Front Cover

OKIFAX
5250 & 5400
Facsimile Products

Adobe Acrobat printable reference copy
of the OKIDATA Service Training Manual.
11/16/99

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Preface

This manual is intended to be used for installing and maintaining OKIFAX 5250/5400 facsimile unit.

Maintenance of the OKIFAX 5250/5400 is assumed to be conducted at the following levels:

- Assembly-level maintenance for mechanical portions
- Unit-level maintenance for electrical at portions

CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

and

ATTENTION: IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE. REMPLACER UNIQUEMENT AVEC UNE BATTERIE DU MEME TYPE OU D'UNT TYPE RECOMMANDE PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USA GEES CONFORMEMENT AUX INSTRUCTIONS DU FABRICANT.

Programming procedures of the following user functions are not described in this maintenance manual.

Please refer to user's guide.

- One-touch key programming
- Two-digit auto dial programming
- Group setting
- Programming mail box password
- Memory operation

1.1 General Performance

(01) Type of appearance
- Desktop type

(02) Applicable lines
- Public switched telephone network (PSTN)
- Private branch exchange (PBX)

(03) Compatibility
- ITU-T Group 3 facsimile transceiver

(04) Document width
- Max. 216 mm (8.5 inches [North American Letter])
- Min. 148 mm (5.83 inches [ISO A5 size])

(05) Effective reading width
- Max. 215 mm (8.46 inches) (North American Letter)
- Max. 208 (ISO A4 size)

(06) Scanning length
- 128 mm to 356 mm (5.06 inches to 14 inches)
  (Length setting: Unlimited (1500 mm) is also available.)

(07) Automatic document feeder (ADF)
- 30 sheets (Letter/A4-size: 20-1b bond. Oki Data recommended paper)
- 15 sheets (Letter/A4-size: 13 to 28-1b bond

(08) Recording paper or sheet

• First cassette:	NA Letter/NA Legal/A4-size plain paper cut 250 sheets capacity (20-1b bond*)
• Second cassette (Option):	NA Letter/NA Legal/A4-size plain paper cut 500 sheets capacity (20-1b bond*)
• Manual loading feeder: (Single Sheet Feeder)	Transparency for overhead projector, applicable. Sheet size: NA Letter/NA Legal/A4-size

*** Oki Data recommended paper**
N/A = North America

(09) Printable width

• North American Letter:	211.3 mm (8.32 inches) / 203.2 mm (8 inches) for assured quality
• North American Legal:	211.3 mm (8.32 inches) / 203.2 mm (8 inches) for assured quality
• ISO A4:	206 mm (8.11 inches) / 197.3 mm (7.77 inches) for assured quality

(10) Printable length

• Letter:	273.4 mm (10.76 inches) / 266.7 mm (10.49 inches) for assured quality
• 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
- Max. 100 sheets (20-lb bond, Oki Data recommended paper)

(12) Scanning resolution

a) Horizontal
- 300 dots/inch

b) Vertical

Transmission mode:	3.85 line/mm (STD) 7.7 line/mm (FINE) 300 dot/inch (EX.FINE)

COPY mode: 7.7 line/ mm (FINE)
300 dot/inch (EX.FINE)

(13) Scanning method

- 2592 bits contact image sensor

(14) Recording resolution

a) Horizontal:
300 dots/inch
b) Vertical

Variable: Automatically adjusted to the paper length.
(300 to 395 dot/inch),
STD mode (3.85 to 5.06 line/mm)
FINE mode (7.7 to 10.13 line/mm)
EX-FINE mode (15.4 to 20.24 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 (8.32 inches / 2496 bit) or 216.7 mm (8.53 inches / 2560 bit) LED Head

(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

(18) Preheating time

- Approx. 20 sec. (Standby to Print)

(19) Coding scheme

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

(20) Modem

- ITU-T Rec. V.29: 9600 bps for use on point-to-point 4-wire leased telephone type circuit
- ITU-T Rec. V.27 ter: 4800 bps modem for use in PSTN (Public Switched Telephone Network)
- ITU-T Rec. V.21 channel 2: 300 bps duplex modem for PS TN
- ITU-T Rec. V.17: 2-wire modem for fax application up to 14.4 kbps
- ITU-T Rec. V.34:

Note: V.34 (33.6 kbps option is available when V.34 optional Modem board is installed in OKIFAX 5400 only.

(21) Transmission speed

- 6 sec. per sheet of ITU-T No. 1 sample document
- 3 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) Memory capacity

- OKIFAX 5250 1M
- OKIFAX 5400 2M

1M, 1.5M, 2M, and 4M options available for both units.

(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 (Option)

- By installing the optional board (CTR board), the MFP function can be realized:
  - PC Printer Function
  - PC Scanner Function
  - PC Fax Modem Function
  - Location Programming Function

Note: For details, see "Product Specification for MFP".

1.2 General User's Function

(01) Transmit mode
- Automatic transmit mode
- Manual transmit mode

(02) Receive mode
- Automatic receive mode
- Manual receive mode
- TEL/FAX automatic switchover mode
- TAD mode
- Memory only receive mode
- PC mode (OKIFAX 5400 only)

(03) Dual access

(04) Voice request

(05) Automatic redial

(06) Last number redial (Manual redial)

(07) Local copy including multiple copies
- Max. 99 copies of document

(08) Sender identification (Sender ID)

(09) Personal identification (Personal ID)

(10) Polling transmission
- Feeder polling transmission
- Memory polling transmission

(11) Polling reception

(12) Selective polling

(13) Acoustic line monitor

(14) Telephone handset (option)

(15) Automatic alternate selecting call
(FAX No. + FAX No. can be registered in one-touch keys).

(16) Delayed transmission
- Delayed broadcast
- Delayed transmission

- OKIFAX 5400 20 times / OKIFAX 5250 10 timers

(17) Relay broadcast initiate

(18) Subaddress transmission

(19) Confidential message transmission (Hopper 1 station)

(20) Confidential message reception
- 16 mail boxes

(21) PHOTO mode
- 64 scale gradations

(22) G3 sequential broadcast (Memory)
- Broadcast mode

OKIFAX 5250:: 89 stations at maximum (15 speed dials + 64 auto dials + 10 keypad dials)
OKIFAX 5400: 134 stations at maximum (30 speed dials + 99 auto dials + 10 keypad dials)
- 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) Vertical reduction printing (Reduction rate is from 100% to 75%)
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 dot/mm x 3.85, 7.7 or 15.4 line/mm ---> 300 dot/inch x 784 line/inch)
- Turn off in the PC print mode

(30) Programmed key operation ("F" key + "OT" key)

(31) Auto dialing

- One-touch dialing OF5250: 15 / OF5400: 30
- Two-digit automatic dialing OF5250: 64 / OF5400: 99
- Keypad dialing
- Chain dialing
- Mixed dialing
- Group dialing OF5250: 10 / OF5400: 20

(32) Real-time dialing

(In case of optional handset is installed or Hook key)

(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

(36) Closed users group (Direct mail rejection)

(38) Transmission contrast and resolution control

(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 3 sec. minimum 5400/6 sec. minimum 5250 --> A4 size 3.85 line/mm

(44) Time and date setting

(45) PC interface

- Standard

(46) Language selection

- 2 language (LCD and Reports)

(47) Fax forwarding

(48) Reports

- Activity report
- Protocol report (Service man setting)
- Message confirmation report (Single address or multiple addresses)
- Broadcast entry report (Broadcast)
- Transmission error report
- Confidential reception report
- Configuration report
- Telephone directory
- Power outage report

(49) 4 digit indication of YEAR

1.3 General Maintenance Functions

(01) Self-diagnosis
- CPU ROM/RAM check
- FLASH (/MASK) memory check (Program, Language, Default)
- RAM check
- RAM check (MEMORY board: option)
- PC-IF board (parallel) check
- Print test

(02) Sensor calibration (Adjustment of scanning level)
(03) LED test
(04) Tone send test
(05) Multi-frequency (MF) send test
(06) High-speed modem send test
(07) High-speed modem receive test
(08) Tone (TEL/FAX) test
(09) Remote diagnosis
(10) System reset
(11) Service default report (Machine setting for service engineer)

1.4 General Appearance

Figure 1.4.1 shows the general appearance. Figure 1.4.2 shows the control panel.

General Appearance of the OKIFAX 5250 / OKIFAX 5400

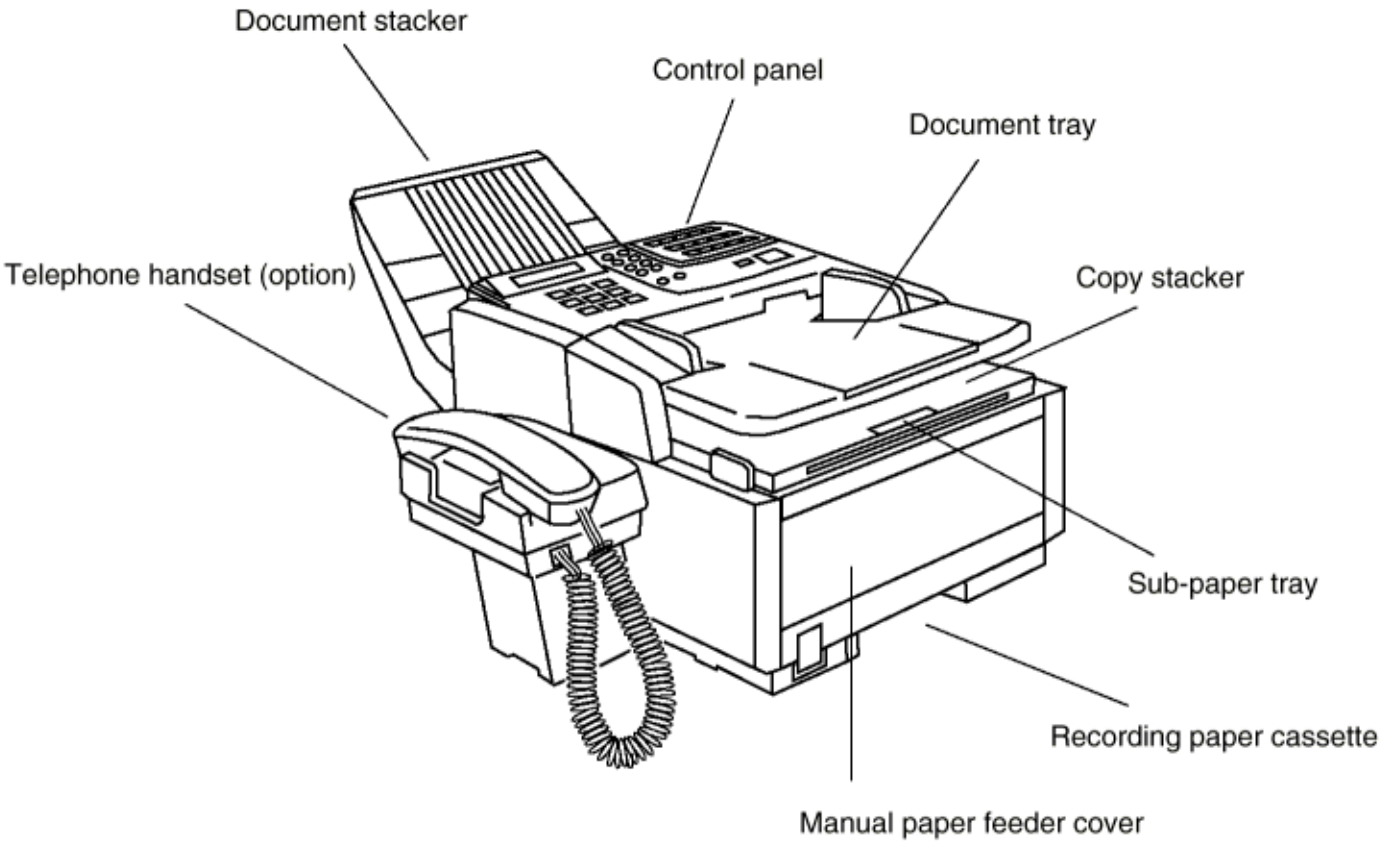
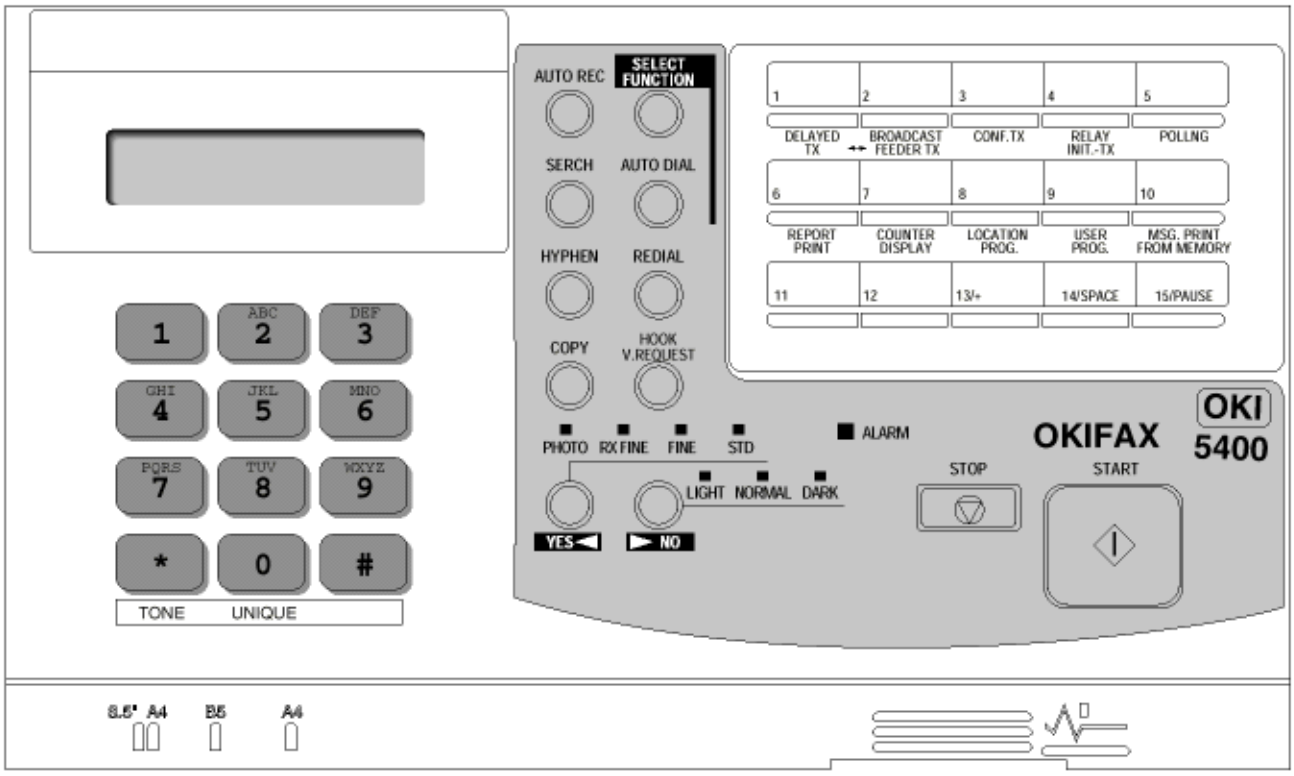


Figure 1.4.1 General Appearance



Fiture 1.4.2 Control Panel

1.5 Basic Performance Specifications

Note:

TF: Technical function setting
FP: Function program setting
OT: One-touch key pressed
F: SELECT FUNCTION key pressed

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

Table 1.5.1 (1/9) Basic Performance Specifications

No.	Item	Specifications
1	Applicable line	1) Public switched telephone network (PSTN) 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. Technical Setup No. 22)
	3) Receiving power level	0 dBm to -40 dBm or -6 dBm to -46 dBm (In case of V.34 TX/RX, -3 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 * Technical Setup No. 11 (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.

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 202.8 mm for local copy	A4
NA letter (216 mm) [US/CANADA]	G3/A4	215.4 mm for TX 211.3 mm for local copy	Letter
NA legal (216 mm) [US/CANADA]	G3/A4	215.1 mm for TX 211.2 mm for local copy	Legal

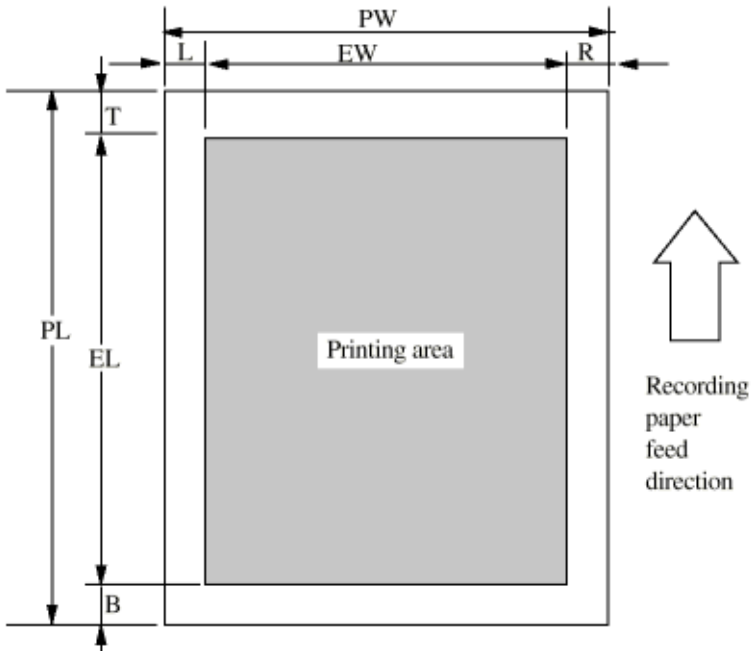
Note: Local copy: Printable reading width in a local copy mode

No.	Item	Specifications
5	Automatic document feeder (ADF)	Max. 30 documents: NA Letter or A4 (20 lb./75gm) Max. 15 documents: NA or A4 (16 to 28/60 to 105gm) Documents shall be placed face down on ADF stacker. The first sheet will be fed first in the feeder and will exit face down 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.
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. Technical Setup No. 11) 2) A jam will also be declared if the document does not reach the scanning position within 5 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

Table 1.5.1 (3/9) Basic Performance Specifications

No.	Item	Specifications
9	Recording paper or sheet	For the first or second recording paper cassette: 1) Type: Plain paper cut (Bond paper: Xerox 4200 type or equivalent) 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 14: 215.9 mm x 355.6 mm / 8.5 inch x 13 inch 3) Weight: 16 lbs to 24 lbs/60 to 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. 4) Thickness: 0.08 mm to 0.12 mm 5) Condition: New paper For the manual loading feeder 1) Type: Plain paper, transparency for overhead projector, colored paper, printer paper 2) Size: A4/NA Letter/NA Legal 3) Weight, thickness and condition: Same as above **Note:** One single sheet should be loaded on the manual paper feeder for one occasion. For best results use Oki Data recommended papers 1) Xerox 4200 (20 - lb/75 gm base weight paper) 2) L-type paper for photo-printers
10	Recording paper cassette first cassette second cassette	Up to 250 sheets/cassette (Oki Data recommended paper) Up to 500 sheets/cassette (Oki Data recommended paper)

Table 1.5.1 (4/9) Basic Performance Specifications

No.	Item	Specifications
11	Effective recording area **Note:** These tables do not include vertical or horizontal addressing deviation (+ or - 2 mm) of recording paper.	

1) Printable area

	Letter Size		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	8.32	211.3	8.11	206	8.32	211.3	8.32	211.3
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	.09	2.3	0.08	2	0.09	2.3	0.09	2.3
R	.09	2.3	0.08	2	0.09	2.3	0.09	2.3

1) Guaranteed printing area

	Letter Size		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	10.5	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

Note: The printable area means the area allowing actual printing at the time of receiving. The guaranteed printing area means the area where the printing quality is guaranteed.

These tables do not include vertical and horizontal addressing error (+/- 3 mm) of recording paper.

No.	Item	Specifications
12	Copy stacking	The fax can discharge printed copies and stack them face down. Maximum sheets on the copy stacker: 100 **Note*:** Oki Data recommended paper

Table 1.5.1 (5/9) Basic Performance Specifications

No.	Item	Specifications
13	Scanning resolution	Horizontal: ● 300 dot/inch Vertical: Transmission mode: ● 3.85 line/mm (STD), 7.7 line/mm (FINE), or 300 dot/inch, (EX. FINE) COPY mode: ● 7.7 line/mm (FINE) or 300 dot/inch (EX. FINE)
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 be automatically enhanced to improve image quality.
16	Recording solution	Horizontal: ● 300 dot/inch Vertical: ● Fixed: 3.85 line/mm (STD), 7.7 line/mm (FINE) 15.4 line/mm (EX. FINE) 300 dot/inch (EX-FINE) Variable: Automatically adjusted to the paper length. ● 300 to 412 dot/inch ● 3.85 to 5.06 line/mm (STD) ● 7.7 to 10.13 line/mm (FINE) ● 15.4 to 20.24 line/mm (EX.FINE)
17	Recording system	Electro-photographic printing 1) 211.3 mm (2496 bit) or 216.7 mm (2560 bit) LED printhead
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% unit 2) From copy to the next copy: 30% unit
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 "NO PAPER ... REPLACE PAPER" 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.

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 operations	
	1) High-speed Modem	● ITU-T Rec. V.29 (9600/7200 bps) ● ITU-T Rec. V.27 ter (4800/2400 bps) ● ITU-T Rec. V.17 (14400/12000/9600/7200 bps) ● ITU-T Rec. V.33 (14400/12000 bps) ● ITU-T Rec. V.34 (33600/28800 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)	Protocol
1st	14400 bps	1	1	ITU-T V.17 (V.17)
2nd	12000 bps	1	1	ITU-T V.17 (V.17)
3rd	9600 bps	1	1	ITU-T V.17 (V.29)
4th	7200 bps	1	1	ITU-T V.17 (V.29)
5th	4800 bps	2	1	ITU-T V.17 V.27 ter.
6th	2400 bps	2	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.

Fallback rank	Transmission speed	Activated by PPR (Times)	Protocol
1st	28800 bps	1 (Note 1)	ITU-T V.34
2nd	26400 bps	1 (Note 1)	ITU-T V.34
3rd	24000 bps	1 (Note 1)	ITU-T V.34
4th	21600 bps	1 (Note 1)	ITU-T V.34
5th	19200 bps	1 (Note 1)	ITU-T V.34
6th	16800 bps	1 (Note 1)	ITU-T V.34
7th	14400 bps	1 (Note 1)	ITU-T V.34
8th	12000 bps	1 (Note 1)	ITU-T V.34
9th	9600 bps	1 (Note 1)	ITU-T V.34
10th	7200 bps	1 (Note 1)	ITU-T V.34
11th	4800 bps	1 (Note 1)	ITU-T V.34
12th	2400 bps	1 (Note 1)	ITU-T V.34

Table 1.5.1 (7/9) Basic Performance Specifications

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. **Note:** In high-speed protocol, 28.8 Kbps are not supported.
27	Transmission time	3 sec. (approx 3.5 sec) /ITU-T No. 1 sample document 6 sec. (approx 6.9 sec) /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.
28	Error correction	ITU-T Error correction mode (ECM) Oki Data ITU-T ECM
29	Communication mode	Half-duplex
30	Ringing 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 + <-- + 11)
31	Image memory	Basic model: OF5250 - 1M / OF5400 - 2M Optional memory: 1M, 1.5M, 2M, and 4M

	OF5400 Memory condition	A4 Setting [pages]	LEGAL Setting [pages]
with option board	Standard (without option)	187	179
	4M-byte	307	299

Note: No. of sheets are counted provided that ITU-T No. 1 sample document is used. No. of sheets are typical value.

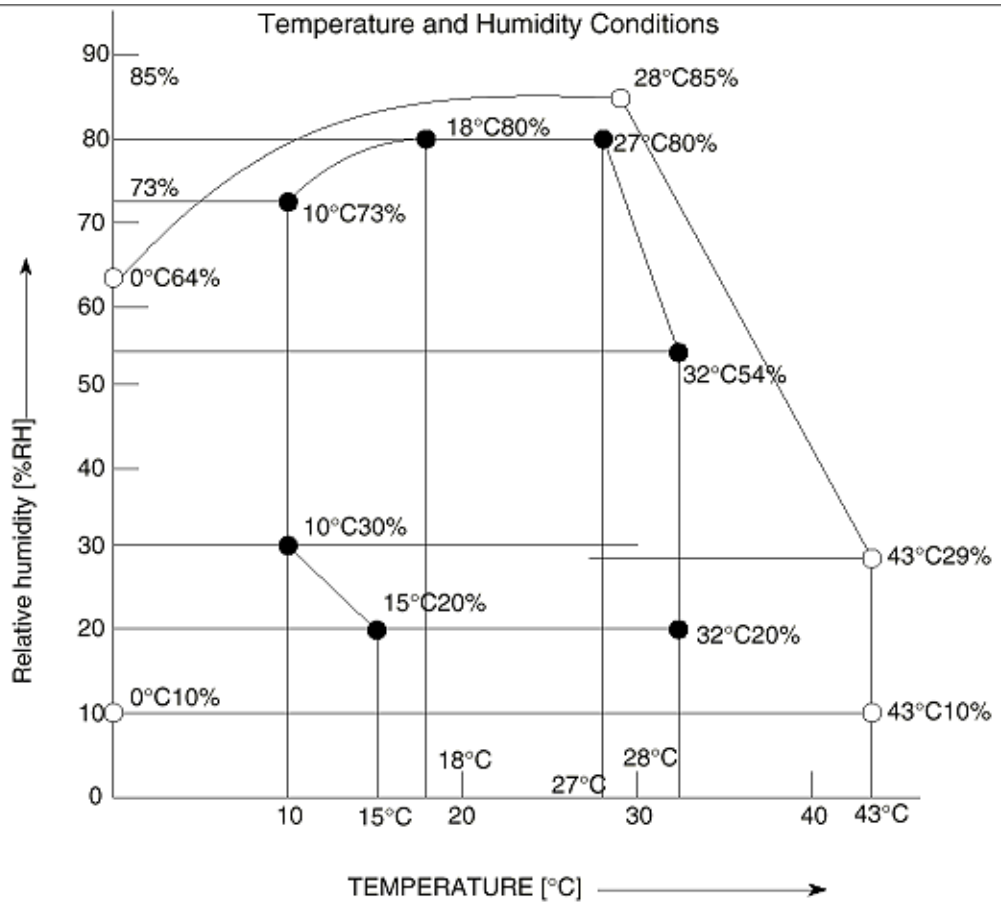
Back-up time on electrical interruption: Min. one hour.

Note: In case of power failure, messages received in memory will only be backed up when 1.5M, 2M, or 4M option is used. These boards have a battery.

Table 1.5.1 (8/9) Basic Performance Specifications

No.	Item	Specifications
32	Telephone handset (option)	General telephone function is available while the power is on. **Note:** In the fax special versions, general telephone is available even when the power is off.
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.
35	PC interface applications	The following four modes are supported: 1) PC local printer function 2) PC scanner function 3) PC Fax Modem function 4) Location Programming function Note: OF5400 option only For details, see product specification for MFP.

No.	Item	Specifications
36	Power supply unit and Power consumption of the machine	Power consumption of the machine (Typical power)
	Mode	**USA/Canada version**
	Transmit	60W
	Receive	160W
	Local copy	210W
	Standby (Power Save OFF)	16.6W
	Standby (Power Save ON)	Not available in the U.S.A.
		Note: ( ): when power save mode is set to ON. Chart: ITU-T No. 1
37	Ambient condition	see Figure 1.5.1 below.

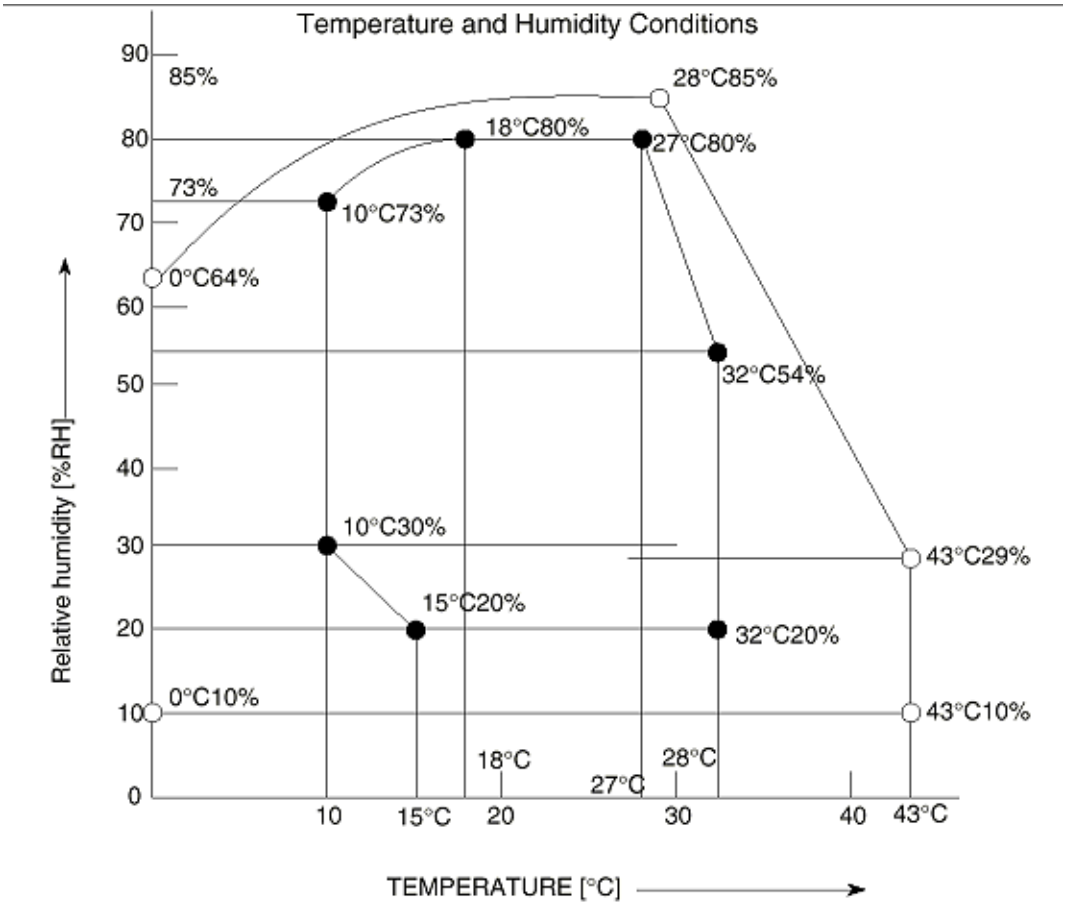


Area enclosed by lines with ● : Range where printing is guaranteed.
Area enclosed by lines with ○ : Range for storage without power supply.

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

Figure 1.5.1 Ambient Conditions

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

	In operation	Power off mode	During Storage	Unit
Temperature	50 - 90 (10-32)	32 - 110 (0-43)	14-110 (-10 - 43)	°F (°C)
Humidity	20 - 80	10-90	10-90	% RH
Maximum wet bulb temperature	77 (25)	80.4 (26.8)	----	°F (°C)

Minimum difference between wet and dry bulb temperatures	35.6 (2)	35.6 (2)	----	°F (°C)

1. Storage conditions specified above apply to the machine in packed condition.
2. Temperature and humidity must be in the range where no condensation occurs.

No.	Item	Specifications
38	Dimension (Main body)	1) Width: Approx. 330 mm 2) Depth: Approx. 420 mm 3) Height: Approx. 245
39	Weight (Main body)	Approx. 13 kg Excluding optional units, recording paper and packing materials.
40	Attachment (to the main board)	1) AC power cord x 1 2) I/D unit x 1 (Already installed) 3) Toner cartridge x 1 4) Telephone handset x 1 (option) 5) Curled cord and Telephone cord for (4) x 1 (option) 6) Document stacker x 1 7) Line cord x 1 8) One touch sheet x 1 (Already installed) 9) User's guide x 1

1.6 Reports and Lists

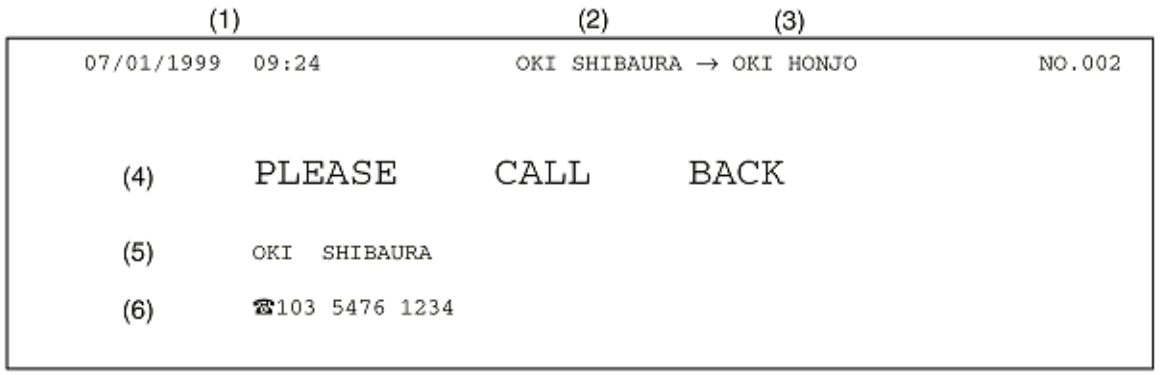
The following table shows Reports and Lists Specifications.

Note:
F +OT: Press FUNCTION and One-touch key
FP: Function program setting
TF: Technical function setting

No.	Item	Specifications
01	**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.
02	**Sender ID**	The fax can transmit a programmed alphanumeric message, such as company's name, consisting of up to 32 characters. **This is an FCC Requirement in the United States.** *** (Outside only)**
03	**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).
04	**Cancel report (Power outage report)**	The fax can automatically print out a power-outage report when the power off condition occurs.
05	**Activity report**	The fax can print out an activity report manually, or automatically, when 30 communications are recorded. * REPORT PRINTOUT +1 (Manual printout)
06	**Message confirmation report**	The fax can print out a message confirmation report manually or automatically in the following cases. (1) When COPY key is pressed after a single location call, this report can be printed. (Manual printout) * FP + 01 (To enable or disable automatic printing).
07	**Broadcast entry report**	The fax can print out a broadcast entry report if specified during operating sequence of a broadcast.
08	**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).
09	**Confidential reception report**	The fax can print out this report automatically on completion of a confidential reception.
10	**Telephone directory**	This directory is printed manually. (REPORT PRINTING +3)
11	**Configuration report**	This report is printed manually. (REPORT PRINTING +4)

Call-back Message (Example)

Call-back Message Format: (Example)

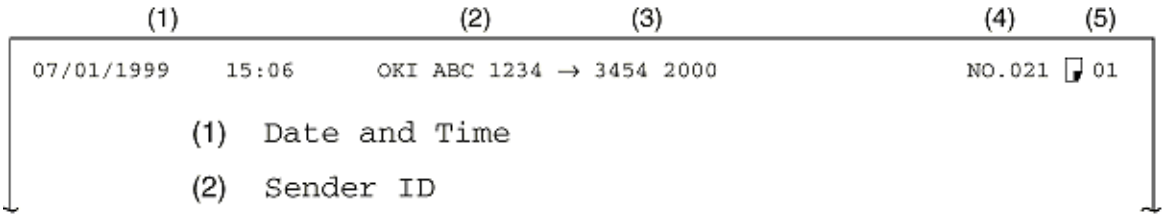


(F050-C1-002)

(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

Sender ID Format: (Example)

Sender ID Format: (Example)



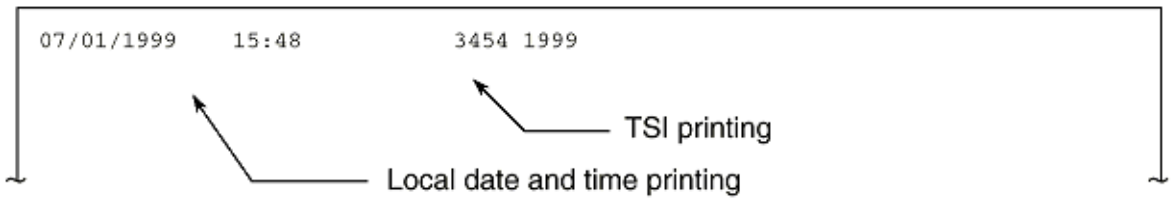
(1) Date and Time
(2) Sender ID
(3) Receiver's CSI/Personal ID
(4) Session number
(5) Page number

(F050-C1-003)

TSI Printing (Example)

Local Date and Time Printing (Example)

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



(F050-C1-004)

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

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

Cancel Report Format: Power Outage Report (Example)

Cancel Report Format: (Example)

POWER OUTAGE REPORT

05/19/1999 17:05
ID=OKI

DATE	TIME	S,R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
05/17	10:10		0485-88-3385				9080
05/17	10:30		ODS TAKASAKI		03		0000
05/17	12:05	01'20"	OKI FAX	BOX=01	03	OK	0000
05/17	13:00	00'20"	03-5476-4300	CALLED	01	OK	0000
05/17	15:40		034567092222	FWD-T	05		
05/18	10:50	01'20"	0495-22-5400	CALLED	03	OK	0000
05/18	15:00			B.C.	01		

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

Activity Report (Example)

(1) **Activity Report Format: (Example)**

ACTIVITY REPORT

(2) 05/19/1999 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)
05/17	10:00	01'20"	OKI FAX	CALLING	02	OK	0000
05/17	10:10	01'00"	0485 88 3385	CALLING	00	STOP	9080
05/17	10:30	00'20"	ODS TAKASAKI	POLLING	00	OK	0000 *8
05/17	12:05	01'20"	OKI FAX	POLLED	03	OK	0000 *9
05/17	13:00	00'20"	03 5476 4300	POLL=XX	01	OK	0000 *10
05/17	15:40	03'25"	ODS TAKASAKI	CONF=01	03	OK	0000 *1
05/17	19:00	00'00"	OKI FAX		01	OK	0000 *2
05/18	10:10	02'00"	OKI SHIBAURA	CALLED	05	NO	908E
05/18	10:22	00'12"	0495 22 5400	CALLING	00	STOP	9080
05/18	10:50	01'20"	0495 22 5400	CALLED	03	NO	9090
05/18	12:05	00'20"	OKI FAX	CALLING	01	STOP	9080
05/18	15:00	01'30"		CALLED	03	OK	0000 *3
05/18	15:30	00'20"		CALLING	01	OK	0000
05/18	17:05	05'20"		B.C.		COMP.	60A0 *4
05/18	19:04	00'20"	03 5476 4300	CALLING	00	STOP	9080
05/19	09:00	01'11"		CALLING	02	OK	0000
05/19	10:20	00'20"	03 5476 4300	CALLING	02	STOP	9080
05/19	10:35	02'23"		CONF=01	02	OK	0000 *1
05/19	10:50	00'20"	ODS TAKASAKI	CALLED	01	OK	0000
05/19	11:03	00'00"	OKI FAX	CALLING	00	STOP	9080
05/19	13:00	00'24"	03 5476 4300		01	OK	0000 *5
05/19	16:00	03'25"	ODS TAKASAKI	FWD-R	03	OK	0000 *6
05/19	16:04	03'30"	OKIFAX	FWD-T	03	OK	0000 *7

*1 : Confidential reception
*2 : Manual TX
*3 : Memory reception
*4 : Broadcast TX
*5 : Manual memory reception
*6 : Reception for forwarding
*7 : Forwarding
*8 : Polling reception
*9 : Polling transmission
*10 : Bulletin polling

Explanation of Example

(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)
FWD-R	(Fax Forwarding RX)
FWD-T	(Fax Forwarding TX)

(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

Message Confirmation Report

Message Confirmation Report Format (1/2): (Example)

(1) MESSAGE CONFIRMATION

(2) 07/01/1999 08:05
(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	CALLING	02	OK	0000

(F050-C1-008 1/2)

Message Confirmation Report Format (2/2): (Example)

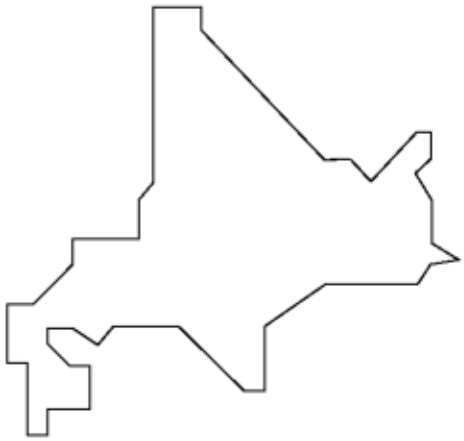
(1) MESSAGE CONFIRMATION

(2) 07/01/1999 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
07/01/96	17:00	OKI → OKIFAX	No.022	001		

150 km

(11)



(F050-C1-008 2/2)

Explanation of Example

(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

Broadcast Entry Report (Example)

BROADCAST ENTRY REPORT

07/01/1999 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	11 = OT11	12 = OT12
13 = OT13	14 = OT14	15 = OT15
16 = OT16	17 = OT17	18 = OT18
19 = OT19	20 = OT20	21 = OT21
22 = OT22	23 = OT23	24 = OT24
25 = OT25	26 = OT26	27 = OT27
28 = OT28	29 = OT29	30 = OT30
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	71 = 71	72 = 72
73 = 73	74 = 74	75 = 75
76 = 76	77 = 77	78 = 78
79 = 79	80 = 80	81 = 81
82 = 82	83 = 83	84 = 84
85 = 85	86 = 86	87 = 87
88 = 88	89 = 89	90 = 90
91 = 91	92 = 92	93 = 93
94 = 94	95 = 95	96 = 96
97 = 97	98 = 98	99 = 99

KEYPAD

1234
2345
3456
4567
1234

Broadcast Entry Report Format: (Example) (2/2)

BROADCAST ENTRY REPORT

07/01/1999 17:04
ID=OKI TAKSAKI

KEYPAD

1234567890123456789012345678901234567890
1234567890123456789012345678901234567890
1234567890123456789012345678901234567890
1234567890123456789012345678901234567890
1234567890123456789012345678901234567890

Broadcast Confirmation Report Format: (Example)

BROADCAST CONFIRMATION REPORT

07/01/1999 17:05
ID=OKI

PAGES = 01

TOTAL TIME = 00:02'30"

LOCATION ID	PAGES	RESULT	LOCATION ID	PAGES	RESULT
ONE TOUCH					
1 = OT1*1	01	OK	2 = OT2*1	01	OK
3 = OT3*1	01	OK	4 = OT4*1	01	OK
5 = OT5*1	01	OK			
AUTO DIL					
01 = AD1*1	01	OK	02 = AD2*1	01	OK
03 = AD3*1	01	OK	04 = GERMAN*1	01	OK
05 = AD5*1	01	OK			
KEYPAD					
1234*1	01	OK			
3456*1	01	OK			
5678*1	01	OK			

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

Broadcast Confirmation Report (Example)

Broadcast Confirmation Report Format: (Example)

BROADCAST CONFIRMATION REPORT

07/01/1999 17:05
PAGES = 01
ID=OKI

TOTAL TIME = 00:02'30"

LOCATION ID	PAGES	RESULT	LOCATION ID	PAGES	RESULT
ONE TOUCH					
1 = OT1*1	01	OK	2 = OT2*1	01	OK
3 = OT3*1	01	OK	4 = OT4*1	01	OK
5 = OT5*1	01	OK			
AUTO DIL					
01 = AD1*1	01	OK	02 = AD2*1	01	OK
03 = AD3*1	01	OK	04 = GERMAN*1	01	OK
05 = AD5*1	01	OK			
KEYPAD					
1234*1	01	OK			
3456*1	01	OK			
5678*1	01	OK			

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

Confidential Reception Report (Example)

Confidential Reception Report Format: (Example)

CONFIDENTIAL RX REPORT

07/01/1999 17:05
ID=OKI

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

*2: Identification of remote station
Personal ID or CSI

Telephone Directory (Examples 1 through 6)

Example 1 of 6

Telephone Directory (1/6): (Example)

TELEPHONE DIRECTORY P1

07/01/1999 17:05
ID=OKI

ONE TOUCH	LOCATION ID	TEL NO.	PRM. ECHO
1	OKI SERVICE	0001 123 345	(ON)
		OR 0101 123 567	
2	ODC	0002	(OFF)
		OR 0102	
3	NEW YORK	0003	(OFF)
		OR 0103	
4	OT4 ABC	0004	(OFF)
		OR 0104	
5	XYZ CO.	0005	(OFF)
		OR 0105 111	
6	UK PLANT	0006 222	(OFF)
		OR 0106	
7	GERMANY	0007	(OFF)
		OR 0107	
8	BT	0008	(OFF)
		OR 0108	
9	FRANCE	0009	(OFF)
		OR 0109	
10	TOKYO	0010	(OFF)
		OR 0011	
11			(OFF)
		OR	
12			(OFF)
		OR	
13			(OFF)
		OR	
14			(OFF)
		OR	
15			(OFF)
		OR	
16			(OFF)
		OR	
17			(OFF)
		OR	
18			(OFF)
		OR	
19			(OFF)
		OR	
20			(OFF)
		OR	
21			(OFF)
		OR	
22			(OFF)
		OR	
23			(OFF)
		OR	
24			(OFF)
		OR	
25			(OFF)
		OR	
26			(OFF)
		OR	
27			(OFF)
		OR	
28			(OFF)
		OR	
29			(OFF)
		OR	
30			(OFF)
		OR	

Example 2 of 6

Telephone Directory (2/6): (Example)

TELEPHONE DIRECTORY P2

07/01/1999 17:05
ID=OKI

AUTO DIAL	LOCATION ID	TEL NO.
01	TOKYO OFFICE	1001 111 222
02	PARIS	1002 111 333
03	AMERICA	1003
04	TOKYO 3	1004
05	TOKYO 5	1005
06	UK	1006
07	BT	1007
08	FRANCE	1008
09	GERMANY	1009
10	ITALY	1010
11	SPAIN	1011 567 890
12	DENMARK	1012 571 123
13	FINLAND	1013
14	SWITLAND	1014
15	OSAKA	1015 456 6789
16	TAKASAKI	1016
17	HONJO	1017
18	SHIBAURA	1018
19		
20		
21		
22		
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24		
25		
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63		

Example 3 of 6

Telephone Directory (3/6): (Example)

TELEPHONE DIRECTORY P3

07/01/1999 17:05
ID=OKI

AUTO DIAL	LOCATION ID	TEL NO.
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
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89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99	OKIDATA	234 5678

Example 4 of 6

Telephone Directory (4/6): (Example)

TELEPHONE DIRECTORY P4

07/01/1999 17:05
ID=OKI

GROUP NUMBER = #1 #2 #3 #4 #5 #6 #7

#1 ONE TOUCH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30																				

AUTO DIAL

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	

#2 ONE TOUCH

AUTO DIAL

#3 ONE TOUCH

AUTO DIAL

#4 ONE TOUCH

AUTO DIAL

#5 ONE TOUCH

AUTO DIAL

#6 ONE TOUCH

AUTO DIAL

#7 ONE TOUCH

AUTO DIAL

Example 5 of 6

Telephone Directory (5/6): (Example)

TELEPHONE DIRECTORY P5

07/01/1999 17:05
ID=OKI

GROUP NUMBER = #8 #9 #10 #11 #12 #13 #14

#8 ONE TOUCH

AUTO DIAL

#9 ONE TOUCH

AUTO DIAL

#10 ONE TOUCH

AUTO DIAL

#11 ONE TOUCH

AUTO DIAL

#12 ONE TOUCH

AUTO DIAL

#13 ONE TOUCH

AUTO DIAL

#14 ONE TOUCH

Example 6 of 6

Telephone Directory (6/6): (Example)

TELEPHONE DIRECTORY P6

07/01/1999 17:05
ID=OKI

GROUP NUMBER = #15 #16 #17 #18 #19 #20

#15 ONE TOUCH

AUTO DIAL

#16 ONE TOUCH

AUTO DIAL

#17 ONE TOUCH

AUTO DIAL

#18 ONE TOUCH

AUTO DIAL

#19 ONE TOUCH

AUTO DIAL

#20 ONE TOUCH

AUTO DIAL

Configuration Report

Configuration Report (User)

CONFIGURATION

07/01/1999 17:05
ID=OKI

FUNCTION LIST

01:MCF (SINGLE-LOC.) ON	02:MCF (MULTI-LOC.) ON	03:ERR.REPORT (MCF) ON
04:MESSAGE 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 *3 1RING	12:DISTINCTIVE RING *3 OFF
13:1'ST PAPER SIZE A4	14:2'ND PAPER SIZE *1 A4	15:USER LANGUAGE ENGLISH
16:INCOMING RING ON	17:REMOTE RECEIVE OFF	18:MEM./FEEDER SWITCH MEMORY
19:POWER SAVE MODE *4 ON	20:ECM FUNCTION ON	21:REMOTE DIAGNOSIS OFF
22:PC/FAX SWITCH *2 (5400 only) ON		

TEL NO. = 12345678901234567890
CALL BACK NO. = 12345678901234567890
FORWARD TEL NO. = 12345678901234567890

REDIAL TRIES	3TRY *3	REDIAL INTERVAL	3MIN *3
DIAL TONE DETECT	OFF *3	BUSY TONE DETECT	ON *3
MF(TONE)/DP(PULSE)	MF *3	PULSE DIAL RATE	10PPS *3
PULSE MAKE RATIO	39% *3	PULSE DIAL TYPE	NORMAL *3
MF (TONE) DURATION	100MSEC *3	PBX LINE	OFF *3
PBX TYPE	NORMAL *3	AUTO START	ON *3
DIAL PREFIX	OFF *3	IT2 DETECT	ON *3

*1 Function 14 is printed when 2'nd Tray is installed.
*2 Function No.22 is printed when CTR board is installed.
*3 Depending on local PTT requirements, certain user function and dial parameters are not printed and can not be selected by the user.

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

CONFIGURATION

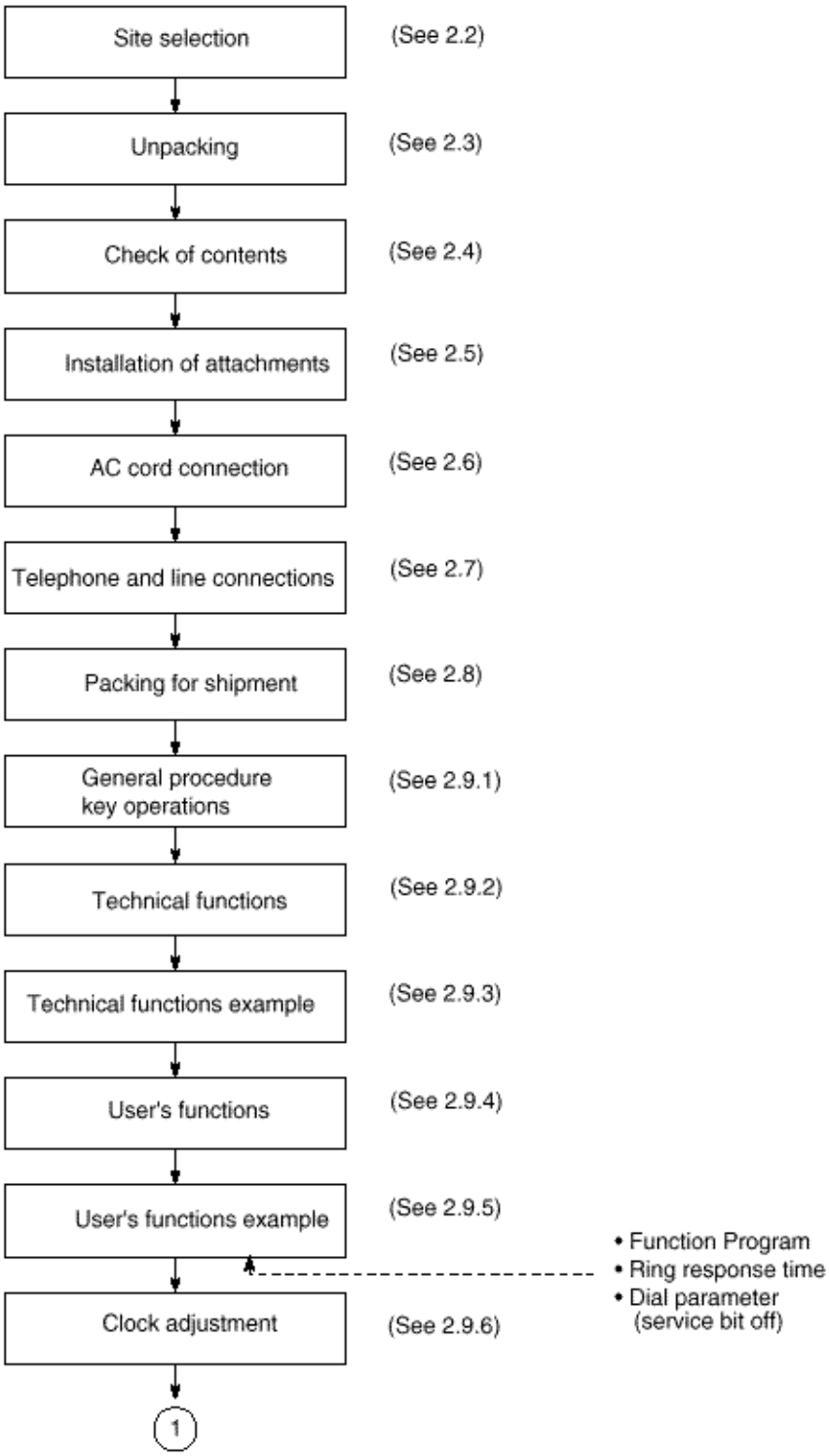
07/01/1999 17:05
ID=OKI

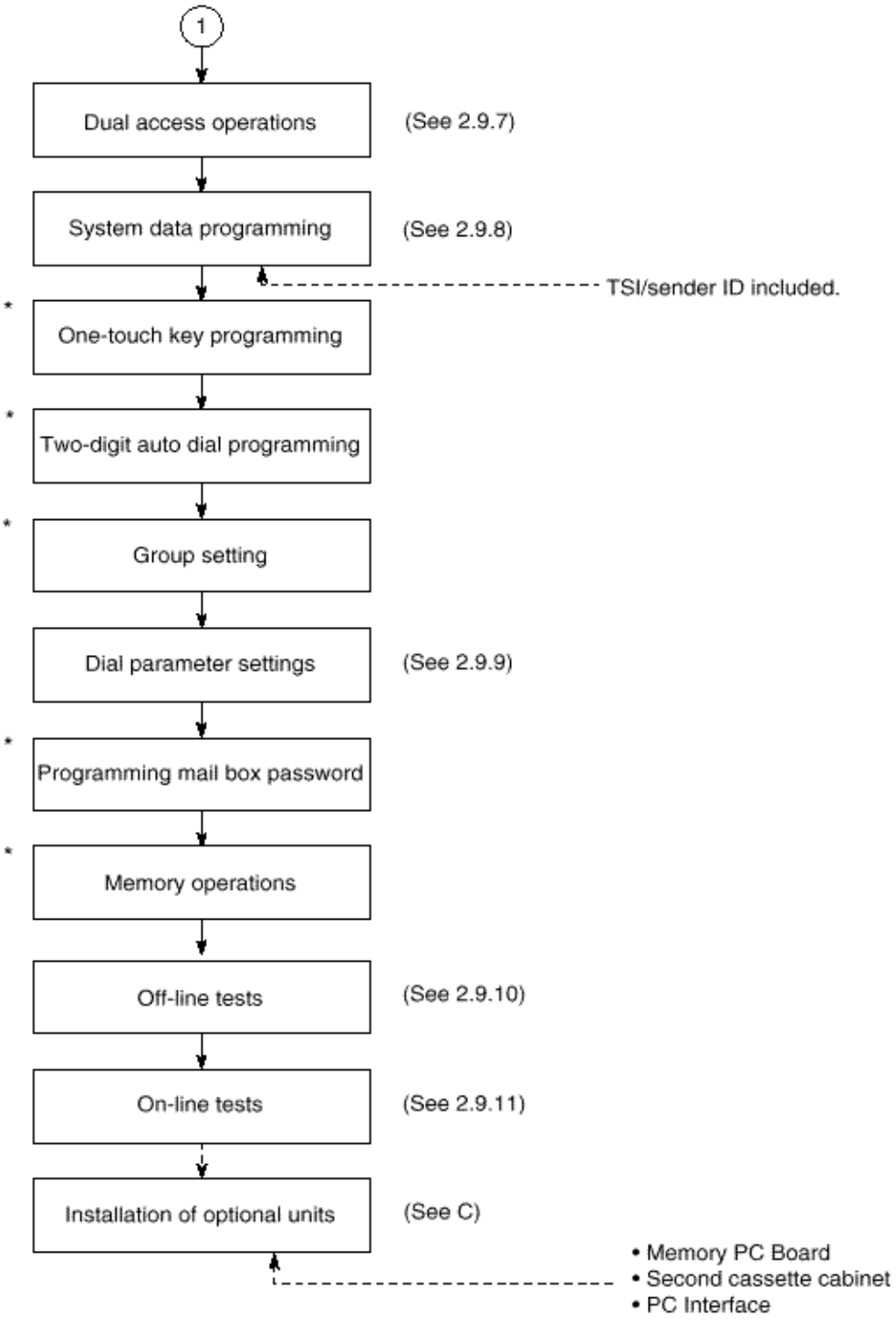
FUNCTION LIST

01:SERVICE BIT ON	02:MONITOR CONT. OFF	03:COUNTRY CODE USA
04:TIME/DATE PRINT OFF	05:TSI PRINT OFF	06:NO TONER MEM. RX ON
07:TAD MODE TYPE2	08:REAL TIME DIAL TYPE2	09:TEL/FAX SWITCH ON
10:MDY/DMY. MDY	11:LONG DOC. SCAN OFF	12:TONE FOR ECHO OFF
13:MH ONLY OFF	14:H/MODEM RATE 14.4K	15:T1 (TX) TIMER VALUE 059
16:T1 (RX) TIMER VALUE 035	17:T2 TIMER VALUE 100	18:DIS BIT32 ON
19:ERR. CRITERION VALUE 10	20:OFF HOOK BYPASS OFF	21:NL EQUALIZER 0DB
22:ATTENUATOR 10DB	23:T/F TONE ATT. 10DB	24:MF ATT. 6DB
25:RING DURA. * 10MS 12	26:CML TIMING * 100MS 3	27:LED HEAD STROBE 10100
28:LED HEAD WIDTH TYPE1	29:MEDIA TYPE MEDIUM	30:V34 TX RETRY ON
31:SYMBOL RATE 3200		

2.1 General

The following flowchart outlines the installation procedure.


Site selection
(See 2.2)
Unpacking
(See 2.3)
Check of contents
(See 2.4)
Installation of attachments
(See 2.5)
AC cord connection
(See 2.6)
Telephone and line connections
(See 2.7)
Packing for shipment
(See 2.8)
General procedure
key operations
(See 2.9.1)
Technical functions
(See 2.9.2)
Technical functions example
(See 2.9.3)
User's functions
(See 2.9.4)
User's functions example
(See 2.9.5)
• Function Program
• Ring response time
• Dial parameter
(service bit off)
Clock adjustment
(See 2.9.6)
1



* : See user's guide

2.2 Site Selection

Precautions for Installation

(01) **Fluctuation in line voltage**
- 120VAC (102V to 127V)
- 230VAC (198V to 264V)

(02) **Room temperature**
50 to 90°F (10 to 32°C)

(03) **Humidity**
20 to 80% RH

(04) **Operating environment**
Pressure: Equivalent to altitude of 2500 m (8,203 feet) and below.

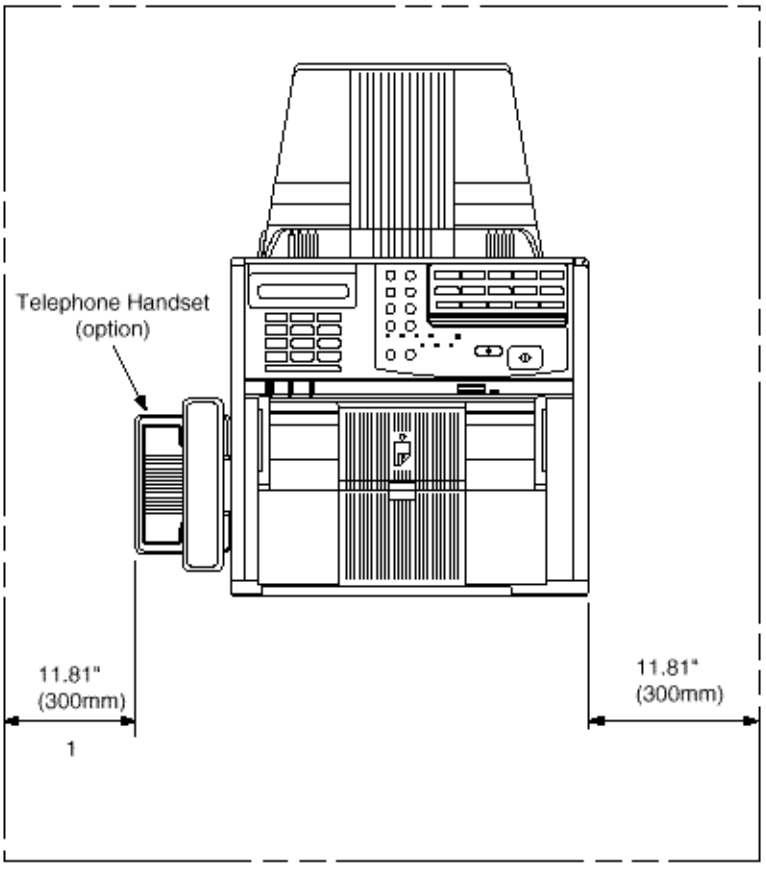
(05) **Exposure**
Do not expose the image drum unit to direct light for more than five minutes.

(06) **Levelness of installation surface**
1 degree max.

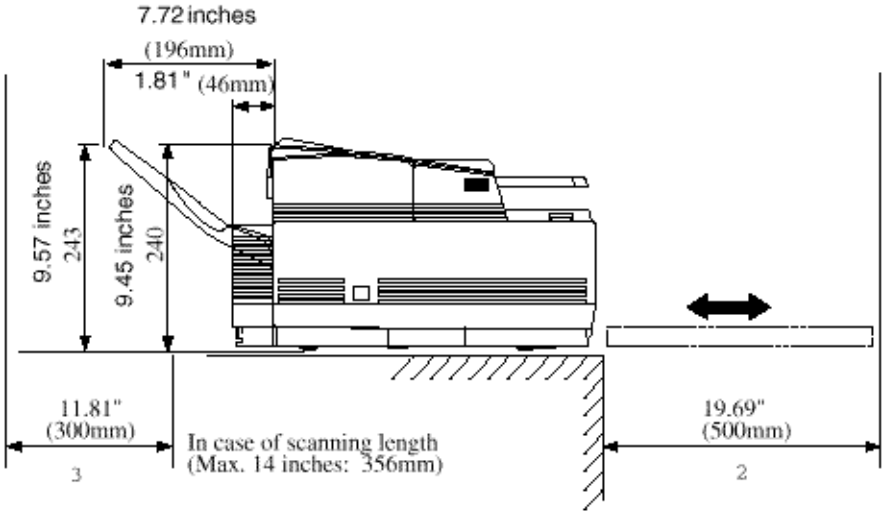
(07) **Other requirements**
Avoid installing in any of the following places:
- A place exposed to direct sunlight
- A place near a heat source or exposed to vibration
- A dusty place
- A place in the atmosphere of acid gas, or steam etc.,
- A place exposed to quick temperature changes

(08) **Required space for installation**
The facsimile requires the space (as shown) for safety and good operability.

Note: 1 This space is necessary for handling the handset. (option)
2 This space is necessary for removing the recording paper cassette.
3 This space is necessary for installing the document stacker and to allow space for the fan exhaust.



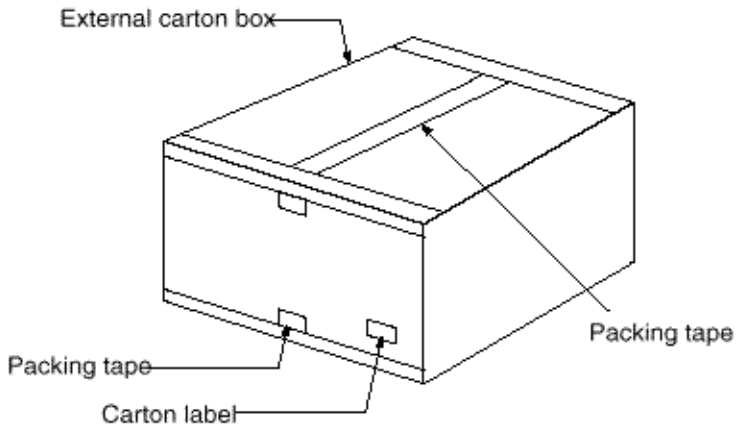
FX-050VP-C2-001



2.3 Unpacking

Unpacking Procedure 1

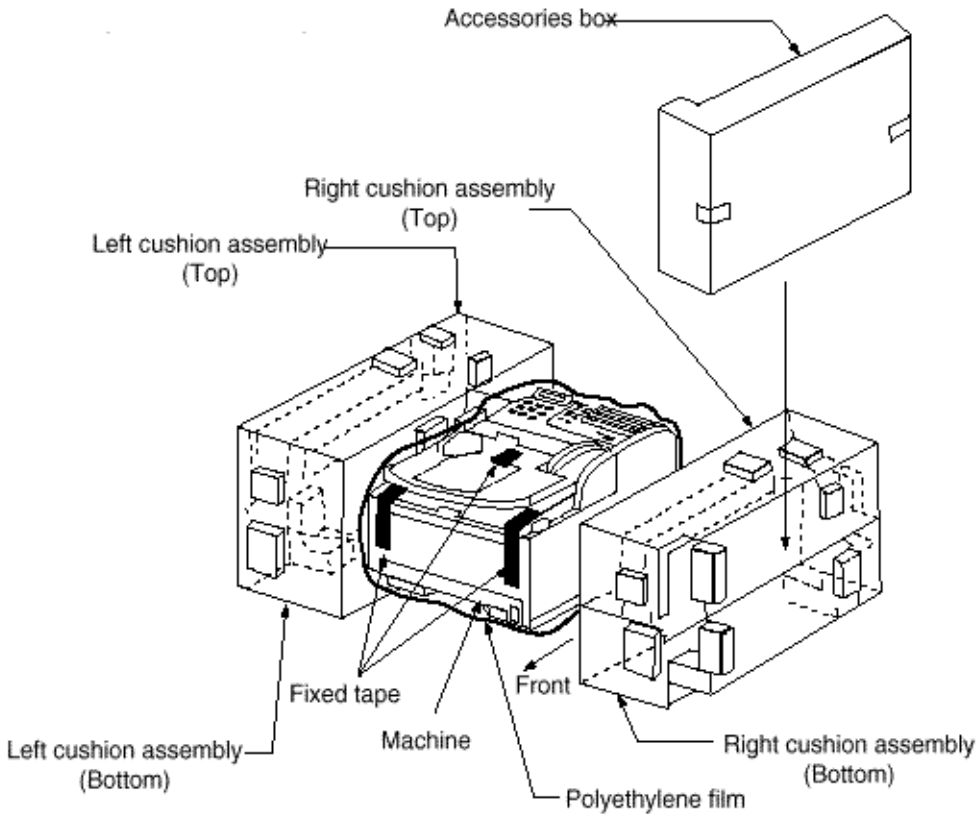
(01) Remove tape on the top of the carton box and open its cover.

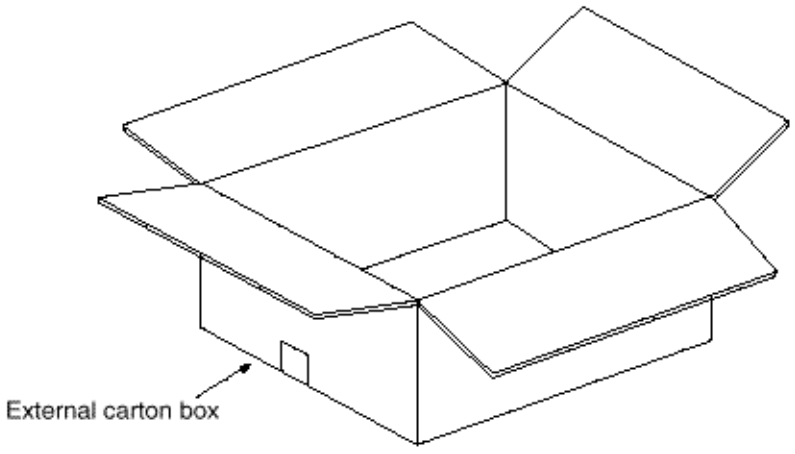


(02) Take out the accessory box from the carton box.

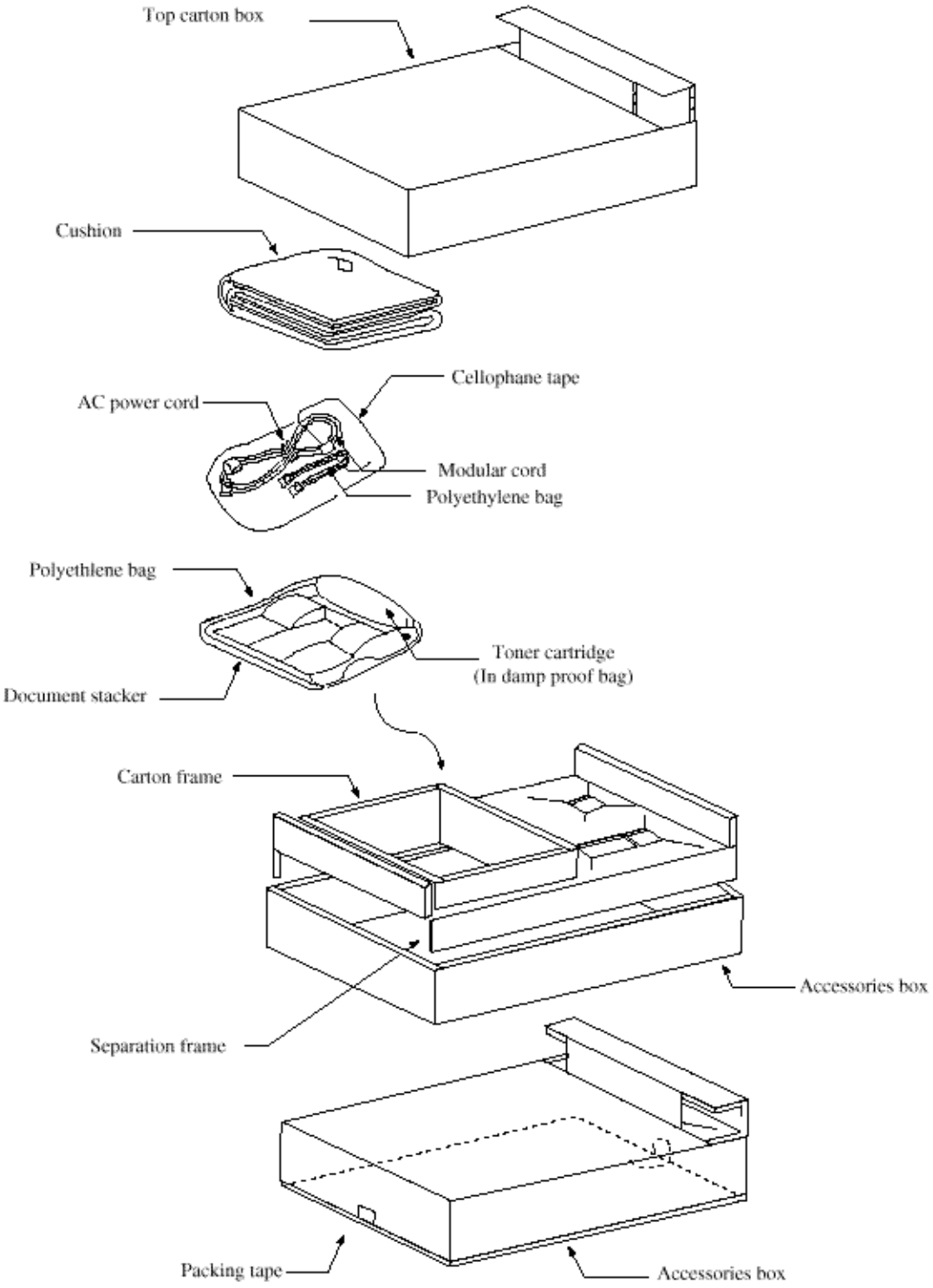
(03) Take out the machine with plastic wrapper from the box.

Unpacking Procedure 2





Unpacking Procedure 3


Top carton box
Cushion
Cellophane tape
AC power cord
Modular cord
Polyethylene bag
Polyethlene bag
Toner cartridge
(In damp proof bag)
Document stacker
Carton frame
Accessories box
Separation frame
Packing tape
Accessories box

2.4 Check of Contents

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

Contents List

Item No.	Name	Q'ty	Remarks
1	OKIFAX 5250 / OF 5400 machine	1	
2	AC power cord	1	
3	Image Drum Unit	1	Already installed.
4	Toner cartridge	1	
5	Document stacker	1	
6	Line cord	1	
7	One touch sheet	1	Already installed.
8	User's Documentation	1	volume

2.5 Installation of Attachments

(01) Items

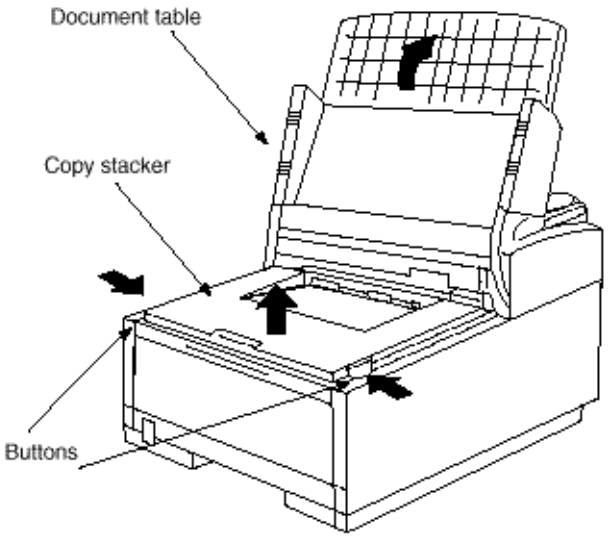
- Image Drum (ID) Unit (already installed)
- Toner cartridge
- Recording paper
- Document stacker

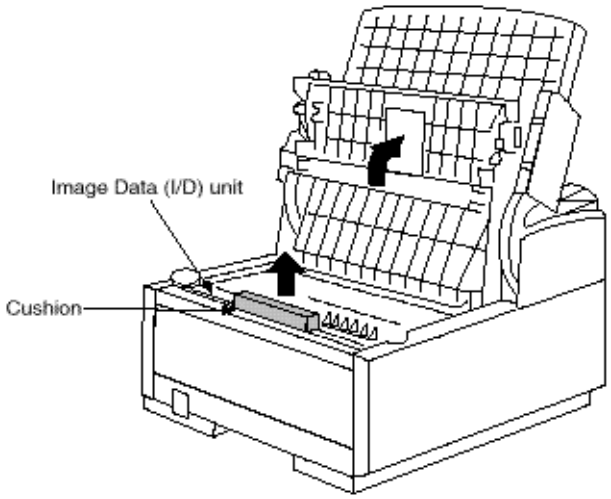
(02) Procedure

1) Toner cartridge

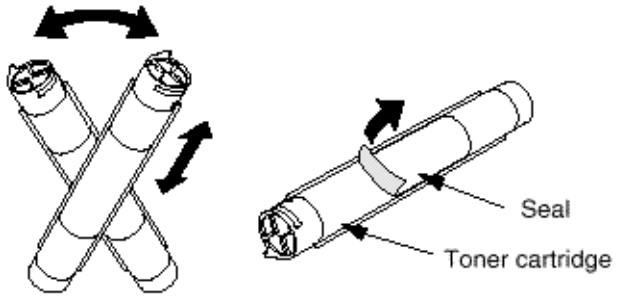
- Peel off the fixed tape attached to the copy stacker.
- Open the document table and copy stacker.
- Take the cushion out of the ID unit.

Toner Cartridge Installation

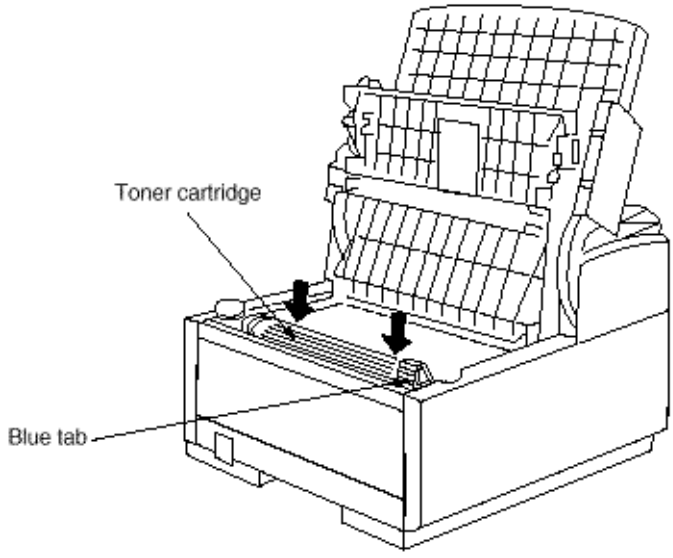




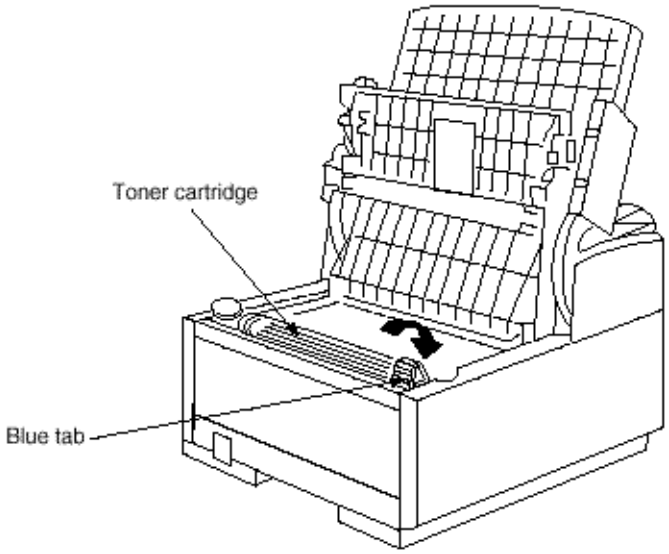
- Take out the toner cartridge from the damp proof bag, shake it five or six times as shown in the illustration to eliminate the toner deflection, and peel off the seal gently.



- 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.
- Push the blue tab forward until it stops.



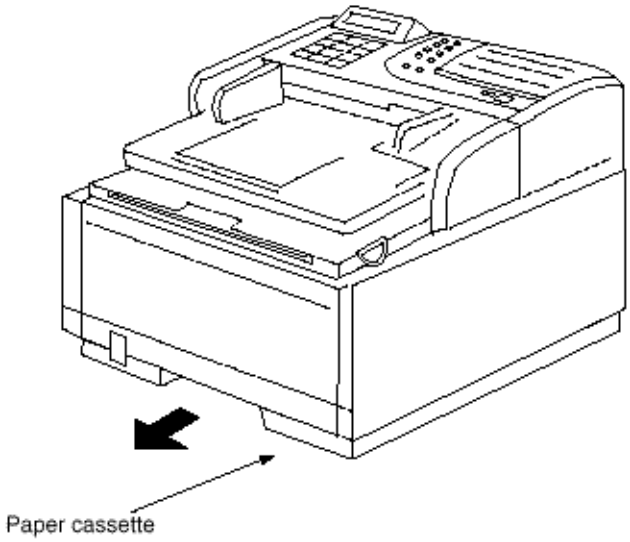
- Clean the toner scattered in the vicinity of the toner cartridge using a cloth moistened with cold water. Do not use hot water since it makes the toner stick there.
- Close the copy stacker until the buttons have been locked completely.



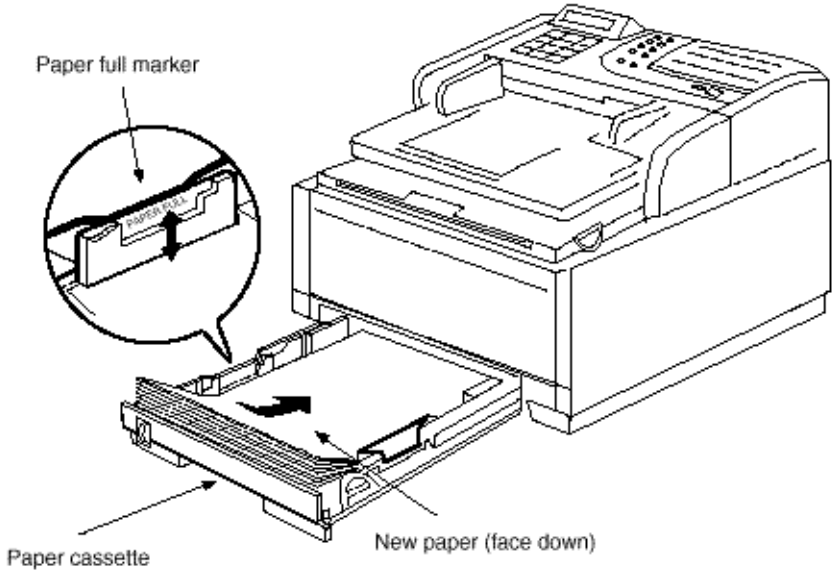
(03) Recording Paper Cassette Installation

Note: About 250 sheets of 20 lb. paper can be set in the recording paper cassette.

- Remove the paper cassette from the facsimile by pulling the cassette tab.

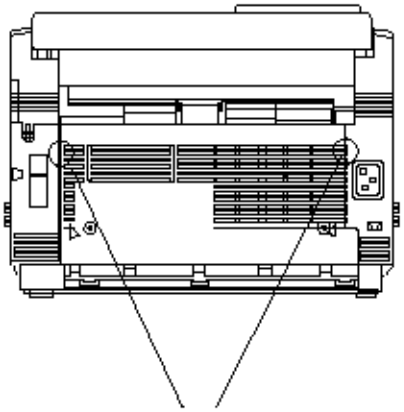


- Sheets must not exceed the paper full marker of the new paper limit indication. If excessive sheets are set, it will cause paper jams.
- After loading the new paper, push it forward into the slot at the front of the facsimile until it locks.

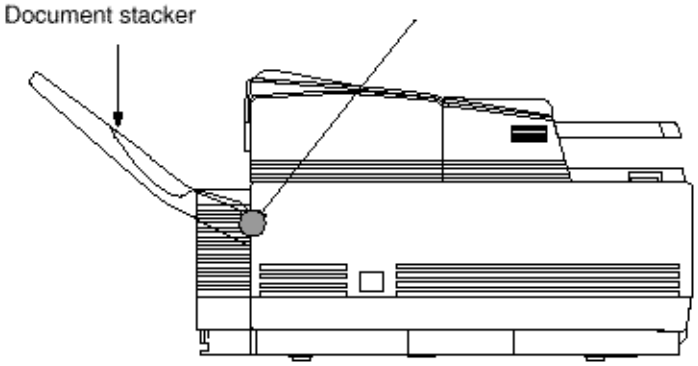


(04) Document Stacker Installation

- Place the document stacker into the hanging position.



Hanging position

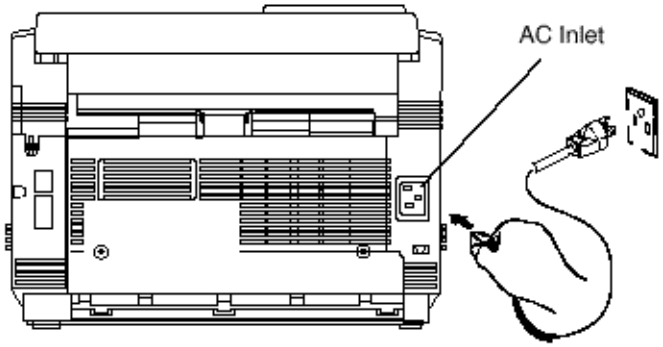


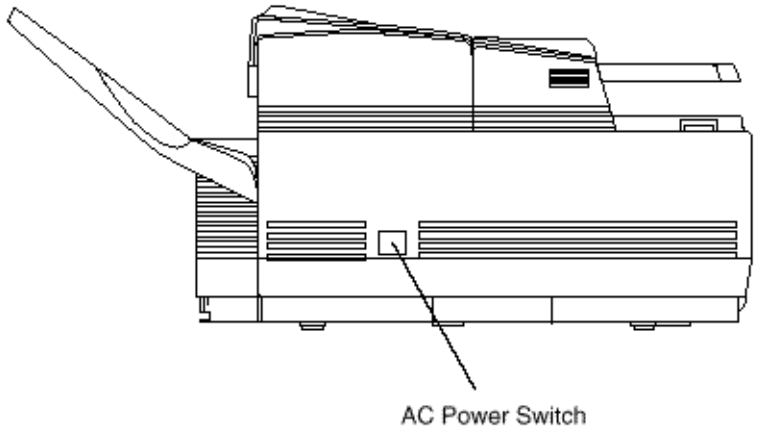
2.6 AC Cord Connection

The power supply is provided as follows.

Nominal input voltage 120VAC (Voltage range 102 to 127VAC)
Nominal input voltage 230VAC (Voltage range 198 to 250VAC)

Check whether the AC voltage of your input is within the above-mentioned voltage range.
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.
Insert the male plug of the AC cord to the inlet receptacle.
Turn the power switch ON.
Verify that the display shows the "(Time)" message indicating the standby mode.

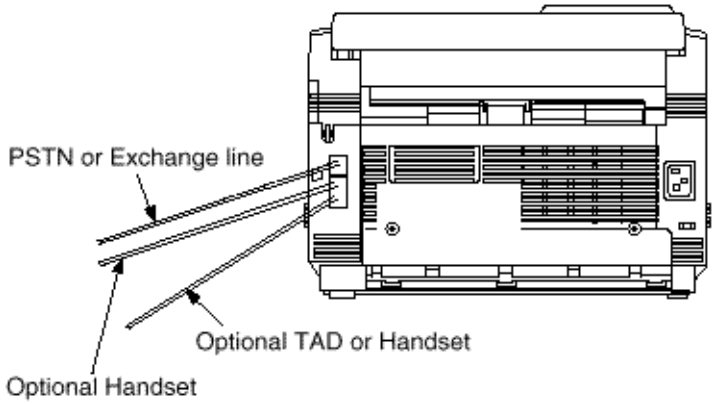




2.7 Telephone and Line Connections

(1) Procedure

- Connect the lines.



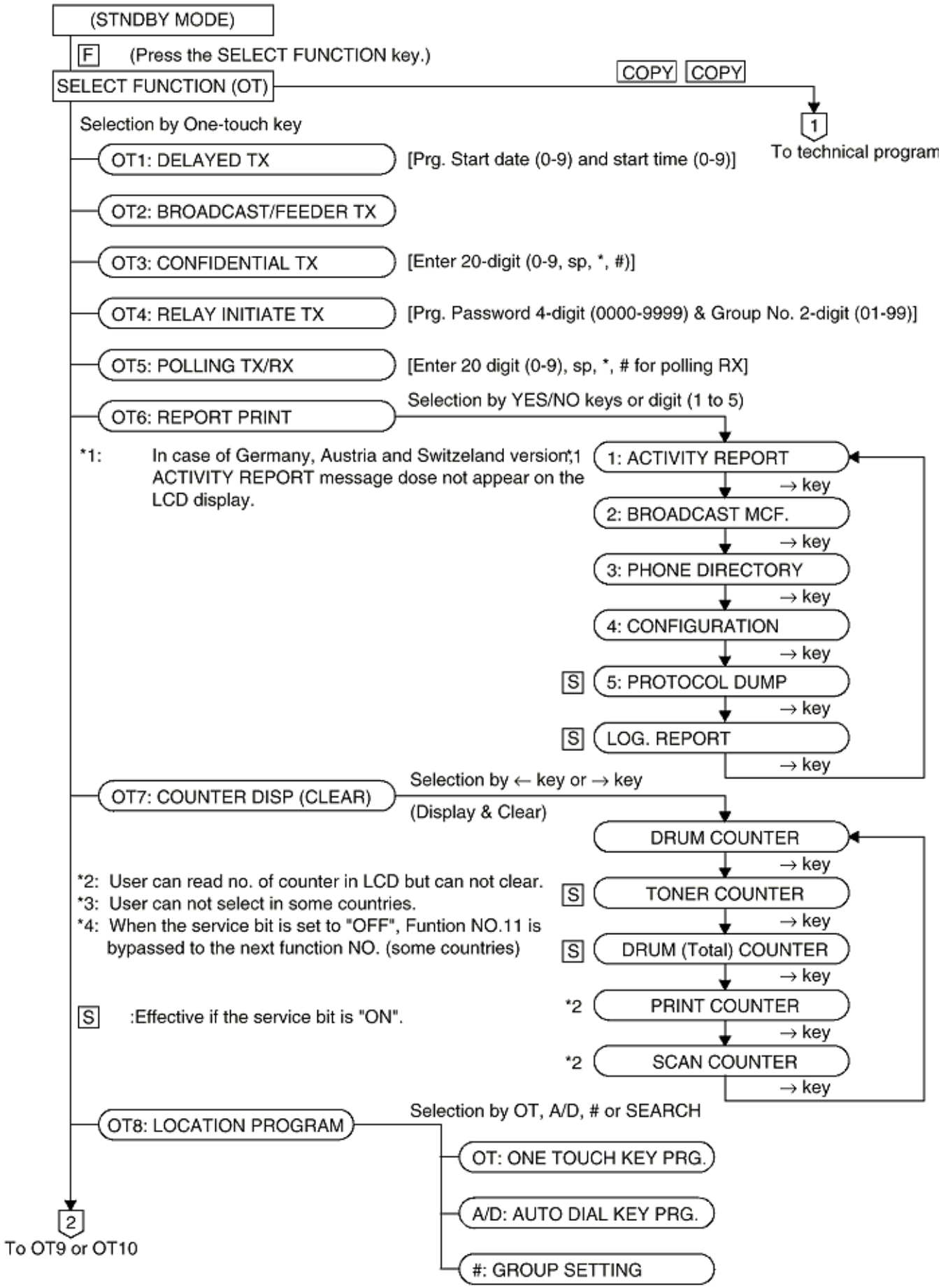
2.8 Packing for Shipment

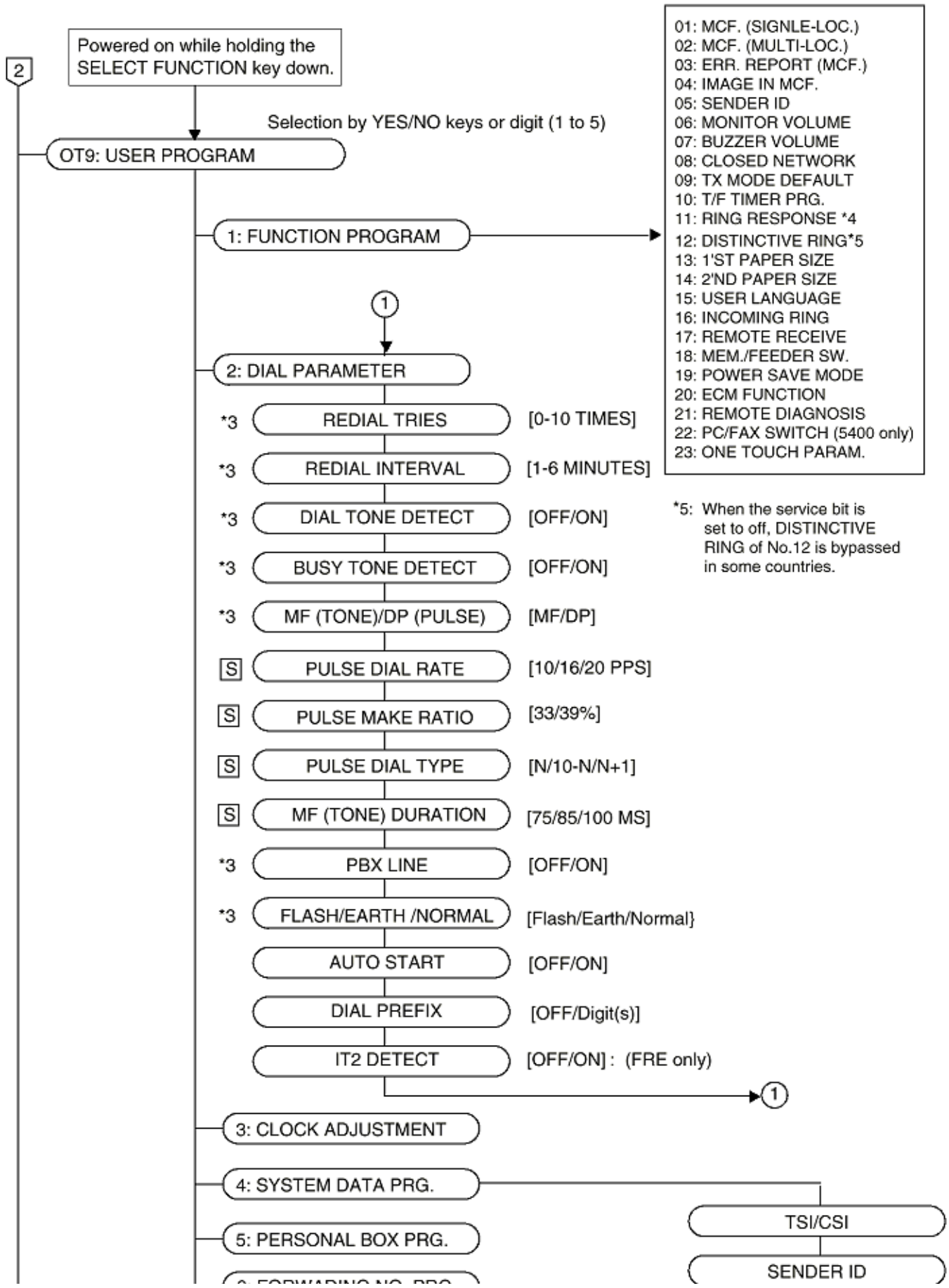
CAUTION: When packing the unit for shipment, REMOVE THE IMAGE DRUM AND TONER FROM THE UNIT AND SHIP SEPARATELY!

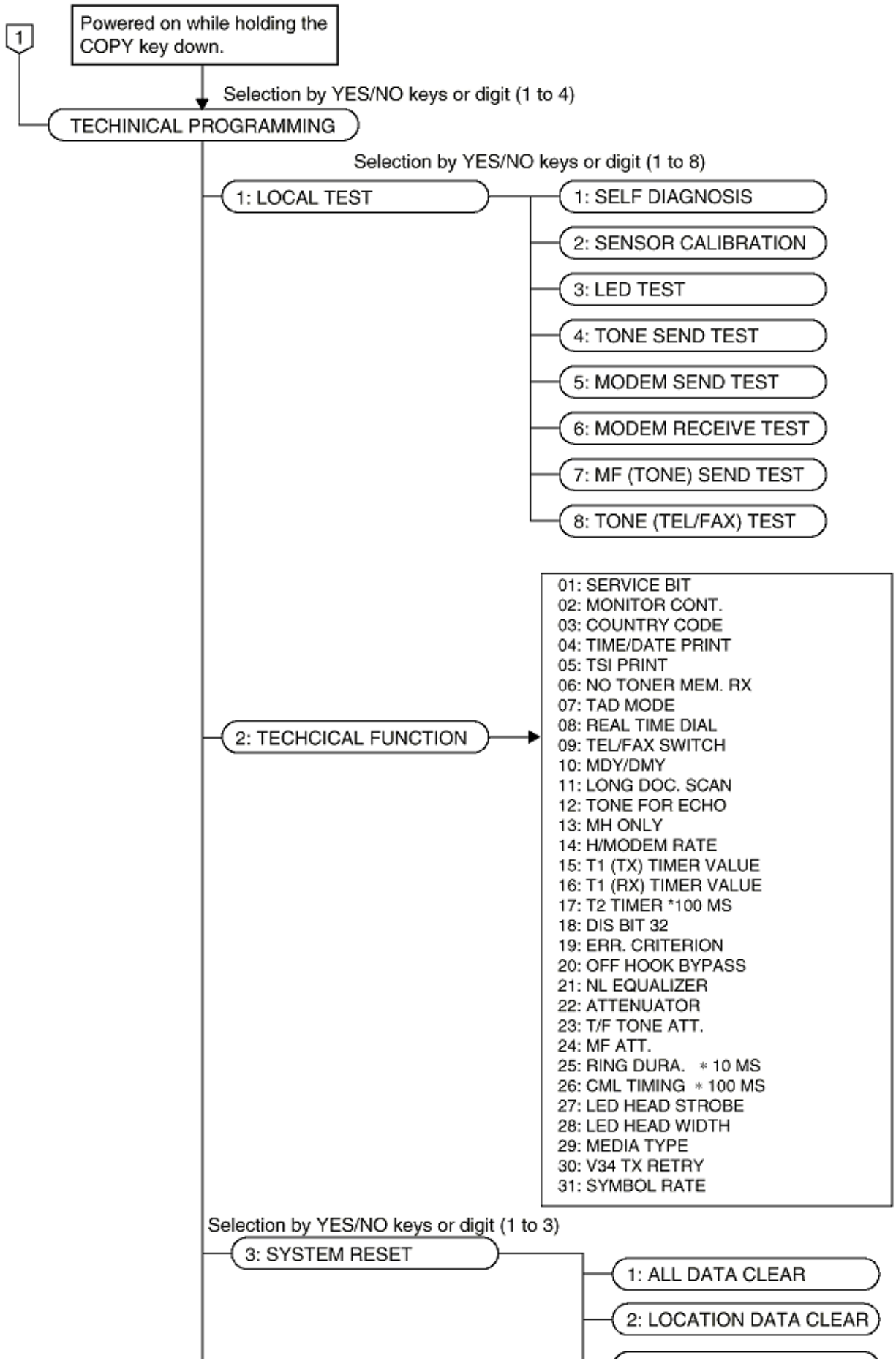
Failure to do so will result in damage to the machine.

