals along that route.



**Block diagram for Parallel Pick Up Path.**

## Service Guide OKIOFFICE 84 Chapter B Print Operation Description

### B1.1 Electrophotographic Processor

The electrophotographic processor prints out the image data to be sent from the main control board on sheets of paper. Figure B1-1 shows the layout drawing of the electrophotographic processor.

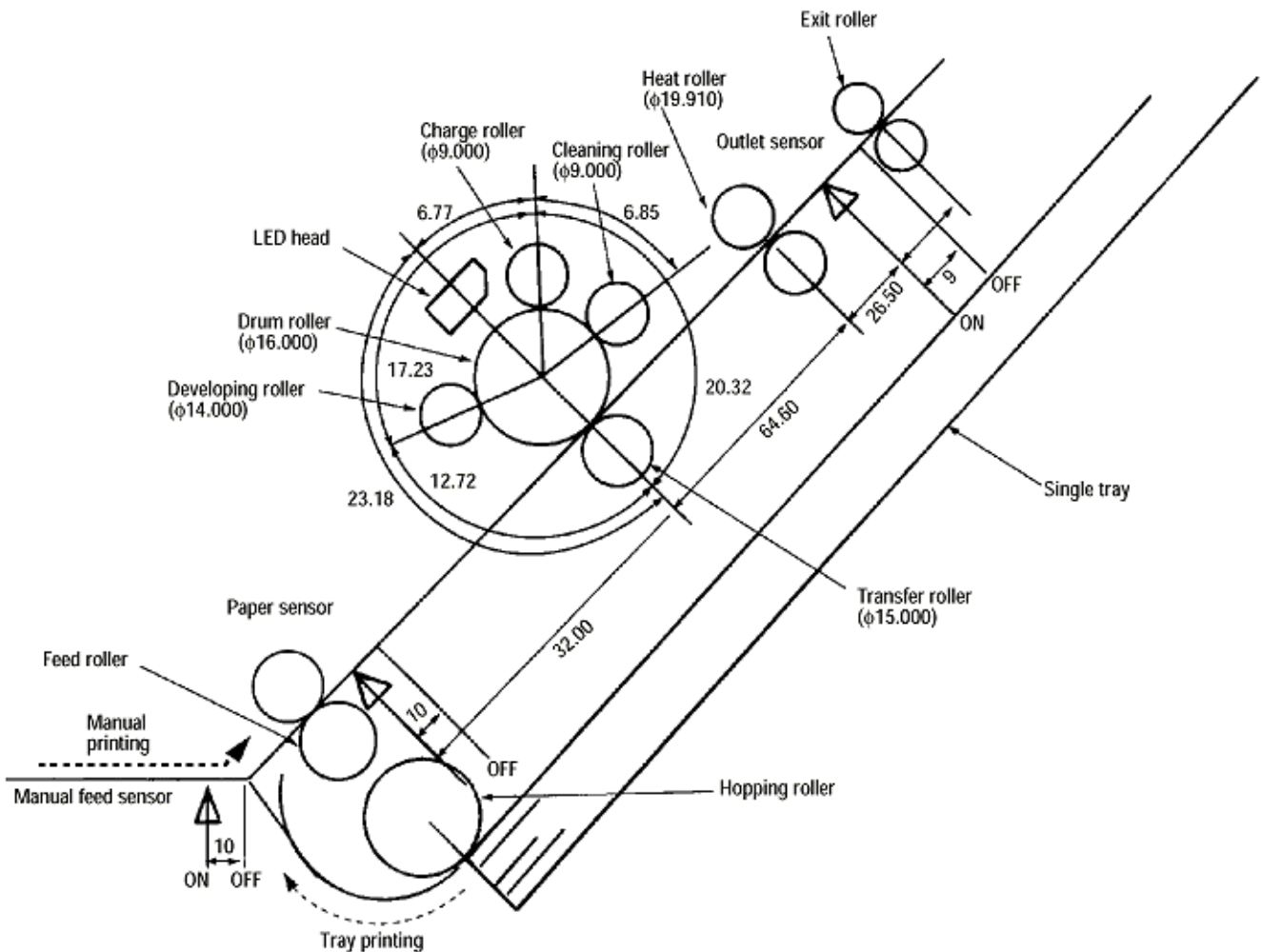
#### (1) Image drum unit

The image drum unit makes a toner adhere to the formed electrostatic latent image with static electricity. This electrostatic latent image is formed by the lights irradiated from LED heads.

#### (2) Electromagnetic clutch

The electromagnetic clutch controls the rotation of the hopping roller according to signals from the control block.

**Layout Drawing of Electrophotographic Processor**



#### 3) Pulse motor (Main)



This pulse motor of 48 steps/rotation is two-phase excited by the signal from the main control board; it performs feeding control by switching normal rotation to reverse rotation or vice versa and turning on/off the electromagnetic clutch. The relationship between the main motor, electromagnetic clutch, registration gear, drum gear, hopping roller is shown in the table below and on the subsequent sections of this chapter.

Main Motor	Electromagnetic Clutch	Hopping Roller	Regist Gear	Drum Gear	Operation
Normal rotation	OFF	Non-rotation	Non-rotation	Rotation	Warm-up
Reverse rotation	ON	Rotation	Rotation	Rotation	Hopping
	OFF	Non-rotation	Rotation	Rotation	Printing

#### (4) LED head

The shift and latch registers receive image data from the main control board for each dot line. 2,560 or 2,496 LEDs are driven to radiate the image drum.

#### (5) Heat Assembly

The heat assembly consists of a heater, a heat roller, a thermistor, and a thermostat.

The power supply unit supplies AC voltage to the heater according to the HEATON signal from the main control board to heat the heat roller. The main control board monitors the heat roller temperature via the thermistor and keeps the temperature constant by turning on/off the heater AC voltage supply.

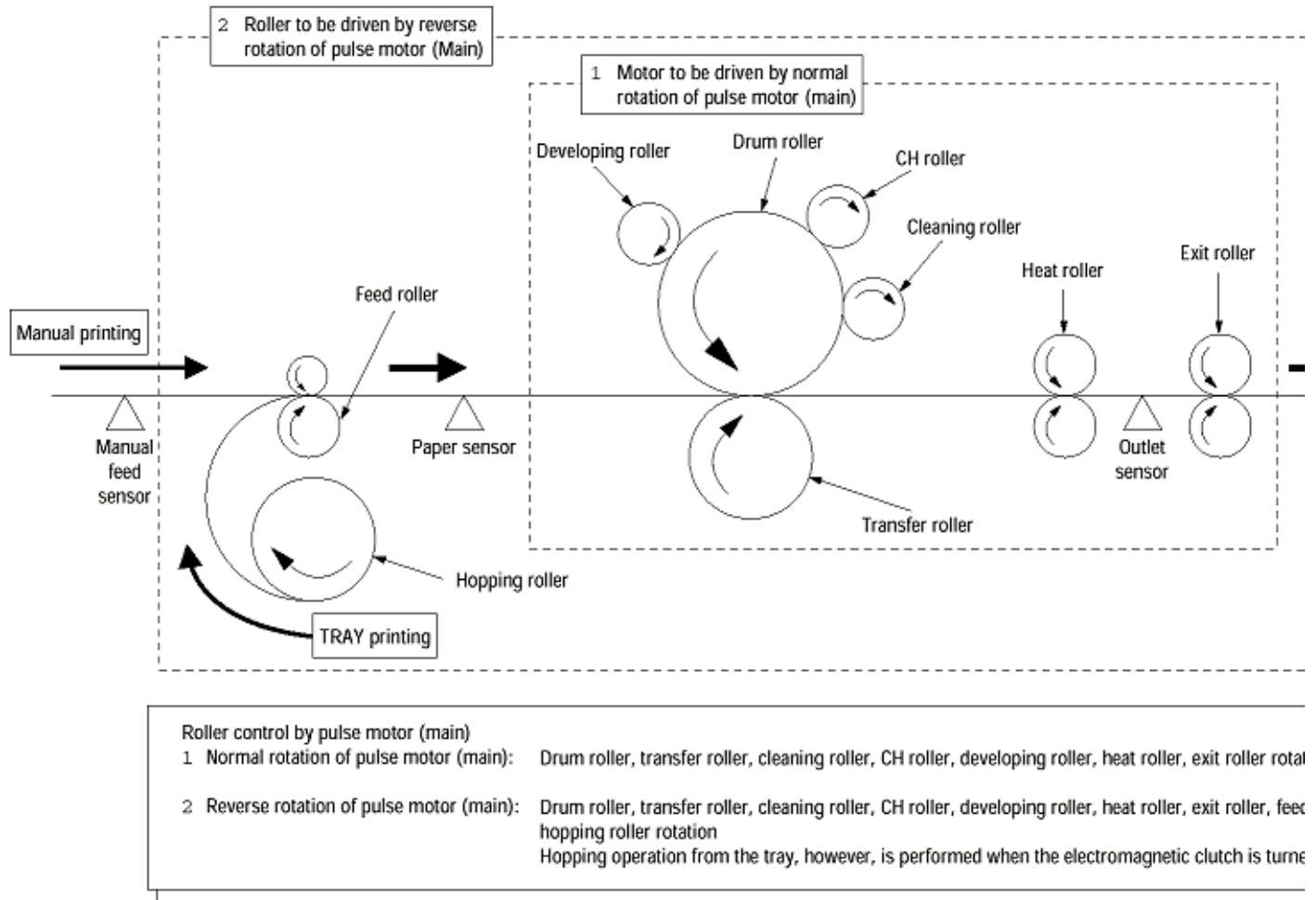
If the heat roller temperature rises abnormally, the thermostat of the heater voltage supply circuit functions to forcibly suspend the AC voltage supply.

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**Service Guide OKIOFFICE 84**  
**Chapter B Print Operation Description**

**Schematic Drawing of OKIOFFICE 84 Paper Feeding**





## Service Guide OKIOFFICE 84

### Chapter B Print Operation Description

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#### B1.2 Electrophotographic Process

##### (1) Electrophotographic process

The electrophotographic process is outlined below.

##### **1 Charging**

The surface of the image drum is charged negatively and uniformly by applying the DC voltage to the charge roller.

##### **2 Exposure**

Light emitted from the LED head irradiates the negatively charged surface of the image drum. The surface potential of the irradiated surface attenuates to form the electrostatic latent image corresponding to the image signal.

##### **3 Development and residual toner recovery**

The negatively charged toner is brought into contact with the Image drum, adhering to the electrostatic latent image on the image drum by static electricity. This adhesion causes the electrostatic latent image to change to a visible image.

At the same time, the residual toner on the image drum is attracted to the developing roller by static electricity.

##### **4 Transfer**

When paper is placed over the image drum surface, the positive charge which is opposite in polarity to that of the toner, is applied to the reverse side by the transfer roller. The toner is attracted by the positive charge and is transferred onto the paper. This results in the transfer of the toner image formed on the image drum onto the paper.

##### **5 Cleaning**

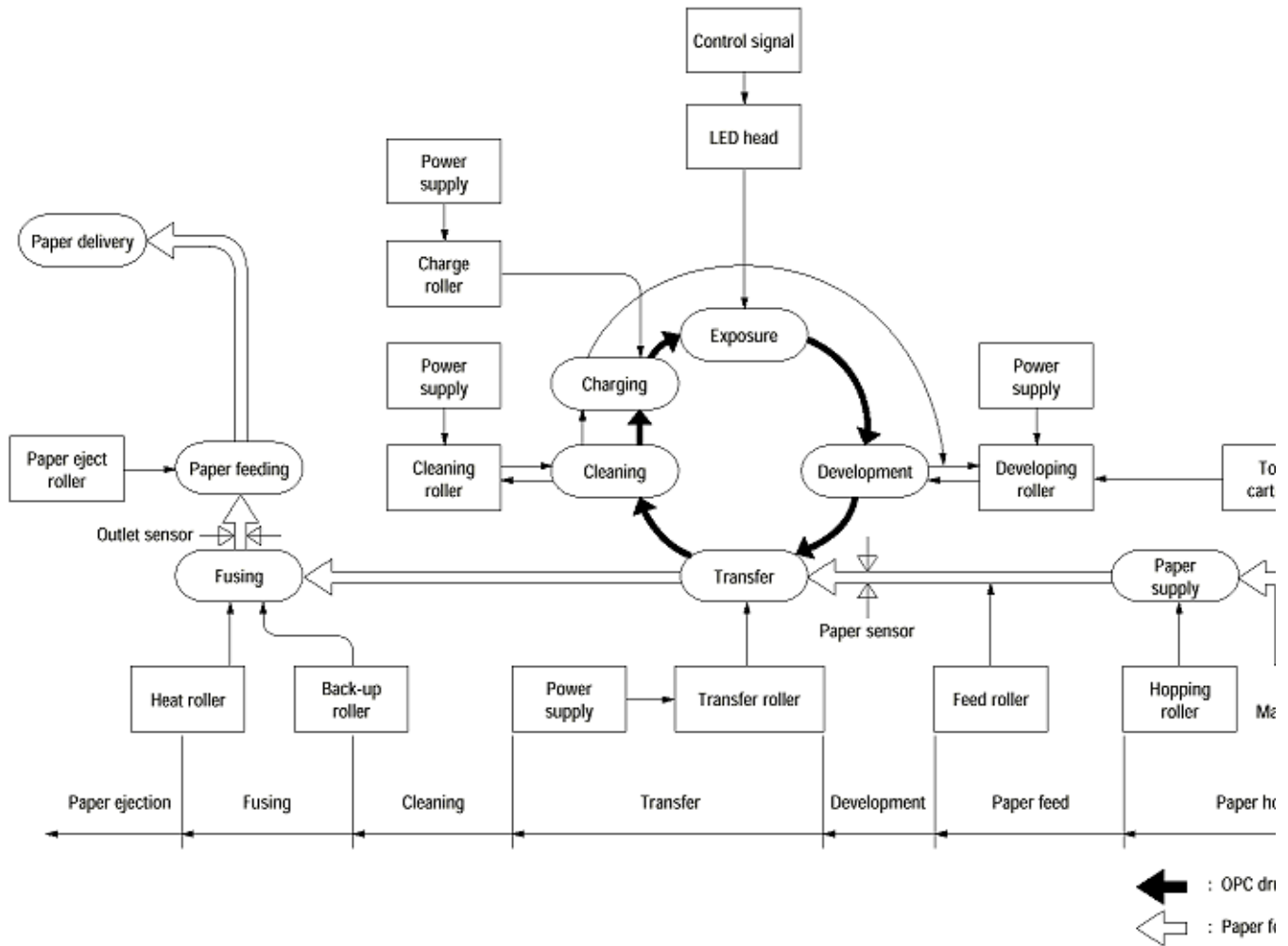
The cleaning roller temporarily attracts the residual toner on the transferred image drum with static electricity, then returns the toner to the image drum.

##### **6 Fusing**

The transferred unfused toner image is fused to a sheet of paper by applying heat and pressure to the image.

## Service Guide OKIOFFICE 84 Chapter B Print Operation Description

Electrophotographic Process Diagram (Figure B1.3)





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**B.2.1 Operations Process Explanation**

Hopping

Printing and Warm-up

Charging

Exposure

Development

Transfer

Fusing

Cleaning

---

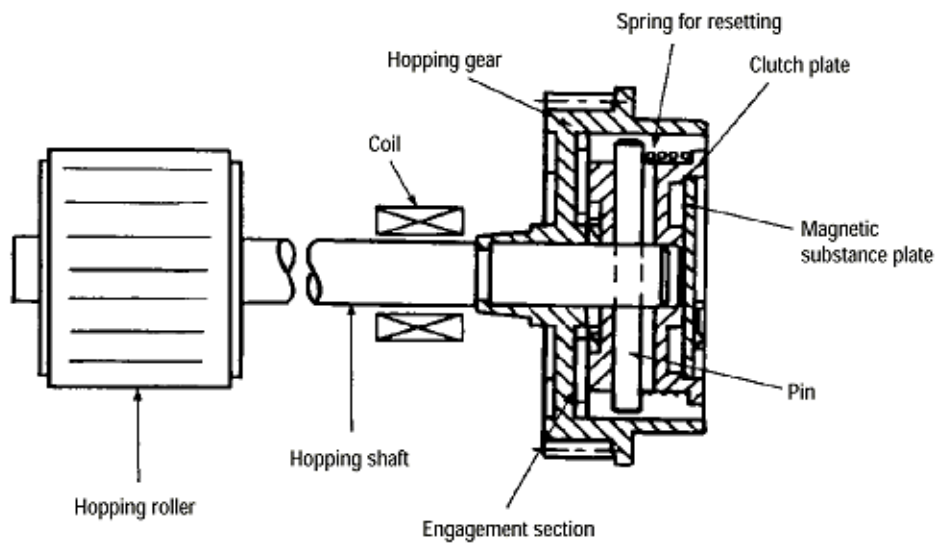
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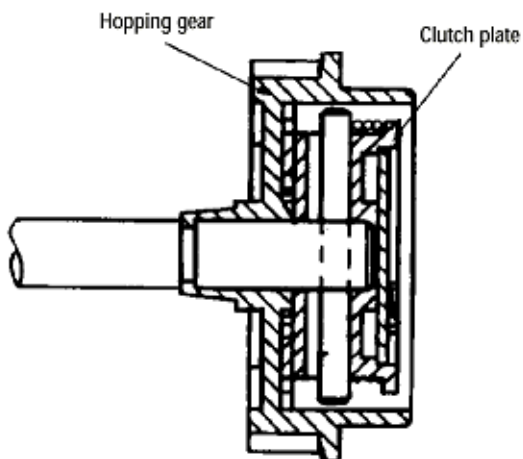
**Hopping**

As shown in the figure below, the clutch for hopping is turned on/off according to current ON/OFF to a coil.

When the clutch is OFF



When the clutch is ON



When the clutch is on, the hopping gear engages with the clutch plate to rotate the hopping roller.

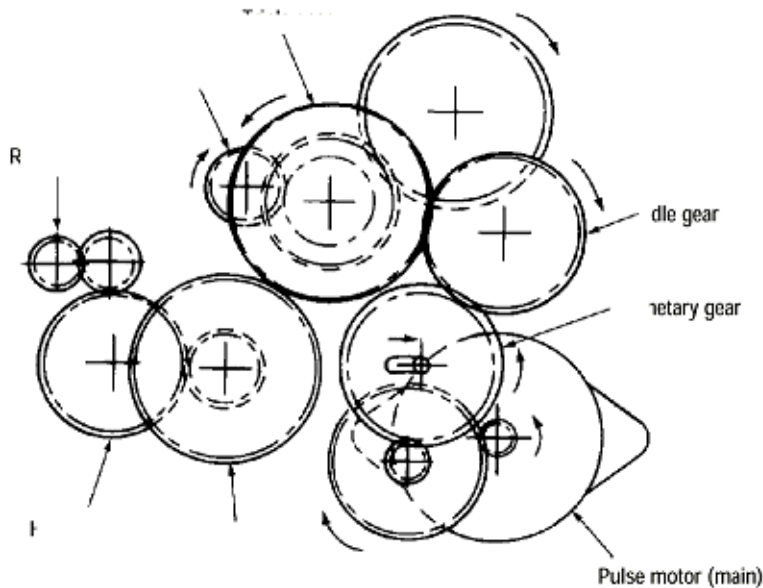
When the clutch is off, the hopping gear is separated from the clutch plate by the spring for resetting, disabling the rotation of the hopping roller.

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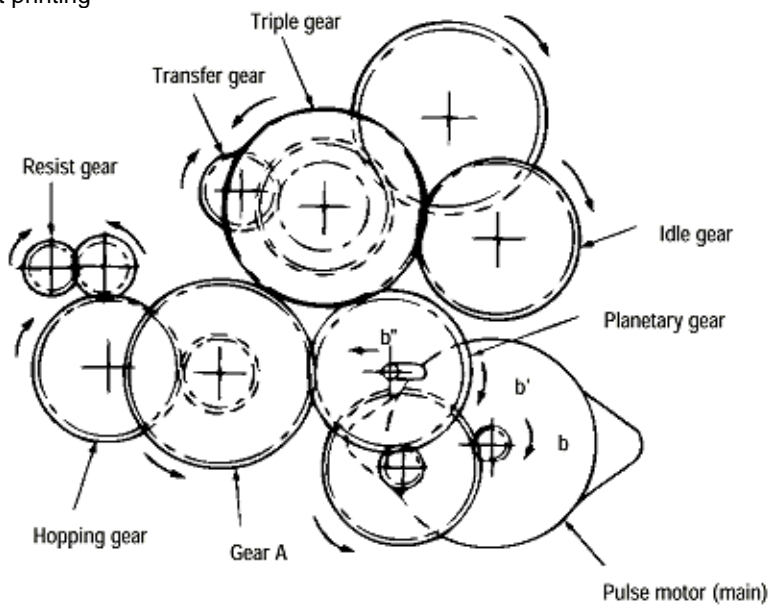
### Printing and Warm-up

At warm-up



Rotate the pulse motor (main) in the a direction. The planetary gear rotates in the a' direction, dislocating its position in the a" direction. This causes the planetary gear to be separated from gear A. The hopping gear will not rotate. The triple gear and transfer gear rotate via the idle gear to drive the image drum unit.

At printing



The paper is further advanced in synchronization to the print data.



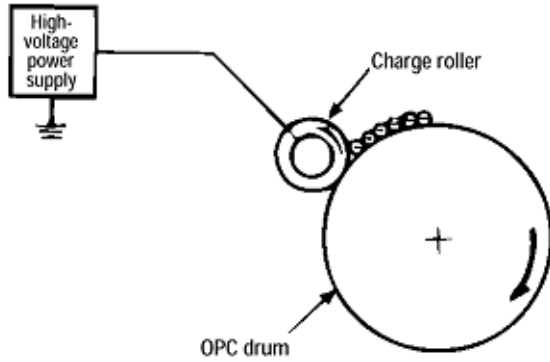
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**Charging**

Charging is performed by applying DC voltage to the charge roller that is in contact with the surface of the image drum.

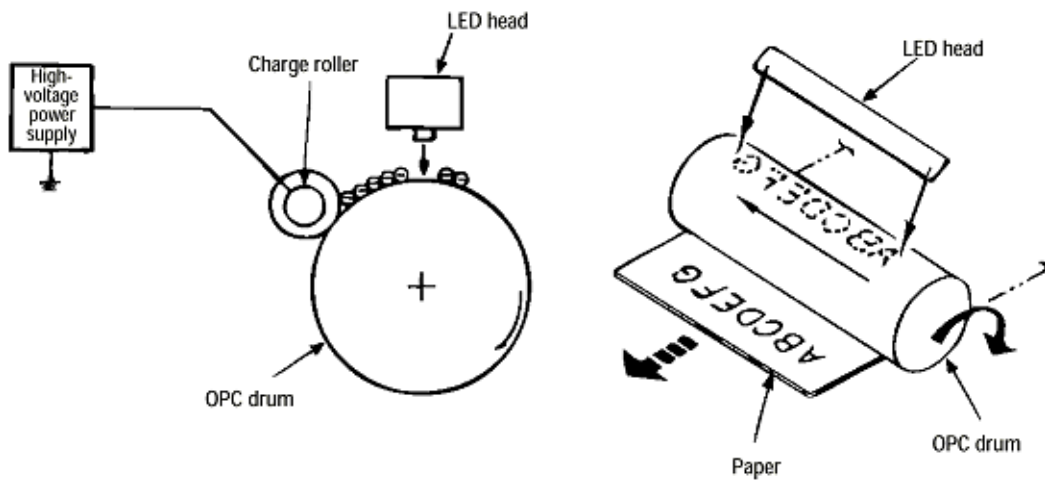


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**Service Guide OKIOFFICE 84**  
**Chapter B Print Operation Description****Exposure**

Light emitted from the LED head irradiates the negatively charged surface of the image drum. The surface potential of the irradiated surface attenuates to form the electrostatic latent image corresponding to the image signal.

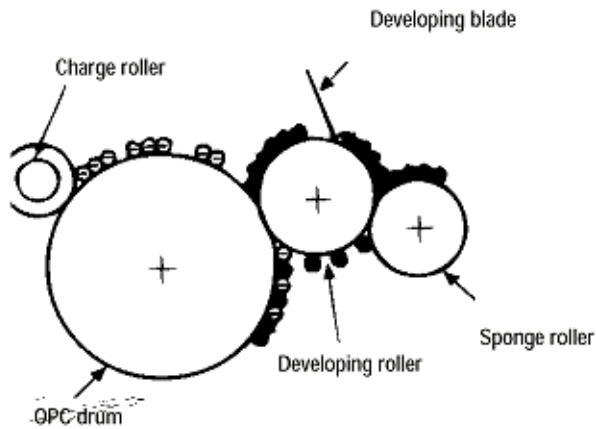


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**Development**

The electrostatic latent image on the surface of the image drum is changed to a visible toner image by applying a toner to it. Development is performed in the contact part between the image drum and developing roller.