2.9.1 General Procedure of Key Operation

Figure 2.9.1 below shows the general procedure of key operation.


(STNDBY MODE)
F
(Press the SELECT FUNCTION key.)
SELECT FUNCTION (OT)
COPY COPY
1
To technical program
Selection by One-touch key
OT1: DELAYED TX
[Prg. Start date (0-9) and start time (0-9)]
OT2: BROADCAST/FEEDER TX
OT3: CONFIDENTIAL TX
[Enter 20-digit (0-9, sp, *, #)]
OT4: RELAY INITIATE TX
[Prg. Password 4-digit (0000-9999) & Group No. 2-digit (01-99)]
OT5: POLLING TX/RX
[Enter 20 digit (0-9), sp, *, # for polling RX]
OT6: REPORT PRINT
Selection by YES/NO keys or digit (1 to 5)
1: ACTIVITY REPORT
→ key
2: BROADCAST MCF.
→ key
3: PHONE DIRECTORY
→ key
4: CONFIGURATION
→ key
S
5: PROTOCOL DUMP
→ key
S
LOG. REPORT
→ key
*1: In case of Germany, Austria and Switzeland version,1 ACTIVITY REPORT message dose not appear on the LCD display.
OT7: COUNTER DISP (CLEAR)
Selection by ← key or → key
(Display & Clear)
DRUM COUNTER
→ key
S
TONER COUNTER
→ key
S
DRUM (Total) COUNTER
→ key
*2
PRINT COUNTER
→ key
*2
SCAN COUNTER
→ key
*2: User can read no. of counter in LCD but can not clear.
*3: User can not select in some countries.
*4: When the service bit is set to "OFF", Funtion NO.11 is bypassed to the next function NO. (some countries)
S :Effective if the service bit is "ON".
OT8: LOCATION PROGRAM
Selection by OT, A/D, # or SEARCH
OT: ONE TOUCH KEY PRG.
A/D: AUTO DIAL KEY PRG.
#: GROUP SETTING
2
To OT9 or OT10


2
Powered on while holding the SELECT FUNCTION key down.
Selection by YES/NO keys or digit (1 to 5)
OT9: USER PROGRAM
1: FUNCTION PROGRAM
01: MCF. (SIGNLE-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 *4
12: DISTINCTIVE RING*5
13: 1'ST PAPER SIZE
14: 2'ND PAPER SIZE
15: USER LANGUAGE
16: INCOMING RING
17: REMOTE RECEIVE
18: MEM./FEEDER SW.
19: POWER SAVE MODE
20: ECM FUNCTION
21: REMOTE DIAGNOSIS
22: PC/FAX SWITCH (5400 only)
23: ONE TOUCH PARAM.
*5: When the service bit is set to off, DISTINCTIVE RING of No.12 is bypassed in some countries.
1
2: DIAL PARAMETER
*3 REDIAL TRIES [0-10 TIMES]
*3 REDIAL INTERVAL [1-6 MINUTES]
*3 DIAL TONE DETECT [OFF/ON]
*3 BUSY TONE DETECT [OFF/ON]
*3 MF (TONE)/DP (PULSE) [MF/DP]
S PULSE DIAL RATE [10/16/20 PPS]
S PULSE MAKE RATIO [33/39%]
S PULSE DIAL TYPE [N/10-N/N+1]
S MF (TONE) DURATION [75/85/100 MS]
*3 PBX LINE [OFF/ON]
*3 FLASH/EARTH /NORMAL [Flash/Earth/Normal}
AUTO START [OFF/ON]
DIAL PREFIX [OFF/Digit(s)]
IT2 DETECT [OFF/ON] : (FRE only)
1
3: CLOCK ADJUSTMENT
4: SYSTEM DATA PRG.
TSI/CSI
SENDER ID
5: PERSONAL BOX PRG.


1
Powered on while holding the COPY key down.
Selection by YES/NO keys or digit (1 to 4)
TECHINICAL PROGRAMMING
Selection by YES/NO keys or digit (1 to 8)
1: LOCAL TEST
1: SELF DIAGNOSIS
2: SENSOR CALIBRATION
3: LED TEST
4: TONE SEND TEST
5: MODEM SEND TEST
6: MODEM RECEIVE TEST
7: MF (TONE) SEND TEST
8: TONE (TEL/FAX) TEST
2: TECHCICAL FUNCTION
01: SERVICE BIT
02: MONITOR CONT.
03: COUNTRY CODE
04: TIME/DATE PRINT
05: TSI PRINT
06: NO TONER MEM. RX
07: TAD MODE
08: REAL TIME DIAL
09: TEL/FAX SWITCH
10: MDY/DMY
11: LONG DOC. SCAN
12: TONE FOR ECHO
13: MH ONLY
14: H/MODEM RATE
15: T1 (TX) TIMER VALUE
16: T1 (RX) TIMER VALUE
17: T2 TIMER *100 MS
18: DIS BIT 32
19: ERR. CRITERION
20: OFF HOOK BYPASS
21: NL EQUALIZER
22: ATTENUATOR
23: T/F TONE ATT.
24: MF ATT.
25: RING DURA. * 10 MS
26: CML TIMING * 100 MS
27: LED HEAD STROBE
28: LED HEAD WIDTH
29: MEDIA TYPE
30: V34 TX RETRY
31: SYMBOL RATE
Selection by YES/NO keys or digit (1 to 3)
3: SYSTEM RESET
1: ALL DATA CLEAR
2: LOCATION DATA CLEAR

2.9.2 Technical Functions

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

The tables show the initial setting items and their purposes. (The default settings differ by country.) 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.

Technical Functions Table

TEL / FAX automatic switching

TAD mode flow chart

Technical Functions Table

This table shows the initial setting items and their purposes. The default settings may differ by country. Each item can be accessed by entering the corresponding service number on Technical Function.

Note:
S-ON: Effective if the service bit has been set to ON.
FP: Function program setting
TF: Technical function setting

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. Enables or disables the following functions: ● Drum (Total) and toner counter clear ● Dial parameters	OFF
02	Line monitor control	Enables or disables continuous monitoring of phone line for technical troubleshooting. One Touch Key 09, Item 06, Monitor Volume (Section 2.9.4) selects the loudness of monitoring. ON : Enable OFF : Disable Example: 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.	OFF
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	USA
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. **Note:** ● Set at receiver.	OFF
05	TSI print	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.) When Technical Function 04 (Section 2.9.2) is set to "ALL", TSI is printed for the all received pages. ON : Enable OFF : Disable (Reference) TSI; Transmitting Subscriber Identification	ON
06	No-toner memory reception	Enables or disables the memory reception when the fax is in no toner condition. ON : The messages are printed when toner has been newly supplied or an operator performs the memory operation (OT10). OFF : The messages are printed in the print mode. But print quality is not guaranteed.	OFF

<table>
<tr><td>07</td><td>TAD mode

(For external telephone answering device)</td><td>For an external telephone answering device. Allows the OKIFAX to share a telephone line with an answering device.
If the REMOTE RX Function is set to a value other than OFF, that code can be used to force FAX RX during TAD MODE.
TAD mode is of two types (TYPE1/TYPE2).
OFF/TYPE1/TYPE2 selectable.
TYPE1
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.
TYPE2
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.</td><td>TYPE2</td></tr>
<tr><td>08</td><td>Real time dialing</td><td>Enables or disables the real time dialing. 3 types selectable. (OFF/TYPE1/TYPE2)
TYPE1: Real-time dialing is available when the optional telephone handset is OFF-HOOK.
TYPE2: Real-time dialing is available when the optional telephone handset is OFF-HOOK or HOOK key is pressed.</td><td>TYPE 2</td></tr>
<tr><td>09</td><td>TEL/FAX switching</td><td>Enables or disables the TEL/FAX automatic switching.
ON : Enable
OFF : Disable
Refer to Technical Function 23 and Function Program 10, Section 2.9.4.</td><td>ON</td></tr>
<tr><td>10</td><td>MDY/DMY</td><td>Switches LCD display and report print from month/day/year to day/month/year or vice versa.
MDY/DMY selectable.</td><td>MDY</td></tr>
<tr><td>11</td><td>Long document SCAN</td><td>Switches the function of transmitting long-size document (more than 380 mm).
ON : Unlimited (1 Hour)
OFF : 380 mm. (14.96 inches)</td><td>OFF</td></tr>
<tr><td>12</td><td>Echo Protection</td><td>Enables Echo Suppression for poor lines with echo, usually during overseas transmissions.
This bit setting controls the following features.
ON: Enables
OFF: Disables
<table><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></td><td>OFF</td></tr>
<tr><td>13</td><td>MH only</td><td>Switches the function of limiting image compression only to the MH codes.
This affects all communications, and should only be used as a last resort.
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.</td><td>OFF</td></tr>
</table>

14	High-speed modem rate	Specifies the modem's starting speed, 33.6K, 28.8K, 14.4k, 9.6k, or 4.8kbps. **Note:** The following protocol is added to OKIFAX 5600-Plus: ITU-T standard V.34 for 33.6K or 28.8 kbps operation.	28.8
15	T1 (TX), timeout value	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 (in one second steps)	059 sec.
16	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. This timer starts after the DIS is transmitted, and checked this timer by the transmission timing signal. If T1 times out, the fax disconnects the line. * Selects the 3 digit timer 010 to 255 sec (in one second steps)	035 sec
17	T2, timeout value	T2, timeout value (layer) Registers the time duration (in seconds) for which the fax detects the EOL interval during reception of phase C. The fax disconnects the line when EOL can not detect within T2 timer. * Selects the 3 digit timer 001 to 255 selectable. (in 100ms steps) For example: 060 x 100 ms =6 s	130 sec
18	DIS bit 32	Specifies whether to transmit a bit 32 in DIS. ON : Transmits a bit 32 OFF: Disable **Note:** Disable only if communication / compatibility problems occur with an older remote machine.	ON
19	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)	10 %
20	Off-hook bypass	Allows two OKIFAX machines to be connected back-to-back for testing purposes. ON : Enable OFF: Disable	OFF
21	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.	0 km
22	Modem attenuator	Adjusts the attenuation (dB) for the transmit signal power level. 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. 0 to 15 dB. selectable	10 dB
23	T/F tone attenuator (for TEL/ FAX SW)	Adjusts the attenuation (dB) for the quasi-ring back tone send signal of TEL/FAX switching. Adjusting value is 0 to 15 dB in one dB steps.	10 dB
24	MF attenuator	Adjusts the attenuation (dB) for the send MF tone power level. Adjusting value is 0 to 15 dB in one dB steps.	3 dB
25	Ring duration detection time	Selects the minimum ring detection time Adjusting time is 100 MS to 990 MS in 10 MS steps. 10 to 99 selectable. For example: (120 ms) 12 x 10 ms = 120 ms	12

26	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) 03 x 100 ms = 300 ms	03
27	Strobe for LED head	Setting of LED print head strobe signals (00000-11111). Selection of strobe width in LED head. "00000" is darkest and "11111" is lightest. **This setting should be verified upon initial install of machine, or replacement of main control board or LED Head.** **Note 1:** 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. **Note 2:** Intensity ranking is determined by the 1st, 2nd and 3rd digits from the right on the LED print head serial number. (i.e.: 212, 212 is the intensity ranking.)	10100

Setting of Technical Function No. 27

Setting / Rank Marking	MSB ↑ LSB																													
		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	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
		0	0	0	0	1	1	1	1	0	0	0	0	0	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																								*							

T.F. No.	Item	Specifications	Default
28	Head width	Head width Use the following table to determine head width type. Then, select the appropriate setting. There are two head width types: Setting / Head width / Head label TYPE 1 / 208 mm (8.19 inches) / 1115G2 TYPE 2 / 216 mm (8.50 inches) / A4 200	TYPE 2
29	Media type	This setting can effect minor changes in fusing temperatures to compensate for different paper weights. Selects the recording paper according to its quality. Medium, Medium-heavy and Heavy selectable.	MEDIUM
30	Learning Set V34 TX RETRY (OF5400 only)	Selects the learning parameter Settings: ON: Remembered; OFF: Not remembered	ON

31	Symbol rate	Symbol rate (later) Selects the V.34 modem symbol rate for OKIFAX 5600-Plus. 2400, 2800, 3200, 3429 selectable.	2800

TEL/FAX Automatic Switching (Technical Function 09)

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: In this mode, following four settings are required.

1: The predetermined time is selectable between 20 or 35 sec. (Function program No. 10, Section 2.9.4)

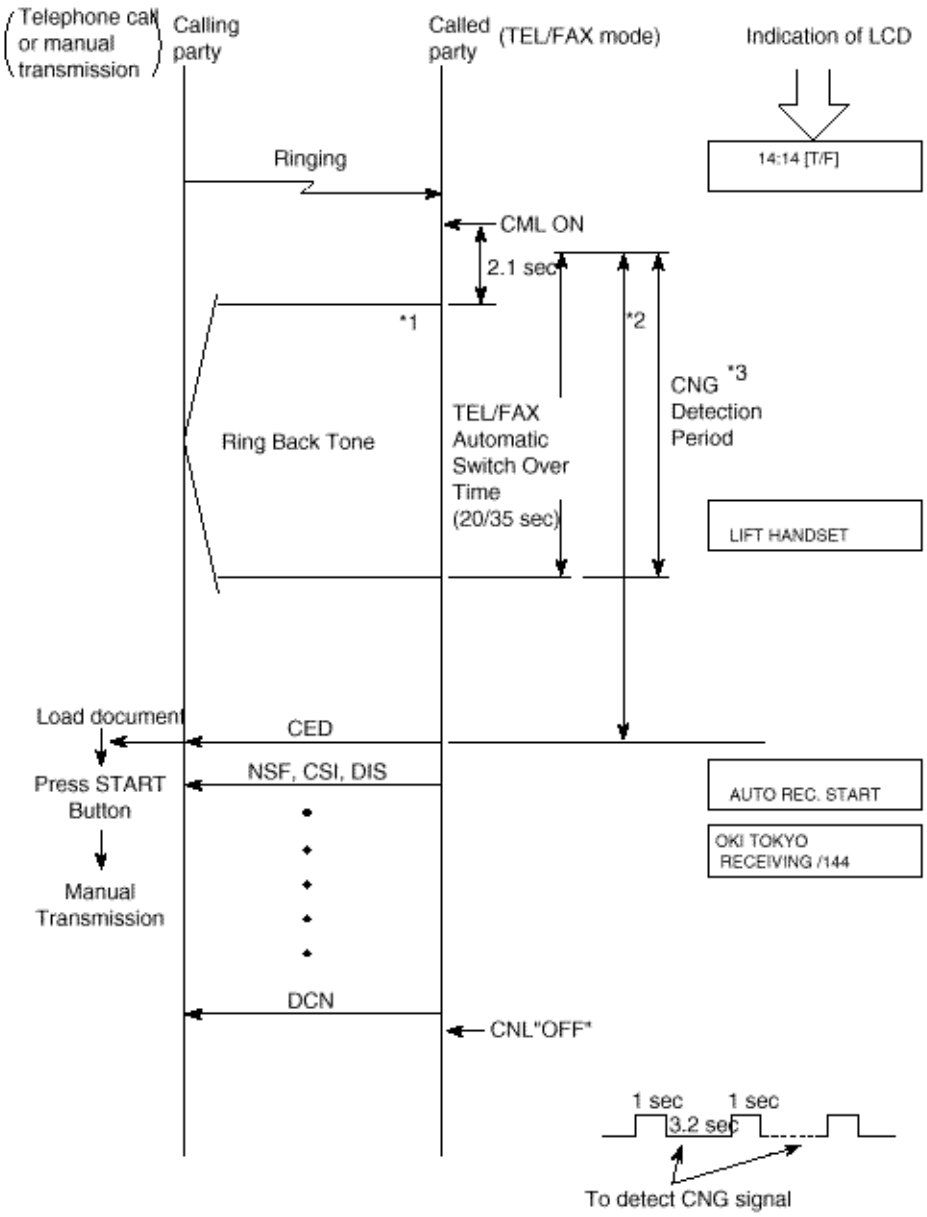
2: No ringing signal is sent to the external telephone handset.

3: Choice of message sending level. The level is selectable from 0 to 15 dB in one dB step. (Technical function 23).

4: TEL/FAX mode is available by Technical Function No. 9.

2)

TEL/FAX Mode Flowchart



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 communications 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".

TAD Mode (Technical Function 07)

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.

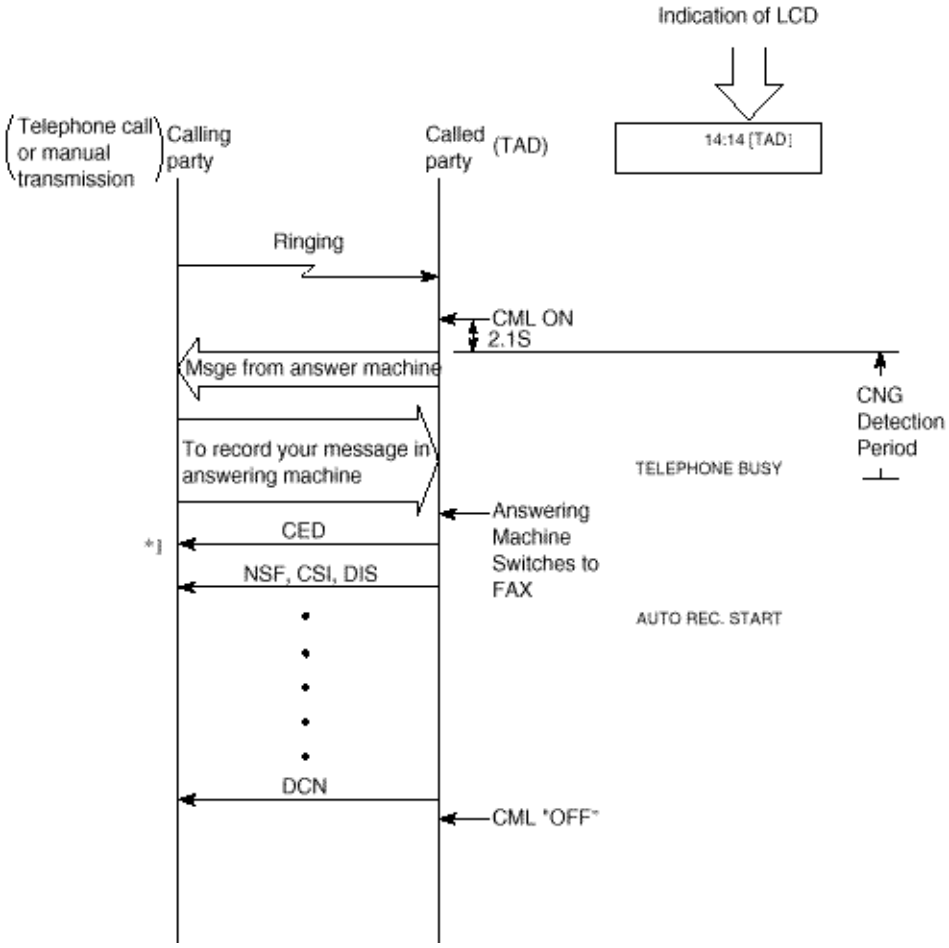
Note 1: TAD modes settings are selected through Technical Function No. 07.

Note 2: Time selections range between 20 or 35 sec.

Note 3: You have a choice of message sending level. Choices are range between 0 and 15 dB, in one dB step. Use Technical Function 23 (Section 2.9.2) to adjust the level.

TAD Mode Flowchart (Type 1)

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



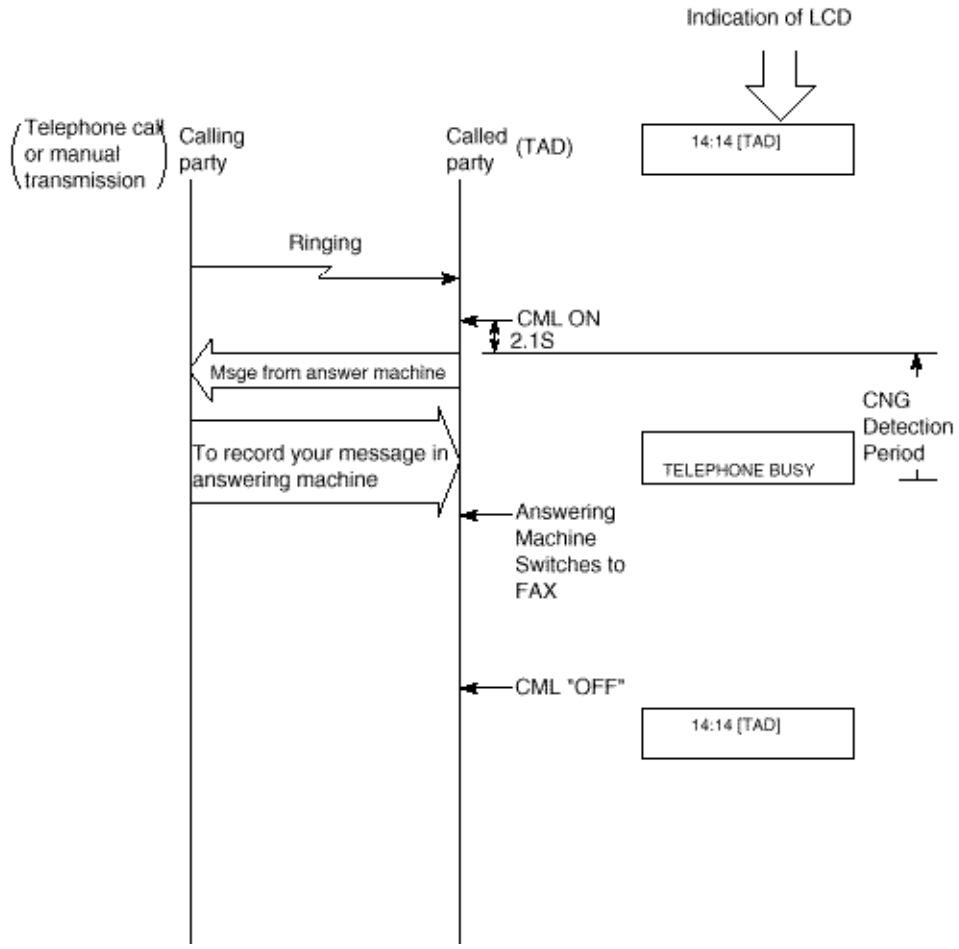
*1 To enable the manual TX mode.

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

NOTE:
If REMOTE RX Function is set to a value other than OFF, that code can be used to force FAX RX during TAD Mode Operation.

TAD Mode Flowchart (Type 2)

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



NOTE:
If REMOTE RX Function is set to a value other than OFF, that code can be used to force FAX RX during TAD Mode Operation.

2.9.3 Technical Functions Example

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

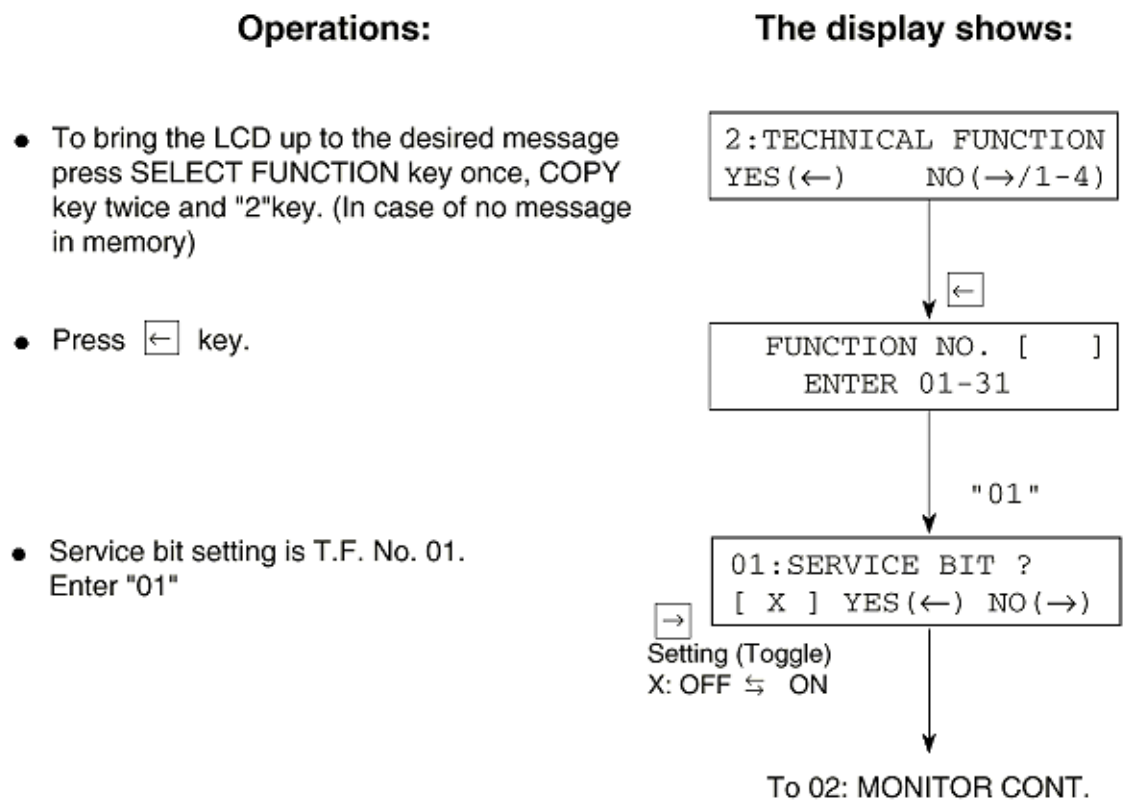
Setting the Service Bit

1) Purpose

To enable or disable the following functions:

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

2) Procedure

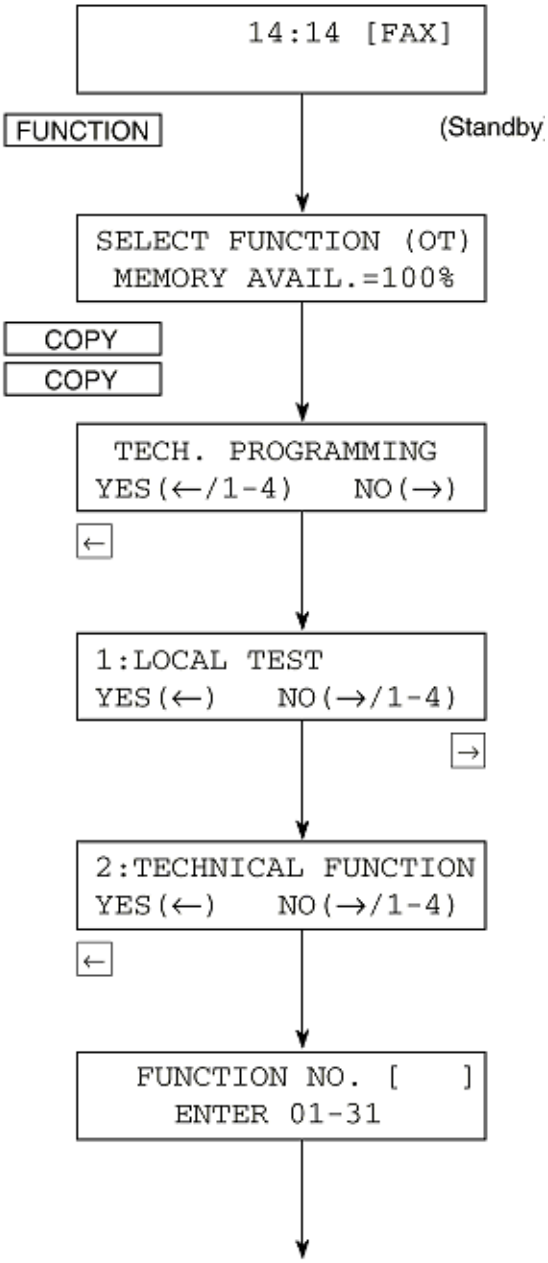


Technical functions

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:



Technical Functions 01-11

Technical Functions 12-16

Technical Functions 17-23

Technical Functions 24-27

Technical Functions 28-31

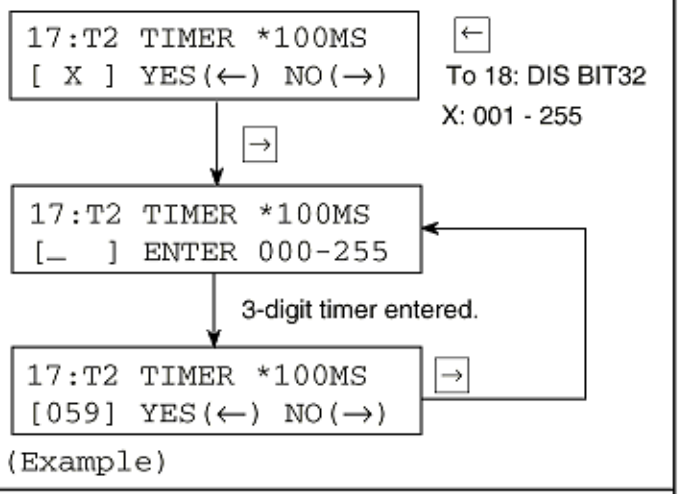
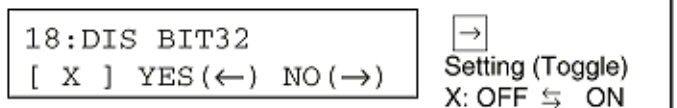
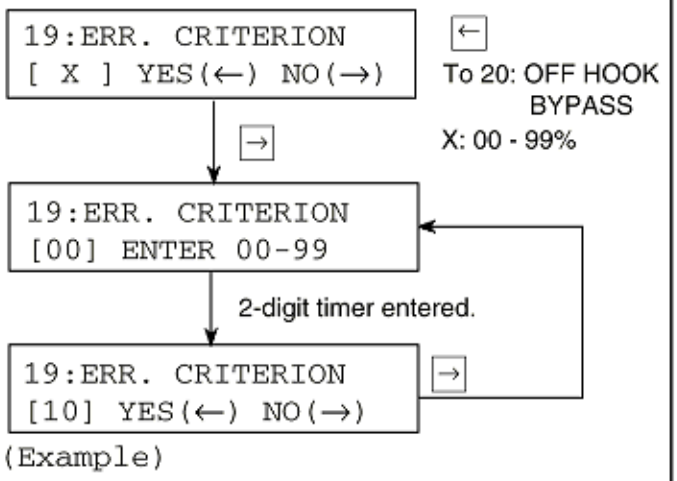
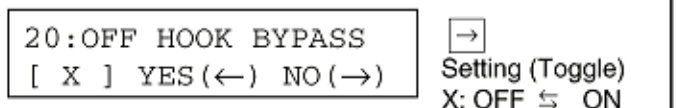
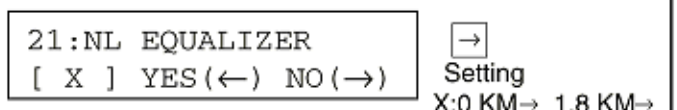
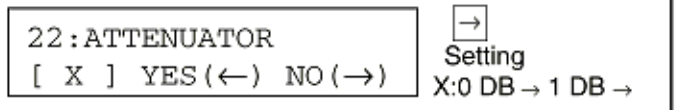
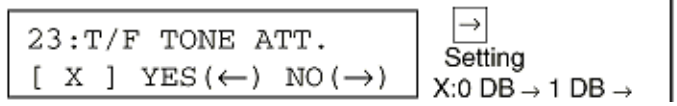
Technical Functions 01 to 11

T.F. No.	Name of Function	The Display Shows
01	Service bit	01:SERVICE BIT [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
02	Line monitor control	02:MONITOR CONT. [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
03	Country code	03:COUNTRY CODE [X] YES(←) NO(→) → Setting X: INT'L→ GBR→ •••••USA
04	Time and date print	04:TIME/DATE PRINT [X] YES(←) NO(→) → Setting X: OFF→ ONCE→ →ALL
05	TSI print	05:TSI PRINT [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
06	No toner memory reception	06:NO TONER MEM. RX [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
07	TAD mode (For external telephone answering device.)	07:TAD MODE [X] YES(←) NO(→) → Setting X: OFF→ TYPE1→ →TYPE2
08	Real-time dialling	08:REAL TIME DIAL [X] YES(←) NO(→) → Setting X: OFF→ TYPE1→ →TYPE2
09	TEL/FAX switching	09:TEL/FAX SWITCH [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
10	MDY/DMY format	10:MDY/DMY [X] YES(←) NO(→) → Setting (Toggle) X: MDY ⇆ DMY
11	Long document transmission	11:LONG DOC. SCAN [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON

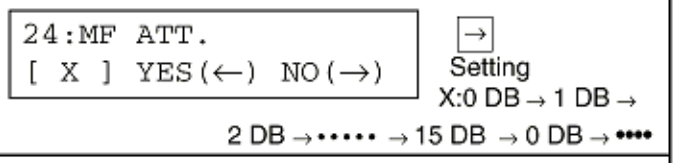
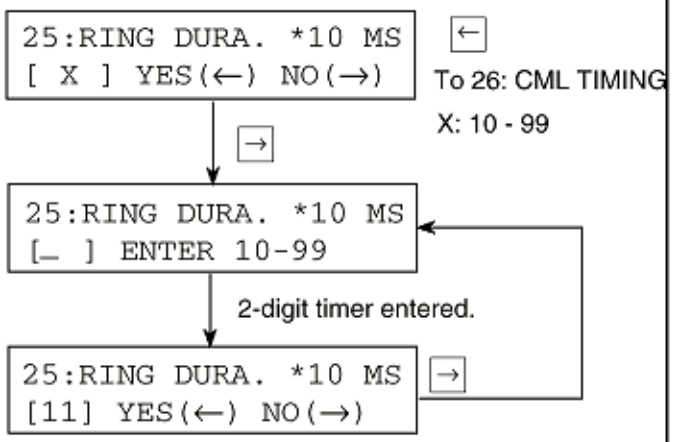
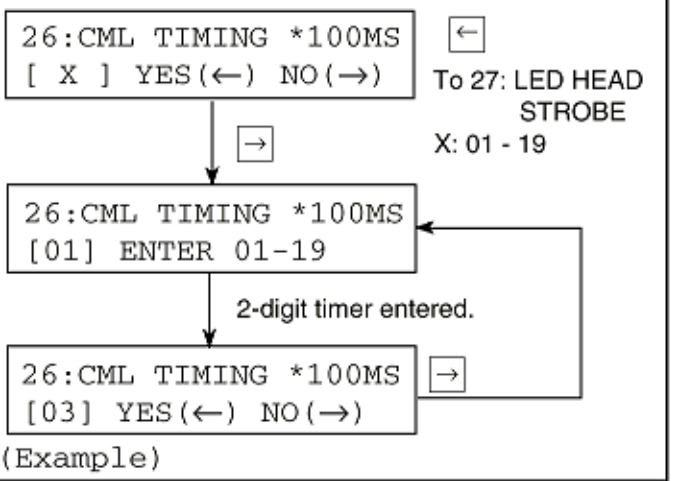
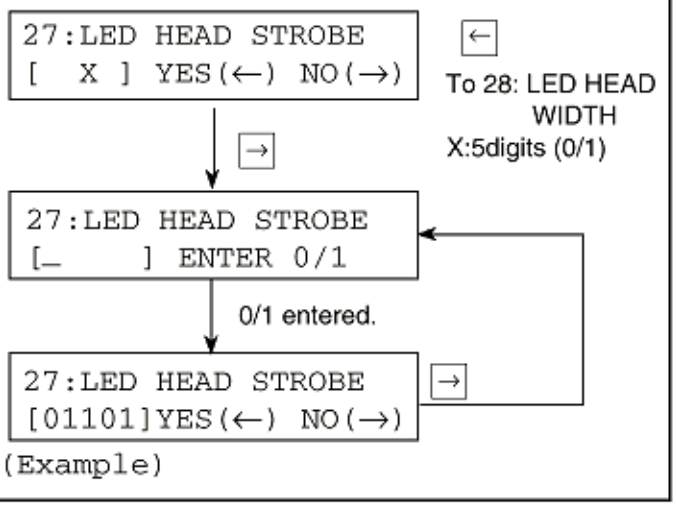
Technical Functions 12 to 16

T.F. No.	Name of Function	The Display Shows
12	Tone for echo (echo protection)	12:TONE FOR ECHO [X] YES(←) NO(→) [→] Setting (Toggle) X: OFF ⇆ ON
13	MH only	13:MH ONLY [X] YES(←) NO(→) [→] Setting (Toggle) X: OFF ⇆ ON
14	High-speed modem rate	14:H/MODEM RATE [X] YES(←) NO(→) [→] Setting X: 4.8k → 9.6k → → 14.4k
15	T1 (TX), timeout value (XTTO value)	15:T1(TX)TIMER VALUE [X] YES(←) NO(→) [←] To 16: T1(RX) TIMER VALUE X: 010 - 255 sec [→] 15:T1(TX)TIMER VALUE [060] ENTER 010-255 3-digit timer entered. 15:T1(TX)TIMER VALUE [059] YES(←) NO(→) [→] (Example)
16	T1 (RX), timeout value	16:T1(RX)TIMER VALUE [X] YES(←) NO(→) [←] To 17: T2 TIMER VALUE X: 010 - 255 sec [→] 16:T1(RX)TIMER VALUE [_] ENTER 010-255 3-digit timer entered. 16:T1(RX)TIMER VALUE [059] YES(←) NO(→) [→] (Example)

Technical Functions 17 to 23

T.F. No.	Name of Function	The Display Shows
17	T2, timeout value	
18	DIS bit 32	
19	Error criterion	
20	Off-hook bypass	
21	NL equalizer	
22	Modem attenuator	
23	T/F tone attenuator (for TEL/FAX switch)	

Technical Functions 24 to 27

T.F. No.	Name of Function	The Display Shows
24	MF attenuator	
25	Ring duration detection time	
26	CML timing	
27	LED Head strobe	

Technical Functions 28 to 31

T.F. No.	Name of Function	The Display Shows
28	LED Head Width	28:LED HEAD WIDTH [X] YES(←) NO(→) → Setting (Toggle) X: TYPE1 ⇆ TYPE2
29	Media type	29:MEDIA TYPE [X] YES(←) NO(→) → Setting X: M → MH → H
30	V34 TX RETRY (5400 only)	30:V34 TX RETRY [X] YES(←) NO(→) → Setting (Toggle) X: ON ⇆ OFF
31	Symbol rate (5400 only)	31:SYMBOL RATE [X] YES(←) NO(→) → Setting X:3429 → 2400 → 2800 → 3200 → 3429

2.9.4 User's Functions

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

The following table shows the initial setting items and their purposes.

Each function program setting (FP) 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

Featured Specifications

Dual Access Combination Table (1/2)

Dual Access Combination Table (2/2)

2)-1 One Touch Key Operations

One Touch Key Program Setting Table 2.9.4

2)-2 Function Program

Feature Specifications

Note:
S-ON: Effective if the service bit has been set on.
FP: Function program setting
TF: Technical function setting

No.	Item	Specifications
01	Auto dial 1) One-touch dial	15/30 one-touch keys are provided. (OKIFAX 5250 = 15 keys / OKIFAX 5400 = 30 keys) 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	64 different codes are provided. (OKIFAX 5250) 99 different codes are provided. (OKIFAX 5400) * Two- digit location code: 01 to 64 (OKIFAX 5250) * Two-digit location code: 01 to 99 (OKIFAX 5400)
	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 numbers 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 using the * key. This feature is not available in all countries.
02	Manual dial	With the optional telephone handset.

03	Receive mode 1) Auto receive mode 2) Manual receive mode 3) Telephone/fax automatic switchover	 Selectable by key operation. Selectable by key operation. 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 the operator does not lift the handset within predetermined time (20 sec. or 35 sec.), the fax automatically starts a document receive operation. To set the timer, refer to Function 10, Section 2.9.4. **Note:** Refer to "Tel/Fax Mode Flowchart" in this section.
04	Automatic redial	Specific redial times and redial intervals. Refer to Section 2.9.9.
05	Last No. redial	● "REDIAL" key is provided. There is no limit on number of repeat attempts.
06	Group dial	● 10 dialing groups (OKIFAX 5250) Max. 79 locations. ● 20 dialing groups (OKIFAX 5400) Max. 129 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.
07	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 64 for OKIFAX 5250 and 01 to 99 for OKIFAX 5400. This name is called a location ID. Any location ID can be searched and displayed on LCD. Then direct dialing 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
08	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.
09	Local copy	Printing resolution: Horizontal: 300 dpi Vertical: 7.7 or 15.4 line/mm or variable
10	Multiple local copy	Up to 99 copies.
11	Manual loading feeder	One single sheet from the feeder above the first recording paper cassette can be copied. Example of sheets: Transparency for an overhead projector

12	Broadcast (Memory transmission)	Maximum 84 (OKIFAX 5250) and Maximum 134 (OKIFAX 5400) remote locations can be specified by the following means: ● One-touch keys (with of without a group list). ● Two-digit auto dial codes. ● 5 keypad dial number One delayed time of calling for this feature can be specified unless any other delayed calling feature has been specified. The combination of 20 delayed broadcast and one immediate calling of broadcast is possible. 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. For example, 5 specified times: 2 specified time of delayed broadcast and 3 specified time of delayed transmission. When multiple locations are specified for one broadcast (1) The unit prints a broadcast entry report, if specified in operating sequence. (2) The unit can print a broadcast confirmation report. (FP + 02 to enable or disable this printout)
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	Transmission preparation (Hopper)	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. An operator can also prepare documents for transmission during transmission from memory.
17	No toner reception	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. 10 under the LCD message "MSG. IN MEMORY/REPLACE TONER CART." in the standby mode. * TF + 06 (To enable or disable this function)
18	Smooth printing	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.

19	Dual Access	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. 1) Operation of memory transmission while the fax is engaged in a communication (memory TX, memory RX or print mode RX). 2) Copy while the fax is engaged in a communication (memory TX or memory RX). **Note:** Condition for operation a) Copy is invalid when the machine is already engaged in an operation which is using or could use the printer. 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. Refer to sub-section 2.9.7 for dual access operation. For the patterns of dual access refer to the following, Dual Access Combination Table (chart 1 of 2). For Dual Access Combination Table (chart 2 of 2).

Dual Access Combination Table (1/2)

Machine Status / Dual Access		Programming	TX from Feeder		Scanning to Memory		TX from Memory			RX (non-ECM/ECM)				
										Paper		Memory		
			During Scanning	After Scanning	During Prefeeding	During Scanning	During Dialing	During Hand-shaking	During Trans-mitting Message	During Hand-shaking	During Receiving Message	During Hand-shaking (–1st ϕ C)	During Hand-shaking (–1st ϕ C)	During Receiving Message
Programming		\	×	×	×	×	×	×	×	×	×	×	×	×
TX from Feeder	Setting	×	\	○	\	\	○	○	○	○	○	○	○	○
	Dial & TX	×	\	\	\	\	\	\	\	\	\	\	\	\
Polling RX	Setting	×	×	×	×	×	×	×	×	×	×	×	×	×
	Dial & RX	×	\	\	×	×	\	\	\	\	\	\	\	\
Scanning to Memory		×	\	○	\	\	○	○	○	○	○	○	○	○
TX from Memory		×	\	\	×	×	\	\	\	\	\	\	\	\
Auto Answer	RX to Paper	×	\	\	○	○	\	\	\	\	\	\	\	\
	RX to Memory	×	\	\	○	○	\	\	\	\	\	\	\	\
	Poll TX	×	\	\	\	\	\	\	\	\	\	\	\	\
Manual Answer	RX to Paper	×	\	\	×	×	\	\	\	\	\	\	\	\
	RX to Memory	×	\	\	×	×	\	\	\	\	\	\	\	\
	Poll TX	×	\	\	×	×	\	\	\	\	\	\	\	\
Copy	Page by Page	×	\	×	\	\	×	×	×	×	×	○	○	○
Manual Message Print	Auto	×	×	×	○	○	○	○	○	\	\	○	○	○
	Manual	×	×	×	×	×	×	×	×	\	\	×	×	×
Manual Report Print	Auto	×	×	×	○	○	○	○	○	\	\	○	○	○
	Manual	×	×	×	×	×	×	×	×	\	\	×	×	×

<Note> ○ : Available × : Not available △ :Available with limitation

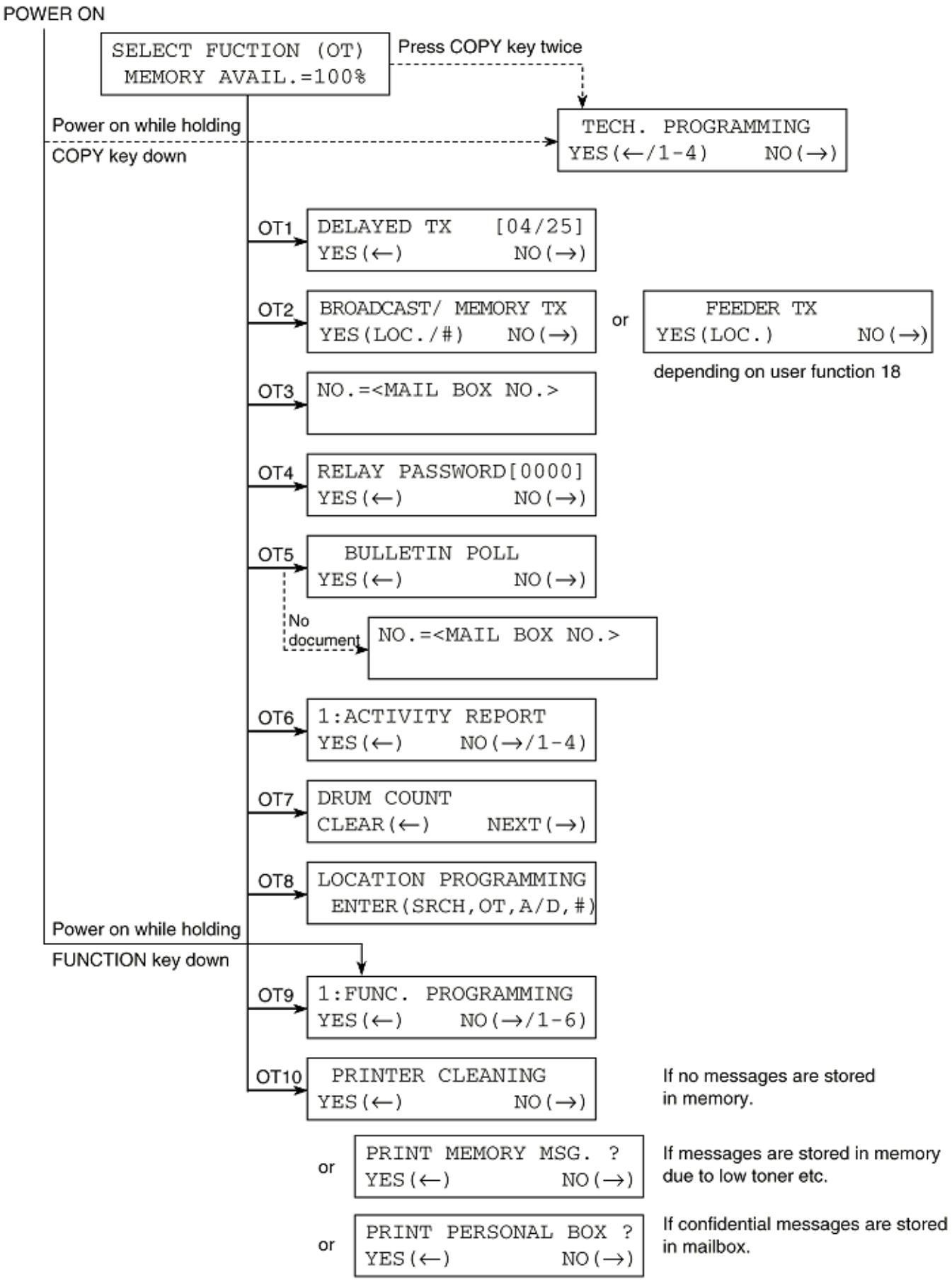
Dual Access Combination Table (2/2)

Dual Access Combination Table (2/2)

Machine Status / Dual Access		Copy			Memory Reception Print				Report Printing			
		Page by Page	Multi-Sorting		Auto Matic		Manual		Auto Matic		Manual	
			During Scanning	During Printing	During Hopping	During Printing	During Hopping	During Printing	During Hopping	During Printing	During Hopping	During Printing
Programming		×	×	×	×	×	×	×	×	×	×	×
TX from Feeder	Setting	\	\	\	○	○	×	×	○	○	×	×
	Dial & TX	\	\	\	○	○	×	×	○	○	×	×
Polling RX	Setting	×	×	×	×	×	×	×	×	×	×	×
	Dial & RX	×	×	×	×	×	×	×	×	×	×	×
Scanning to Memory		\	\	\	○	○	×	×	○	○	×	×
TX from Memory		×	×	×	×	×	×	×	×	×	×	×
Auto Answer	RX to Paper	×	×	×	×	×	×	×	×	×	×	×
	RX to Memory	○	○	○	○	○	×	×	○	○	×	×
	Poll TX	×	×	×	×	×	×	×	×	×	×	×
Manual Answer	RX to Paper	×	×	×	×	×	×	×	×	×	×	×
	RX to Memory	×	×	×	×	×	×	×	×	×	×	×
	Poll TX	×	×	×	×	×	×	×	×	×	×	×
Copy	Page by Page	\	\	\	\	\	\	\	\	\	\	\
Manual Message Print	Auto	\	\	\	\	\	\	\	\	\	\	\
	Manual	\	\	\	\	\	\	\	\	\	\	\
Manual Report Print	Auto	\	\	\	\	\	\	\	\	\	\	\
	Manual	\	\	\	\	\	\	\	\	\	\	\

<Note> ○ : Available × : Not available

2)-1 One-Touch Key Operations


POWER ON
SELECT FUCTION (OT)
MEMORY AVAIL.=100%
Press COPY key twice
TECH. PROGRAMMING
YES(←/1-4) NO(→)
Power on while holding
COPY key down
OT1
DELAYED TX [04/25]
YES(←) NO(→)
OT2
BROADCAST/ MEMORY TX
YES(LOC./#) NO(→)
or
FEEDER TX
YES(LOC.) NO(→)
depending on user function 18
OT3
NO.=<MAIL BOX NO.>
OT4
RELAY PASSWORD[0000]
YES(←) NO(→)
OT5
BULLETIN POLL
YES(←) NO(→)
No document
NO.=<MAIL BOX NO.>
OT6
1:ACTIVITY REPORT
YES(←) NO(→/1-4)
OT7
DRUM COUNT
CLEAR(←) NEXT(→)
OT8
LOCATION PROGRAMMING
ENTER(SRCH,OT,A/D,#)
Power on while holding
FUNCTION key down
OT9
1:FUNC. PROGRAMMING
YES(←) NO(→/1-6)
OT10
PRINTER CLEANING
YES(←) NO(→)
If no messages are stored in memory.
or
PRINT MEMORY MSG. ?
YES(←) NO(→)
If messages are stored in memory due to low toner etc.
or
PRINT PERSONAL BOX ?
YES(←) NO(→)
If confidential messages are stored in mailbox.

One-Touch Key Program Settings (Table 2.9.4)

F+OT Item	Specifications	No.
01	Delayed transmission (Tx)	This function enters a message transmission time(s) and location(s) for execution at a specified time.
02	Broadcast/memory transmission	To make a one-time selection of the memory transmission mode. Maximum 89 (OKIFAX 5250) Maximum 139 (OKIFAX 5400) Remote locations can be specified by the following means: ● One-touch key (with of without a group list) OKIFAX 5250: 15 OKIFAX 5400: 30 ● Two-digit auto dial code OKIFAX 5250: 64 OKIFAX 5400: 99 ● Keypad dial number OKIFAX 5250: 10 OKIFAX 5400: 10 When multiple locations are specified for one broadcast, 1) The fax can print a broadcast confirmation report, if specified in operating sequence.
03	Confidential transmission	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/OKIFAX 1050: 01 to 08 OKIFAX 2450: 01 to 16 OKIFAX 5300: 01 to 08 OKIFAX 5300-Plus/5250: 01 to 08 OKIFAX 5600: 01 to 16 OKIFAX 5600-Plus/5400: 01 to 16
04	Relay broadcast initiate relay transmission	This function automatically originates a message call via relay key station (which must be equipped with OKIFAX 2600, or equivalent) up to 99 locations. To program relay password. To enable or disable the relay report.
05	Polling transmission/reception	Polling TX: The documents placed on the feeder can be collected by a remote station. Polling RX: The fax can collect documents from one remote station. Selective Polling is supported.

06	Report printing	1. Activity report 2. Broadcast message confirmation report (Multi location) 3. Phone directory report 4. Configuration report Technical Function 01, the Service Bit, must be ON. 5. Protocol dump report ● TF + 01 (Sets to Service bit) Log. Report ● TF + 01 (Sets to on Service bit)
07	Counter display (clear)	The operation for displaying and clearing the print counters in five ways are as follows: 1. Drum counter ● User can clear but can not read No. of counter 2. Toner counter ● TF + 01 (Sets to on Service bit) 3. Drum (total) continue ● TF + 01 (Sets to on Service bit) 4. Print counter ● User can read no. of counter in LCD but can not clear. 5. Scan counter ● User can read no. of counter in LCD but can not clear.
08	Location program 1. One-touch key	One-touch keys allows 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). (One ID can be registered for one key). (4) 15 one-touch keys are provided (OKIFAX 5250). 30 one-touch keys are provided (OKIFAX 5400).
	2. Two-digit auto dial program	Auto-dial No. 01 to 64 for OKIFAX 5250 and No. 01 to 99 for OKIFAX 5400 Allows registering telephone number in 32 digits (numeral, -, P and space) and ID for the telephone directory function 15 characters (alphabetic, numeric and symbolic).
	3. Group setting	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. 10 dialing groups for the OKIFAX 5250 20 dialing groups for OKIFAX 5400

09	User's programs 1. Function program	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: 2'ND PAPER SIZE 15: USER LANGUAGE 16: INCOMING RING 17: REMOTE RECEIVE 18: MEM./FEEDER SW 19: 20: ECM FUNCTION 21: REMOTE DIAGNOSIS 22: PC/FAX SWITCH 23: ONE TOUCH PARAM. Refer to Table 2.9.4 for Specifications of the function programs No. 01 through 23.
	2. Dial parameters	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 14. Not Used Refer to Table 2.9.9 for specifications of dial parameter settings.
	3. Clock adjustment	Date and time adjustment.
	4. System data program	(1) TSI/CSI 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 cover letter (alphabetic, numeric and symbolic) in 20 digits.

	5. Personal box	To allow the operator to open a personal box and to assign a 4-digit password code one of 16 mail-box memory segments in the message memory.
	6. Forwarding number programming (for OKIFAX 5400 only)	The message is first received in the memory and when this reception is completed, the unit automatically transfers the message to one designated location.
10	Print operation 1. Substitutive message print	The messages are printed when toner has been newly supplied or an operator performs the substitutive operation. When memory reception data exists in the memory and the MEMORY RX MODE is indicated by AUTO REC key operation, the machine will print out the memory reception data.
	2. Confidential reception message print	Confidential RX message print Printing is enabled for received message in the personal box in memory only when the password entered by the operator matches that already registered to the box. ● 8 mailboxes for OKIFAX 5250 ● 16 mailboxes for OKIFAX 5400
	3. Printer cleaning	This drum cleaning function removes the residual toner on the image drum surface by printing.

2)-2 Function Program

User Function Program Settings (Table 2.9.4)

Part 1 of 4

P.F. No.	Item	Specifications	Default
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.	OFF
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.	ON
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.	ON
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 the report is printed automatically.) OFF: Disables this function.	ON
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	ON
06	Line monitor volume	Controls the volume. OFF/Low/High selectable.	LOW
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. **Note:** Fixed a low level for key touch tone.	MID

08	Closed network	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. OFF/RX only/TX and RX selectable. * Prevention of direct mail or wrong number calls. (Reference) TSI: Transmitting subscriber identification CSI: Called subscriber identification	OFF
09	TX mode default	Selects automatically the mode set up when a document is loaded on the feeder. The following combinations are selectable. STD/NORMAL→STD/DARK→STD/LIGHT→ FINE/NORMAL→FINE/DARK→FINE/LIGHT→ EX.FINE/NORMAL→EX.FINE/DARK→ EX.FINE/LIGHT→PHOTO/NORMAL→ PHOTO/DARK→PHOTO/LIGHT→ STD/NORMAL→ • • •	STD / NORMAL
10	Telephone/fax automatic switchover time	Specifies the time for which the fax alerts an operator on reception of a call in the telephone/fax automatic switchover mode. 20 sec./35 sec. selectable Refer to the "Tel/Fax Mode Flowchart" in this chapter.	35 sec
11	Ring response time	User can register ring response time if National code is: INT'L, GBR, NOR, SWE, USA, HOL, ESP. ITA, GRE or GER Selects the ring response time. 1 ring/5/10/15/20 sec. selectable.	1 ring
12	Distinct ring	Specifies the detected distinct ring. (not available in all countries). OFF/ON/SET selectable.	OFF
13	1'st cassette paper size	Selects A4, LETTER or LEGAL 13, LEGAL 14/ OTHER (when installing Bi-Central board) by this function. The operator must select the preferable paper size as the machine cannot detect the paper size automatically. **Note:** OTHER message appears when operating with MFP terminal.	LETTER
14	2'nd cassette paper size (option)	Selects A4, LETTER or LEGAL 13, LEGAL 14/ OTHER by this function. The operator must select the preferable paper size as the machine cannot detect the paper size automatically. **Note:** OTHER message appears when operating with MFP terminal.	LETTER

15	User language	A choice of 2 languages for LCD and print message are available. Languages: English and French	ENG
16	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.	ON
17	Remote receive	This function is used to transfer the call received by external telephone (connected to fax) by entering preset two-digits. The following combinations are selectable. 00/11/22/33/44/55/66/77/88/99/**/##/OFF selectable.	OFF
18	Memory and feeder switch	Switches the transmission mode between the memory and feeder. MEM. TX/FEEDER TX selectable. **Note:** Memory or feeder setting can register as the default by operating the "F + OT 2".	FEEDER TX
20	ECM function	Enables or disables ECM (error correction mode) communication. ON: Enables OFF: Disables	ON
21	Remote diagnosis	Enables or disables the remote diagnosis function when the machine can allow remote diagnosis from remote center. ON: Enables OFF: Disables	OFF
22	PC/FAX switch (OF5400 only)	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 form PC to fax reception automatically. ON: Automatically change to fax reception OFF: No reception **Note:** When the parallel board is installed on the fax, PC/FAX switching mode appears in the LCD display.	ON
23	One-touch key parameters	To assign the following features to each one-touch key. 1) Echo protection (ON/OFF)	OFF

2.9.5 User's Functions Example

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

1) Function Program

1) Function Program

Operations:	The display shows:
• 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)	1:FUNC. PROGRAMMING YES(←) NO(→/1-6)
• Press [←] key.	[←] or [1] FUNCTION NO. [ ] ENTER 01-23
• 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.	To an individual setting item. (See Table 2.9.5)

User's Functions Table

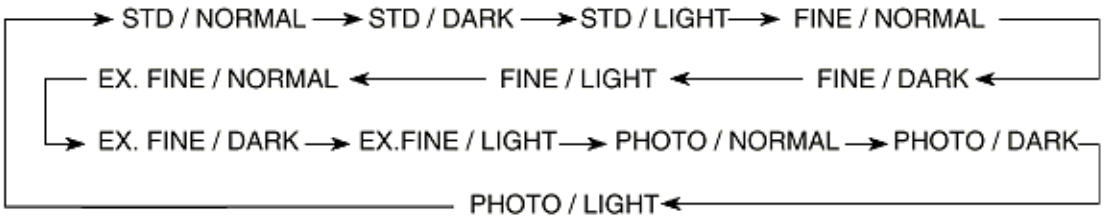
Table 2.9.5 (1/2) User's Functions

Tap No.	Name of Function	The Display Shows
0 1	Message confirmation report (Single location)	01:MCF(SINGLE-LOC.) [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
0 2	Message confirmation report (Multiple locations)	02:MCF (MULTI-LOC.) [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
0 3	Error report	03:ERR. REPORT(MCF.) [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
0 4	Image in MCF.	04:IMAGE IN MCF. [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
0 5	Sender ID	05:SENDER ID [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
0 6	Line monitor volume	06:MONITOR VOLUME [X] YES(←) NO(→) → Setting X: OFF → LOW → HIGH
0 7	Buzzer volume	07:BUZZER VOLUME [X] YES(←) NO(→) → Setting (Toggle) X: MID →HIGH → LOW
0 8	Closed network	08:CLOSED NETWORK [X] YES(←) NO(→) → Setting X: T/R → RX → OFF
0 9	TX mode default	09:TX MODE DEFAULT YES(←) NO(→) → Setting RESOLUTION & ORIGINAL NOTE 1:
1 0	Telephone/fax automatic switchover timer	10:T/F TIMER PRG. [X] YES(←) NO(→) → Setting (Toggle) X: 20SEC ⇆ 35SEC
1 1	Ring response time	11:RING RESPONSE [X] YES(←) NO(→) → Setting X: 1RING → 05SEC → 10SEC → 15SEC → 20SEC NOTE 2:
1 2	Distinct ring	→ NOTE 2:

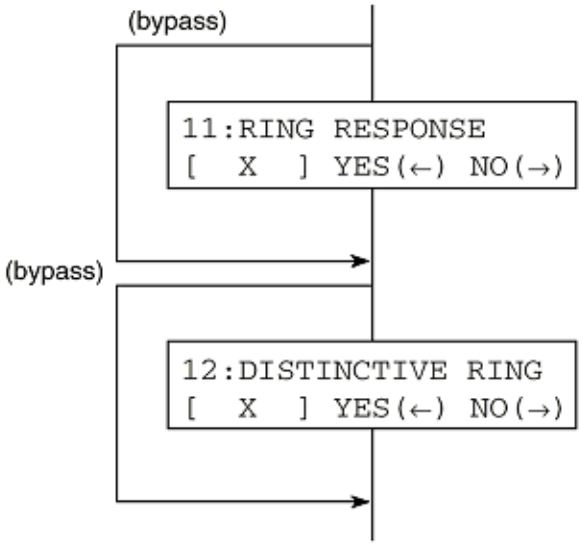
Table 2.9.5 (2/2) User's Functions

Tap No.	Name of Function	The Display Shows
1 3	1st cassette paper size	13:1'ST PAPER SIZE [X] YES(←) NO(→) → Setting X: A4 → LET → LGL 13 → LGL 14 → OTHER → A4
1 4	2ndcassette paper size (option)	14:2'ND PAPER SIZE [X] YES(←) NO(→) → Setting X: A4 → LET → LGL 13 → LGL 14 → OTHER → A4 NOTE 3:
1 5	User language	15:USER LANGUAGE [X] YES(←) NO(→) → Setting X: ENG. ⇆ (Other)
1 6	Incoming ring	16:INCOMING RING [X] YES(←) NO(→) → Setting (Toggle) X: OFF → ON → DRC → OFF
1 7	Remote receive	17:REMOTE RECEIVE [X] YES(←) NO(→) OFF → 00 → 11 → 22 → 33 → 44 → 55 → 77 → 88 → 99 → ## → ** → OFF
1 8	Memory and feeder selection	18:MEM/FEEDER SW. [X] YES(←) NO(→) → Setting X: MEM. ⇆ FEED.
1 9	Power save mode (not available for US/CANADA version)	19:POWER SAVE MODE [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
2 0	ECM function	20:ECM FUNCTION [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
2 1	Remote diagnosis	21:REMOTE DIAGNOSIS [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON
2 2	PC/FAX switch (option)	22:PC/FAX SWITCH [X] YES(←) NO(→) → Setting (Toggle) X: OFF ⇆ ON NOTE 4:
2 3	One-touch key parameters	23:ONE TOUCH PARAM. YES(OT) NO(→) → To: FUNCTION NO. One-touch key pressed

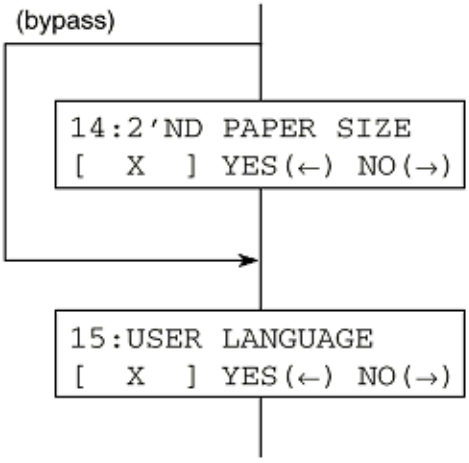
Note1: RESOLUTION & ORIGINAL of Tx mode defult setting can be selected by using [→] key.



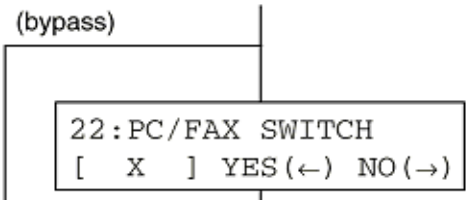
Note2: When the service bit is set to "off" and the corresponding bit of XPARA of national code is set to "off", Ring response and/or Distinctive ring is bypassesd as follows:



Note3: When 2'nd tray is not mounted on OKIFAX 5400, 2'nd paper size is bypassed as follows:

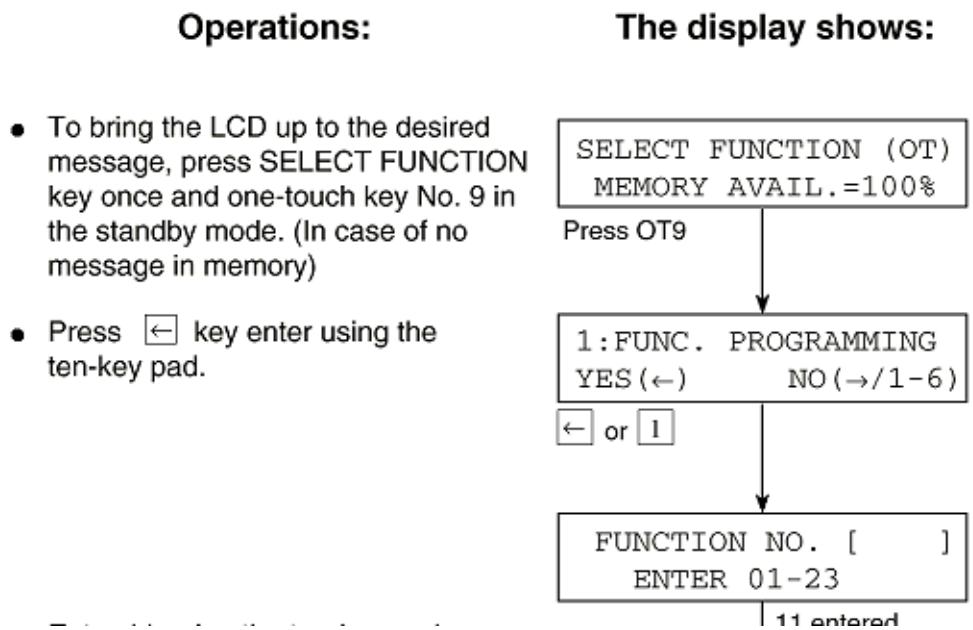


Note4: When CTR board is not mounted on OKIFAX 5400, PC/FAX switch is bypassed as follows:



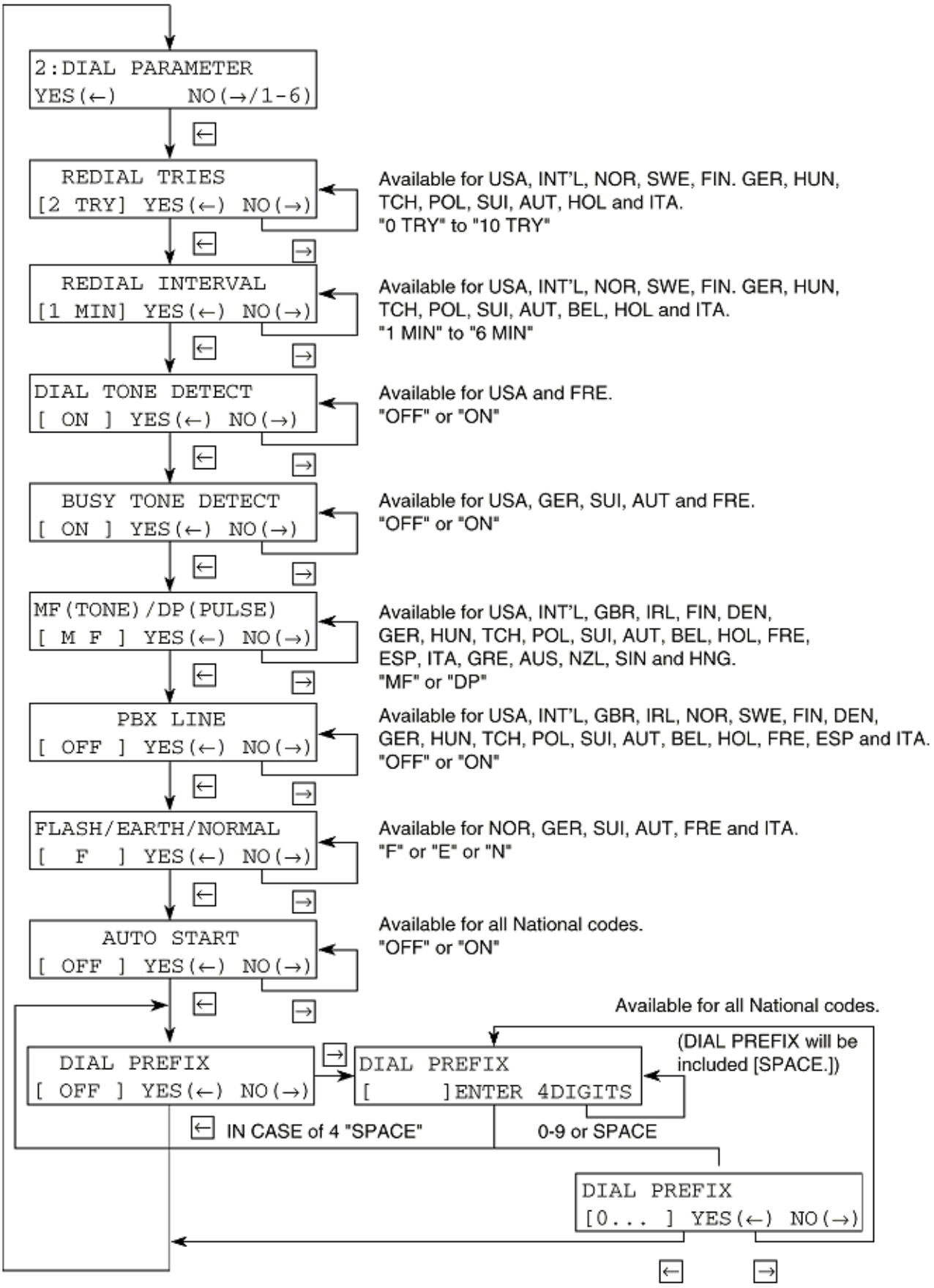
2) Ring response time

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



3) Dial parameters (Service Bit "OFF")

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


2:DIAL PARAMETER
YES(←) NO(→/1-6)
REDIAL TRIES
[2 TRY] YES(←) NO(→)
Available for USA, INT'L, NOR, SWE, FIN. GER, HUN, TCH, POL, SUI, AUT, HOL and ITA.
"0 TRY" to "10 TRY"
REDIAL INTERVAL
[1 MIN] YES(←) NO(→)
Available for USA, INT'L, NOR, SWE, FIN. GER, HUN, TCH, POL, SUI, AUT, BEL, HOL and ITA.
"1 MIN" to "6 MIN"
DIAL TONE DETECT
[ON] YES(←) NO(→)
Available for USA and FRE.
"OFF" or "ON"
BUSY TONE DETECT
[ON] YES(←) NO(→)
Available for USA, GER, SUI, AUT and FRE.
"OFF" or "ON"
MF(TONE)/DP(PULSE)
[M F] YES(←) NO(→)
Available for USA, INT'L, GBR, IRL, FIN, DEN, GER, HUN, TCH, POL, SUI, AUT, BEL, HOL, FRE, ESP, ITA, GRE, AUS, NZL, SIN and HNG.
"MF" or "DP"
PBX LINE
[OFF] YES(←) NO(→)
Available for USA, INT'L, GBR, IRL, NOR, SWE, FIN, DEN, GER, HUN, TCH, POL, SUI, AUT, BEL, HOL, FRE, ESP and ITA.
"OFF" or "ON"
FLASH/EARTH/NORMAL
[F] YES(←) NO(→)
Available for NOR, GER, SUI, AUT, FRE and ITA.
"F" or "E" or "N"
AUTO START
[OFF] YES(←) NO(→)
Available for all National codes.
"OFF" or "ON"
Available for all National codes.
DIAL PREFIX
[OFF] YES(←) NO(→)
DIAL PREFIX
[ ]ENTER 4DIGITS
(DIAL PREFIX will be included [SPACE.])
IN CASE of 4 "SPACE"
0-9 or SPACE
DIAL PREFIX
[0...] YES(←) NO(→)

The following table can be set depending on the National codes even if the service bit is "off".

Table 2.9.10 Dial parameters setting if the service bit "OFF"

NATIONAL CODE	USA	INT'L	GBR	IRL	NOR	SWE	FIN	DEN	GER	HUN	TCH	POL
Redial tries	○	○			○	○	○		○	○	○	○
Redial interval	○	○			○	○	○		○	○	○	○
Dial tone detect	○											
Busy tone detect	○								○			
MF/DP	○	○	○	○			○	○	○	○	○	○
Pulse dial rate												
Pulse make ratio												
Pulse dial type												
MF duration												
PBX line	○	○	○	○	○	○	○	○	○	○	○	○
Flash/Earth/Normal					○				○			
Auto start	○	○	○	○	○	○	○	○	○	○	○	○
Dial	○	○	○	○	○	○	○	○	○	○	○	○
IT2 detect												

NATIONAL CODE	SUI	AUT	BEL	HOL	FRE	ESP	ITA	GRE	AUS	NZL	SIN	HNG
Redial tries	○	○		○			○					
Redial interval	○	○	○	○			○					
Dial tone detect					○							
Busy tone detect	○	○			○							
MF/DP	○	○	○	○	○	○	○	○	○	○	○	○
Pulse dial rate												
Pulse make ratio												
Pulse dial type												
MF duration												
PBX line	○	○	○	○	○	○	○					
Flash/Earth/Normal	○	○			○		○					
Auto start	○	○	○	○	○	○	○	○	○	○	○	○
Dial	○	○	○	○	○	○	○	○	○	○	○	○
IT2 detect												

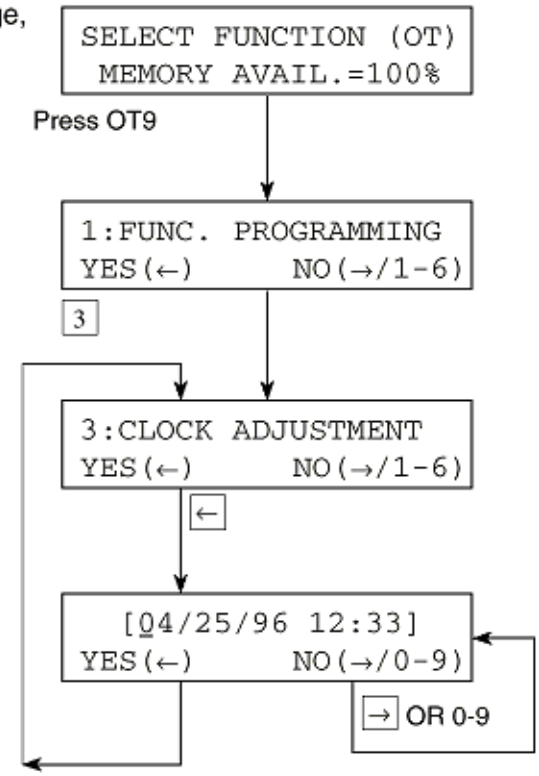
Note: The blank in the table is not indicated on the LCD.

2.9.6 Clock Adjustment

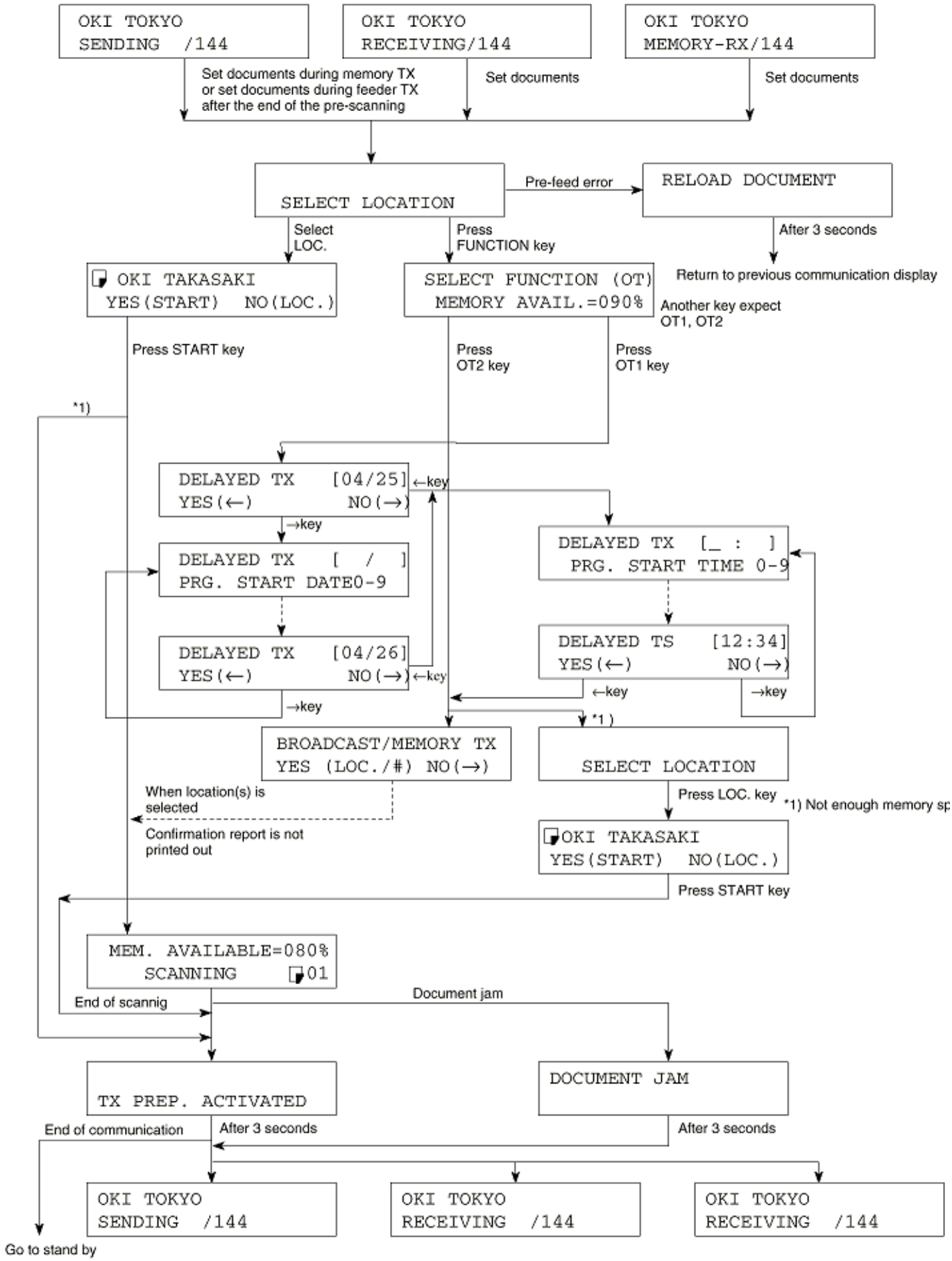
Operations:

- 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:



2.9.7 Dual Access Operation


OKI TOKYO
SENDING /144
OKI TOKYO
RECEIVING/144
OKI TOKYO
MEMORY-RX/144
Set documents during memory TX
or set documents during feeder TX
after the end of the pre-scanning
Set documents
Set documents
SELECT LOCATION
Pre-feed error
RELOAD DOCUMENT
After 3 seconds
Return to previous communication display
Select
LOC.
Press
FUNCTION key
OKI TAKASAKI
YES(START) NO(LOC.)
SELECT FUNCTION (OT)
MEMORY AVAIL.=090%
Another key expect
OT1, OT2
Press START key
Press
OT2 key
Press
OT1 key
*1)
DELAYED TX [04/25]
YES(←) NO(→)
←key
→key
DELAYED TX [/]
PRG. START DATE0-9
DELAYED TX [04/26]
YES(←) NO(→)
←key
→key
DELAYED TX [_ :]
PRG. START TIME 0-9
DELAYED TS [12:34]
YES(←) NO(→)
←key
→key
*1)
BROADCAST/MEMORY TX
YES (LOC./#) NO(→)
SELECT LOCATION
When location(s) is
selected
Confirmation report is not
printed out
Press LOC. key
*1) Not enough memory sp
OKI TAKASAKI
YES(START) NO(LOC.)
Press START key
MEM. AVAILABLE=080%
SCANNING 01
End of scannig
Document jam
TX PREP. ACTIVATED
DOCUMENT JAM
End of communication
After 3 seconds
After 3 seconds
OKI TOKYO
SENDING /144
OKI TOKYO
RECEIVING /144
OKI TOKYO
RECEIVING /144
Go to stand by

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)

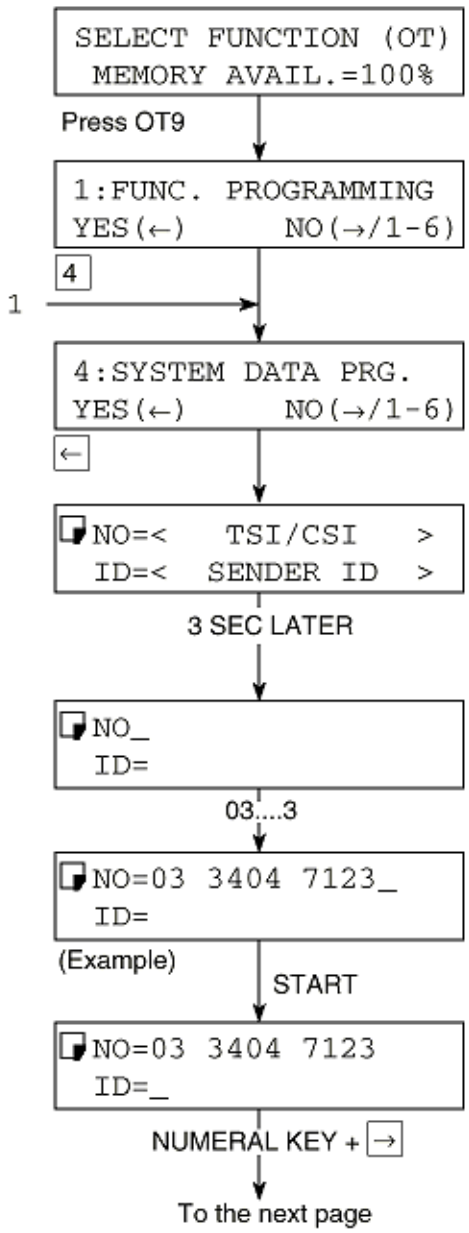
Operations:

- 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.

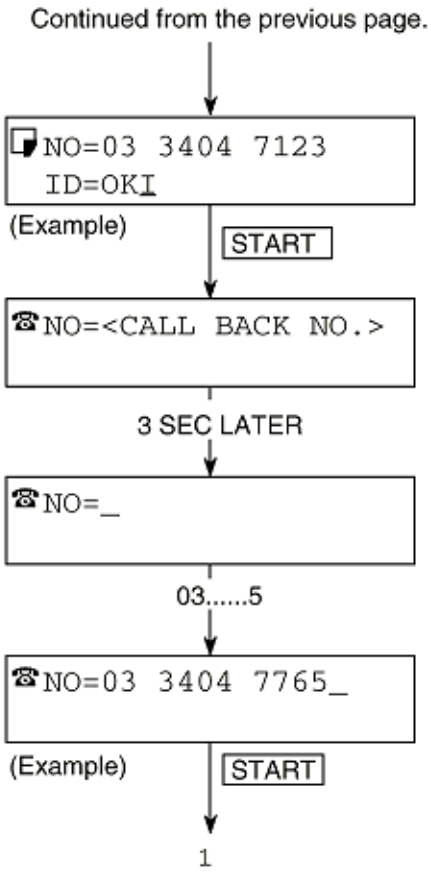
The display shows:



Note: Use the UNIQUE key to input special symbols.

Operations:

The display shows:



- Press START key.

- Press START key

2.9.9 Dial Parameters Settings

(1) Procedure

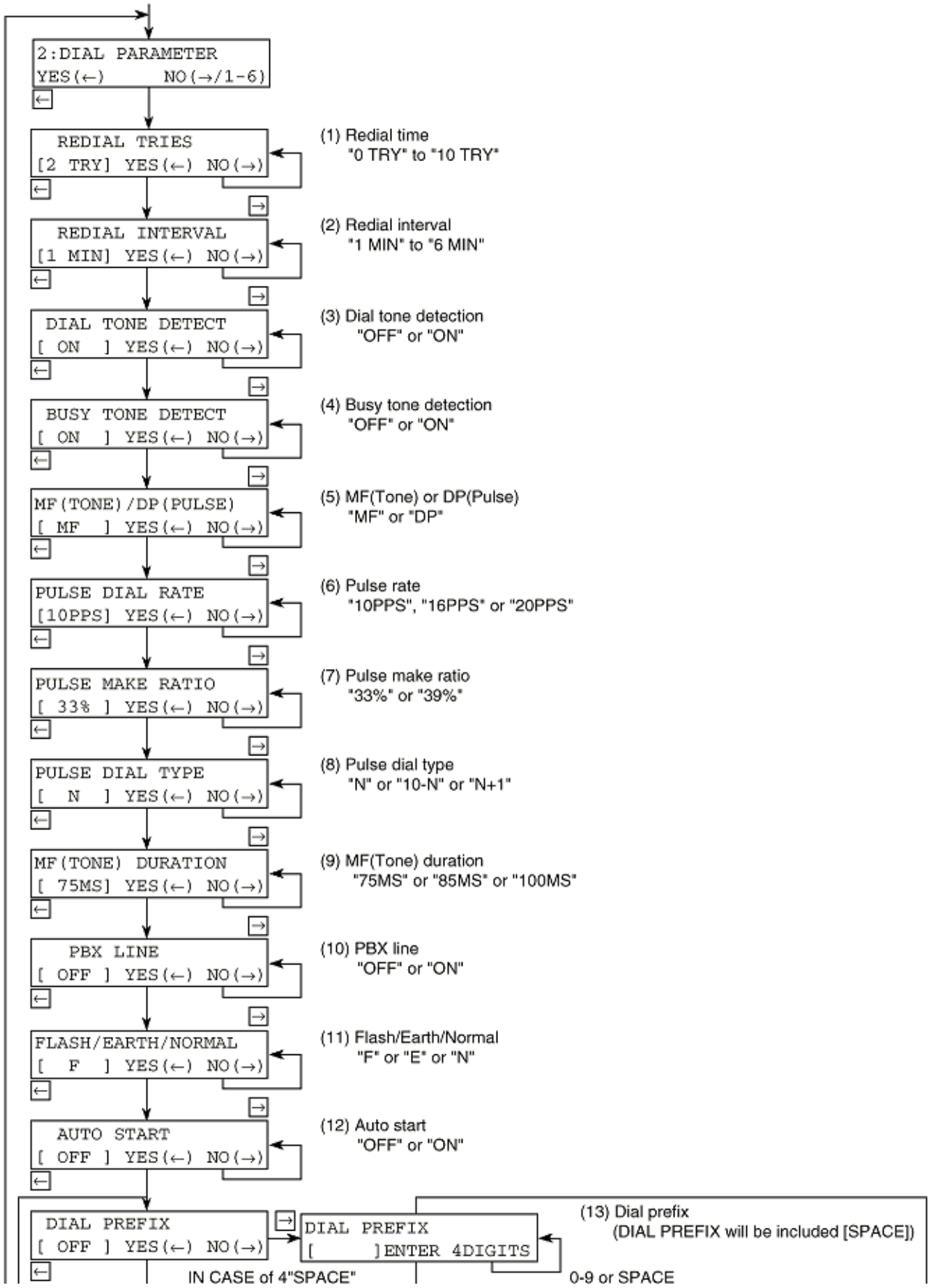
The following shows the case in which the service bit is on.

Operations:	The display shows:
• 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)	SELECT FUNCTION (OT) MEMORY AVAIL.=100%
	Press OT9 ↓
• Enter 2 using the ten-key pad.	1:FUNC. PROGRAMMING YES(←) NO(→/1-6) 2 ↓
• Press ← key	2:DIAL PARAMETER YES(←) NO(→/1-6) ← ↓
	To DIAL PARAMETERS

*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.



(2) Purpose

Table 2.9.11 Default Settings of Dial Parameters

No.	User Setting Items	Setting Selection	NATIONAL 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	17 FRE	18 ESP
1	REDIAL TRIES	0 - 10 TRIES	3	3	2	2	5	10	3	5	10	10	2	2	10	10	3	2	2	2
2	REDIAL INTERVAL	1 - 6 min	3	3	3	3	2	3	3	3	1	1	3	3	1	1	3	3	6	3
3	DIAL TONE DETECT	ON/OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF
4	BUSY TONE DETECT	ON/OFF	ON	ON	ON	OFF	ON	ON	ON	ON	ON	OFF	ON	ON	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	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	10	10
7	PULSE MAKE RATIO	33%/39%	39%	33%	33%	33%	33%	39%	39%	39%	39%	33%	39%	33%	39%	39%	33%	39%	33%	33%
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	N	N
9	MF (TONE) DURATION	75 ms/83 ms/100 ms	100	85	85	85	75	85	85	100	85	100	100	100	85	85	85	100	75	85
10	PBX LINE	ON/OFF	OFF	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	FLASH	N
12	AUTO START	ON/OFF	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
13	DIAL PREFIX	OFF/(max. 4 digits)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0...	OFF	OFF	OFF	0...	0...	OFF	OFF	OFF	OFF
14	IT2 DETECT	ON/OFF	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	ON	–

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 comanies and customers without notice.

(same diagram / table --- side view)

Table 2.9.11 Default Settings of Dial Parameters

No.	User Setting Items	Setting Selection	NATIONAL 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	17 FRE	18 ESP	19 ITA	20 GRE	21 AUS	22 NZL	23 SIN	24 HNG
1	REDIAL TRIES	0 - 10 TRIES	3	3	2	2	5	10	3	5	10	10	2	2	10	10	3	2	2	2	2	2	2	2	5	2
2	REDIAL INTERVAL	1 - 6 min	3	3	3	3	2	3	3	3	1	1	3	3	1	1	3	3	6	3	3	3	3	3	3	3
3	DIAL TONE DETECT	ON/OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	OFF	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	ON	ON	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	MF	MF	MF	MF	MF	MF	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	10	10	10	10	10	10	10	10
7	PULSE MAKE RATIO	33%/39%	39%	33%	33%	33%	33%	39%	39%	39%	39%	33%	39%	33%	39%	39%	33%	39%	33%	33%	39%	39%	33%	33%	33%	33%
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	N	N	N	N	N	10-N	N	N
9	MF (TONE) DURATION	75 ms/83 ms/100 ms	100	85	85	85	75	85	85	100	85	100	100	100	85	85	85	100	75	85	85	100	85	85	85	85
10	PBX LINE	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	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	FLASH	N	N	N	N	N	N	N
12	AUTO START	ON/OFF	ON	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	ON	ON	OFF	ON	ON	ON	ON
13	DIAL PREFIX	OFF/(max. 4 digits)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0...	OFF	OFF	OFF	0...	0...	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
14	IT2 DETECT	ON/OFF	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	ON	–	–	–	–	–	–	–

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 comanies and customers without notice.