1. The sponge roller negatively charges a toner and applies it to the developing roller.
2. The toner applied to the developing roller is thin-coated by the developing blade.
3. A toner adheres to the exposure part of the image drum in the contact part between the image drum and developing roller. This causes the electrostatic latent image to be changed to a visible image.

---

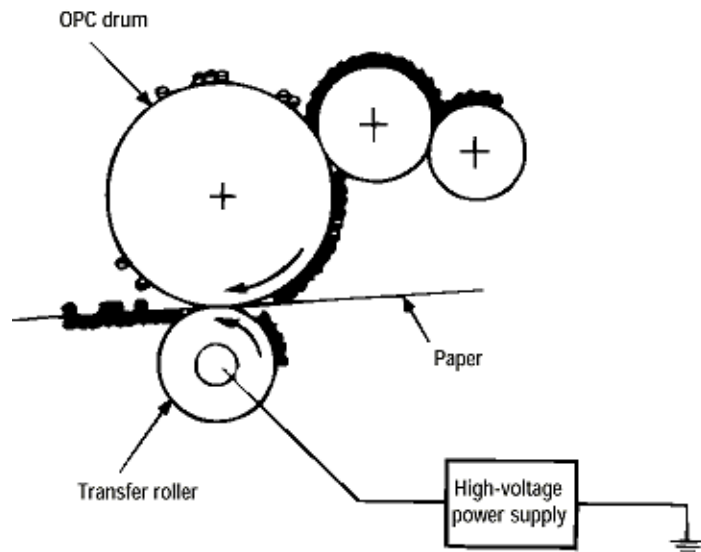
**Transfer**

The transfer roller is composed of conductive sponge material. This roller is set so that the surface of the image drum and sheets of paper will adhere closely.

A sheet of paper is placed on the surface of the image drum and the positive charge opposite to the negative charge of a toner is applied from the reverse side by the transfer roller.

When a high negative voltage is applied from the power supply to the transfer roller, the positive charge induced on the surface of the transfer roller moves to the paper side at the contact part between the transfer roller and the sheet of paper. The positive charge on the lower side of the sheet of paper then causes the negatively charged toner adhering to the surface of the image drum to move to the upper side of the sheet.

This enables transfer to the sheet of paper.



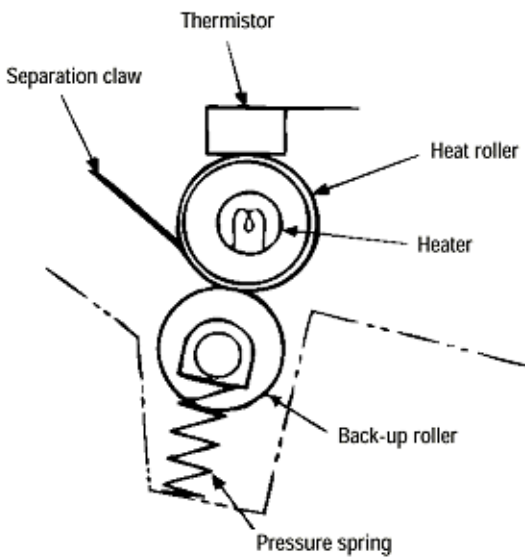
---

**Fusing**

The transferred unfused toner image is fused to a sheet of paper because heat and pressure are applied when it passes between the heat roller and backup roller.

The Teflon-coated heat roller contains a 400 W heater (Halogen lamp) that heats the heat roller. The thermistor on the surface of the heat roller keeps the temperature of the heat roller constant. A thermostat is also installed for safety. If temperature rises abnormally, this thermostat opens to suspend voltage supply to the heater.

The backup roller is pressurized to the heat roller by the pressure spring on each side.

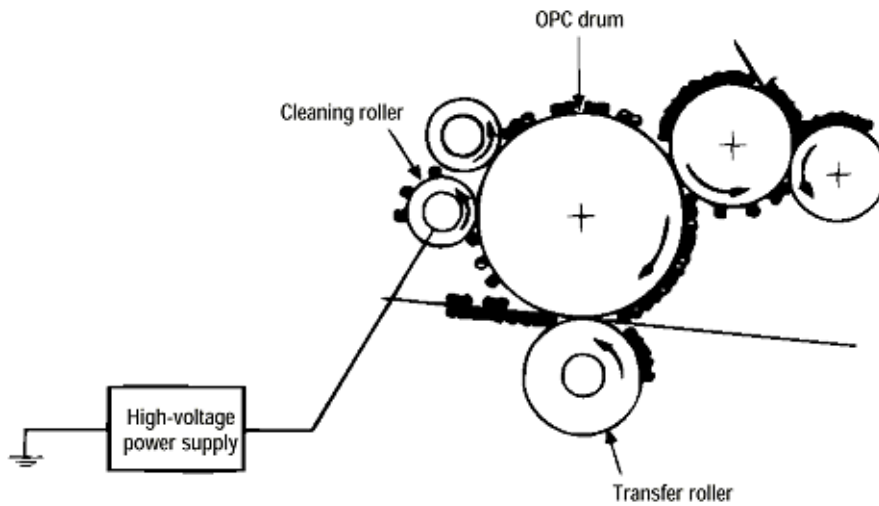


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**Cleaning**

After transfer has terminated, the cleaning roller temporarily draws in the untransferred residual toner adhering to the image drum with static electricity and then returns it to the image drum.





## Service Guide OKIOFFICE 84

### Chapter B Print Operation Description

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#### B.3 Paper Jam Detection

The OKIOFFICE 84 monitors the paper status when the power supply is on and during printing. In the following cases, the unit interrupts the printing process as a paper jam. Printing can be recovered by opening the cover removing the jammed paper, and closing the cover.

Error	Cause of Error
Paper inlet jam	<ul style="list-style-type: none"><li>● Only the manual feed sensor detects "Paper exists" when the power supply is on.</li><li>● The leading part of the paper does not reach the paper sensor although hopping operation was performed three time.</li></ul>
Paper feed jam	<ul style="list-style-type: none"><li>● The leading part of the paper does not reach the outlet sensor within a fixed time after it has passed the paper sensor.</li></ul>
Paper outlet jam	<ul style="list-style-type: none"><li>● The trailing part of the paper does not pass the outlet sensor within L mm after the leading part of the paper has passed the outlet sensor.</li></ul>
Paper size error	<p>2.52" (64 mm) L 15.77" (400.6 mm) &lt; = L = &gt;</p> <ul style="list-style-type: none"><li>● The trailing part of the paper does not pass the paper sensor within L mm after the leading part of the paper has passed the paper sensor.</li></ul> <p>2.52" (64 mm) L 15.77" (400.6 mm) &lt; = L = &gt;</p>





## Service Guide OKIOFFICE 84

### Chapter B Print Operation Description

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#### Paper Feed Check List

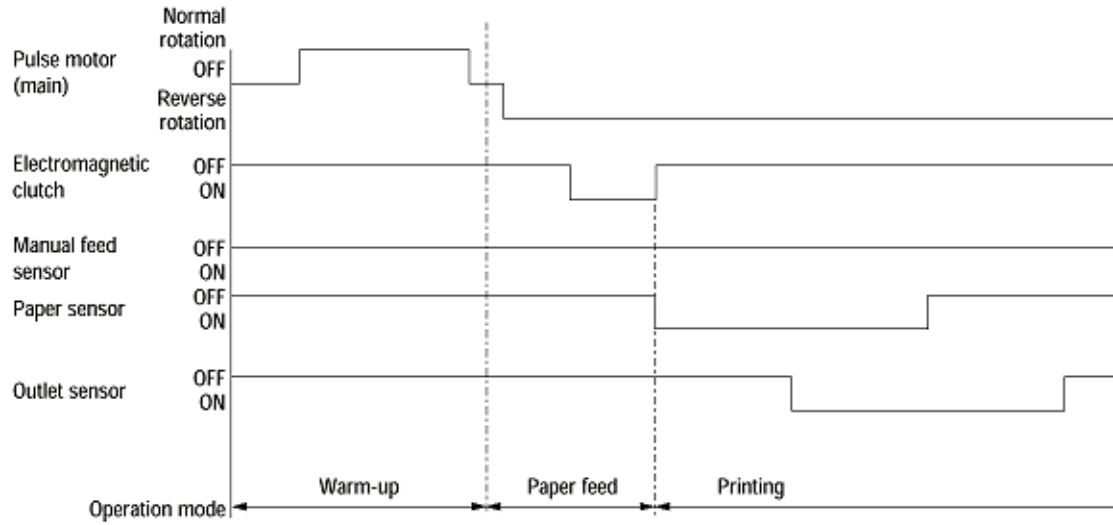
Type of Error	Supervisory Sensor	Reference Value	Error	
Paper feed error	Electromagnetic clutch ON/ Paper sensor ON	69.8	35	-----
Paper feed jam1	Paper sensor ON/ Outlet sensor ON	122.9	20.0	-----
Paper size error	Paper sensor ON/ Paper sensor OFF	2.52" (64 mm) <=L = > 15.77" (400.56 mm)	-----	-----
Paper outlet jam	Outlet sensor ON/ Outlet sensor OFF	2.52" (64 mm) <= L = > 15.77" (400.56 mm)	45.0	45.0
Paper feed jam 2	Paper end sensor OFF/ Outlet sensor OFF	121.9	20.0	20.0

Unit: mm



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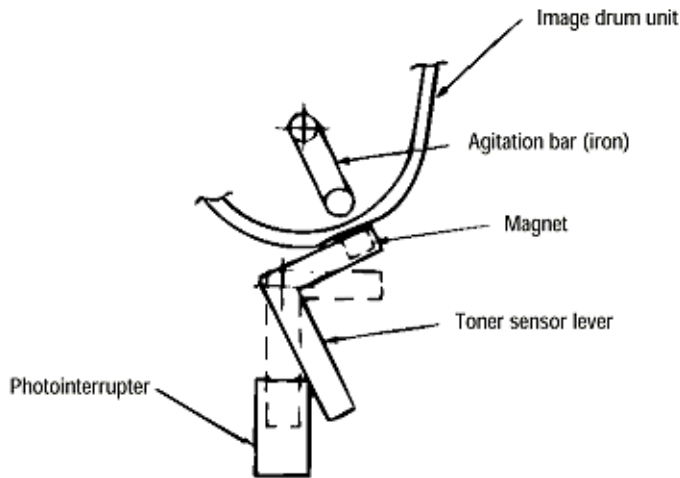
**Timing Chart for Paper Feed (Tray Feed)**



#### B.4 Toner Low Detection

- Hardware configuration of toner sensor

The figure below shows the hardware configuration of the toner sensor.

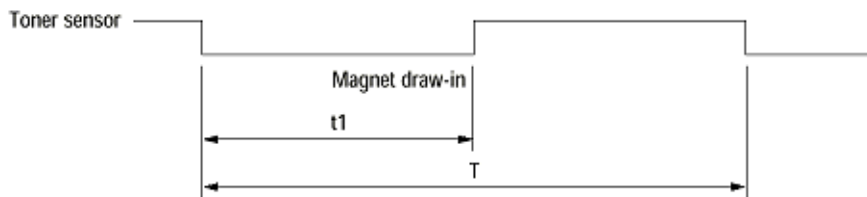


Hardware Configuration of Toner Sensor

#### Hardware Configuration of Toner Sensor

- Toner detection method

(1) Toner sensor monitoring conditions are shown in the figure below.



**Caution:** The toner sensor is not monitored when the drum is inactive.

(a) When the toner-low state continues twice, Toner Low occurs. (This state is monitored at a cycle of 40 milliseconds.)

(b) When the toner-full state continues twice, Toner Low is released. (This state is monitored at a cycle of 40 milliseconds.)

(c) When the toner sensor does not change over two cycles ( $T \times 2$ ), the toner sensor alarm state occurs.

(d) After the image drum unit has been replaced (after the drum counter has been reset), Toner Low is not detected when the drum counter indicates 1 to 100 counts.

(2) The basic rotation cycle of the toner sensor is as follows:

	<b>T time</b>
Basic rotation cycle of toner sensor	4.9 sec.
Toner low time	t1 > 1.2 sec.
Toner full time	1.2 sec. > t1 >

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## Service Guide OKIOFFICE 84 Chapter B Print Operation Description

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### B.5 Cover Open

Opening the stacker cover turns off the microswitch on the high-voltage power supply board to suspend +5 V supply to the high voltage power supply. This results in the stop of all high-voltage outputs. At the same time, the CVOPN signal is issued to notify the main control board of the switch status and cover open processing is executed.

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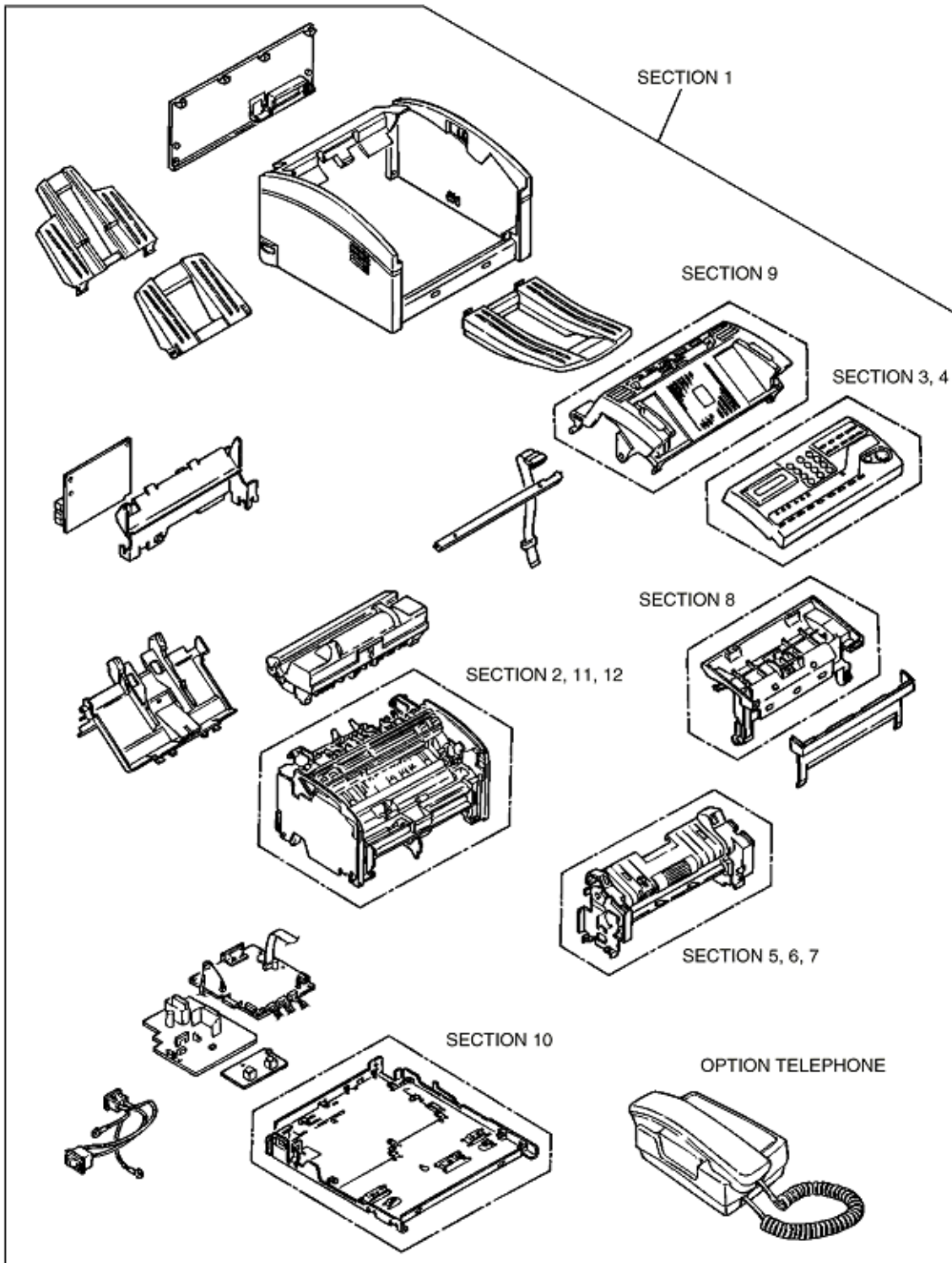
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**Service Guide OKIOFFICE 84**  
**Chapter C Illustrated Parts List**

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**Illustrated Parts List**



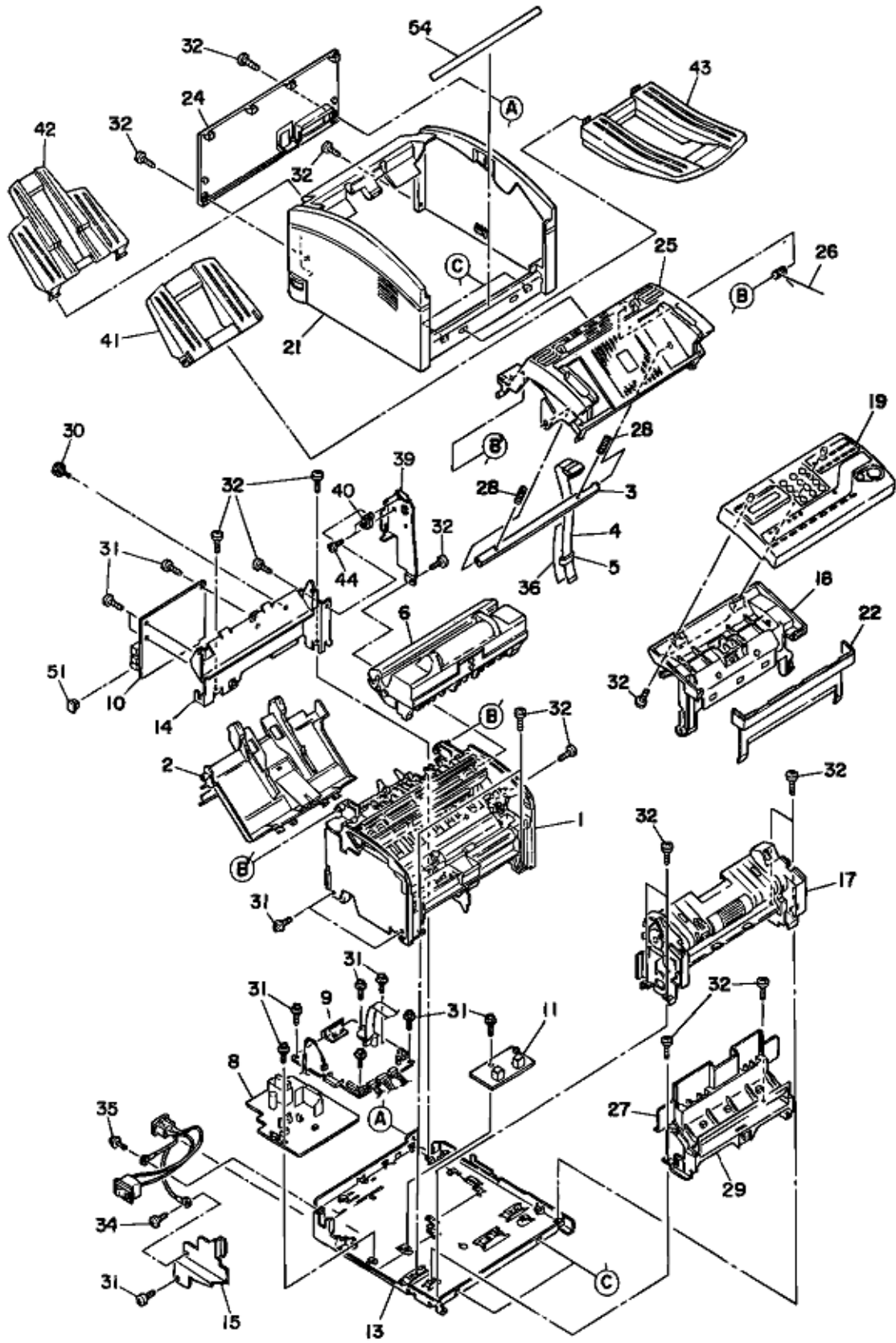


**Service Guide OKIOFFICE 84**  
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**Section 1: Cabinet Assembly 1/2**





Rev.	No.	Oki Part Number	Description	Q'ty	Remarks
	2		HOLDER-ASSY		
	3	56112101	LED HEAD	1	RSPL
	4	56633401	CABLE FLAT ASSY.	1	RSPL
	6	40709901	Image Drum Unit	1	Consumable
	8a	40588801	DC Power Supply Unit-120v	1	
	8b	40588901	DC Power Supply Unit-230v	1	
	9	40687601	Board-R51	1	
	10a	40044501	Board - UNC	1	
	11	40605601	H.V. Board P6L	1	
	13	40672901	Plate Assy.-Base	1	
	14	40023901	Bracket-Package	1	
	15	40236401	Plate Assy. - Shield (HV)	1	
	17		Frame Assy.-Scanner L	1	Refer to Section 5
	18		Frame Assy.-Scanner (U)	1	Refer to Section 8
	19	40712201	OPE Panel Assembly	1	
	21a	40606501	Cover-Main (A)	1	
	22a	40025301	Cover-Front	1	
	24a	40606601	Cover-NCU	1	
	25a	40672801	Cover Assy.-Top (A)	1	
	26	40026101	Spring-TC	1	

---

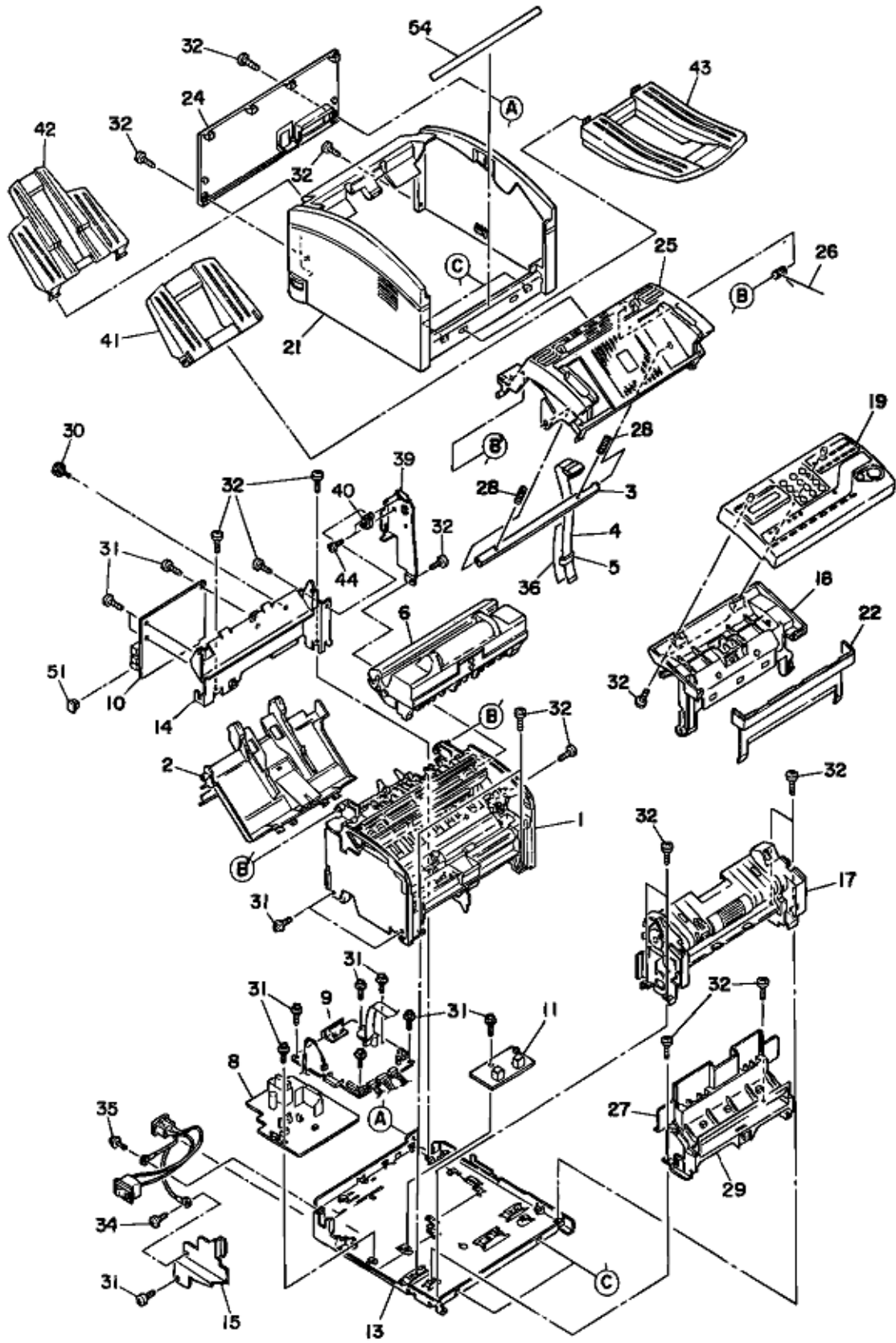
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**Section 1: Cabinet Assembly 2/2**