Dial Parameters Settings Table

No.	Item	Specifications	Default
01	Redial tries	Switches on the re-dial times to meet the regulations of the installed country. 0 to 10 tries (in one-try steps) 1 to 5 tries for FRE.	3
02	Redial interval	Switches on the re-dial intervals to meet the regulations of installed country. 1 to 6 minutes (in one-minute steps) 1 to 12 minutes for FRE.	3
03	Dial tone detect	Selects the dial tone detection. ON/OFF selectable. ON: Enable OFF: Disable	OFF
04	Busy tone detect	Selects the busy tone detection. ON/OFF selectable. ON: Enable OFF: Disable	ON
05	MF (TONE) or DP (Pulse)	Selects dialing by multi-frequency or dial pulse.	MF (TONE)
06	Pulse dial rate	Selects the dialing pulse rates for the line. 10 pps/16 pps/20 pps selectable.	10 pps
07	Pulse make ratio	Selects pulse dial rate. 33%/39%	39%
08	Pulse dial type	Selects pulse dial type. Normal (N)/10-N/N+1	Normal (N)
09	MF (Tone) duration	Selects MF (Tone) duration. 75/85/100 ms selectable.	100 ms
10	PBX line	Selects PBX line. ON/OFF selectable. ON: PBX line OFF: PSTN	OFF
11	Flash/Earth/Normal	Selects the PBX type to meet the exchange requirements. NORMAL/EARTH/FLASH selectable. (PBX line origination types)	NORMAL
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	ON
13	Access digit	Prefix dialing digits with which PBX connects the fax to the public line. OFF/max. 4digit(s) selectable. Digit: Enable OFF: Disable	OFF
14	IT2 detect (FRE only)	Selects 2nd dial tone detection ON/OFF selectable. (FRE only) ON: Enable OFF: Disable	OFF

2.9.10 Off-line Tests

(1) Purpose

Activate self-diagnosis which includes:

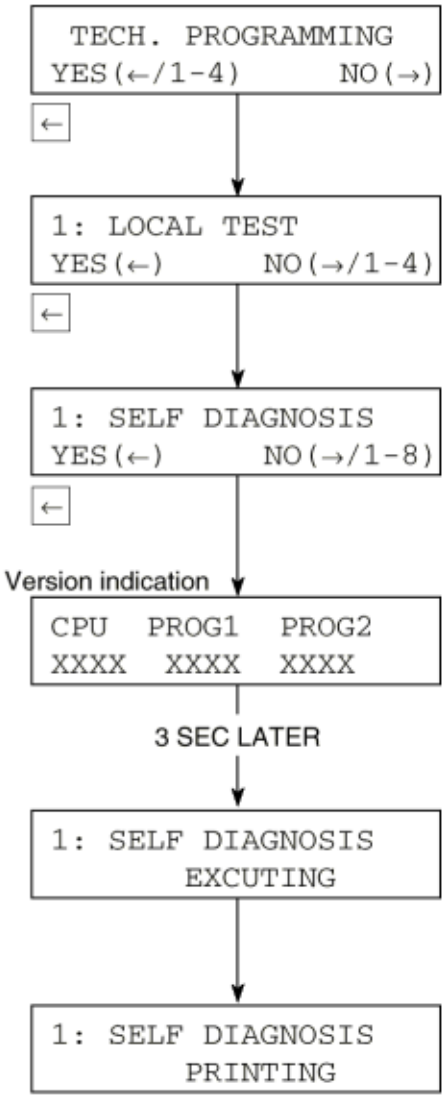
- Print test
- CPU-ROM version printing
- CPU-RAM check
- PROG version printing
- LANGUAGE version printing
- DEFAULT version printing
- RAM check
- RAM check (memory board: optional)
- PC-I/F version printing (optional)

(2) Procedure

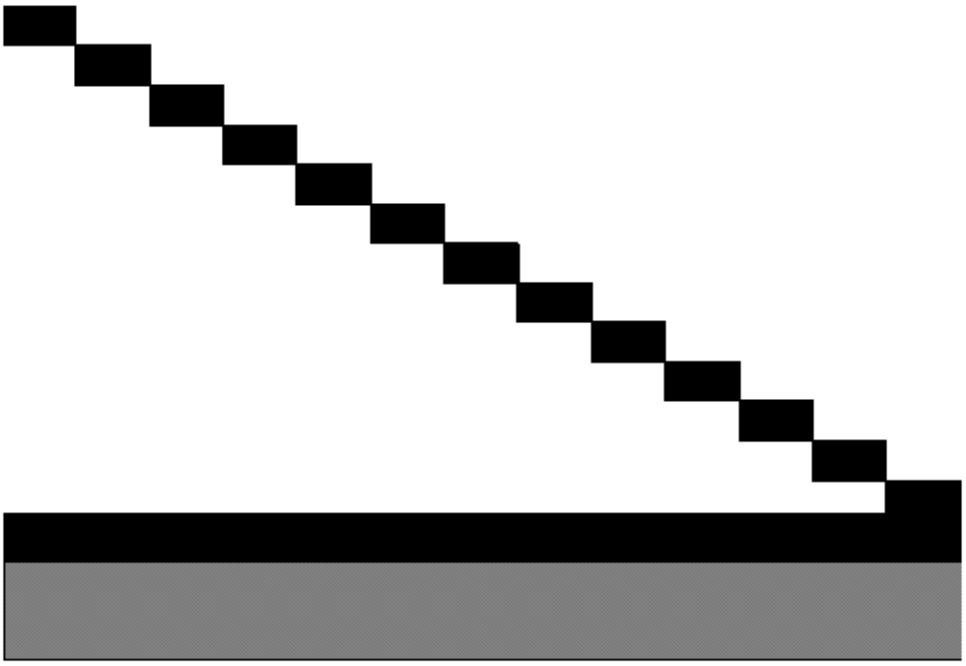
Operations:

- 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   Z208
             HASH      OK   6FCF
   CPU-RAM             OK
   PROG1     VERSION   HB0
             HASH      OK   C5CA
   PROG2     VERSION   JB0
             HASH      OK   8ABF

   LANGUAGE  VERSION   EFHH
             HASH      OK   1292
   DEFAULT   VERSION   GF00
             HASH      OK   9B54
*1 RAM1                1M   OK
*2 RAM2                OK
*3 OPT-RAM1            1M   OK
*3 OPT-I/F             PARALLEL
   DEFAULT TYPE        01   12/01/1998   18:30
```

*1 marked item is shown for condition of all RAM except EXCEED RAM.

*2 marked item is shown to SRAM for EXCEED.

*3 marked items are option.

2.9.11 On-line Tests

1. Transmission

(1) Load documents

(2) Make sure that

- The loaded documents are fed in automatically.
- The STD and NORMAL lamps light.
- The display shows SELECT LOCATION.

(3) Dial the telephone number of the remote machine by the ten-key pad.

(4) Make sure that the telephone number of the remote machine is shown on the display.

(5) Press the START button.

(6) Typical message transmission flow is described in Figure 2.9.5 below.

2. Reception

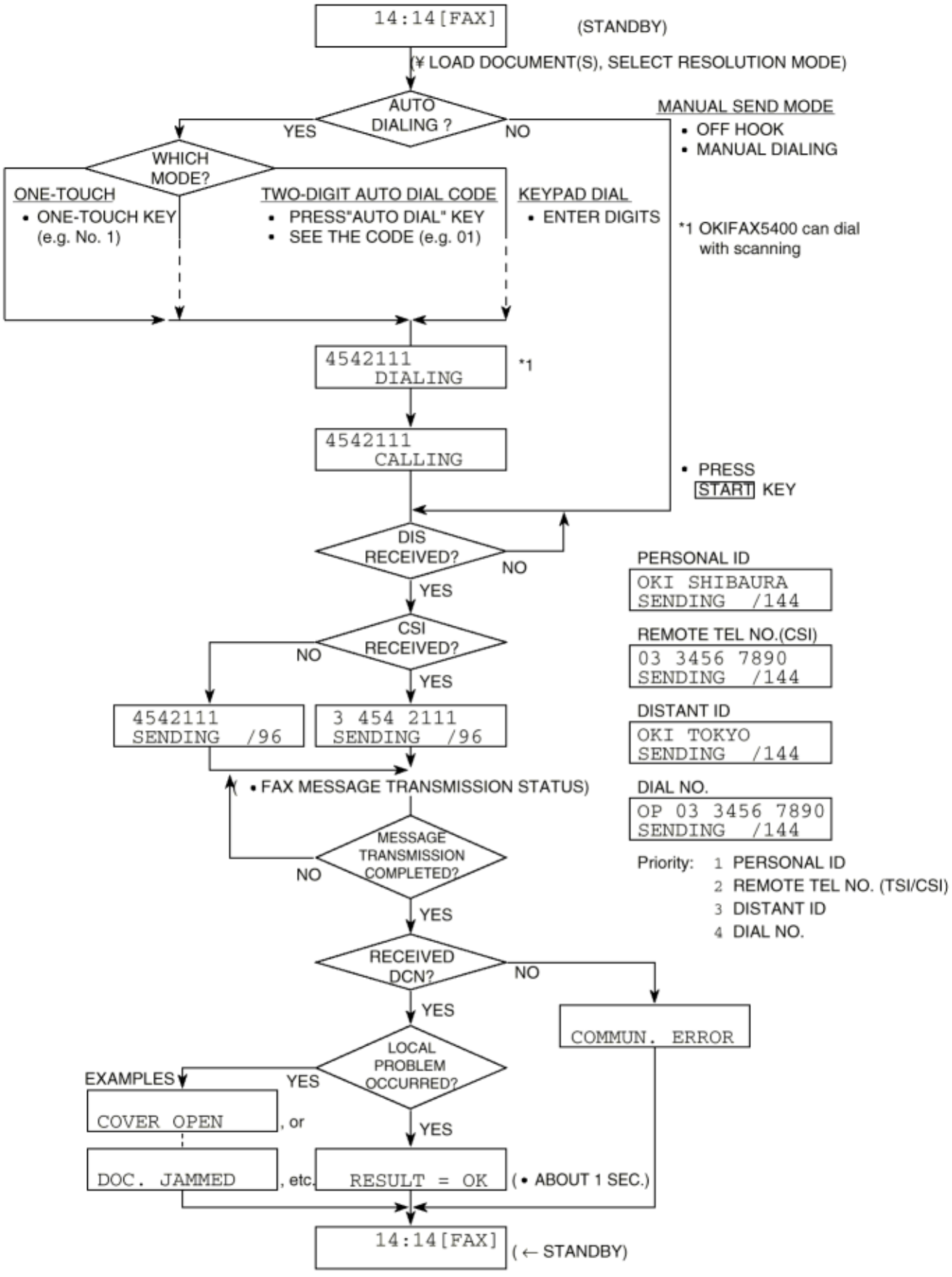
(1) Use another machine for dialing.

(2) Make sure that

- The display shows AUTO REC. START.
- The message is automatically received.

(3) Typical message reception flow is described in Figure 2.9.6 below.

Typical Transmission Flow


14:14[FAX]
(STANDBY)
(¥ LOAD DOCUMENT(S), SELECT RESOLUTION MODE)
AUTO DIALING ?
YES
NO
MANUAL SEND MODE
• OFF HOOK
• MANUAL DIALING
WHICH MODE?
ONE-TOUCH
• ONE-TOUCH KEY (e.g. No. 1)
TWO-DIGIT AUTO DIAL CODE
• PRESS"AUTO DIAL" KEY
• SEE THE CODE (e.g. 01)
KEYPAD DIAL
• ENTER DIGITS
*1 OKIFAX5400 can dial with scanning
4542111 DIALING
*1
4542111 CALLING
• PRESS START KEY
DIS RECEIVED?
NO
YES
PERSONAL ID
OKI SHIBAURA SENDING /144
CSI RECEIVED?
NO
YES
REMOTE TEL NO.(CSI)
03 3456 7890 SENDING /144
4542111 SENDING /96
3 454 2111 SENDING /96
DISTANT ID
OKI TOKYO SENDING /144
• FAX MESSAGE TRANSMISSION STATUS)
DIAL NO.
OP 03 3456 7890 SENDING /144
MESSAGE TRANSMISSION COMPLETED?
NO
YES
Priority: 1 PERSONAL ID
2 REMOTE TEL NO. (TSI/CSI)
3 DISTANT ID
4 DIAL NO.
RECEIVED DCN?
NO
YES
COMMUN. ERROR
LOCAL PROBLEM OCCURRED?
EXAMPLES
YES
COVER OPEN
, or
DOC. JAMMED
, etc.
YES
RESULT = OK
(• ABOUT 1 SEC.)
14:14[FAX]
(← STANDBY)

FX050-C2-021

Typical Reception Flow

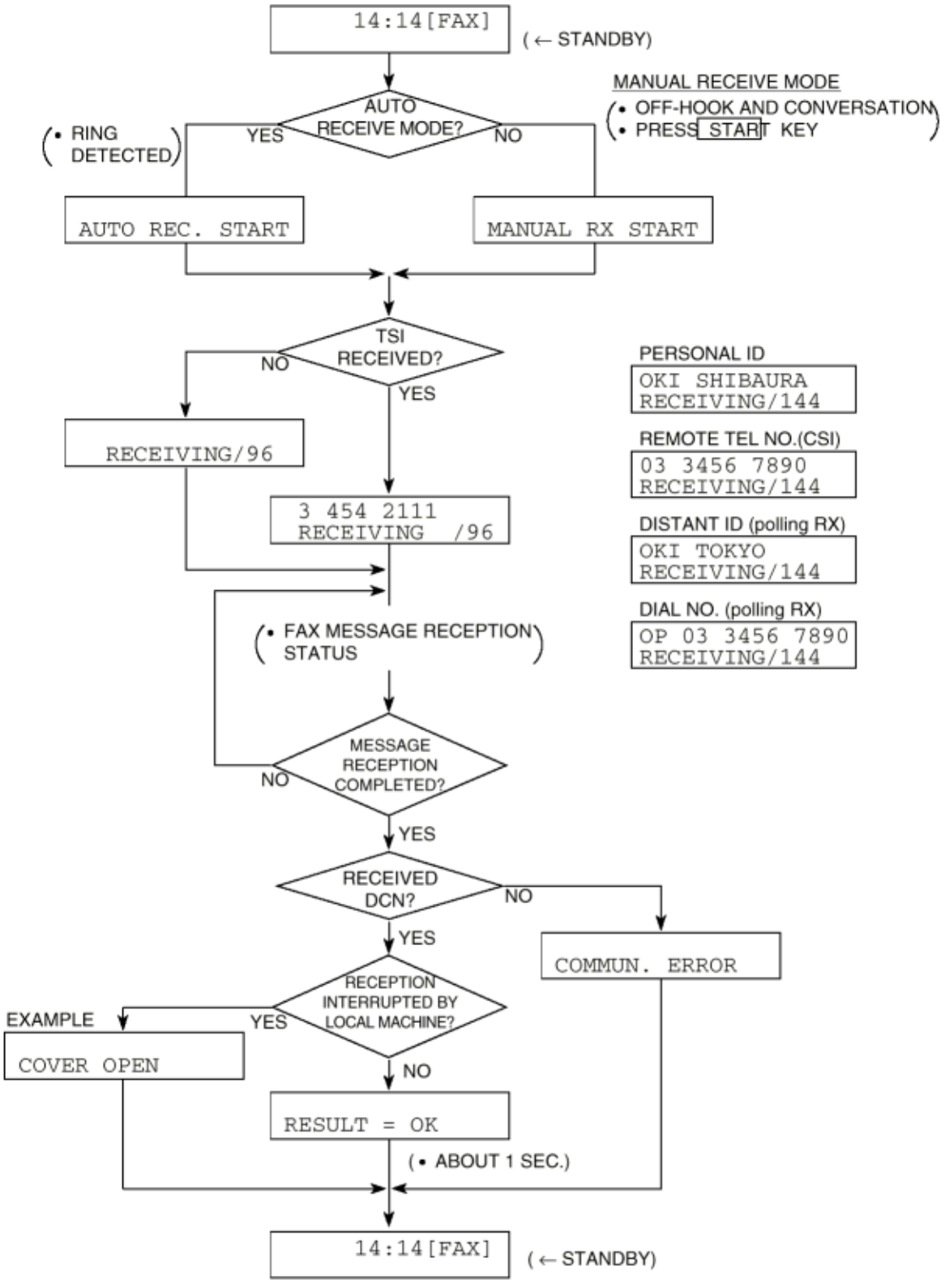


Fig. 2.9.6 Typical Reception Flow

2.10 Installation of Optional Units

(1) Items

- Memory board
- PC interface board
- Telephone handset
- Second paper cassette unit

(2) Procedure

- Turn the facsimile power switch OFF and remove the AC power cord.

Note: Unplug the AC power cord from the wall outlet first and then from the facsimile.

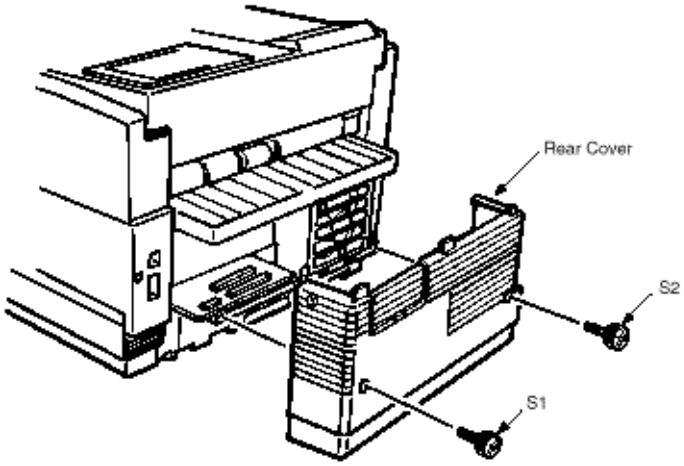
- Do not remove unnecessary parts.
- Since screws and small parts are likely to be lost, they should temporarily be attached to their original positions.

1. Installation of the Memory Board

- In OKIFAX 5250/5400, MEM, 1, 1.5, 2 o4 MB memory board can be mounted on the connector CN13 of E17 board.

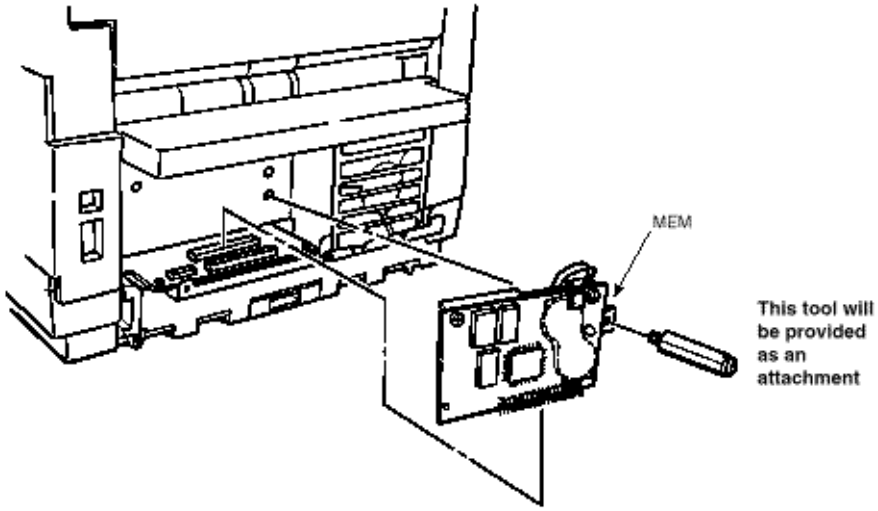
Remove Rear Cover.

Remove the rear cover by removing the two screws S1 and S2 .



Install Memory Board:

First, install the memory board on to the connector CN13 of the main control board, and then tighten the screw to the separation plate.



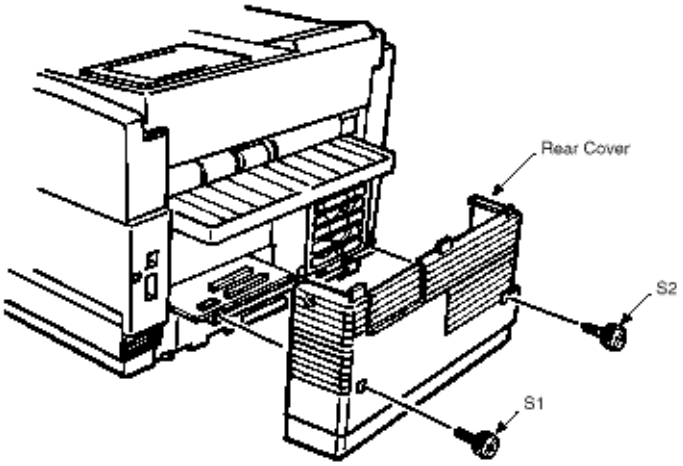
Note:
Fit the fixing hooks at anchor positions on the cassette guide, after that, lift the rear cover slightly and push it inward.

Tighten the two screws S1 and S2.

2. Installation of CTR (PC interface) board (OF5400 only)

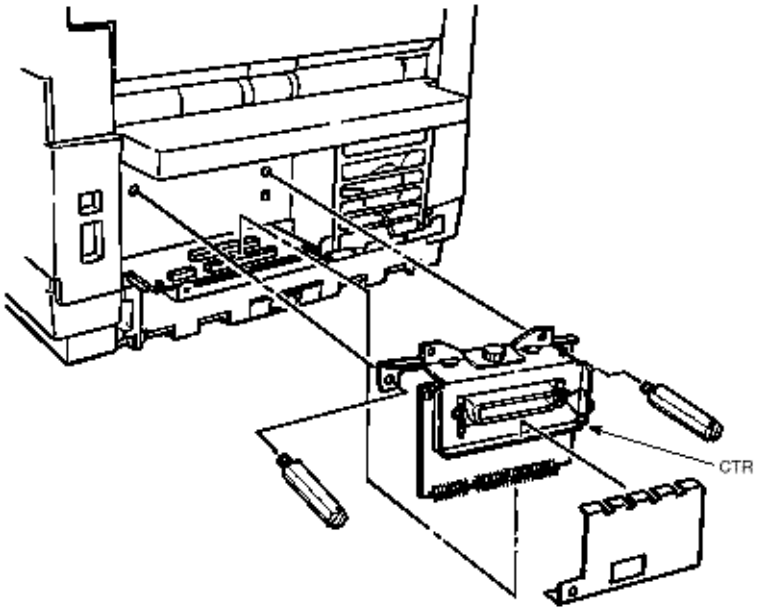
Remove Rear Cover.

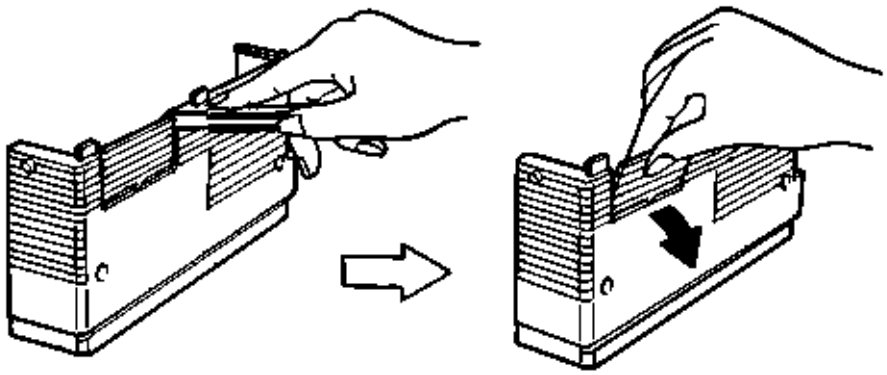
Remove the rear cover by removing the two screws S1 and S2 .



Install CTR board.

First, install CTR board on to the connector CN12, CN17 of the main control board, and then tighten the two screws to the separation plate.





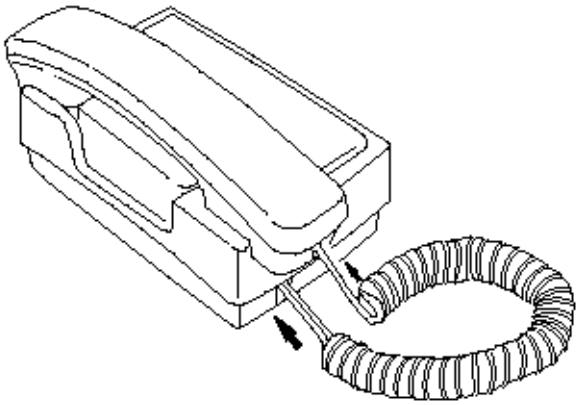
a) Insert the tip of a cutter or Nipper between the mold of Rear Cover and cut out it.

Note: Be careful not to rotate the cutter or Nipper, since this can cause scratching on the Rear Cover.

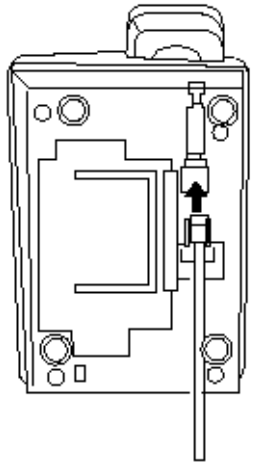
b) Grasp the mold of Rear cover, and rotate it up and down until you can able to easily remove it.

3. Installation of an Optional Telephone Set

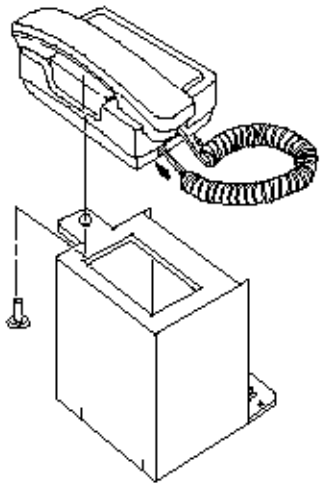
(1) After having taken out the telephone set, telephone handset and curled cord from the carton box, connect them as shown.



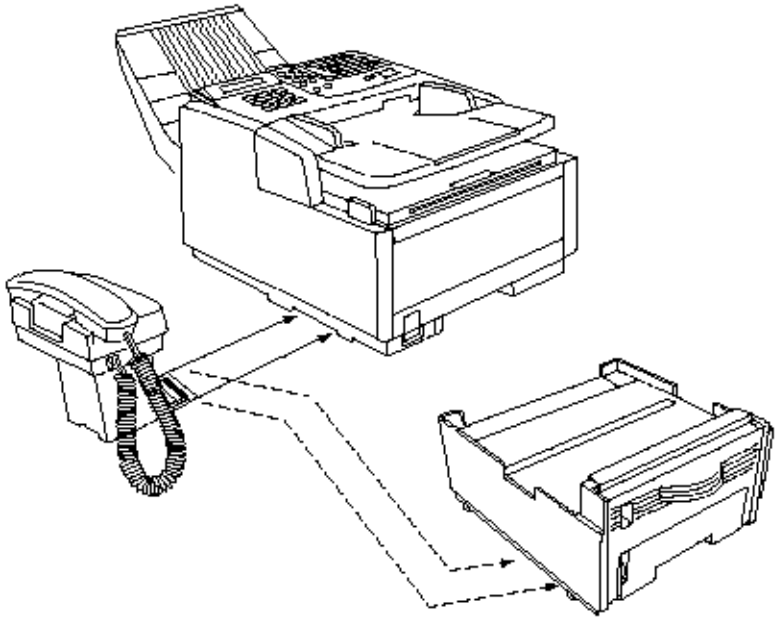
(2) After installing the connection cable to the telephone set, extend the connection cable.



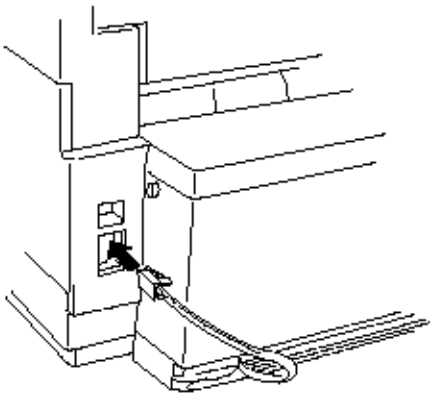
(3) After installing the cradle assembly to the telephone set, fix the screw .



(4) Install the telephone assembly on the facsimile transceiver unit. In this case, cram the telephone assembly into the position shown by lifting the facsimile transceiver unit slightly. When the second paper tray is mounted on the facsimile transceiver unit, install the telephone assembly in the position shown.



(5) Connect the terminal on the other side of the connection cable formed on the rear side of the equipment (TEL1), to the telephone set.



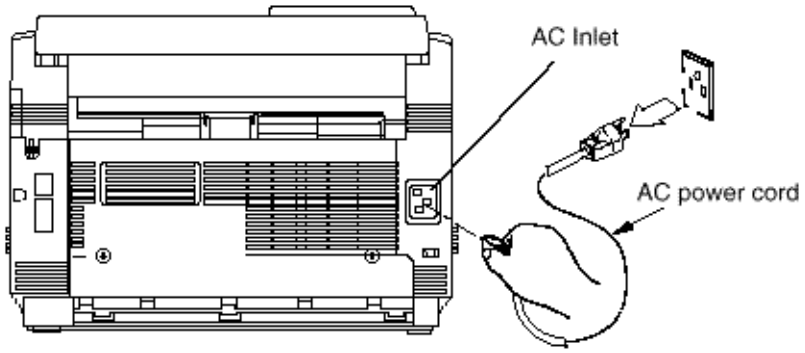
4. Second Paper Cassette Unit

This item explains how to install the Second Paper Cassette Unit option.

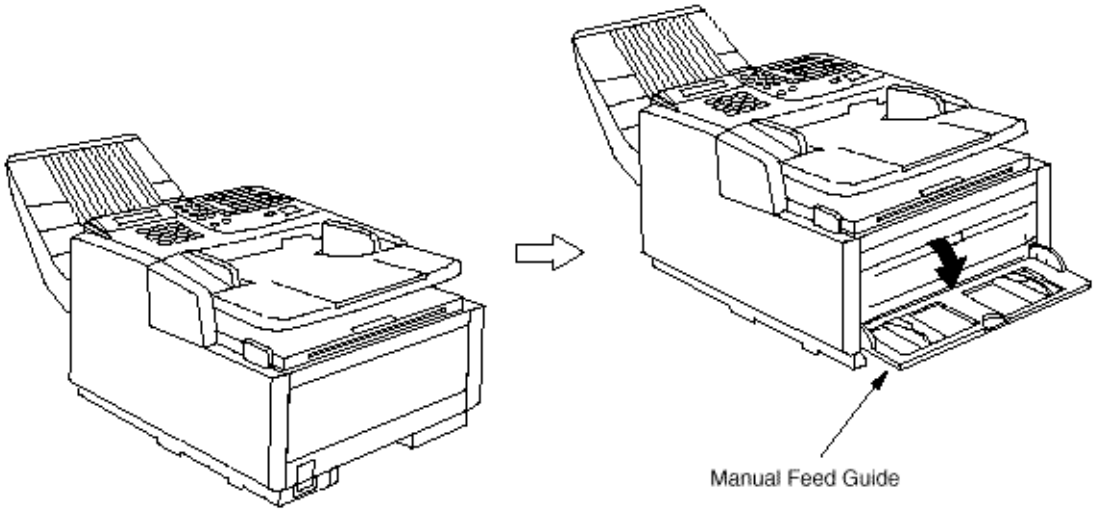
Second Paper Cassette Unit Installation

1. Turn the facsimile power switch off and remove the AC power cord.

Note: Unplug the AC power cord from the wall outlet first and then from the facsimile.

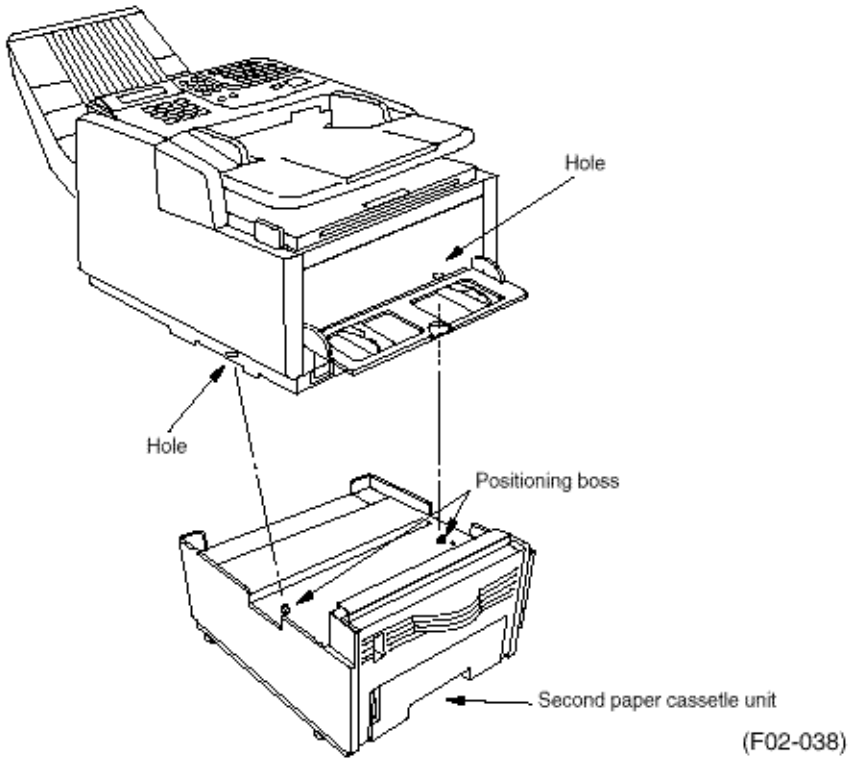


2. Open the Manual Feed Guide.



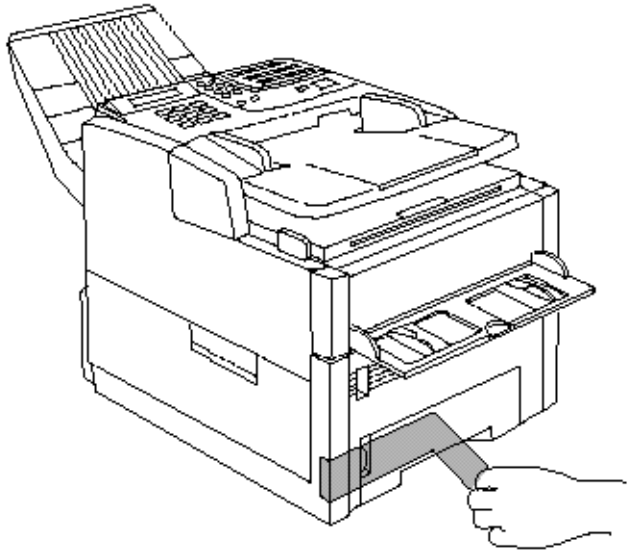
3. Gently lower the facsimile on the Second Paper Cassette Unit.

Note: Make sure that the positioning boss of the Second Paper Cassette Unit fits into the 2 holes at the bottom of the facsimile transceiver main unit.



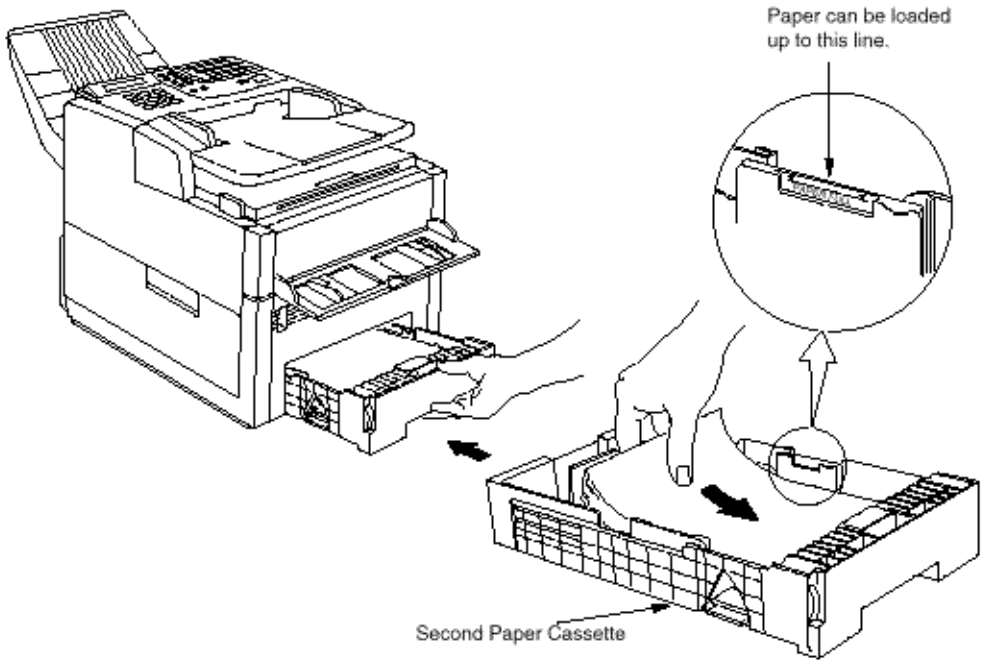
(F02-038)

4. Peel off the tape attached on the Second Paper Cassette Unit.



5. Install the Second Paper Cassette. Approximately 500 sheets of recording paper (20-Ib bond) can be loaded.

6. Reconnect the power cord to the wall and the facsimile, and turn the facsimile power on.

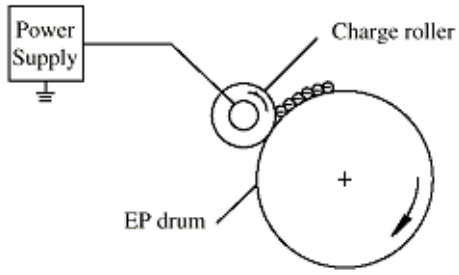
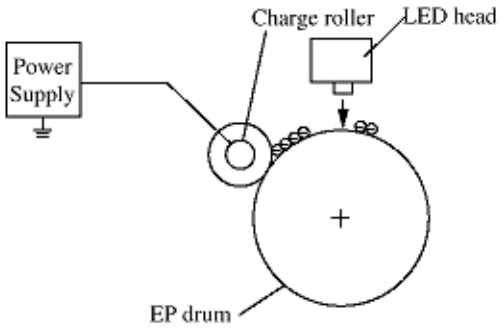
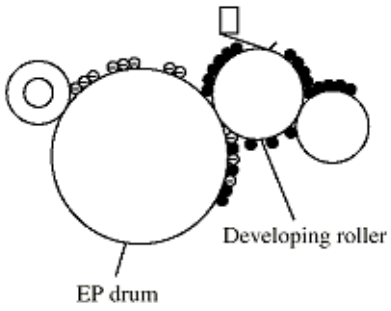

Paper can be loaded
up to this line.
Second Paper Cassette

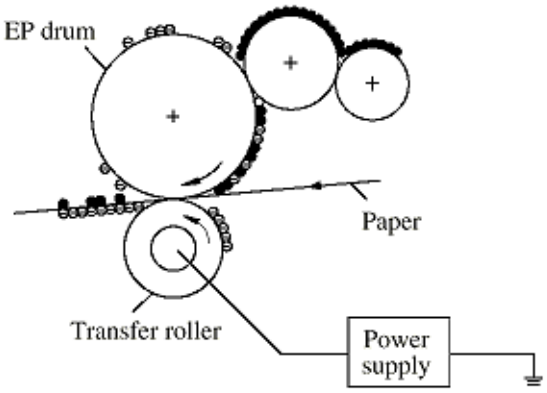
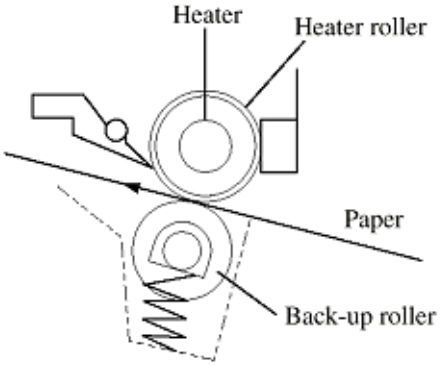
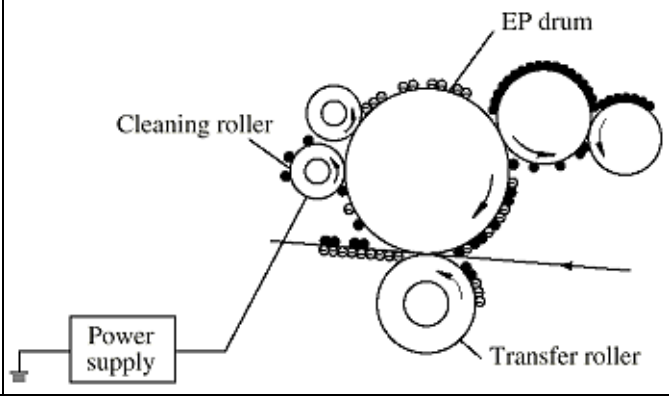
3.1 Fundamentals of the Electro-Photographic Process

The electro-photographic process involves six sub-processes:

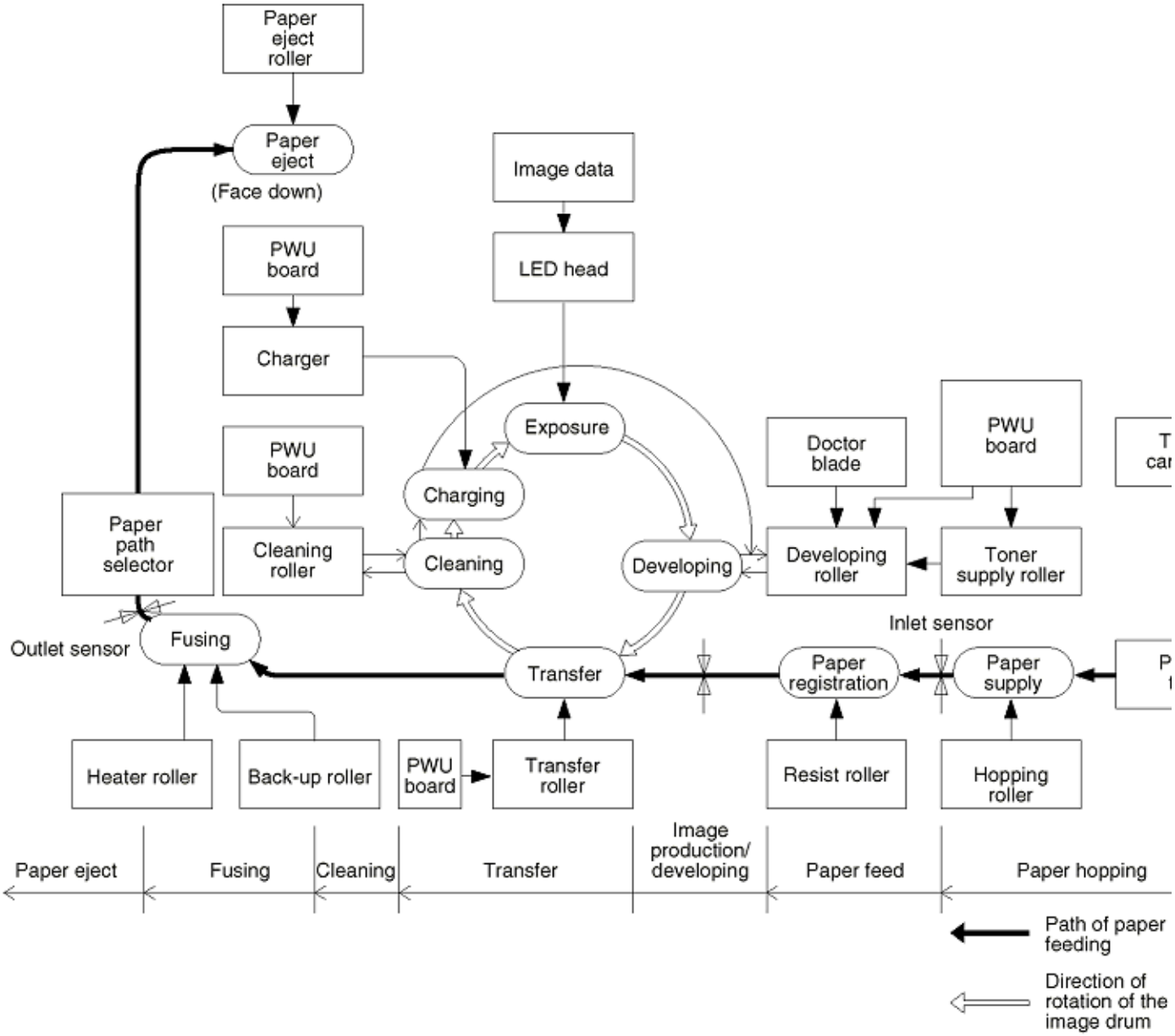
(1) Charging (2) Exposure (3) Development (4) Transfer (5) Fusing (6) Cleaning

The outline of each process is explained below.

Process	Illustration	Description
1 Charging		The surface of the electro-photographic Image drum is uniformly charged with negative charges by applying a negative voltage to the charge roller. When the applied DC voltage exceeds a threshold value, charging of the drum begins.
2 Exposure		Light emitted from the LED head irradiates the negatively charged surface. 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.
3 Development		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. At the same time, the residual toner on the Image drum is attracted to the developing roller by static electricity.

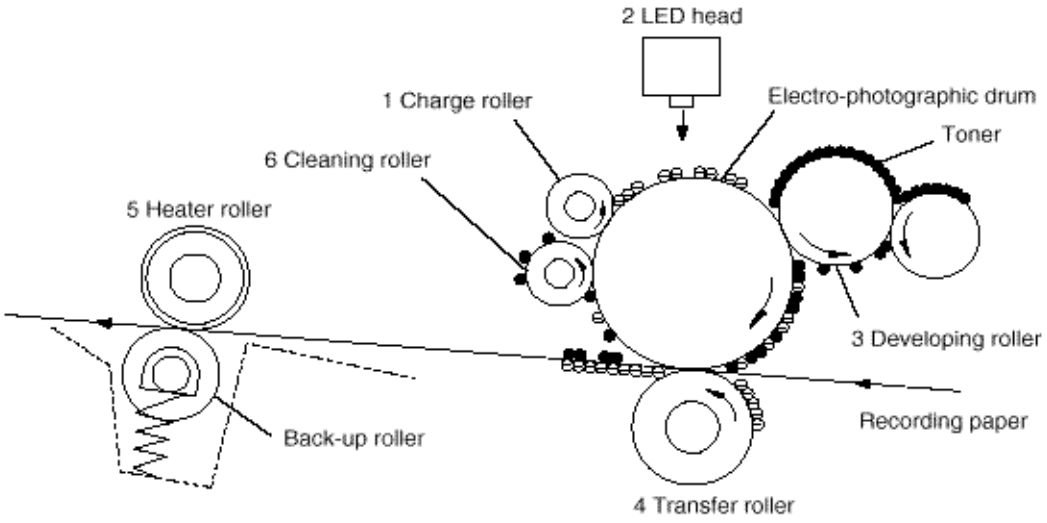
4 Transfer		The recording paper is placed over the Image drum surface and a positive charge, opposite in polarity to the toner, is applied to the reverse side of the paper from the transfer roller. The toner is attracted by the positive charge and is transferred to the paper. The toner charged negative 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.
5 Fusing		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.
6 Cleaning		Residual toner on the Image drum is attracted to the cleaning roller temporarily by static electricity on the Image drum surface.

Electric Photographic Process Flow



3.2 Actual Electo-photographic Process

The electro-photographic process consists of six essential processes.



* Process:

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

3.3 Boards and Units / Block Diagram

The three boards, [Memory board (option), Telephone interface board (option), PC interface board (option)] and three units constitute the facsimile machine unit.

Main control board	E17:	(E17)
Modem board (for OKIFAX 5400)	MODEM:	(MODE; V.34)
Network control unit board	NCU:	(UNC; WN5, DN5; FN5)
Memory board (option)	MEM:	(MEM; 2/4MB)
Telephone interface board (option)	TEL:	(TEL-U, TEL-W1, TEL-W2, TEL-W2D, NTIF, HOOK, 10 KEY,)
PC interface board (OF5400 option)	Bi-Centro I/F:	(CTR)
2nd tray interface board (option)	2ND TRAY I/F:	(TQSB)
Operation panel assembly unit	OPE:	(O5W)
Power supply unit	POW UNIT:	(120/230, SPSU;120V/230V)

Refer to the following block diagram for more information in the next section.

Note: The contact image sensor and electromagnetically driven parts compose the so-called Scan Unit.

Block Diagram

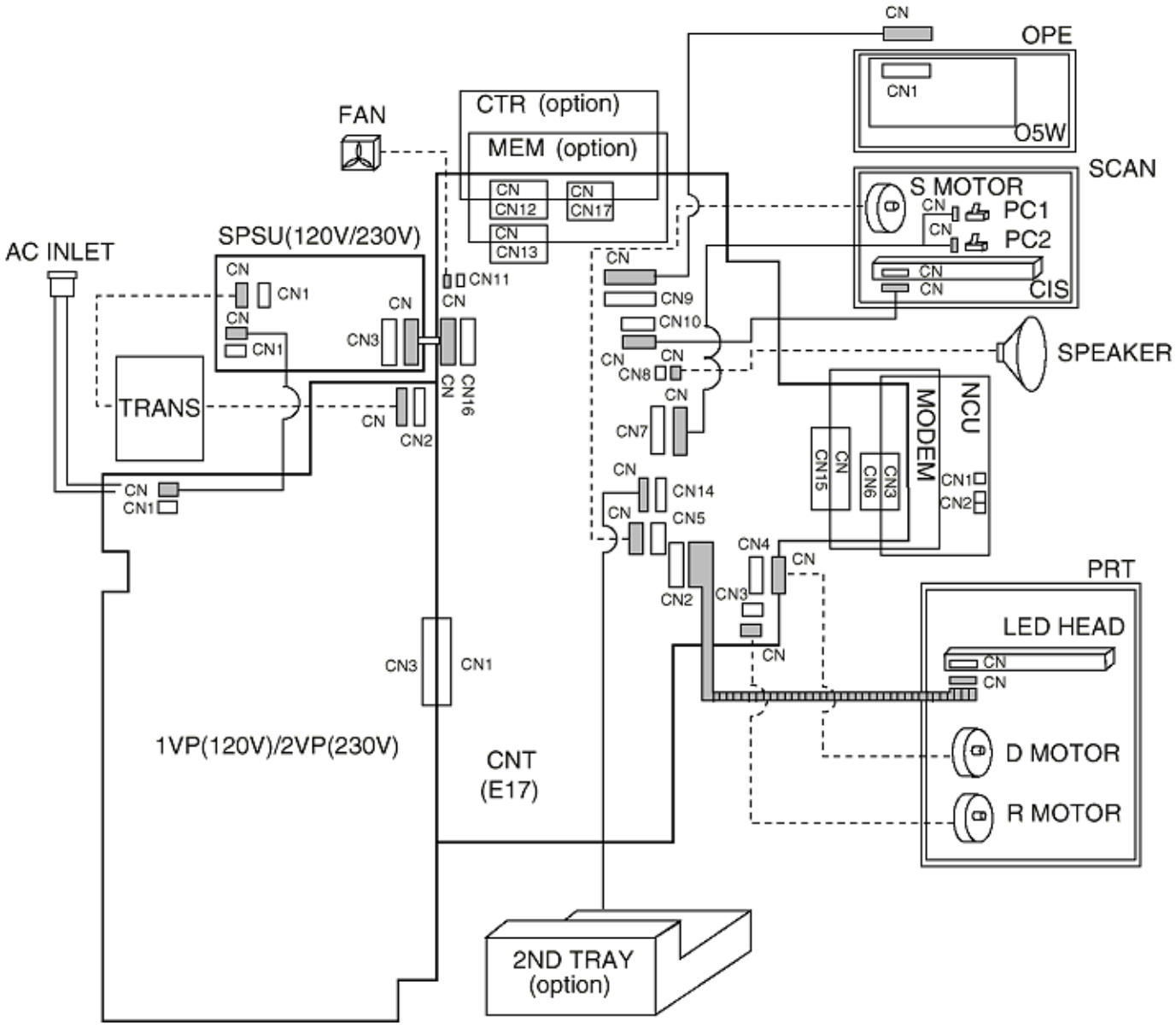
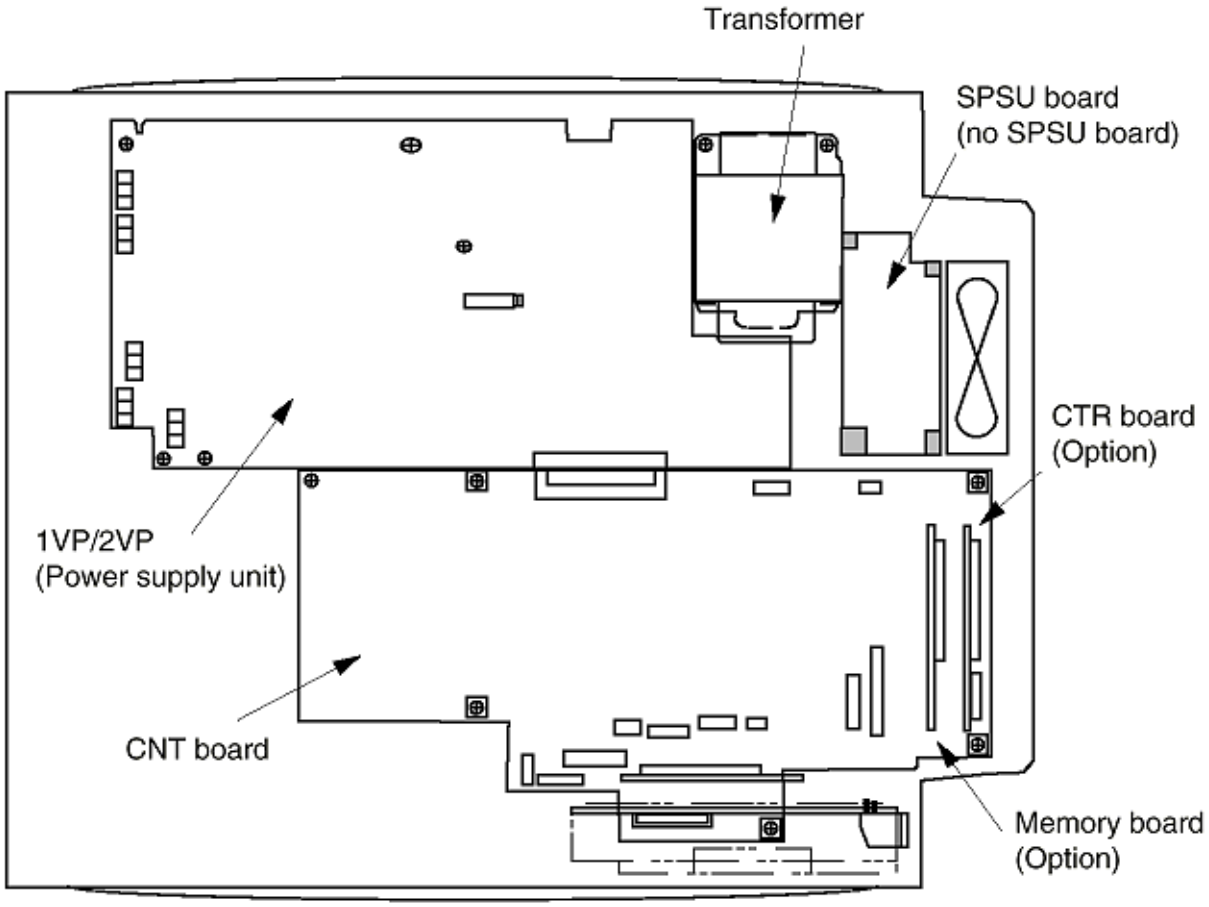


Figure 3.3.1 Related drawing

3.4 Overall Dimension and Mechanical Structure



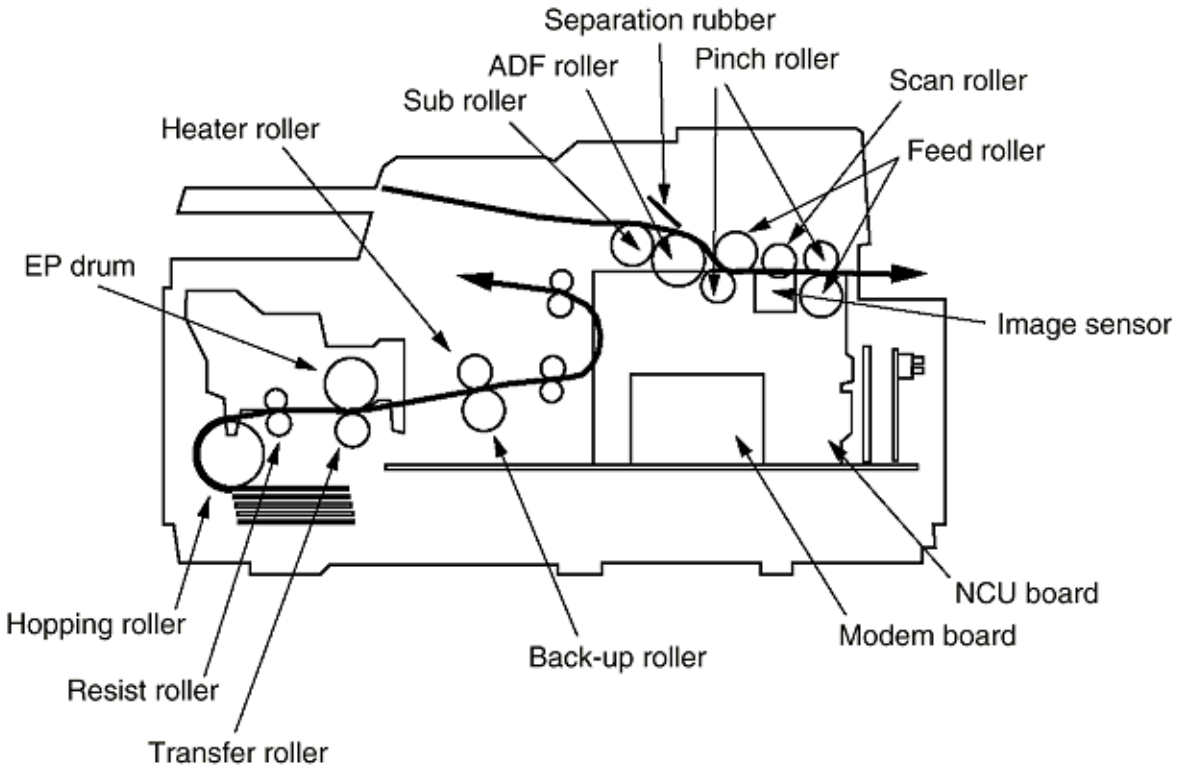


Figure 3.4.1 Overall Dimension and Mechanical Structure

4.1 General

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

4.1.1 Precautions for Parts Replacement

4.1.1 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.

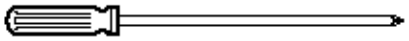
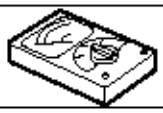
(7) Using a wrist band connected to the ground will protect semiconductors on printed circuit boards from damage by the static electricity.

(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. Refer to Chapter 8.
	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. 27. Refer to Chapter 5.

4.2 Tools

The tools (shown below) are required for the replacement of parts.

No.	Service tools		Q'ty	Remarks
1		Philips screw driver (L)	1	
2		Philips screw driver (M)	1	
3		Philips screw driver (S)	1	
4		Flat screw drivers (S)	1	
5		Philips screw driver (S)	1	
6		Radio pliers	1	
7		Nippers	1	
8		Multimeter	1	Short-ciucuit test

4.3 How to Disassemble and Reassemble

This section explains how to disassemble and reassemble the fax.

- The Disassembly Procedure Flowcharts provide an overview of the procedures.
- The detailed disassembly procedure is explained from sub-section 4.3.1 to 4.3.8.

Disassembly Procedure Flow 4.1 (1 of 2)

Disassembly Procedure Flow 4.1 (2 of 2)

4.3.1 LED Print Head

4.3.2 Image Drum, Covers (Rear, NCU, Main) Separation Plate, Boards (NCU, Modem)

4.3.3 Control Panel Assembly, Paper Guide (U) Assembly

4.3.4 Sub-roller, ADF Roller Assembly, Pinch Roller, Contact Image Sensor, Document Detectors (PC1 and PC2)

4.3.5 Motors (Resist, Drum), Assemblies (Release Guide, Manual Guide) Stacker Cover, Fusing Unit

4.3.6 Lower Base, Motor Assembly, Back-up Roller, Transfer Roller

4.3.7 Resist Roller, Hopping Roller, Sensor Plate

4.3.8 E17 Board, Power Supply Unit, Contact Assembly, Transformer, Sub-PSU

Disassembly Procedure Flow 4.1 (1of 2)

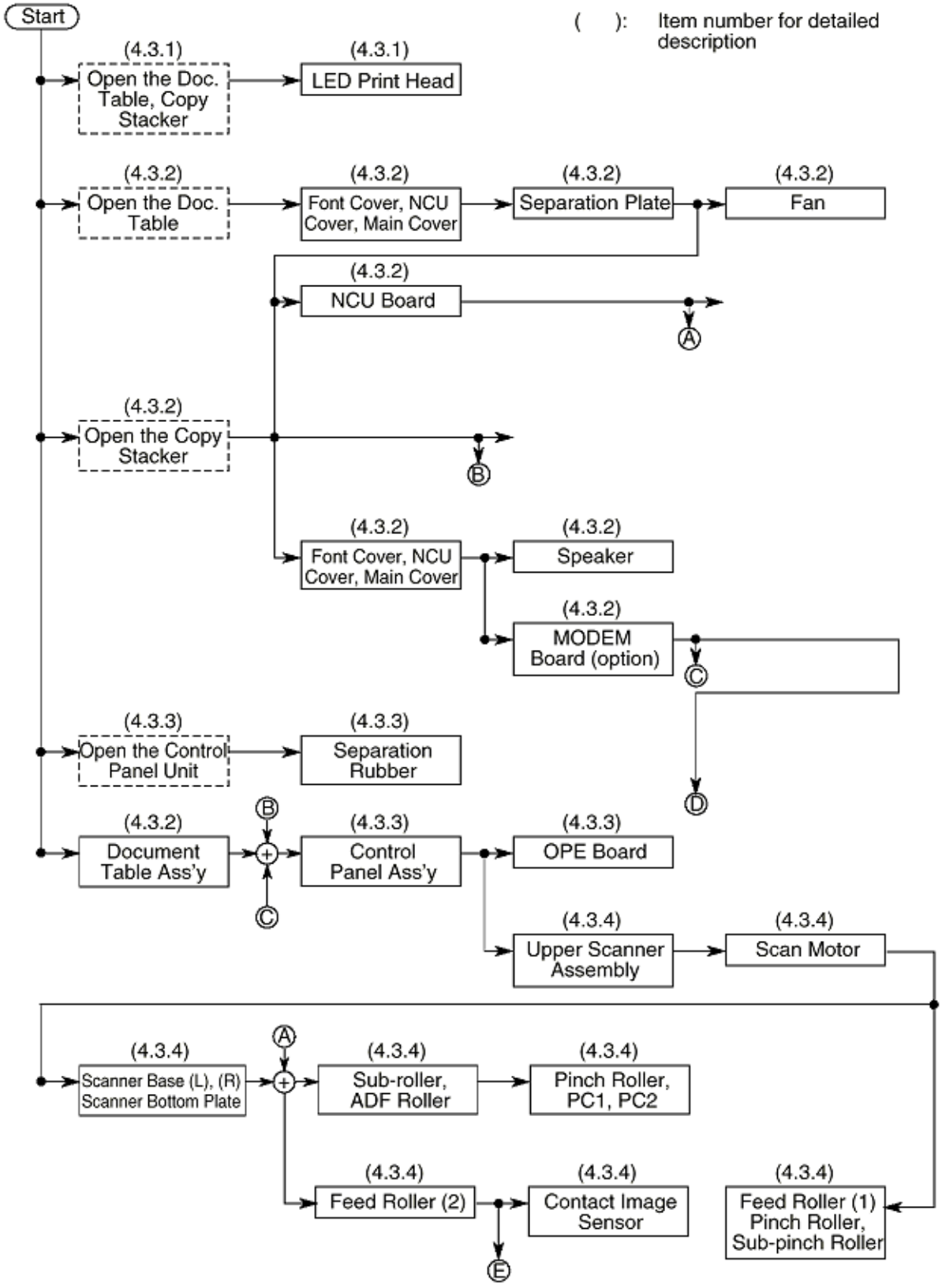


Figure 4.1 (1/2) Disassembly Procedure Flow

Disassembly Procedure Flow (Figure 4.2) 2 of 2

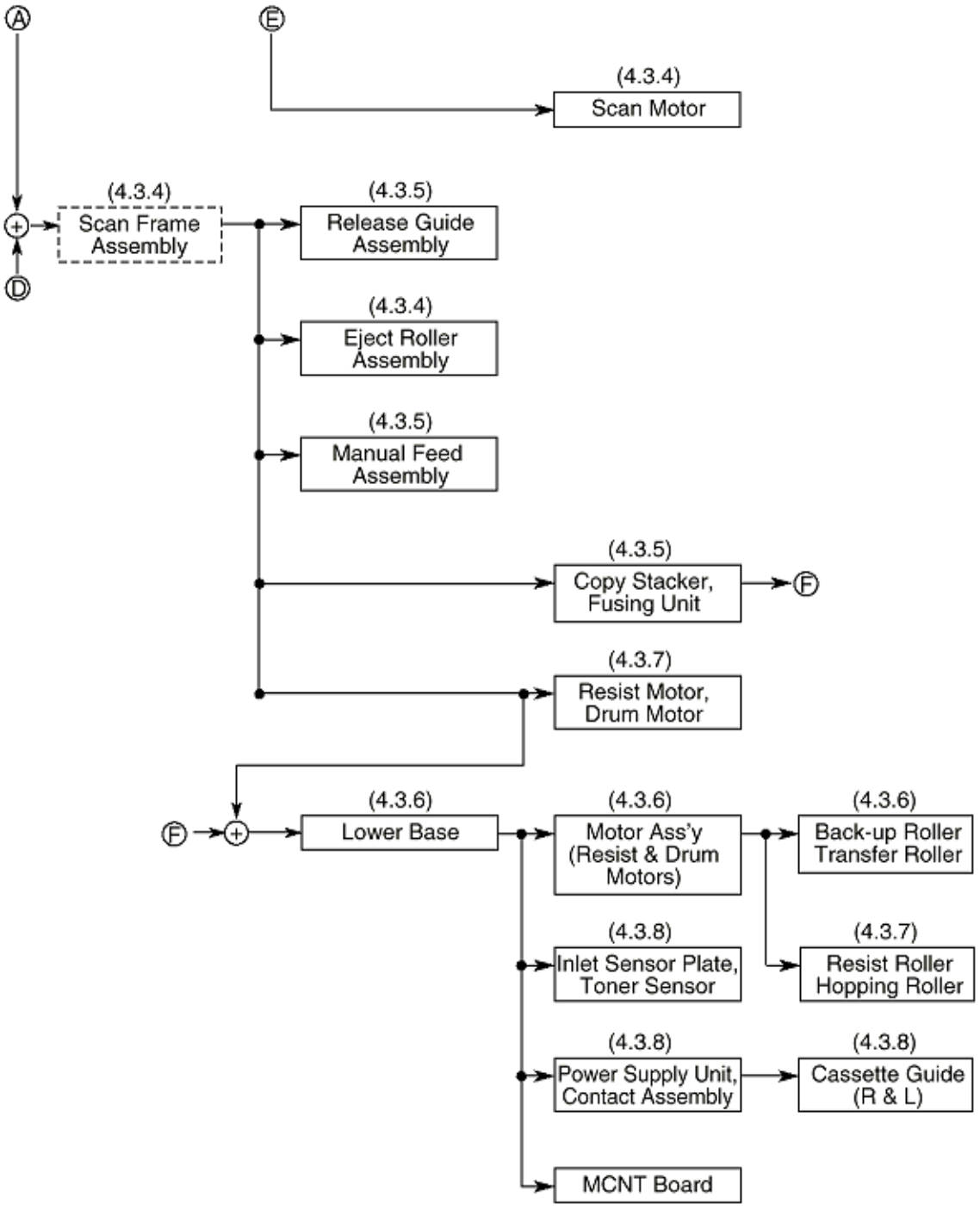


Figure 4.1 (2/2) Disassembly Procedure Flow

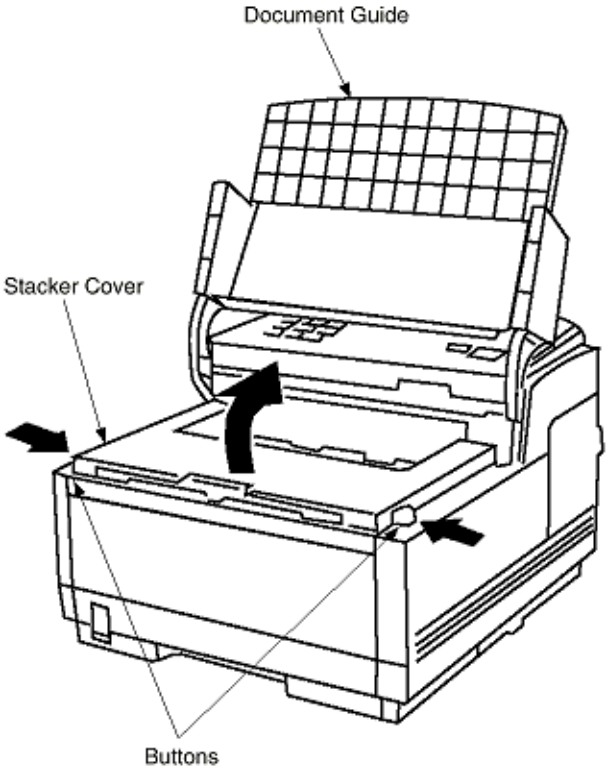
4.3.1 LED Print Head

It is used two kind of head as the LED print head. (208 mm width or 216 mm width)

(1) Disassembly procedure

a) Open the Document Table assembly.

b) Open the Stacker Cover by pushing the Buttons.

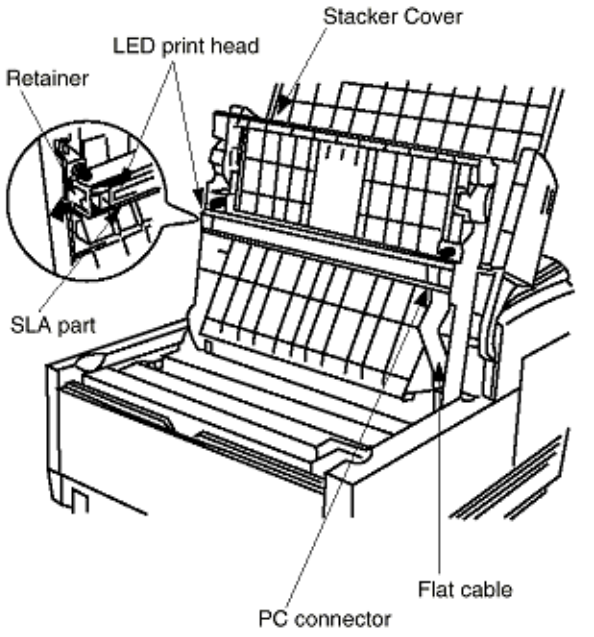


(FX-050VP-C4-001)

c) Disconnect the PC connector from the LED print head.

d) Disconnect the flat cable from the PC connector.

e) Remove the LED print head while spreading the retainer on the Stacker Cover.



(FX-050VP-C4-002)

Note: Be sure not to touch directly or push the SLA part of the LED print head.

(2) Reassembly procedure

Reverse the disassembly procedures.

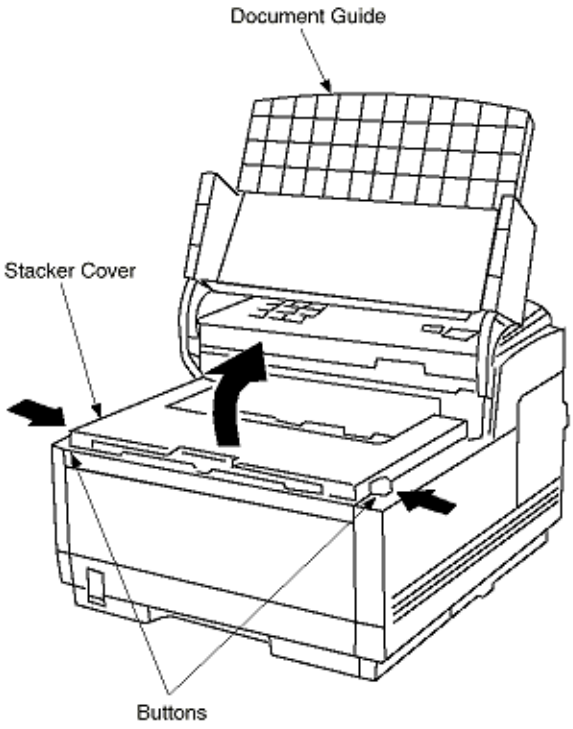
4.3.2 Image Drum, Covers (Rear, NCU, Main) Separation Plate, Boards (NCU, Modem)

(1) Disassembly procedure

1) ID Unit, Rear Cover, NCU Cover, Main Cover

a) Open the Document Guide assembly.

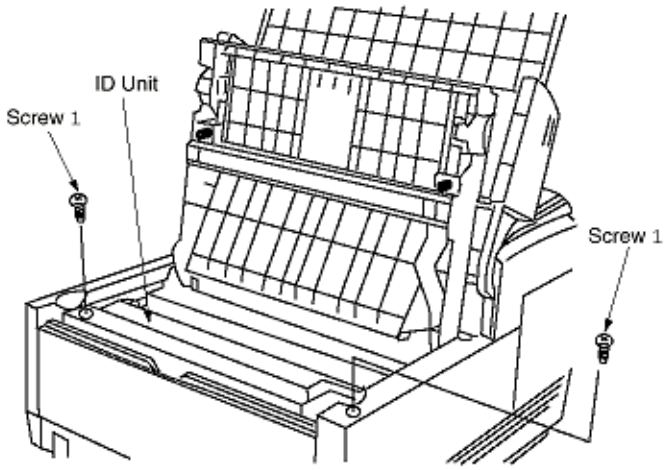
b) Open the stack cover by removing the buttons.



(FX-050VP-C4-001)

c) Take out the ID Unit from the equipment.

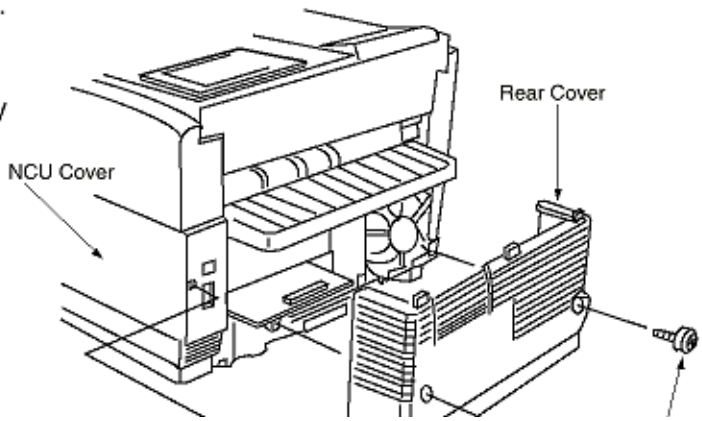
d) Remove the two screws ①.



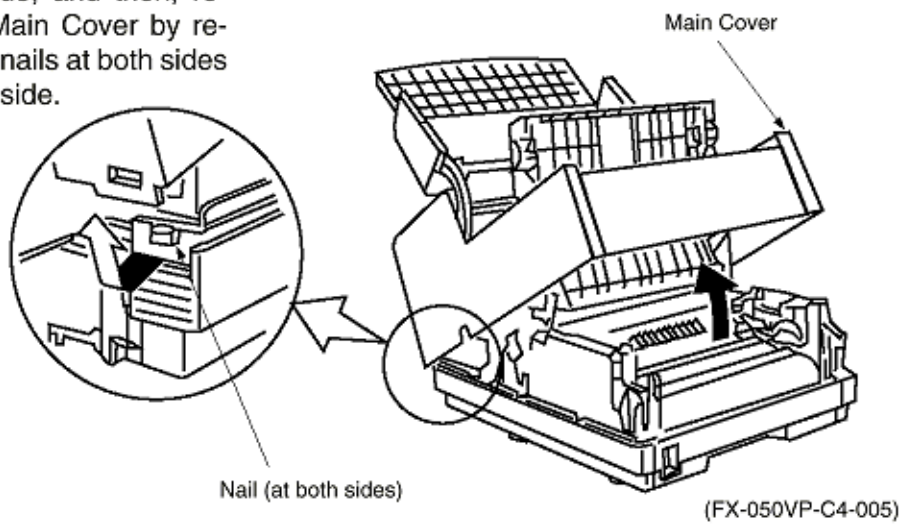
(FX-050VP-C4-003)

e) Remove the Rear Cover by removing the two screws ②.

f) Remove the NCU Cover by removing the screws ③.



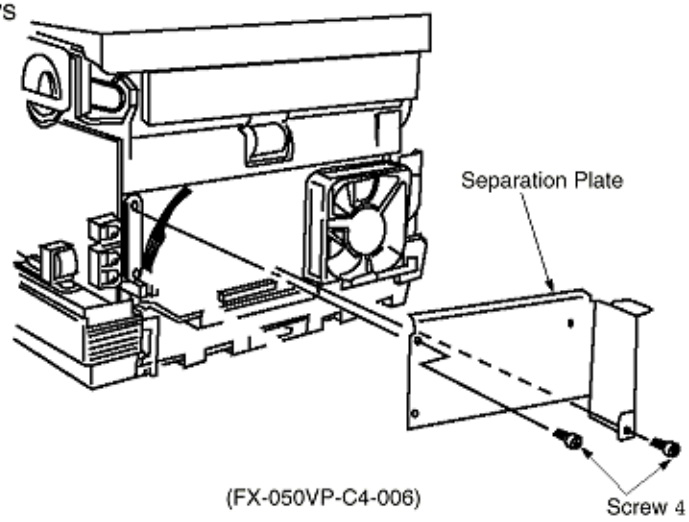
g) First, open the Main Cover from the front side, and then, remove the Main Cover by removing the nails at both sides on the rear side.



(FX-050VP-C4-005)

2) Separation Plate

a) Remove the Separation Plate by removing the two screws ④.



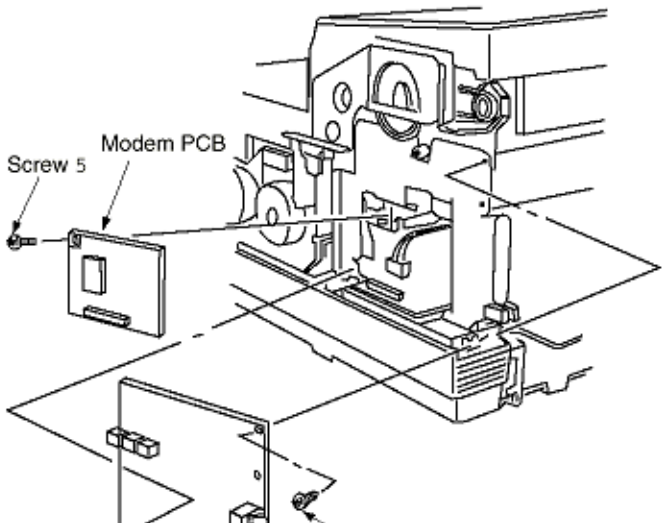
(FX-050VP-C4-006)

3) NCU Board, MODEM Board

a) Remove the NCU Board by removing the two screws ⑤.

b) Remove the MODEM Board by removing the screw ⑥.

Note: V.34 modem board (5400 option)



4.3.3 Control Panel Assembly, Paper Guide (U) Assembly

(1) Disassembly procedure

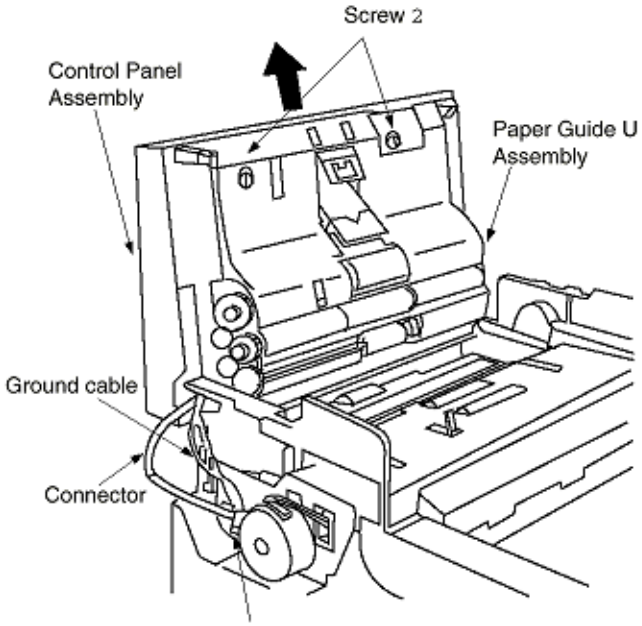
1) Control Panel Assembly and Paper Guide (U) Assembly

a) First, carry out the disassembly procedure up to the point of the 4.3.2 (Main Cover, NCU Cover and Rear Cover).

b) Remove the ground cable by removing the screw ①.

c) Disconnect the connector of the Control Panel from the MCNT Board.

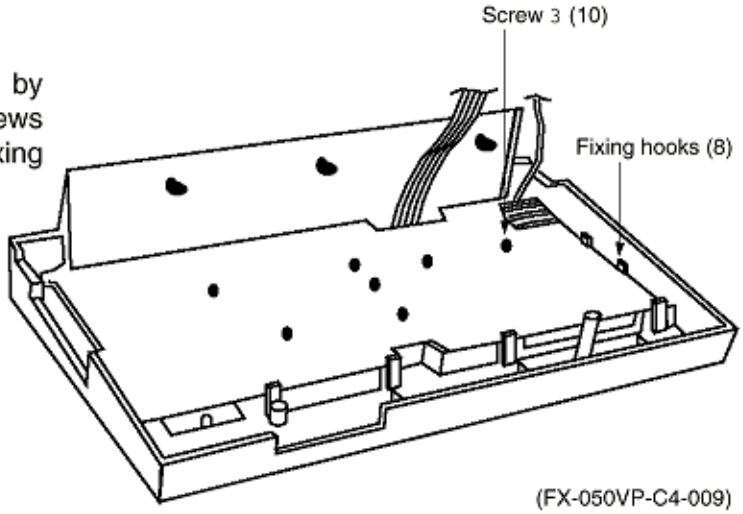
d) The removal of the two screws ② results into two separate assemblies:
Control Panel Assembly and Paper Guide (U) Assembly.



(FX-050VP-C4-008)

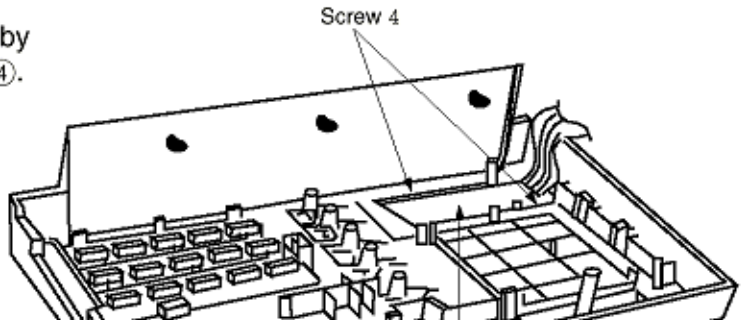
2) Control Panel Assembly

a) Remove the OPE Board by removing the 10 small screws ③ and the part of the fixing hooks (8).



(FX-050VP-C4-009)

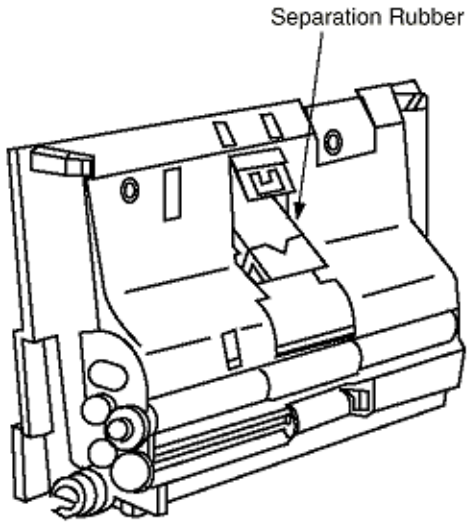
b) Remove the part of LED by removing the two screws ④.



3) Paper guide (U) Assembly

a) Separation Rubber

a. The Separation Rubber can be removed from the Paper Guide (U) Assembly.

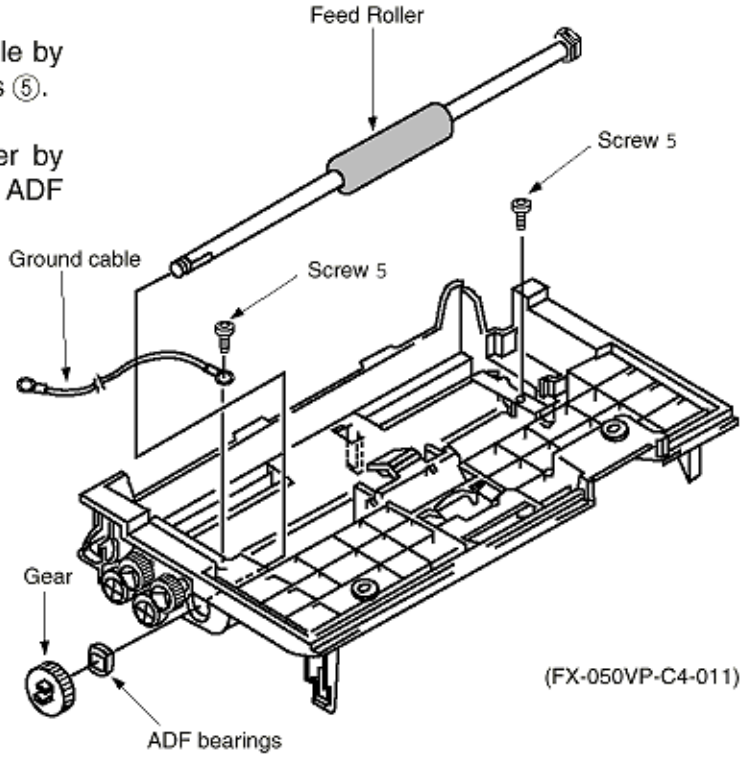


(FX-050VP-C4-011)

b) Feed Roller

a. Remove the ground cable by removing the two screws ⑤.

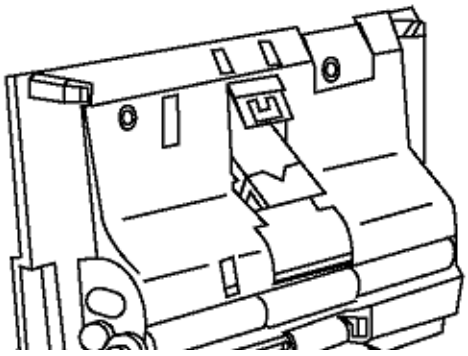
b. Remove the Feed Roller by removing the gear and ADF bearings.



(FX-050VP-C4-011)

c) Scan Roller
Remove the Scan Roller by removing the gear and ADF bearing.

d) Exit Roller
Remove the Exit Roller while spreading and holding up the part of the fixing hooks.



Note: Be careful as not to break the shaft of

4.3.4 Sub-roller, ADF Roller Assembly, Pinch Roller, Contact Image Sensor, Document Detectors (PC1 and PC2)

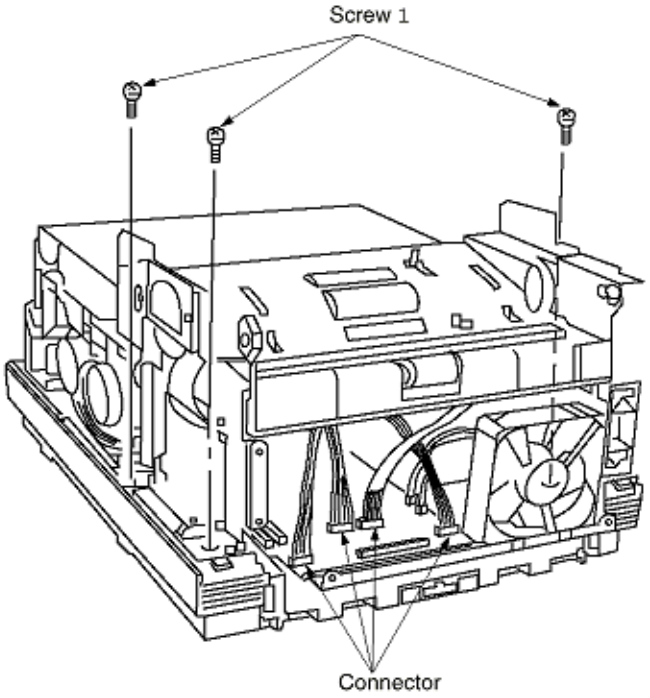
(1) Disassembly procedure

1) Scanner Unit

a) First, carry out the disassembly procedure up to the point of the 4.3.2 (Rear Cover and Main Cover) and 4.3.3 (Control Panel Assembly and Paper Guide (U) Assembly).

b) Disconnect the connector from the MCNT Board and the AC inlet from the scanner frame.

c) Remove the Scanner Unit by removing the three screws ①.



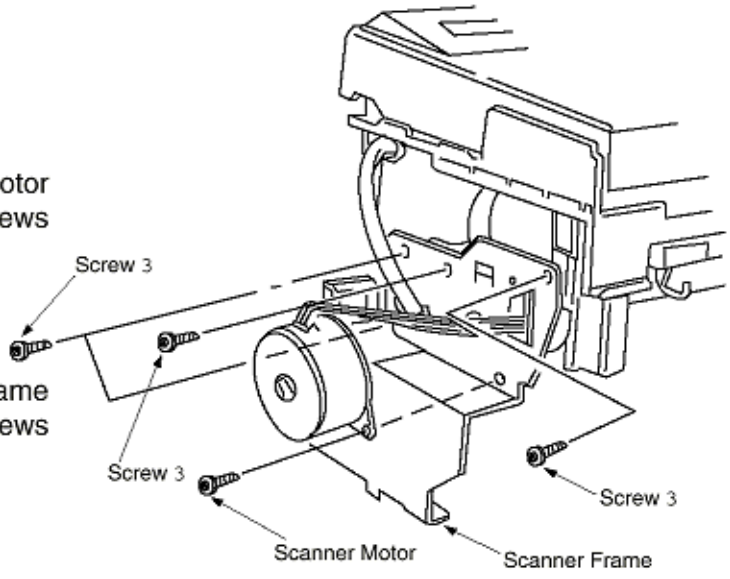
(FX-050VP-C4-013)

2) Scanner Motor

a) Remove the Scanner Motor by removing the two screws ②.

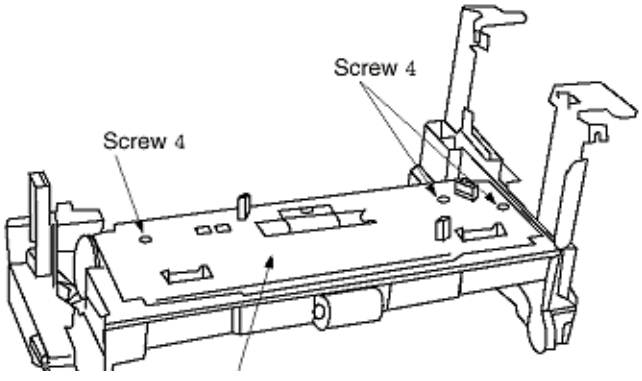
3) Scanner Frame

a) Remove the Scanner Frame by removing the three screws ③.



(FX-050VP-C4-014)

4) Sub-roller, ADF roller assembly, Pinch Roller, Contact Image Sensor



- Turn the Scanner Frame Assembly inside out and perform the disassembly procedure.

a) Remove the Bottom Plate by removing the three screws ④.

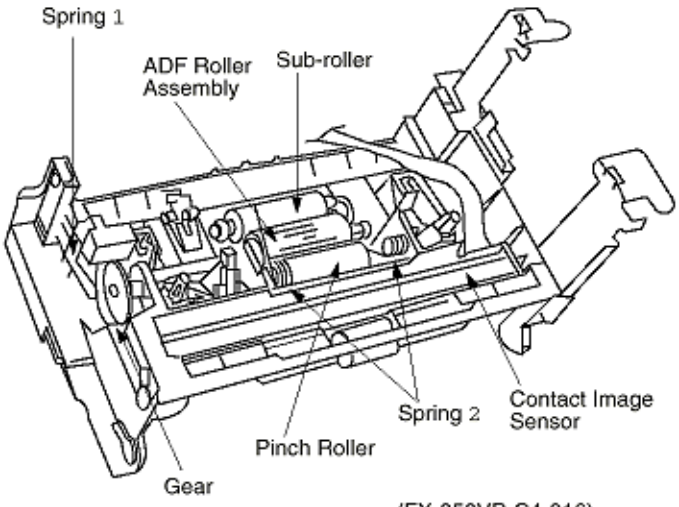
b) Remove the Sub-roller from the Scanner Frame.

c) Remove the spring ① from the Scanner Frame.

d) Remove the ADF Roller Assembly by removing the gear on the Scanner Frame.

e) After removing the ADF Roller, remove the Pinch Roller by holding up the two springs ② while the Pinch Roller Shaft is pushed and released.

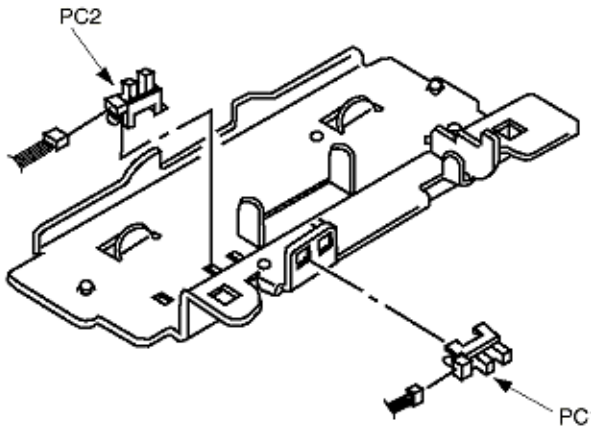
f) Remove the Contact Image Sensor by disconnecting the connector.



(FX-050VP-C4-016)

5) PC1, PC2

a) After disconnecting the two connectors, remove the photo-coupler sensors PC1 and PC2 on the Bottom Plate by pressing the latch using the flat screwdriver or the like.



(FX-050VP-C4-017)

(2) Reassembly procedure

Reverse the disassembly procedure.

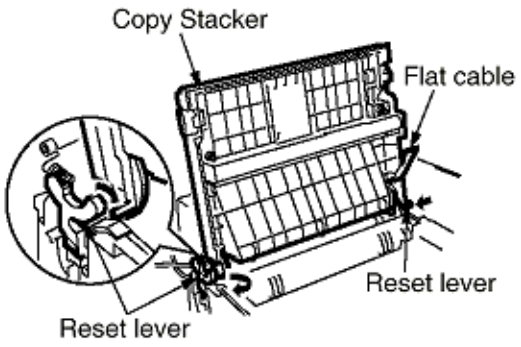
4.3.5 Motors (Resist, Drum), Assemblies (Release Guide, Manual Guide) Stacker Cover, Fusing Unit

3) Stacker Cover

a) Disconnect the flat cable.

b) Remove the Copy Stacker by pressing inward the two latches on it from the two reset levers.

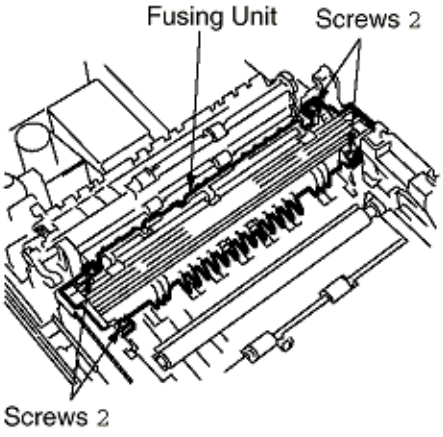
c) Remove the Copy Stacker by spreading it from the lower base.



(FX050-C4-021)

4) Fusing Unit

a) Remove the Fusing Unit by removing the four screws ②.

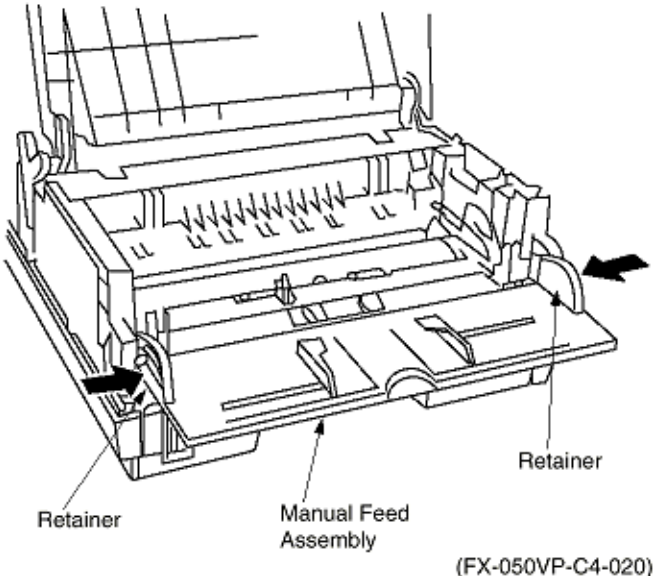


(FX050-C4-022)

5) Manual Feed Assembly

a) First, carry out the disassembly procedure up to the point of Main Cover removal. (Refer to sub-section 4.3.2)

b) Remove the Manual Feed Assembly by pressing inward the two retainers.



(FX-050VP-C4-020)

4.3.6 Lower Base, Motor Assembly, Back-up Roller, Transfer Roller

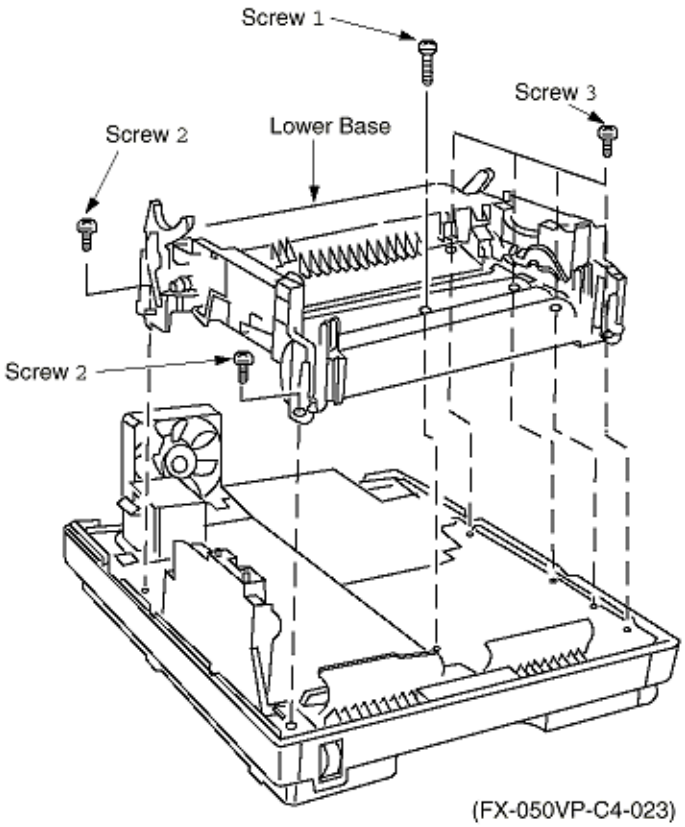
(1) Disassembly procedure

1) Lower Base, Motor Assembly

a) First, carry out the disassembly procedure up to the point of the Fusing Unit removal. (Refer to sub-item 4.3.5.)

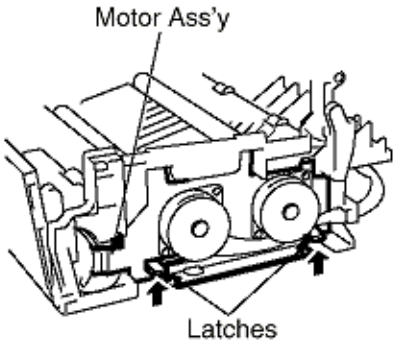
b) Disconnect the two connectors (CN3 and CN4 on the MCNT board).

c) Remove the Lower Base by removing the seven screws ① to ③.



(FX-050VP-C4-023)

d) Press up and hold the two latches while removing the Motor Assembly out.

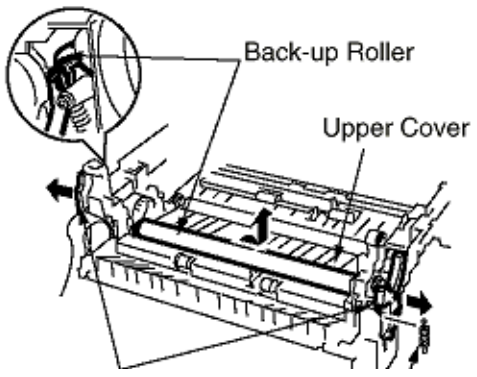


(FX050-C4-024)

2) Back-up Roller, Transfer Roller

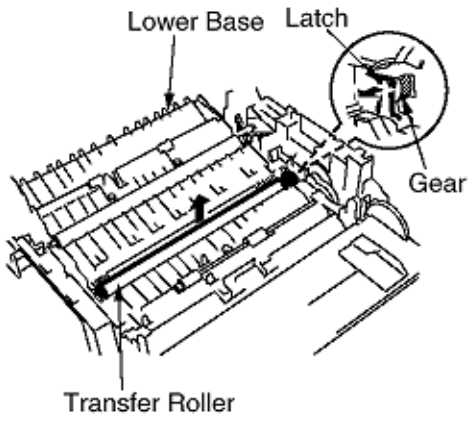
a) After removing the Lower Base, remove the spring.

b) Lift the left side of the Back-up Roller and pull it out leftwards.



c) Release the gear by unlocking the latch on the Lower Base.

d) Lift the right side of the Transfer Roller and shift rightwards, then pull it out from the Lower Base.



(FX050-C4-026)

(2) Reassembly procedure

Reverse the disassembly procedures.

4.3.7 Resist Roller, Hopping Roller, Sensor Plate

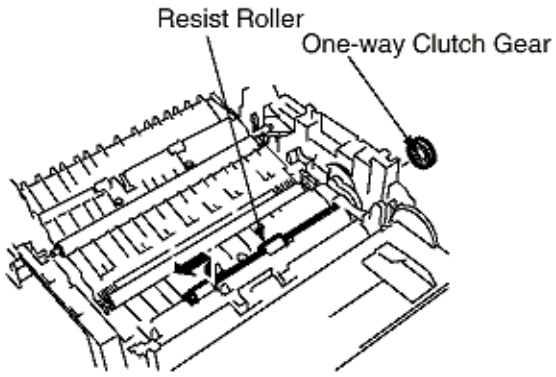
(1) Disassembly procedure

1) Resist Roller, Hopping Roller

a) First, carry out the disassembly procedure up to the point of the Lower Base removal. (Refer to sub-item 4.3.6.)

b) Remove the One-way Clutch Gear.

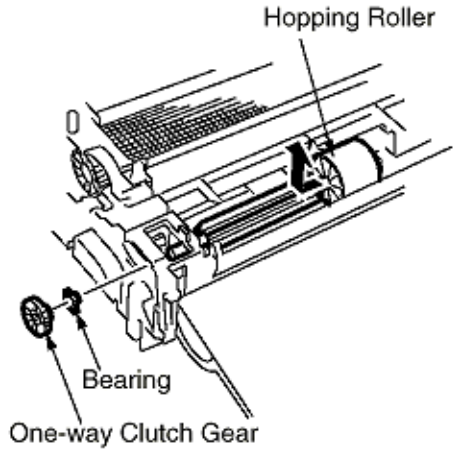
c) Press the Resist Roller to the right side and lift up the left side of it, then take off the Resist Roller.



(FX050-C4-027)

d) Remove the One-way Clutch Gear and Bearing.

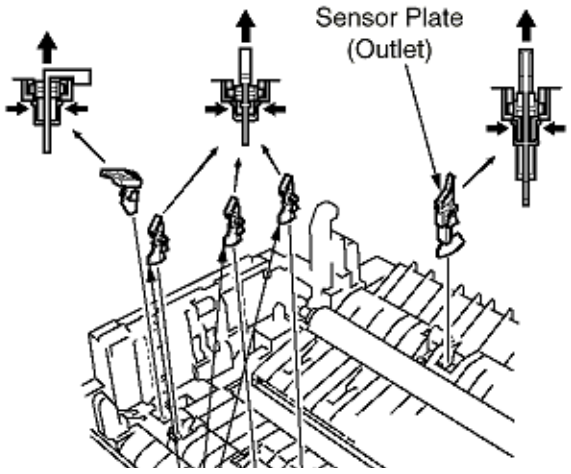
e) Remove the Hopping Roller by sliding to the right side.



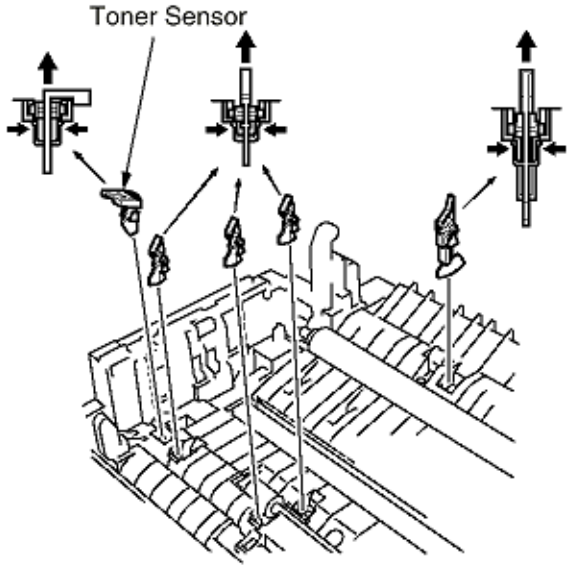
(FX050-C4-028)

2) Sensor Plates (Inlet, Outlet), Toner Sensor

a) After removing the Lower Base, remove the Sensor Plate by pressing and holding the latches while shifting the Sensor Plate up and out.



b) Press and hold the Clutch while pushing the Toner Sensor up and out.



(FX050-C4-030)

(2) Reassembly procedure

Reverse the disassembly procedures.

4.3.8 E17 Board, Power Supply Unit, Contact Assembly, Transformer, Sub-PSU

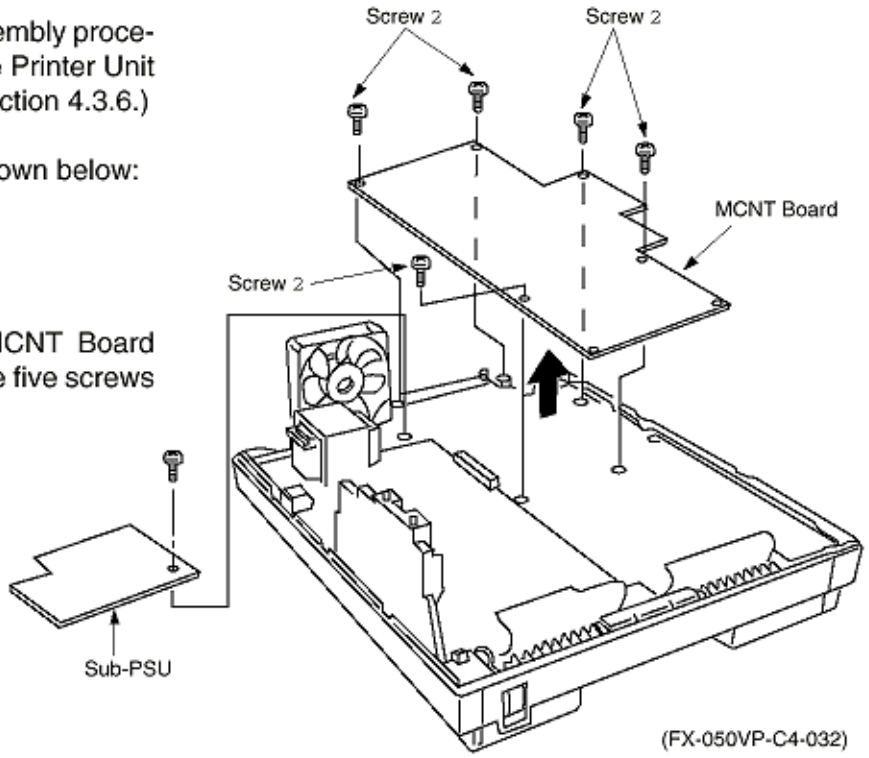
(1) Disassembly procedure

- First, carry out the disassembly procedure up to the point of the Printer Unit removal. (Refer to sub-section 4.3.6.)

  Note: MCNT board is shown below:

1) MCNT Board

   a) Remove the MCNT Board by removing the five screws ②.



(FX-050VP-C4-032)

2) Power Supply Unit and Contact Assembly

   a) Disconnect the two connectors from the Transformer.

   b) Remove the Power Supply Unit by removing the three screws ③ and the screw ④.

   c) Separate the Power Supply Unit from the Contact Assembly.

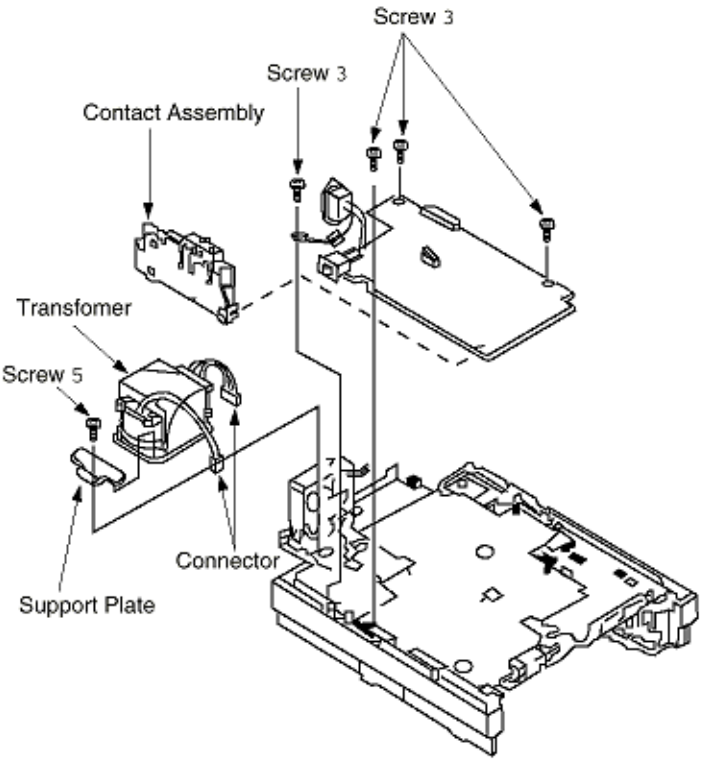
3) Transformer

   a) Remove the Support Plate by removing the five screws ⑤.

   b) Remove the Transformer by disconnecting the two connectors.

4) Sub-PSU

   a) Remove 1 screw.



(FX-050VP-C4-033)

5.1 Setting of LED Print Head Drive Time

- Adjustment point: Technical Function No. 27.
- * 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) Use this table to set the LED print head drive time.

Table 5.1.1 Setting of Technical Function No. 27

Setting / Rank Marking	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
		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	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																								*								

Note 1: 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.)

Note 2: When the head label of the replaced LED printhead (new part) is the same as that of the used LED printhead (old part), you do to always have to set the LED printhead width by technical function No. 28. (Refer to table 2.9.1 TF No. 28).

5.2 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: Main control board - E17 board; LC2-3 pin and ground terminal
- Specification: 20.000 MHz ± 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: Main control board - E17; CN16-1 pin and ground terminal
- Specification: +5V ± 4% (+4.5V to 5.2V)

3) +5V DC Voltage

- Measurement point: Main control board - E17; CN1-B12/A13/B13 pin and ground terminal
- Specification: +5V ± 4% (+4.5V to 5.2V)

4) +8V DC Voltage

- Measurement point: Main control board - E17; CN1-A14 pin and ground terminal
- Specification: +6.5V to 15V

5) -8V DC Voltage

- Measurement point: Main control board - E17; CN1-B14 pin and ground terminal
- Specification: -15V to -6.5V

6) +30V DC Voltage

- Measurement point: Main control board - E17; CN1-A15/B15 pin and ground terminal
- Specification: +24V to +45V

7) Contact Image Sensor Output (SIG signal)

- Measurement point: Main control board - E17; CN10-1 pin and ground terminal
- Specification: A waveform sample is shown below.
- Test chart: White sheet (A4 size)

5.3 Measurement

1) Turn AC power OFF.

2) Carry out the disassembly procedure up to Main Cover and Scanner Unit removal. (Refer to the Mechanical Disassembly and Reassembly in Chapter 4-2.)

3) Connect extension cables to the M17 board.

4) Connect the frequency counter (for clock frequency), digital voltmeter (for power voltage) and Oscilloscope (for SIG signal). Refer to the Measurement Points Diagram (Main Control Board).

5) Turn AC power ON. Main power supply is set to "ON" (PC1 ON) by loading the document on the cover-top. (except +5V SUB)

6) Measurement

7) Turn AC power OFF.

8) Reverse the disassembly procedures.

Measurement Points on M17 Board

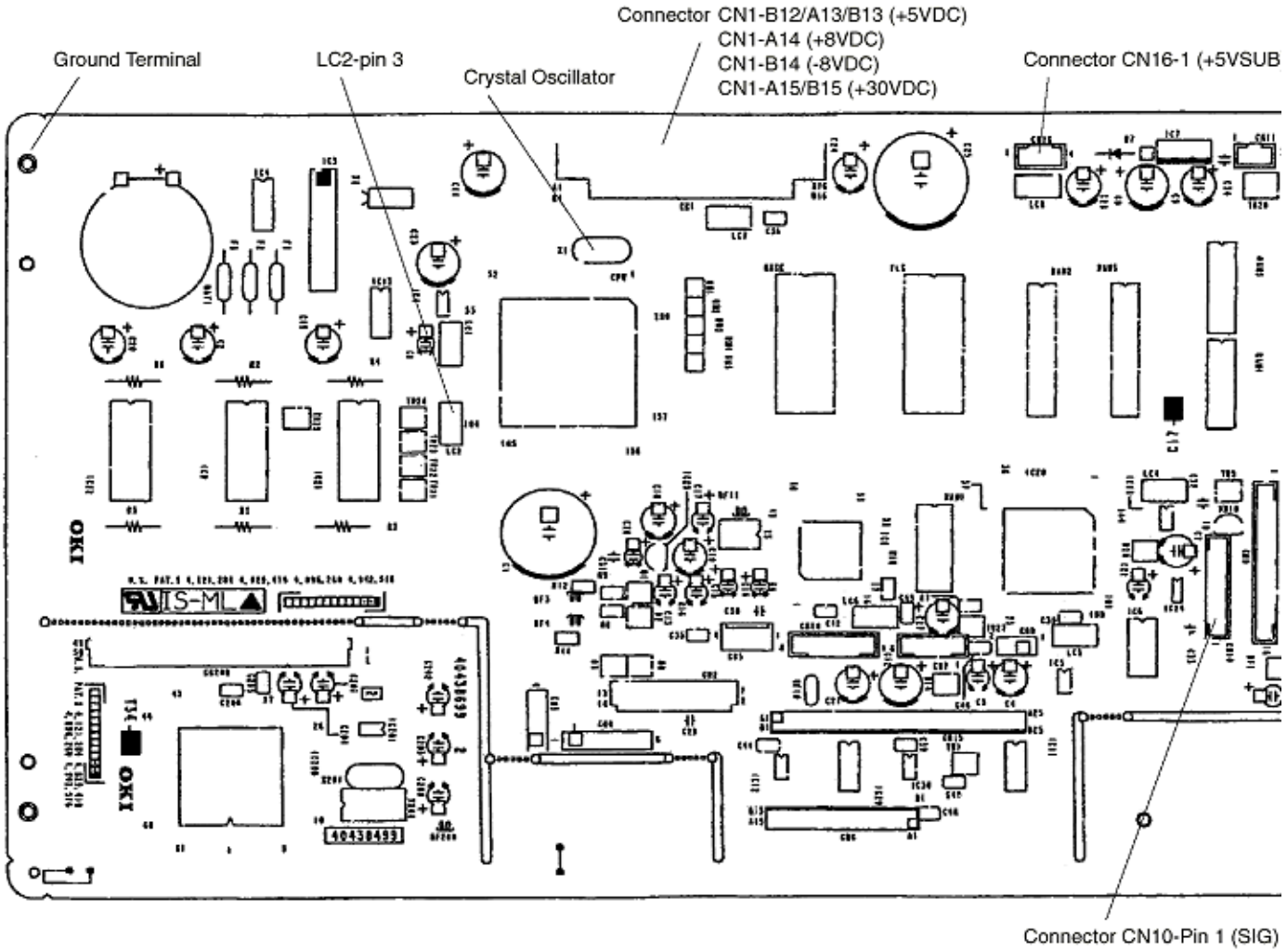


Figure 5.2.1 Measurement Points on E17 Board

6.1 Consumables Replacement

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

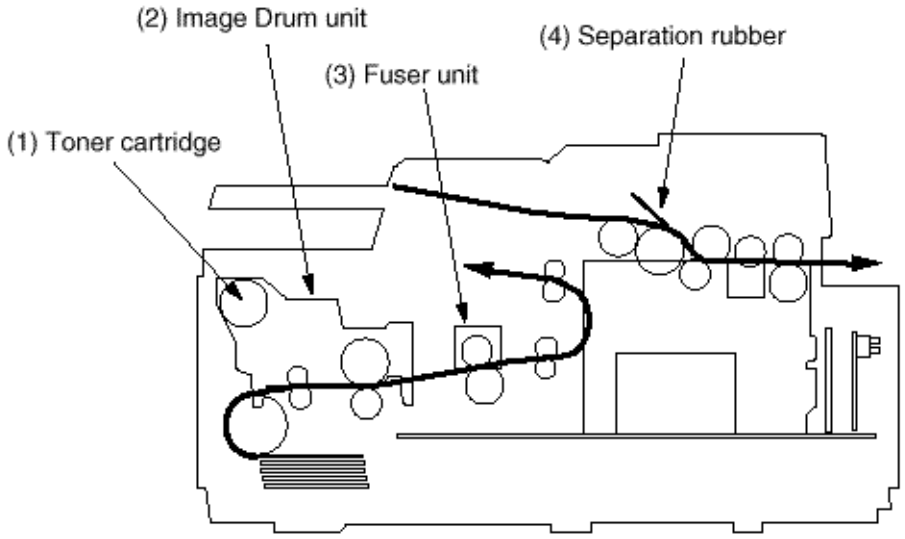
User Replaceable

No.	Part name	Expected Use Before Replacement	Item No. in Ref. Diagram
1	Toner Cartridge	2500 sheets/cartridge (ITU-T document sample No.1) (second or later cartridge to a new I/D Unit) *The first toner cartridge installed in a new image drum unit will not print as many pages as the second or later cartridge.	(1)
2	Image Drum Unit (I/D)	up to 11,000 sheets: per unit	(2)

Service Technician Replaceable

No.	Part name	Expected Use Before Replacement	Item No. in Ref. Diagram
1	Fuser Unit	180,000 sheets	(3)
2	Separation Rubber	The Separation Rubber will not require replacement for at least 30,000 documents fed.	(4)

Replaceable Items Diagram



Others - Reliability

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	Battery	The life of the battery is five years. Battery maintains system time and date during power outage ONLY.
4	Mean Time Before Failure (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.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

6.2 Routine Inspection

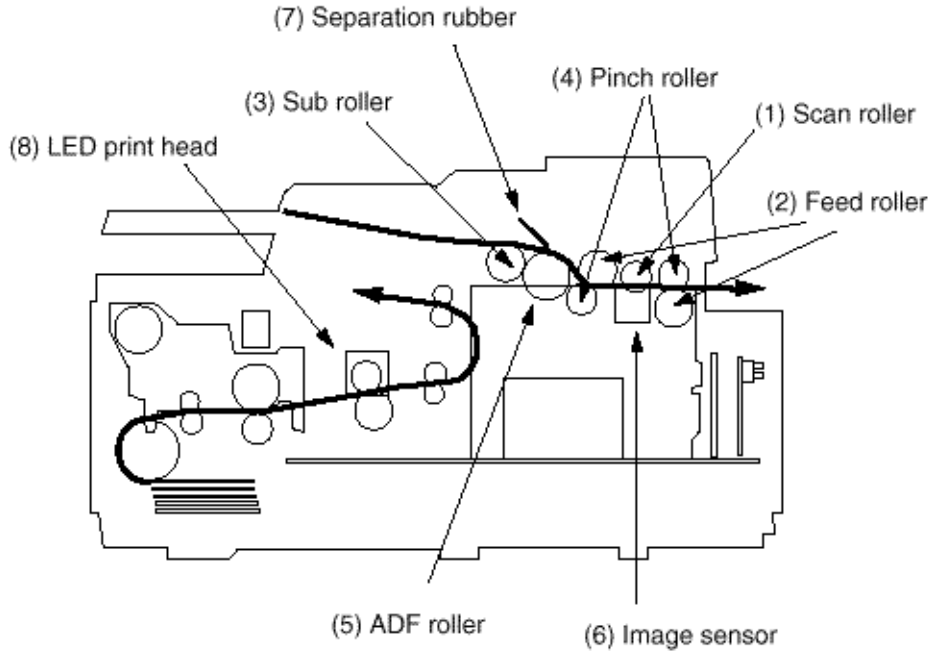
Basically, the routine inspection of the following items is performed about half-yearly (or every one year) after the machine is installed.

The description of routine inspection is shown in the maintenance procedures.

Routine Inspection

No.	Part name	Maintenance Procedure	Item No. in Ref. Diagram
1	Scan Roller	Clean with wet cloth.	(1)
2	Feed Rollers No. 1 and No. 2	Clean with wet cloth. If the surface of these rollers becomes dirty and the dirt causes the transmitted image or the local copied image to expand vertically, perform this cleaning.	(2)
3	Sub Roller	Clean with wet cloth.	(3)
4	Pinch Rollers	Clean with ethyl alcohol.	(4)
5	ADF Roller	Clean with wet cloth. If the surface of this roller becomes dirty and the dirt causes misfeeding of documents, perform this cleaning.	(5)
6	Contact Image Sensor	Check for accumulation of paper dust, etc. Clean with ethyl alcohol if necessary.	(6)
7	Separation Rubber	Clean with wet cloth. If this rubber is worn out, replace it. (once a year)	(7)
8	LED print head	Clean the surface of the LED head by using a soft, lint-free cloth. Move the cloth back and forth across the head several times, using a clean portion of the cloth with each pass.	(8)
9	Printer unit	Clean the inside of the printer unit by using a cloth dampened with cold water.	
10	Lubrication	Apply silicone oil to the following parts: a. Gears (once a year)	
11	Cleaning	Remove any foreign materials that may have fallen into the machine from outside.	

Preventative Maintenance Diagram



6.3 Printer Counter Display/Clear (User)

1. Purpose

A user can clear the image drum counter and also check some of the other counters (such as the print counter, scan counter) by using the <--- key or ---> key.

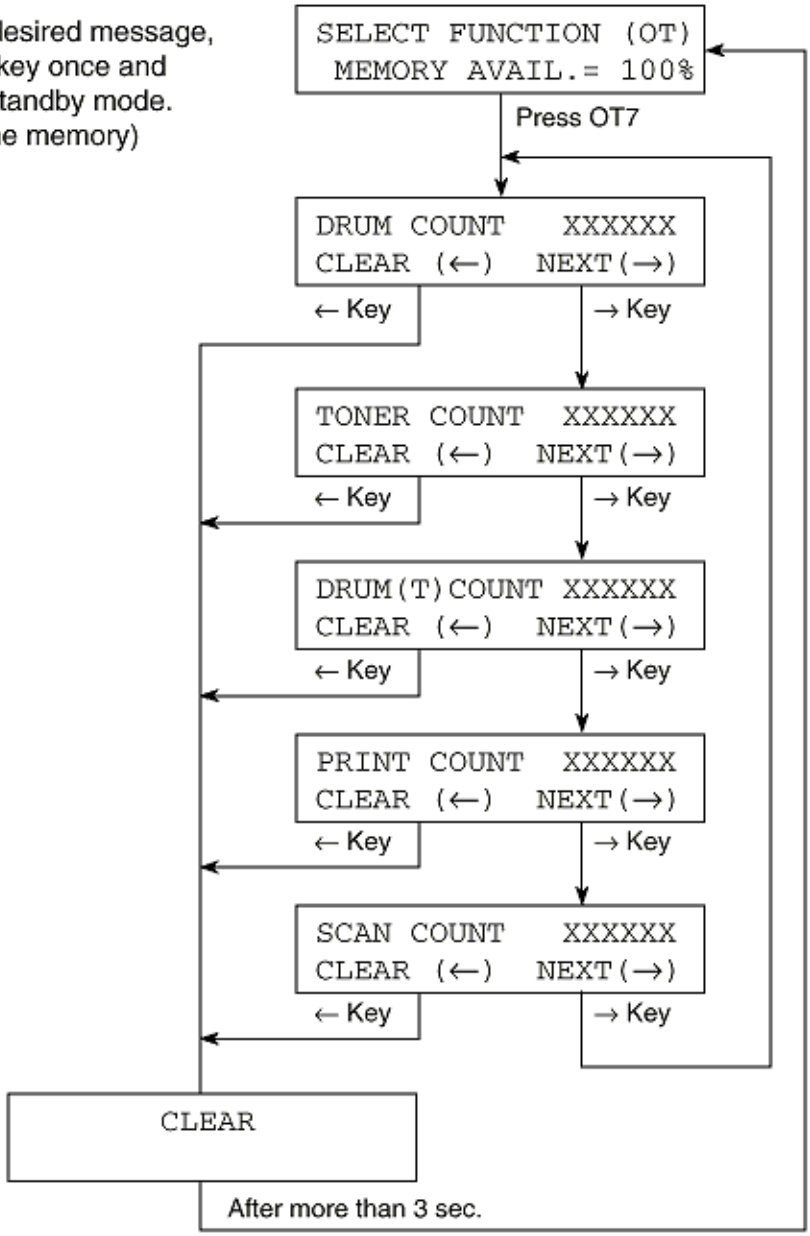
2. Procedure

The following example shows the menu flow when the service bit has been set **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

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

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

Note: DRUM (T) count is used to display the total in-use life of the machine. This counter cannot be cleared.

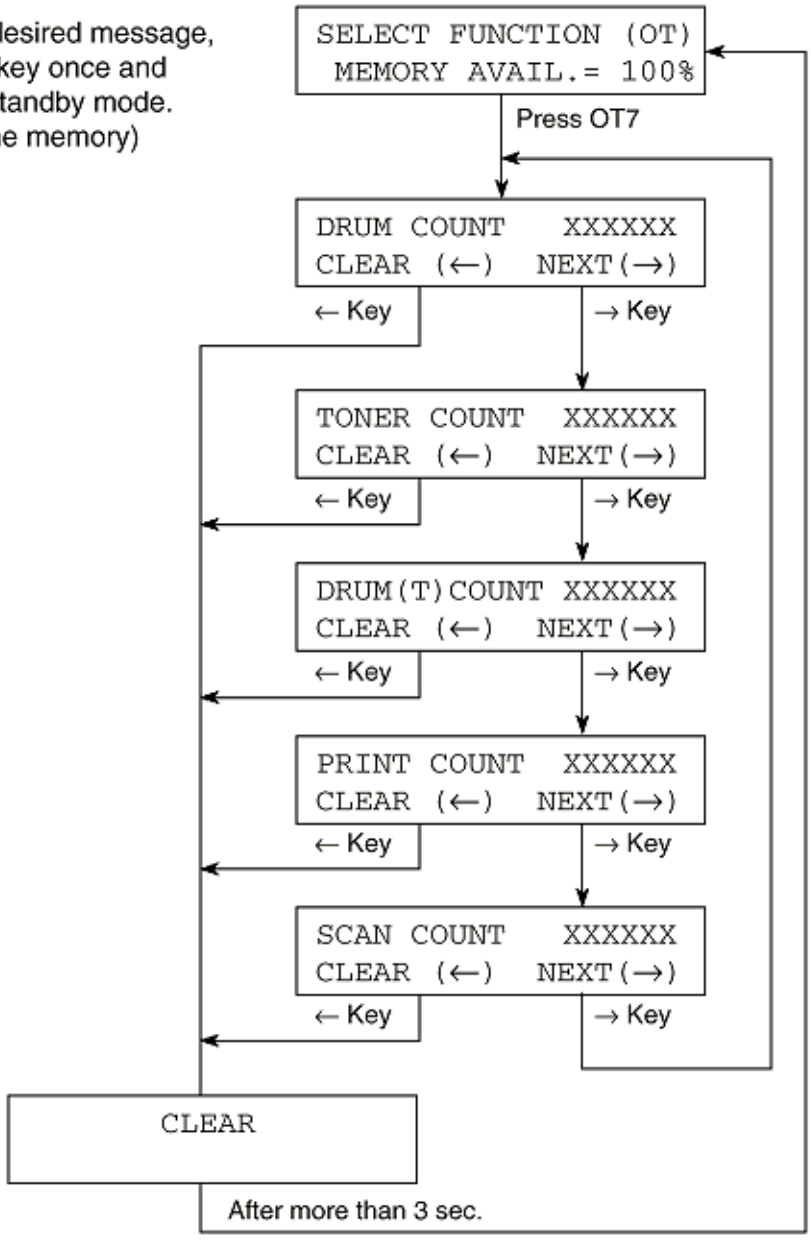
2. Procedure

The following example shows the menu flow 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:



6.5 Self-Diagnosis Test

1. **Purpose**
   To check ROMs, RAMs and printing function.

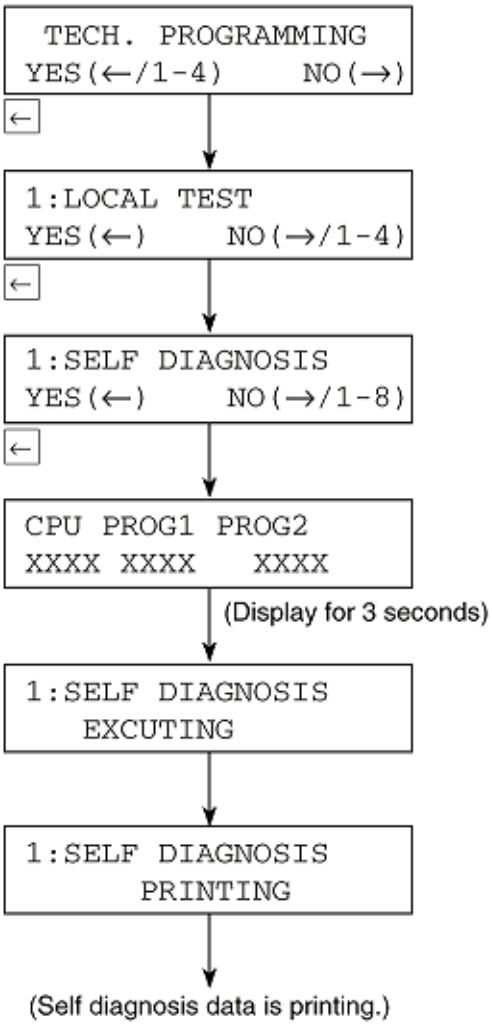
2. **Procedure**

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 4 — 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) PROG1 VERSION

PROG1	In case PROG1 is good.	HASH OK

h) PROG2 VERSION

PROG2	In case PROG2 is good.	HASH OK

i) LANGUAGE VERSION

LANGUAGE	In case LANGUAGE is good.	HASH OK
	In case LANGUAGE is not good.	HASH NG

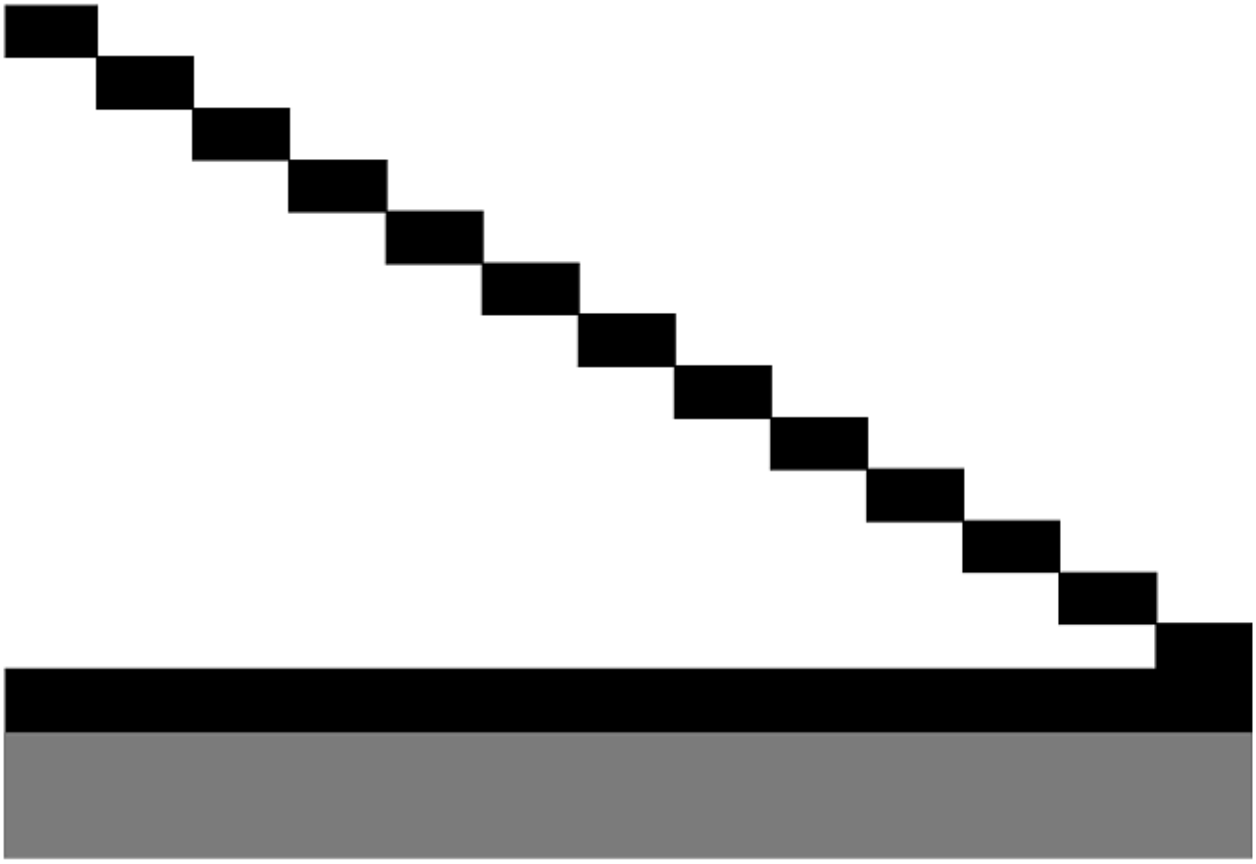
j) DEFAULT VERSION

DEFAULT	In case DEFAULT is good.	HASH OK
	In case DEFAULT is not good.	HASH NG

k) RAM1	In case RAMi is good.	OK
RAM2	In case RAMi is not good.	NG
	("i" is RAM's number)	
l) OPT-RAM1	In case OPT-RAM1 is good.	OK
	In case OPT-RAM1 is not good.	NG
m) OPT-IF	In case OPT-IF is good.	PARALLEL
	In case OPT-I/F is not good.	(ALL BLANK)

- Figure 6.5.1 shows a printed sample.

Self-Diagnosis Test Sample