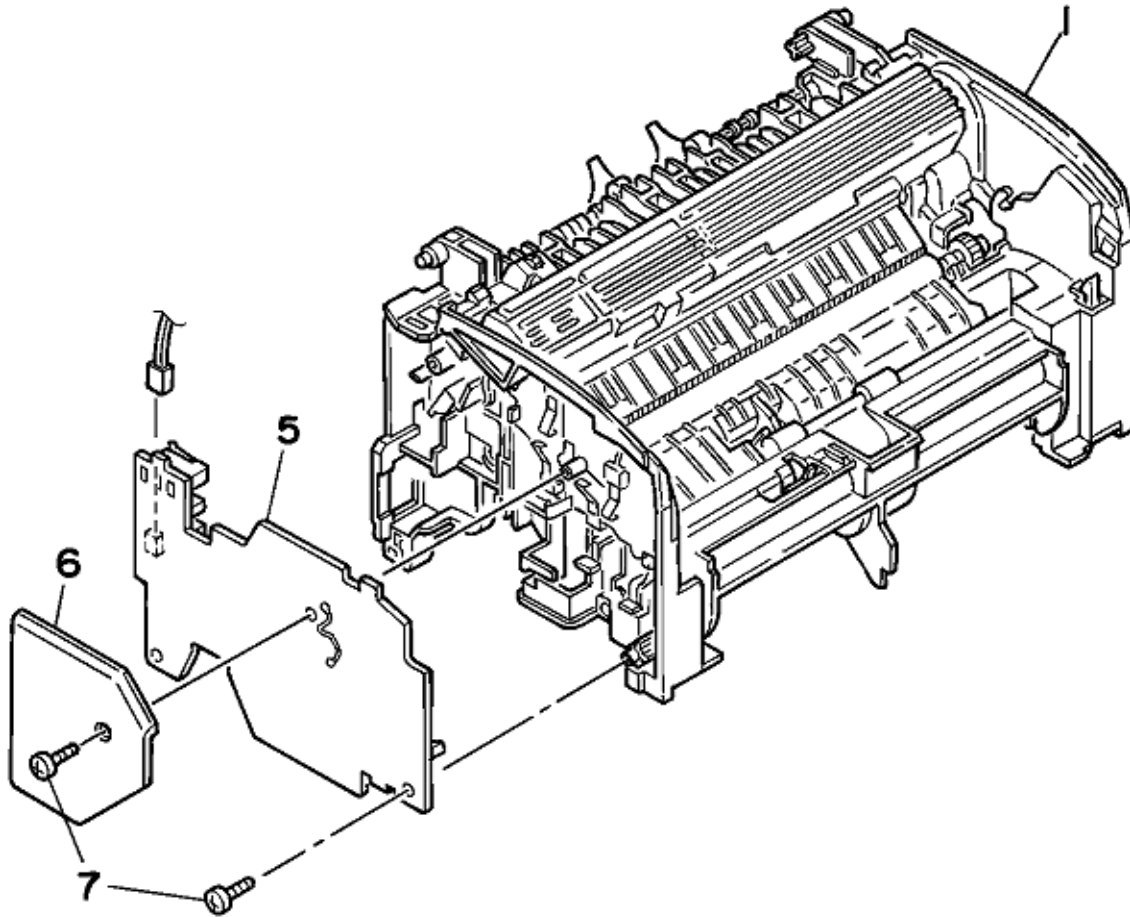


Rev.	No.	Oki Part Number	Description	Q'ty	Remarks
	27	40024001	Guide-Paper (U)	1	
	28	50928701	Spring: Head	2	
	29	40024101	Guide-Paper (L)	1	
	31		B Tapping Screw		
	32		B Tapping Screw FA		
	33		B Screw B		
	34		Screw		
	35		Screw	1	
	36	40773601	Sheet - Shield (LED)		
	39	40140801	Bracket-Damper	1	
	40	40148201	Gear-Damper	1	
	41a	40025701	Tray-Document	1	
	42a	40025801	Tray-Paper	1	
	43a	40375801	Stacker Assy.-Document	1	
	44		Screw-Tapping (S-M2)		

---

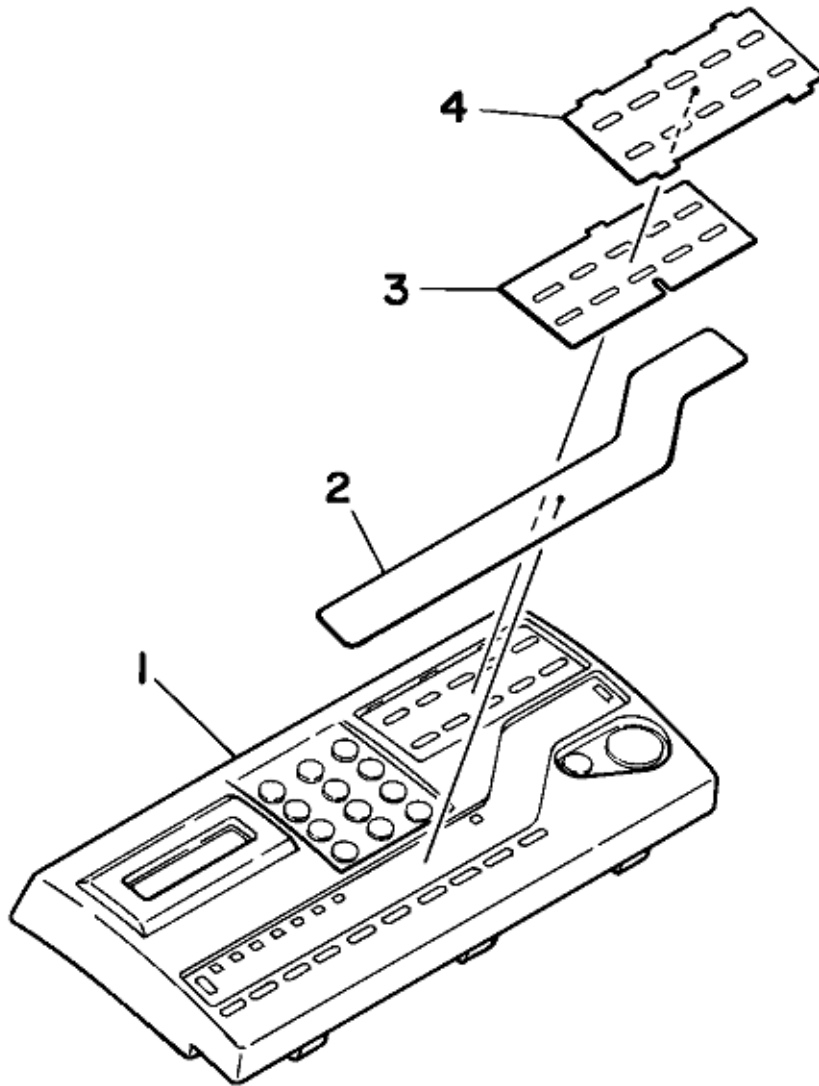
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Section 2: Printer Unit



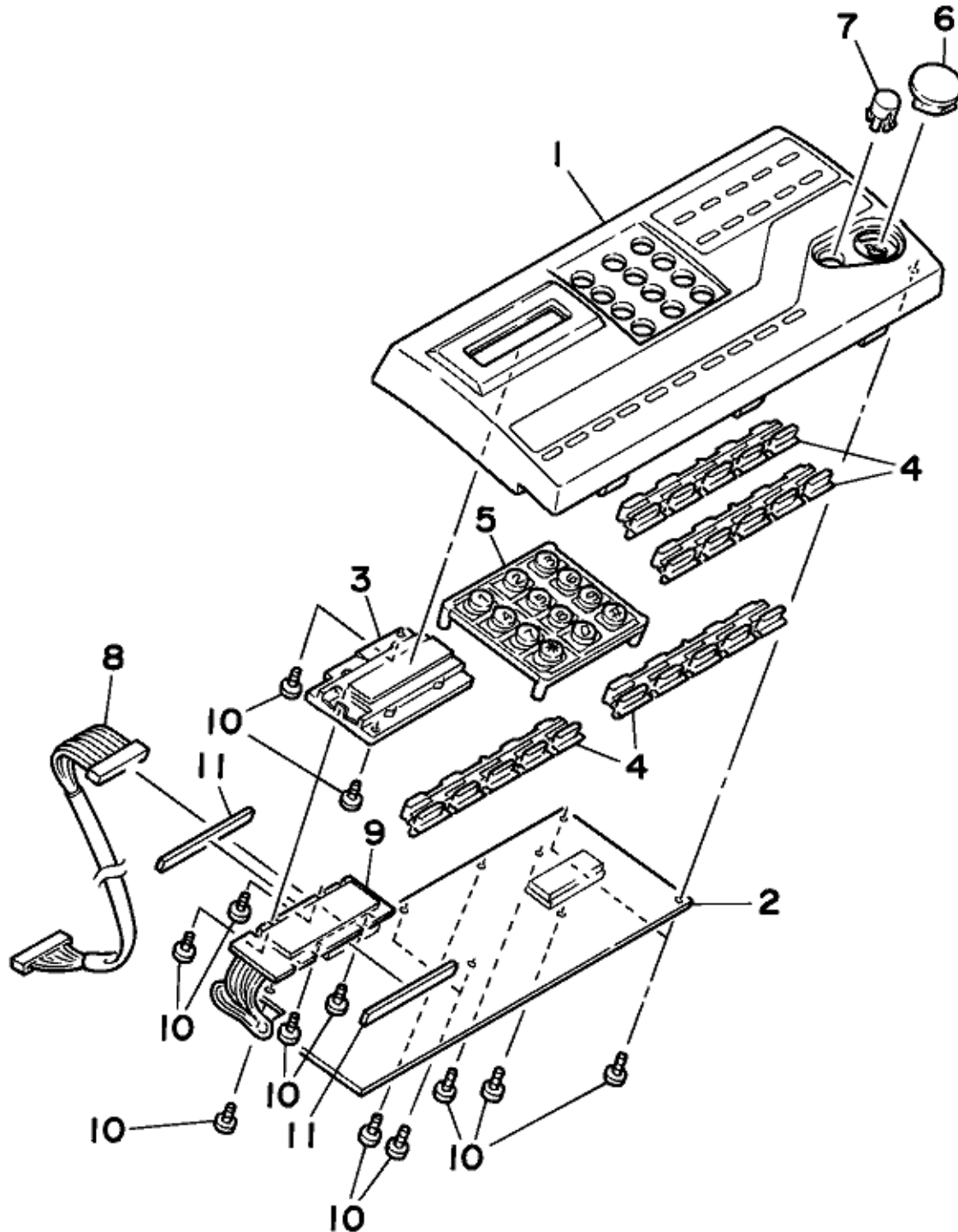
Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	N/A	Printer Unit Assembly		See Section 11
	5	40607401	H.V. Board P2H	1	
	6	40413401	Cover - HV		
	7		Screw F		

---

**Section 3: Operator Panel**

Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	40712201	OP Panel Assy.	1	
	2	00073320	Sheet: F048	1	
	3	00073413	Sheet : One Touch	1	
	4	40023601	Sheet: Cover	1	