```
    CPU-ROM   VERSION   Z208
              HASH      OK   6FCF
    CPU-RAM             OK
    PROG1     VERSION   HB0
    PROG1     HASH      OK   C5CA
    PROG2     VERSION   JB0
    PROG2     HASH      OK   8ABF

    LANGUAGE  VERSION   EFHH
              HASH      OK   1292
    DEFAULT   VERSION   GF00
              HASH      OK   9B54
*1  RAM1                1M   OK
*2  RAM2                OK
*3  OPT-RAM1            1M   OK
*3  OPT-I/F             PARALLEL
    DEFAULT TYPE        01   12/01/1998   18:30
```

*1 marked item is shown for condition of all RAM except EXCEED RAM.
*2 marked item is shown to SRAM for EXCEED.
*3 marked items are option.

6.6 Sensor Calibration Test

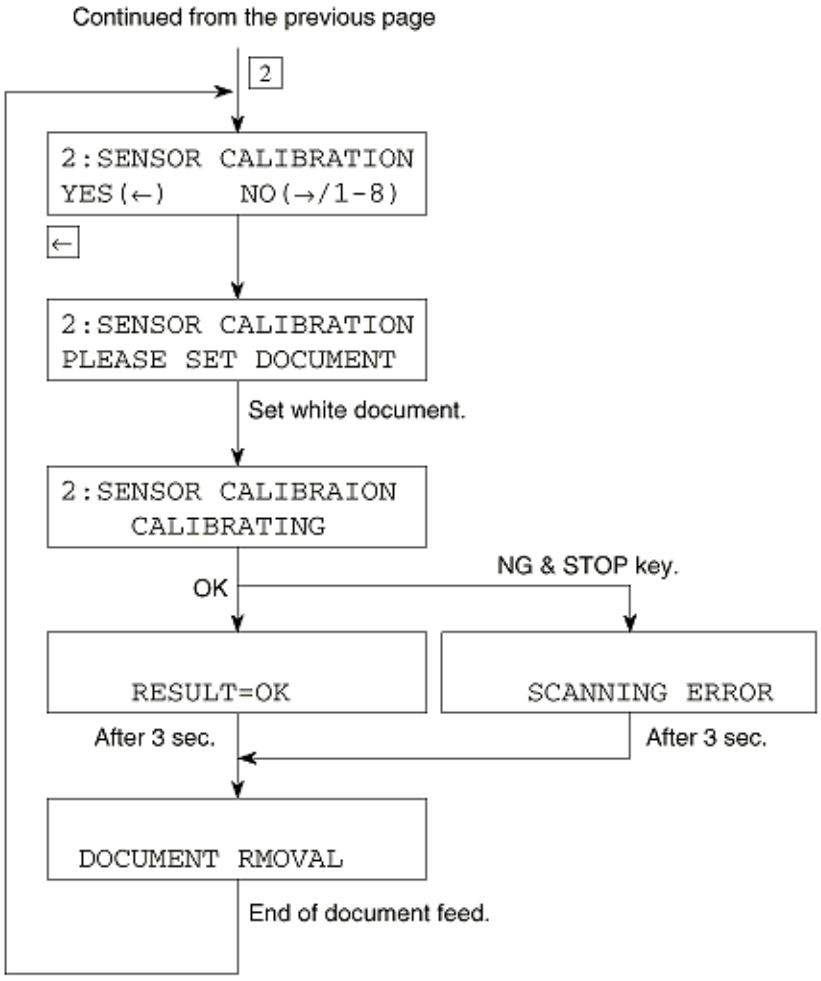
1. **Purpose**
   To adjust the linearity of output levels of contact image sensor.

Operations:	The display shows:
• 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)	TECH. PROGRAMMING YES(←/1-4) NO(→)
• Press ← key.	1:LOCAL TEST YES(←) NO(→/1-4)
• Press ← key.	1:SELF DAIGNOSIS YES(←) NO(→/1-8)
	To SENSOR CALIBRATION

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.

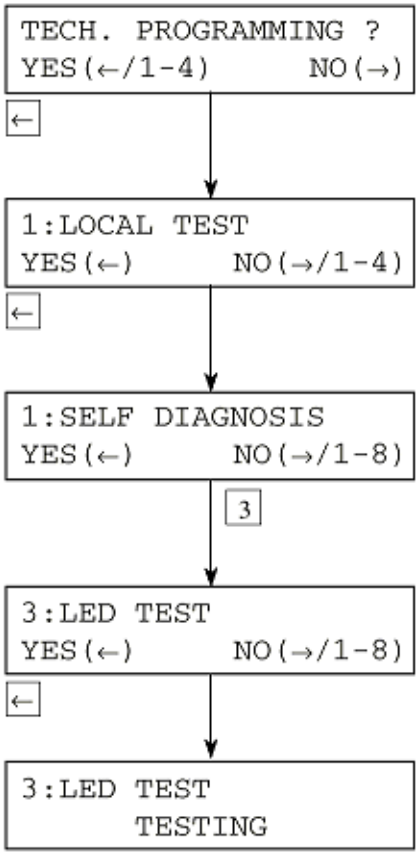
6.7 LED Test

1. **Purpose**
   To check all LEDs on operation panel by lighting.

2. **Procedure**

Operations: **The display shows:**

- 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)

→ ALARM → DARK → NORMAL → LIGHT → STD → FINE →
all LED off ← all LED on ← PHOTO ← EX.FINE ←

1 second interval.

- After the checking, press STOP key.

6.8 Tone Send Test

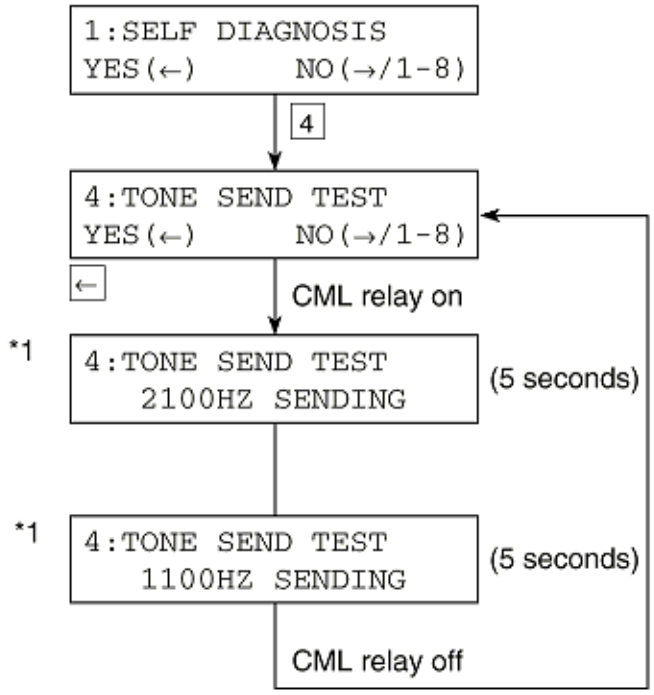
1. **Purpose**
   To send the G3 tonal frequencies to the line.

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.

6.9 High-speed Modem Send Test

1. Purpose

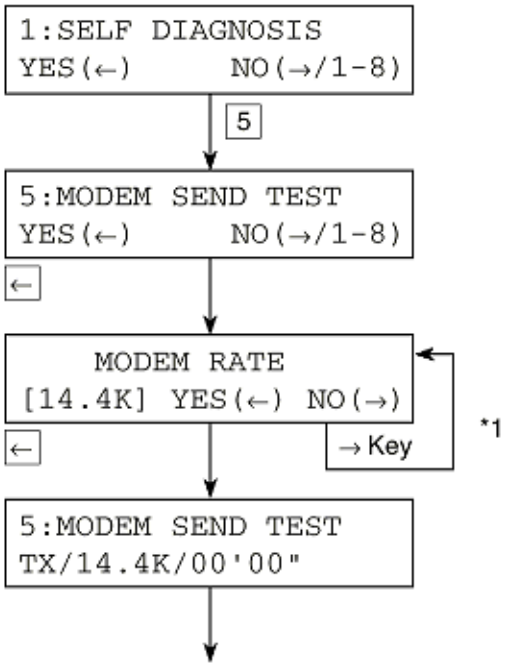
To check the telephone line quality in combination with a remote station programmed to the high-speed modem receive test mode.

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:

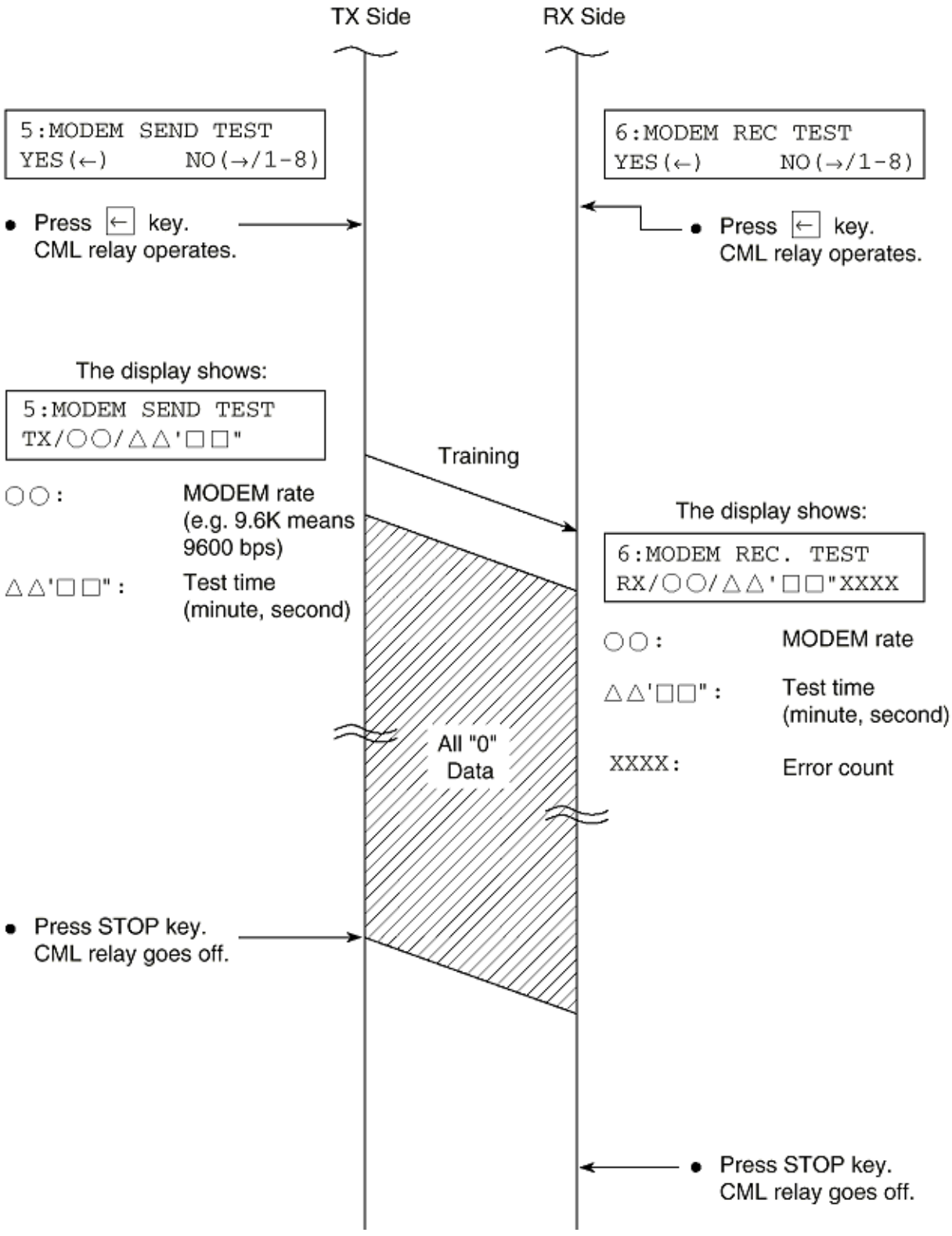


(For detail, see Fig. 6.9.1)

*1: → 33.6K (Option) → 28.8K (Option) → 14.4K → 12.0K → 9.6KT (V.17) → 7.2KT (V.17) →
← 0.3K ← 2.4K ← 4.8K ← 7.2K (V.29) ← 9.6K (V.29) ←

33.6K and 28.8K are skipped for the MODEM without 33.6/28.8K bps function.

High-speed Modem Send and Receive Test Diagram


TX Side
RX Side
5:MODEM SEND TEST
YES(←) NO(→/1-8)
6:MODEM REC TEST
YES(←) NO(→/1-8)
• Press ← key.
CML relay operates.
• Press ← key.
CML relay operates.
The display shows:
5:MODEM SEND TEST
TX/○○/△△'□□"
Training
○○: MODEM rate
(e.g. 9.6K means
9600 bps)
△△'□□": Test time
(minute, second)
The display shows:
6:MODEM REC. TEST
RX/○○/△△'□□"XXXX
○○: MODEM rate
△△'□□": Test time
(minute, second)
XXXX: Error count
All "0"
Data
• Press STOP key.
CML relay goes off.
• Press STOP key.
CML relay goes off.

6.10 High-speed Modem Receive Test

1. Purpose

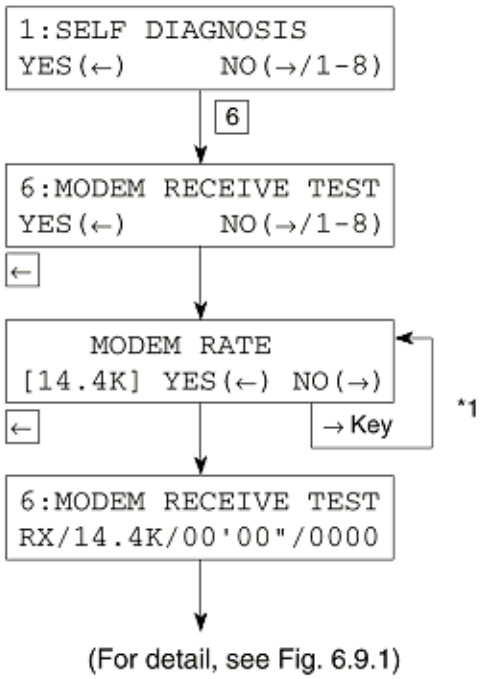
To check the telephone line quality in combination with a remote station programmed to the high-speed modem send test mode.

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:



(For detail, see Fig. 6.9.1)

*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

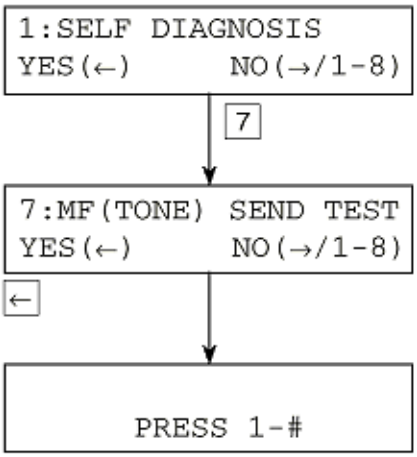
To send the multi-frequencies of tone dialing to the line.

2. Procedure

Operations:

The display shows:

- 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

6.12 Tone (TEL/FAX)

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

2. **Procedure**

Operations:	The display shows:
• 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)	1:SELF DIAGNOSIS YES(←) NO(→/1-8)
• Enter 8.	8 8:TONE(TEL/FAX) TEST YES(←) NO(→/1-8)
• Press ← key.	← 8:TONE(TEL/FAX) TEST TONE SENDING
• After the test, press STOP key.	

6.13 Protocol Data Dump

1. **Purpose**
   To analyze the transmitted/received G3 protocol signals.

2. **Procedure**

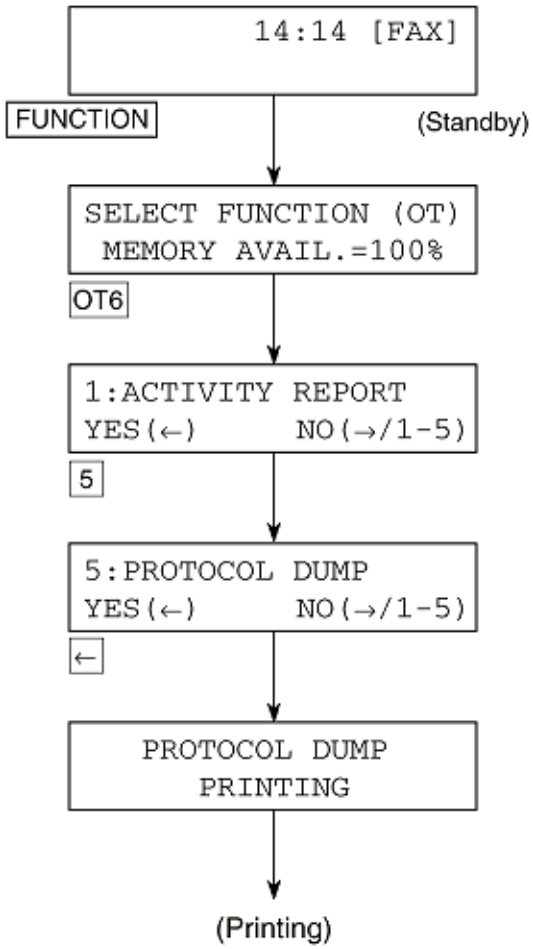
   - Manual print-out of the last communication.

   (a) Manual print-out

Operations:

- Press SELECT FUNCTION key, provided that the service bit is ON.
- Press one-touch key No.6
- Enter 5.
- Press ← key.

The display shows:



Dump data description

1) Data sample

PROTOCOL DUMP

07/01/98 09:21
ID=OKI SHIBAURA

DATE	TIME	S,R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
07/01	09:16	00'46"	OKI HONJO	CALLING	01	OK	0000

FCF

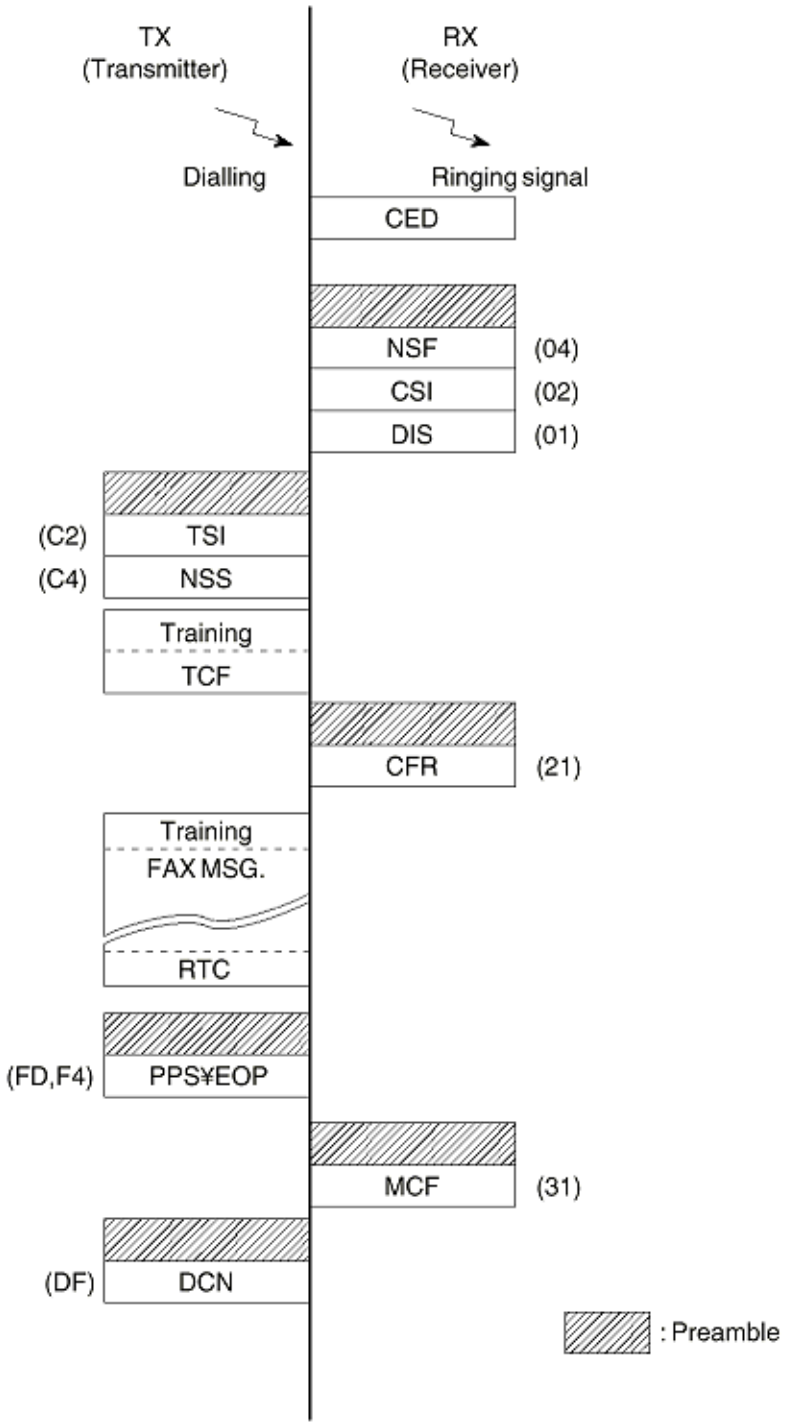
TX	C2 C4	FD F4	DF
RX	04 02 01	21	31

TX	
RX	

TX
DIS
00 00 00 00 00 00 00
DTC
00 00 00 00 00 00 00
DCS
00 00 00 00 00 00 00 00 00
NSF
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
NSS
FF C8 C4 00 00 84 80 30 40 E4 10 40 B8 39 20 0C 0C 0C 0C 30 82 4A AA 82 42 92 12 CA 04 92 D2 F2
80 40 80 10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00
NSC
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00
CM
JM
00 00 00 00
00 00 00 00
RX
DIS
FF CB 01 00 73 17 22 00 00 00 00 00 00 00 00 00 00 00 00
DTC
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
DCS
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
NSF
FF C0 04 00 00 84 80 08 40 F4 10 40 F9 7D 20 0C 0C 0C 0C 90 F2 52 72 F2 12 04 92 D2 F2 80 F0 80
40 80 50 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00
NSS
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00
NSC
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00
CM
JM
00 00 00 00 00 00
00 00 00 00 00 00
V 34
SYMBOL RATE(SPS) = 3429
DATA SIGNALLING RATE(BPS) = 228
RSEULT 00
TX
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PX
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
RECEIVED CSI/CIG/TSI
FF C0 02 0C 0C 2C AC 04 4C 4C 04 AC 9C 2C 0C 04 04 04 04 04 04 04 04
TRANSMITTED CSI/CIG/TSI
FF C0 C2 2C CC 4C 8C 04 6C EC 2C AC 04 CC 0C 04 04 04 04 04 04 04 04

Data Analysis

The printed out data permits to analyze G3 facsimile communication protocol signals between two facsimile machines. Below is the result of an analysis on the printed data (referring to the Sample Protocol Data Dump).


TX
(Transmitter)
RX
(Receiver)
Dialling
Ringing signal
CED
NSF
(04)
CSI
(02)
DIS
(01)
(C2)
TSI
(C4)
NSS
Training
TCF
CFR
(21)
Training
FAX MSG.
RTC
(FD,F4)
PPS¥EOP
MCF
(31)
(DF)
DCN
: Preamble

FCF - Facsimile Control Field Conversion Table

This table 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.

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
DTC	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
EPO	74 F4	End of Procedure
RTP	33 B3	Retain 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 F9	Procedure Interrupt-EOM
PRI-EOP	7C FC	Procedure Interrupt-EOP
DCN	5F DF	Disconnect
ECM		Error Correction Mode
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	Response to End of Retransmission
FCD	60	Facsimile Coded Data
PPS	7D FD	Partial Page Signal
PPR	3D BD	Partial Page Request
RCP	61	Return to control for Partial Page
RNR	37 B7	Receiver not Ready
RR	76 F6	Receiver Ready

6.14 System Reset

1. Purpose

To clear or initialize the following data:
(a) Location data
(b) Configuration data (default)

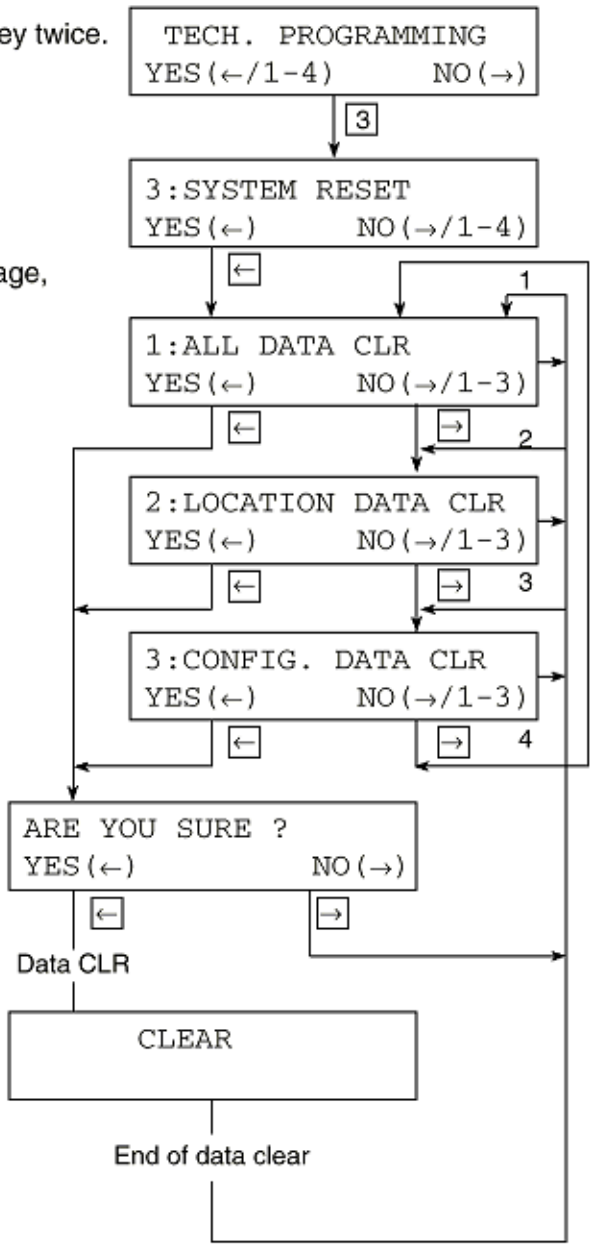
2. Procedure

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 is printed on the Activity Report to document the result of each communication.

2) The activity report prints the service code "0000", when a communication terminates normally.

3) The activity report prints one of the service codes "90XX", when a communication terminates abnormally.

4) In addition to service codes "90XX", the codes listed below also identify errors.

-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

Service Codes Table

Code	Description
0000	Successful end of communication
1080	STOP key 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	TCF 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 cannot perform confidential reception
21B1	Transmitter tried to transmit by broadcast initiate function, but the remote fax does not have broadcast capability
21C0	In Closed Network setting, TSI/CIG/CSI is either not received, or, if received, is not authorized
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, it is not authorized
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 to 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 occurred during Confidential Reception
39C0	DECODER hardware error (cannot reproduce picture)
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 RNR
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 single 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:

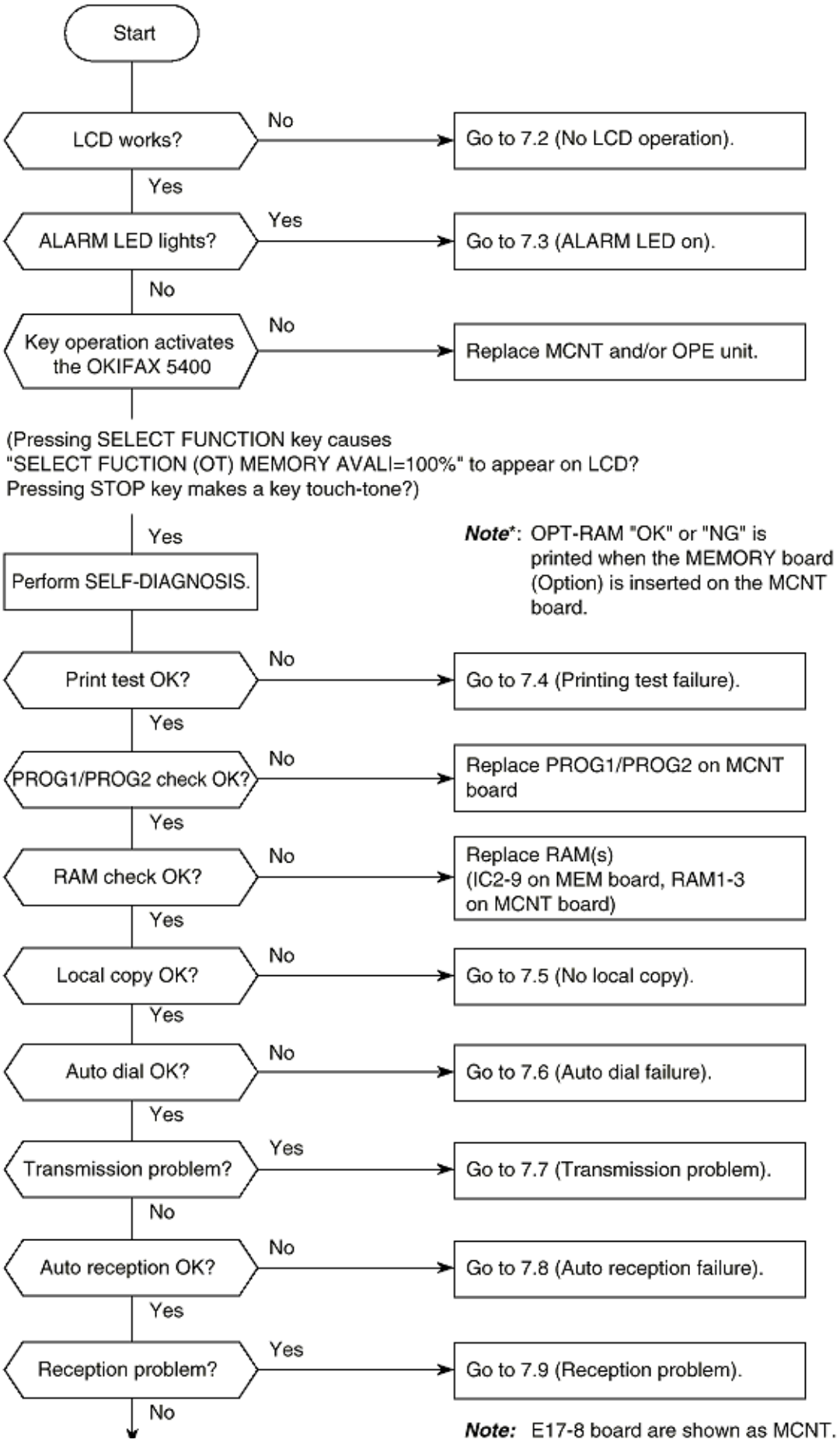
(A) Troubleshooting flow charts related to general operations

(B) Troubleshooting flow charts by test operations

(C) Troubleshooting flow charts placing an emphasis on mechanical portions

Section No.	Name of Flow Chart	(A)	(B)	(C)
7.1.1	Overall troubleshooting flow chart	A	B	
7.1.2	No LCD operation	A		
7.1.3	ALARM LED on	A		
7.1.4	Printing test failure	A	B	
7.1.5	No local copy	A	B	
7.1.6	Auto dial failure	A		
7.1.7	Transmission problem	A		
7.1.8	Auto reception failure	A		
7.1.9	Reception problem	A		
7.1.10	Sensor calibration test		B	
7.1.11	LED test		B	
7.1.12	Tone send test		B	
7.1.13	High-speed modem test		B	
7.1.14	MF (Tone) send test		B	
7.1.15	Tone (TEL/FAX) send test		B	
7.1.16	No acoustic line monitor	A		
7.1.17	Power supply unit	A		
7.1.18	No document feeding			C
7.1.19	Multiple document feeding			C
7.1.20	Document skew			C
7.1.21	Document jam			C
7.1.22	Printer unit			

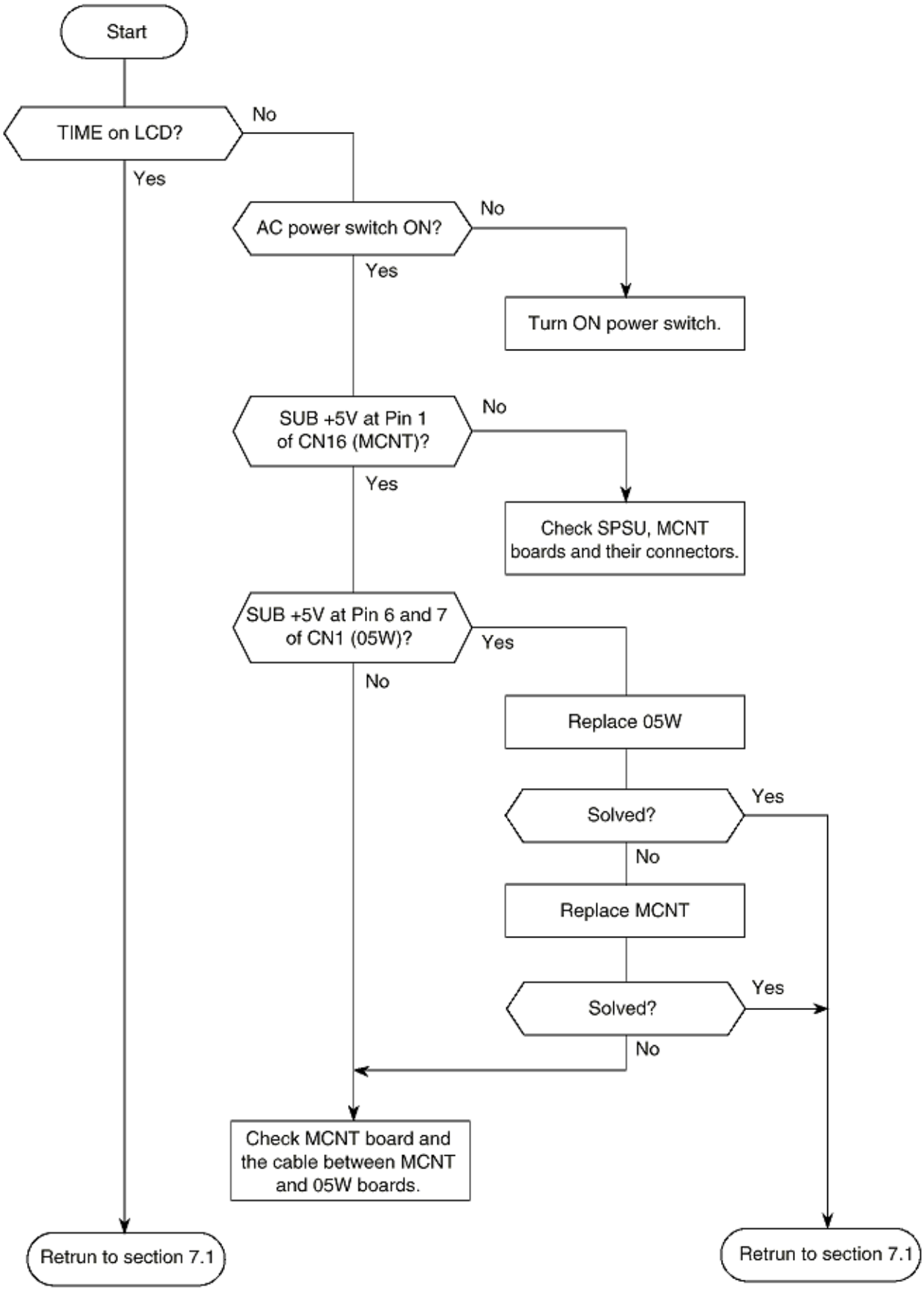
7.1 Overall Troubleshooting Flow Chart



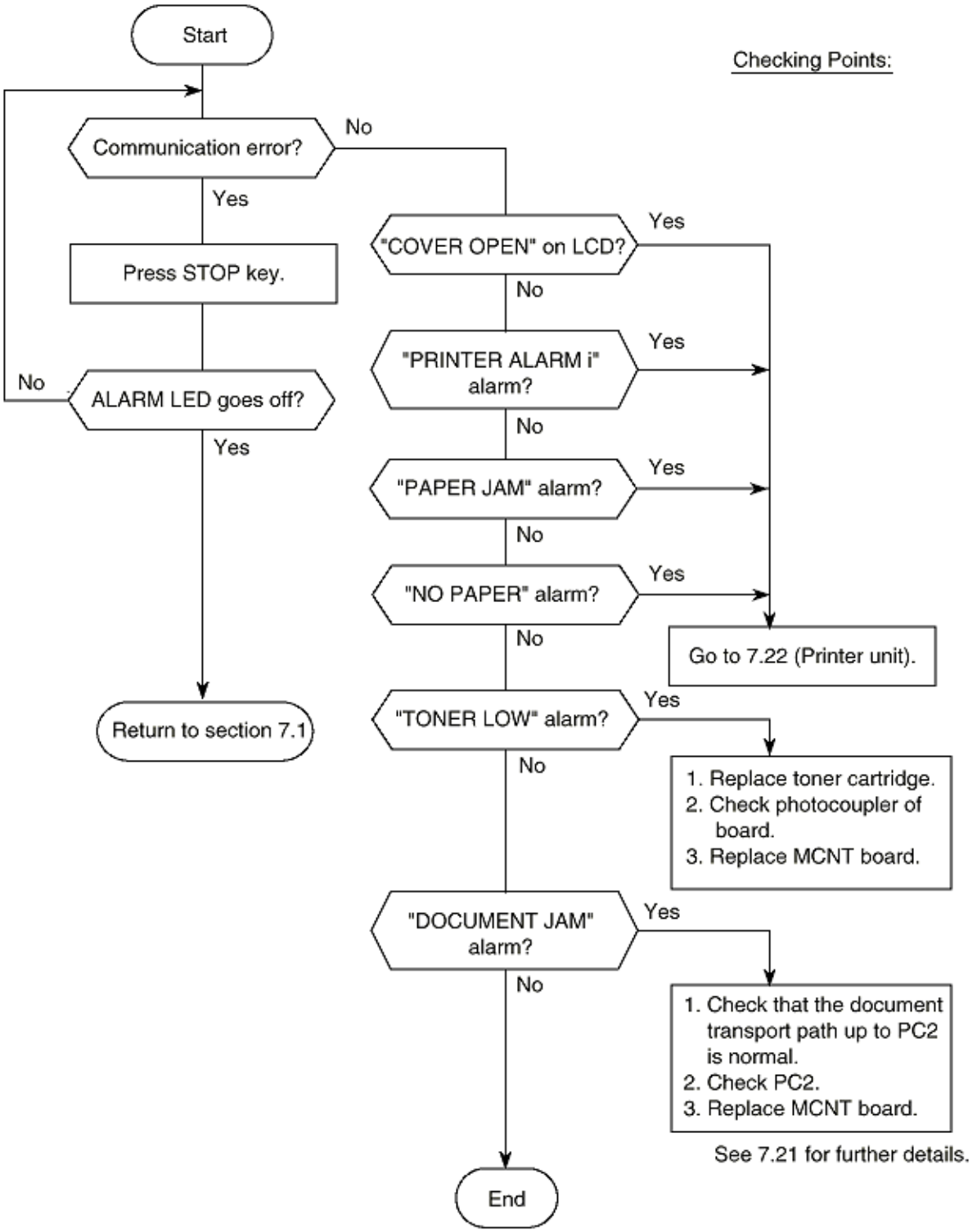
Note:* OPT-RAM "OK" or "NG" is printed when the MEMORY board (Option) is inserted on the MCNT board.

Note: E17-8 board are shown as MCNT.

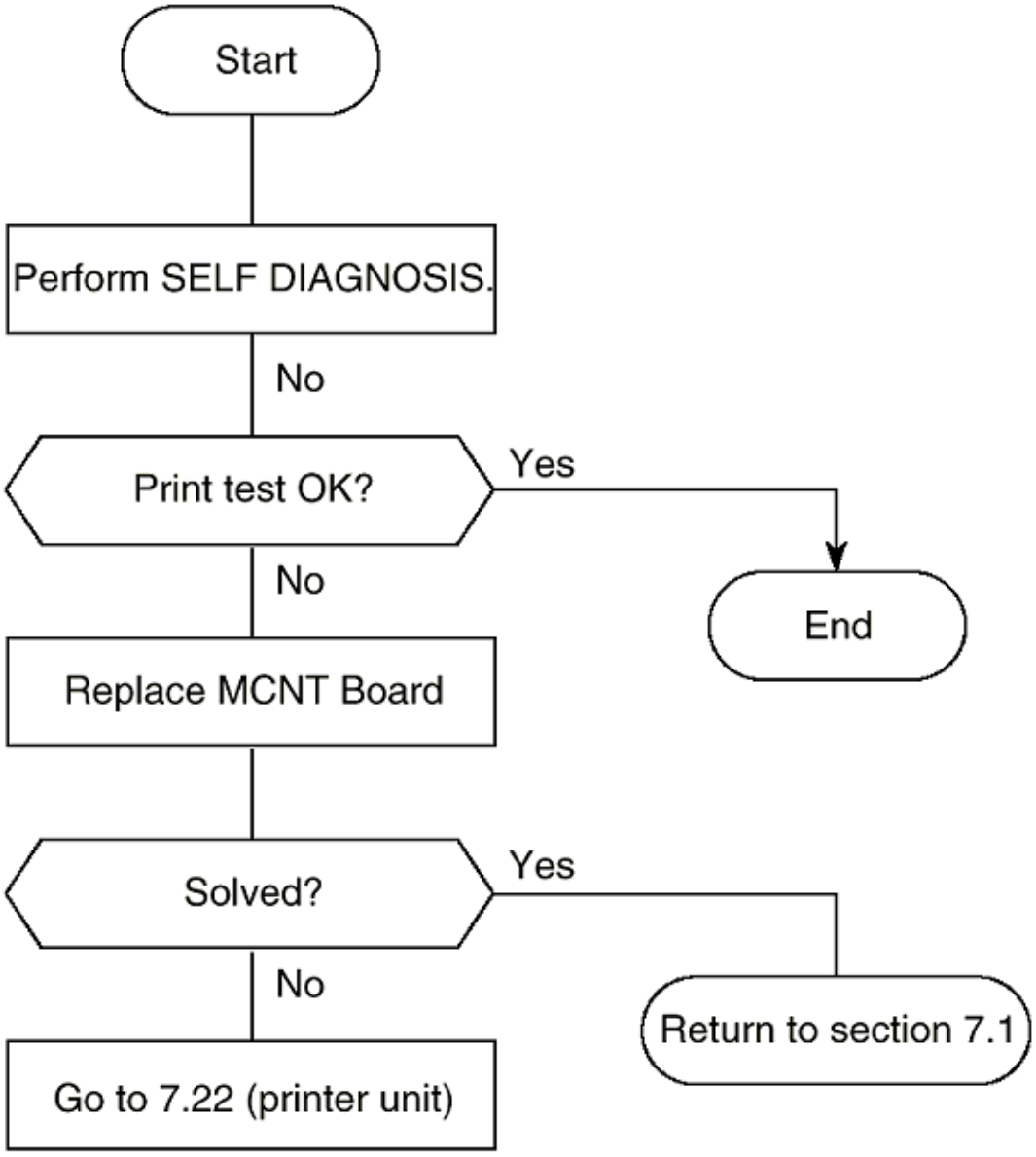
7.2 No LCD Operation


Start
TIME on LCD?
No
Yes
AC power switch ON?
No
Yes
Turn ON power switch.
SUB +5V at Pin 1 of CN16 (MCNT)?
No
Yes
Check SPSU, MCNT boards and their connectors.
SUB +5V at Pin 6 and 7 of CN1 (05W)?
Yes
No
Replace 05W
Solved?
Yes
No
Replace MCNT
Solved?
Yes
No
Check MCNT board and the cable between MCNT and 05W boards.
Retrun to section 7.1
Retrun to section 7.1

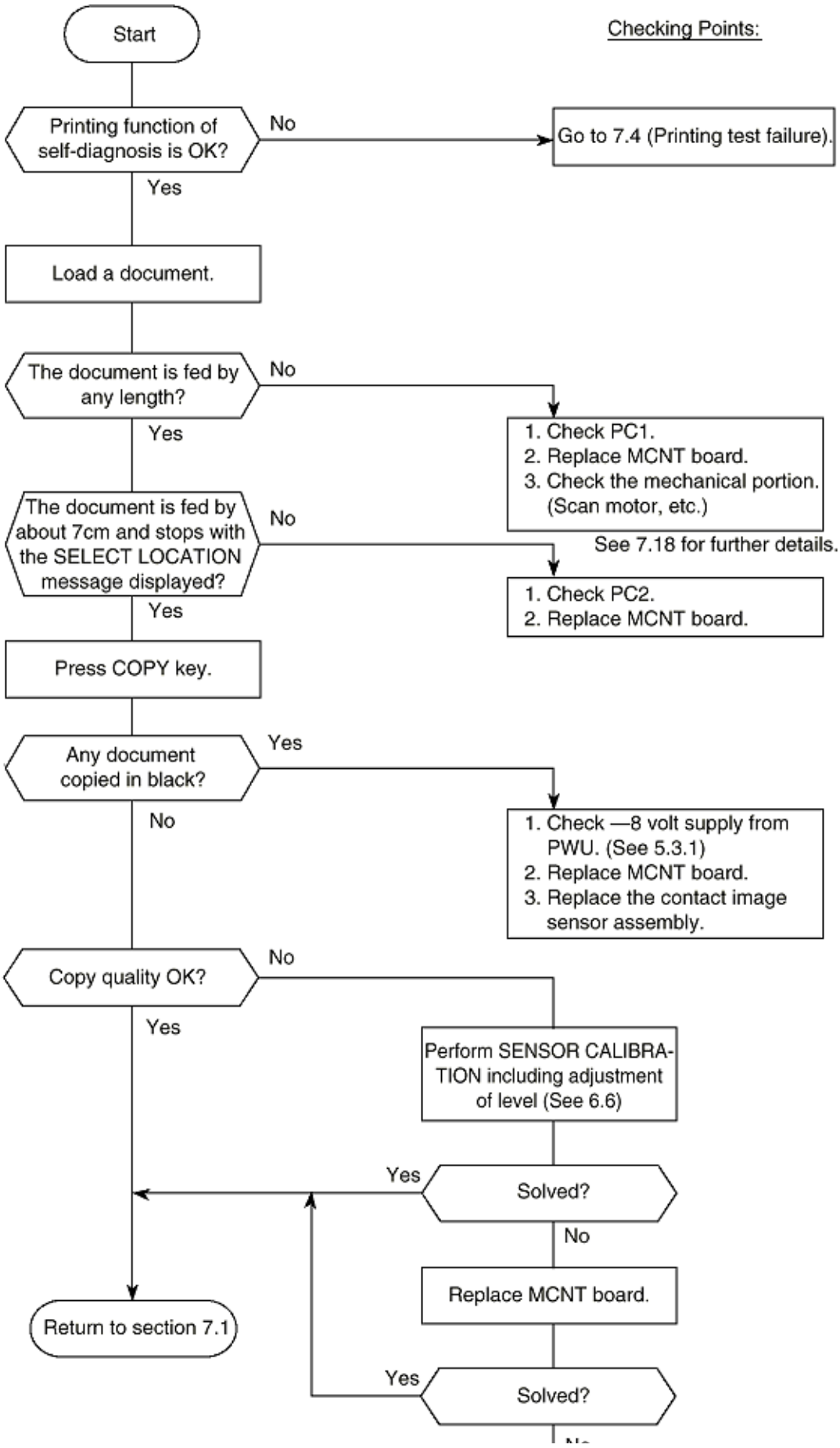
7.3 Alarm LED On



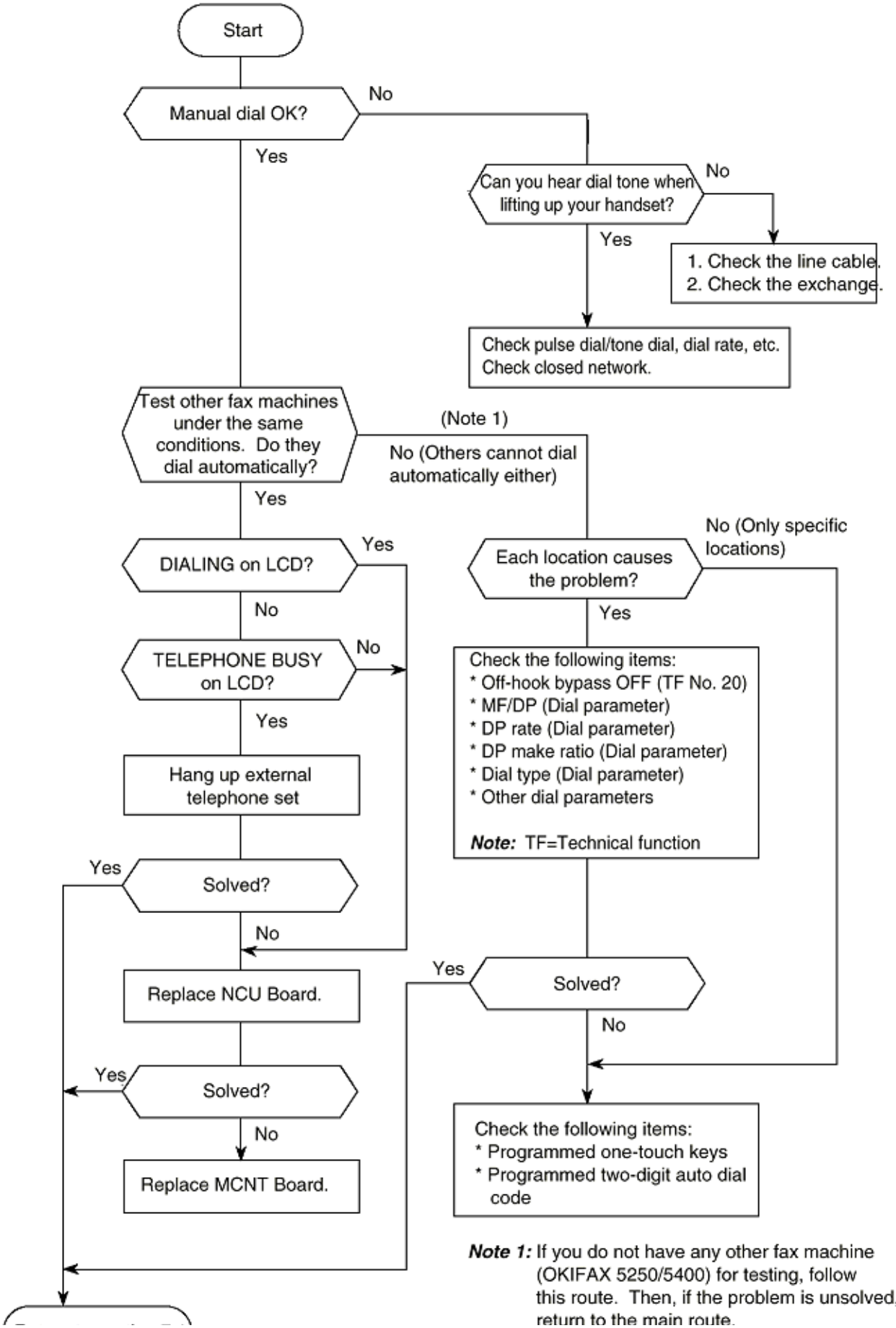
Note*: "PRINTER ALARM i" will be shown as follows:
PRINTER ALARM 2 to PRINTER ALARM 4.


Start
Perform SELF DIAGNOSIS.
No
Print test OK?
Yes
End
No
Replace MCNT Board
Solved?
Yes
Return to section 7.1
No
Go to 7.22 (printer unit)

7.5 No Local Copy


Start
Checking Points:
Printing function of self-diagnosis is OK?
No
Go to 7.4 (Printing test failure).
Yes
Load a document.
The document is fed by any length?
No
1. Check PC1.
2. Replace MCNT board.
3. Check the mechanical portion. (Scan motor, etc.)
See 7.18 for further details.
Yes
The document is fed by about 7cm and stops with the SELECT LOCATION message displayed?
No
1. Check PC2.
2. Replace MCNT board.
Yes
Press COPY key.
Any document copied in black?
Yes
1. Check —8 volt supply from PWU. (See 5.3.1)
2. Replace MCNT board.
3. Replace the contact image sensor assembly.
No
Copy quality OK?
No
Yes
Perform SENSOR CALIBRATION including adjustment of level (See 6.6)
Yes
Solved?
No
Replace MCNT board.
Return to section 7.1
Yes
Solved?

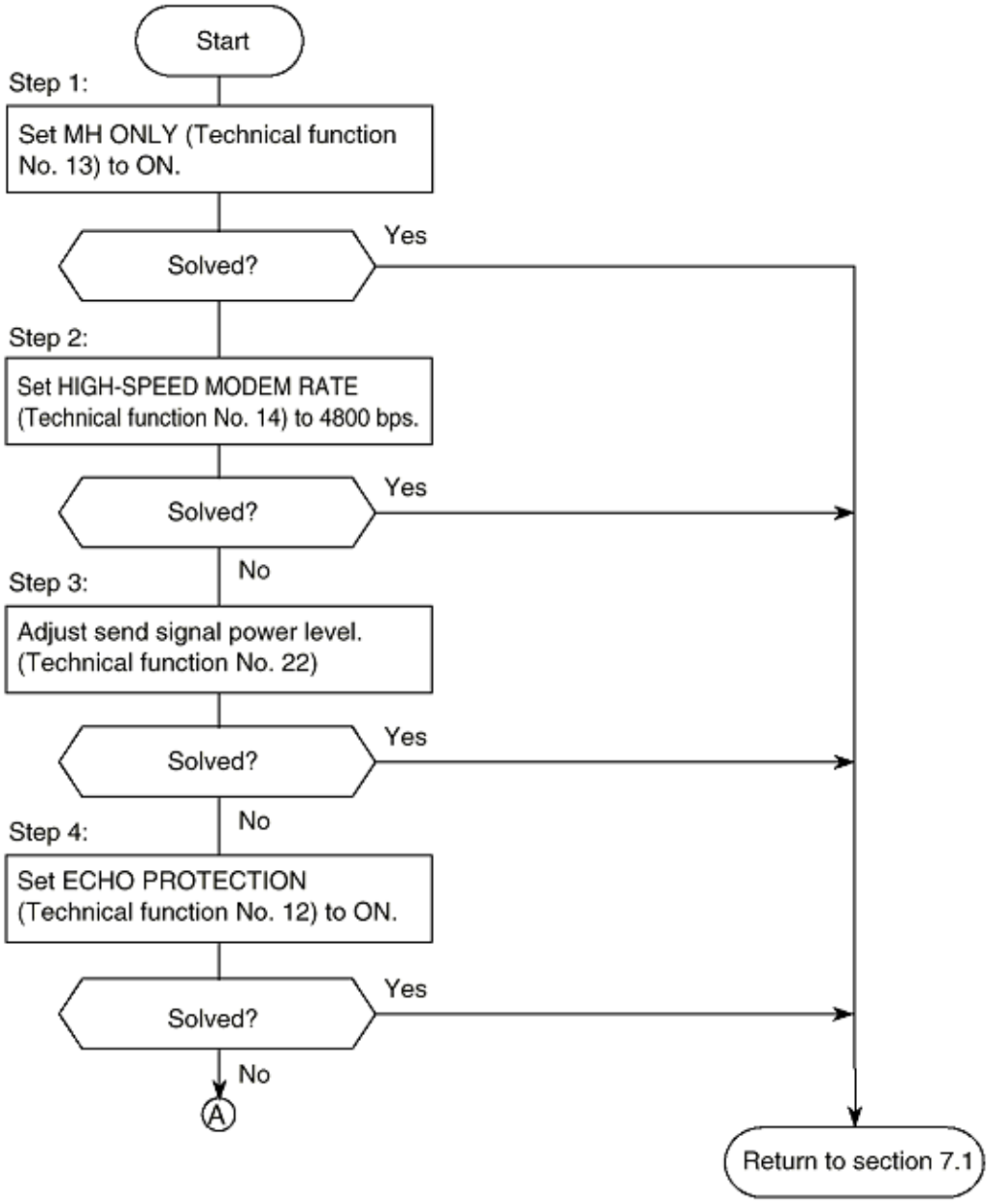
7.6 Auto Dial Failure

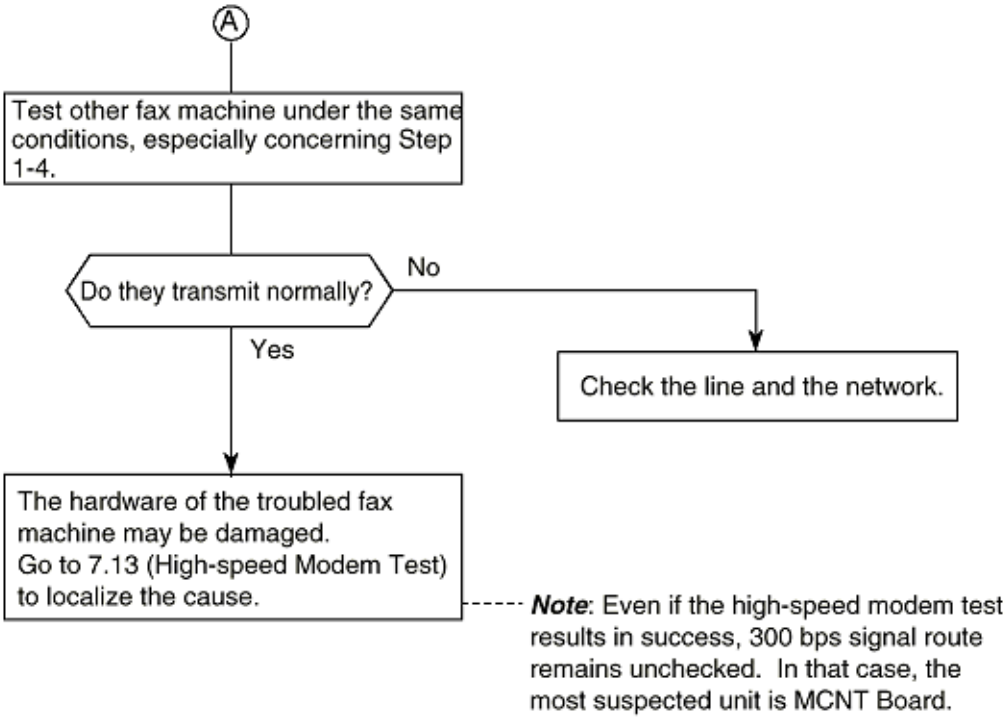


Note 1: If you do not have any other fax machine (OKIFAX 5250/5400) for testing, follow this route. Then, if the problem is unsolved, return to the main route.

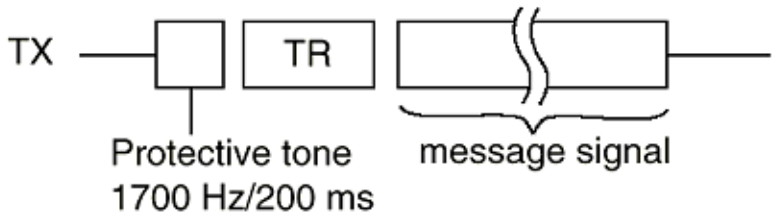
7.7 Transmission Problem

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

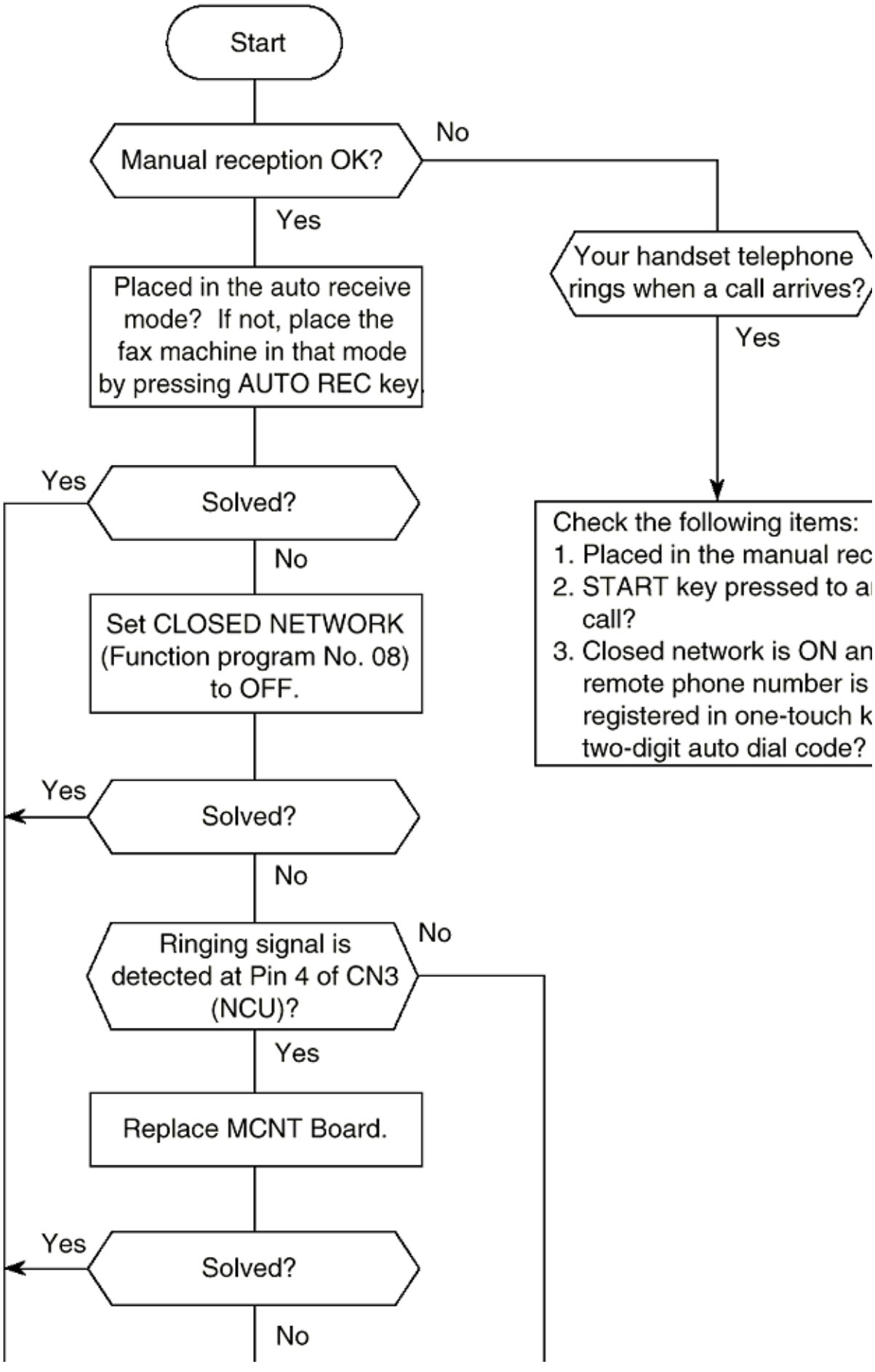




Description: Protective tone is 1700 Hz/200 ms. This signal is added to training signal to protect the training signal against echo as follows.

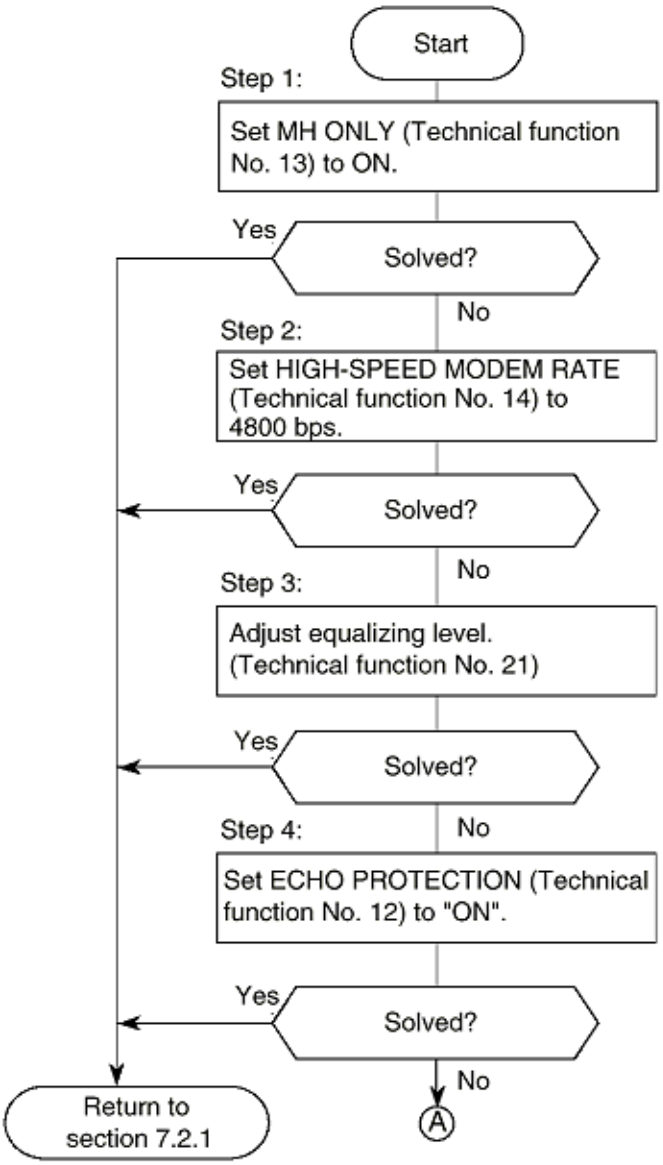


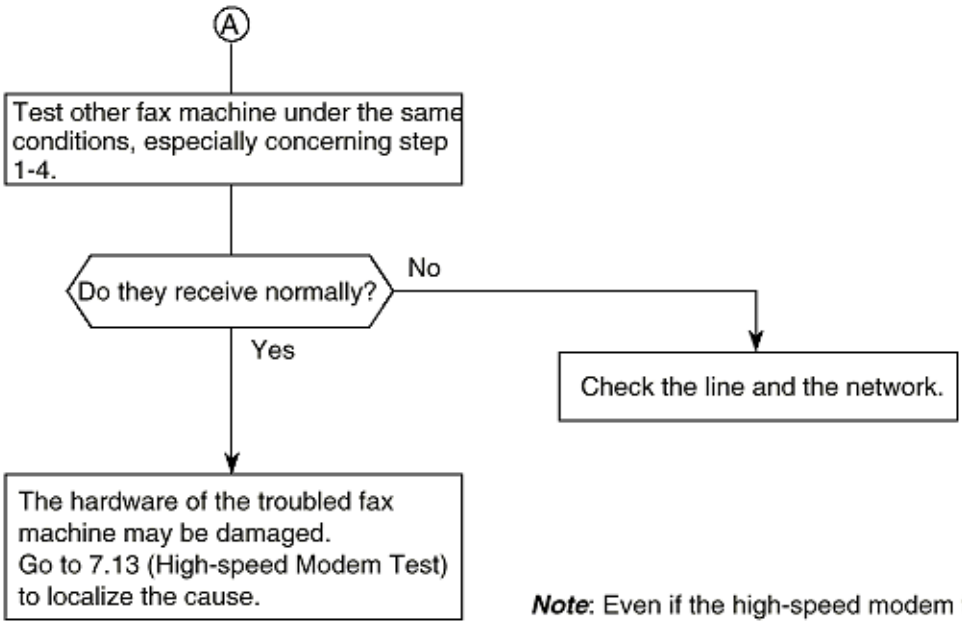
7.8 Auto Reception Failure


Start
Manual reception OK?
No
Yes
Your handset telephone rings when a call arrives?
Yes
Placed in the auto receive mode? If not, place the fax machine in that mode by pressing AUTO REC key.
Yes
Solved?
No
Check the following items:
1. Placed in the manual rec
2. START key pressed to a
call?
3. Closed network is ON an
remote phone number is
registered in one-touch k
two-digit auto dial code?
Set CLOSED NETWORK (Function program No. 08) to OFF.
Yes
Solved?
No
Ringing signal is detected at Pin 4 of CN3 (NCU)?
No
Yes
Replace MCNT Board.
Yes
Solved?
No

7.9 Reception Problem

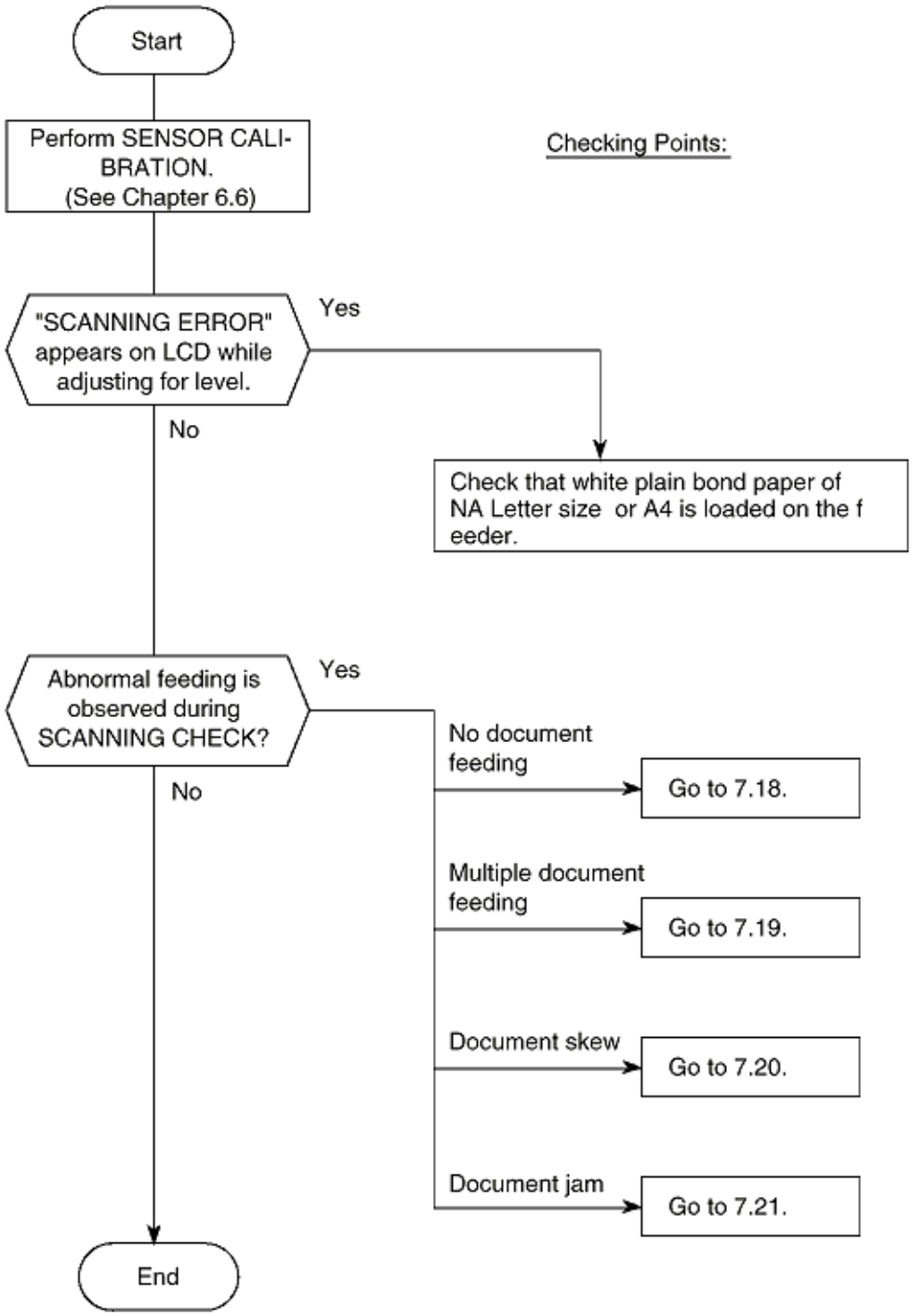
This section explains how to localize the cause of problems occurred after completion of connection with a remote station.



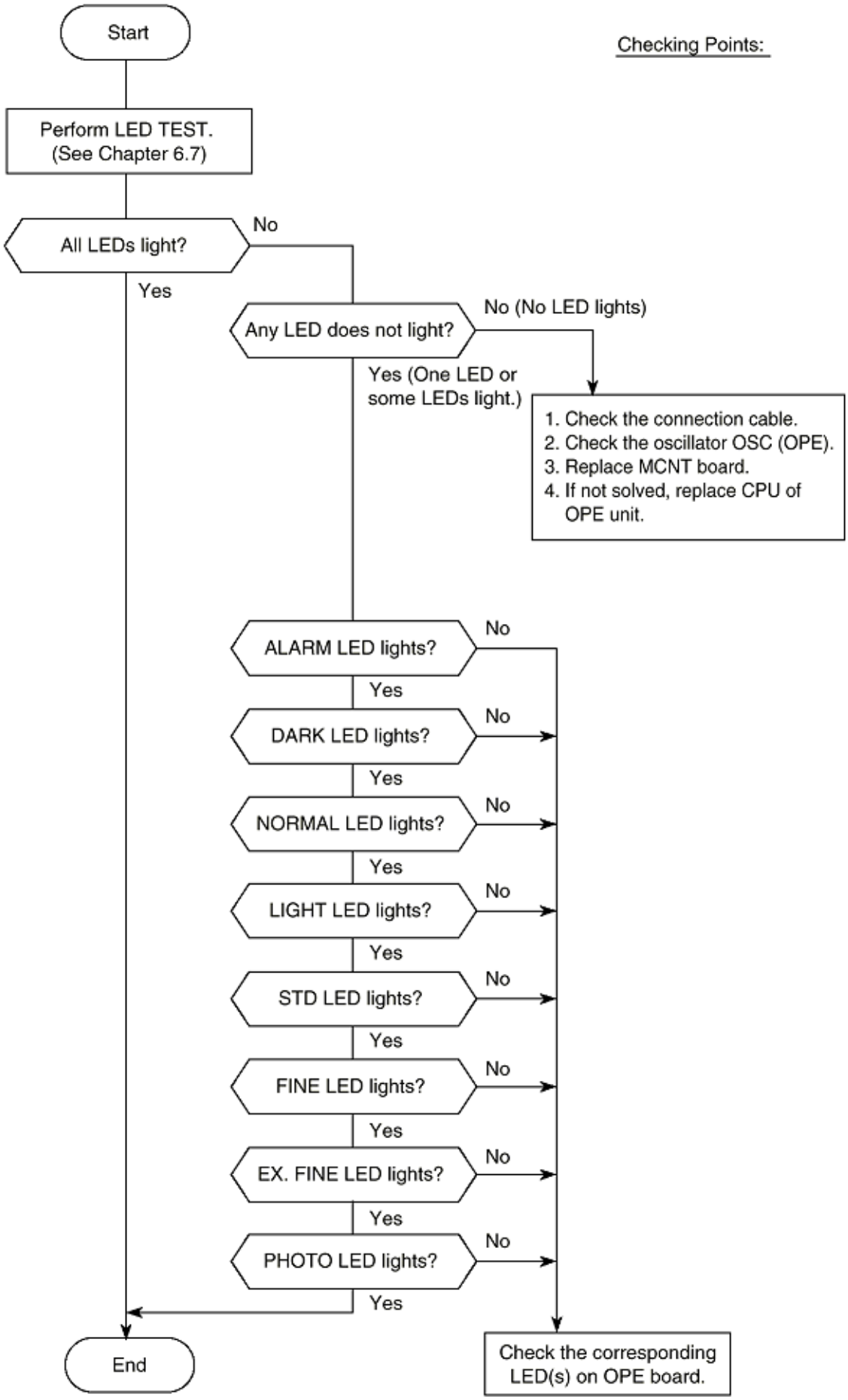


Note: Even if the high-speed modem test results in success, 300 bps signal route remains unchecked. In that case, the most suspected unit is MCNT board.

7.10 Sensor Calibration Test

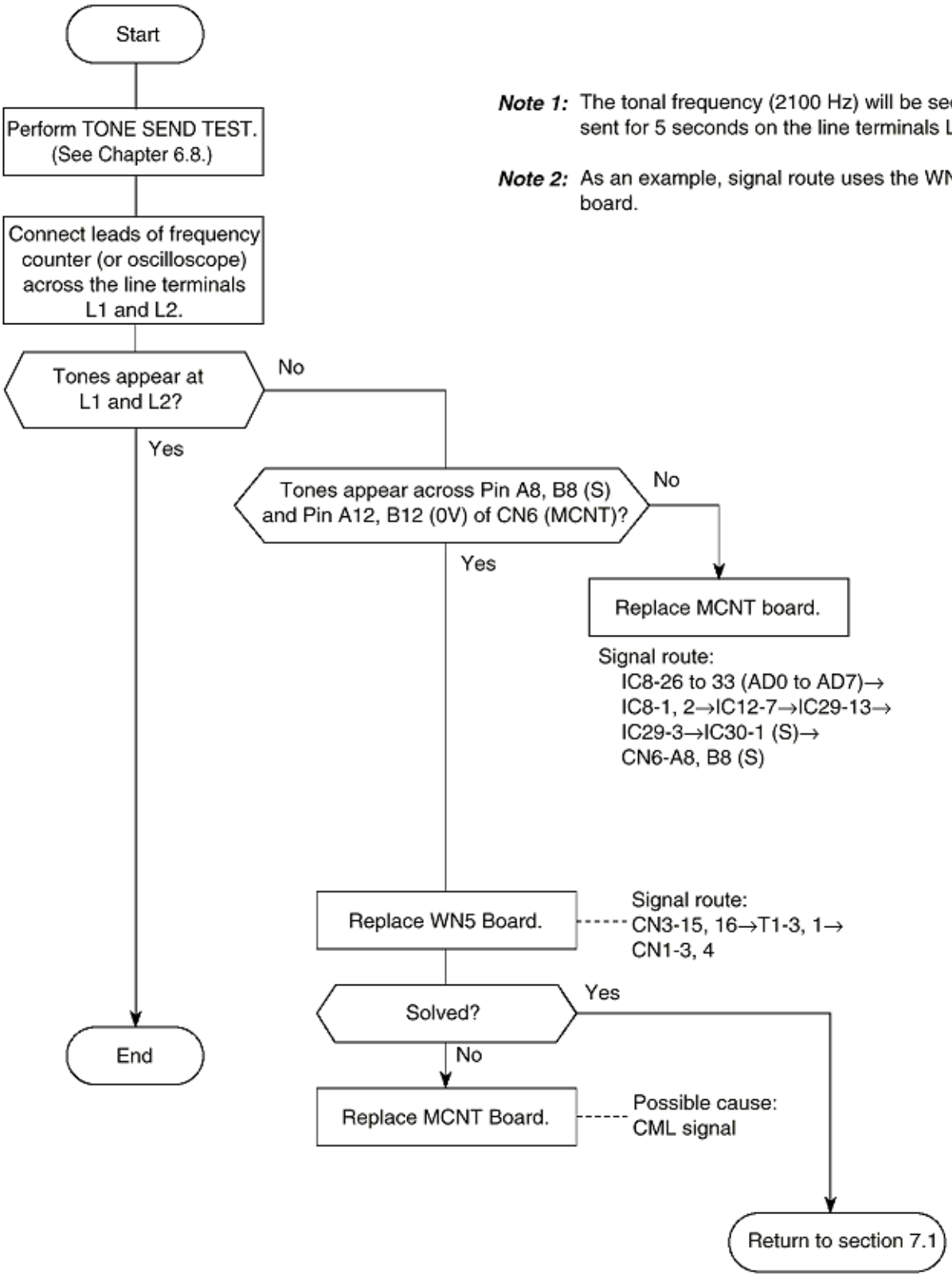


7.11 LED Test



Checking Points:

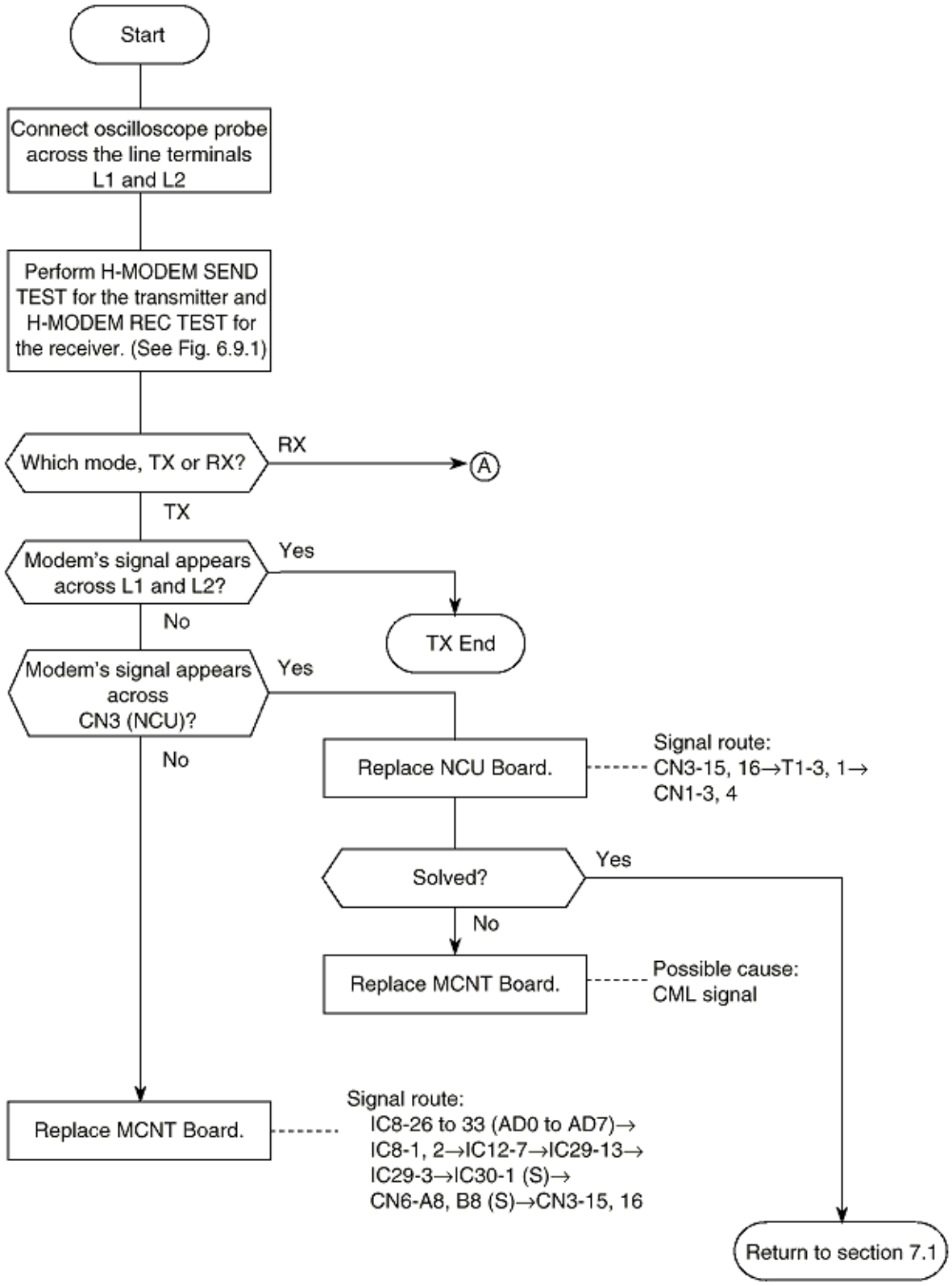
7.12 Tone Send Test

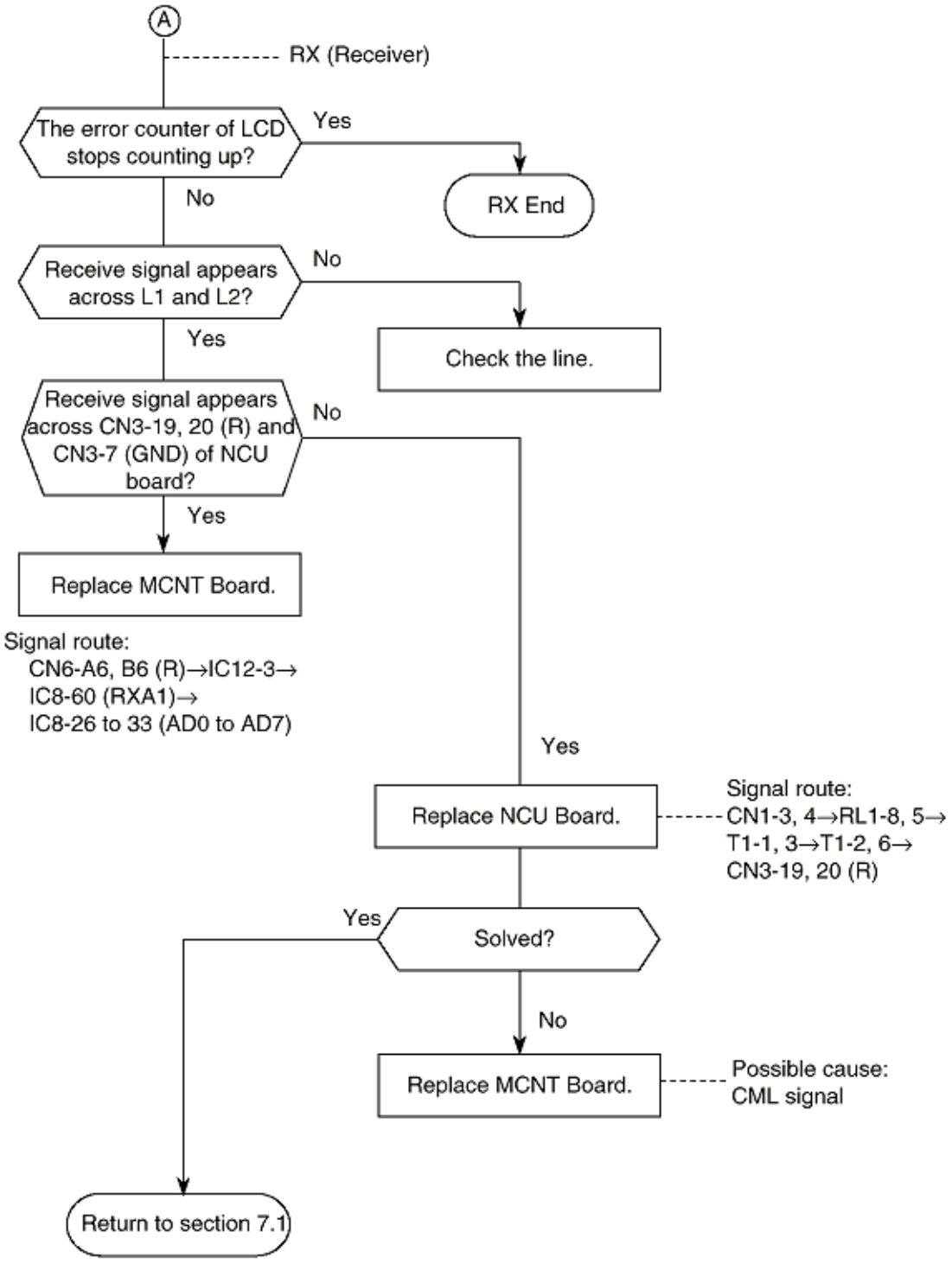


Note 1: The tonal frequency (2100 Hz) will be sequentially sent for 5 seconds on the line terminals L1 and L2.

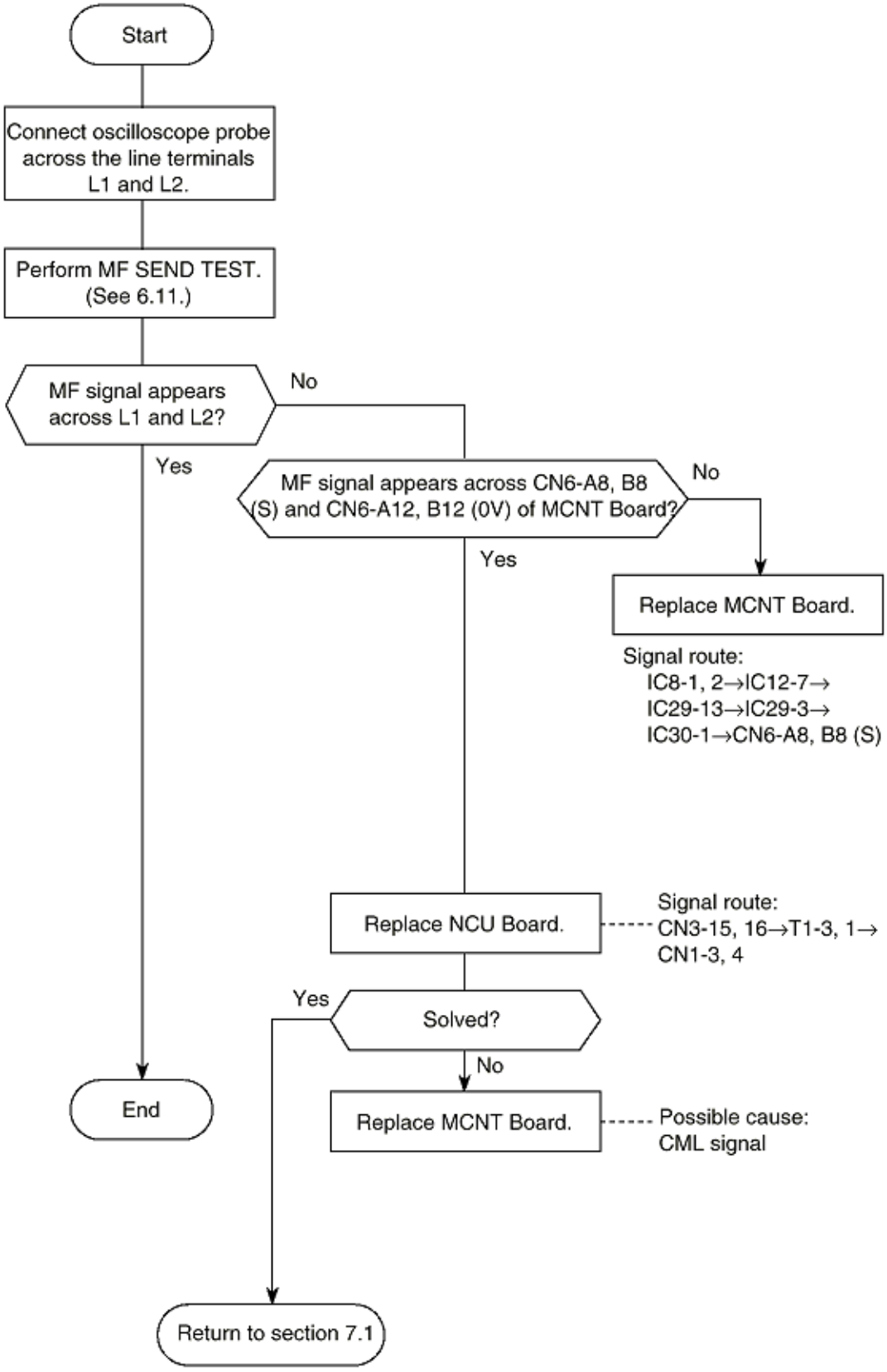
Note 2: As an example, signal route uses the WN5 (NCU) board.

7.13 High-speed Modem Test

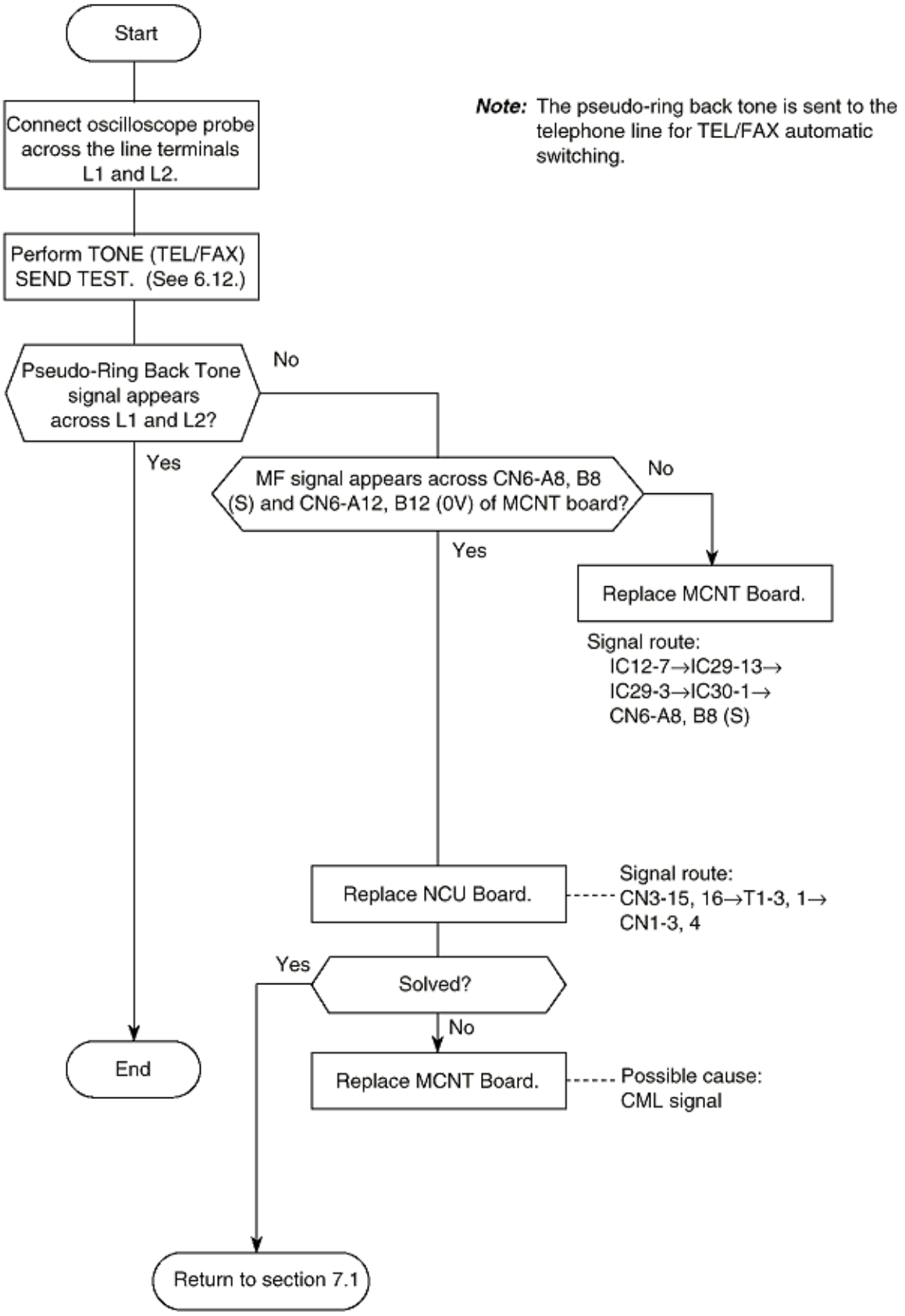

Start
Connect oscilloscope probe across the line terminals L1 and L2
Perform H-MODEM SEND TEST for the transmitter and H-MODEM REC TEST for the receiver. (See Fig. 6.9.1)
Which mode, TX or RX?
RX
A
TX
Modem's signal appears across L1 and L2?
Yes
TX End
No
Modem's signal appears across CN3 (NCU)?
Yes
No
Replace NCU Board.
Signal route:
CN3-15, 16→T1-3, 1→
CN1-3, 4
Solved?
Yes
No
Replace MCNT Board.
Possible cause:
CML signal
Replace MCNT Board.
Signal route:
IC8-26 to 33 (AD0 to AD7)→
IC8-1, 2→IC12-7→IC29-13→
IC29-3→IC30-1 (S)→
CN6-A8, B8 (S)→CN3-15, 16
Return to section 7.1


A
RX (Receiver)
The error counter of LCD stops counting up?
Yes
RX End
No
Receive signal appears across L1 and L2?
No
Check the line.
Yes
Receive signal appears across CN3-19, 20 (R) and CN3-7 (GND) of NCU board?
No
Yes
Replace MCNT Board.
Signal route:
CN6-A6, B6 (R)→IC12-3→
IC8-60 (RXA1)→
IC8-26 to 33 (AD0 to AD7)
Yes
Replace NCU Board.
Signal route:
CN1-3, 4→RL1-8, 5→
T1-1, 3→T1-2, 6→
CN3-19, 20 (R)
Yes
Solved?
No
Replace MCNT Board.
Possible cause:
CML signal
Return to section 7.1

7.14 MF Send Test


Start
Connect oscilloscope probe across the line terminals L1 and L2.
Perform MF SEND TEST. (See 6.11.)
MF signal appears across L1 and L2?
No
Yes
MF signal appears across CN6-A8, B8 (S) and CN6-A12, B12 (0V) of MCNT Board?
No
Yes
Replace MCNT Board.
Signal route:
IC8-1, 2→IC12-7→
IC29-13→IC29-3→
IC30-1→CN6-A8, B8 (S)
Replace NCU Board.
Signal route:
CN3-15, 16→T1-3, 1→
CN1-3, 4
Yes
Solved?
No
End
Replace MCNT Board.
Possible cause:
CML signal
Return to section 7.1

7.15 Tone (TEL/FAX) Send Test

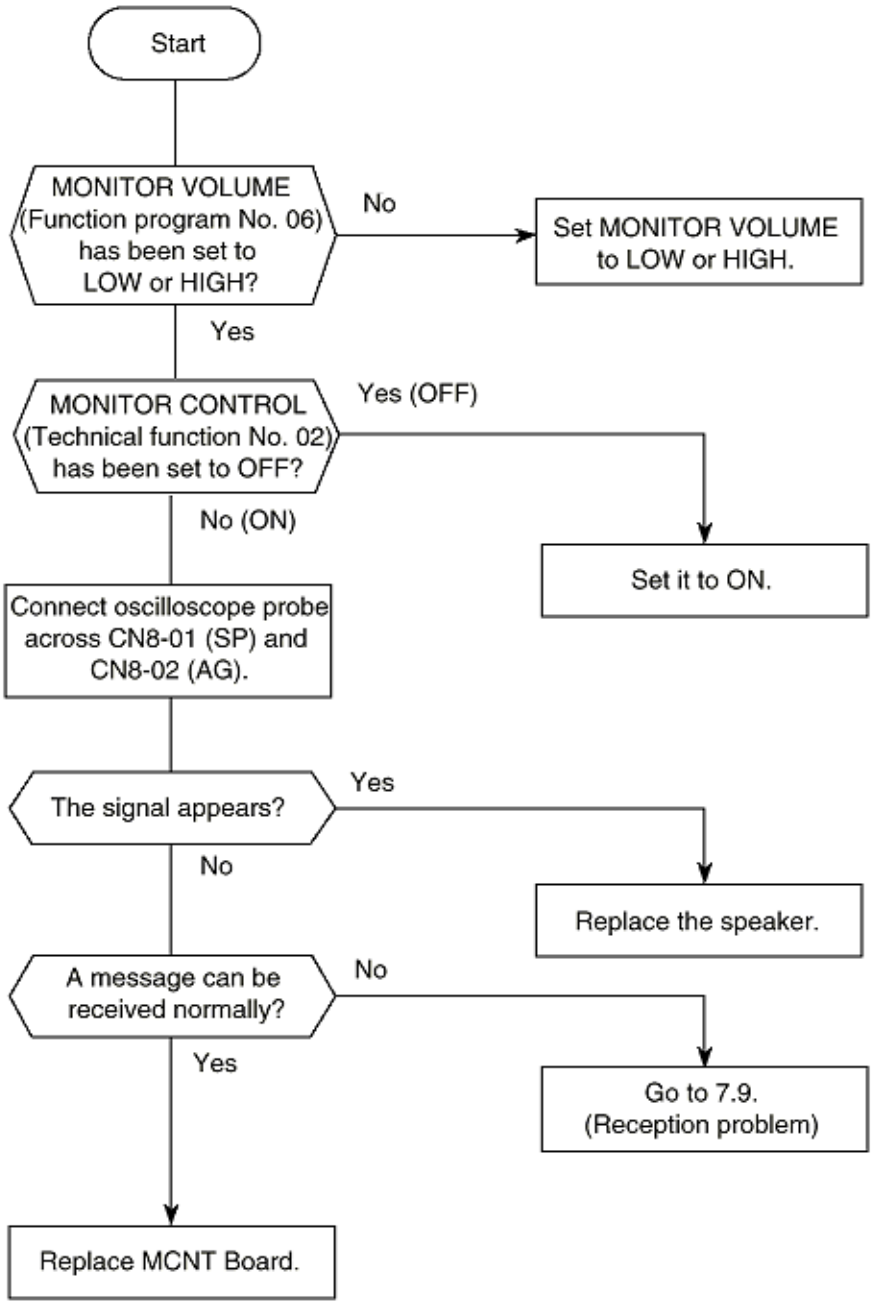


Note: The pseudo-ring back tone is sent to the telephone line for TEL/FAX automatic switching.

7.16 No Acoustic Line Monitor

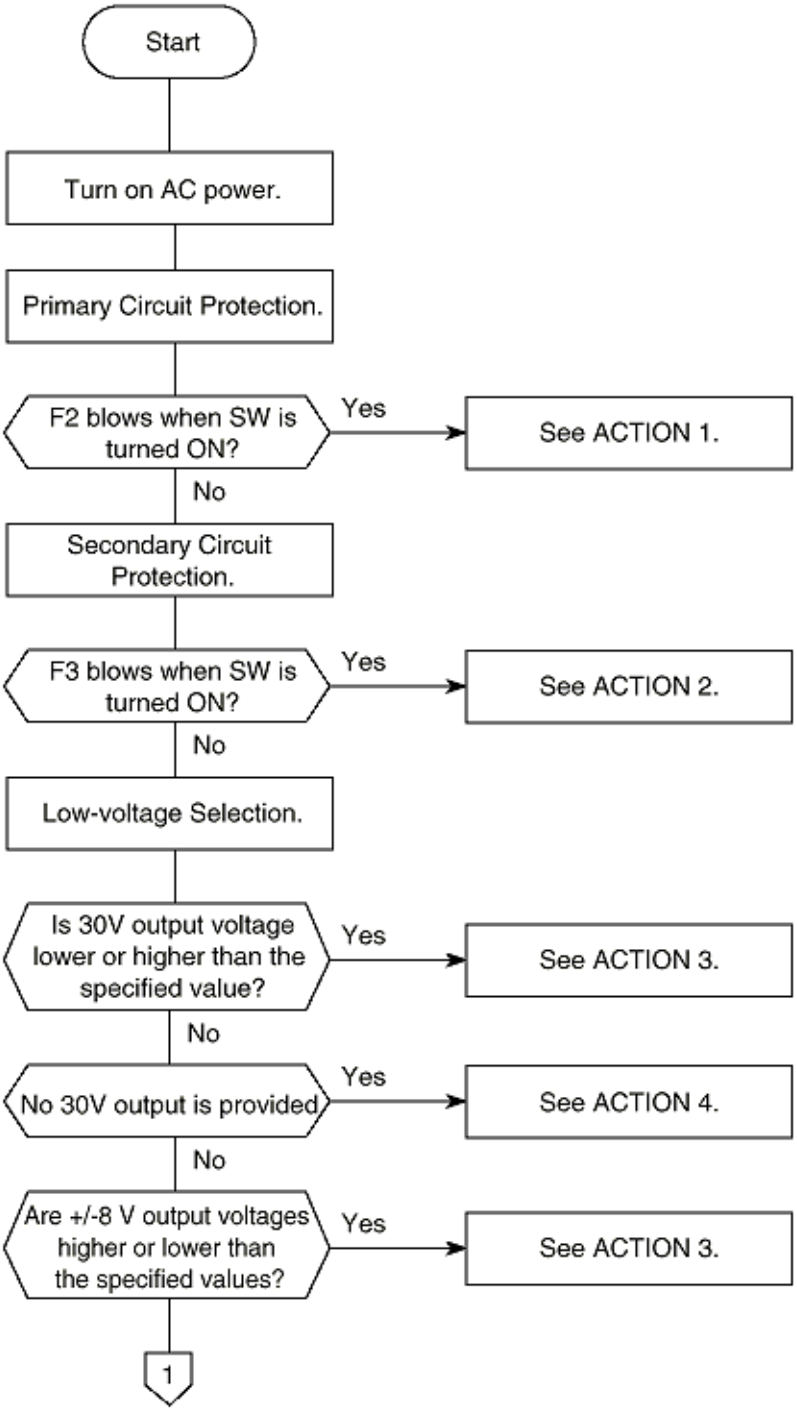
There are two source routes of acoustic line monitor:

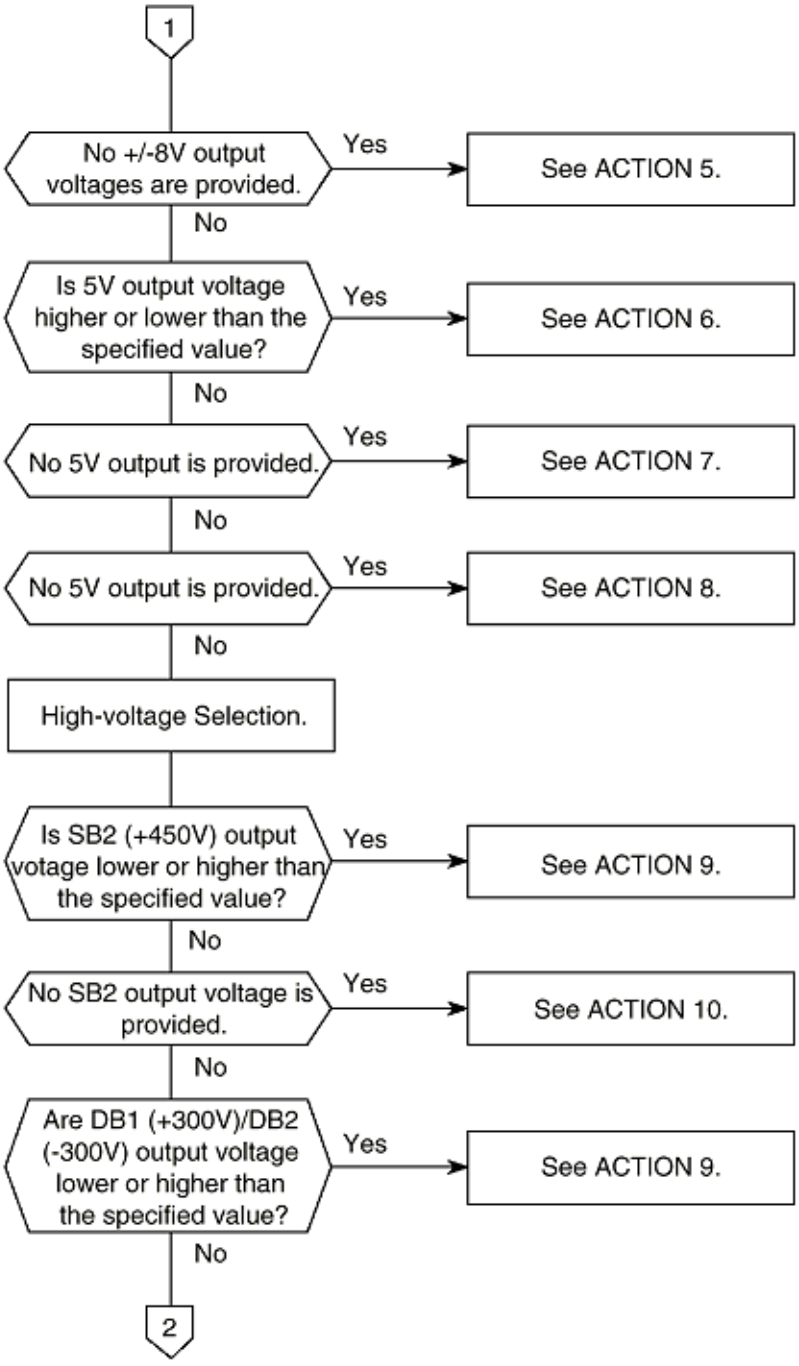
(a) General communication signal
(b) DP pulse signal

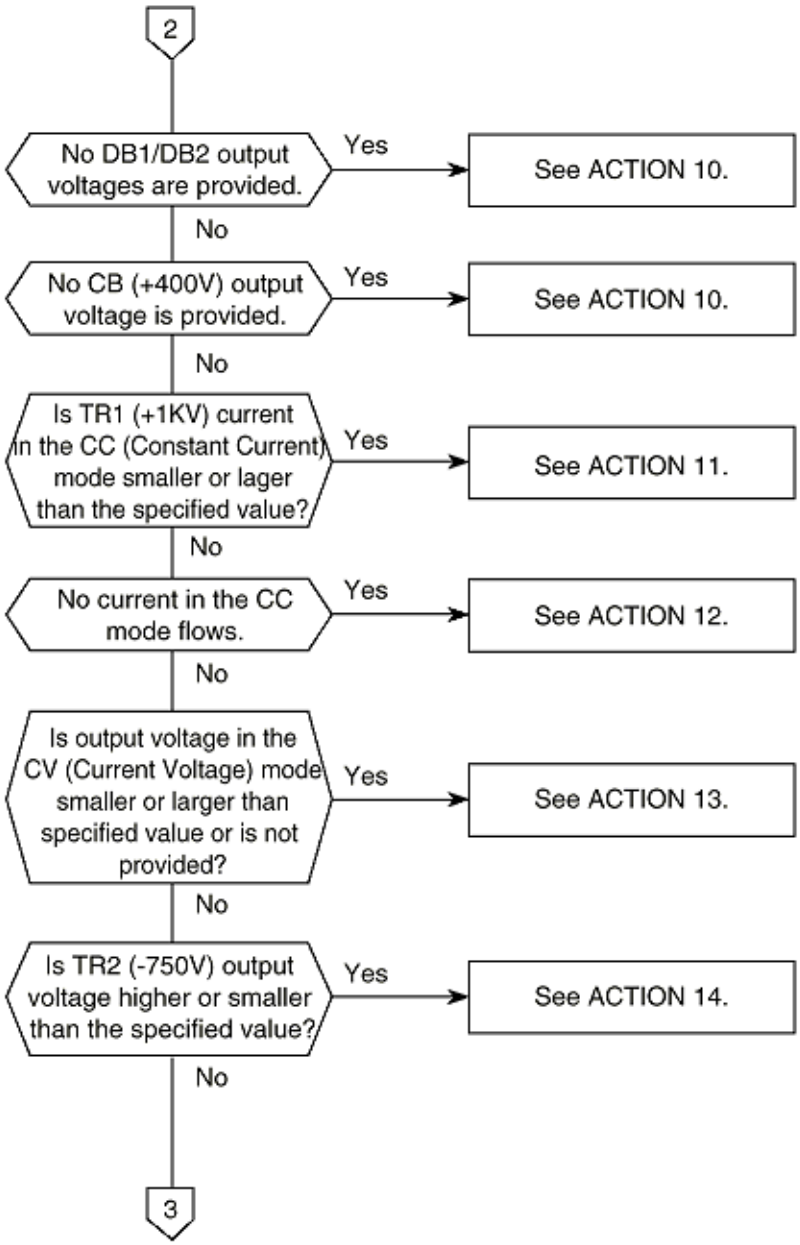


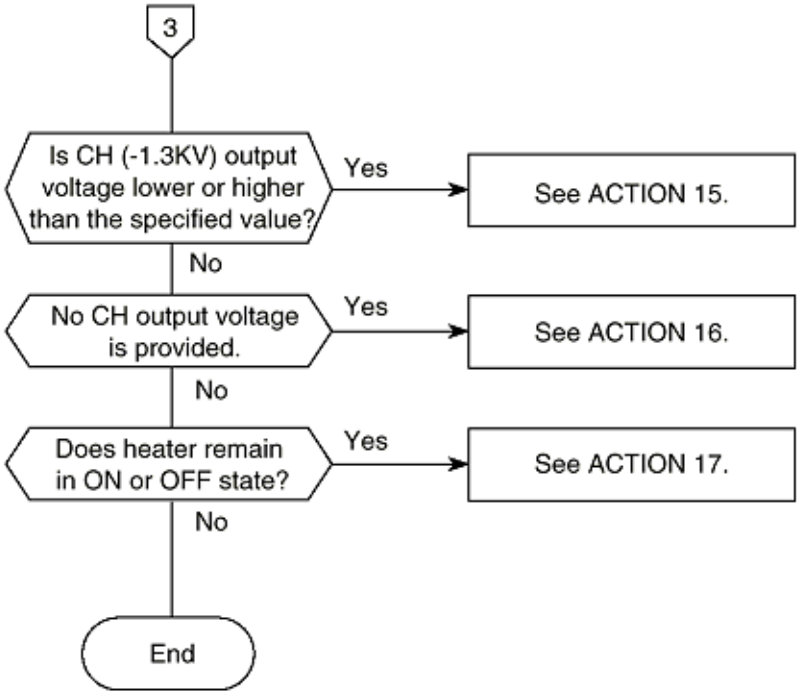
Signal route:
CN6-A6, B6 (R)→IC12-1 (RM)→
TR1-2→IC11-3→IC5-5

7.17 Power Supply Unit




1
No +/-8V output voltages are provided.
Yes
See ACTION 5.
No
Is 5V output voltage higher or lower than the specified value?
Yes
See ACTION 6.
No
No 5V output is provided.
Yes
See ACTION 7.
No
No 5V output is provided.
Yes
See ACTION 8.
No
High-voltage Selection.
Is SB2 (+450V) output votage lower or higher than the specified value?
Yes
See ACTION 9.
No
No SB2 output voltage is provided.
Yes
See ACTION 10.
No
Are DB1 (+300V)/DB2 (-300V) output voltage lower or higher than the specified value?
Yes
See ACTION 9.
No
2


2
No DB1/DB2 output voltages are provided.
Yes
See ACTION 10.
No
No CB (+400V) output voltage is provided.
Yes
See ACTION 10.
No
Is TR1 (+1KV) current in the CC (Constant Current) mode smaller or lager than the specified value?
Yes
See ACTION 11.
No
No current in the CC mode flows.
Yes
See ACTION 12.
No
Is output voltage in the CV (Current Voltage) mode smaller or larger than specified value or is not provided?
Yes
See ACTION 13.
No
Is TR2 (-750V) output voltage higher or smaller than the specified value?
Yes
See ACTION 14.
No
3



Action Items:

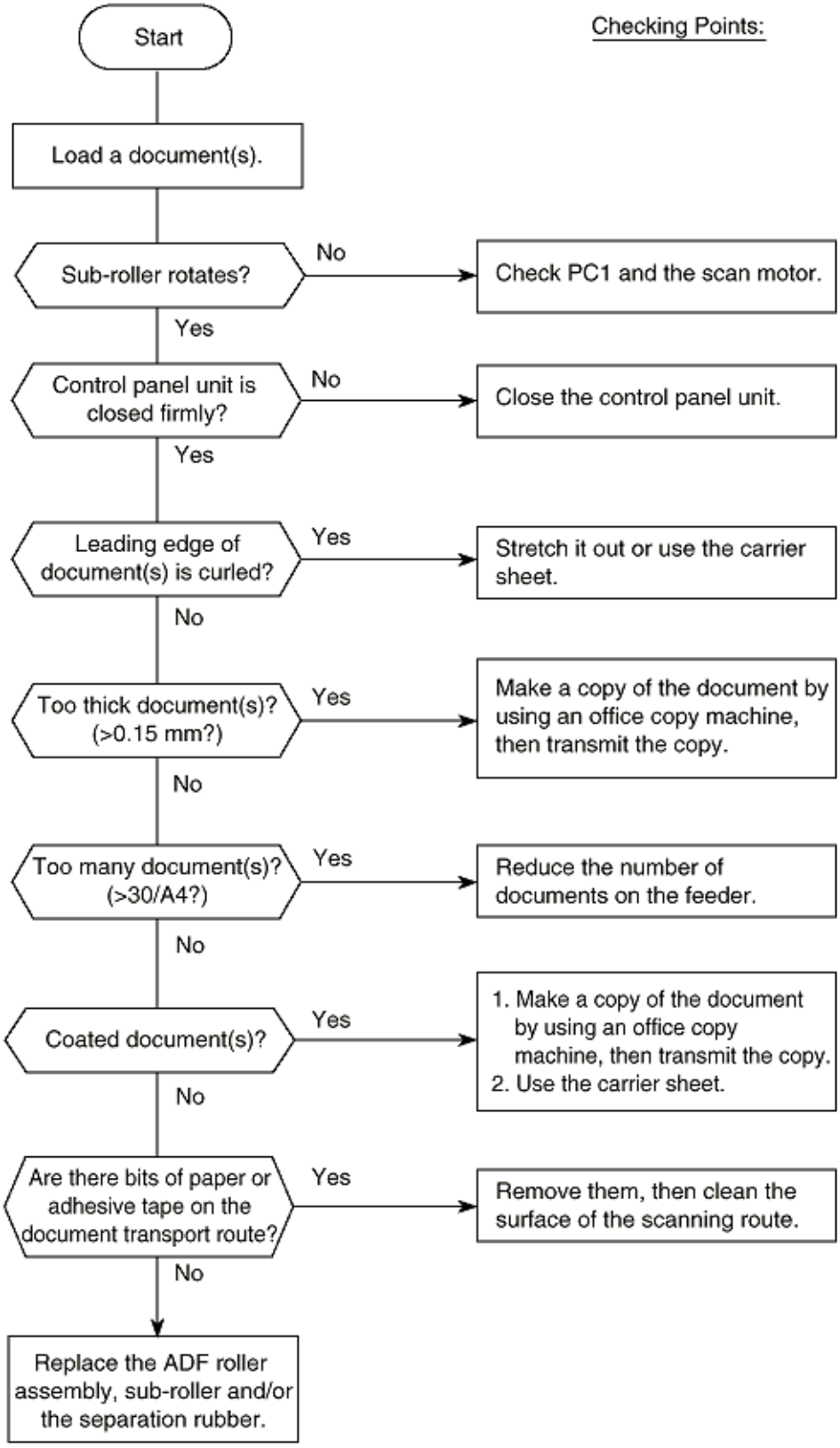
No.	ACTION
1	Probable cause 1: A double AC voltage is applied (200V is applied to a 120V transformer). Check item 1: Check the input AC voltage. Probable cause 2: A short-circuit between lines after F2. Check item 2: Check the pattern on PCB and T1.
2	Probable cause 2: Short-circuit in 30V output circuit. Check item 1: Check DS1, C7, and R53. Probable cause 2: A short-circuit in 5V output circuit. Check item 2: Check Q1, D6, D7, C6, C10, C20, D6, D8, R4, R9, R83, R10, R11, and C35. If D8 and D6 operate and F3 blows when 5V overvoltage is detected, D8 and Q1 may be detective. Replace both D8 and Q1.
3	Probable cause 1: If the AC voltage is high (127V or more)/(250V or more), the output voltage becomes higher than the specified value. If the AC voltage is low (102V or less)/(198V or less), the output voltage becomes lower than the specified value. Check item 1: Check the AC voltage. Probable cause 2: If the load setting is large, the output voltage becomes lower than the specified value. Check item 2: Check the load resister. Probable cause 3: DS1 is defective (if the 30V output voltage is low). Check item 3: Check DS1 and R53.
4	Probable cause 1: F3 blows. → See ACTION 2. Probable cause 2: T1 is defective. Check item 2: Check secondary side pins 1 to 3 and primary side pins 1 and 2 of T1. Check item 3: Check DS1 for shorting and opening.
5	Probable cause 1: D10 and D11 are defective. Check item 1: Check the AC voltage. Probable cause 2: T1 is defective. Check item 2: Check pins 5 and 6 of T1 (thermal fuse may blow).
6	Probable cause 1: The reference resister is defective. Check item 1: Check R83, R10 and R11 (tolerance error: +/- 1%). Probable cause 2: IC1 is defective. Check item 2: Check IC1-1 pin (normal value: 2.45 to 2.69V).
7	Probable cause 1: F3 blows. → See ACTION 2.
8	Probable cause 1: C19 and C20 are defective. Check item 1: Check C10 and C20. Probable cause 2: L3 is defective.

No.	ACTION
9	Probable cause 1: D85 is defective. Check item 1: Replace D85. Probable cause 2: The load is larger than the normal value. Check item 2: Check if the load current is 2μA or less. Probable cause 3: D52 is defective. Check item 3: Check if D52 is iZ300 class Y or Z (class X is not acceptable).
10	Probable cause 1: Q11 and Q12 are malfunctioning. Check item 1: Check the PWM waveform of DB output (cycle: 142 μs, ON time: 36μs). Check item 2: Check Q11 and Q12. Check the base voltage of Q21, Q22 and Q23 (3.7V or more to 3.9V or more).
11	Probable cause 1: Current set resistor R115 is defective. Check item 1: Check R115 (tolerance error: +/-1%) Probable cause 2: The reference voltage is incorrect. Check item 2: Check if the voltage at CN3-B10 pin is 2.5V. Check item 3: Check the PWM waveform of TR1 (cycle: 142Ms, ON time: 36 μs).
12	Probable cause 1: CC (Constant Current) mode is not set. Check item 1: Check if TR SEL2 is "H". Probable cause 2: T2 is defective. Check item 2: Replace T2. Check T2. Probable cause 3: Check (3) of ACTION 11.
13	Probable cause 1: The voltage memory circuit is malfunctioning. Check item 1: Check if the average value of the VSEN voltage in the CC mode is equal to that in the CV (Current Voltage) mode. Check if the voltage across C230 remains unchanged in the CV mode (for 15 seconds or more).
14	Probable cause 1: D65 or D66 is defective. Check item 1: Check if these diodes are 1ZB390. Check item 2: Check the PWM waveform of TR2 output (cycle: 146μs, ON time: 36μs). Check item 3: Check if TR1 is "L" or TR2 is "H" (if TR1 is "H", TR1 output appears).
15	Probable cause 1: The class of D76 or D82 is incorrect. Check item 1: Check if both D76 and D82 are of EB-2 class. Probable cause 2: The load current is lower than the specified value. Check item 2: The load current shall be 6 to 8μA. (Namely, the load current shall not be more than or less than this limit range.)

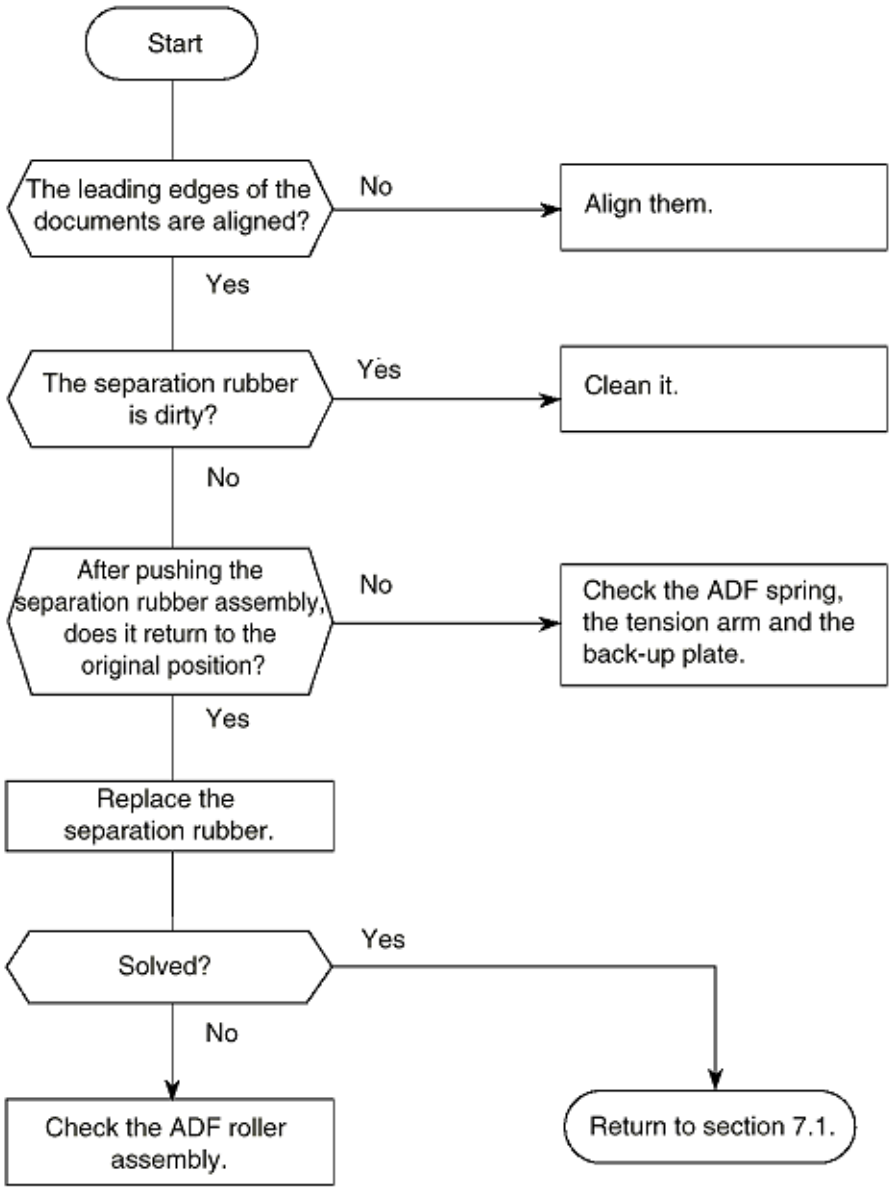
No.	ACTION
16	Check item 1: Check the PWM waveform of CH (cycle: 42μs, ON time: 36μs).
17	Probable cause 1: D1 is detective. Check item 1: Check if both D1 and T1 or D1 and T2 are shorted. Probable cause 2: The D1 drive circuit is defective. Check item 2: Check PC1. [Whether PC1 turns ON or OFF according to the level of HEAT signal (CN3-B7)?] Check if R2 or R3 is in open state (This cannot be observed from the external appearance because these resistors are fusible resistor.)

7.18 No Document Feeding

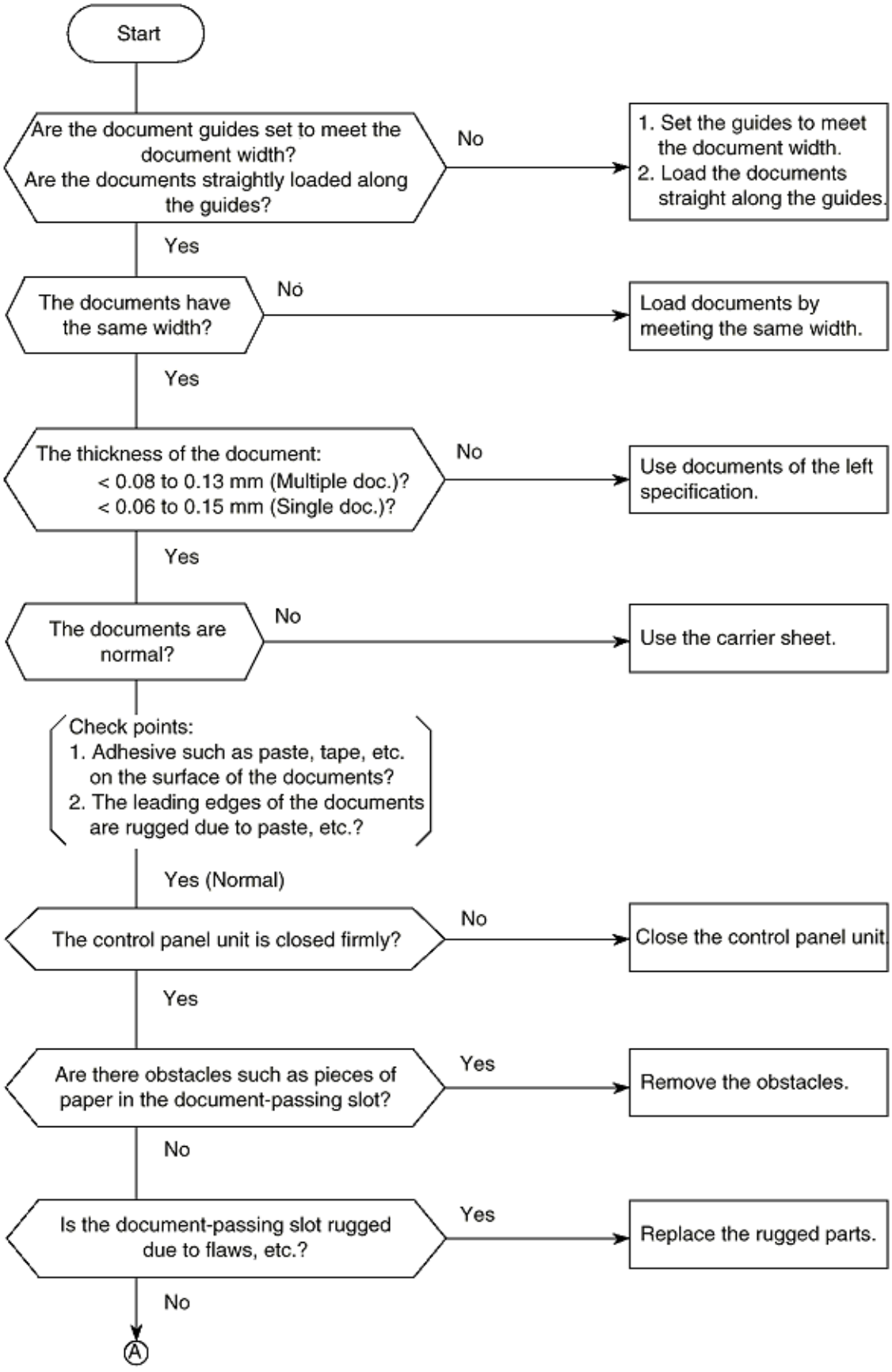
Note: This section places an emphasis on troubleshooting of mechanical portions. Therefore, it is recommended to replace the E17 Board first and, then if not solved, follow this flow chart.

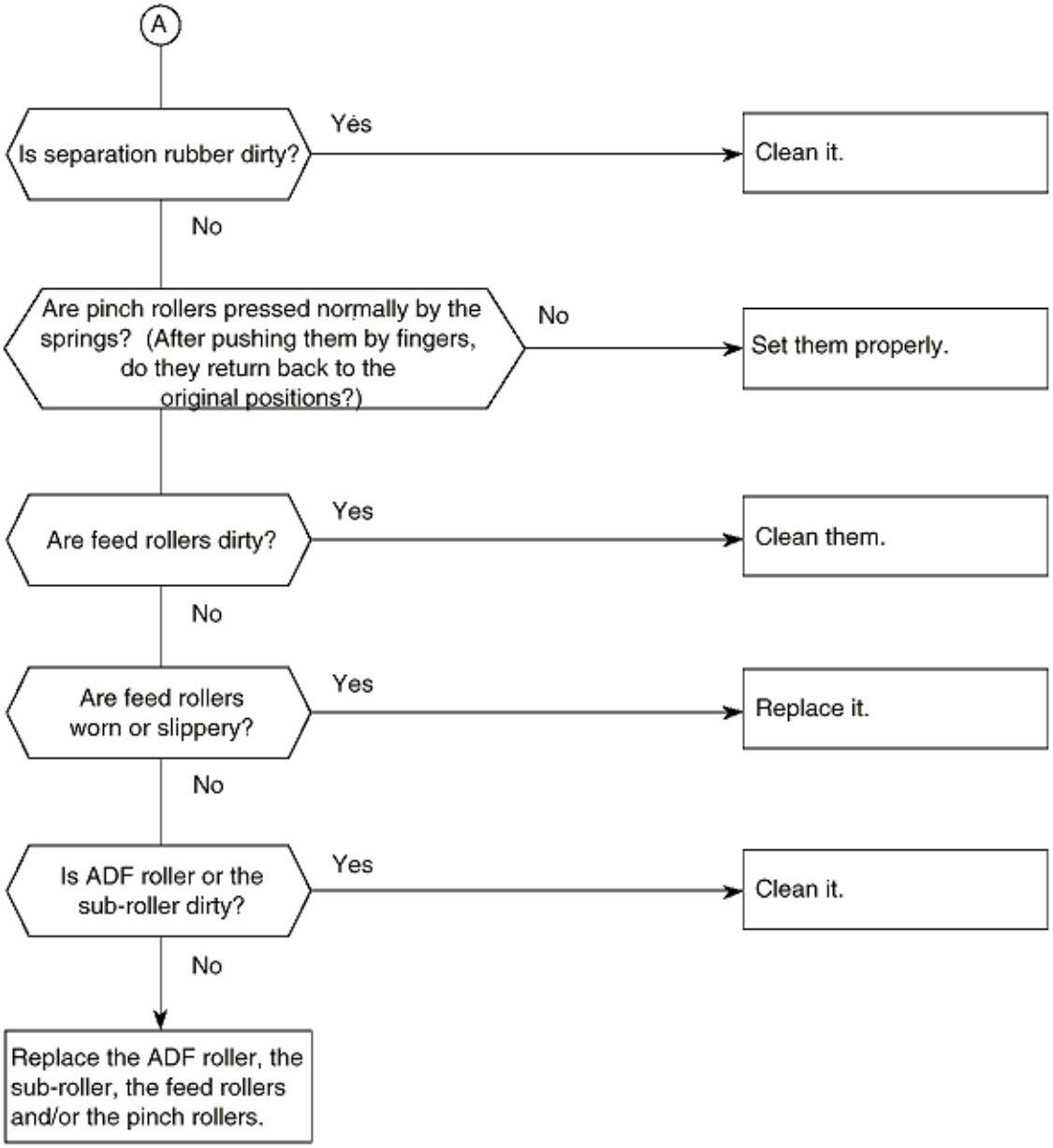

Checking Points:
Start
Load a document(s).
Sub-roller rotates?
No
Check PC1 and the scan motor.
Yes
Control panel unit is closed firmly?
No
Close the control panel unit.
Yes
Leading edge of document(s) is curled?
Yes
Stretch it out or use the carrier sheet.
No
Too thick document(s)? (>0.15 mm?)
Yes
Make a copy of the document by using an office copy machine, then transmit the copy.
No
Too many document(s)? (>30/A4?)
Yes
Reduce the number of documents on the feeder.
No
Coated document(s)?
Yes
1. Make a copy of the document by using an office copy machine, then transmit the copy.
2. Use the carrier sheet.
No
Are there bits of paper or adhesive tape on the document transport route?
Yes
Remove them, then clean the surface of the scanning route.
No
Replace the ADF roller assembly, sub-roller and/or the separation rubber.

7.19 Multiple Document Feeding

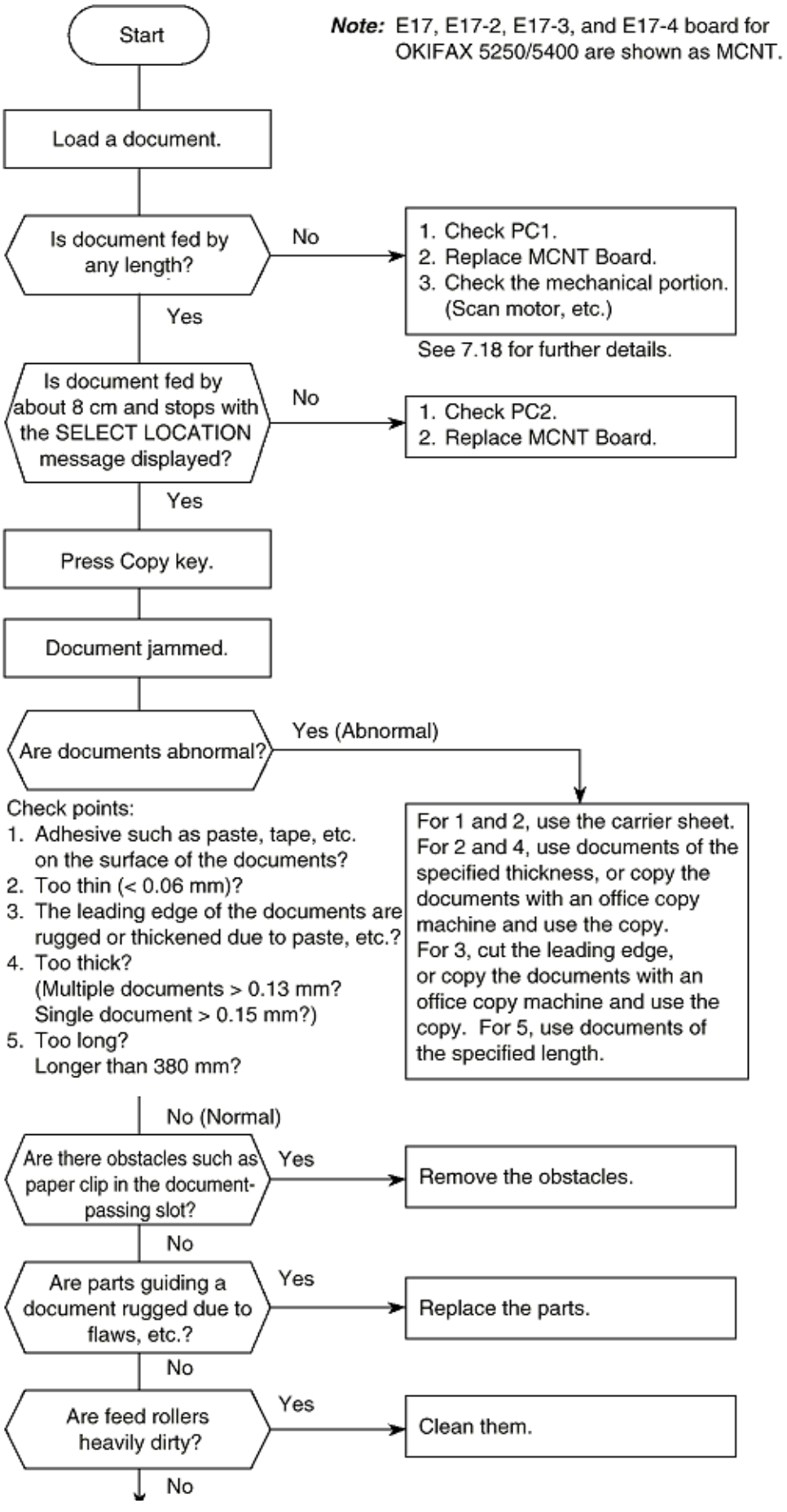


7.20 Document Skew


Start
Are the document guides set to meet the document width?
Are the documents straightly loaded along the guides?
No
1. Set the guides to meet the document width.
2. Load the documents straight along the guides.
Yes
The documents have the same width?
No
Load documents by meeting the same width.
Yes
The thickness of the document:
< 0.08 to 0.13 mm (Multiple doc.)?
< 0.06 to 0.15 mm (Single doc.)?
No
Use documents of the left specification.
Yes
The documents are normal?
No
Use the carrier sheet.
Check points:
1. Adhesive such as paste, tape, etc. on the surface of the documents?
2. The leading edges of the documents are rugged due to paste, etc.?
Yes (Normal)
The control panel unit is closed firmly?
No
Close the control panel unit.
Yes
Are there obstacles such as pieces of paper in the document-passing slot?
Yes
Remove the obstacles.
No
Is the document-passing slot rugged due to flaws, etc.?
Yes
Replace the rugged parts.
No
Ⓐ


A
Is separation rubber dirty?
Yes
Clean it.
No
Are pinch rollers pressed normally by the springs? (After pushing them by fingers, do they return back to the original positions?)
No
Set them properly.
Are feed rollers dirty?
Yes
Clean them.
No
Are feed rollers worn or slippery?
Yes
Replace it.
No
Is ADF roller or the sub-roller dirty?
Yes
Clean it.
No
Replace the ADF roller, the sub-roller, the feed rollers and/or the pinch rollers.

7.21 Document Jam


Start
Note: E17, E17-2, E17-3, and E17-4 board for OKIFAX 5250/5400 are shown as MCNT.
Load a document.
Is document fed by any length?
No
1. Check PC1.
2. Replace MCNT Board.
3. Check the mechanical portion. (Scan motor, etc.)
See 7.18 for further details.
Yes
Is document fed by about 8 cm and stops with the SELECT LOCATION message displayed?
No
1. Check PC2.
2. Replace MCNT Board.
Yes
Press Copy key.
Document jammed.
Are documents abnormal?
Yes (Abnormal)
Check points:
1. Adhesive such as paste, tape, etc. on the surface of the documents?
2. Too thin (< 0.06 mm)?
3. The leading edge of the documents are rugged or thickened due to paste, etc.?
4. Too thick? (Multiple documents > 0.13 mm? Single document > 0.15 mm?)
5. Too long? Longer than 380 mm?
For 1 and 2, use the carrier sheet. For 2 and 4, use documents of the specified thickness, or copy the documents with an office copy machine and use the copy. For 3, cut the leading edge, or copy the documents with an office copy machine and use the copy. For 5, use documents of the specified length.
No (Normal)
Are there obstacles such as paper clip in the document-passing slot?
Yes
Remove the obstacles.
No
Are parts guiding a document rugged due to flaws, etc.?
Yes
Replace the parts.
No
Are feed rollers heavily dirty?
Yes
Clean them.
No

7.22 Printer Unit

7.22.1 Precautions

7.22.2 Troubleshooting flow Charts of Printer Unit

7.22.3 Image Problems Table

7.22.1 Precautions

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 image drum 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 Flowchart

1: Top Cover is Open

2: Replace Image Drum Message

3: Engine Controller Error

4: Fan Motor Rotation Error

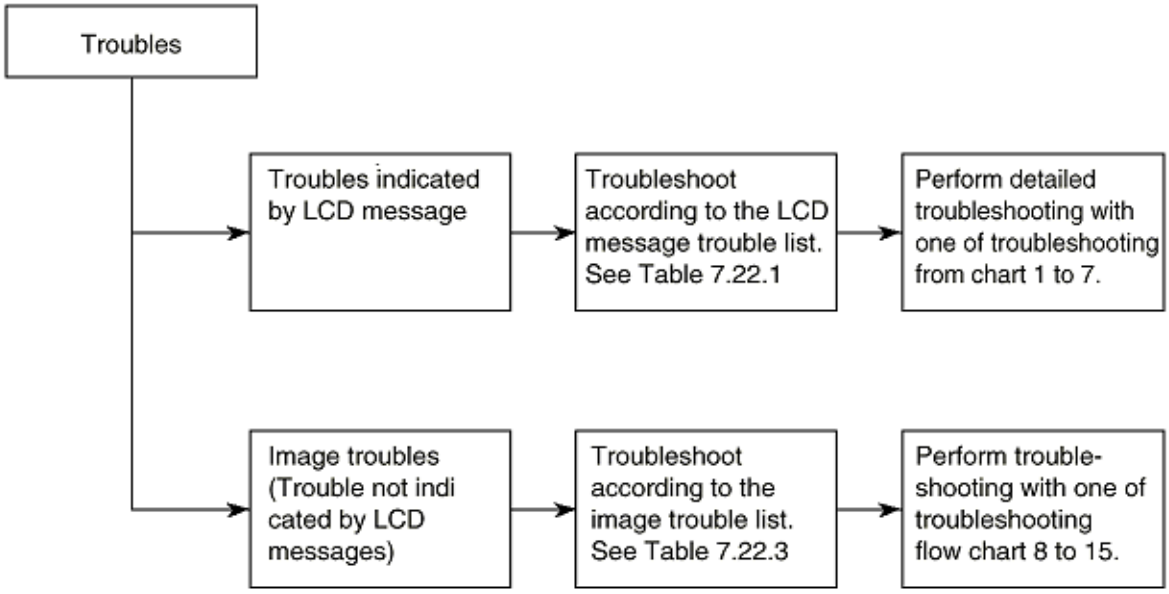
5: Fuser Unit Thermal Error

6: Paper Jams

7: No Paper Tray or No Paper

Action Items (Printer Unit LCD Message) Table 7.22.2

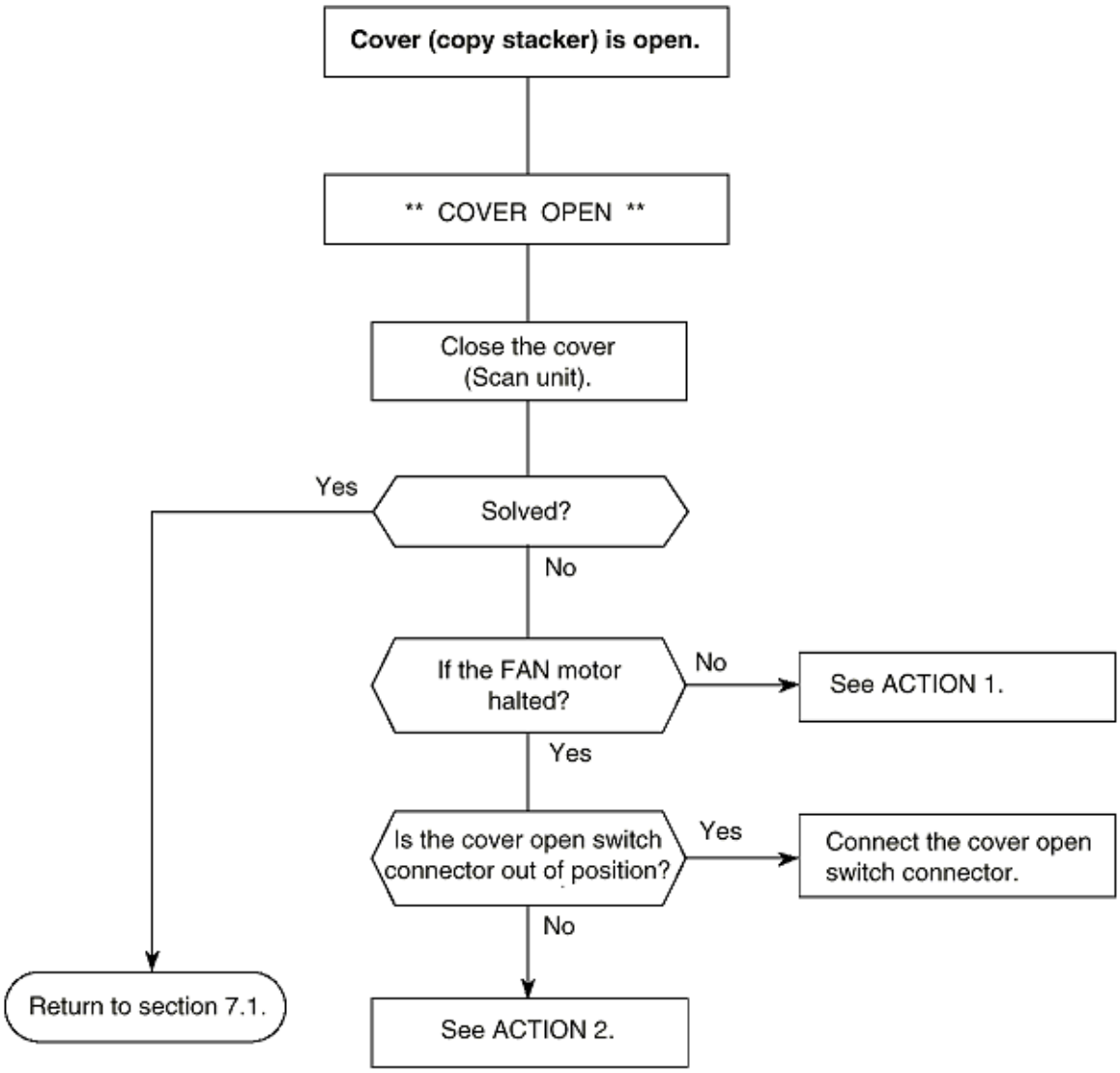
Overall Troubleshooting Flowchart



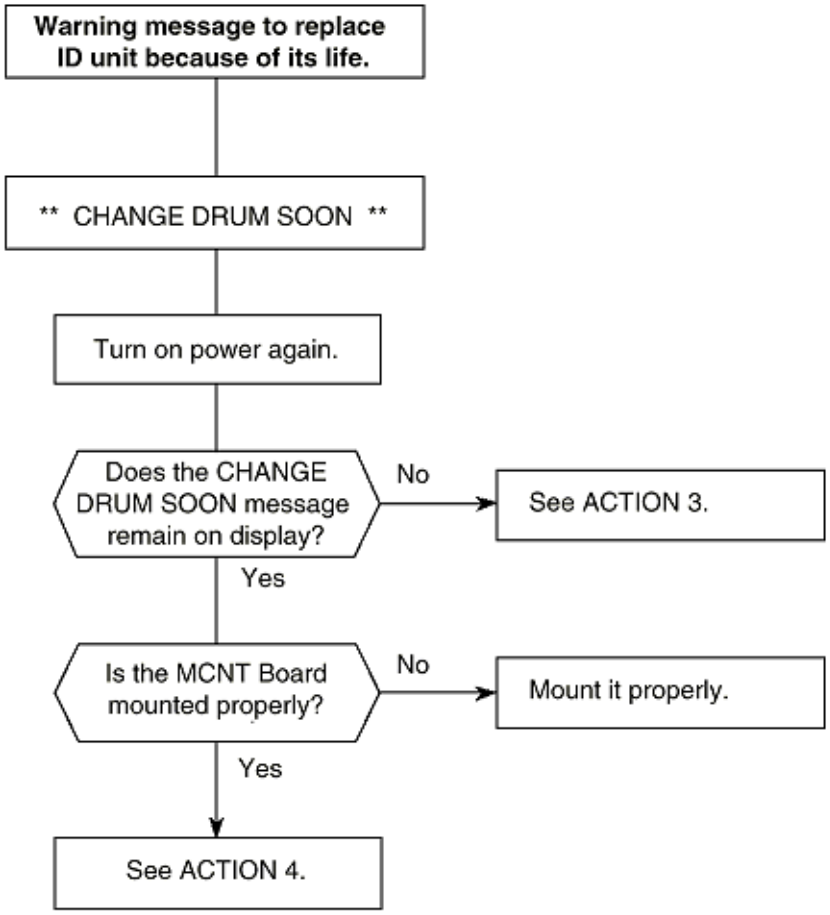
LCD Message / Troubleshooting Table

Category	LCD message display	Situation	Trouble-shooting 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	Replace the image drum unit, because it is near its end of life.	2
Engine errors	PRINTER ALARM 2[TEL] PLEASE CONFIRM	Engine controller error (Opt.: 2nd Tray)	3
	PRINTER ALARM 3[TEL] PLEASE CONFIRM	Fan Motor Rotation Error	4
	PRINTER ALARM 4[TEL] PLEASE CONFIRM	Fuser unit thermal error	5
Recording paper / jam error	PAPER JAM [FAX] CONFIRM AND "STOP"	Recording paper feed jam, transport jam, ejection jam, recording size error	6
Paper cassette	NO PAPER [FAX] REPLACE PAPER	No recording paper tray or no recording paper	7
Daily status	TONER LOW [FAX] REPLACE TONER CART.	Toner is low. Note: No toner memory RX is ON.	
	14:14 [FAX] REPLACE TONER CART.	Toner is running low. Note: No toner memory RX is OFF.	

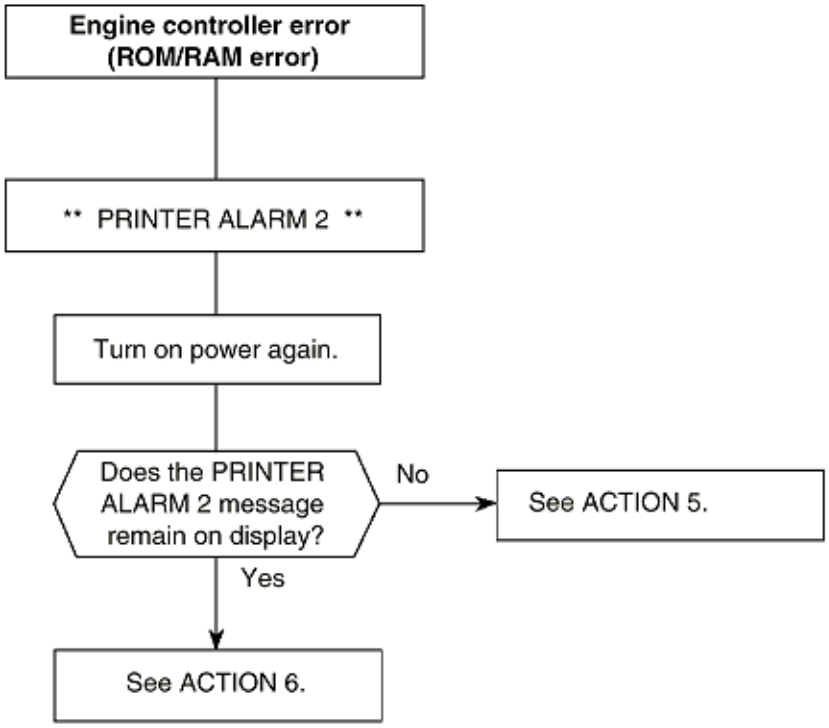
1: Top Cover is Open



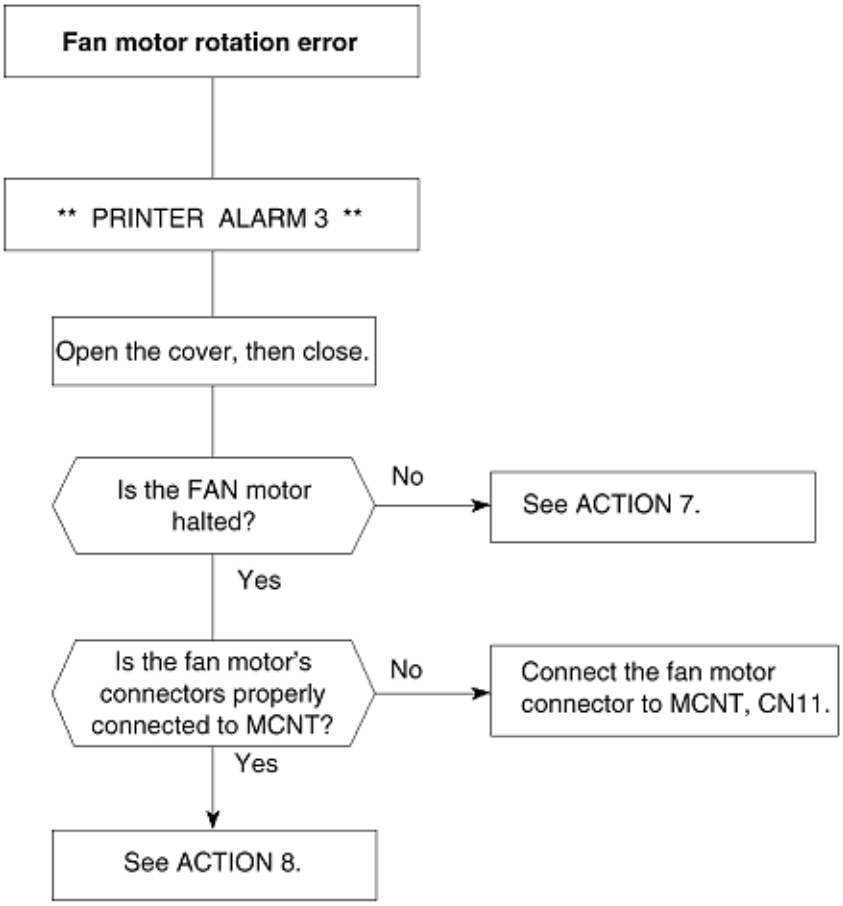
2: Replace Image Drum Message



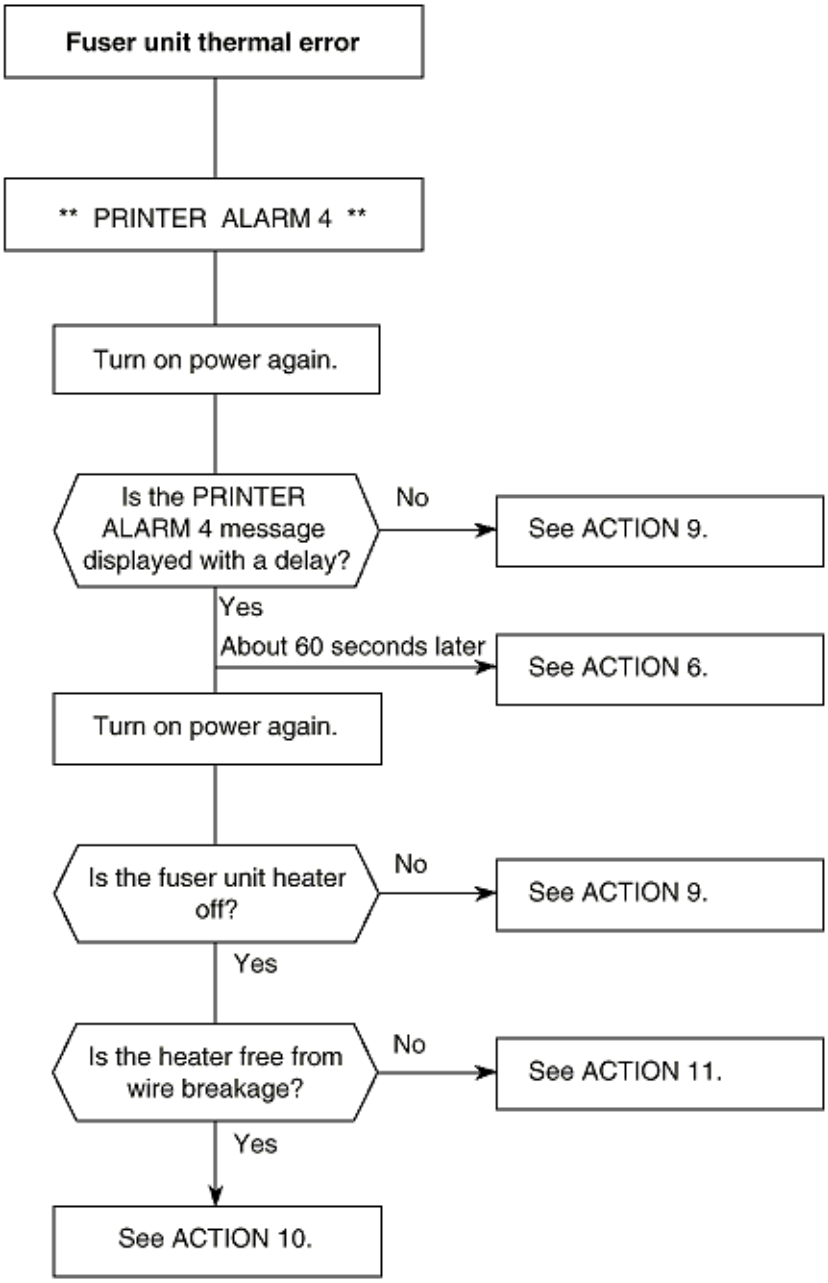
3: Engine Controller Error



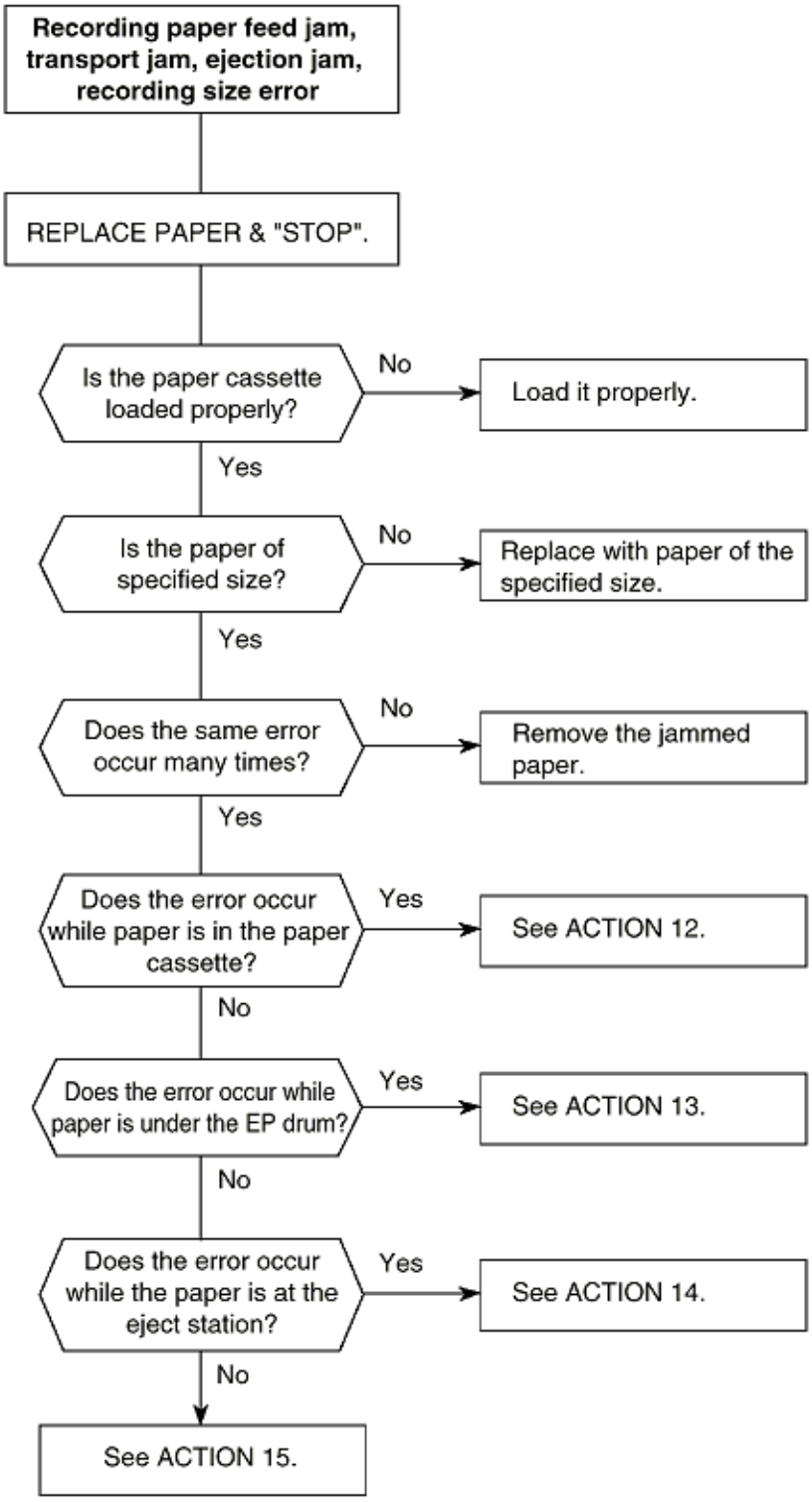
4: Fan Motor Rotation Error



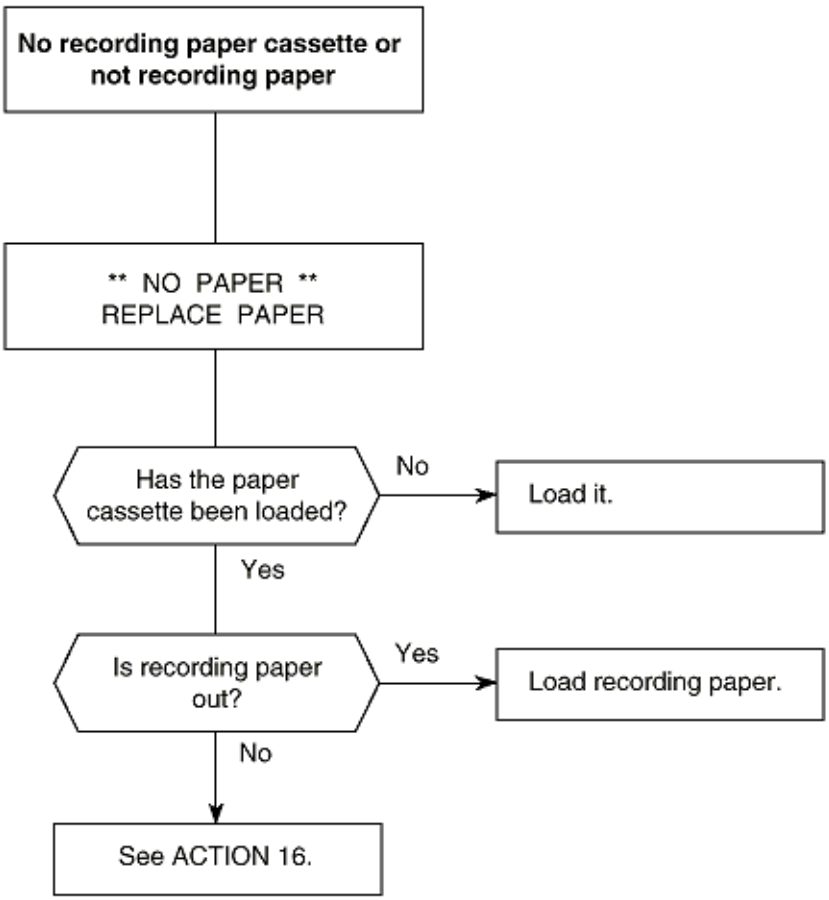
5: Fuser Unit Thermal Error



6: Paper Jams


Recording paper feed jam, transport jam, ejection jam, recording size error
REPLACE PAPER & "STOP".
Is the paper cassette loaded properly?
No
Load it properly.
Yes
Is the paper of specified size?
No
Replace with paper of the specified size.
Yes
Does the same error occur many times?
No
Remove the jammed paper.
Yes
Does the error occur while paper is in the paper cassette?
Yes
See ACTION 12.
No
Does the error occur while paper is under the EP drum?
Yes
See ACTION 13.
No
Does the error occur while the paper is at the eject station?
Yes
See ACTION 14.
No
See ACTION 15.

7: No Paper Tray or No Paper



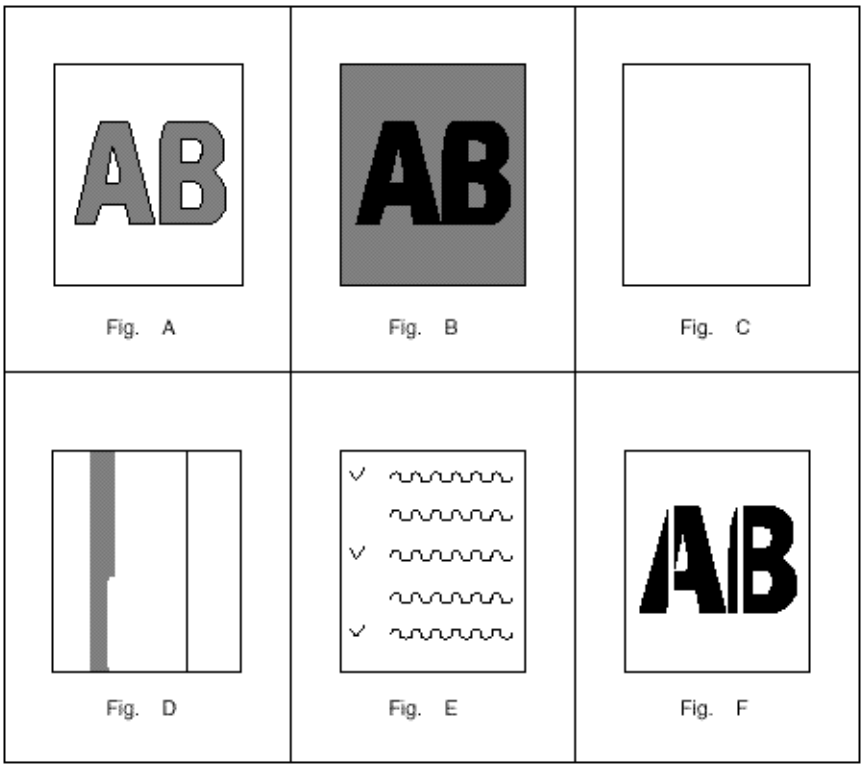
Action Items (Printer Unit-LCD Message) Table

No.	Action
1	Check E17 Board.
2	Check POWER SUPPLY UNIT cover open switch cover open switch connection. CheckE17 Board.
3	Return to Section 7.1
4	Replace the image drum.
5	Check installation of E17 board, POWER SUPPLY UNIT board. Ensure good connection between the machine and the 2nd Tray Unit.
6	Check E17 Board.
7	Check Fan motor, E17 Board.
8	Check FAN motor, E17 Board, POWER SUPPLY UNIT.
9	Check thermister (resistance about 100 kilo ohms at room temperature and about 1.5 kilo ohms at high temperature), POWER SUPPLY UNIT. Clean contacts on fuser and contact assembly.
10	Check connection between the PWU and the fuser assembly, heater, thermostat.
11	Check PWU. Clean and check all contacts to the fuser assembly for continuity.
12	Check inlet sensor lever for sticking or breaking, hopping roller, resist motor, E17 Board, cover setting state.
13	Check "COVER OPEN STATE", drum motor, clean drum motor and drive gears, E17 board. Check gears for proper lubrication.
14	Check exit sensor lever for sticking or breakage, cover setting state, PWU
15	Check E17 Board.
16	Check paper sensor levers, PWU, E17 Board.

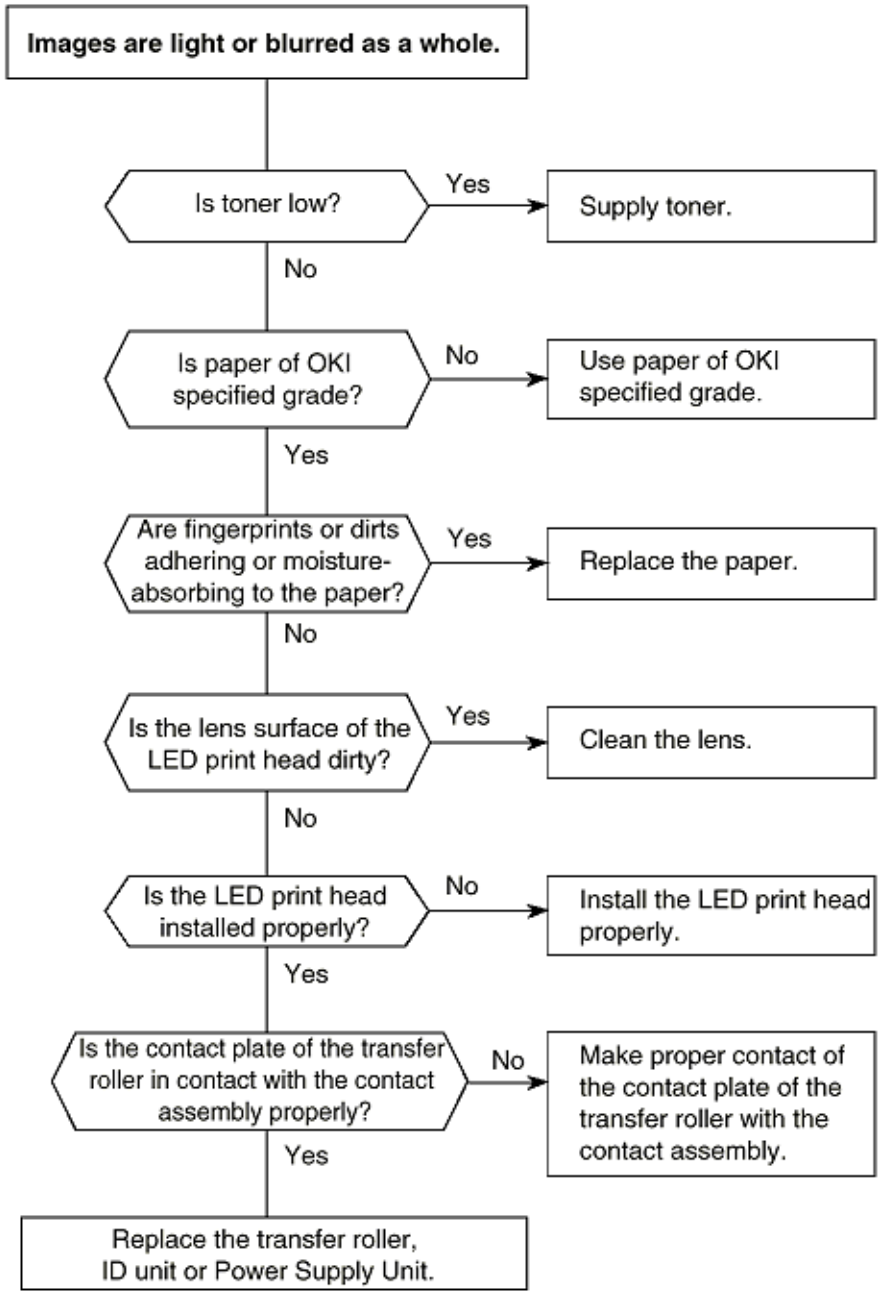
7.22.3 Image Problems Table

Abnormal Symptom	Reference Figure	Troubleshooting Flow Chart No.
Light or blurred images	Fig. A	8
Smeared output background	Fig. B	9
Blank output	Fig. C	10
Vertical black stripes	Fig. D	11
Evenly spaced, repeating marks	Fig. E	12
Blank spots	----	13
Vertical white stripes	Fig. F	14
Poor fusing (images are blurred or toner slides off when touched)	----	15

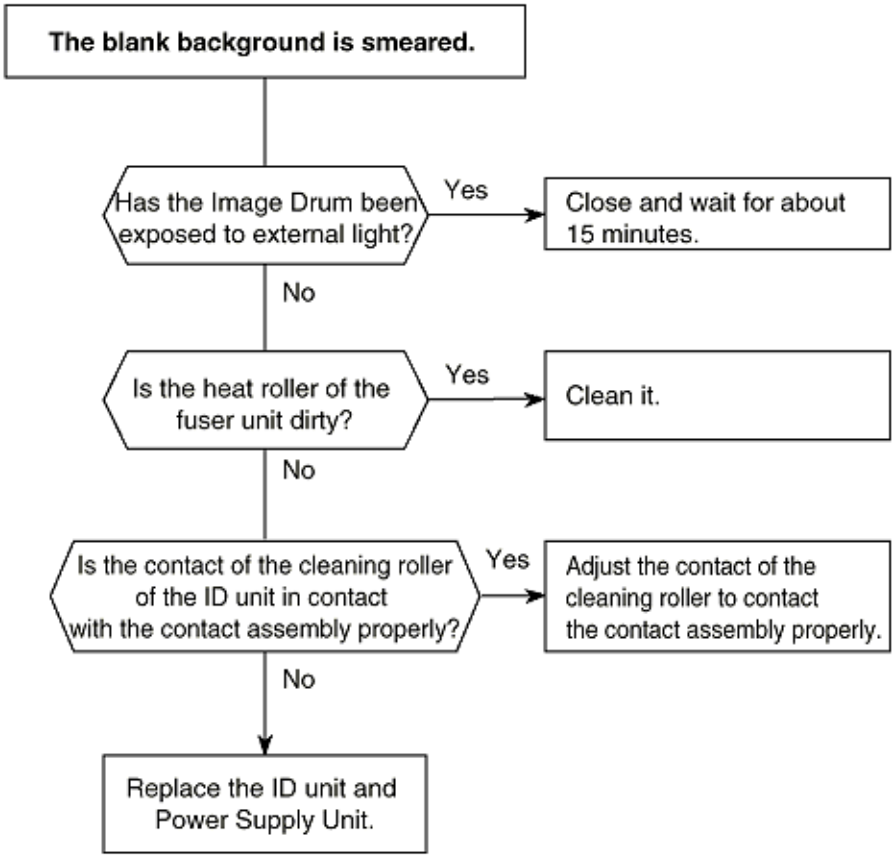
Sample Image Problems



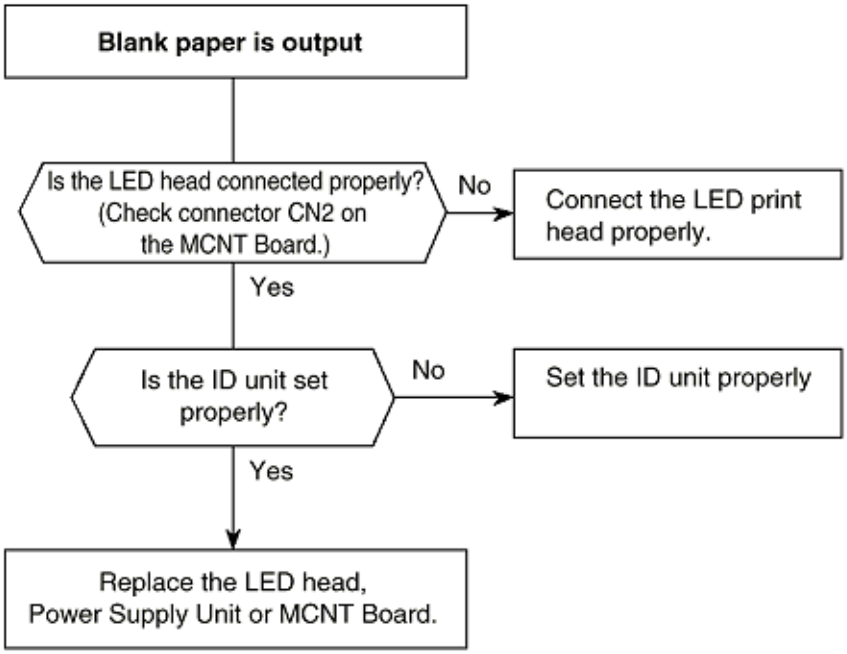
8: Light or Blurred Output



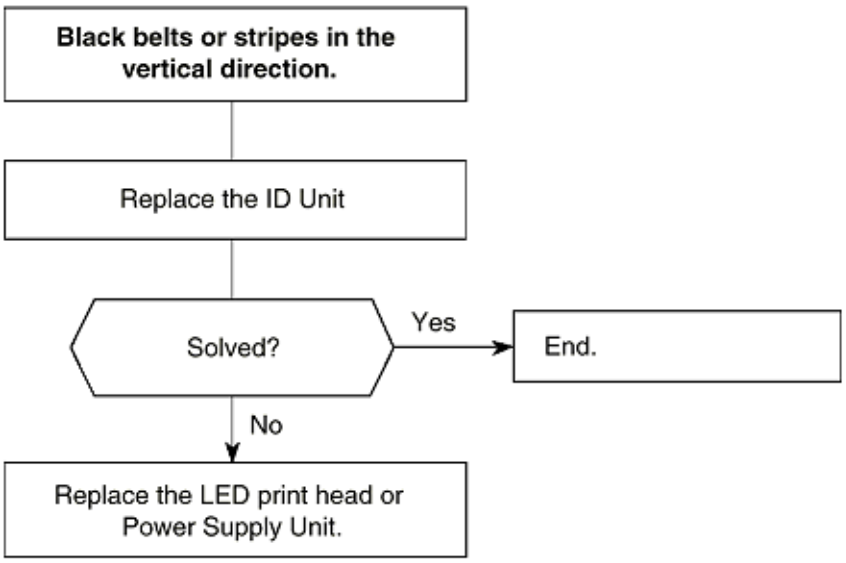
9: Smeared Background on Output



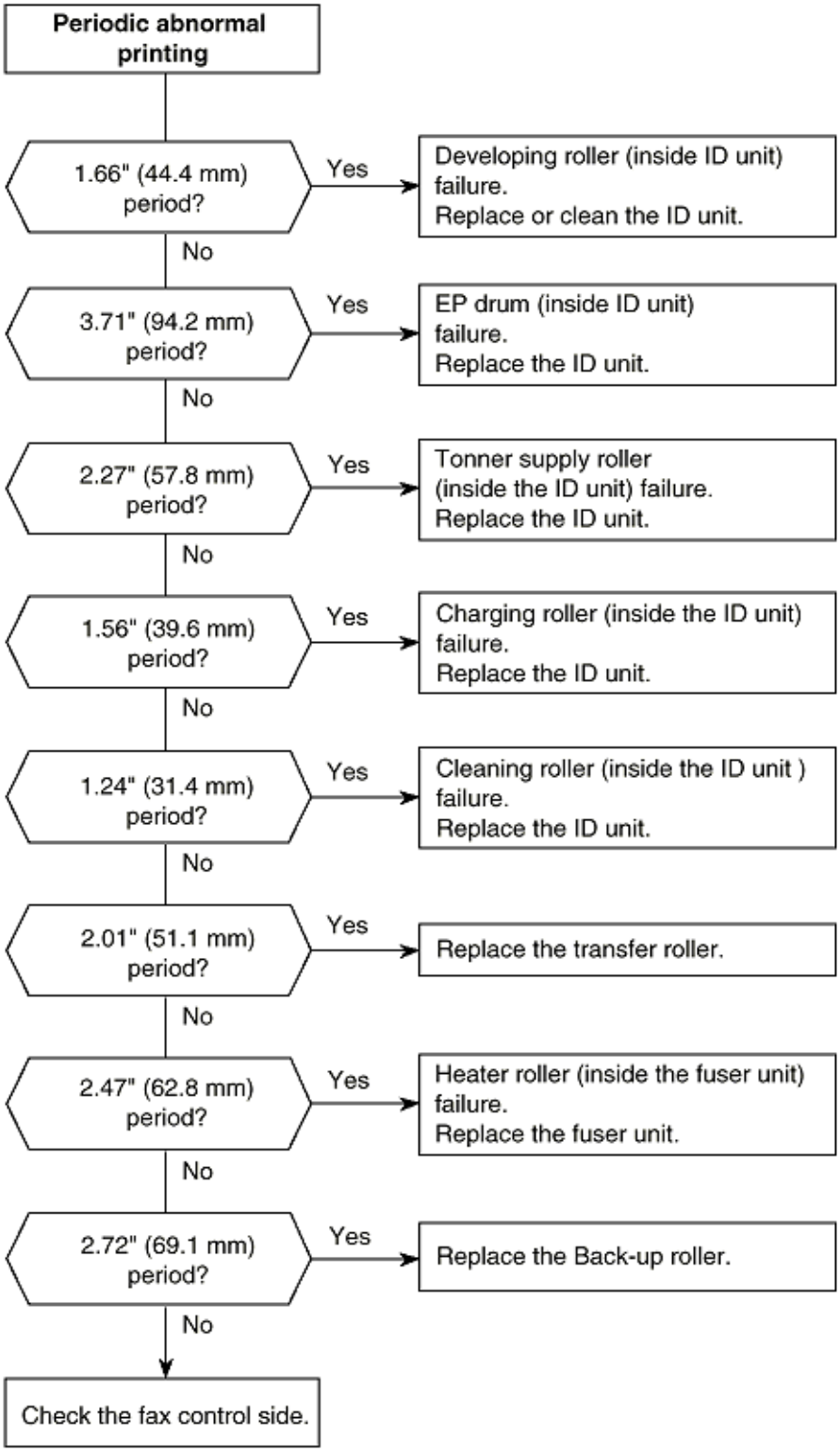
10: Blank Output



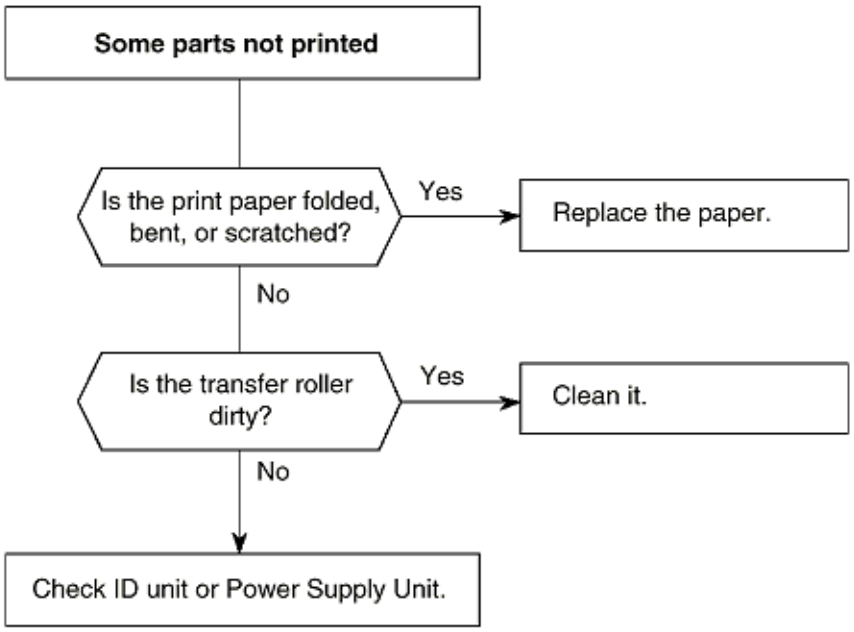
11: Vertical Black Stripes on Output



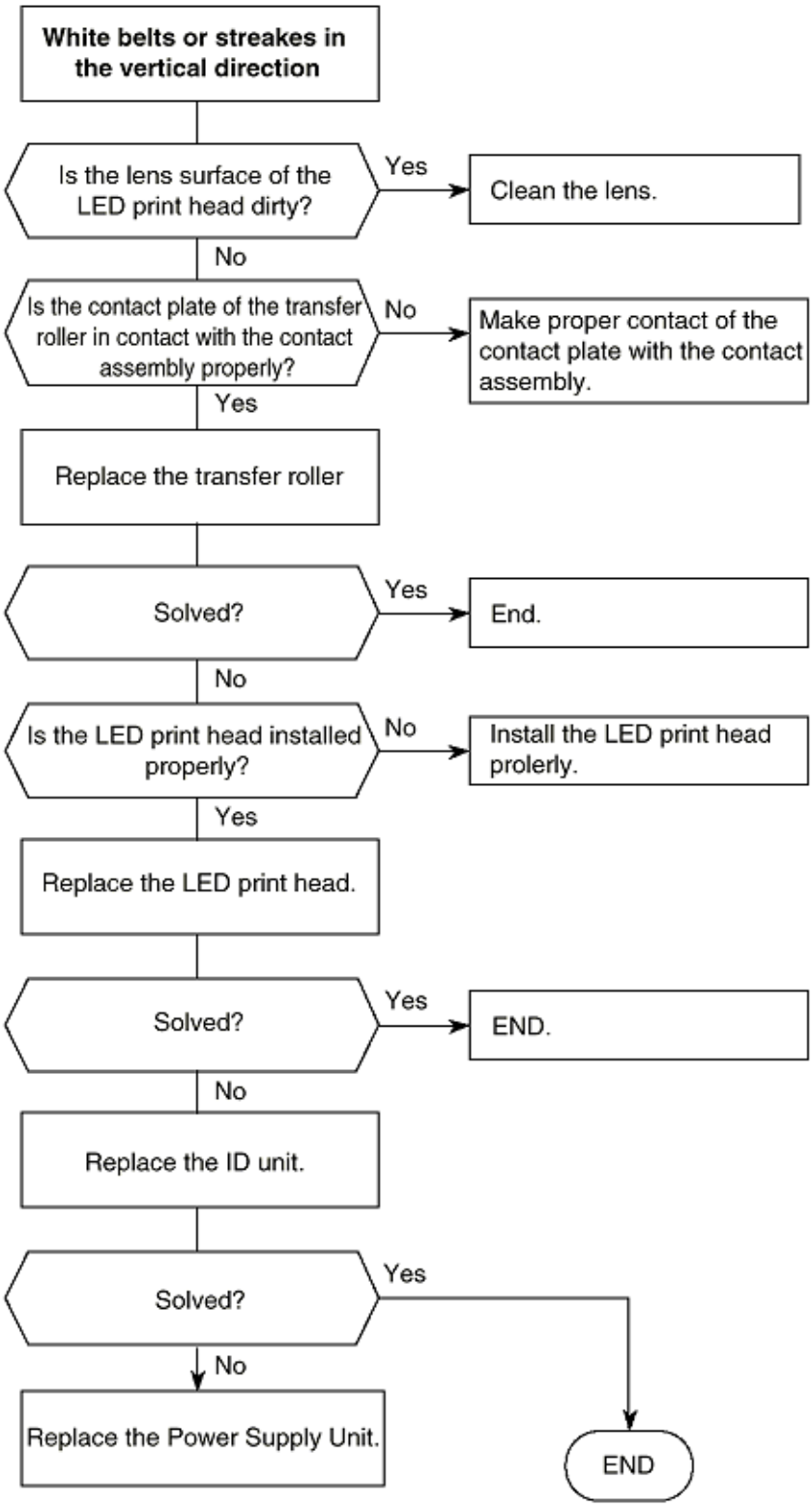
12: Evenly Spaced Marks on Output


Periodic abnormal printing
1.66" (44.4 mm) period?
Yes
Developing roller (inside ID unit) failure.
Replace or clean the ID unit.
No
3.71" (94.2 mm) period?
Yes
EP drum (inside ID unit) failure.
Replace the ID unit.
No
2.27" (57.8 mm) period?
Yes
Tonner supply roller (inside the ID unit) failure.
Replace the ID unit.
No
1.56" (39.6 mm) period?
Yes
Charging roller (inside the ID unit) failure.
Replace the ID unit.
No
1.24" (31.4 mm) period?
Yes
Cleaning roller (inside the ID unit) failure.
Replace the ID unit.
No
2.01" (51.1 mm) period?
Yes
Replace the transfer roller.
No
2.47" (62.8 mm) period?
Yes
Heater roller (inside the fuser unit) failure.
Replace the fuser unit.
No
2.72" (69.1 mm) period?
Yes
Replace the Back-up roller.
No
Check the fax control side.

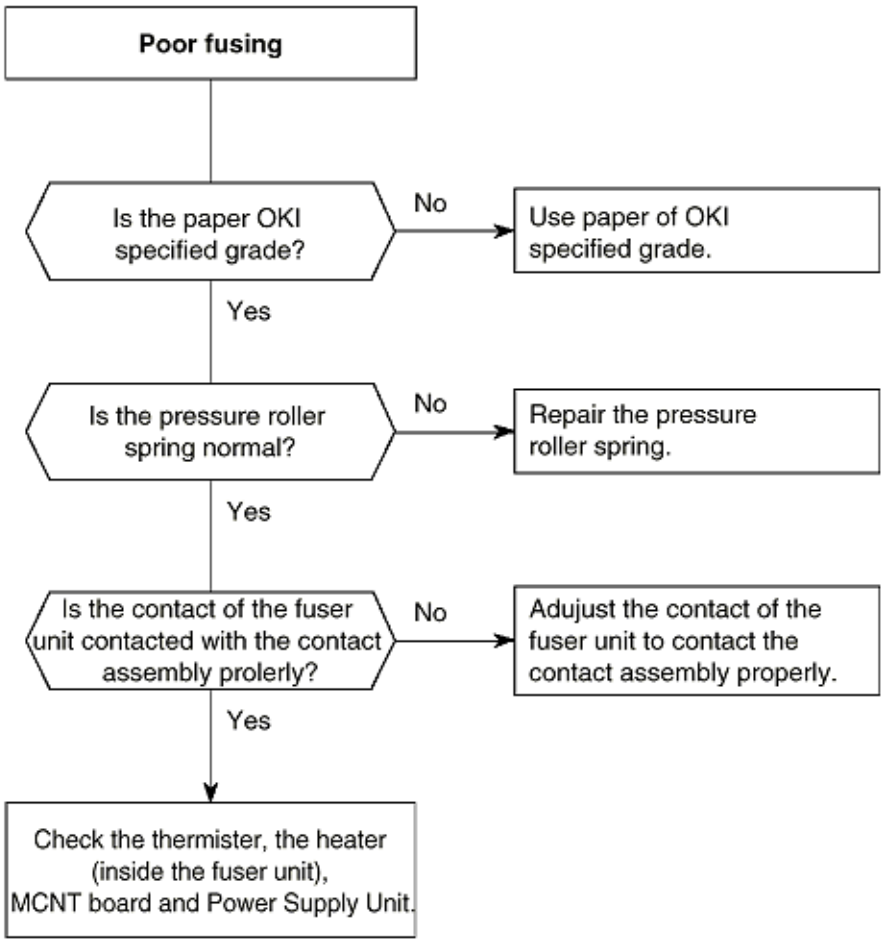
13: Missing Print on Output



14: Vertical White Stripes on Output


White belts or streakes in the vertical direction
Is the lens surface of the LED print head dirty?
Yes
Clean the lens.
No
Is the contact plate of the transfer roller in contact with the contact assembly properly?
No
Make proper contact of the contact plate with the contact assembly.
Yes
Replace the transfer roller
Solved?
Yes
End.
No
Is the LED print head installed properly?
No
Install the LED print head prolerly.
Yes
Replace the LED print head.
Solved?
Yes
END.
No
Replace the ID unit.
Solved?
Yes
No
Replace the Power Supply Unit.
END

15: Poor Fusing



8.1 General Information

The OKIFAX 5250 and OKIFAX 5400 do not have any dipswitches.

A1.1 Unit Configuration and Block Diagram

The unit configuration of the OKIFAX 5250 / 5400 is as follows:

Diagram

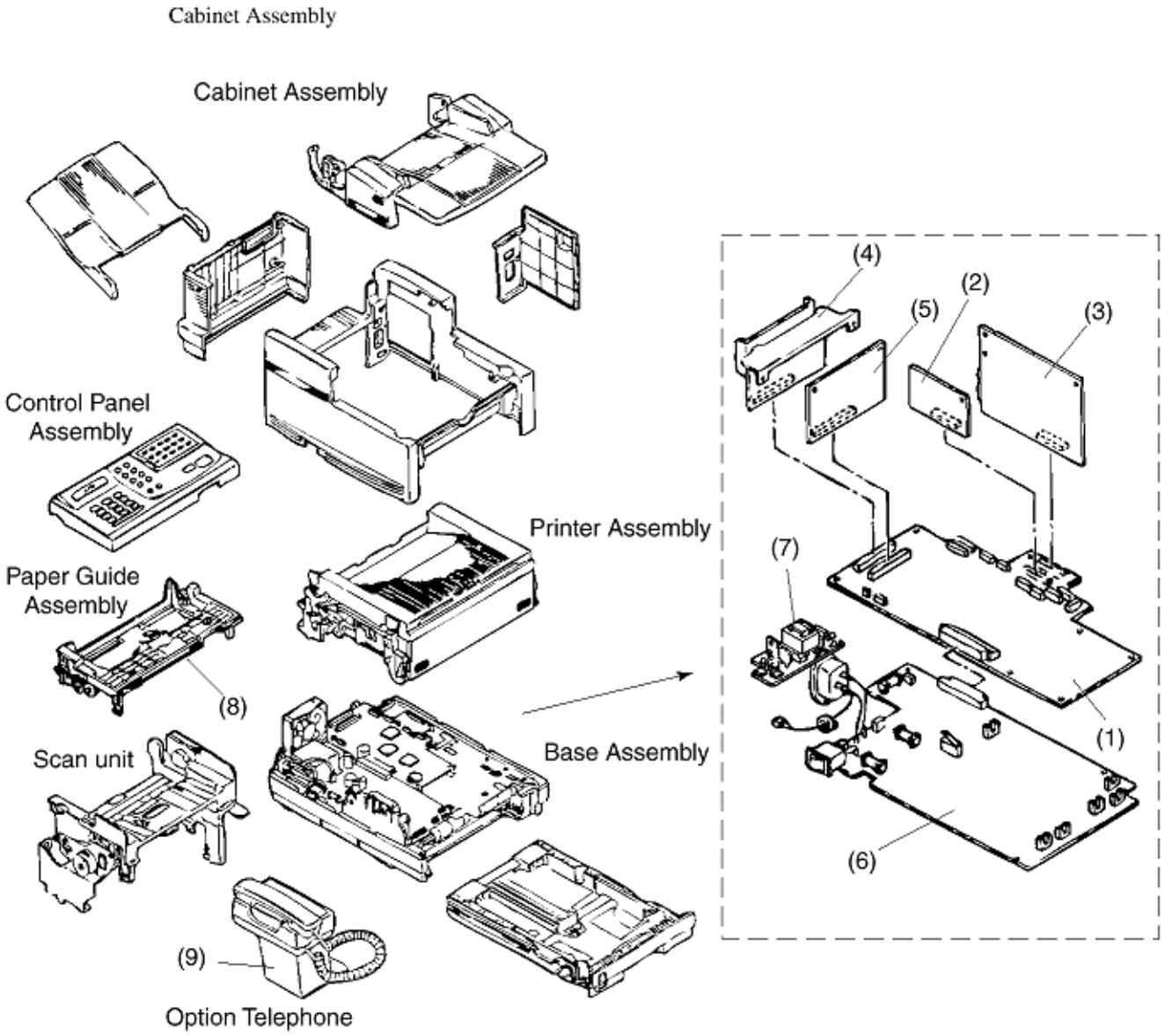


Figure A1.1.1 Unit Configuration

(1) Main control board

(2) Modem board (MODEM): OKIFAX 5400 only

(3) Network control unit (UNC)

(4) PC interface board (CTR): OKIFAX 5400 option only

(5) Memory board (MEM): option

(6) Power supply unit (1VP: 120V, 2VP: 230V)

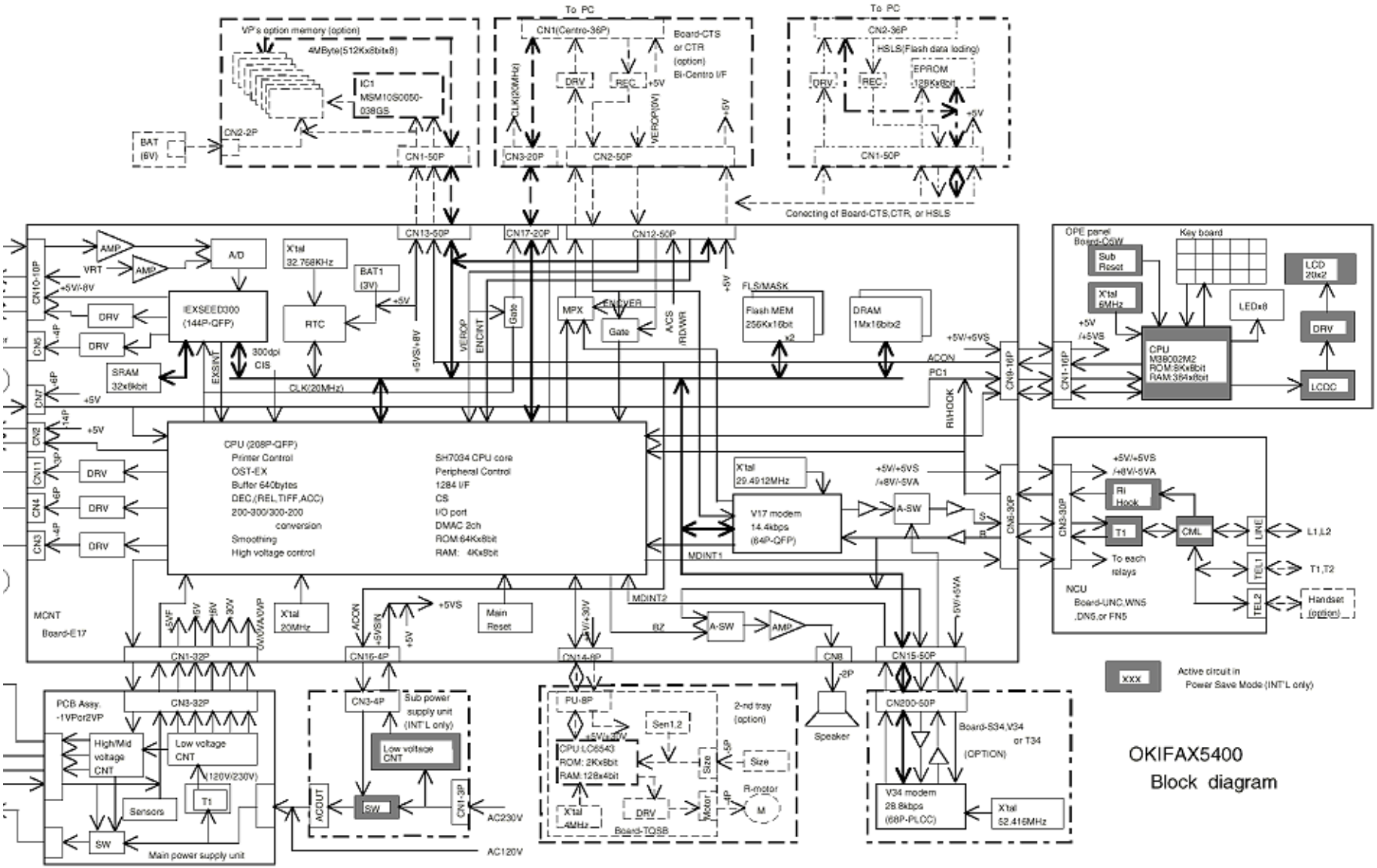
(7) Power supply unit (SUB POW)

(8) Operation panel board (05WH)

(9) Optional board

- Telephone interface board (TEL)
- NCU-TEL interface board (NTIF)
- Ten-key board (10KY)
- Hook board (HOOK)

Block Diagram



OKIFAX5400
Block diagram

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
EXSEED	Image processing gate array
FAN	Fan motor
FLASH	Flash memory
IOGA 3	Input output gate array
PCi	Photocoupler number i
POW.UNIT	Power supply unit
PSRAM	Pseudo-SRAM
R-MOTOR	Resist motor
RTC	Real time clock
S-MOTOR	Send motor
SRAM	Static random-access memory
X'tal	Crystal oscillator

A1.2 Function of Each Unit

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

The block diagram is shown in Section A1.1

(1) Main Control Board (E17)

- CPU
  Basic processor
  Scanning control
  Picture processing control
  Printing control
  SIO (Serial input/output) control

- IOGA (Input/output gate array)
  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 EXSEED
  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

- Fan motor control

- Drum motor control

- Resist motor control

- Modem chip/Modem board (For OKIFAX 5600-Plus)
  Modulation and demodulation for V.34 (for OKIFAX 5600-Plus)
- 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

(2) Operation panel unit: 05W 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

(3) NCU Board (PCB)

- 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

(4) Power supply unit: SUB-POW board

- Conversion of main alternating current to the following direct currents:
  +5V DC power supply
  +8V DC/-8V DC power supply
  +30V 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

(5) MEM (memory) board (Option)

- DRAM
  Memory storage for ECM operations, memory broadcast, delayed broadcast, etc.

(6) CTR board (PC Interface)

- Driver circuits for bi-directional, parallel port

(7) NTIF board (Option)

- Ringer circuit

(8) TENKEY board (Option)

- TEN-key pad

(9) HOOK board (Option)

- Hook switch circuit

10) TELU board (Option): (For U.S. and Canada)

NOTE: This board is contained within the optional handset.

- Speech network circuit
  Basic speech functions included.

(11) TQSB board (option)

Second paper cassette unit

- MOS-CPU
- Motor control

A2.1 Signal Flow Explanation

(1) Copy Mode

(2) G3 Send Mode

(3) G3 Receive Mode

(4) 300bps Send Mode

(5) 300bps Receive Mode

(6) Report Printing

(7) Memory Transmission

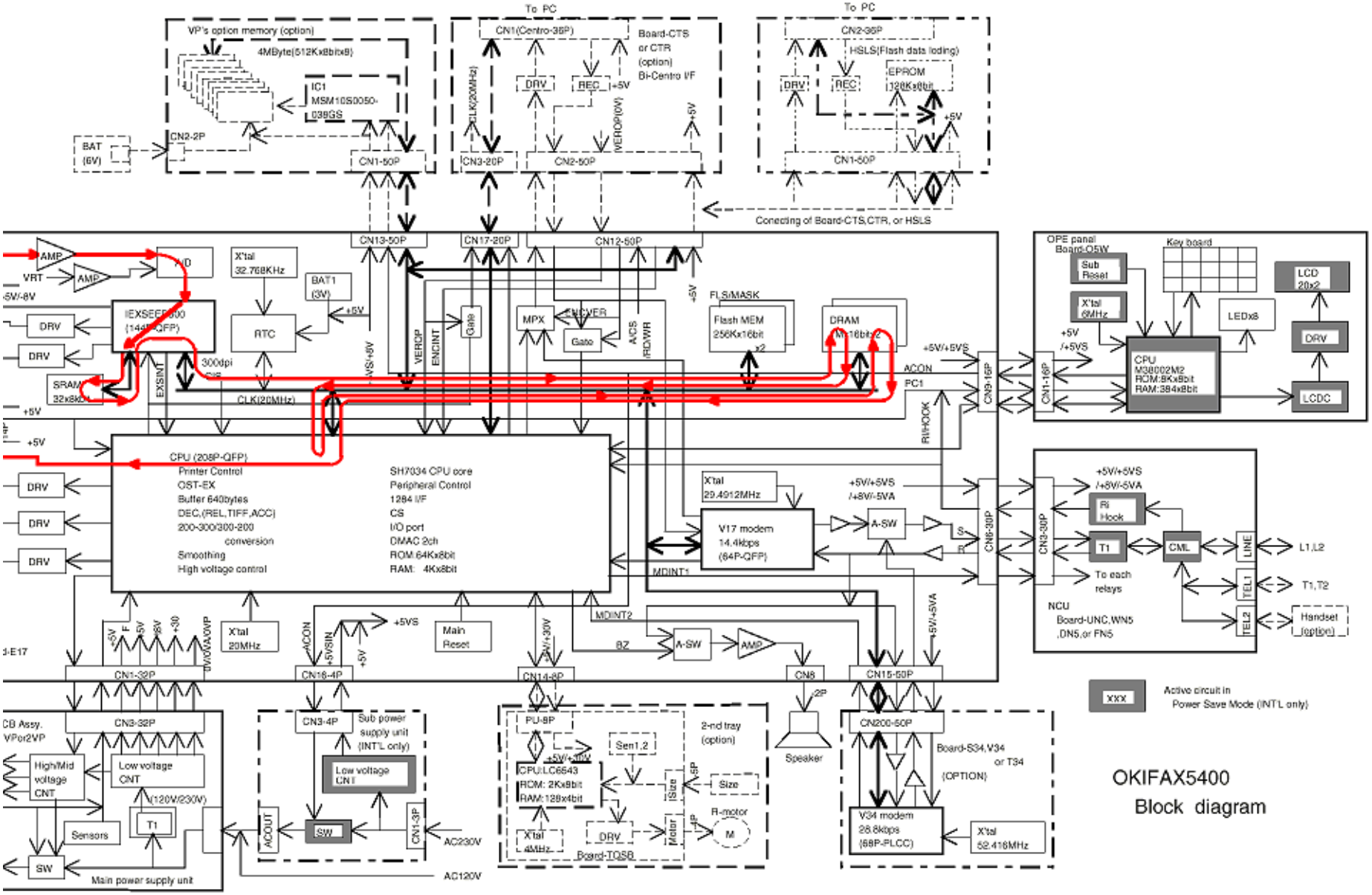
(8) Memory Reception

(1) Copy Mode

The Copy Picture Signal Diagram 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 EXSEED (image processing LSI) and SRAM. Here, the picture data undergoes various kinds of picture processings (EXSEED and SRAM), converted to two-level binary data (black and white) and then sent to IOGA (scanning control). The one-line binary picture data from IOGA 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 IOGA. The data is converted into a serial data by the picture control of IOGA and transferred to the LED print head for printing as HDATA. Writing of data into the page memory is also possible during the printing operation.

Copy Picture Signal



OKIFAX5400

Block diagram

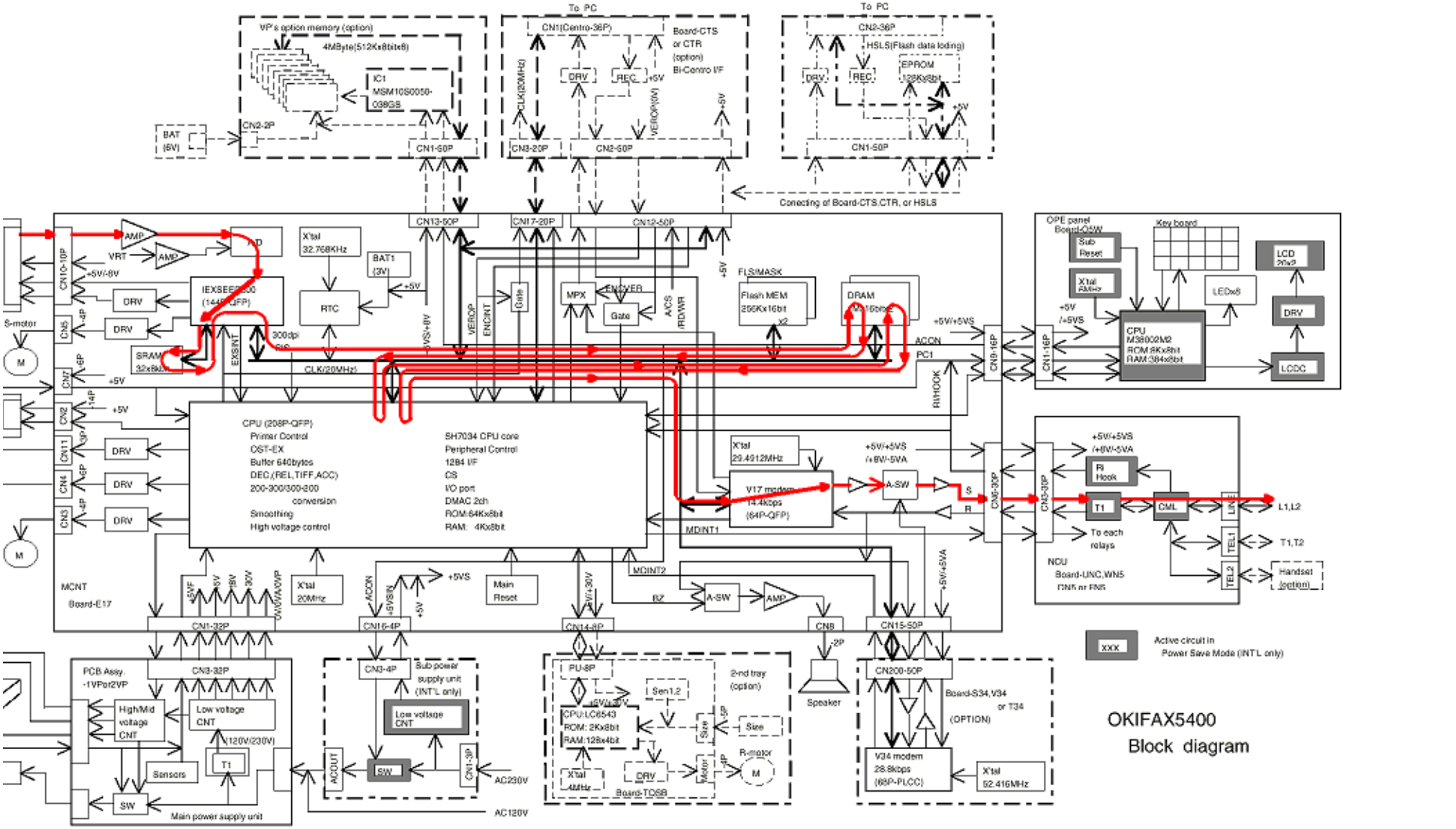
(2) G3 Send Mode

The G3 Send Picture Signal Diagram 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 CPU. The 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 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.

G3 Send Pciture Signal

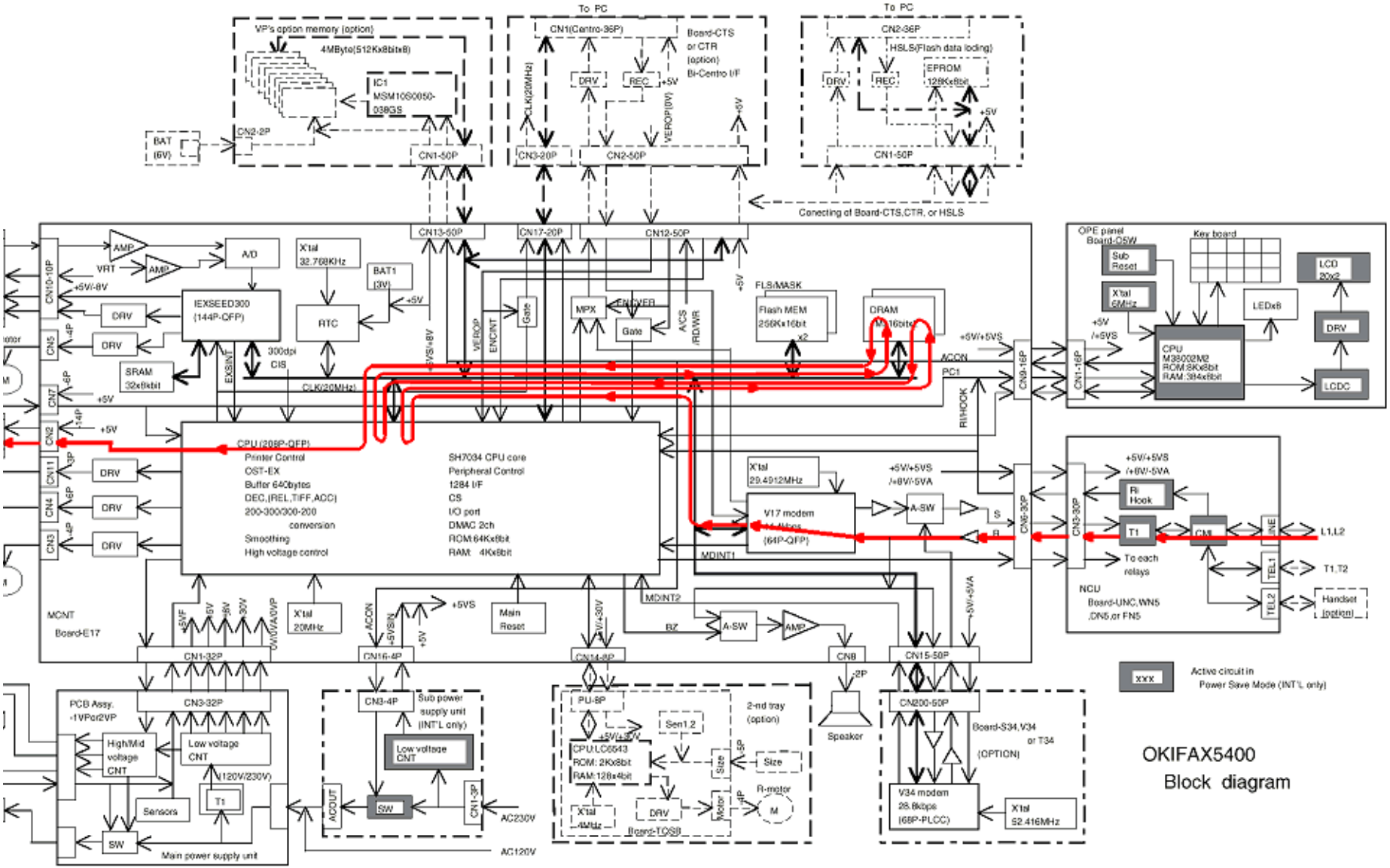

To PC
To PC
VP's option memory (option)
4MByte(512Kx8bitx8)
IC1
MSM10S0050-
038GS
CN2-2P
BAT
(6V)
CN1-60P
CN1(Centro-36P)
Board-CTS
or CTR
(option)
Bi-Centro I/F
CLK(20MHz)
DRV
REC
+5V
VEROP(0V)
CN3-20P
CN2-60P
CN2-36P
HSLS(Flash data loding)
EPROM
128Kx8bit
CN1-60P
Conecting of Board-CTS,CTR, or HSLS
CN13-50P
CN17-20P
CN12-50P
AMP
VRT
AMP
A/D
X'tal
32.768KHz
BAT1
(3V)
RTC
+5V
+5V/-8V
IEXSEED300
(144P-QFP)
SRAM
32x8bit
300dpi
EXSINT
CLK(20MHz)
+5VS/+8V
VEROP
ENCINT
Gate
MPX
ENCVER
Gate
A/CS
IRD/WR
FLS/MASK
Flash MEM
256Kx16bit
x2
DRAM
x16bitx2
+5VI/+5VS
ACCN
PC1
RIHOOK
CN9-16P
CN1-16P
OPE panel
Board-OPW
Sub
Reset
X'tal
8MHz
Key board
LCD
20x2
LEDx8
DRV
LCDC
+5V
/+5VS
CPU
M38002M2
ROM:8Kx8bit
RAM:384x8bit
S-motor
M
CN10-10P
CN5
CN7
CN2
CN11
CN4
CN3
4P
6P
14P
DRV
CPU (208P-QFP)
Printer Control
CST-EX
Buffer 640bytes
DEC.(REL,TIFF,ACC)
200-300/300-200
conversion
Smoothing
High voltage control
SH7034 CPU core
Peripheral Control
1284 I/F
CS
I/O port
DMAC 2ch
ROM:64Kx8bit
RAM: 4Kx8bit
X'tal
29.4912MHz
V17 modem
14.4kbps
(64P-QFP)
A-SW
+5VI/+5VS
/+8V/-5VA
S
R
CN6-30P
CN3-30P
R
Hook
T1
CML
LINE
L1,L2
TEL1
T1,T2
TEL2
Handset
(option)
To each
relays
NCU
Board-UNC,WN5
(INT'L or FNR
MDINT1
MDINT2
MCNT
Board-E17
X'tal
20MHz
ACCN
+5VS/N
+5V
Main
Reset
BZ
A-SW
AMP
+5VI/+5VA
CN1-32P
CN16-4P
CN14-8P
CN8
CN15-50P
2P
Speaker
XXX
Active circuit in
Power Save Mode (INT'L only)
PCB Assy.
-1VPor2VP
CN3-32P
High/Mid
voltage
CNT
Low voltage
CNT
(120V/230V)
T1
Sensors
SW
Main power supply unit
CN3-4P
Sub power
supply unit
(INT'L only)
Low voltage
CNT
SW
CN1-3P
AC230V
AC120V
ACCOUT
PU-8P
2-nd tray
(option)
Sen1,2
CPU:LC6543
ROM: 2Kx8bit
RAM:128x4bit
Size
Size
R-motor
X'tal
4MHz
DRV
Motor
Board-TC6B
CN200-50P
Board-S34,V34
or T34
(OPTION)
V34 modem
28.8kbps
(68P-PLCC)
X'tal
92.416MHz
OKIFAX5400
Block diagram

(3) G3 Receive Mode

The G3 Receive Picture Signal Diagram 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 CPU. The 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 CPU. When the data for one page has been stored in the DRAM/P-SRAM, the data is read out from the DRAM and sent to IOGA. The picture data is converted into a signal data by the printer control of IOGA and transferred to the LED print head for printing as HDATA 0/1.

G3 Receive Picture Signal


To PC
To PC
VP's option memory (option)
4MByte(512Kx8bitx8)
IC1
MSM10S0050-038GS
CN2-2P
BAT (6V)
CN1-50P
CN1(Centro-36P)
Board-CTS or CTR (option) Bi-Centro I/F
CLK(20MHz)
DRV
REC
+5V
VEROP(0V)
+5V
CN3-20P
CN2-50P
CN2-36P
HSLS(Flash data loding)
DRV
REC
EPROM 128Kx8bit
+5V
CN1-50P
Conecting of Board-CTS,CTR, or HSLS
CN13-50P
CN17-20P
CN12-50P
AMP
AMP
VRT
A/D
X'tal 32.768KHz
BAT1 (3V)
+5V/-8V
IEXSEED300 (144P-QFP)
RTC
+5V
DRV
DRV
SRAM 32x8kbit
300dpi CIS
EXSINT
CLK(20MHz)
VR/ROP
ENCINT
+5VS/+8V
Gate
MPX
ENCODER
Gate
A/CS /RD/WR
+5V
FLS/MASK
Flash MEM 256Kx16bit x2
DRAM M.16bit
+5V/+5VS
ACCON
PC1
RIHOOK
CN9-16P
CN1-16P
OPE panel Board-O5W
Sub Reset
X'tal 6MHz
+5V /+5VS
Key board
LED x8
LCD 20x2
DRV
CPU M38002M2 ROM:8Kx8bit RAM:384x8bit
LCDC
CN10-10P
CN5
CN7
CN2
CN11
CN4
CN3
+5V
CPU (208P-QFP)
Printer Control
CST-EX
Buffer 640bytes
DEC,(REL,TIFF,ACC)
200-300/300-200 conversion
Smoothing
High voltage control
SH7034 CPU core
Peripheral Control
1284 I/F
CS
I/O port
DMAC 2ch
ROM:64Kx8bit
RAM 4Kx8bit
X'tal 20.4912MHz
V17 modem 14.4kbps (64P-QFP)
+5V/+5VS /+8V/-5VA
A-SW
S
R
MDINT1
CN6-30P
CN3-30P
+5V/+5VS /+8V/-5VA
Ri Hook
T1
CML
To each relays
L1,L2
T1,T2
Handset (option)
NCU
Board-UNC,WN5 ,DN5,or FN5
MCNT
Board-E17
+5VF
+5V
+8V
-30V
ON/OFF/A0VP
X'tal 20MHz
ACON
+5VS/+5V
+5V
+5VS
Main Reset
+8V/+30V
MDINT2
BZ
A-SW
AMP
+5V/-5VA
CN1-32P
CN16-4P
CN14-8P
CN8
CN15-50P
2P
Speaker
xxx
Active circuit in Power Save Mode (INT'L only)
PCB Assy. -1VPor2VP
CN3-32P
High/Mid voltage CNT
Low voltage CNT
120V/230V)
T1
Sensors
SW
Main power supply unit
ACOUT
CN3-4P
Sub power supply unit (INT'L only)
Low voltage CNT
SW
CN1-3P
AC230V
AC120V
PU-8P
Sen1,2
2-nd tray (option)
+5V(+8.5V)
CPU:LC6543
ROM: 2Kx8bit
RAM:128x4bit
Size
Size
X'tal 4MHz
DRV
Motor
4P
R-motor
M
Board-TOSB
CN200-50P
Board-S34,V34 or T34 (OPTION)
V34 modem 28.8kbps (68P-PLCC)
X'tal 52.416MHz
OKIFAX5400
Block diagram

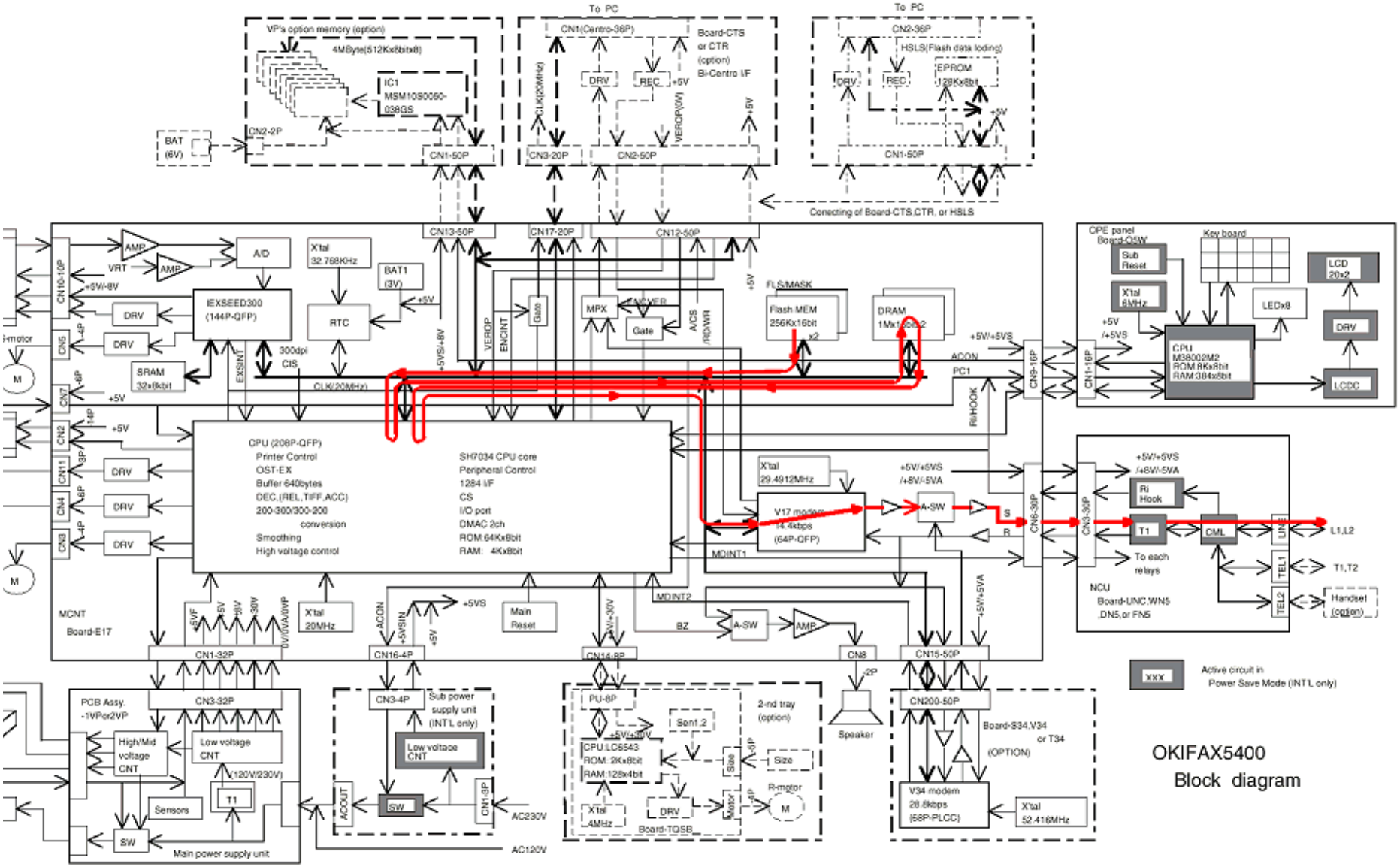
(4) 300 bps Send Mode

The 300 bps Second Mode Diagram shows the 300 bps 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 CPU. The contents of the frame has been edited on the DRAM by CPU and sent to MODEM via 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



OKIFAX5400
Block diagram

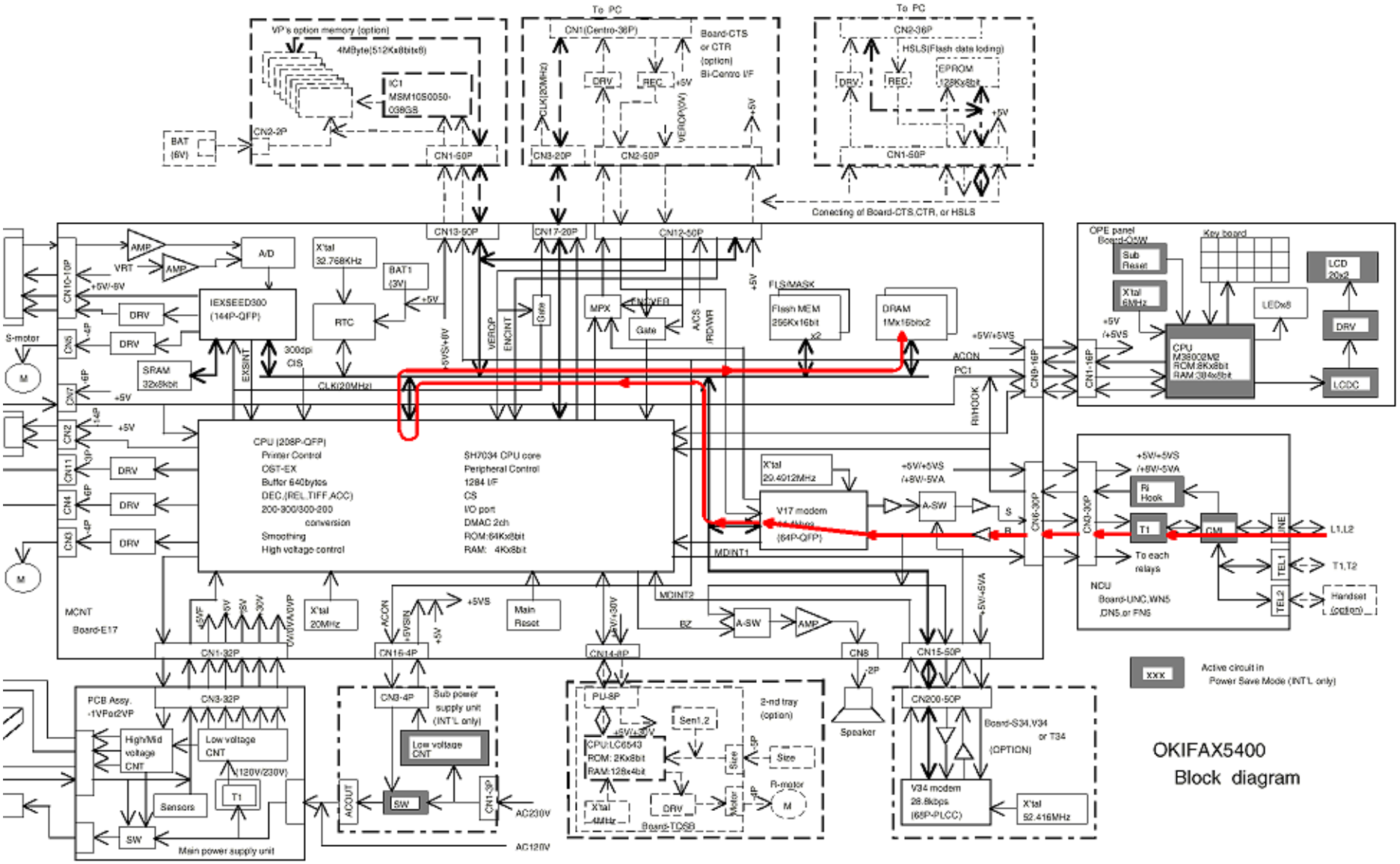
(5) 300 bps Receive Mode

The 300 bps Receive Mode Diagram shows the 300 bps 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 CPU via the data bus from the modem. The data is read and decoded by the 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.

300 bps Receive Signal



OKIFAX5400
Block diagram

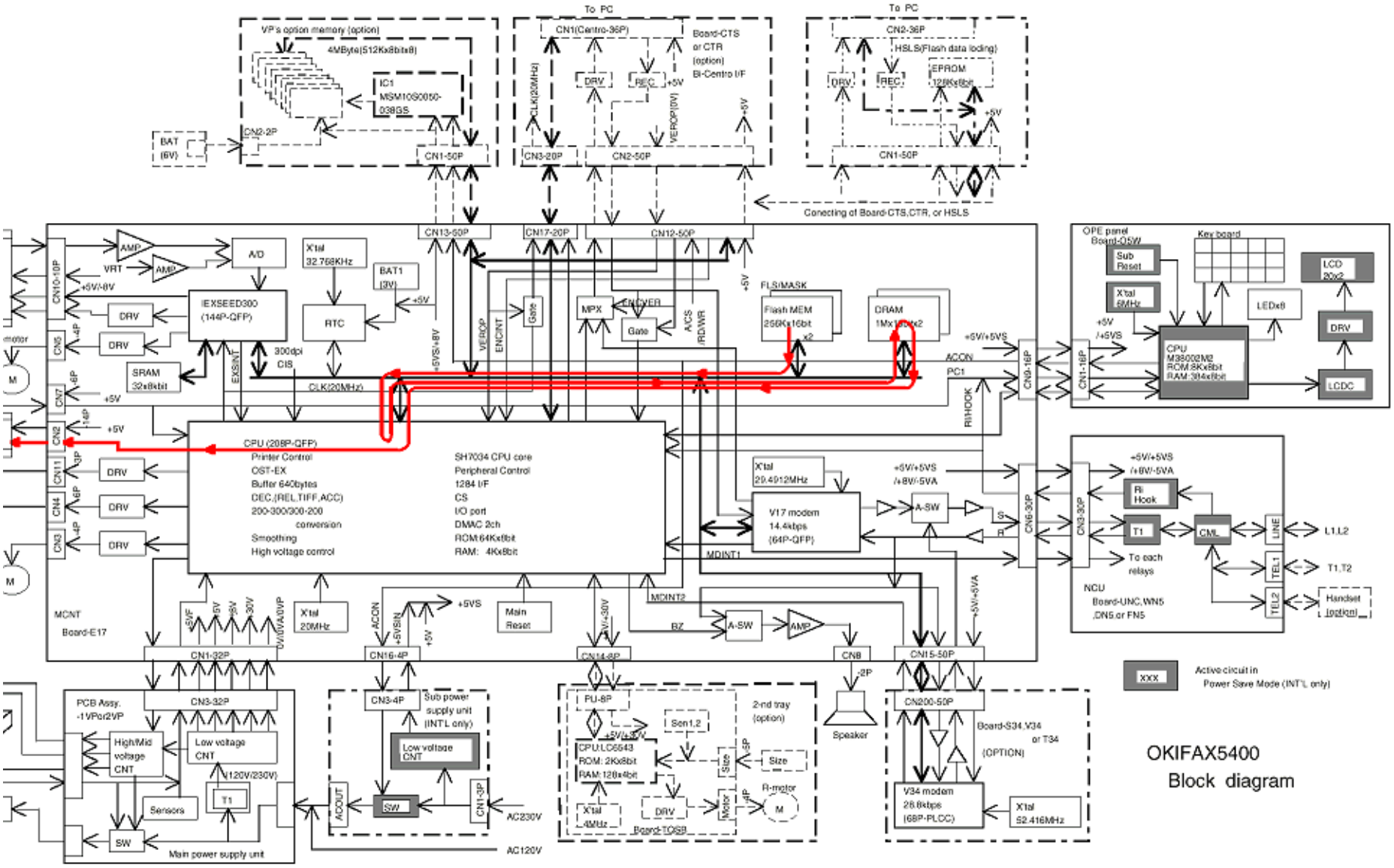
(6) Report Printing

The Report print Signal Diagram shows the Report Print 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 IOGA. The data is converted into a serial data by the picture control of IOGA and transferred to the LED print head for printing as HDATA 0/1.

Report Printing Signal


VP's option memory (option)
4MByte(512Kx8bitx8)
IC1
MSM10S0050-038GS
CN2-2P
BAT (6V)
CN1-50P
To PC
CN1(Centro-36P)
Board-CTS or CTR (option) Bi-Centro I/F
CLK(20MHz)
DRV
REC
+5V
VEROP(0V)
CN3-20P
CN2-50P
To PC
CN2-36P
HSLS(Flash data loding)
EPROM
128Kx8bit
CN1-50P
Conecting of Board-CTS,CTR, or HSLS
CN13-50P
CN17-20P
CN12-50P
CN10-10P
AMP
VRT
A/D
X'tal 32.768KHz
BAT1 (3V)
+5V/-8V
IEXSEED300 (144P-QFP)
RTC
SRAM 32x8bit
EXSINT
300dpi CIS
CLK(20MHz)
+5VS/+8V
VEIBOP
ENCINT
Gate
MPX
ENCVER
ACS
/RD/WR
FLS/MASK
Flash MEM 256Kx16bit x2
DRAM 1Mx16bitx2
+5V/+5VS
ACON
PC1
RI/HOOK
CN9-16P
CN1-16P
OPE panel Board-OSW
Sub Reset
X'tal 8MHz
Key board
LCD 20x2
LEDx8
DRV
LCDC
CPU M38002M2 ROM:8Kx8bit RAM:384x8bit
CN5
CN7
CN2
CN11
CN4
CN3
CPU (208P-QFP)
Printer Control
OST-EX
Buffer 640bytes
CEC,(REL,TIFF,ACC)
200-300/300-200 conversion
Smoothing
High voltage control
SH7034 CPU core
Peripheral Control
1284 I/F
CS
I/O port
DMAC 2ch
ROM:64Kx8bit
RAM: 4Kx8bit
X'tal 20.4912MHz
V17 modem 14.4kbps (64P-QFP)
+5V/+5VS /+8V/-5VA
A-SW
S
R
CN6-30P
MDINT1
MDINT2
CN3-30P
Ri Hook
T1
CML
LINE
TEL1
TEL2
L1,L2
T1,T2
Handset (option)
To each relays
NCU
Board-UNC,WN5 ,DN5 or FN5
MCNT
Board-E17
-5VF
5V
9V
30V
0V/0VA/0VP
X'tal 20MHz
ACON
+5VS/IN
Main Reset
-30V/+30V
BZ
AMP
+5VS/+5VA
CN1-32P
CN16-4P
CN14-8P
CN8
CN15-50P
Speaker
XXX
Active circuit in Power Save Mode (INT'L only)
PCB Assy. -1VPor2VP
CN3-32P
High/Mid voltage CNT
Low voltage CNT
(120V/230V)
Sensors
T1
SW
Main power supply unit
CN3-4P
Sub power supply unit (INT'L only)
Low voltage CNT
ACOUT
SW
CN1-3P
AC230V
AC120V
PU-8P
+5V/+3.3V
CPU:LC5643
ROM: 2Kx8bit
RAM:128x4bit
X'tal 4MHz
DRV
Board-TOSB
Sen1,2
2-nd tray (option)
Size
Motor
4P
R-motor
M
CN200-50P
Board-S34,V34 or T34
(OPTION)
V34 modem 28.8kbps (68P-PLCC)
X'tal 52.416MHz
OKIFAX5400
Block diagram

(7) 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.

(8) Memory Reception

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