### Section 4: Operator Panel Assembly





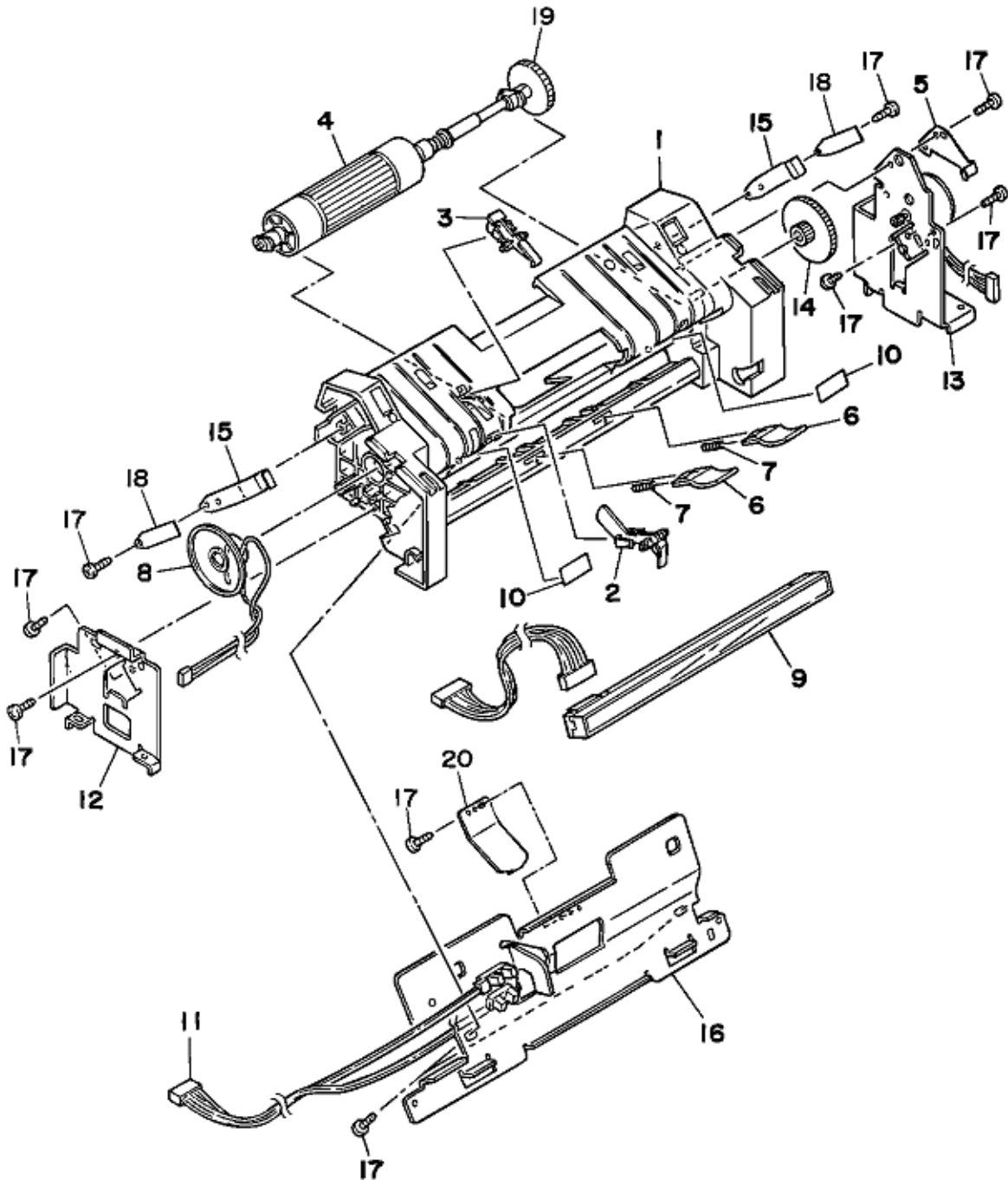
Rev.	No.	Oki parts Number	Description	Q'ty	OKIDATA P/N
	1	N/A	Case-OPE(T)		Refer to Section 3
	2	40086701	Board-04W	1	
	3	N/A	Holder-LCD		
	4	N/A	Button-Function		
	5	N/A			
	6				
	7				
	9				
	10		B SCREW A		
	11				

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## Service Guide OKIOFFICE 84 Chapter C Illustrated Parts List

### Section 5: Frame Assembly Scanner (L)



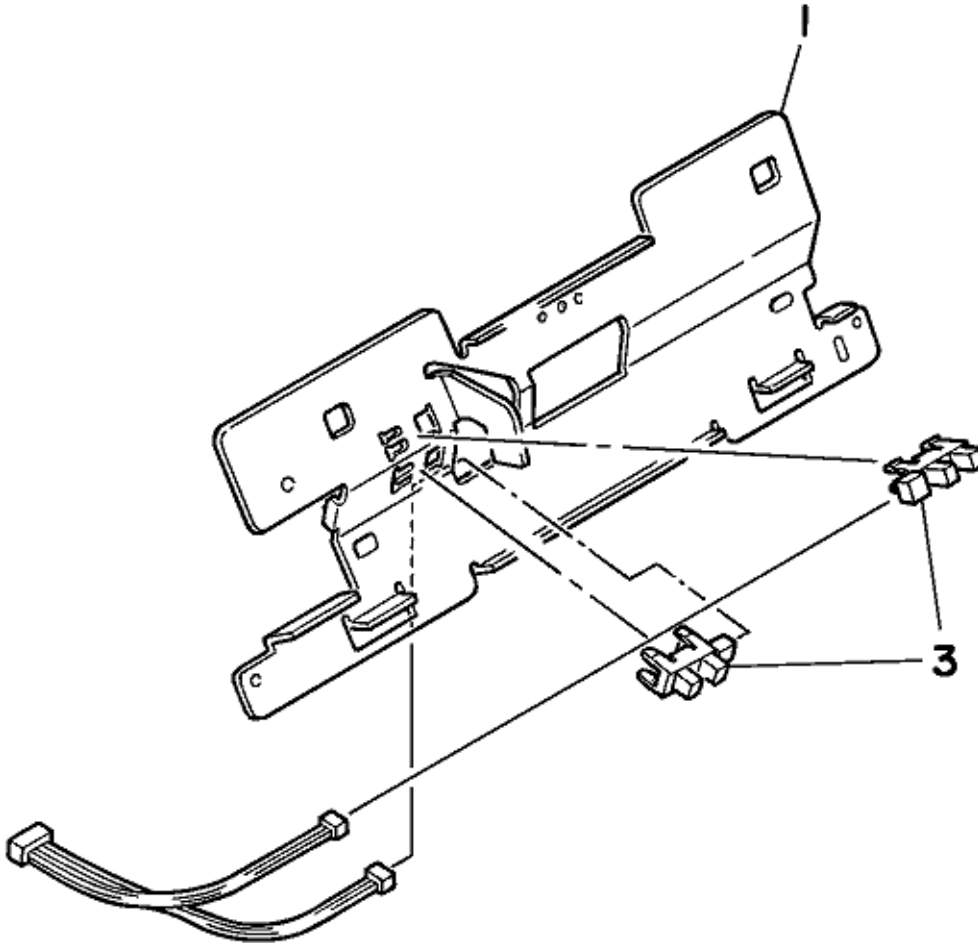
Rev.	No.	OKIDATA P/N	Description	Q'ty	
	1		Frame-Scanner (L)		
	2	40019401	Lever-PC1	1	

3	40019501	Lever-PC2	1	
4	40019601	Roller Assy.-ADF	1	
5	40020201	Plate-Earth ADF	1	
6	40020601	Piece-Exit	2	
7	40020703	Spring-Exit	2	
8	40127501	Connection: Cord-Speaker	1	
9	40141401	Contact Image Sensor - A4	1	
12	N/A	Plate-Scanner (L)		
13	N/A	Plate Assy.-Scanner (R)		
14	40020301	Gear-Z95/14	1	
15	40020501	Spring-Latch	2	
16	N/A	Plate Assy.-Scanner (B)		
17	N/A	B Screw FA		
18	40153801	Spring-Reinforcement	2	
19	40025201	Gear-Z38	1	
20	40024501	Spring-CIS	1	

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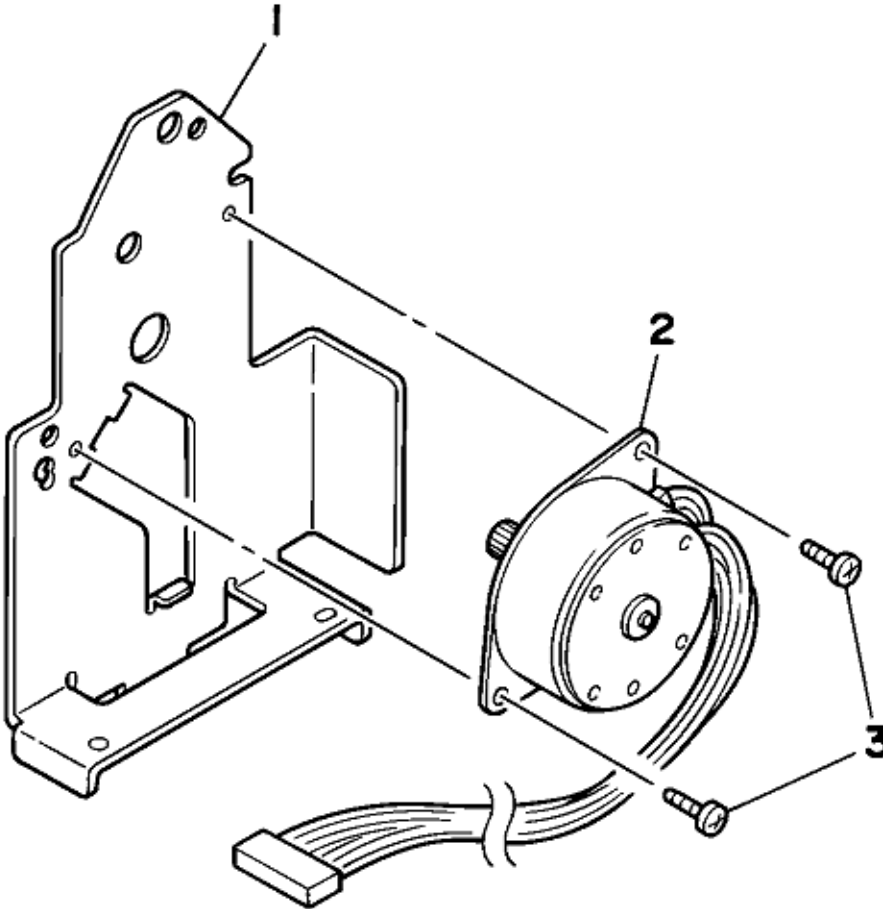
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**Section 6: Plate Assembly-Scanner (B)**

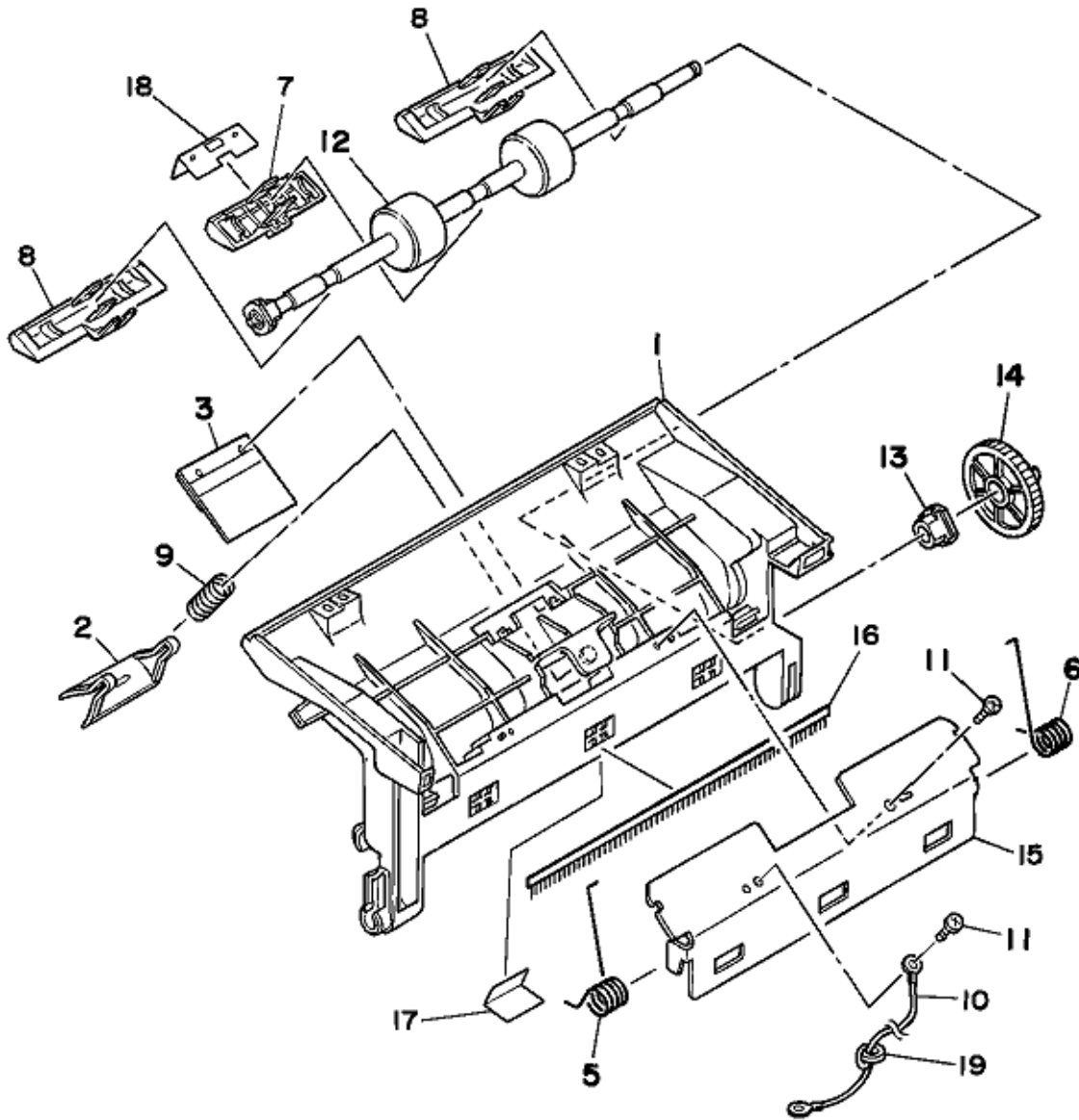
Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	N/A	Plate-Scanner (B)	1	N/A
	3	50410001	Sensor: Photo	2	RSPL