A3.1 Main Control Board (E17) Circuit Diagrams

A.3.1.1 E-17 CPU Circuit Diagram

A3.1.2 E-17 - FLS, MASK, and Real Time Clock Circuit Diagram

A3.1.3 E-17 - Audio Monitor Circuit Diagram

A3.1.4 E-17 - CIS Circuit Diagram

A3.1.5 E-17 - IEXSEED Circuit Diagram

A3.1.6 E-17 - Modem Circuit Diagram

A3.1.7 E-17 - NCU, OPE, and PC1/PC2 Circuit Diagram

A3.1.8 E-17 - LED Circuit Diagram

A3.1.9 E-17 - Send Motor Circuit Diagram

A3.1.10 E-17 - Drum/Resist Motor Circuit Diagram

A3.1.11 E-17 - Fan Motor Circuit Diagram

A3.1.12 E-17 - Main Power Supply Circuit Diagram

A3.1.13 E-17 - Optional Memory and CTR Circuit Diagram

A3.1.14 E-17 Circuit Diagram

A3.1.1 E-17 - CPU Circuit Diagram

1. Block diagram

The circuit diagram consists of a CPU, crystal oscillator circuit and reset signal generator.

Refer to the Related Signals of CPU Diagram for more information.

2. Function

1) CPU

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

- Printing control
- Various image data processing control for scanning data
- Strobe signals control for LED head
- Smoothing control for printing data
- 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)
- Input/output port

2) Crystal oscillator circuit

X1 is a 20 MHz crystal oscillator. The output wave is fed to the CPU through pin 14 and 15.

CLK (20MHz) is used as the system clock.

Related Signals of CPU Diagram

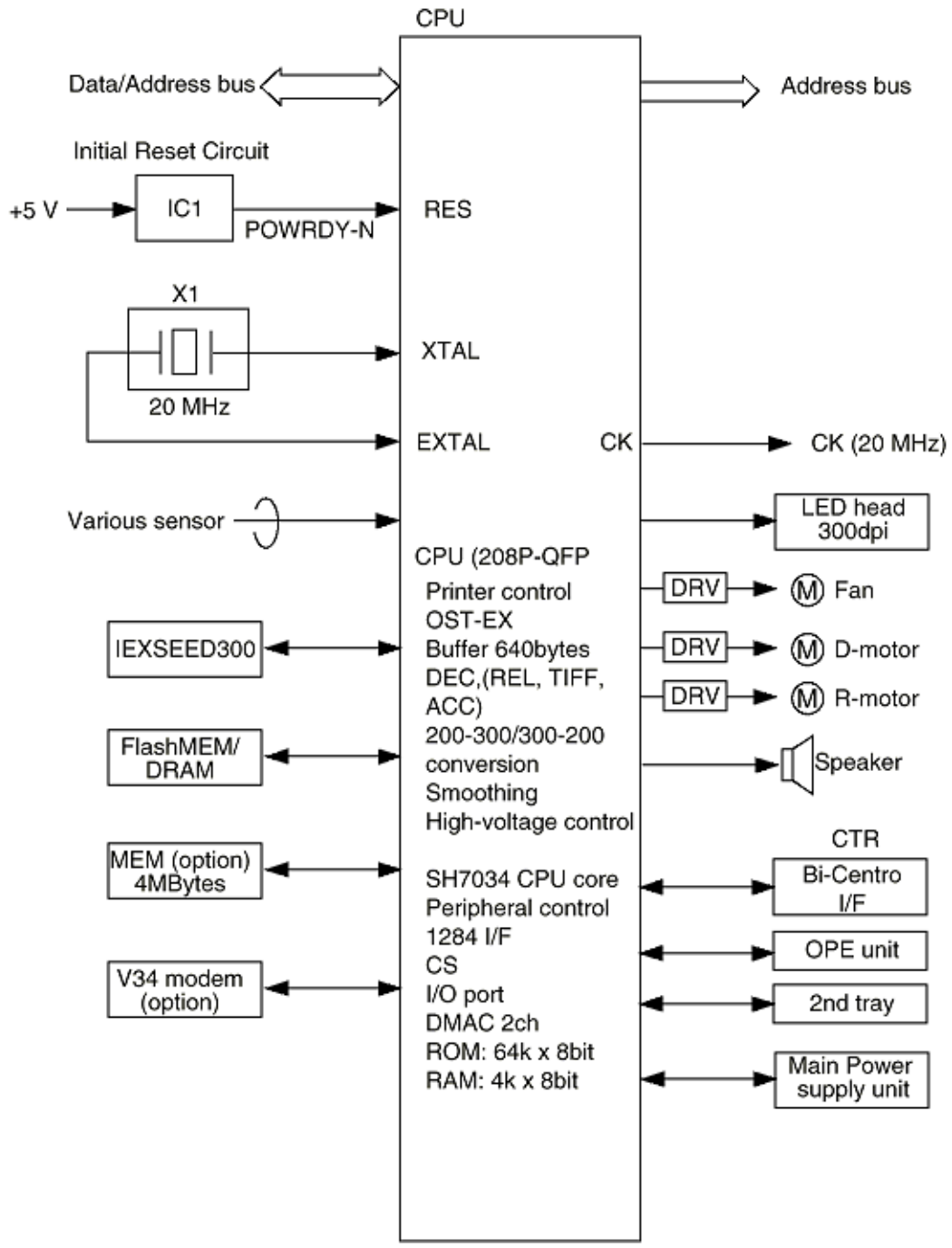


Figure A3.1.1 Related Signals of CPU

A3.1.2 E17 - FLS, MASK and Real Time Clock Circuit Diagram

1. Block diagram

The circuit diagram consists of Flash memory, Mask ROM, IC3 (Real time clock IC) and Back up battery circuit.

Refer to the Block Diagram of FLS, MASK and Real Time Clock for more information.

2. Functions

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.

- 256 KByte x 16 bit Flash memory x 1 (FLS)

Used for work area, report recording etc.

2) Back-up battery circuit

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

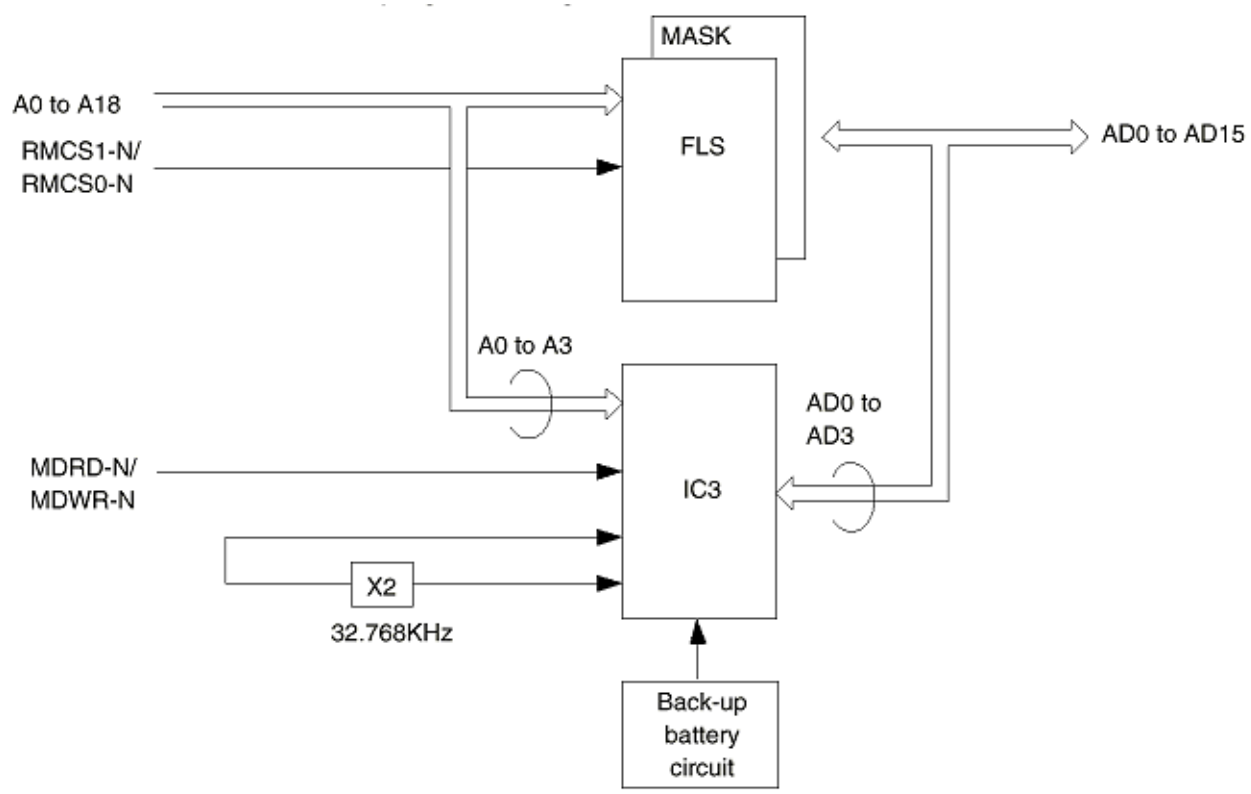
3) Real-time clock IC (IC3)

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 (AD0 - AD3), 4-bit address bus (A1 - A4) and the control signals, RTCCS, MDMRD-N and MDMWR-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).

4) MASK

- 256 KByte x 16 bit Flash memory or Mask ROM x 1 (MASK)
  Used for program storage

Block Diagram of FLS, MASK and Real Time Clock



A3.1.3 E17 - Audio Monitor Circuit Diagram

1. Block diagram

The audio monitor circuit 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.

Refer to the Block Diagram of Audio Monitor Circuit for further information.

2. Function

1) Line monitoring

Send and receive signals are input from the transformer on the NCU board to this circuit as RM 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 CPU. Output (high and low) from IC11 passes through the amplifier and fed to the speaker as a SP signal.

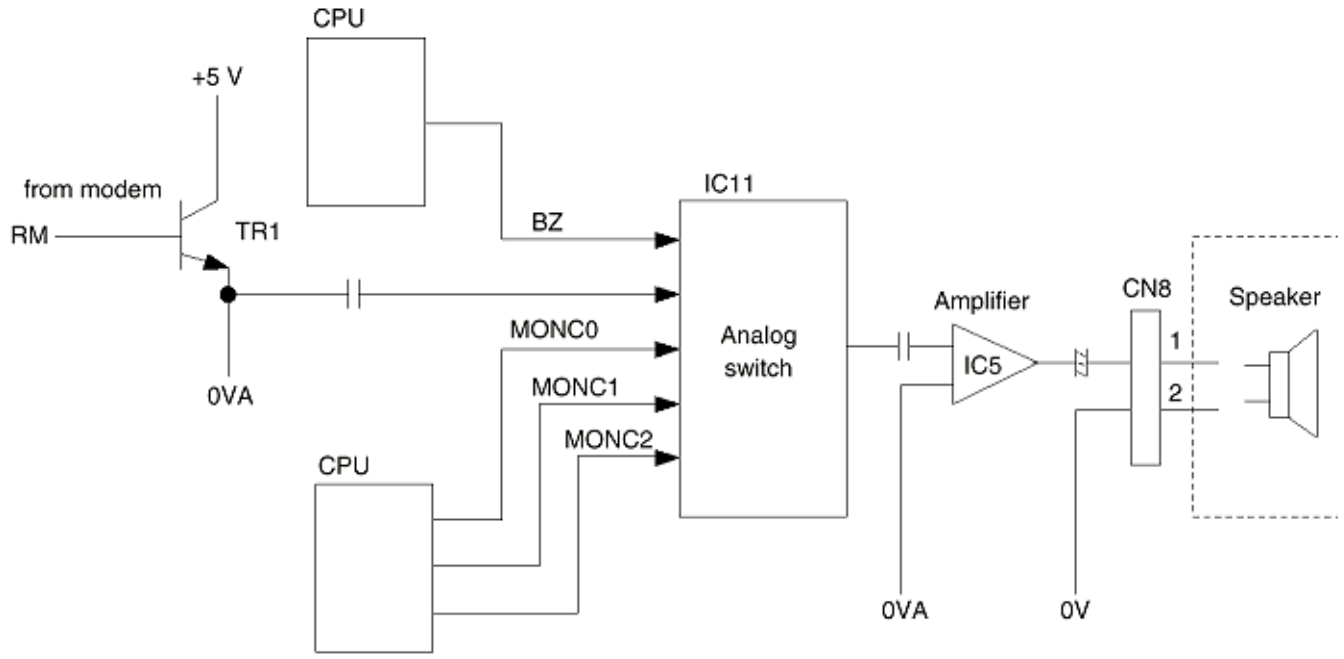
- MONC0/MONC1/MONC2 signal : Volume control signal.

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 (key touch etc.) are input from CPU to this circuit as BZ signal. The various buzzer signals are sounded under the control of CPU.

Block Diagram of Audio Monitor Circuit



A3.1.4 E17 - CIS (contact image sensor) Block Diagram

1. Block diagram

The circuit diagram shown on page 4/16 consists of the following function:

- IC6 (A/D converter) and amplifier
- 30 V/24 V conversion circuit
- Connector CN10 that provides an interface between E17 board and CIS (contact image sensor).

Refer to the Block Diagram of the CIS (contact image sensor) for more information.

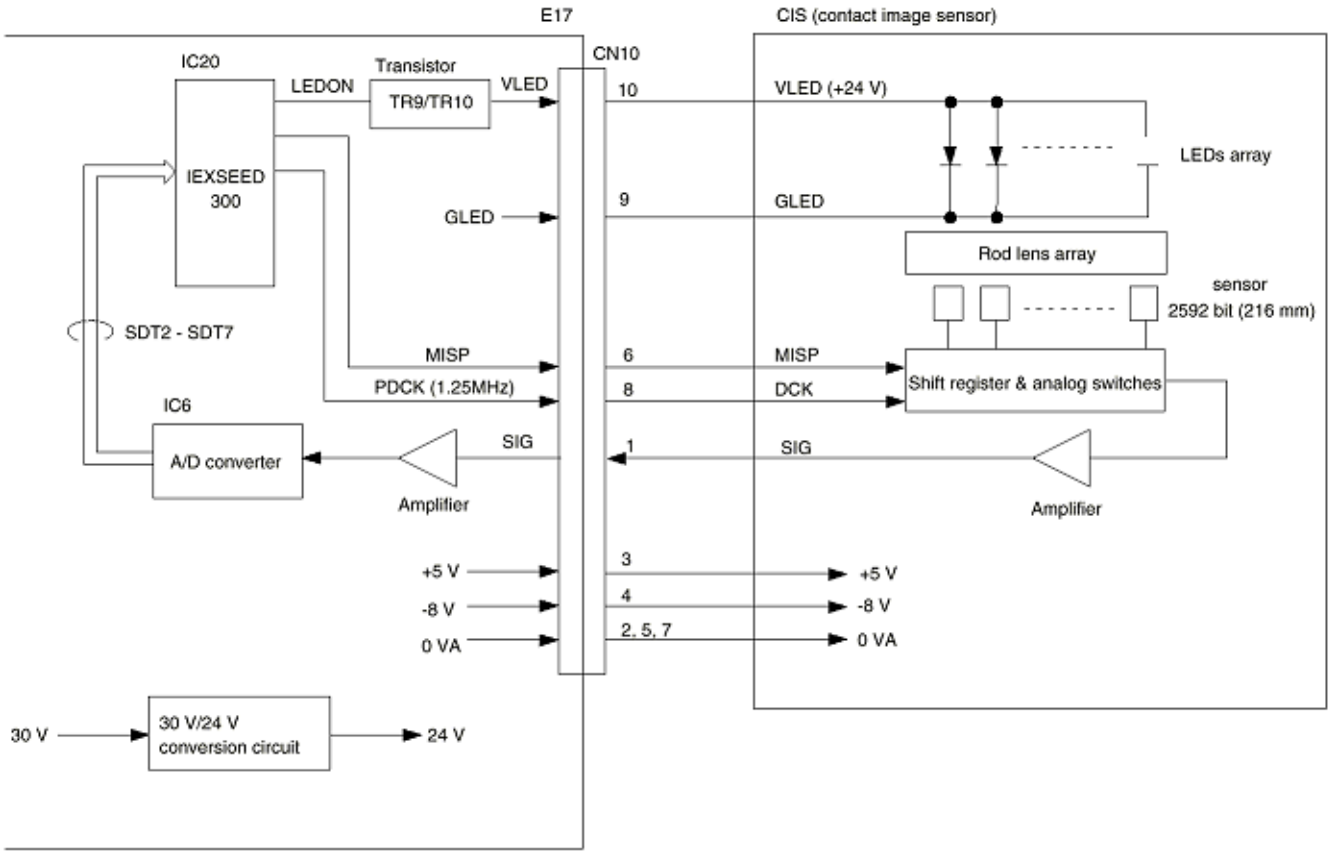
2. Function

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 via amplifier. After conversion from analog data to 6-bit digital signal (SDT2 - SDT7) under the control of IC6, the picture data is sent to IEXSEED300 (scanning control LSI) of IC20. Here, the picture data undergoes
various kinds of picture processings.

Sensor interface signal output from IEXSEED300.

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

Block Diagram of CIS (contact image sensor)



A3.1.5 IEXSEED300 Diagram

1. Block diagram

The circuit diagram shown consists of the IEXSEED300 (image processing LSI) of IC20 and SRAM.

Refer to the Related Signals and Block Diagram of CIS for more information.

2. Function

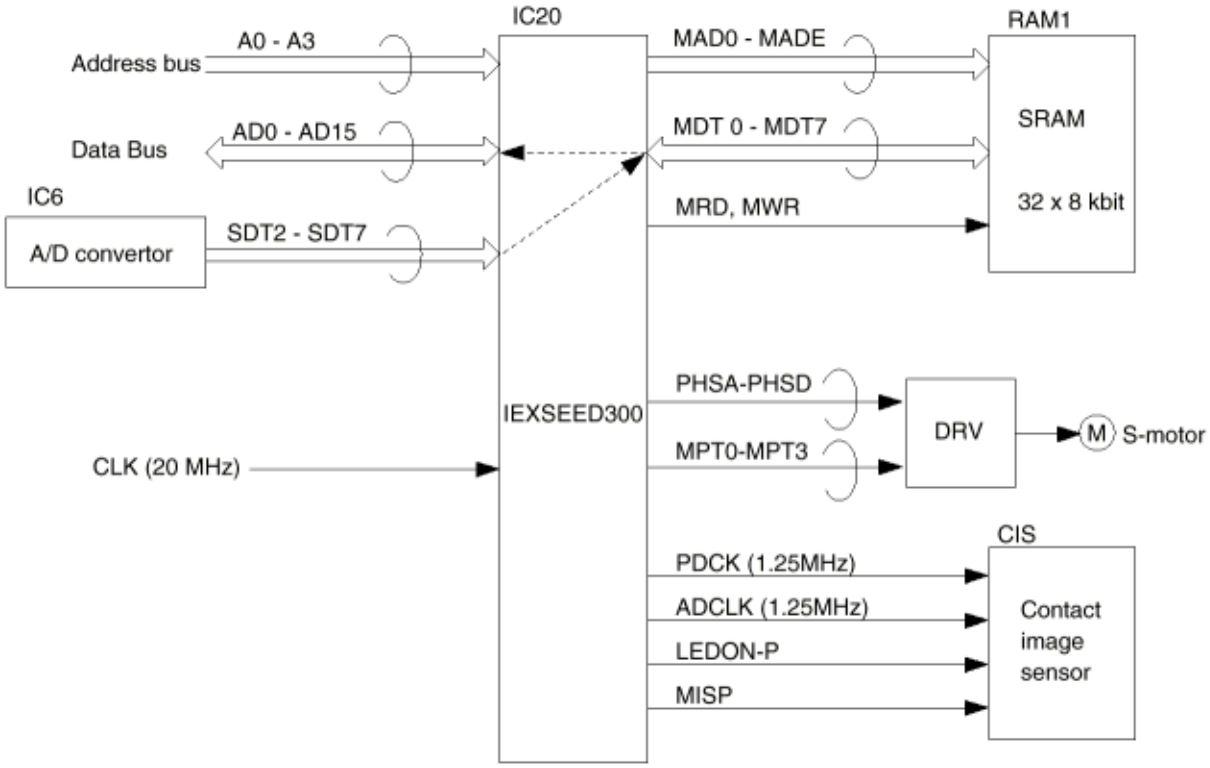
IEXSEED300 is developed LSI for the image processing.
IEXSEED300 contains the following functions:

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

3. SRAM

32 x 8 kbit SRAM x 1 (RAM1)
Stores the dark/light level correction data.
Error diffusion data and image separation data are processed by IEXSEED300.

Related Signals of IEXSEED300



A3.1.6 E17 - Modem Diagram

1. Block diagram

The circuit diagram shown on page 7/16 consists of connector CN15 that provides an interface between E17 board and the Modem board S34, V34 or T34 (option).

The circuit diagram shown on page 6/16 consists of Modem (14.4 kbps). The circuit diagram shown consists of Modem (V34 modem, 28.8 kbps).

Modem consists the following functions:

- Modulation/demodulation

Modulation type:

1) ITU-T Rec. V34 (28800 bps) for G3 picture data.

2) ITU-T Rec. V17 (14400/12000/9600/7200 bps) for G3 picture data.

3) ITU-T Rec. V33 (14400/12000 bps) for G3 picture data.

4) ITU-T Rec. V29 (9600/7200 bps) for G3 picture data.

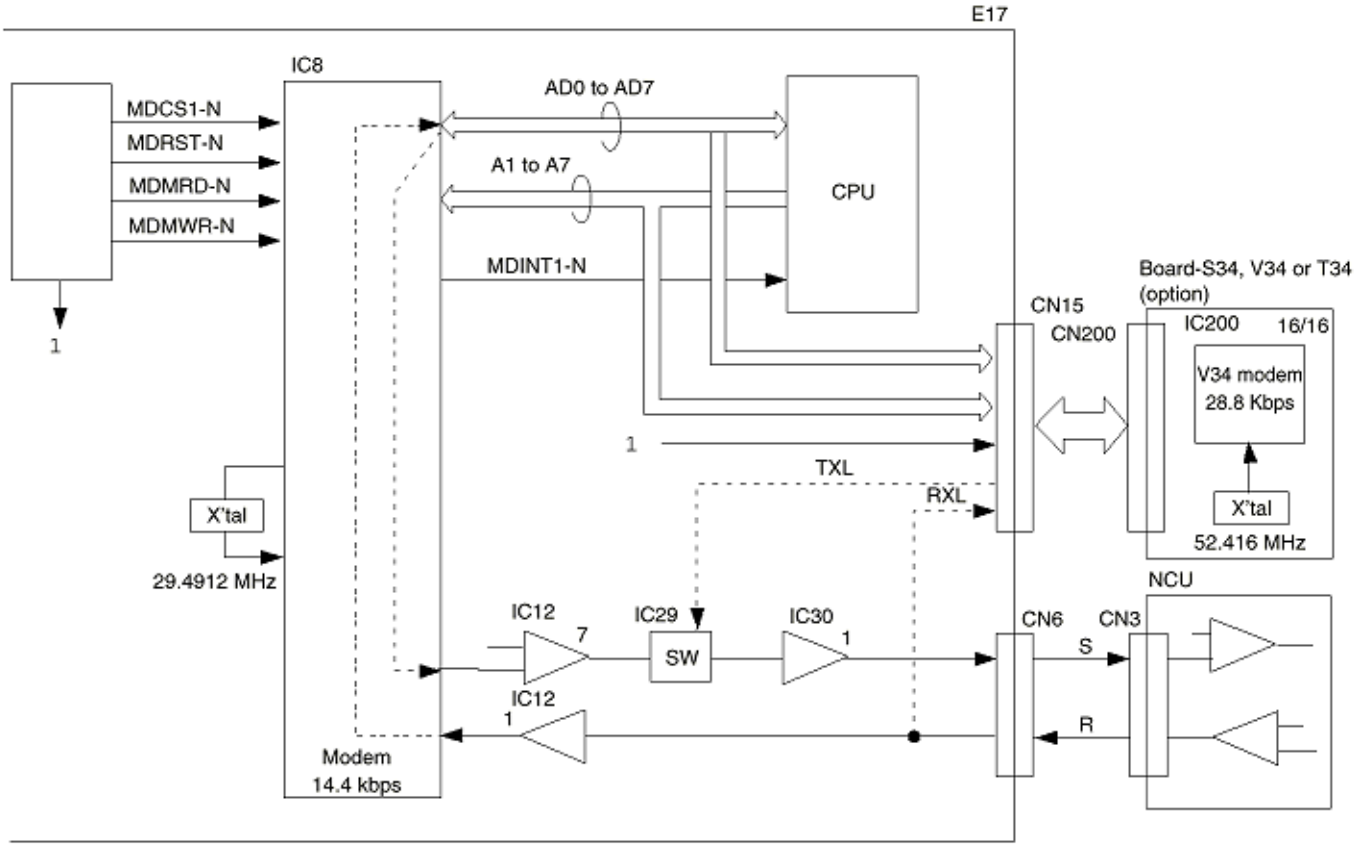
5) ITU-T Rec. V27 ter (4800/2400 bps) for G3 picture data.

6) ITU-T Rec. V21 channel 2 (300bps) 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

For more information, refer to the Related Signals of Modem Diagram.

Related Signals of Modem



A3.1.7 E17 - NCU, OPE, and PC1/PC2 Circuit Diagram

1. Block diagram

The circuit diagram shown consists of the following connectors:

- Connector CN6 that provides an interface between M17 board and NCU board.
- Connector CN7 that provides an interface between M17 board and external electro-mechanical devices (PC1 and PC2).
- Connector CN9 that provides an interface between M17 board and OPE (O5W) unit.

Refer to the following diagrams for further information.

Interface between E17 and NCU Boards Diagram

Interface between E17 and OPE Boards Diagram

Related Signals of PC1 and PC2 Diagram

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: Presense of document at scanning position.

3. Others

NCU interface signal

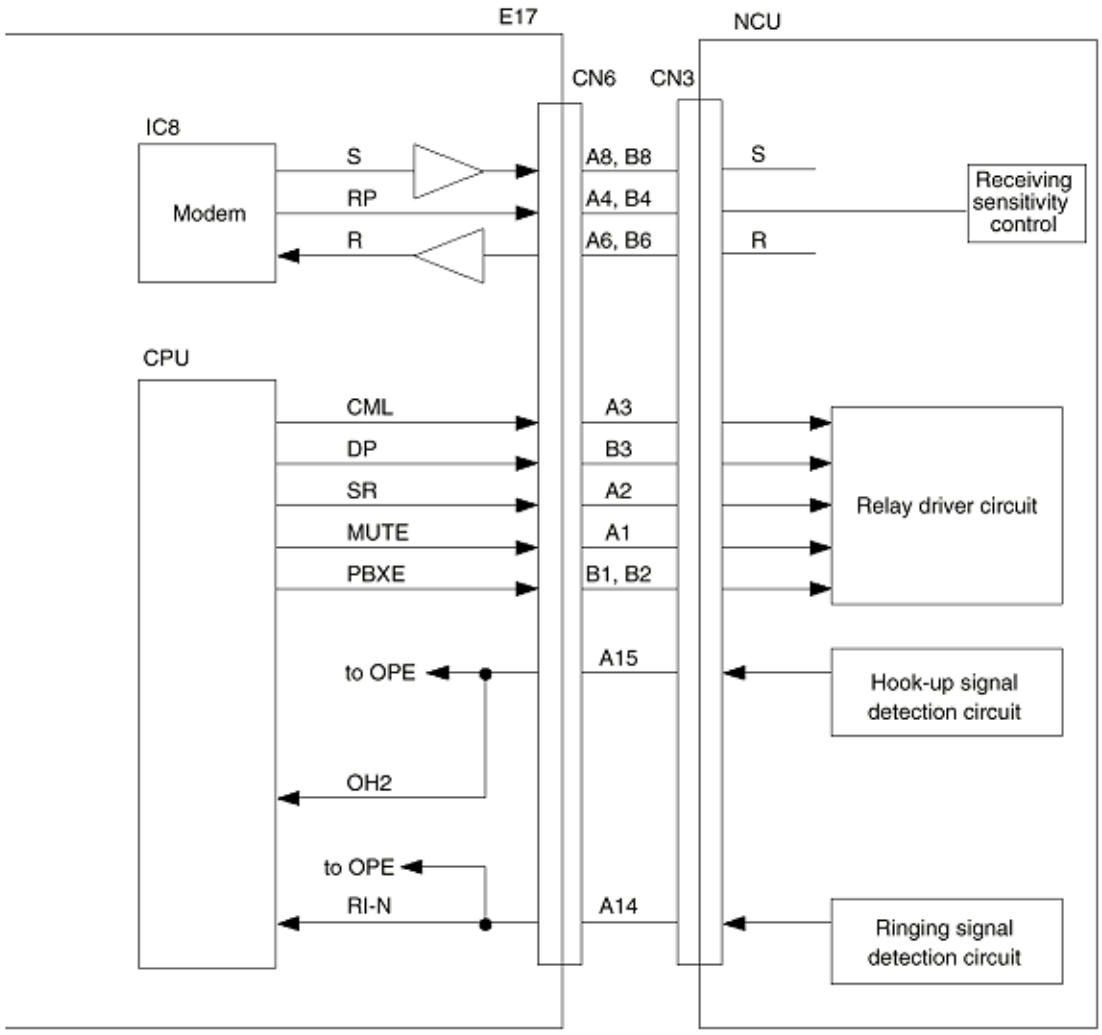
- CML : Line seizure control signal
- DP : Dial pulse control signal
- SR : Control signal for connection between LINE and TEL terminals
- MUTE : Control signal for pulse dial improvement and bell shunt replay
- PP : Relay control signal for special service code detection at parallel pickup or remote reception
- PBXE : Control signal for connecting one of LINE terminal to the PBXE terminal
- OH2 : Detection of off-hook of terminal connected to TEL-1 or TEL-2
- OH1 : 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.)

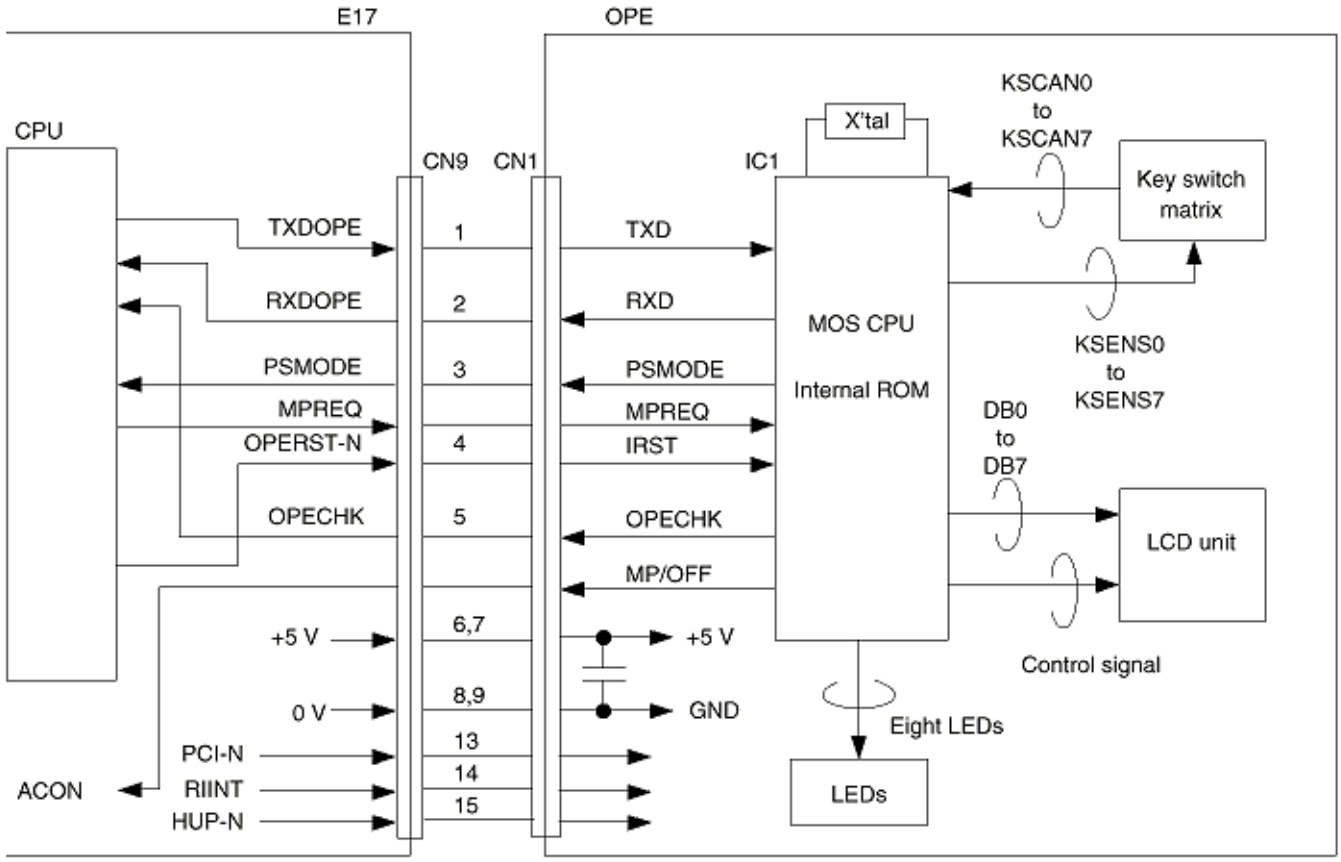
OPE interface signals

- 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
- WAKEUP-N : Wakeup signal
- PSMODE : Power Save Mode off signal from OPE.
- MP/OFF : Main Power On/Off signal to Main Power Supply Unit.
- MPREQ : Main Power off signal from CPU.

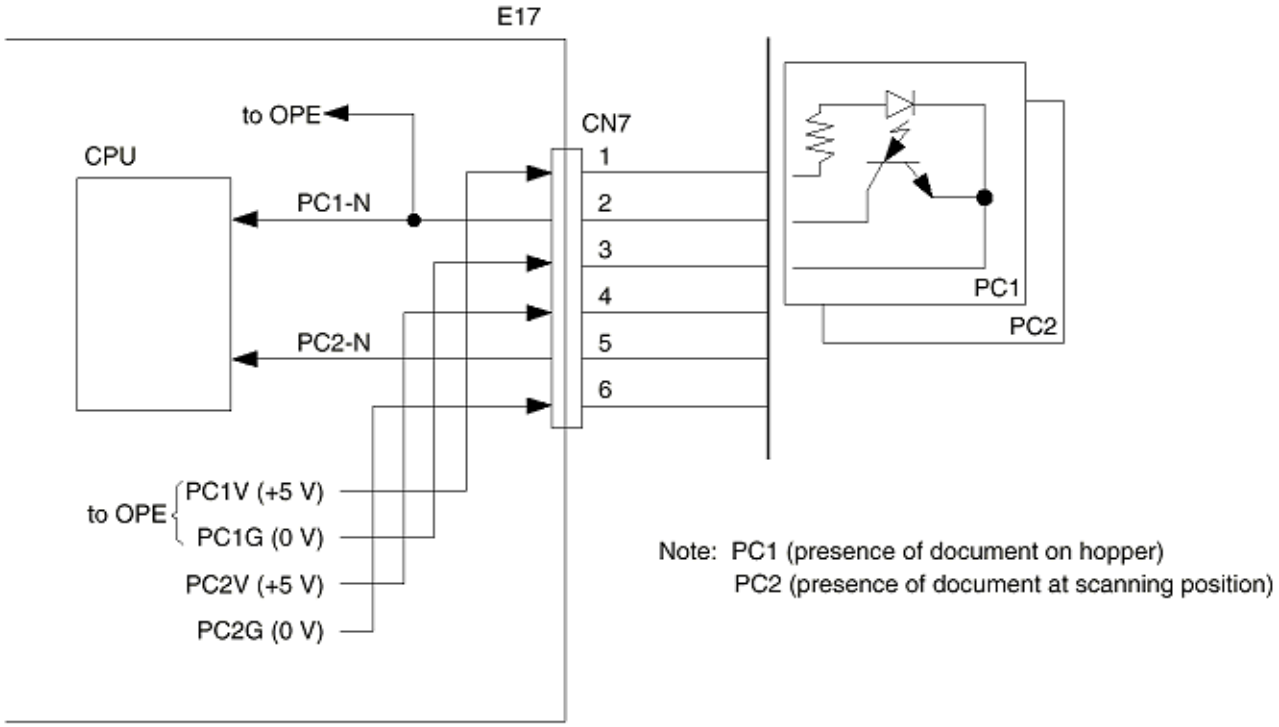
Interface between E17 Board and NCU Board



Interface between E17 Board and OPE



Related Signals of PC1/PC2



Note: PC1 (presence of document on hopper)
PC2 (presence of document at scanning position)

A3.1.8 E17 - LED Circuit Diagram

1. Block diagram

The circuit diagram consists of connector CN2 that provides an interface between E17 board and LED print head.

For more information, refer to the Related Signals and Block Diagram of LED Print head.

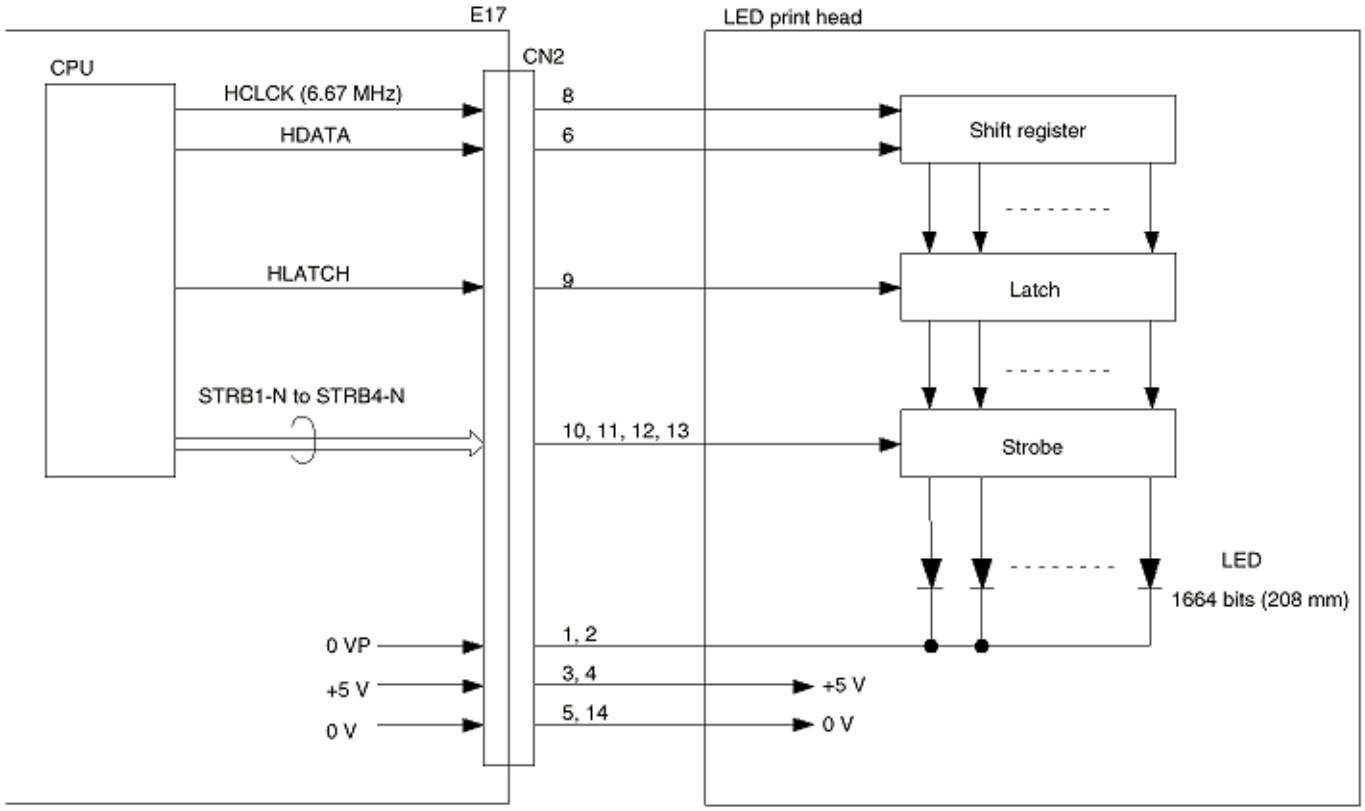
2. Function

Data of 1664 LEDs on the LED print head is loaded into the shift registers by the HCLCK (6.67 MHz) signal. After the 1664 bit (208mm) 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 IOGA

- HDATA 0: Print data i.e., data to be printed
- HCLCK: Transfer clock for print data (6.67 MHz/10MHz)
- HLATCH: Latch signal for print data
- STRB1-N to STRB4-N : LED head strobe signals

Related Signals and Block Diagaram of LED Head



A3.1.9 E17 - Send Motor Circuit Diagram

1. Block diagram

The circuit diagram consists of the following functions and connectors:

- IC21 (Send motor drive)
- Connector CN5 that provides an interface between M17 board and the send motor.

For more information, refer to the Related Signals of the Send Motor Diagram.

2. Function

1) Send motor rotation and chopper control

Send motor drive signals are generated by the IEXSEED and output to send motor via IC21 (motor drive IC) of this circuit.

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

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

a) Send motor rotation control

There are several cases of the rotation operation:

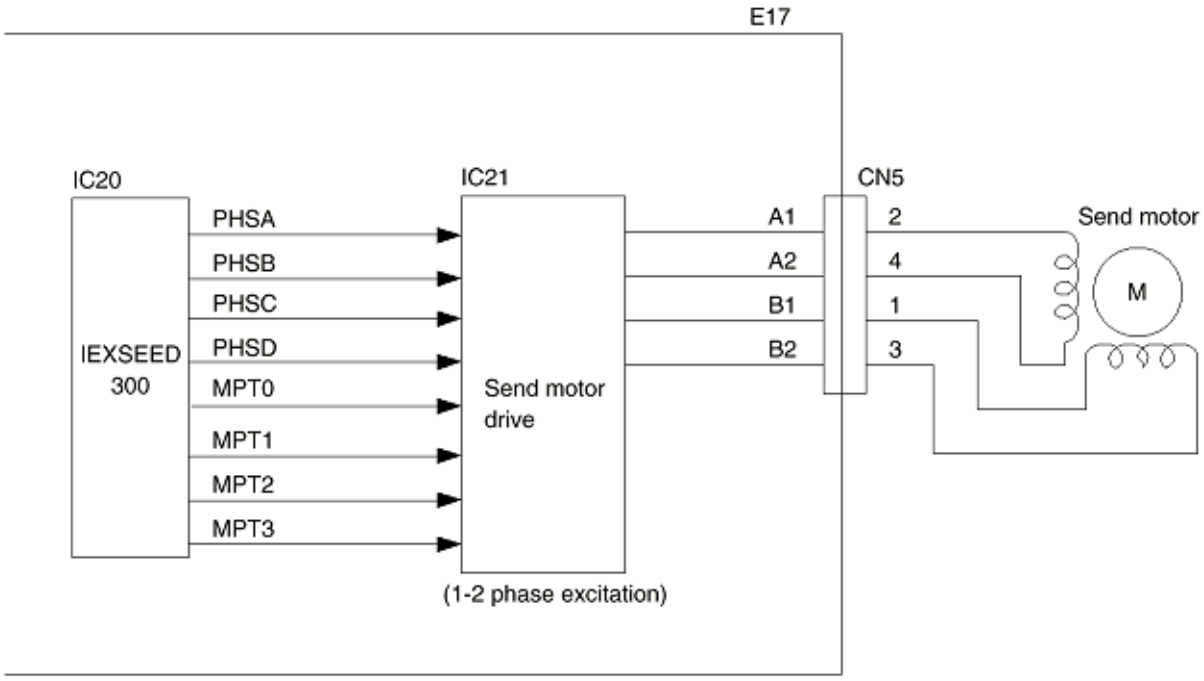
Forward rotation for feeding documents.

- 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.

Related Signals of Send Motor



A3.1.10 E17 - Drum/Resist Motor Circuit Diagram

1. Block diagram

The circuit diagram consists of the following functions and connectors:

- IC9 (Drum motor driver)
- IC22 (Resist motor driver)
- Connector CN3 that provides an interface between E17 board and the resist motor.
- Connector CN4 that provides an interface between E17 board and the drum motor.

For more information, refer to the Related Signals of Drum/Resist Motor Diagram.

2. Function

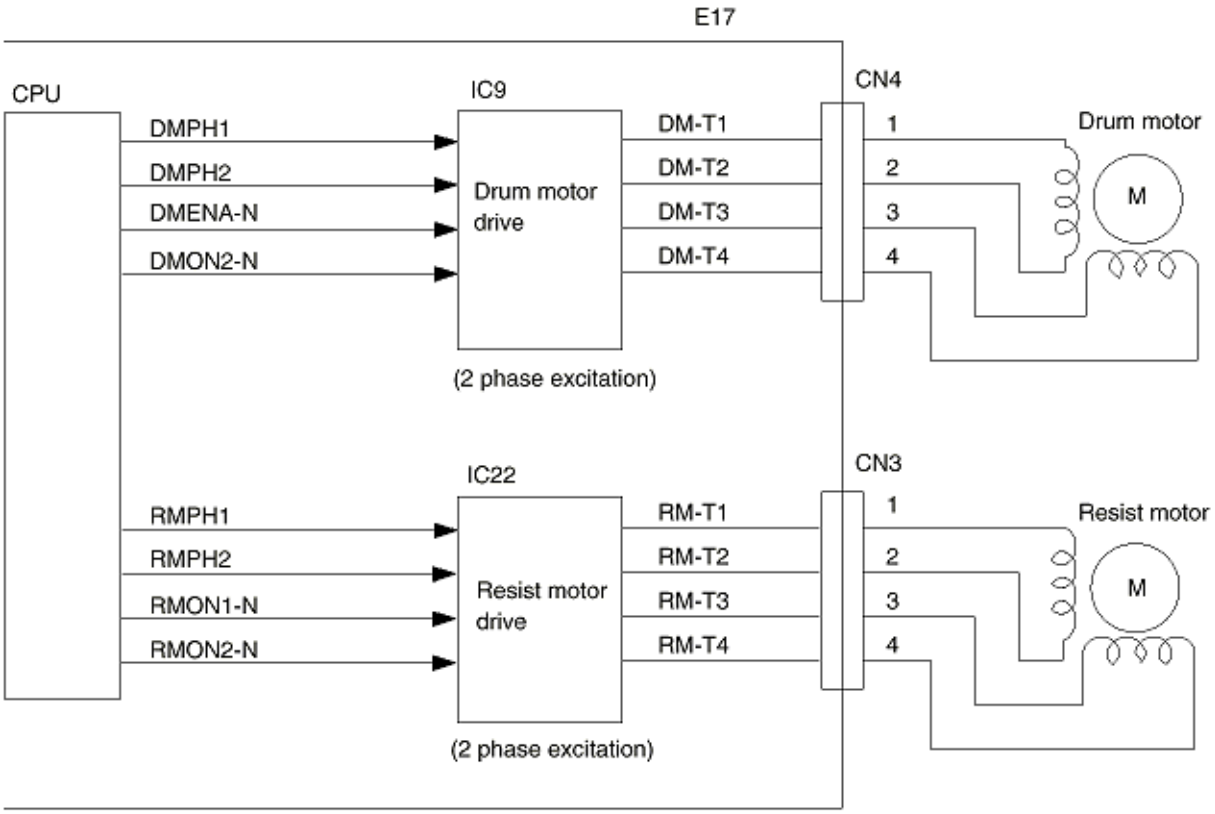
1) Drum motor control

The drum motor is driven by the motor driver IC9. It is two-phase excited and bipolar-driven according to the DMPH1 and DMPH2 signals that are generated from the CPU. The DMON2-N, DMENA-N signal are generated from CPU. This
drum motor rotates the image drum.

2) Resist motor control

The resist motor is driven by the motor driver IC22. It is two-phase excited and bipolar-driven according to the RMPH1 and RMPH2 signals that are generated from the CPU. The RMON1-N, RMON2-N signal ARE generated from CPU. This resist motor rotates the hopping (paper hopping) and the resist (paper feed) rollers. Refer to Appendix B for more information.

Related Signals of Drum/Resist Motor



A3.1.11 E17 - Fan Motor Circuit Diagram

1. Block diagram

The circuit diagram consists of the following connectors:

- Connector CN11 that provides an interface between E17 board and the fan motor.
- Connector CN14 that provides an interface between E17 board and the second tray (option).
- Connector CN16 that provides an interface between E17 board and Sub-power unit.

Refer to the following diagrams for further information.

Related Signals of the Fan Motor Diagram

Interface Between E17 Board and the Second Tray (Option)

2. Function

1) Fan motor control

The fan motor is controlled by the FANON signal generated from IOGA3 under the temperature control of the heater.

The operating status of the fan is supervised by the FANSNS-N signal.

The fan rotates in the following 3 status:

- Normal mode
- Cover open
- Paper jamming occurring in the paper transport route

2) Second tray (option)

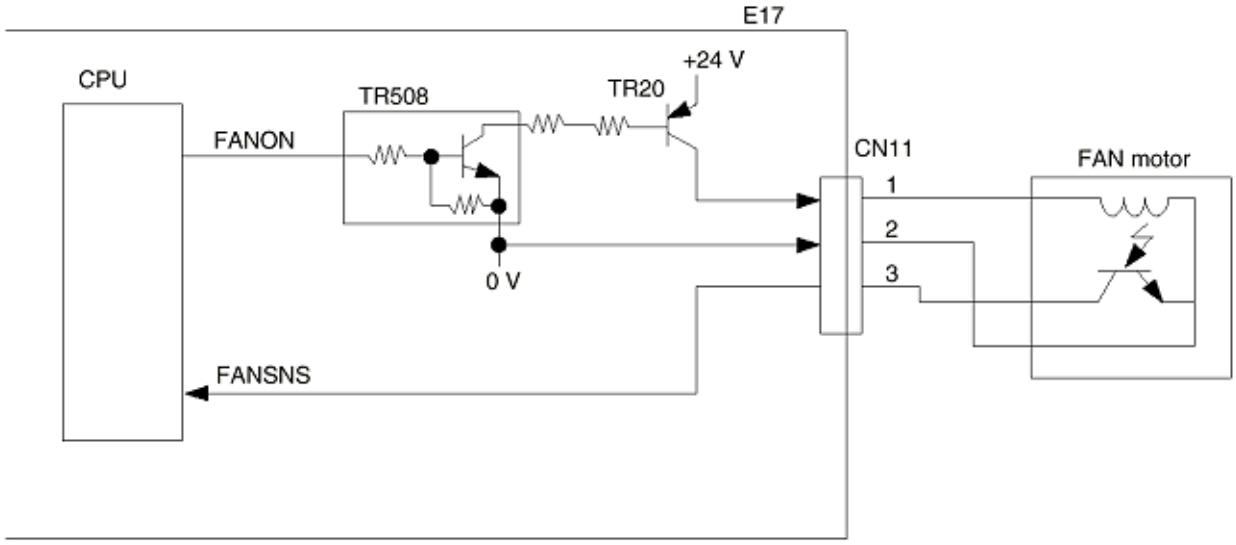
Second tray consists of the following functions:

- Paper capacity : 500 sheets
- Paper size : A4, Letter, Legal
- Paper-size selection : Manual
- Cassette/no-cassette selection : Automatic
- Paper/no-paper selection : Automatic
- Paper route open to facsimile transceiver unit: Automatic decision

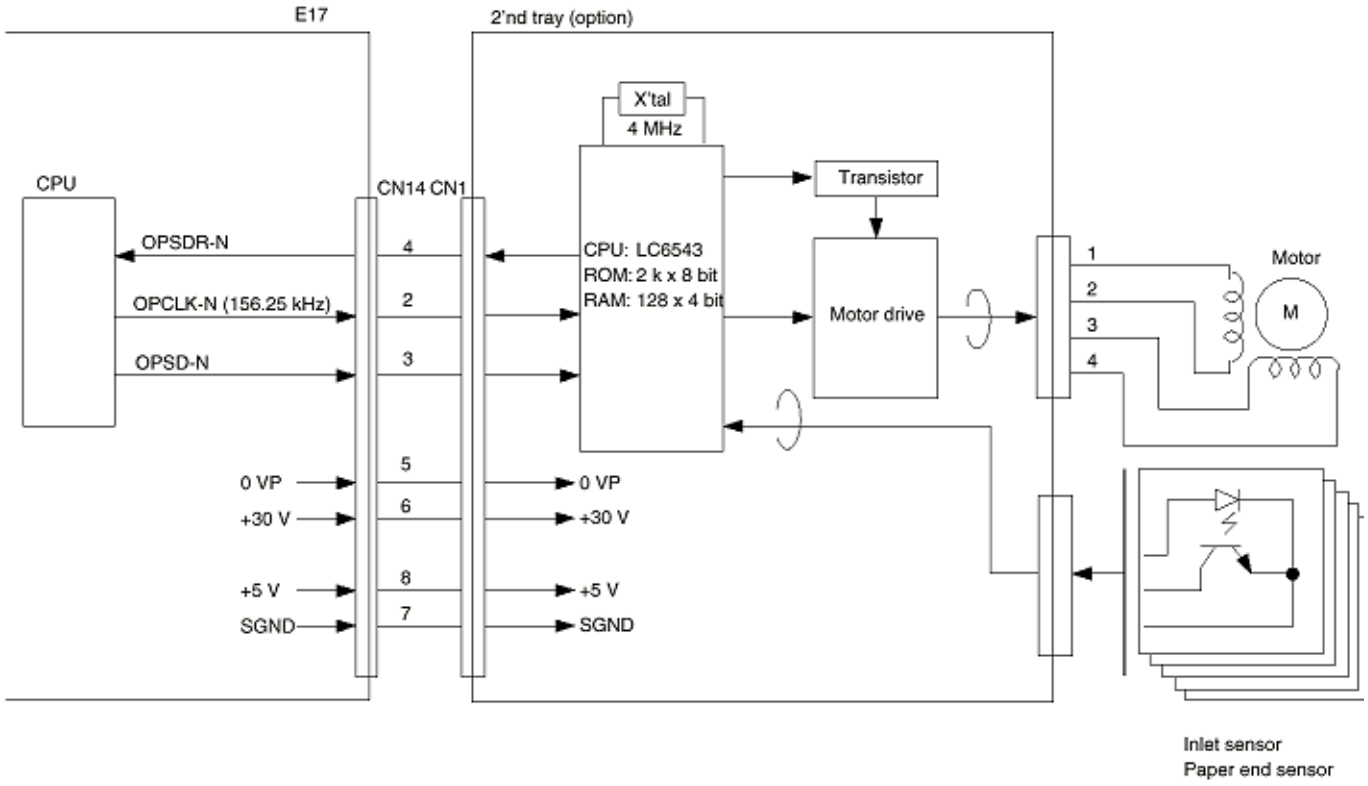
Control method:

When second tray is installed on the facsimile transceiver unit, the tray is connected to the facsimile transceiver unit by a connector. The tray controls by the command from CPU of PU (printer unit) section.

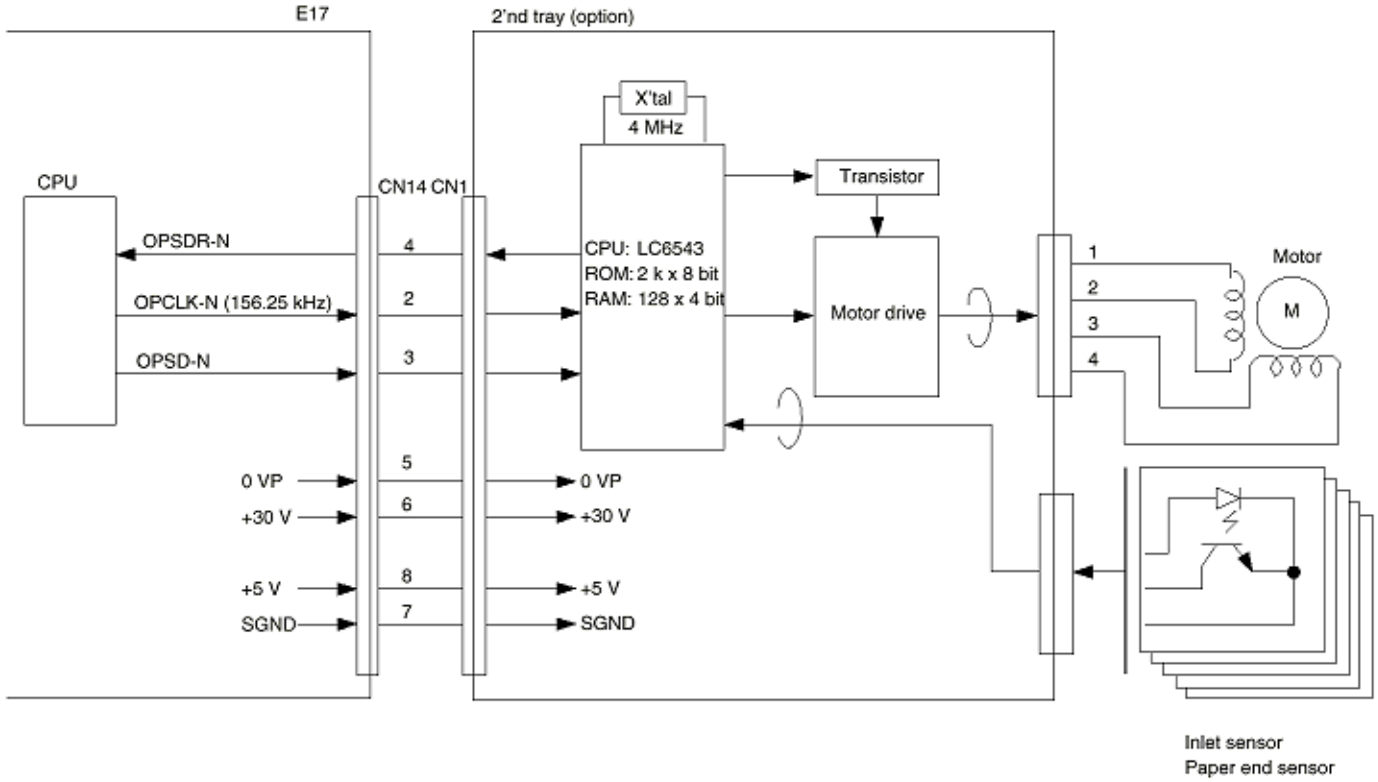
Related Signals of Fan Motor



Interface between E17 Board and 2'nd Tray



< same diagram -- different size >


E17
2'nd tray (option)
X'tal
4 MHz
CPU
CN14 CN1
Transistor
OPSDR-N
OPCLK-N (156.25 kHz)
OPSD-N
CPU: LC6543
ROM: 2 k x 8 bit
RAM: 128 x 4 bit
Motor drive
Motor
M
0 VP
+30 V
+5 V
SGND
Inlet sensor
Paper end sensor

A3.1.12 E17 - Main Power Supply Circuit Diagram

1. Block diagram

The circuit diagram consists of the following connector:

- Connector CN1 provides an interface between E17 board and main power supply unit.

2. Function

1) Sensors and switch control

Six types of sensors are used in the printer as listed below. All of their output enter IOGA3 ports for referring to and processing by the CPU.

For more information, refer to the Sensors and Switch Control Diagram.

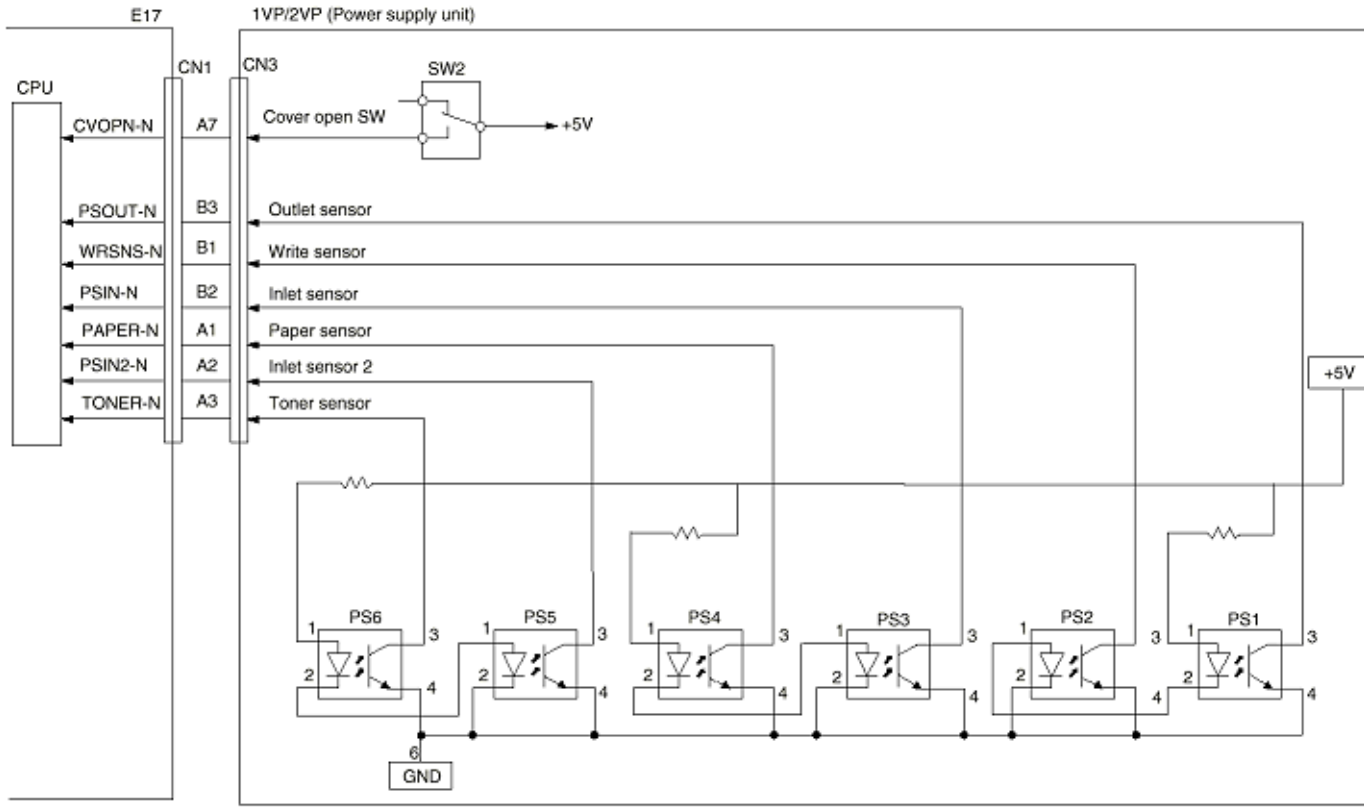
- Inlet sensor 1 and 2
- Write sensor (To detect the paper top position for printing)
- Outlet sensor
- Paper end sensor
- Toner end sensor
- Cover status switch

The functions of variou sensors are described in the table in the next section.

Sensor Functions

Sensor Type	Sensor Name	Function
PSIN-N PSIN2-N	Inlet sensor Inlet sensor 2	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
PAPER-N	Paper sensor	Detects the presence of paper in the paper cassette. 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: Paper exists, 1: paper does not exist

Sensors and Switch Control



Fuser Unit Temperature Control

2) Fuser unit temperature control

The heater in the fuser unit is controlled by the thermister, IOGA3 and CPU to keep the heater roller surface within a prescribed temperature range. The CPU supervises the status of the port PC0 periodically, turning HEATON signal on and off according to CPU of PC0 (A/D converter input section) 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 thermister according to the status of the THCHK signal.

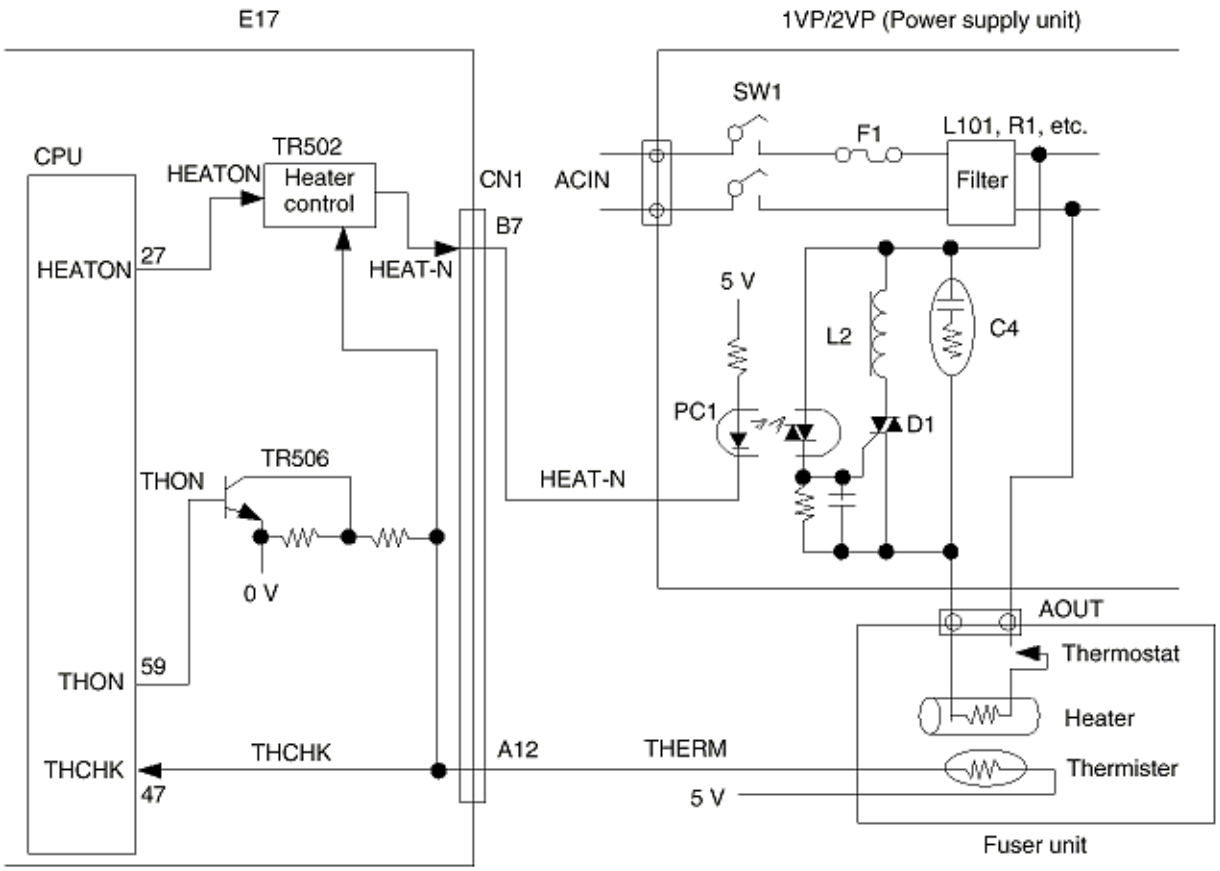
A built-in thermostat in the fuser unit prevents the heater from being overheated in event of failures in the thermister, or temperature control circuit, etc.

For more information, refer to the Fuser Unit Temperature Control Diagram below.

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 CPU.

Fuser Unit Temperature Control



High/Medium Voltage Control

3) High-voltage and medium-voltage control

High voltages are activated by CPU and generated by the high-voltage circuit inside the power supply unit. The CH (charge) voltage of about -1.35 kV is used for the charge roller. The TR1/TR2 (transfer) voltage of about +3.5 kV/-0.75 kV is used for the transfer roller.

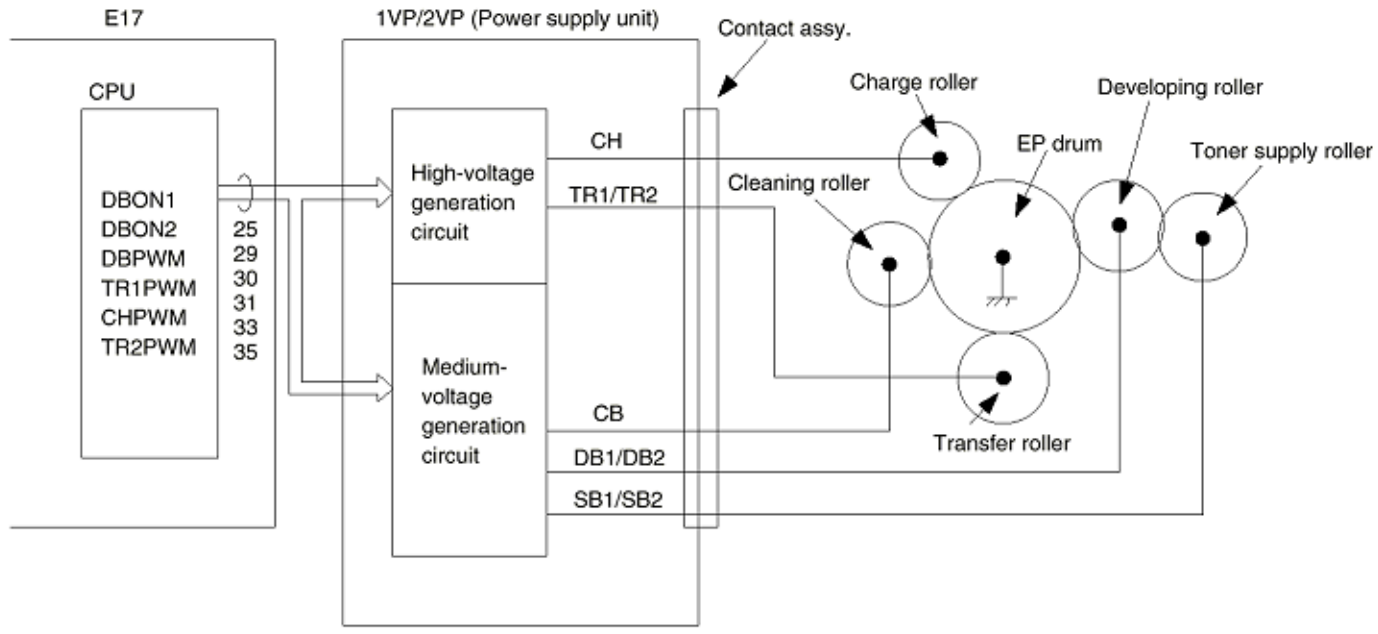
Medium voltages are activated by IOGA3 and generated by the medium-voltage circuit inside the power supply unit. The SB1/SB2 (toner supply) voltage of about +0 V/-450 V is used for the toner supply roller. The DB1/DB2 (developing) voltage of about +300 V/-300 V is used for the developing roller. The CB (cleaning) voltage of about +400V is used for the cleaning roller.

For more information, refer to the High/Medium Voltages Control Diagram below.

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

SIGNAL NAME	DESCRIPTION
CHPWM	P.W.M.: CH is output.
DB1ENB	"1"; + ive polarity voltage of DB1/SB1 is output.
DB2ENB	"1"; - ive polarity voltage of DB2/SB2/CB is output.
TR1PWM	P.W.M.: TR1 is output.
TR2PWM	P.W.M.: TR2 is output.
DBPWM	P.W.M.: DB/SB/CB is output.

High/Medium Voltage Control



A3.1.13 E17 - Optional Memory and CTR Circuit Diagram

1. Block diagram

The circuit diagram consists of the following connector:

- Connector CN13 that provides an interface between M17 board and optional memory board.
- Connector CN12 and CN17 that provides an interface between M17 board and CTR (PC interface) board.

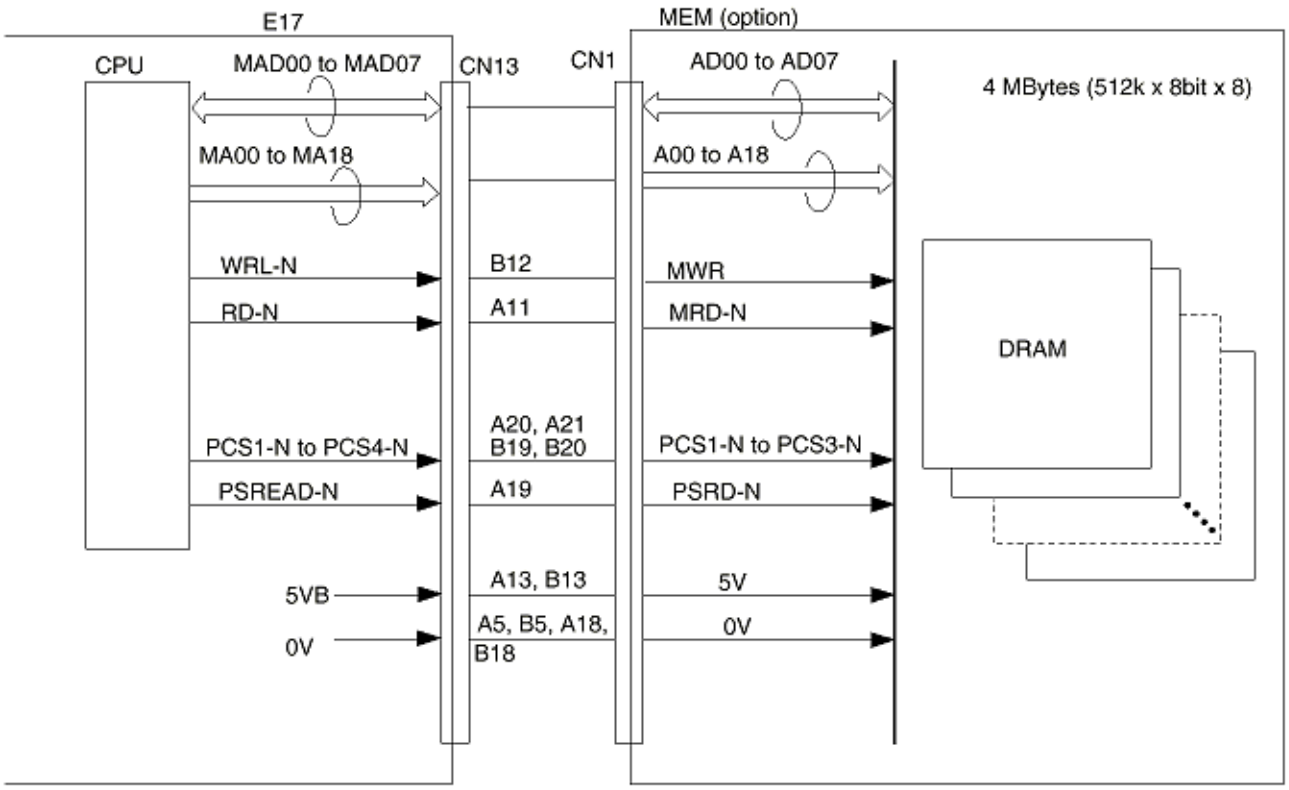
For more information, refer to the following diagrams.

Interface Between E17 and Memory Board

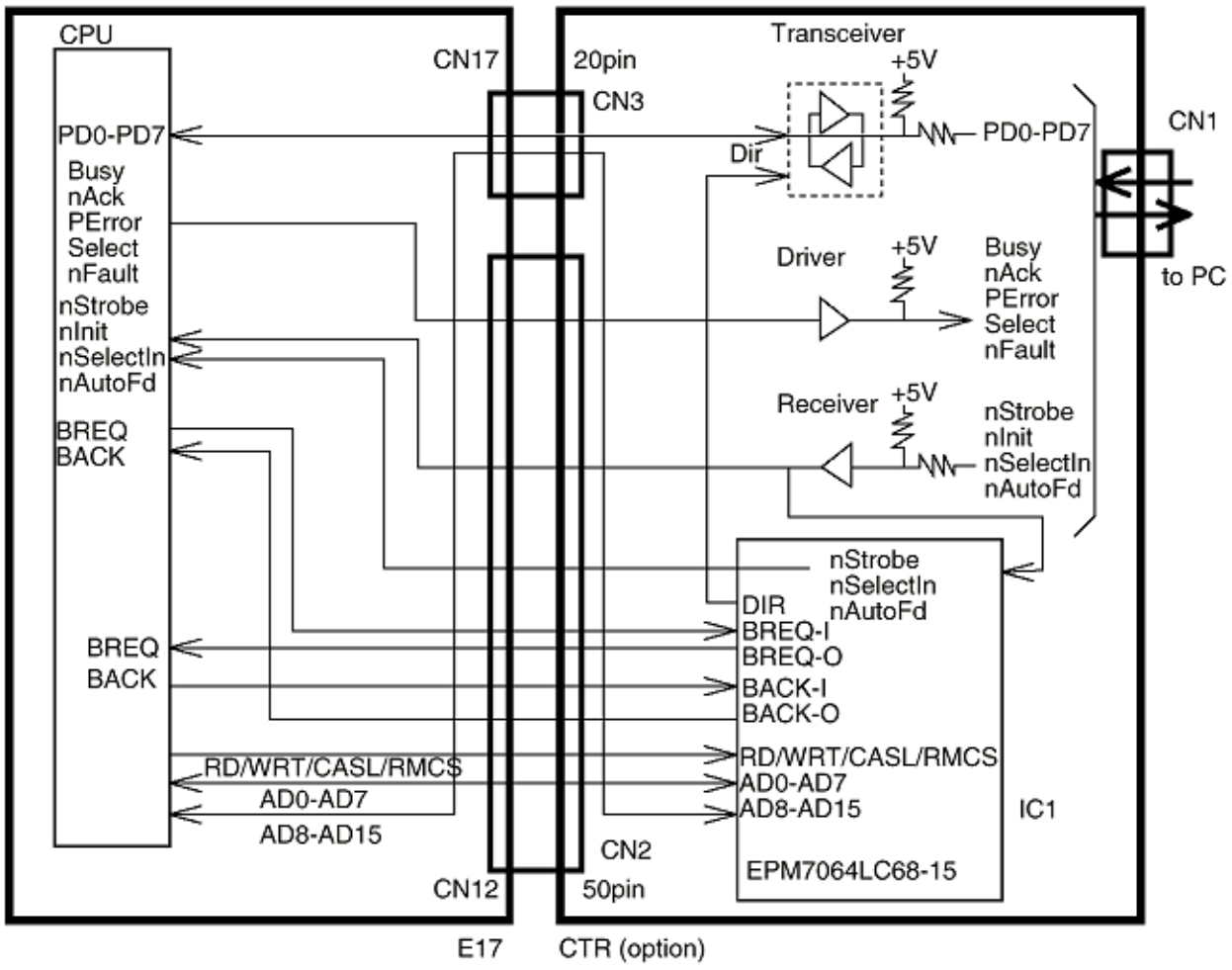
Interface Between E17 and PC Interface Board

Note 1: 4 Mbyte memory board can be added to the memory capacity.

Interface: E17 Board to Optional Memory Board Diagram



Interface E17 Board to CR Board (PC interface unit) Diagram



A3.1.14 E17 DRAM Diagram

1. Block diagram

The circuit diagram consists of the following functions and connectors:

- RAM3 to RAM5

For more information, refer to the Block Diagram of DRAM.

2. Function

1) PSRAM

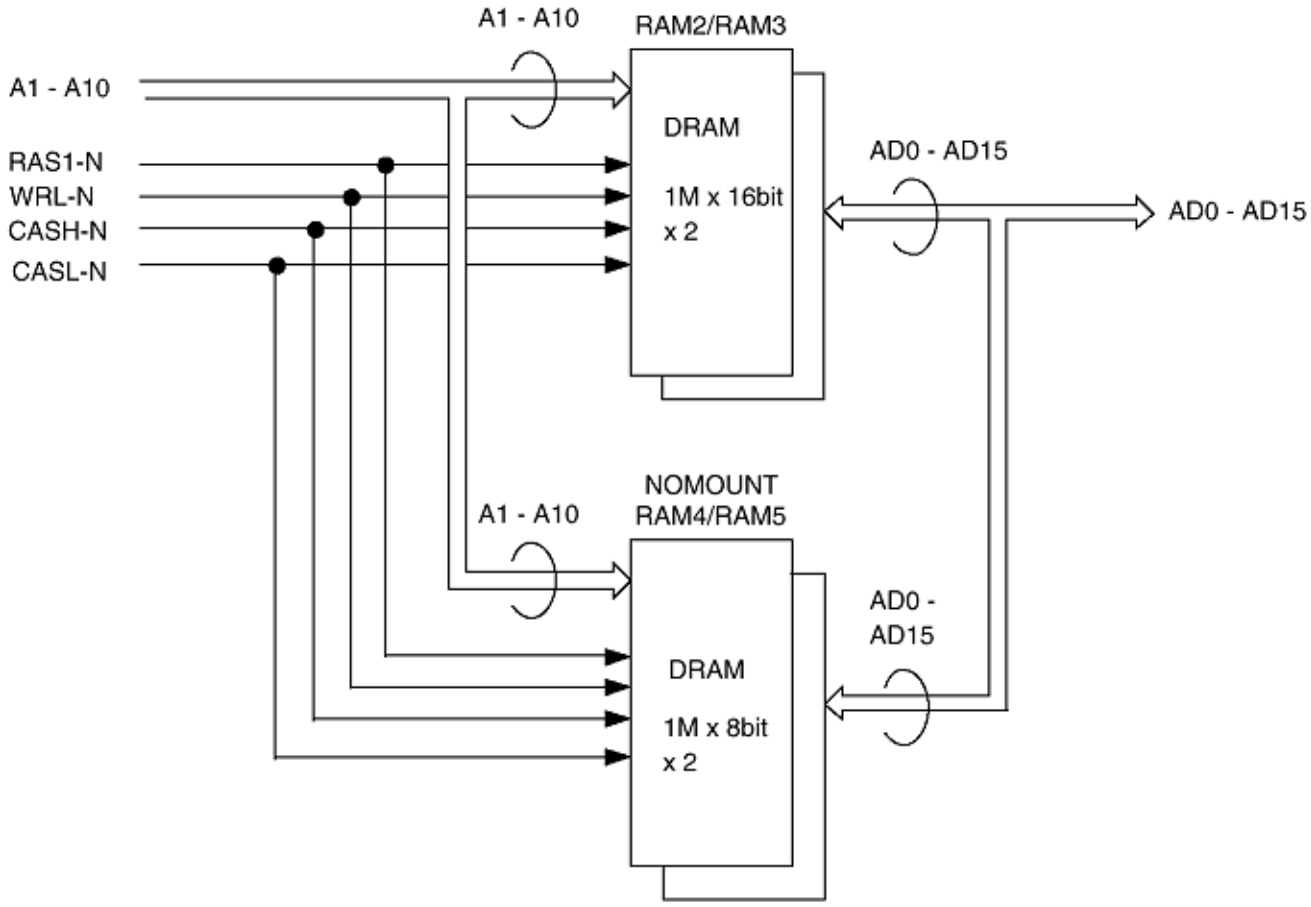
2 MByte DRAM x 1 (RAM3) for ODA version

512 KByte DRAM x 2 (RAM4 and RAM5) for INT'L version

- Used as follows:

  Picture memory for the ECM send/receive modes.
  Picture memory for the memory transmission mode.
  Picture memory for the retransmission mode.
  Picture memory for the reception in memory.
  Editing for report printing.

Block Diagram of DRAM



A3.2 OPE (05W) Circuit Diagram

1. Block diagram

Refer to the Block Diagram of OPE (05W).

The O5WH (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.

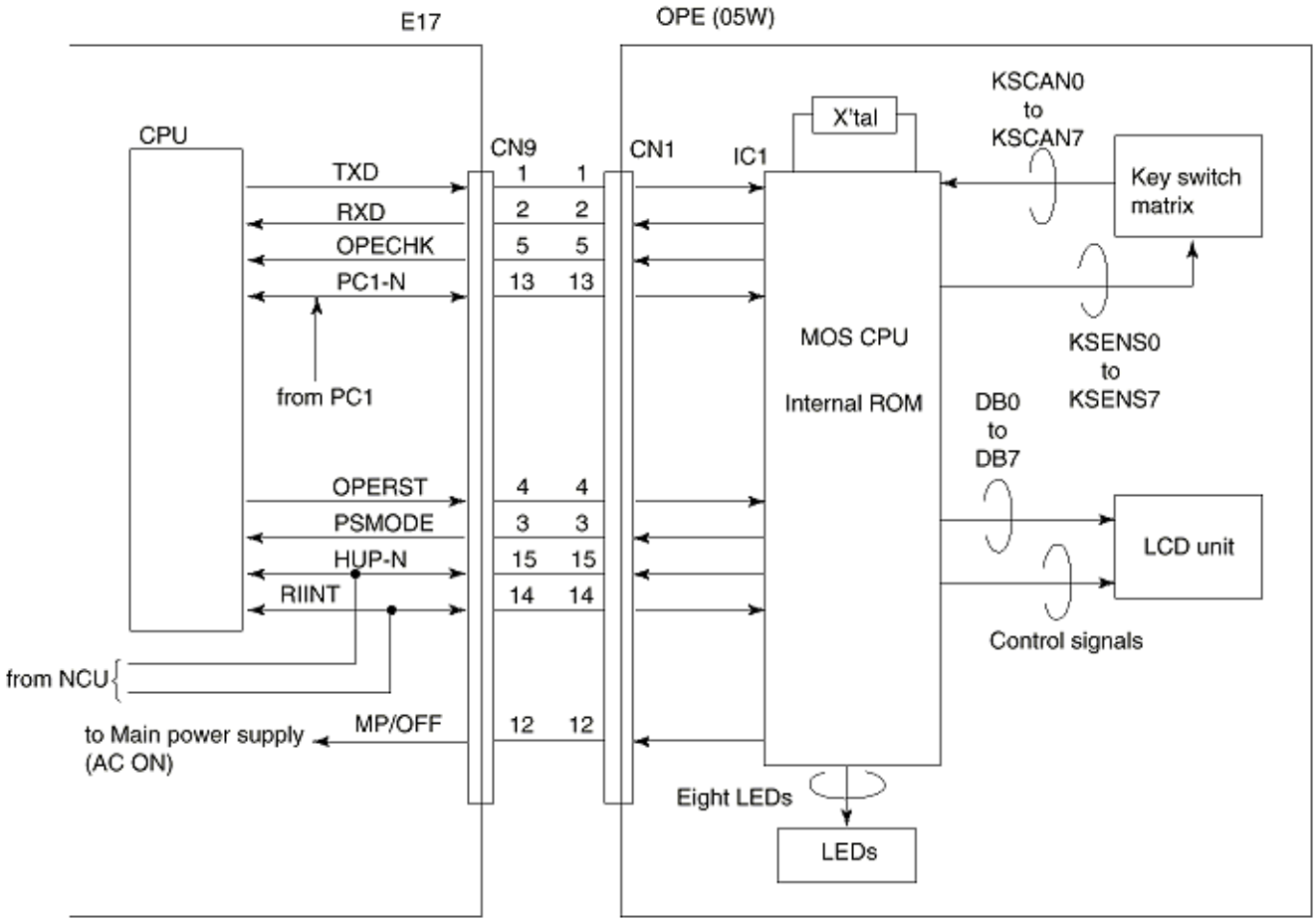
3. LED drives and LEDs

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 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 (120/230 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

Block Diagram of OPE (operation unit) Diagram



A3.3 Power Supply Unit

A3.3.1 Circuit Diagram for 1VP/2VP (1 of 2)

A3.3.2 Circuit Diagram for 1VP/2VP (2 of 2)

A3.3.1 Circuit Diagram for 1VP/2VP (1/2)

IMPORTANT: Oki Data Corporation recommends that maintenance of the Power supply unit (1VP/2VP board) be performed by replacement of the whole power supply 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:

1VP/2VP 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, etc.
+8 V	CIS (contact image sensor)
-8 V	CIS (contact image sensor)
+30 V	Send motor, drum motor, resist motor, fan drive, flash memory, CIS, and 2nd tray voltage

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/60Hz +/-2%	

3. Output ratings

Transformer type B

Pin No.	Rated Voltage	Rated Current	Current Range	Voltage Range	Output Ripple	Output Noise
CN3-B11-B13 A13	+5V	1.8 A	0.2 to 4.5 A	5 V +/-4%	100 mVP-P	250 mVP-P
CN3-A15, B15	+30 V	1.20 A	0 to 1.20 A	-	4.0 VP-P	-
CN3-A14	+8 V	0.1 A	0 to 0.1 A	6.5 to 15 V	3.0 VP-P	3.6 VP-P
CN3-B14	-8 V	0.1 A	0 to 0.1 A	-15 to 6.5 V	3.0 VP-P	3.6 VP-P

4: Block Diagram

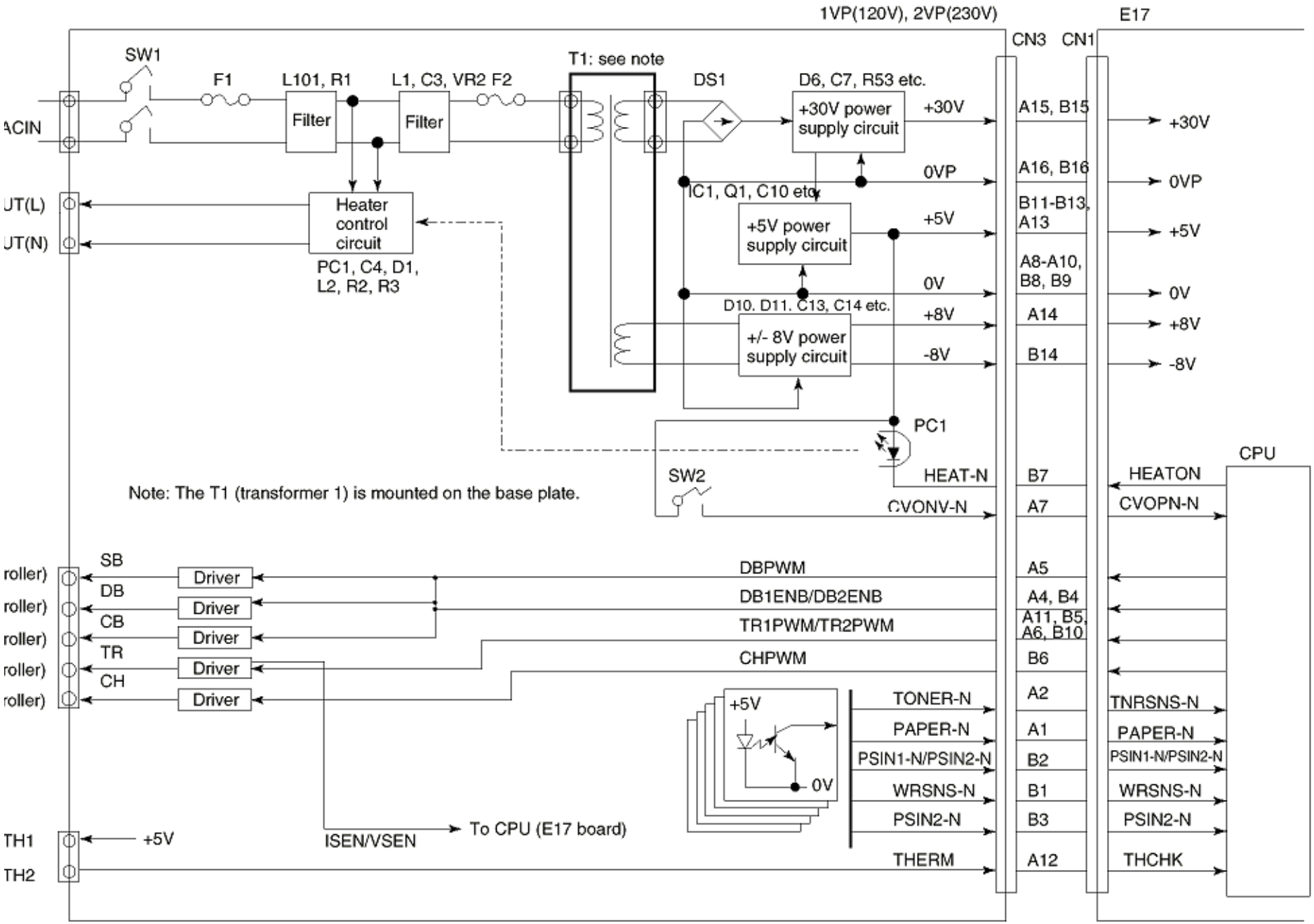
Refer to the Block Diagram of 1VP (120V)/2VP (230V).

Note: The differences between 1VP (AC120V) and 2VP (AC230V) board are shown in the following table.

Symbol	1VP Board	2VP Board	Remarks
INLET Ass'y	4YS4011-2894P001	4YS4011-2894P002	
F1	51MS063L	19181-5A	
F2	51MS016L	Not mounted	
F3	GGS 3.15	21702.5	
T1 (Transformer 10	4YB4049-7082P1	4YB4049-7083P1	
C1, C2, C56 and C242	Not mounted	Mounted	
R18, R51, R52 and R125	Not mounted	Mounted	

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

Block Diagram of PWU (Power Supply Unit)


1VP(120V), 2VP(230V)
E17
CN3
CN1
SW1
F1
L101, R1
L1, C3, VR2 F2
T1: see note
DS1
D6, C7, R53 etc.
+30V power supply circuit
+30V
A15, B15
+30V
ACIN
Filter
Filter
0VP
A16, B16
0VP
IC1, Q1, C10 etc
B11-B13, A13
+5V
+5V
+5V power supply circuit
UT(L)
UT(N)
Heater control circuit
PC1, C4, D1, L2, R2, R3
A8-A10, B8, B9
0V
0V
D10. D11. C13, C14 etc.
+8V
A14
+8V
+/- 8V power supply circuit
-8V
B14
-8V
PC1
CPU
SW2
HEAT-N
B7
HEATON
Note: The T1 (transformer 1) is mounted on the base plate.
CVONV-N
A7
CVOPN-N
roller)
SB
Driver
DBPWM
A5
roller)
DB
Driver
DB1ENB/DB2ENB
A4, B4
roller)
CB
Driver
TR1PWM/TR2PWM
A11, B5, A6, B10
roller)
TR
Driver
CHPWM
B6
roller)
CH
Driver
+5V
TONER-N
A2
TNRSNS-N
PAPER-N
A1
PAPER-N
PSIN1-N/PSIN2-N
B2
PSIN1-N/PSIN2-N
0V
WRSNS-N
B1
WRSNS-N
PSIN2-N
B3
PSIN2-N
TH1
+5V
ISEN/VSEN
To CPU (E17 board)
THERM
A12
THCHK
TH2

5. General functional description

5-1 General

5-2 Circuit description

5-3 Low-voltage section

5-4 Protection circuits

5-5 Cover open circuit

5-6 High Voltage Section

5-7 Photosensors

5-1 General

The power supply unit consists mainly of AC transformer and a power PCB (1VP board for AC120V/2VP board for AC230V). A block diagram of the power supply unit is shown in Figure A3.6.1 The power PCB is composed of five main circuits: AC input section, heater control section, low-voltage section, high-voltage section and protection circuit.

The low-voltage section provides a +5V output by a DC-DC converter and other output voltages (+30V, +8V and -8V) simply by rectifying and smoothing the respective outputs of the AC transformer. The high-voltage section (TR1, TR2, DB1, DB2, SB1, SB2, CB and CH) produces a flyback voltage from 5V by using a drum coil and a high-voltage transformer.

5-2 Circuit Description

5-2-1 AC input section

5-2-2 Heater control circuit

5-2-1 AC input section

1) AC commercial power is supplied to line filter circuit through the AC inlet, power switch (SW1) and the fuse (F1). Fuse F1 is used for protecting the heater circuit.

2) The filter circuit consists of L101, R1, C1, C2, C3 and L1. Capacitors C1 and C2 are not mounted in the power unit for 120VAC input.