---

**Section 7: Plate Assembly-Scanner (R)**

Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	N/A	Plate-Scanner (R)		N/A
	2	56513101	Motor-S 151/175	1	RSPL
	3	N/A	B SCREW FA		N/A

### Section 8: Frame Assembly-Scanner (U)



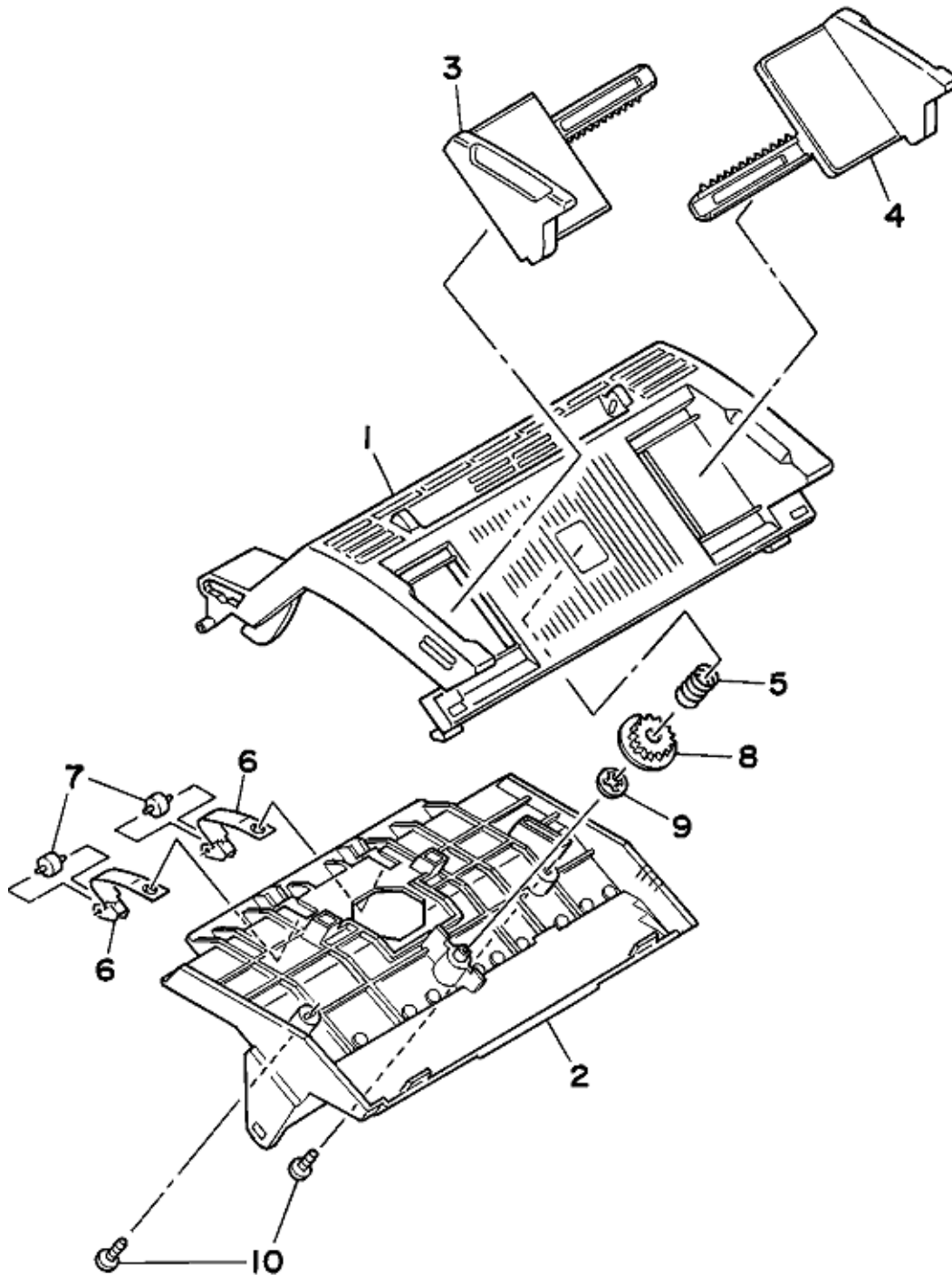
Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	N/A	Frame-Scanner (U)		N/A
	2	5333980	BACK-UP PLATE ADF	1	RSPL
	3	40267001	SEPARATION RUBBER ASSEMBLY	1	RSPL
	4				
	5	40021401	Spring-Pinch (L)	1	RSPL

6	40021501	Spring-Pinch (R)	1	RSPL
7	40745801	Guide-Sensor (A)		
8	40021701	Guide-Sensor (B)	2	RSPL
9	40481101	ADF SPRING	1	RSPL
10		Cord-Earth		
11	N/A	B SCREW FA	1	N/A
12	40021202	Roller Assy.-Sensor	1	RSPL
13	40022001	Bearing-S	1	RSPL
14	40020801	Gear-Z31	1	RSPL
15		Plate-Support	1	
16	40026301	Bar-Discharge	1	N/A

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### Section 9: Cover Assembly-Top



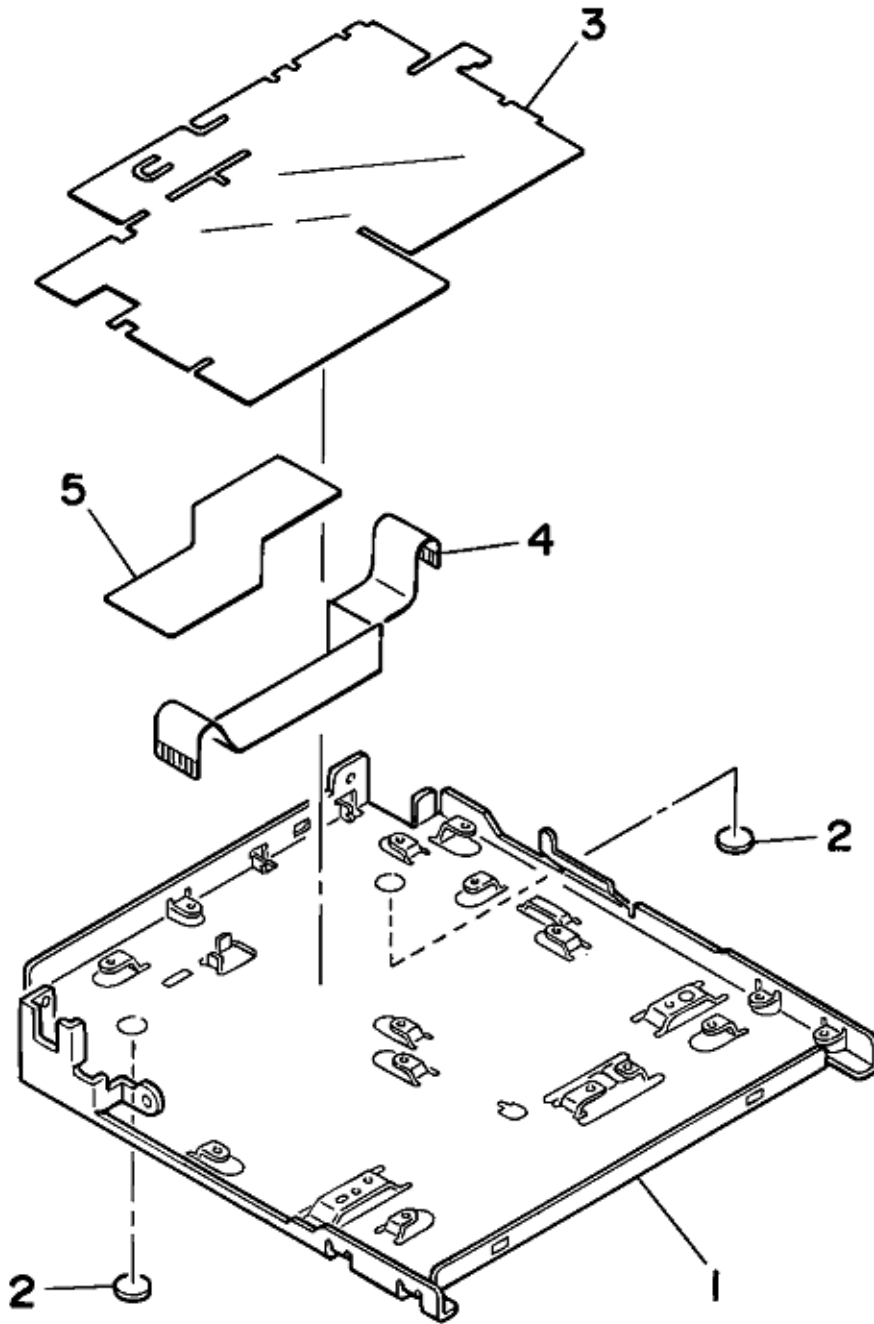


Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	N/A	Cover-Top		Refer to Section 1
	2	40606701	Holder-LED	1	RSPL
	3	N/A	Guide-Document (L)		N/A
	4	N/A	Guide-Document (R)		N/A
	5		Spring	1	
	6	51024901	PLATE EXIT	2	N/A
	7	53502401	EJECT ROLLER A	2	N/A
	8	51239603	PINION GEAR B	1	N/A
	10	N/A	B SCREW FA		N/A

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Section 10: Plate Assembly-Base



Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1		Plate-Base		Refer to Section 1
	2		RUBBER A		
	3		Sheet-Insulation	1	

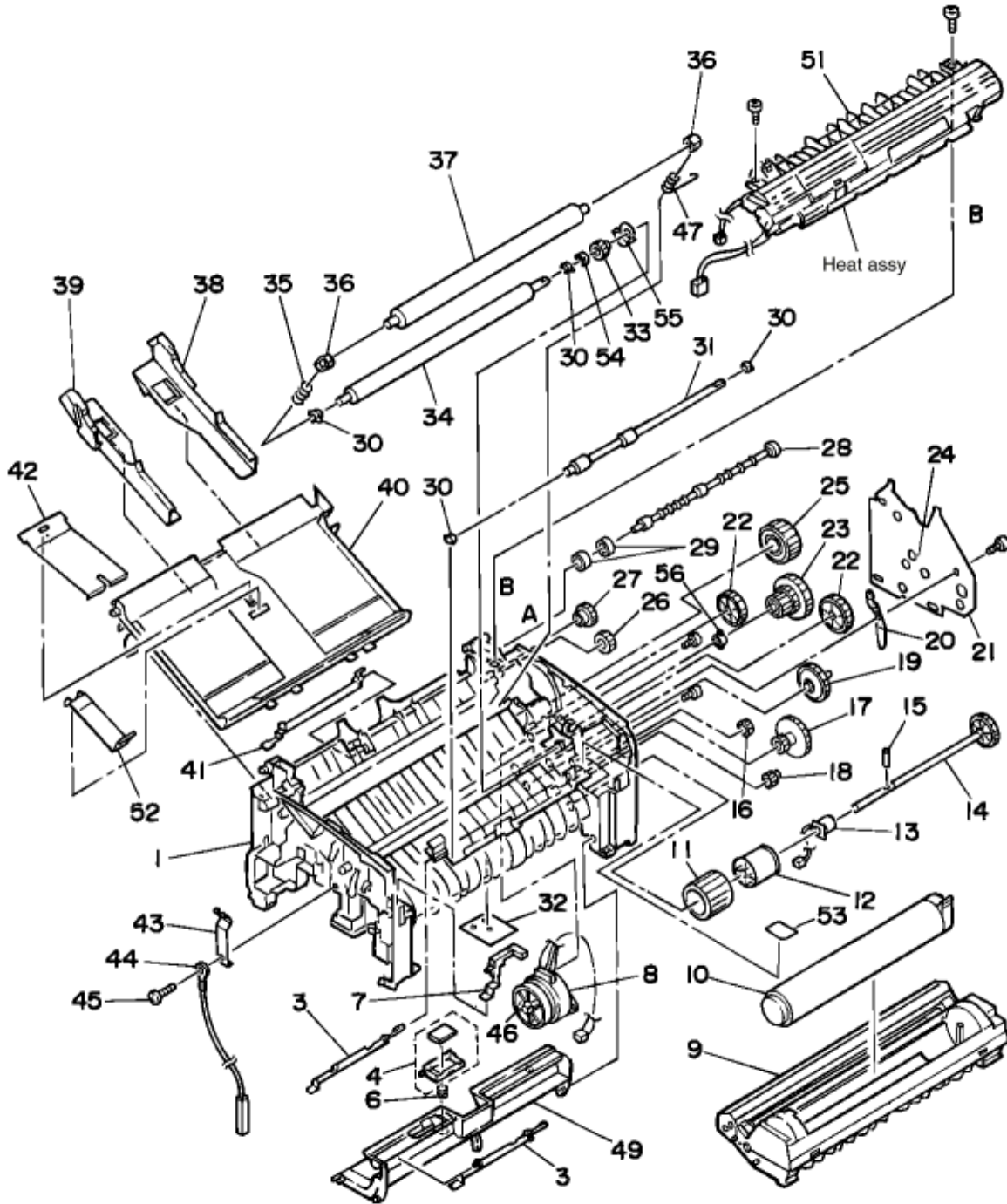
	4	40128001	Cord: Flat	1	
	5		Sheet-FG		

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## Service Guide OKIOFFICE 84 Chapter C Illustrated Parts List

### Section 11: Printer Base Frame Unit (1 of 2)



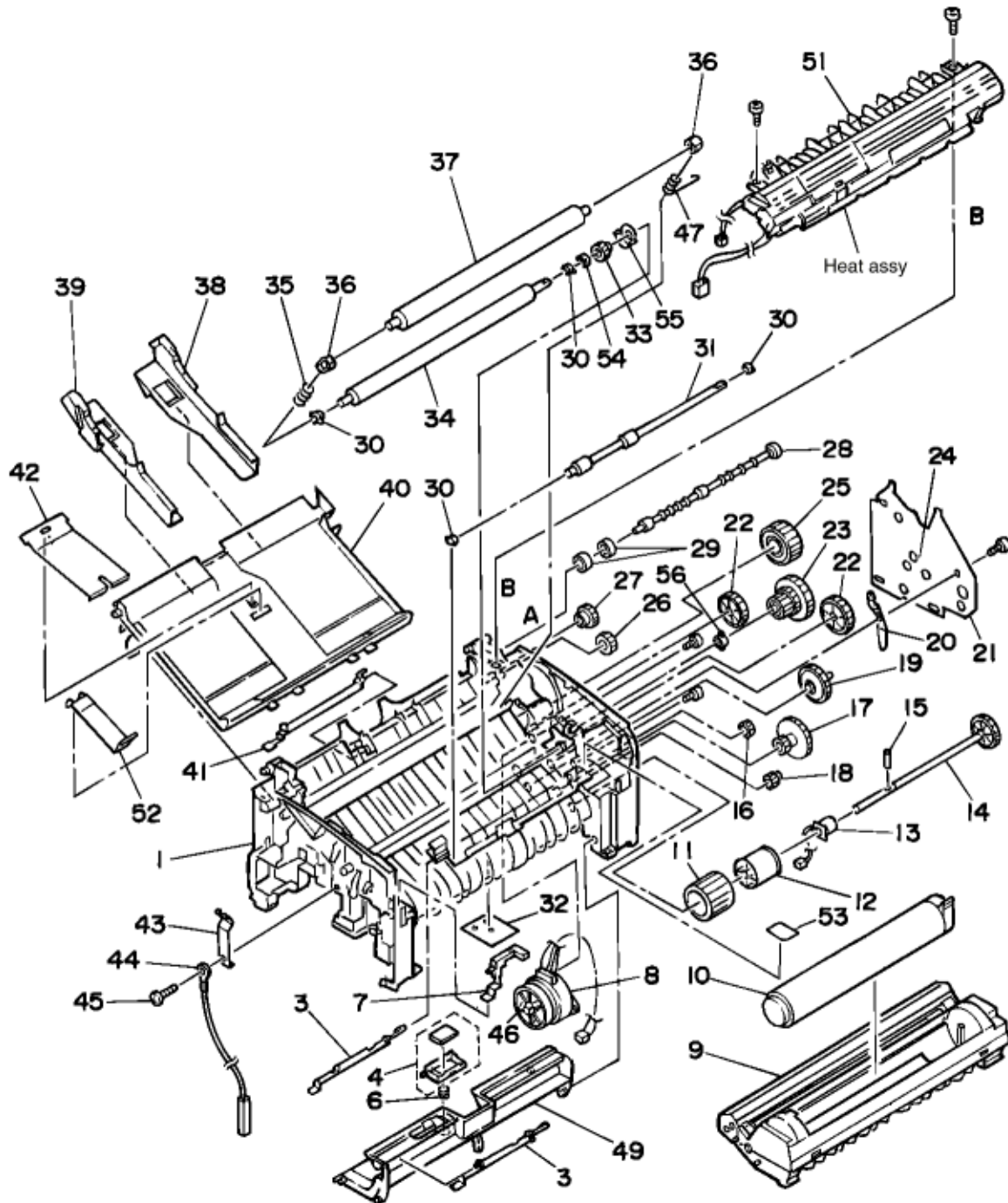
Rev.	No.	OKIDATA P/N	Description	Q'ty
	1	40593201	Frame: Unit Assy.	1

3	50410601	Paper Sensor E	2	
4	40721301	Separatory Assy	1	
6	40781701	Compression Spring S	1	
7	50410801	Toner Sensor Assy	1	
8	40496401	Motor: Pulse	1	
9	40709901	Drum: Image	1	Consumable
10	52111701	Cartridge: Toner	1	Consumable
11	40779601	Hopping Roller	1	
12	50708801	Holder: Roller (Hopping Roller)	1	
13	50809001	Magnet H (Hopping Shaft)	1	
14	51113901	Shaft: Hopping Assy.	1	
15	50607701	Pin: Knock	1	
16	51237501	Gear: Idle R	1	
17	51238001	Gear: Idle 2R	1	
18	51237401	Gear: R	1	
19	51237701	Gear: Idle M	1	
20	51021501	Plate: Earth A	1	
21	51021401	Plate: Slide M	1	
22	51237801	Gear: Idle P	2	
23		Gear: Idle 3R	1	
24	51022601	Plate: Tension	1	
25	51238101	Gear: Idle Heat	1	
26	51238201	Gear: Idle E (A)	1	
27	51238301	Gear: Idle E (B)	1	
28	51113801	Shaft: Drive E (Eject)	1	
29		Roller: Eject	2	
30	51609101	Resistration Bearing	4	

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Section 11: Printer Base Frame Unit (2 of 2)



Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	31	53348301	Roller: Registration	1	
	33	40737801	Gear: T	1	

34	40713601	Roller: Transfer	1	
35	50931701	Spring: Bias (L) (Back UP Roller)	1	
36	51609201	Bearing: BU (Back Up Roller)	2	
37	40594601	Roller: Pressure B	1	
38	51021901	Guide: Paper (R)	1	
39	51021801	Guide: Paper (L)	1	
40	50708901	Holder: Paper	1	
41	50410701	Sensor: Paper Exit	1	
42	50931101	Spring: Hopping	1	
43	40638001	Contact-CB	1	
45		Screw		
46	40625401	Fan		
47	50930901	Spring Pressure (R)		
49	40562401	Guide: Sheet	1	
51a	40592801	Heat Assy. (120 V)	1	
51b	40592802	Heat Assy. (230 V)	1	
52	40034001	Stopper Spring	1	
55	40710301	Guide-Gear T	1	
56	40634701	Bearing-Gear	1	

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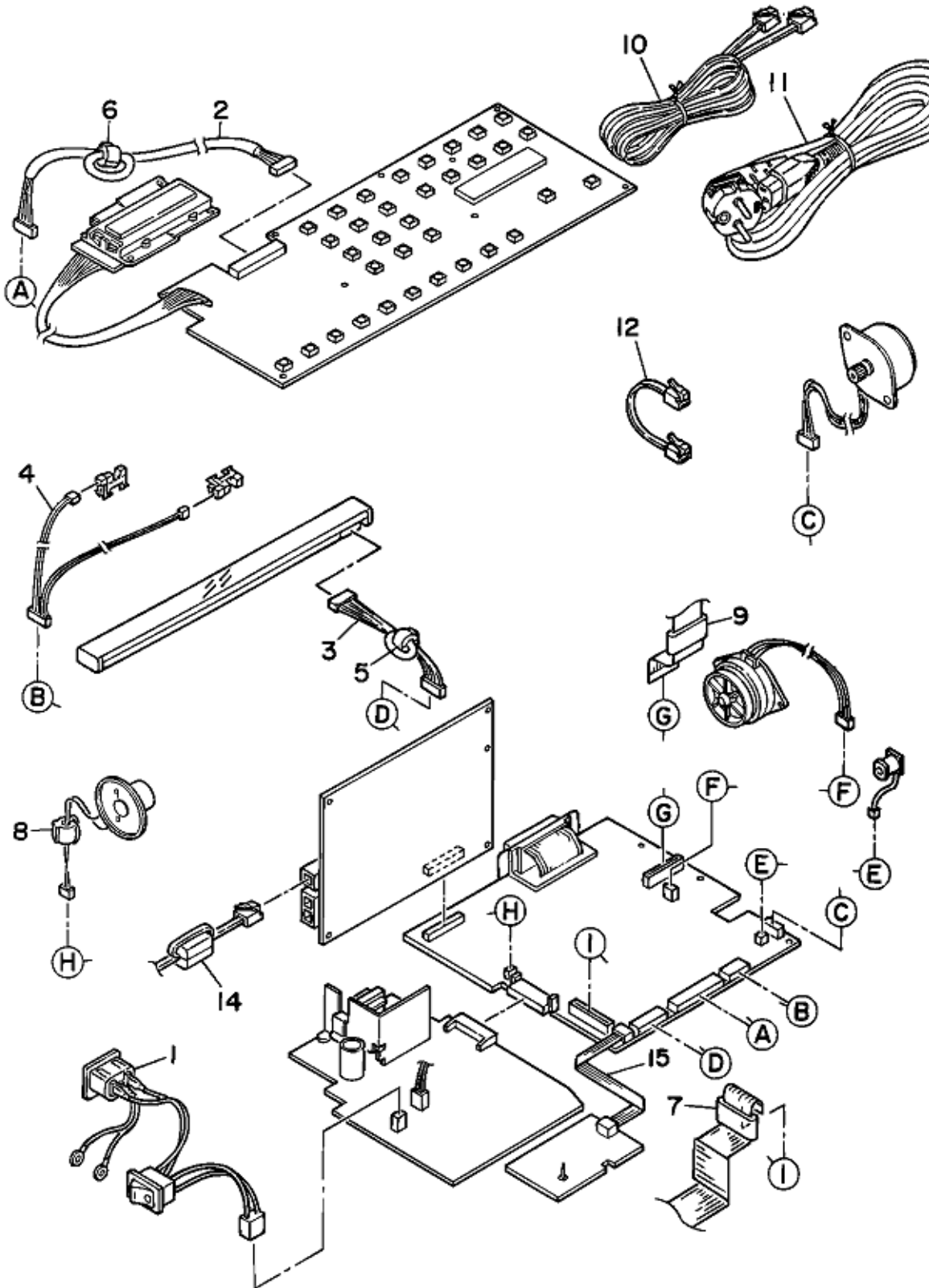
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**Section 12: Cables**





Rev.	No.	OKIDATA P/N	Description	Q'ty	Remarks
	1	40635401	Connection Cord-Wire (AC)	1	

	2	40040001	Connection Cord-Wire (OPE)	1	
	3	40040201	Connection Cord-Wire (CIS)	1	
	4	40040301	Connection Cord-Wire (PC1/2)	1	
	5	55505203	TFC-20-10-10 Core	1	
	6	55505204	TFC-23-11-14 Core	1	
	7	55505702	SSC-40-12-M Core	1	
	9	55506201	FPC-25-12 Core	1	
	10	56621001	TEL/LINE Cable	1	
	11	56618901	AC CORD	1	
	14	55505904	SFC-8 Core	1	For TEL/LINE Cord use
	15	40687701	Cord-Flat (SUMI CARD)	1	P6L-R51

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