3) Fuse F2 is used for protection for the double voltage input in the power supply unit for 120VAC input and will not blow by shorting or opening the secondary circuit. This fuse F2 is not mounted in the power supply unit for 230VAC input.

5-2-2 Heater control circuit

1) The AC power divided from the AC input section passes through L2 for noise elimination and is fed to the heater via D1 (operating as a switch) from the power PCB.

2) The on/off operation of D1 is controlled by the operation of photocoupler PC1 whose operation is controlled by the HEAT-N signal applied to CN3-B7 pin from the main control board.

3) Resistors R2 and R3 connected on the AC side of PC1 are fuse resistors to protect themselves from firing when PC1 turns on in the event of D1 open failure.

5-3 Low-voltage section

5-3-1 +30 V circuit

5-3-2 +/- 8 V circuit

5-3-3 +5 V circuit

5-3-1 +30 V circuit

1) The +30 V circuit provides +30 V output by rectifying the corresponding output of transformer T1 by a rectifier diode DS1 and smoothing the rectified signal by capacitor C7.

2) Resistor R53 is used to discharge the electric charge of C7 when the power switch (SW1) turned off.

5-3-2 +/- 8 V circuit

1) The +/- 8 V circuit provides +8 V and -8 V outputs by rectifying the corresponding output of transformer T1 by rectifier diodes D10 and D11 and smoothing the rectified signals by capacitors C13 and C14.

2) Resistors R22 and R23 are used to discharge the electric charge of C13 and C14 when the power switch (SW1) is turned off.

5-3-3 +5 V circuit

1) +5 V circuit provides +5 V output by lowering +30 V output by means of DC-DC converter circuit.

2) IC1 is a control IC of frequency fixed type (operating at about 30 kHz in present power supply unit)

3) Q1 is a power transistor, D7 is a flywheel diode, and L3 , C10 and C20 compose a smoothing circuit.

4) The +5 V output is regulated as follows. The rectified +5 V is divided by resistors R83, R10 and R11 and the resulting voltage is applied to IC1, in which this voltage is regulated to a constant voltage. Thus, the regulated +5 V output is obtained by controlling IC1.

5-4 Protection circuit

1) The protection circuit includes fuse F3 for +30 V and +5 V overcurrent protection circuit.

2) If an overvoltage is applied to the +5 V circuit, D8, R9 and D6 operate to short-circuit the +30 V circuit for half-wave cycle and fuse F3 will blow.

3) F1 will blow only in the event of AC line short-circuit.

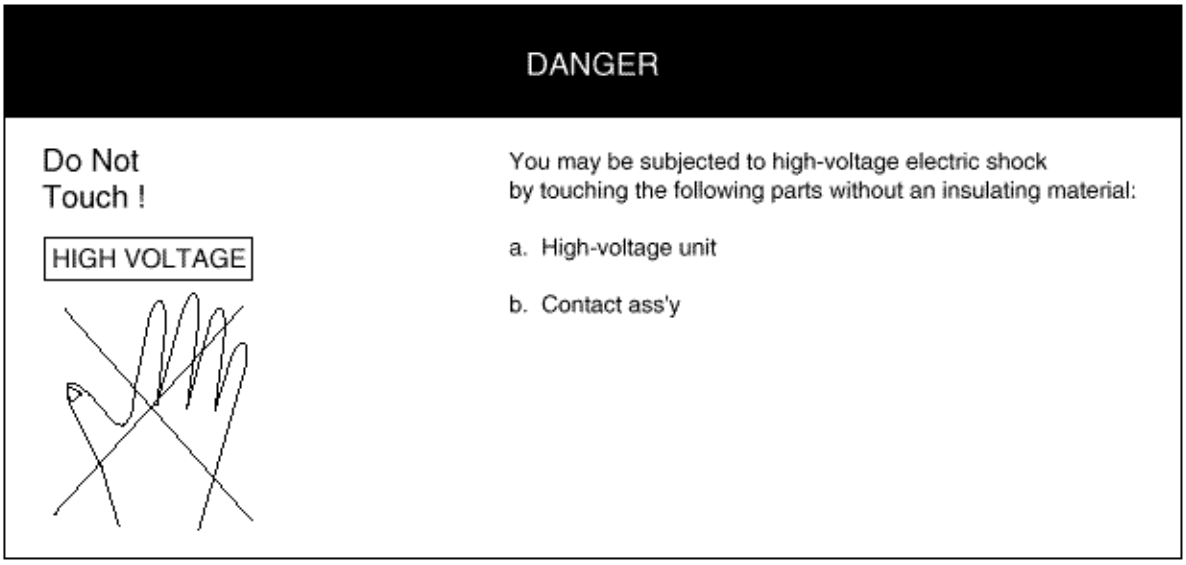
5-5 Cover open circuit

1) The cover open circuit consists of SW2. When the stacker cover is opened, the cover open microswitch (SW2) on the 1VP/2VP 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.

A3.3.2 1VP (for 120V)/2VP (for 230V) Circuit Diagram (2/2)

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

Note: If the high-voltage unit inside the 1VP/2VP 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.



5-6 High-voltage Section

5-6-1 Functional overview

5-6-2 SB2, DB1, DB2 and CB

5-6-3 TR1 and TR2

5-6-4 CH

5-6-1 Functional overview

The high-voltage outputs consist of TR1 (3.5 kV), TR2 (-0.75 kV), DB1 (+300 V), DB2 (-300 V), SB2 (-450V), CB (+400 V) and CH (-1.35 kV) and are obtained as follows. The control signal obtained from IOGA of E17 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.

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

5-6-2 SB2, DB1, DB2 and CB

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.

5-6-3 TR1 and TR2

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.

5-6-4 CH

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.

5-7 Photosensors

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

1) PS1 (photosensor 1): PSOUT
Supervises the paper feed according to the time of arrival at the sensor and the time of passage of paper.

2) PS2 (photosensor 2): WRSNS
Detects the leading part of sensor. Supervises the paper running state.

3) PS3 (photosensor 3): PSIN1
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.

4) PS4 (photosensor 4): PAPER
Detects the end of the paper.

5) PS5 (photosensor 5): PSIN2
Not used

6) PS6 (photosensor 6): TONER
Detects the lack of the toner.

A3.4 UNC, WN5, FN5 and DN5 Circuit Diagram

UNC Circuit Diagram

WN5 Circuit Diagram

FN5 Circuit Diagram

DN5 Circuit Diagram

UNC (NCU) Circuit Diagram

1. Block diagram

- Refer to the Block Diagram of UNC (NCU) Circuit Diagram.

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 main control 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 main control 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.

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 arrestor to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable. The TB1 arrestor 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 seizuring 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 circuits detects MF or CNG tones without seizuring 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 seizuring a line, it opens to increase the impedance.

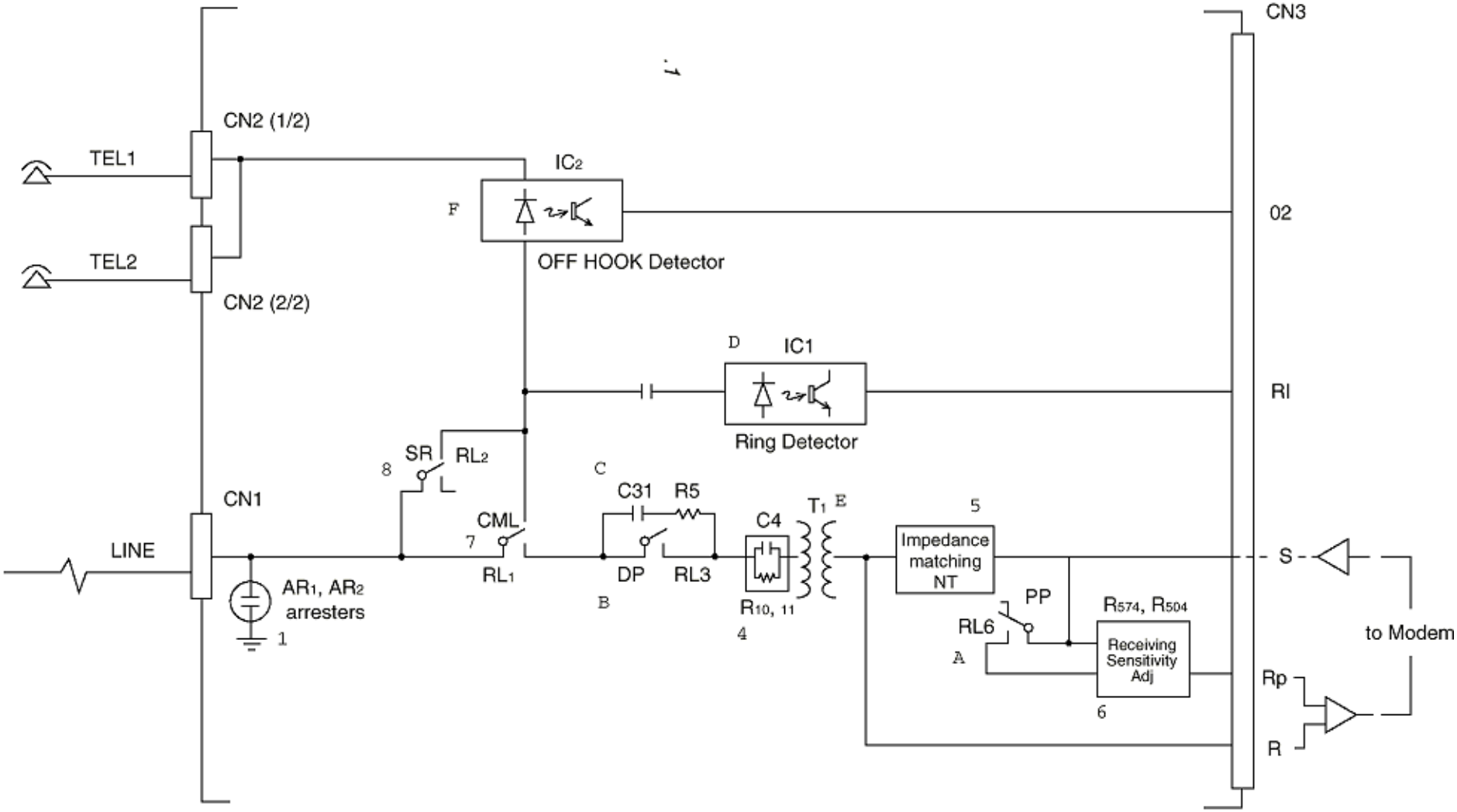
13 Pickup RC (R5, C31)
These circuits insert a high-impedance resistor and capacitor serially to prevent the line impedance from dropping by the line transformer T1.

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-Plus 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.

Block Diagram of UNC


CN3
CN2 (1/2)
TEL1
IC2
F
02
TEL2
OFF HOOK Detector
CN2 (2/2)
D
IC1
RI
Ring Detector
SR
RL2
8
C
CN1
C31
R5
C4
T1
E
5
CML
7
LINE
S
Impedance matching NT
RL1
DP
RL3
B
R10, 11
4
PP
R574, R504
RL6
A
Receiving Sensitivity Adj
to Modem
AR1, AR2 arresters
1
6
Rp
R

WN5 Circuit Diagram

1 Lightning arresters (AR1, 2)
The nominal operating voltage is 500 V.
When connecting the ground of the arrestor to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable.
The TB1 arrestor ground terminal can also be used to connect to the earth directly.

2 Loop current detector (IC4) -- Optional
When a line is seizured, 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 circuits detects MF or CNG tones without seizuring a line, it disconnects Impedance matching Net work (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 seizuring 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)

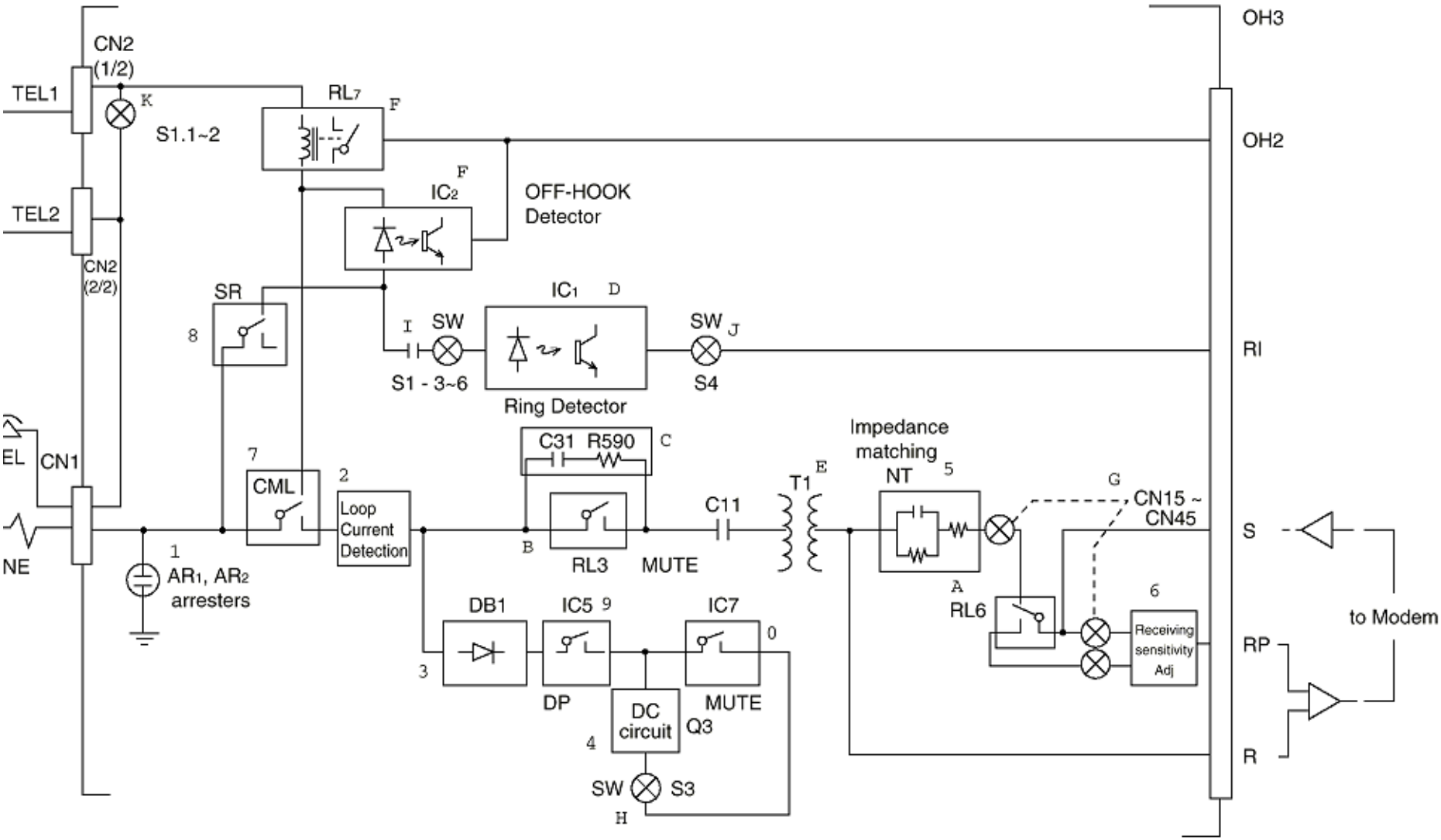
18 DC resistance switch (SW3)
This switch sets the DC resistance according to the line requirement.

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.

Block Diagram of WN5


CN2
(1/2)
TEL1
K
S1.1~2
RL7
F
TEL2
CN2
(2/2)
IC2
F
OFF-HOOK
Detector
SR
8
IC1
D
I
SW
S1 - 3~6
Ring Detector
SW
J
S4
OH3
OH2
RI
EL
CN1
NE
7
CML
2
Loop
Current
Detection
C31
R590
C
B
RL3
MUTE
C11
T1
E
Impedance
matching
NT
5
G
CN15 ~
CN45
A
RL6
6
Receiving
sensitivity
Adj
S
RP
R
to Modem
1
AR1, AR2
arresters
DB1
IC5
9
IC7
0
3
DP
DC
circuit
Q3
MUTE
4
SW
S3
H

FN5 Circuit Diagram

1 Lightning arresters (AR1, 2)
The nominal operating voltage is 500 V.
When connecting the ground of the arrestor to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable.
The TB1 arrestor 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 seizuring 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 seizuring 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.

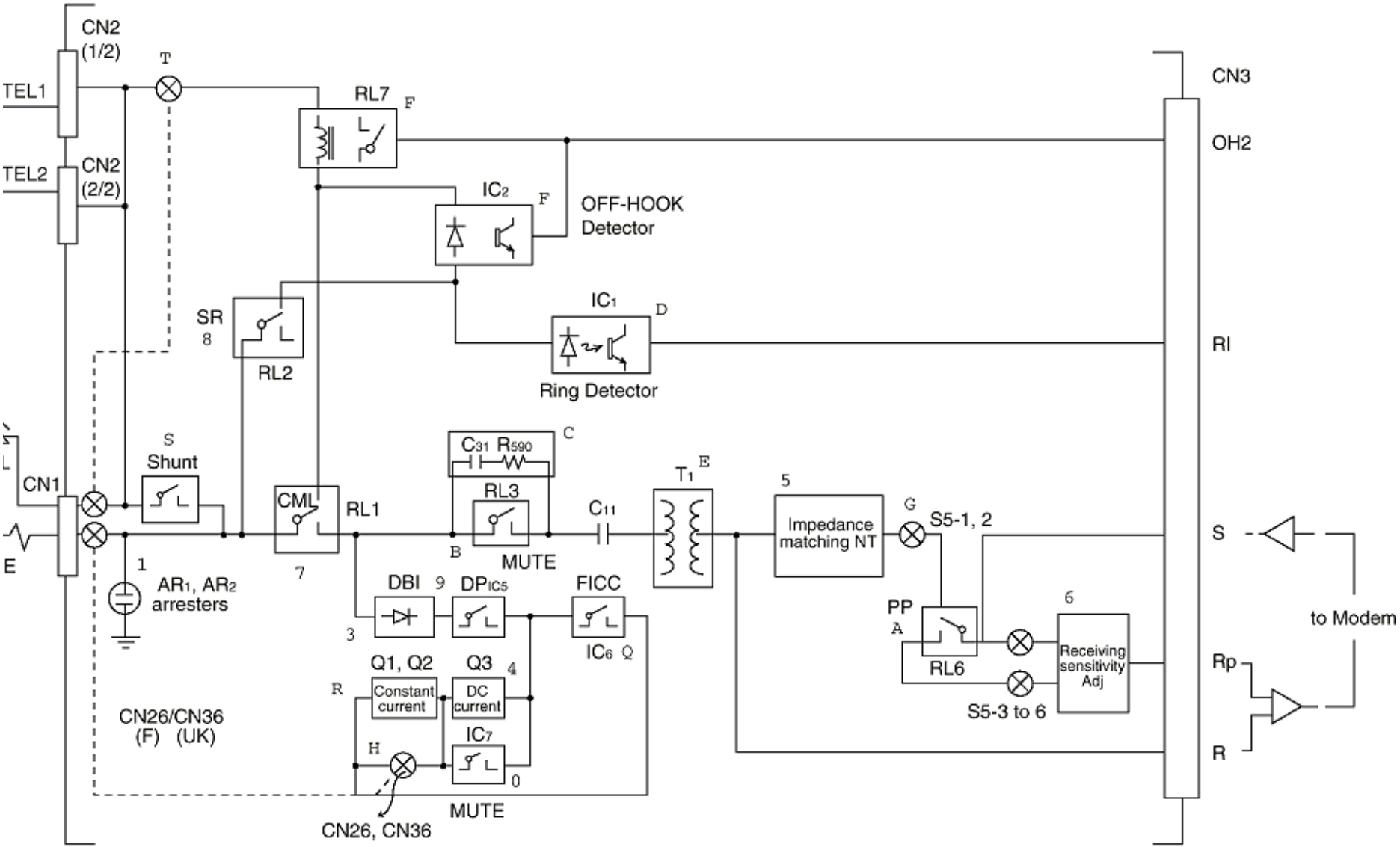
27 FICC (IC6)
This circuits reduces the DC resistance to increase the loop current momentarily to assure operation of the switch at line seizuring.

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 resonance's 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.

Block Diagram of FN5


CN2
(1/2)
TEL1
T
RL7
F
CN3
OH2
TEL2
CN2
(2/2)
IC2
F
OFF-HOOK
Detector
SR
8
RL2
IC1
D
RI
Ring Detector
S
Shunt
C31 R590
C
CML
RL1
RL3
C11
T1
E
5
Impedance
matching NT
G
S5-1, 2
S
CN1
E
1
AR1, AR2
arresters
7
B
MUTE
DBI
9
DPIC5
FICC
3
IC6
Q
PP
A
RL6
6
Receiving
sensitivity
Adj
to Modem
Q1, Q2
Q3
4
R
Constant
current
DC
current
IC7
H
0
S5-3 to 6
Rp
R
CN26/CN36
(F) (UK)
MUTE
CN26, CN36

DN5 Circuit Diagram

1 Lightning arresters (AR1, 2)
The nominal operating voltage is 500 V.
When connecting the ground of the arrestor to the chassis, tighten ARG on the PCB with a screw. At this time, the PCB is grounded through the power cable.
The TB1 arrestor 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 circuits detects MF or CNG tones without seizuring 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 seizuring 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 trephone 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.

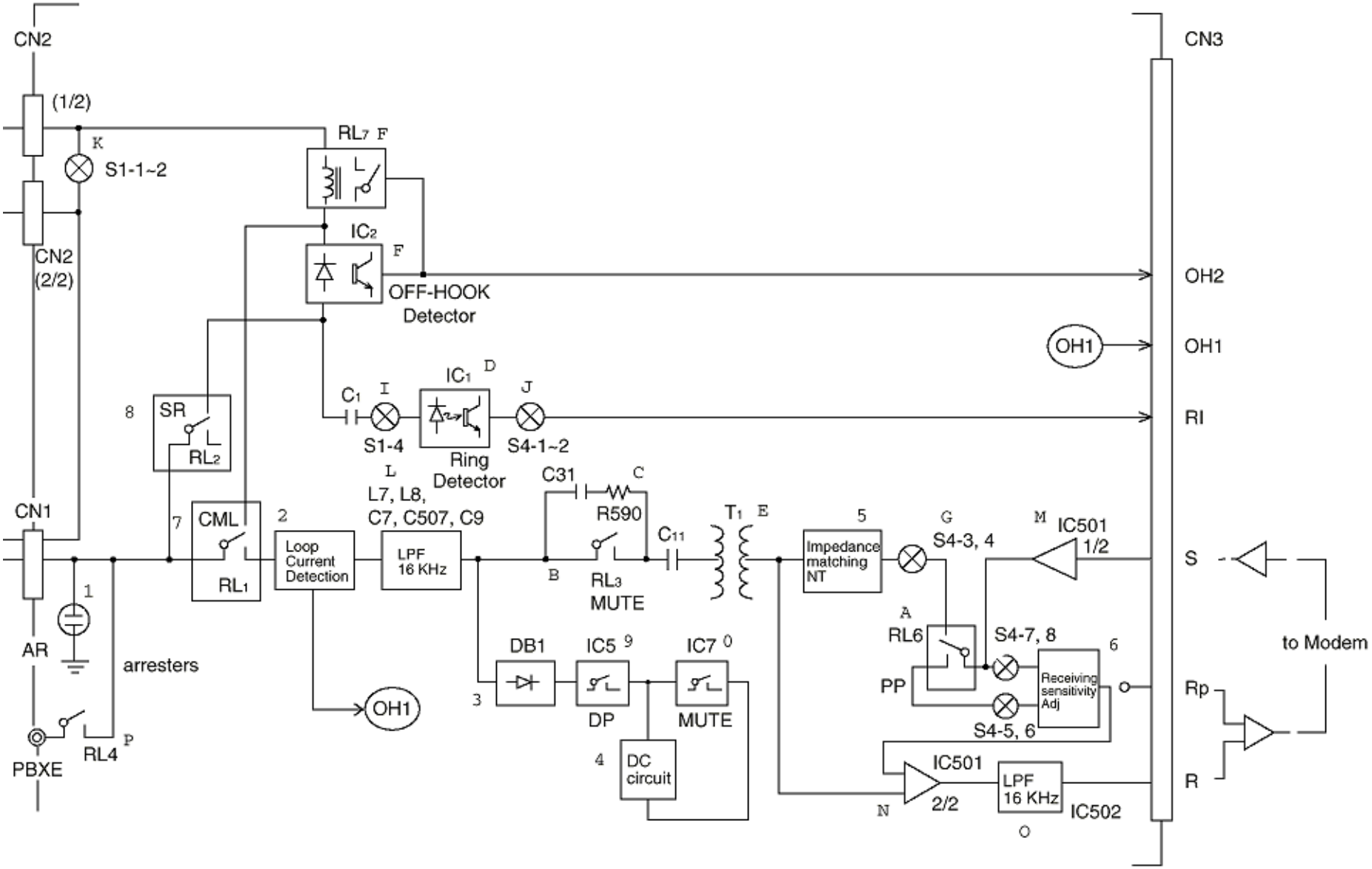
23 Transmitter amplifier (IC501 1/2)
This transmitter buffer amplifier amplifies DTMF signals and FAX send signals.

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 circuits connects one end of the LINE terminal to the PBXE terminal when requested from the PBX line.

Block Diagram of DN5


CN2
(1/2)
K
S1-1~2
CN2
(2/2)
RL7 F
IC2
F
OFF-HOOK
Detector
CN3
OH2
OH1
OH1
RI
8
SR
RL2
C1
I
IC1 D
J
S1-4
Ring
Detector
S4-1~2
L
L7, L8,
C7, C507, C9
C31
C
R590
CN1
7
CML
RL1
2
Loop
Current
Detection
LPF
16 KHz
B
RL3
MUTE
C11
T1 E
5
Impedance
matching
NT
G
S4-3, 4
M
IC501
1/2
S
A
RL6
S4-7, 8
6
Receiving
sensitivity
Adj
PP
S4-5, 6
to Modem
1
AR
arresters
DB1
IC5 9
IC7 0
3
DP
MUTE
4
DC
circuit
Rp
R
IC501
2/2
N
LPF
16 KHz
IC502
O
PBXE
RL4
P

A3.5 TELU, TEL-W2, TEL-W1, and TEL-W2F Circuit Diagram (option)

TELU

TEL-W2

TEL-W1

TEL-W2F

TELU Circuit Diagram (option)

The TELU board is the control board of the telephone set when the optional telephone assembly is installed on the facsimile transceiver.

1. Block diagram

- **Refer to the Block Diagram of the TELU circuit diagram.**

2. General functions of this circuit are as follows:

- Speech IC
- Sending Level Adjustment
- Receiving Level Adjustment
- Sending Frequency Response Adjustment
- Side Tone Adjustment
- DC V-1 Characteristics Adjustment
- Return Loss Adjustment
- AGC (automatic gain control)
- Manual Pad
- Sending Frequency Response Adjustment
- Receiving Frequency Response Adjustment
- Pulse Dialing (for TEL-W1)
- MF Dialing (for TEL-W1)
- Charge Pulse Elimination Characteristics (for TEL-W2D)
- Handset Interface

3. Explanation of TEL circuit diagram

This section describes functional blocks of individual TEL circuit diagram.

3-1 TELU circuit diagram

TELU circuit diagram is formed by Speech IC and interface of UNC, HOOK SW and HANDSET.

1) Speech IC

The hybrid circuit is formed by Speech IC.

2) Handset Interface

- Transmitter signal route

Signal from the microphone of the handset is input to pin 15 and 16 of Speech IC. This signal is determined by the

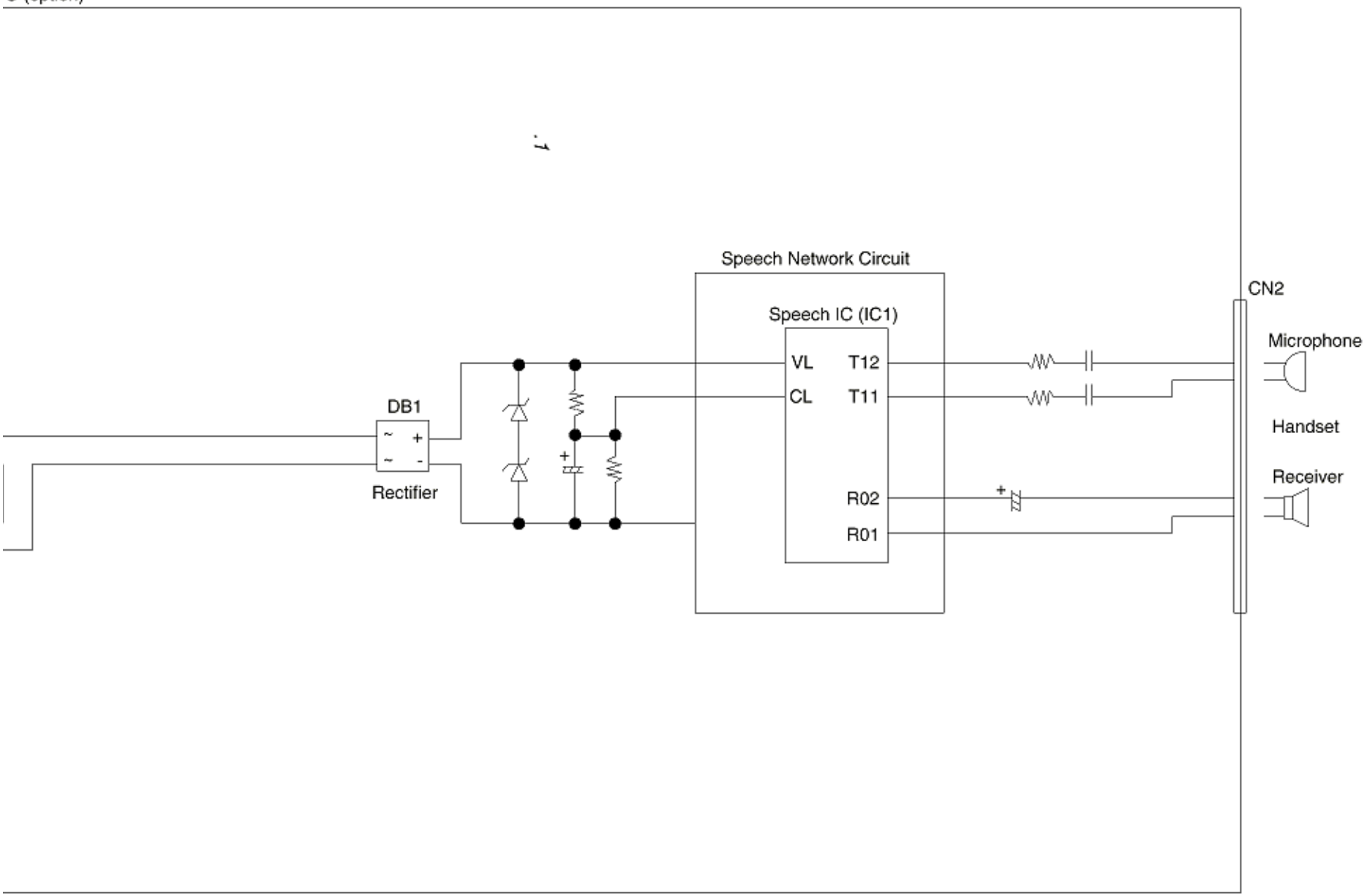
amplification factor and output to the telephone line via UNC, Hook switch and DB2 (rectifier).

- Receive signal route

Receive signal from the telephone line enters Speech IC via UNC, Hook switch and DB2 and is output to pin 2 & 3 of the speaker of the handset.

Block Diagram of TEL-U (option)

·U (option)


Speech Network Circuit
Speech IC (IC1)
VL
CL
T12
T11
R02
R01
DB1
Rectifier
CN2
Microphone
Handset
Receiver

TEL-W2 Circuit Diagram

Refer to Block Diagram TEL-W2

1) Speech IC

General functions of the speech IC are as follows:

- Basic speech functions included.
- Separate receive pre-amplifier with signal output terminal
- Separate receive power amplifier input terminal, cause it is possible to mixing input.
- Balanced input for microphone input to provide immunity to common mode noise.
- MF pre-amplifier input terminal is possible to mixing input.
- Dial pulse waveform improvement circuit included.
- Manual pad function included.
- The transmit, receive, and DTMF amplifier are provided with AGC in accordance with the line current.

2) Sending Level Adjustment

The sending level is determined by the circuit section formed by resistors R55, R56, R57 and R58, and the bits of SW3 connect the resistors in parallel. The sending level is maximum when all the bits of SW3 are set to ON, and minimum when all the bits of SW3 are set to OFF.

3) Receiving Level Adjustment

The receiving level is determined by the circuit section formed by resistors R34, R35, R36, R82, R83 and R84, and the bits of SW5. The receiving level is minimum when all the bits of SW5 are set to ON, and maximum when all the bits of SW5 are set to OFF.

4) Sending Frequency Response Adjustment

The circuit section affecting the low range level of the sending frequency response is formed by capacitors C59, C35, C36 and C60, which are connected in series to the section in front of a transmitter. The low range level can be adjusted by the ON/OFF setting of bits 1 and 2 of SW3. The high range level can be adjusted by the ON/OFF setting of SW6-5.

Note: When the frequency response is changed, the sending and receiving levels may be changed. Verify the sending and receiving levels after adjustment.

5) Side Tone Adjustment

The setting of the side-tone level is performed by the setting of SW1-1 through 8 and SW2-1. One of these bits it set to ON for each individual country. The side-tone level is interrelated with the receiving and sending level. The side-tone level becomes higher when the sending and receiving level are set lower.

Note: After the side tone level is changed, the sending and receiving levels change, so readjust the sending and receiving level and reverify and readjust the side tone.

6) DC V-I (voltage-versus-current) Characteristics Adjustment

The adjustment of the DC V-I characteristics at the time of line supplement is performed by D10, D11, D12, SW2-7, R25 and SW2-8. When raising the DC V-I value, set SW 2-7 to OFF or SW2-8 to ON. When decreasing the value, set SW2-7 to ON,
or SW2-8 to OFF.

7) Return Loss

The return loss setting is performed by SW2-2 to 6. One of the bits is set to ON for each individual country. When

SW2-3 is set to ON, the impedance is set to 600 W's series.

8) AGC (automatic gain control)

AGC is function for adjusting the sending and receiving levels automatically in accordance with the line current values, so that the optimal communication level is automatically set. The circuit section to determine the AGC characteristic is formed by the group of resistors R41, R43 and R44 connected to the AGC terminal of the speech IC. The AGC gain is high wen the resistor values are small, and the AGC gain is low when the resistor values are large. The AGC gain is adjusted by ON/OFF setting of SW6-2 and 3 connected to R43 and R44.

9) Manual Pad

The manual pad is used for a countermeasure by the ON setting of SW6-1 when howling has occurred because of line conditions. (normally set to OFF)

Note: Adjustment Sequence of Characteristics

Since individual characteristics are interrelated to each other, the settings shall be performed in the following sequence:

(1) DC resistance

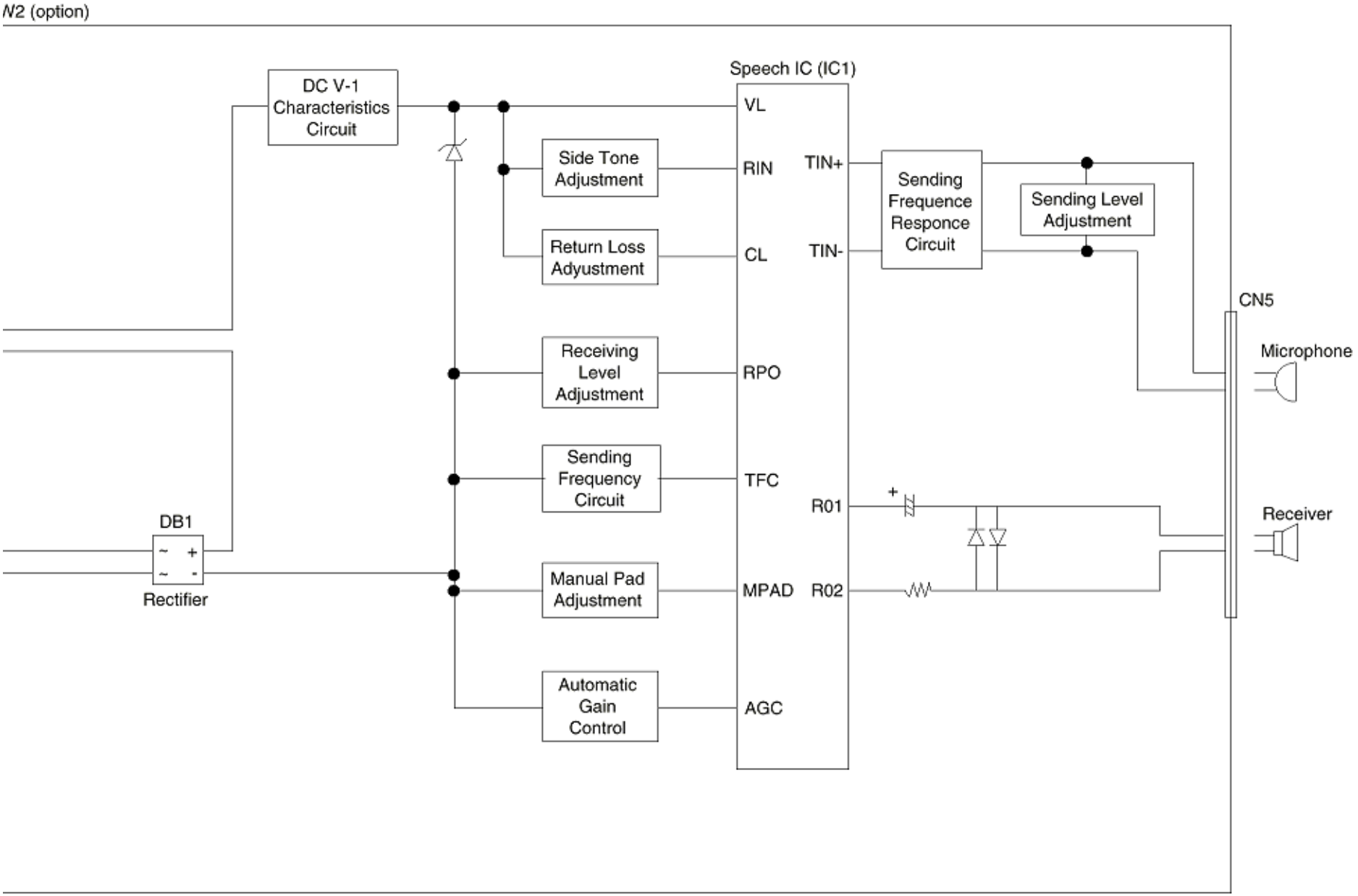
(2) Return loss

(3) Sending level

(4) Receiving level

(5) Side tone level

Block Diagram of TEL-W2


N2 (option)
DC V-1 Characteristics Circuit
Speech IC (IC1)
VL
Side Tone Adjustment
RIN
TIN+
Sending Frequence Responce Circuit
Sending Level Adjustment
Return Loss Adyustment
CL
TIN-
CN5
Microphone
Receiving Level Adjustment
RPO
Sending Frequency Circuit
TFC
R01
Receiver
DB1
Manual Pad Adjustment
MPAD
R02
Rectifier
Automatic Gain Control
AGC

TEL-W1 Circuit Diagram

Refer to Block Diagram of TEL-W1.

1) Speech IC

General functions of the speech IC are as follows:

- Basic speech functions included.
- Separate receive pre-amplifier with signal output terminal
- Separate receive power amplifier input terminal.
- Balanced input for microphone input to provide immunity to common mode noise.
- MF pre-amplifier input terminal.
- Dial pulse waveform improvement circuit included.
- Manual pad function included.
- The transmit, receive, and DTMF amplifier are provided with AGC in accordance with the line current.

2) Sending Level Adjustment

The sending level is adjusted by the selection of resistors allocated for individual countries by the dip-switch settings. The dip-switch set to ON corresponds to the country as shown in the table below.

- Increase the resistor value to set louder sending level (i.e. lower SLR value).
- Lower the resistor value to set quieter sending level (i.e. higher SLR value).

3) Receiving Level Adjustment

The receiving level is adjusted by the selection of resistors allocated for individual countries by the dip-switch settings. The dip-switch set to ON correspond to the country as shown in the table below.

- Lower the resistor value to set louder receiving level (i.e. lower RLR value).
- Increase the resistor value to set quieter receiving level (i.e. higher RLR value).

4) Sending Frequency Response Adjustment

The adjustment of the high range frequency response is performed by changing the capacitance of the capacitor C33. Increase the value of C33 to lower the amplitude of the high range level. Decrease the value of C33 to raise the amplitude. The adjustment of the low range frequency response is performed by changing the capacitance of the capacitors C35 and C37. Decrease the capacitance of C35 and C37 to lower the amplitude of the low range level. Increase the capacitance of C35 and C37 to raise the amplitude.

Note: When the sending frequency response is changed, the sending loudness rating (SLR) value may change. It is required to measure the SLR value again and verify it.

5) Receiving Frequency Response Adjustment

The adjustment of the low range frequency response is performed by changing the capacitance of the capacitor C26. Increase the capacitance of C26 to raise the amplitude of the low range level. Decrease the capacitance of C26 to lower the
amplitude.

The adjustment of the high range-frequency response is performed by changing the capacitance of the capacitors C29. Decrease the capacitance of C29 to raise the amplitude of the high range level. Increase the capacitance of C29 to lower the
amplitude of the high range level.

Note: When the receiving frequency response is changed, the receiving loudness rating (RLR) value may change. It is required to measure the RLR value again and verify it.

6) Side-Tone Adjustment

The side-tone adjustment is performed by the C-R networks corresponding to the individual countries. For adjusting the side tone, select the corresponding C-R network by the designated DIP switch and adjust the STMR value to the specified value by the values of capacitors and resistors.

The dip-switch set to ON corresponds to the country as shown in the table.

Note: When the C-R network is changed for the side tone adjustment, the receiving loudness rating (RLR) value may change. It is required to measure the RLR value again and verify it.

7) DC V-I Characteristics

The DC V-I characteristics at the time of the line supplement is performed by diodes D10, D11 and SW4-5, and can be selected from two types by setting of dip-switch 4-5. In case SW4-5 is set to ON, since D10, and D11 are short-circuited, V/I value is lowered. In case SW4-5 is set to OFF, V/I value is raised.

8) Return Loss Adjustment

The return loss adjustment is performed by the installed C-R networks corresponding to the individual country. For adjusting the return loss, select the corresponding C-R network by the designated DIP switch and adjust the return loss by changing the values of capacitors and resistors.

The dip-switch set to ON corresponds to the country as shown in the table.

9) AGC (automatic gain control)

AGC is a function for adjusting the sending and receiving levels automatically in accordance with the line current values, so that the optimal communication level is automatically set. The circuit section to determine the AGC characteristics is formed
by resistors R41 and R43 connected to the AGC terminal of the speech IC. The AGC gain is high when the resistor values are small, and the AGC gain is low when the resistor values are large.

10) Pulse Dialling

Changing the make-and-break ratio is determined by the dip-switch SW4-1 and 2.

- Setting SW4-1 to ON and SW4-2 to OFF corresponds to a 33% make ratio.
- Setting SW4-1 to OFF and SW4-2 to ON corresponds to a 40% make ratio.

11) MF dialling

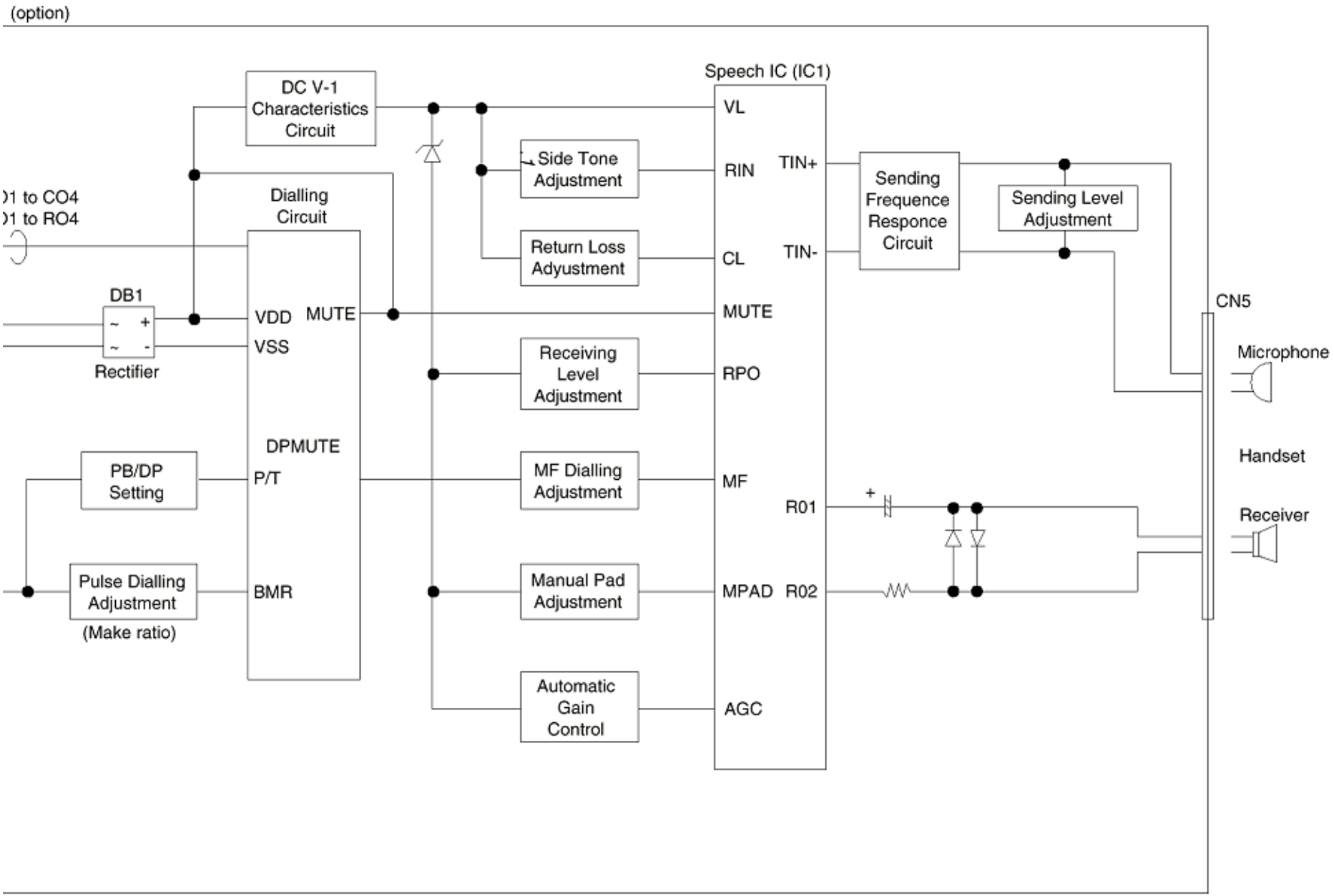
The MF signal sending level is adjusted by the selection of resistors and capacitors allocated for the individual countries by the dip-switch setting. The dip-switch set to ON corresponds to the country as shown in the table below.

Increase the resistor value to lower the MF signal sending level, and decrease the resistor value to raise the sending level. The difference between the high and low groups of the MF signal is performed by changing the capacitance of the capacitor. The allowable level difference between the high and low groups is (2±1) dB.

12) Manual Pad

The manual pad is used as a countermeasure by the ON setting of SW3-8 when howling is occurs because of line conditions. (normally set to OFF)

Block Diagram of TEL-W1


(option)
Speech IC (IC1)
DC V-1 Characteristics Circuit
Side Tone Adjustment
Return Loss Adyustment
Receiving Level Adjustment
MF Dialling Adjustment
Manual Pad Adjustment
Automatic Gain Control
VL
RIN
CL
MUTE
RPO
MF
MPAD
AGC
TIN+
TIN-
R01
R02
Sending Frequence Responce Circuit
Sending Level Adjustment
CN5
Microphone
Handset
Receiver
)1 to CO4
)1 to RO4
DB1
Rectifier
Dialling Circuit
VDD
VSS
MUTE
DPMUTE
P/T
BMR
PB/DP Setting
Pulse Dialling Adjustment
(Make ratio)

TEL-W2F Circuit Diagram

Refer to Block Diagram of TEL-W2F.

1) Speech IC

General functions of the speech IC are as follows:

- Basic speech functions included.
- Separate receive pre-amplifier with signal output terminal.
- Separate receive power amplifier input terminal, cause it is possible to mixing input.
- Balanced input for microphone input to provide immunity to common mode noise.
- MF pre-amplifier input terminal is possible to mixing input.
- Dial pulse waveform improvement circuit included.
- Manual pad function included.
- The transmit, receive, and DTMF amplifier are provided with AGC in accordance with the line current.

2) Sending Level Adjustment

The sending level is determined by the circuit section formed by resistors R55, R56, R57 and R58, and the bits of R110-R114 connect the resistors in parallel. The sending level is maximum when all the bits of R110-R114 are set to "Mount", and minimum when all the bits of R110-R114 are set to "Not mount".

3) Receiving Level Adjustment

The receiving level is determined by the circuit section formed by resistors R34, R35, R36, R37 and R38, and the bits of R101-R105. The receiving level is minimum when all the bits of R101-R105 are set to "Mount", and maximum when all the bits of R101-R105 are set to "Not mount".

4) Sending Frequency Response Adjustment

The circuit section affecting the low range level of the sending frequency response is formed by capacitors, C35 and C36, which are connected in series to the section in front of a transmitter.

Note: When the frequency response is changed, the sending and receiving levels may be changed. Verify the sending and receiving levels after adjustment.

5) Side Tone Adjustment

Adjustment is unavailable.

6) DC V-I (voltage-versus-current) Characteristics Adjustment

Adjustment is unavailable.

7) Return Loss

Adjustment is unavailable.

8) AGC (automatic gain control)

Adjustment is unavailable.

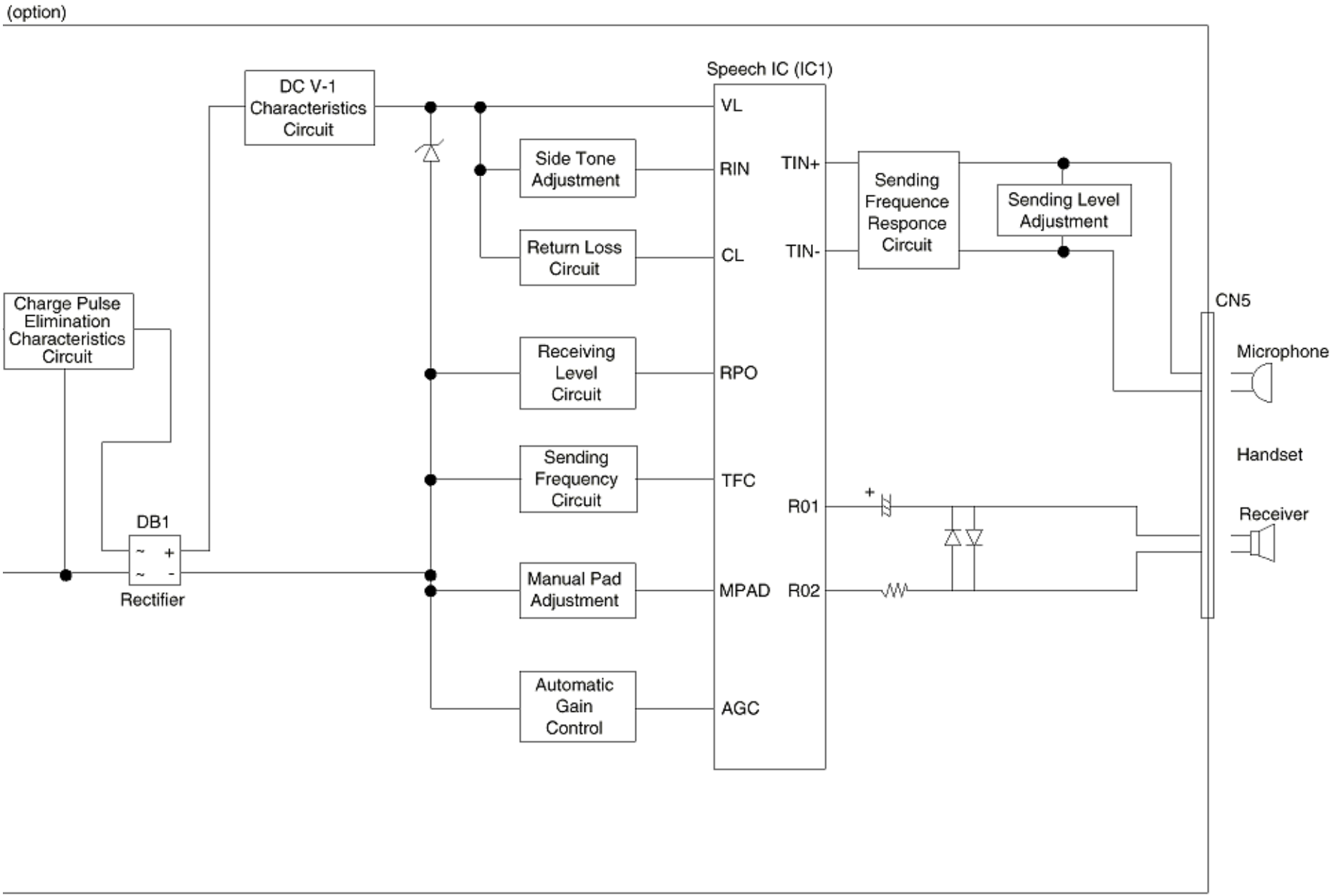
9) Manual Pad

Adjustment is unavailable.

(1) DC resistance

(2) Return loss
(3) Sending level
(4) Receiving level
(5) Side tone level

Block Diagram of TEL-W2F


(option)
Speech IC (IC1)
DC V-1 Characteristics Circuit
VL
Side Tone Adjustment
RIN
TIN+
Sending Frequence Responce Circuit
Sending Level Adjustment
Return Loss Circuit
CL
TIN-
CN5
Charge Pulse Elimination Characteristics Circuit
Microphone
Receiving Level Circuit
RPO
Handset
Sending Frequency Circuit
TFC
R01
Receiver
DB1
~ +
~ -
Rectifier
Manual Pad Adjustment
MPAD
R02
Automatic Gain Control
AGC

A3.7 MEMO (memory) Circuit Diagram (option)

By mounting this optional memory board (MEM/MEM-2), it can be used for the expansion memory.

1. Block diagram

Refer to the Related Signal or Memory Board Diagram.

Memory board circuit consists of the following block.

1) 512 kbyte MOS Dynamic RAM x 4 (IC3 to IC6).

Used as follows:

- Picture memory for the ECM send/receive modes.
- Picture memory for the memory transmission mode.
- Picture memory for the retransmission data.
- Picture memory for the reception in memory

2) Memory capacity

4 Mbyte (512 k x 8 bit x 8) memory board can be added for OKIFAX 5400

The relationship between memory capacity and mounted boards are shown in the following table:

Memory Capacity	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9
4 Mbyte	○	○	○	○	○	○	○	○

○ : mounted

× : not mounted

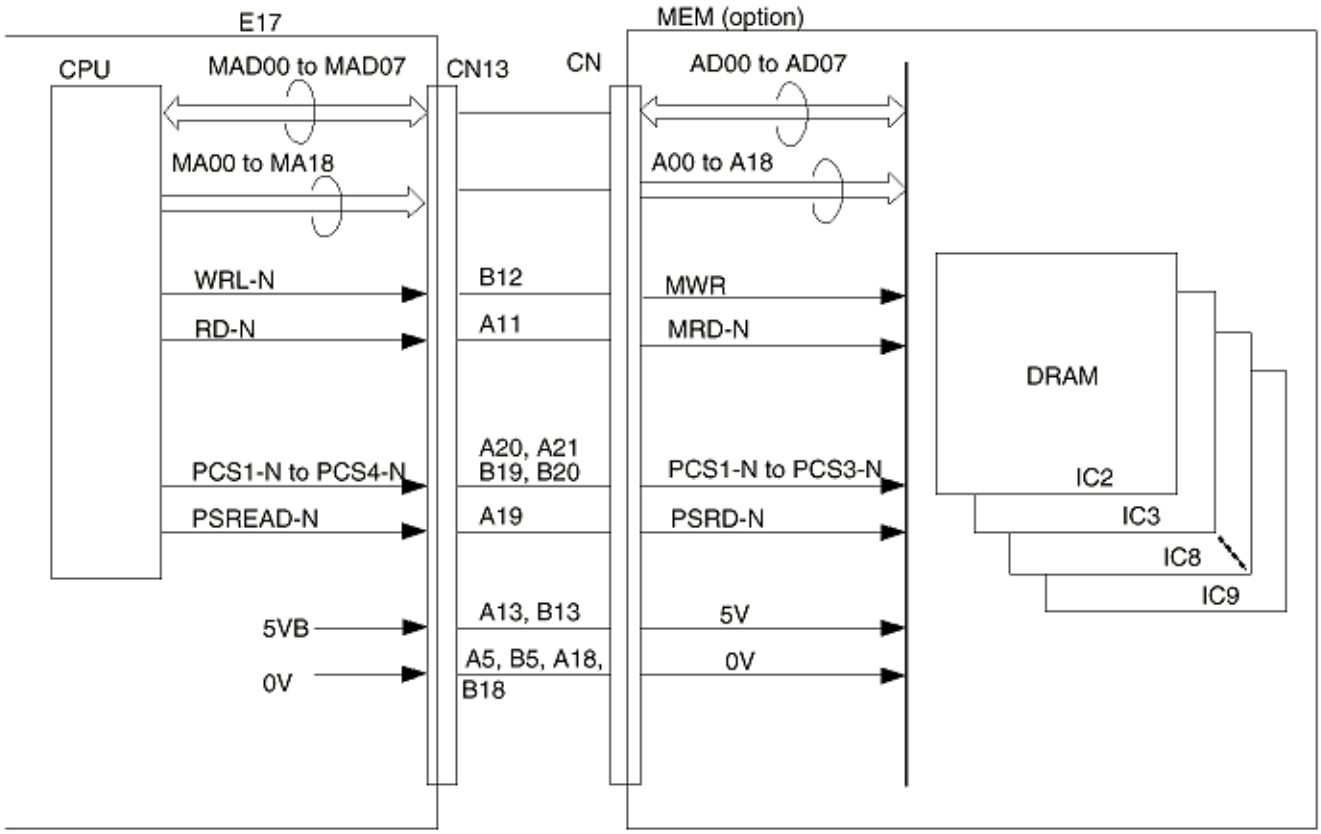
Note: Back-up time on electrical interruption; Min. one hour.

3) Image memory capacity

	Memory Condition	OKIFAX 5250		OKIFAX 5400 LEGAL Setting
With Option Board	Standard (without option)	17		35

Note: No. of sheets are counted provided that ITU-T No.1 sample document is used. No. of sheets are typical value.

Related Signals of Memory Board



A3.8 CTR Circuit Diagram (PC interface unit: OF5400 option)

CTR board is used as an interface board of PC and FAX when PC is connected to facsimile machine.

1. Block diagram

CTR board circuit is formed by Receiver, Driver, and 1284-I/F.

For more information, refer to the Related Signals of CTR Board Diagram.

2. Function

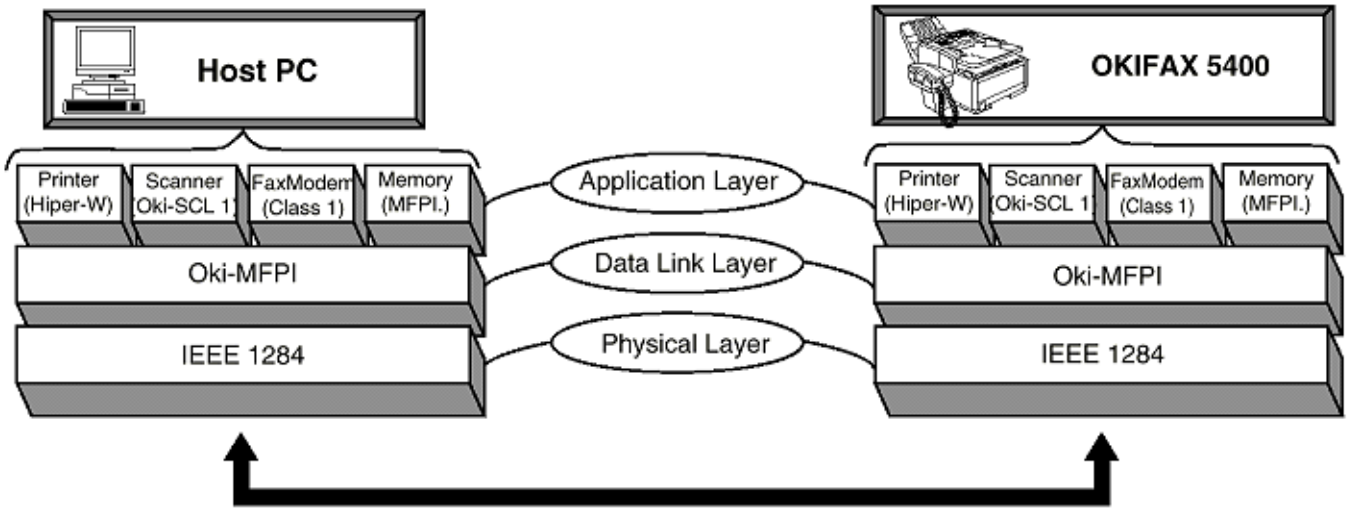
2.1 Summary

By installing the optional board (Bi-Centro), the following MFP (Multi-Function Peripheral) function can be realized.

Example:

- PC printer function (300/Q600 dpi) 8PPM
- PC Scanner function 300 dpi
- PC Fax Modem function (TIA/EIA Class 1)
- PC Memory function
- PC Multiplex function Disable Enable

Interface between Fax machine and Host PC consists of three layer structure as detailed below, each sub-system can be operated at the same time by adopting a Oki-MFPI protocol in both Fax machine and Host PC.



a) Application layer:

Performs a function control of each sub-system at the Host PC and Fax machine.

b) Data-Link layer:

Performs a protocol control at the Host PC and Oki-MFPI (TIA IS650 Level 1 requirement).

(Packetize/Unpacketize, flow control, Transfers command/data between each sub-system)

c) Physical layer:

Has a bi-directional interface control circuit which conforms to IEEE1284.

Standard mode: Compatible, Nibble

Oki special mode: MCE (Mode Change Express)

Following devices are as sub-system:

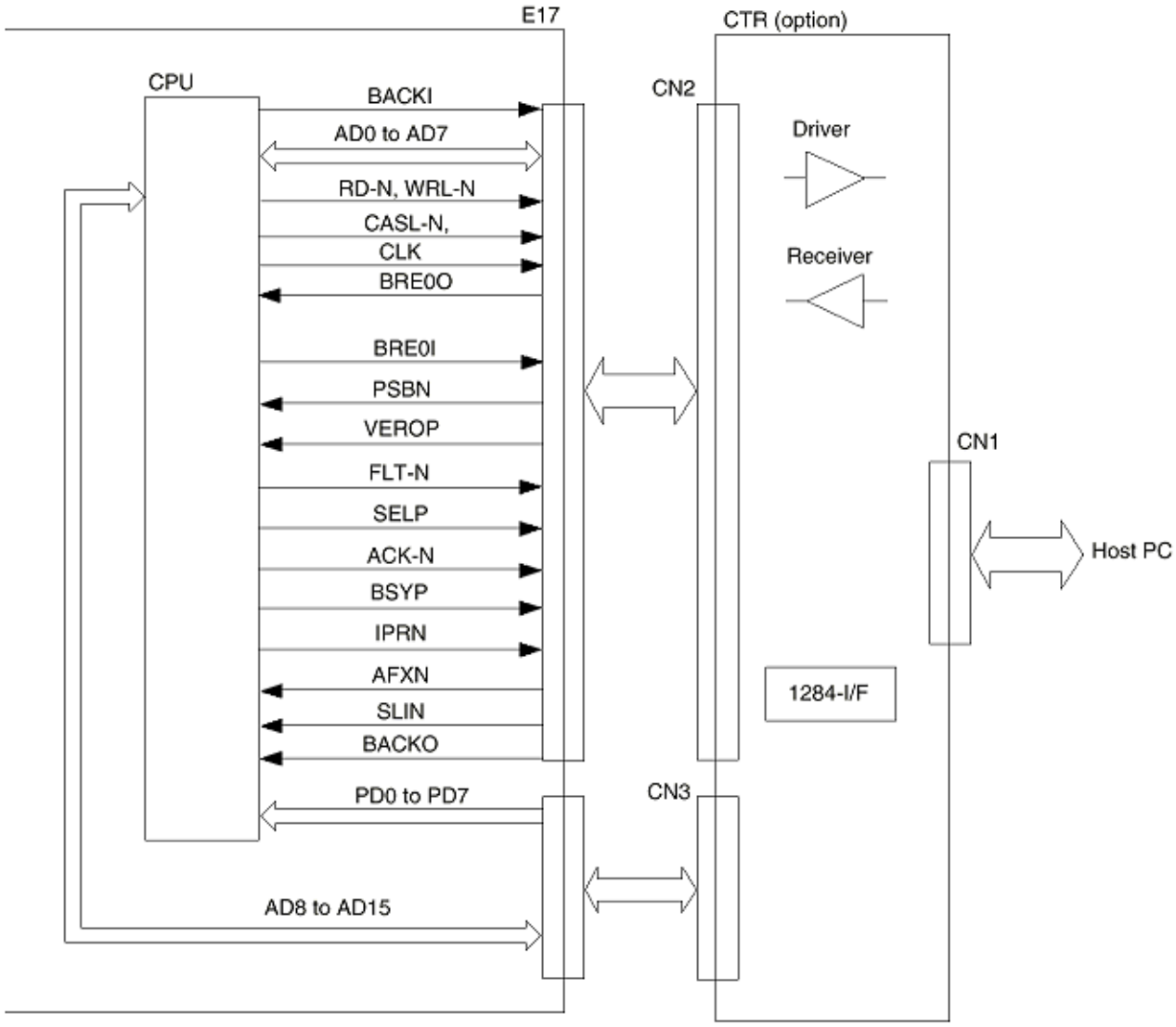
1) Printer (HIPER-W: Host based Image PrintER for Windows)
Encodes a raster image data in Host PC and transfers a data with HIPER-W emulation.

2) Scanner (Oki-SCL 1: Oki-Scanner Control Language 1)
Transfers and image data of document scanned in Fax machine to the Host PC with Oki-SCL 1 command.

3) FaxModem (TIA/EIA Class 1)
Send/receive a Class 1 command between Host PC and Fax machine.

4) Memory (MFPL: Multi-Function Peripheral Language)
By using MFPL command, it is possible to display on screen of Host PC for condition of Fax machine and performs the initial registration of the telephone number used in Fax machine.

Related Signals of P050 (PC interface unit) Diagram



A3.9 TQSB (Second tray) Circuit Diagram: option

1. Block diagram

This board is installed as the optional board for the unit.

Refer to the Block Diagram of the Second Tray (Option).

2. Function

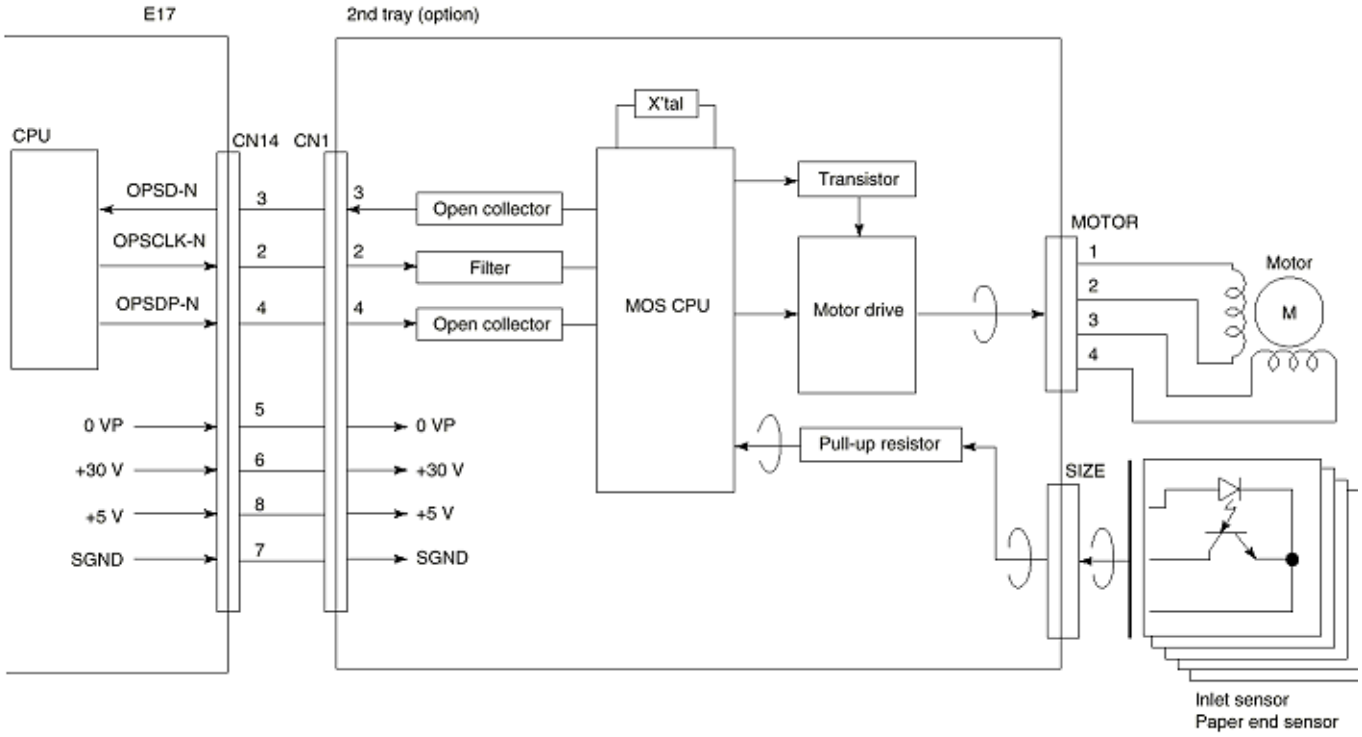
Second tray consists of the following functions:

- Paper capacity: 500 sheets
- Paper size: A4, Letter, Legal
- Paper-size selection: Automatic
- Cassette/no-cassette selection: Automatic
- Paper/no-paper selection: Automatic
- Paper route open to facsimile transceiver unit : Automatic decision

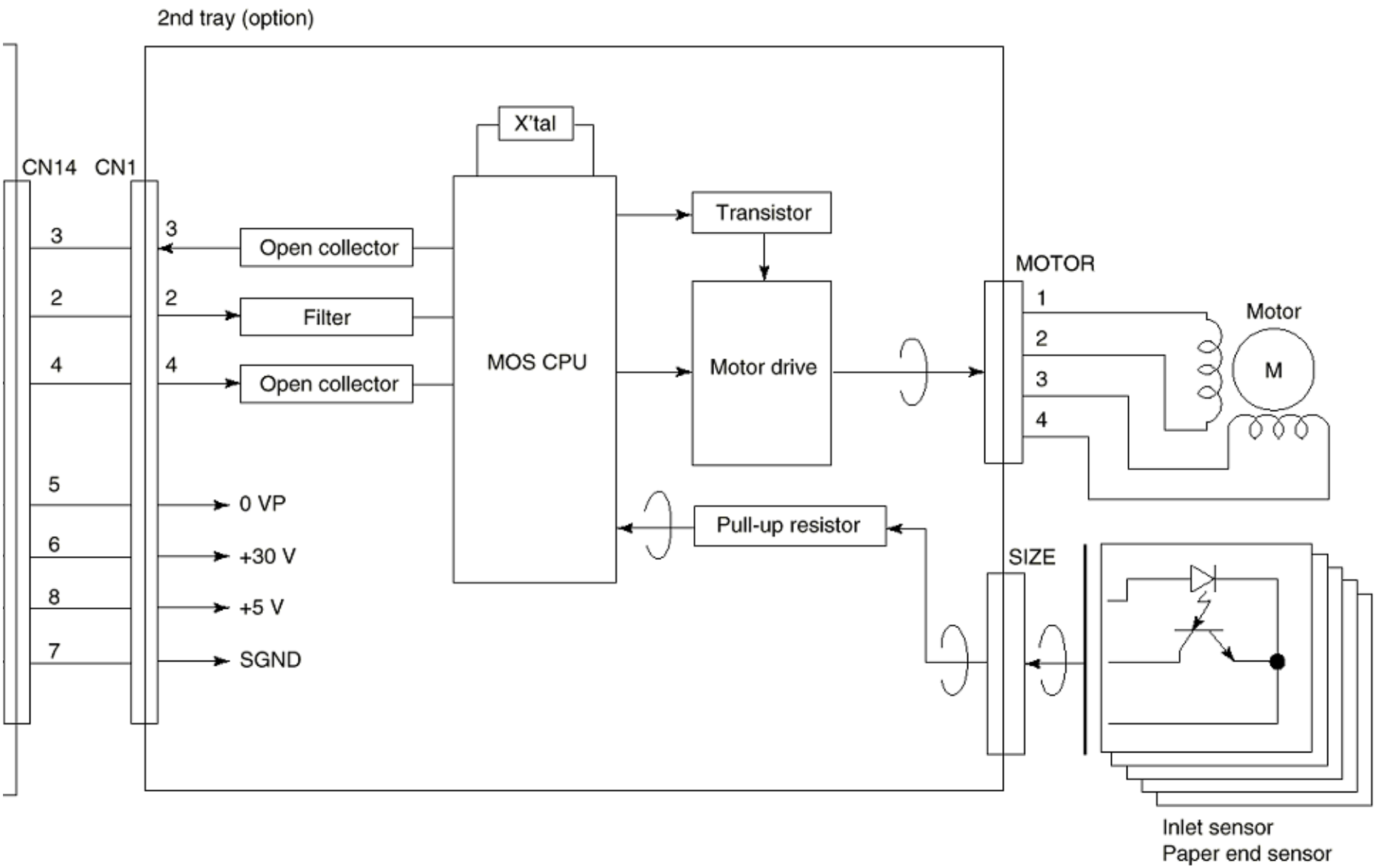
Control method:

When second tray is installed with the facsimile transceiver unit, the tray is connected to the facsimile transceiver unit by a connecting cable. The tray is controlled by the command from CPU of PU (printer unit) section.

Block Diagram of 2nd Tray



< same diagram -- side view >


2nd tray (option)
CN14
CN1
3
2
4
5
6
8
7
3
2
4
Open collector
Filter
Open collector
0 VP
+30 V
+5 V
SGND
X'tal
MOS CPU
Transistor
Motor drive
Pull-up resistor
MOTOR
1
2
3
4
Motor
M
SIZE
Inlet sensor
Paper end sensor

Overview

This appendix describes the print operation processes and assemblies of the unit.

B.1 Mechanical Components

B.2 Description of Print Operations

B.3 Errors

B.4 Other Special Cases

B.1 Mechanical Components

1) Image drum cartridge

2) Resist motor

3) Drum motor

4) LED head

5) Fuser

Layout of Print Station Components

1) Image drum cartridge

The image drum cartridge I/D or EP (electro-photographic) consists of an image drum, a charger, and a developer. The cartridge forms a toner image on the drum, using an electrostatic latent image formed by the LED print head.

2) Resist motor

This resist motor is a pulse motor of 48 steps/rotation that is two-phase excited by the signal from the M17 board. It drives the hopping roller and the resist roller via two one-way clutches according to the direction of rotation.

3) Drum motor

This drum motor is a pulse motor of 48 steps/rotation that is two-phase excited by the signal from the M17 board and is the main motor of this mechanism.

4) LED head

Image data for each dot on a line from the M17 board is received by the shift registers and latch registers. The Letter size LED head are driven to radiate the image data on to the EP (image) drum.

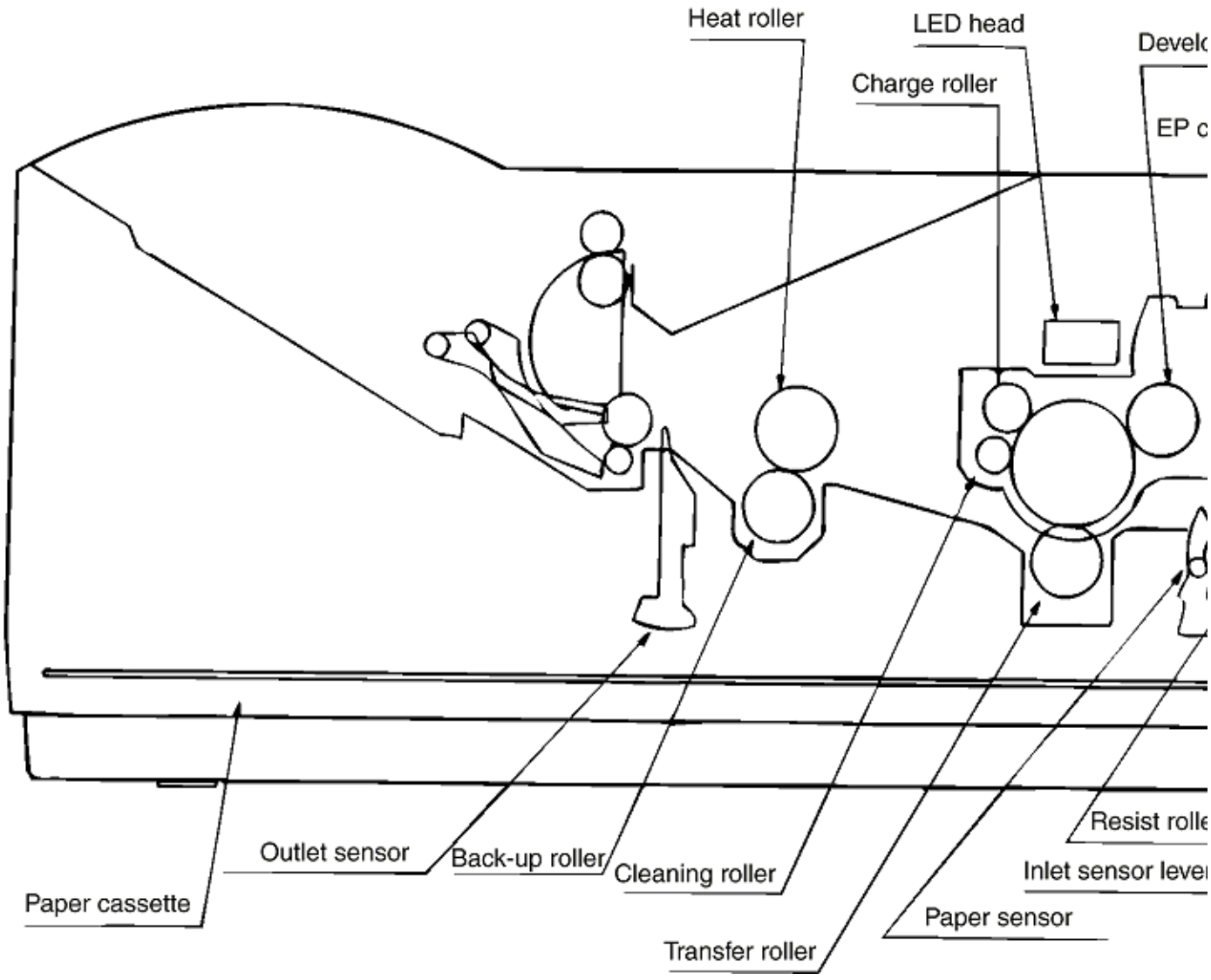
5) Fuser

The fuser consists of a heater, a heat roller, a thermister and a thermostat.

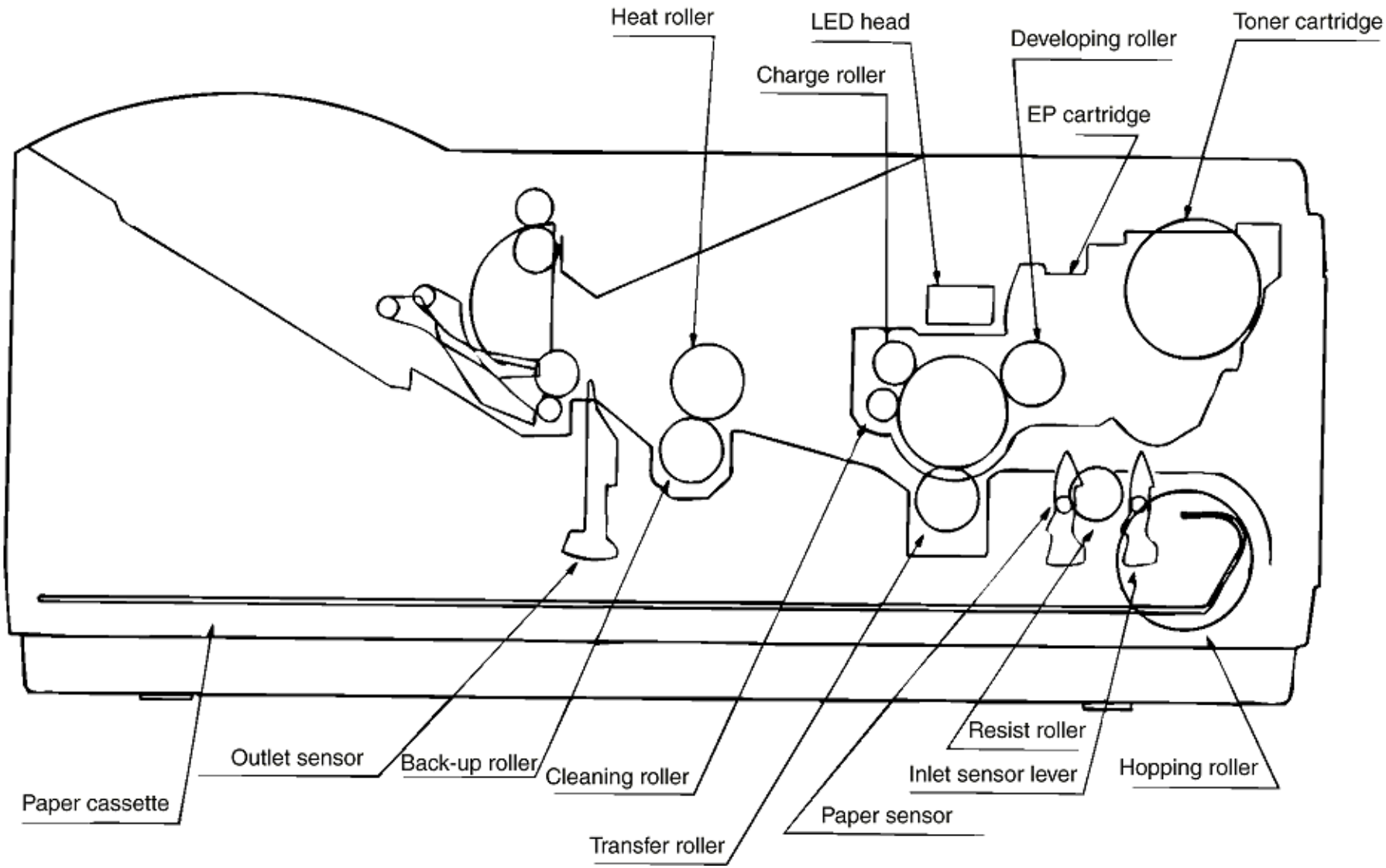
An AC voltage from the power supply board (1VP/2VP) is applied to the heater under the control of the HEAT-N signal from the M17 board. This AC voltage heats the heater. The M17 board supervises the heat roller temperature via the thermistor, and regulates the heater roller at a predetermined temperature (about 185 °C) by connecting or disconnecting the AC voltage supply to the heater.

If the heater roller temperature rises abnormally, the thermostat of the heater voltage supply circuit is activated to cut off the AC voltage supply forcibly.

Layout of Print Station Components



< same diagram - side view >


Heat roller
LED head
Developing roller
Toner cartridge
Charge roller
EP cartridge
Resist roller
Outlet sensor
Back-up roller
Cleaning roller
Inlet sensor lever
Hopping roller
Paper cassette
Paper sensor
Transfer roller

B.2 Description of Print Operations

B2.1 Process Operations

B2.1 Process Operations

1) Hopping and feeding

2) Charging

3) Exposure

4) Developing

5) Transfer

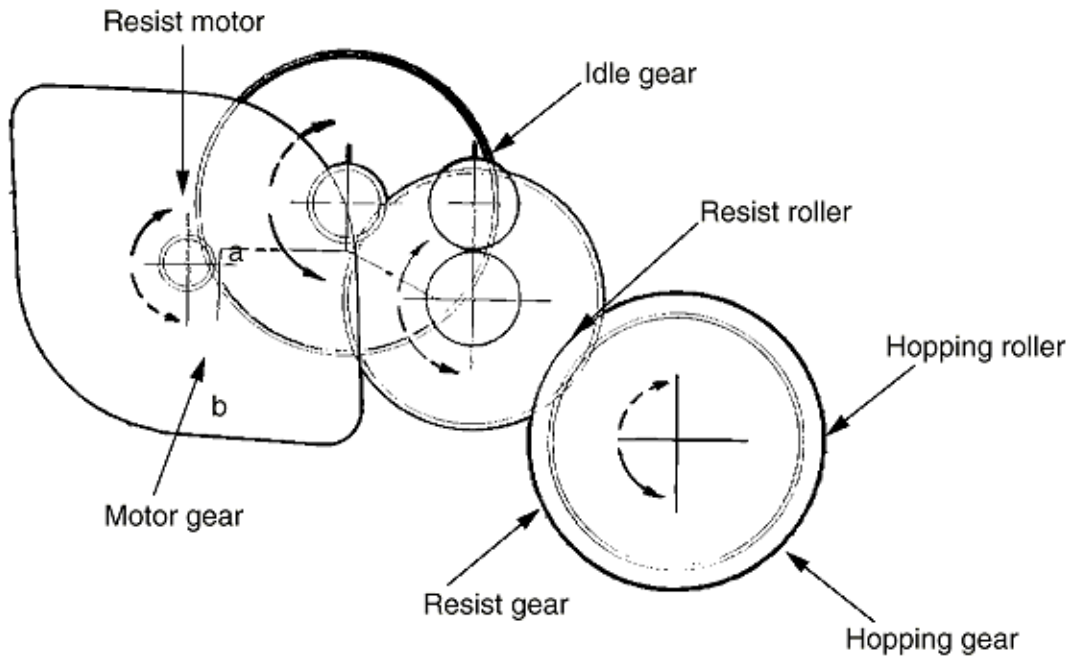
6) Fusing

7) Cleaning

8) Cleaning of rollers

1) Hopping and feeding

Hopping and feeding are affected by a single resist motor in the mechanism shown below.



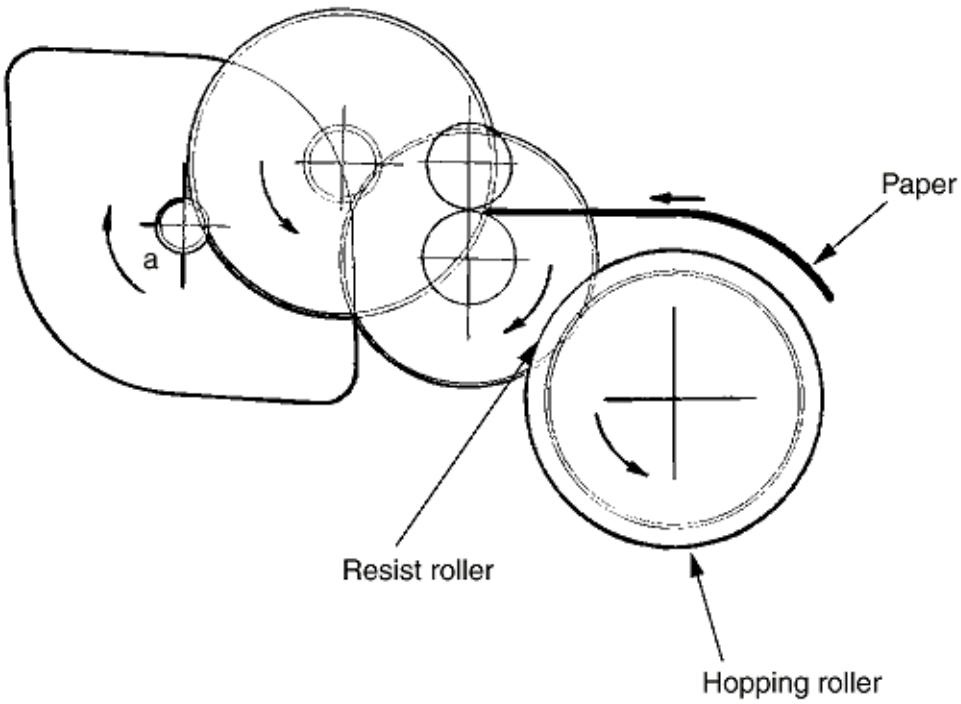
Turning the resist motor in the "a" direction drives the hopping roller. Turning the resist motor in the "b" direction drives the resist roller. The resist gear and hopping gear each contain one-way clutches, so that turning each of these gears in the reverse direction will not be transmitted to the corresponding roller.

(a) Hopping

1 Hopping turns the resist motor in the "a" direction (in the clockwise [CW] direction) and drives the hopping roller to advance the paper until the inlet sensor turns on.

(In this case, the resist gear also turns, but the resist roller is prevented from turning by the one-way clutch gear.)

2 After the paper has turned on the inlet sensor, the paper is further advanced by a predetermined length until the paper hits the resist roller. (The skew in the paper can thus be corrected.)

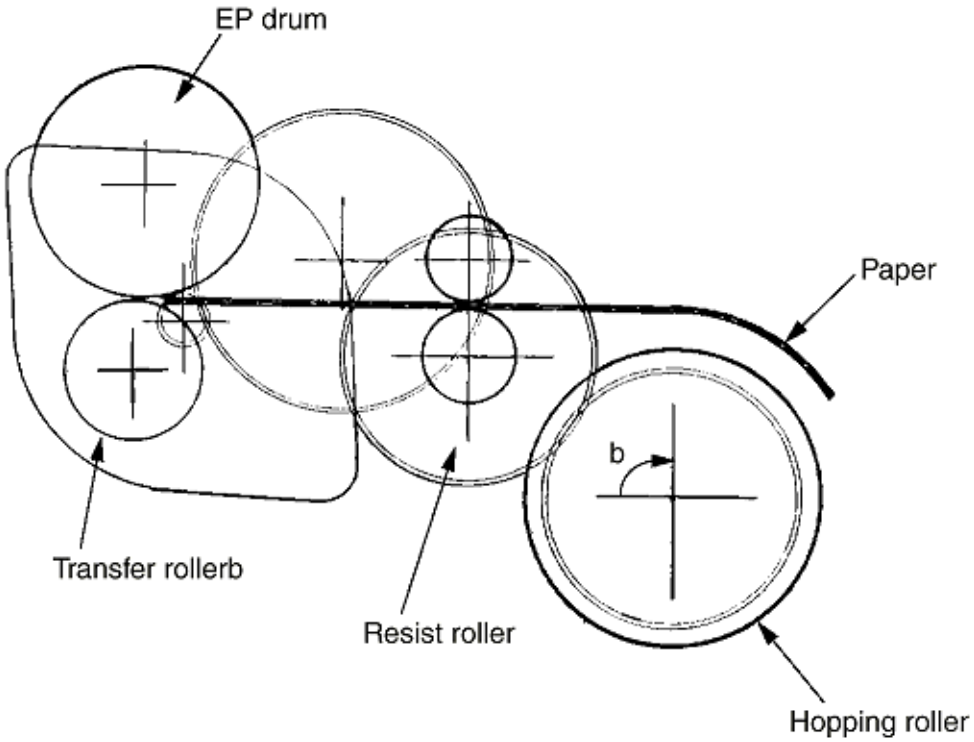


CW = Clockwise

(b) Feeding

1 After end of hopping, turning the resist motor in the "b" direction (in the counter-clockwise [CCW] direction) drives the resist roller to advance the paper. (In this case, the hopping gear also turns, but the hopping roller is prevented from turning by the one-way clutch gear.)

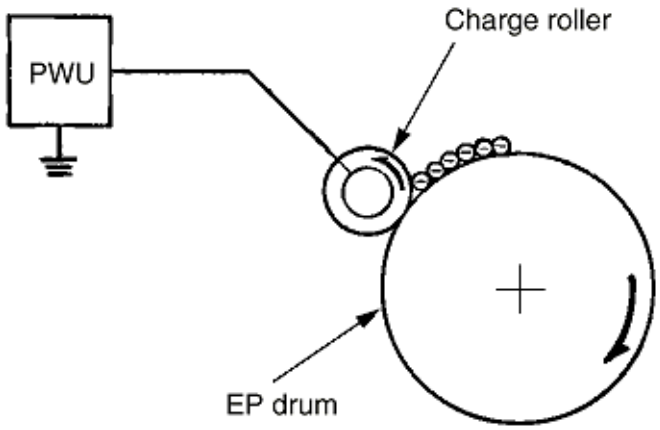
2 The paper is further advanced in synchrony with the print data.



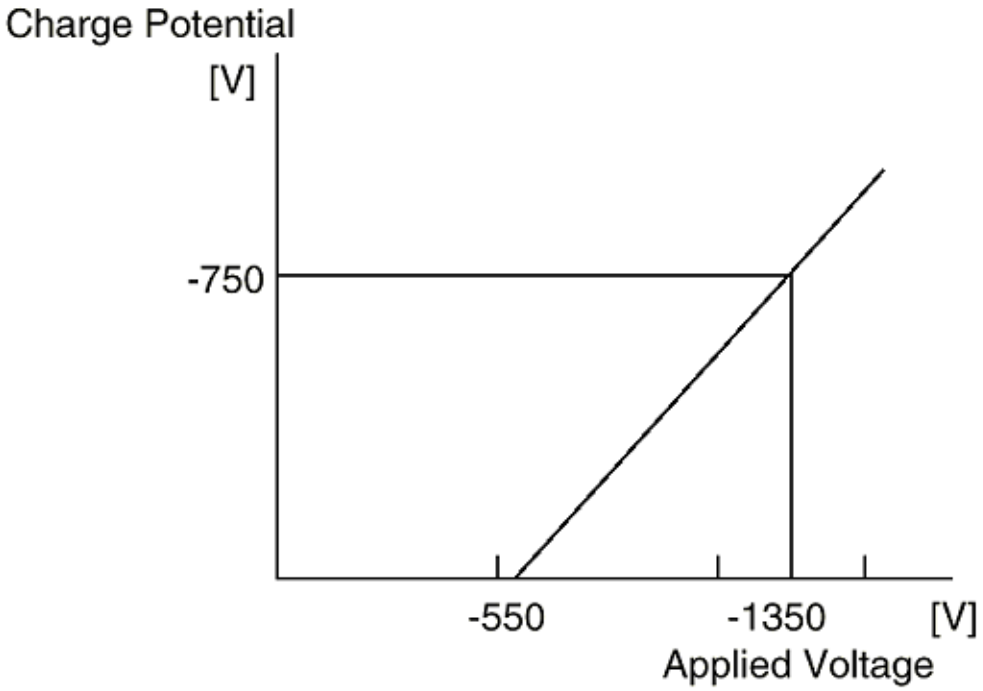
CCW = Counterclockwise

2) Charging

Charging is affected by applying a DC voltage to the charge roller that is in contact with the image drum surface.

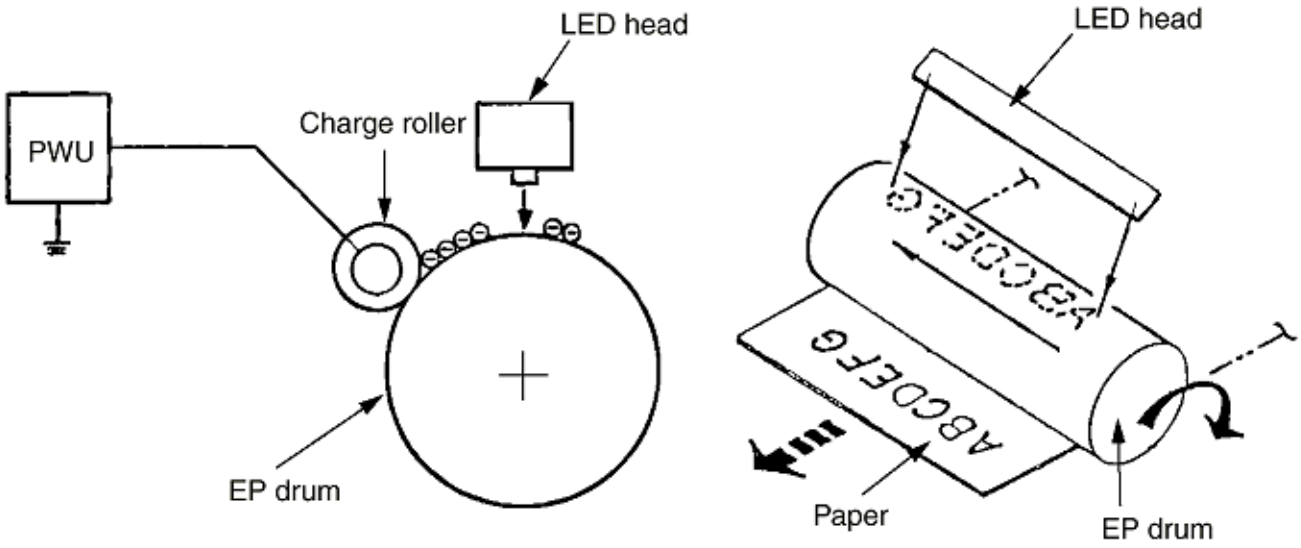


The charge roller is composed of two layers consisting of a conductive layer and a surface protective layer that has elasticity, in order to secure a good contact with the image drum. When the DC voltage (-1.35 KVDC) applied from the Power Supply Unit exceeds a threshold value, charging begins. The applied voltage is proportional to charge potential with off set of approx. -550V.

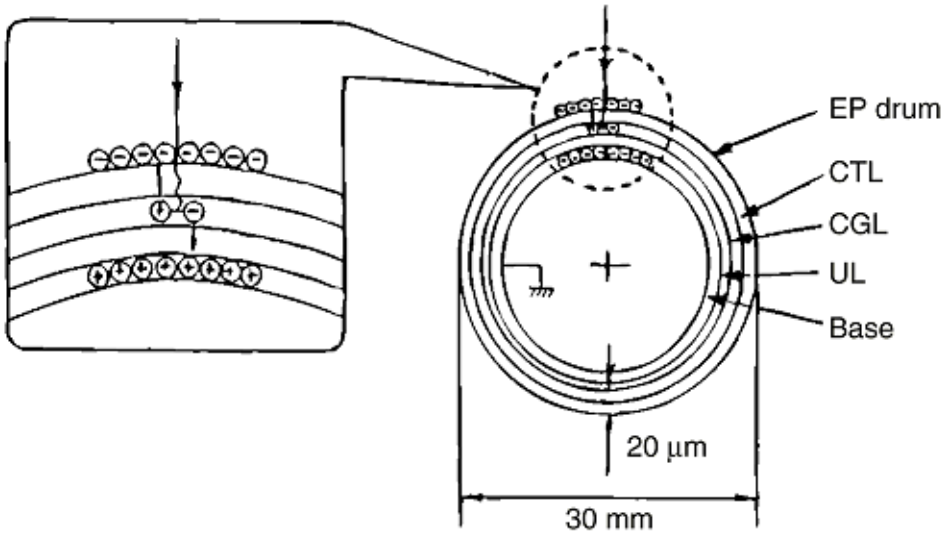

Charge Potential
[V]
-750
-550
-1350
[V]
Applied Voltage

3) Exposure

Light emitted from the LED head irradiates the image drum surface with negative charges. The surface potential of the irradiated part of the image drum drops, thereby forming an electrostatic latent image associated with the image signal.



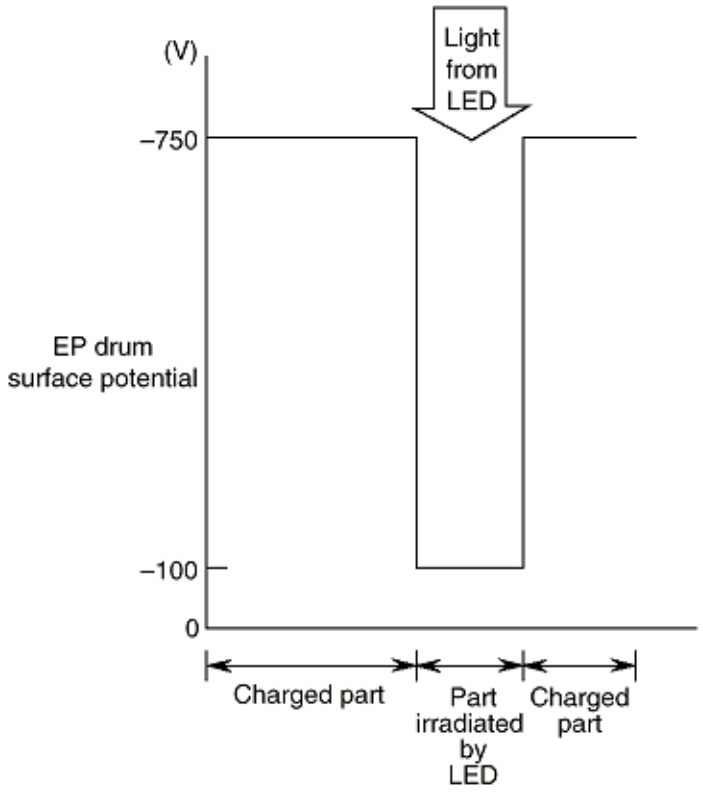
The image drum is coated with an underlayer (UL), a carrier generation layer (CGL), and carrier transfer layer (CTL) on the aluminum base. The organic photo conductor layer (OPC), comprising a CTL and a CGL, is about 20 mm thick.



The image drum surface is charged to about -750 V by the contact charge of the charge roller.

When light from the LED head irradiates the image drum surface, the light energy generates positive and negative carriers in the CGL. The positive carriers are moved to the CTL by an electrical field acting on the image drum. Likewise, the negative carriers flow into the aluminum layer (ground).

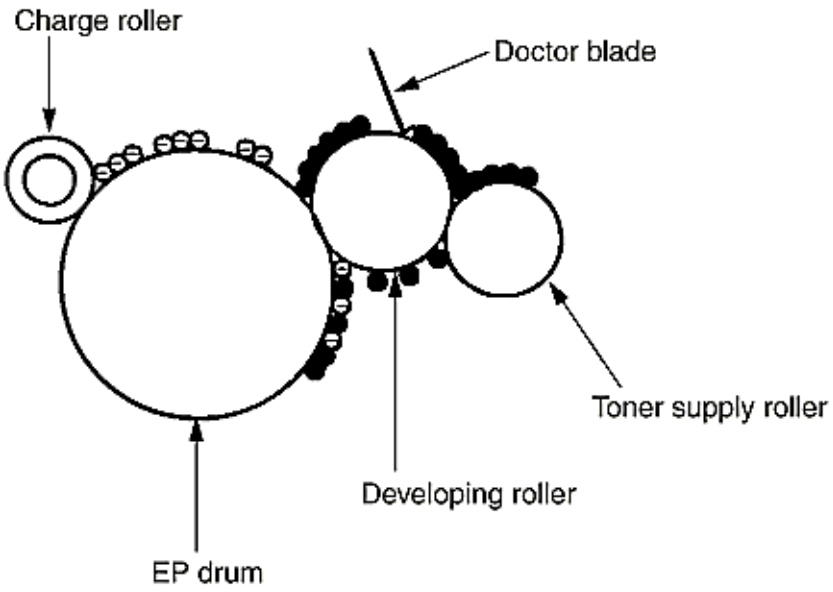
The positive carriers moved to the CTL combine with the negative charges on the image drum surface accumulated by the contact charge of the charge roller, lowering the potential on the image drum surface. The resultant drop in the potential of the irradiated part of the image drum surface forms an electrostatic latent image on it. The irradiated part of the image drum surface is kept at about -100 V.



4) Developing

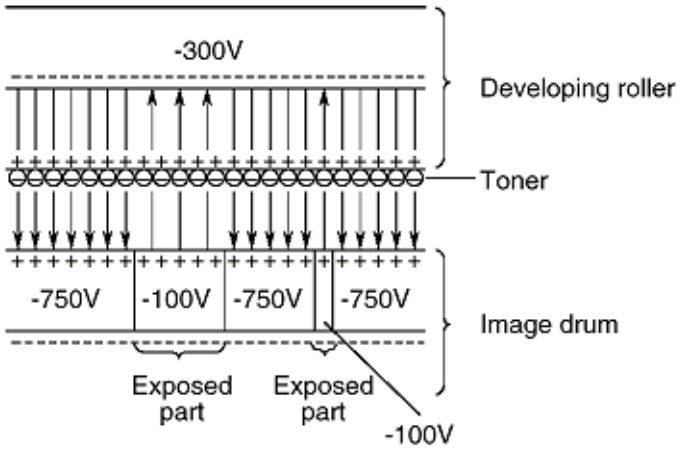
Toner is attracted to the electrostatic latent image on the image drum surface to convert it into a visible toner image. Developing takes place at the contact between the image drum and the developing roller.

1 As the toner supply roller rotates while rubbing on the developing roller, a friction charge is generated between the developing roller and the toner, allowing the toner to be attracted to the developing roller. (The developing roller surface is charges positive and the toner, negative.)



2 The toner attracted to the developing roller is scraped off by the doctor blade, forming a thin coating of toner on the developing roller surface.

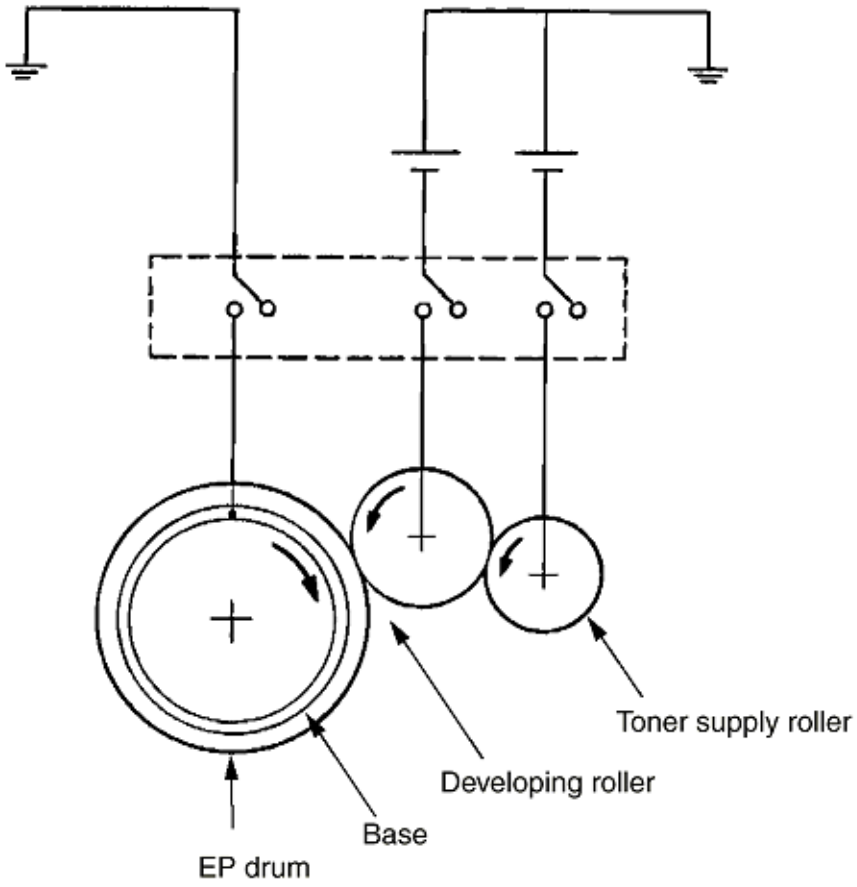
3 Toner is attracted to the exposed part (low-potential part) of the image drum at the contact between the image drum and the developing roller, making the electro-static latent image visible.



An illustration of activities at the contact point of the image drum surface and the developing roller (arrow marks

denote the direction of the electric field).

Note: The toner supply roller and the developing roller are supplied with bias voltages required during the developing process as shown below. -450 VDC is supplied to the toner supply roller, -300 VDC to the developing roller.

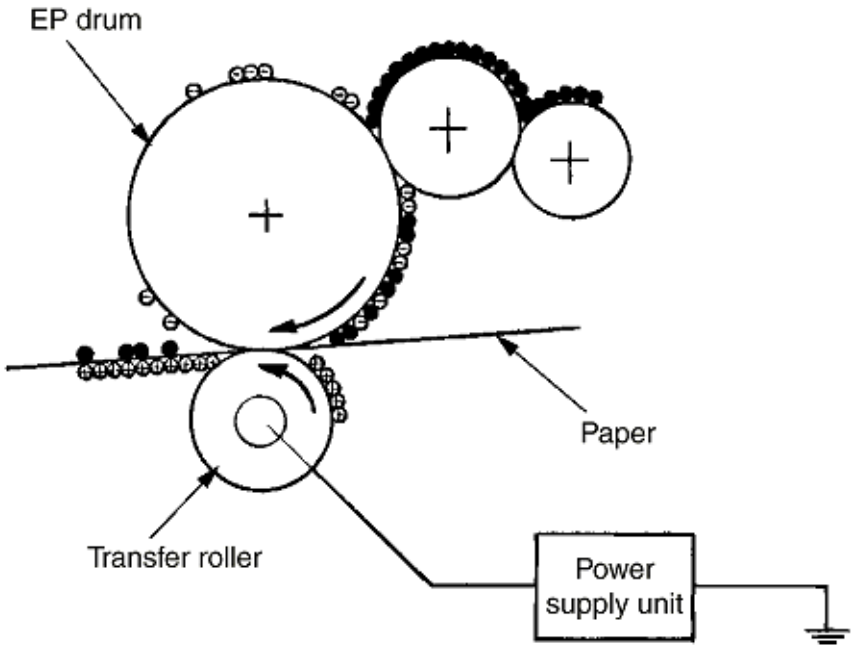


5) Transfer

The transfer roller is composed of conductive sponge material and is designed to make the image drum surface and the paper closely into contact.

Paper is placed over the image drum surface, and a positive charge, opposite in polarity to the toner, is applied to the paper from its reverse side.

The application of a high positive voltage (+1 KVDC) from the Power Supply Unit (1VP/2VP board) to the transfer roller causes the positive charge induced on the transfer roller surface to be transferred to the paper at the contact between the transfer roller and the paper. As a result, toner charged negative that is attracted to the image drum surface is transferred to the upper side of the paper by the positive charge on the lower side of the paper.

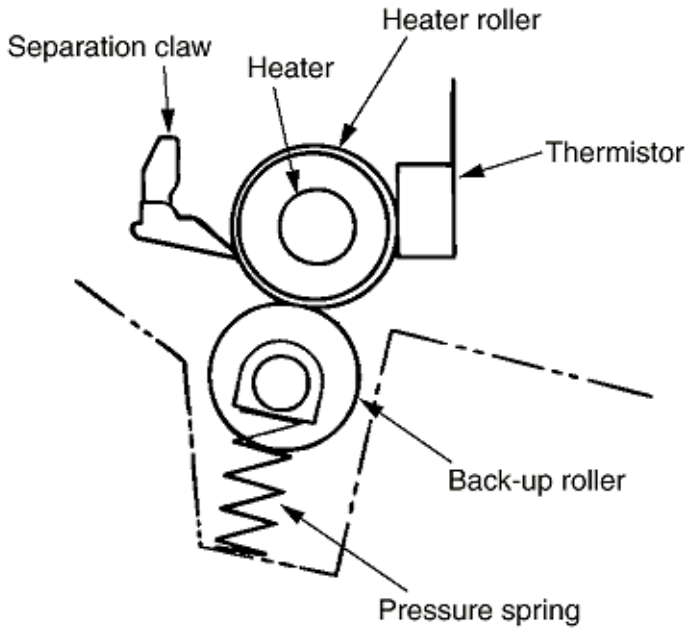


6) Fusing

After the end of the transfer operation, 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. The heater roller with a Teflon coating incorporates a 500 W heater (Halogen lamp), which heats the heat roller.

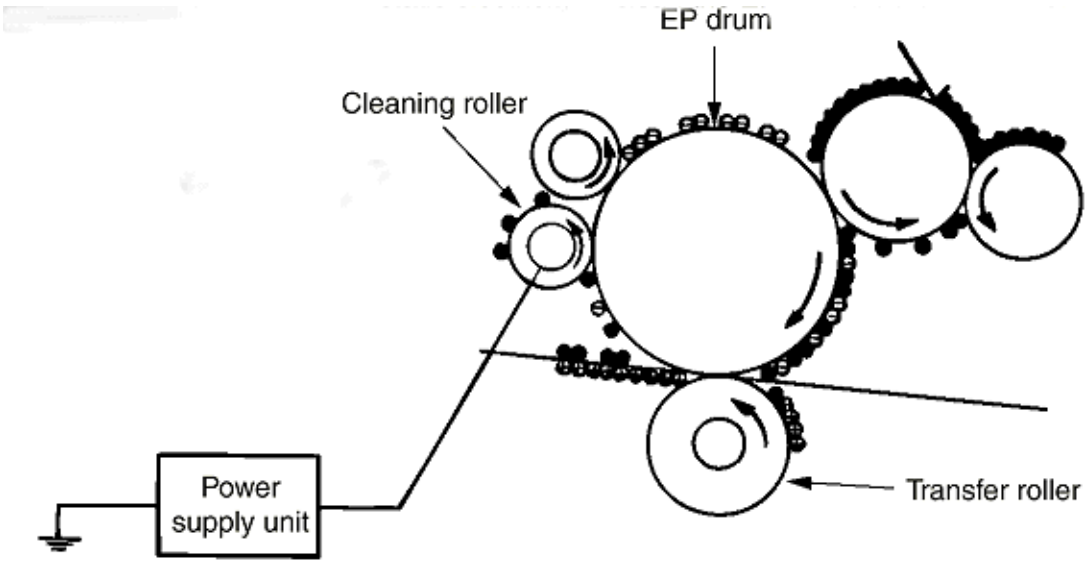
A thermister, which is in contact with the heater roller, regulates the heater roller at a predetermined temperature (about 185 °C for OKIFAX 5000 series). A safety thermostat cuts off voltage supply to the heater by opening the thermostat in the event of abnormal rise in temperature.

The back-up roller is held under a pressure of 2.5 kg by the pressure spring at each side.



7) Cleaning

After the end of the transfer, residual toner on the image drum is attracted to the cleaning roller temporarily by static electricity to clean the image drum surface.



8) Cleaning of rollers

The charge roller, transfer roller and cleaning roller are cleaned in the following cases:

- In warning up at power-on time
- In warning up after the cover is opened and closed
- When the number of accumulated sheets is 10 or more and the printout operation ends

Changes in bias voltage applied to each roller move adhesive toner from the roller to the image drum and return it to the developer.

	Cleaning "NO" (V)	Cleaning "YES" (V)
DB+	-	+300 V
DB-	-300 V	-300 V
TR+	+1000 V	+1000 V
TR-	-	-750 V
CB (cleaning)	+400 V	+400 V
CH-	-1350 V	-1350 V

B.3 Errors

B.3.1 Errors List

The errors are listed below.

1) Major trouble errors

- Fuser error (Printer Alarm 4)
- Fan error (Printer Alarm 3)
- Paper supply error
- Paper transport system error
- Paper exit jam
- Paper size error
- 2'nd tray communication error (Printer Alarm 2)
- Cover open

2) Recoverable errors

- 2'nd tray route open
- No cassette in 2'nd tray
- No paper in 1'st cassette
- No paper in 2'nd cassette

3) Alarms (warning)

- Low toner
- Paper width error

Notes:
1. The major trouble errors do not recover after an error has been removed unless a reset is not performed.

2. A recoverable error resets automatically by itself once the cause of error has been removed. Printing is not possible while an error is existing.

3. The alarm serves as a warning only and the printing operation is performed.

B.3.2 Major Trouble Errors

B.3.2.1 Fuser Error

B.3.2.2 Fan Error

B.3.2.3 Paper Feed Monitoring

B.3.2.4 2'nd Tray Communication Error

B.3.2.5 Cover Open

B.3.2.1 Fuser Error

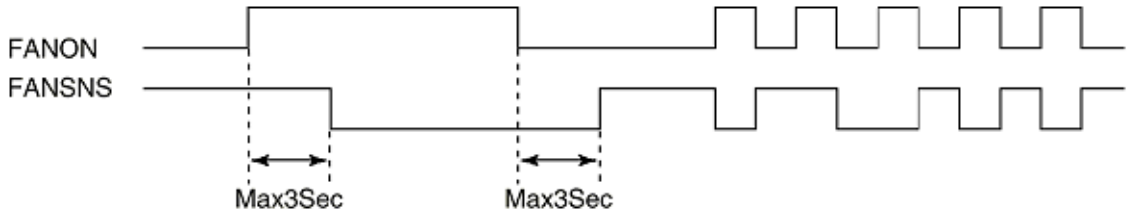
The fuser error indicates an error in thermister on heater.

In case the fuser error occurs at the time of printing, the heater is turned off soon but the printing continues of that page.

However, if the error occurs before the write sensor is turned on, the motor stops soon.

B.3.2.2 Fan Error

The fan error is generated when the FANSNS signal lead goes "1" while the fan is running at full speed. Operation of the FANSNS signal when the fan is turned on is described below.



Since the fan alarm is not monitored during printing, the fan alarm does not appear from the moment the printing is started until the completion of printing operation. Printing continues even if the fan alarm occurs during printing.

B.3.2.3 Paper Feed Monitoring

Status	Description of Supervising Sensor	Distance
Paper supply error	Indicates monitoring error in hopping. Hopping is retried 3 times.	118 mm (4.64") or less path Length +36 (hopping) x 3
Transport system jam 1	Indicates an error in the paper transport path. Error on resist roller section. From resist ON to write sensor (PS2) ON.	30 mm (1.18") or less Inlet - write +20
Transport system jam 2	From inlet sensor OFF up to write sensor OFF.	44 mm (1.73") or less
Transport system jam 3	Indicates an error in the paper transport system. Error transfer roller and/or heat roller. From write sensor ON to outlet sensor ON.	207 mm (8.15") or less Write - outlet +69
Paper size error	Indicates paper size other than specified one. From resist ON to inlet sensor OFF.	Recording paper +/- 45 mm (1.77")
Paper outlet jam 1	Supervises slipping of the recording paper. From outlet sensor ON to OFF.	Recording paper +/- 45 mm (1.77")
Paper outlet jam 2	Supervises jamming at the near paper outlet. From outlet sensor ON to OFF. When a crumpled recording paper is detected, the outlet sensor is set to "OFF" earlier than uses.	135 mm (5.31") or less: NG

B.3.2.4 2'nd Tray Communication Error (Printer Alarm 2)

This error is generated if on sending a command to the 2'nd tray is returned no-status (40s) or an undefined status. However, in case there is no status when reset, it will be considered that the 2'nd tray is not mounted.

B.3.2.5 Cover Open

Cover open sensor "0" indicates an open cover.

When the cover is closed the CU (control unit) section sends the reset signal and processes in the same way as if the power has been turned on.

B3.3.3 Recoverable Errors

The three recoverable errors are listed in the table below.

Status	Description of Supervising Sensor
2'nd tray route open	Paper supply route from the option 2'nd tray to the main body is open, recording paper of the 1'st tray is being replaced.
No paper 1'st cassette	No paper has been detected by the 1'st tray's paper sensor. No paper has been detected by paper sensor in "1" state.
No paper 2'nd cassette	Response from the option tray indicated no paper in 2'nd tray.

B3.3.3.1 Toner Low Detection

Composition

Operation

Operation during toner full state

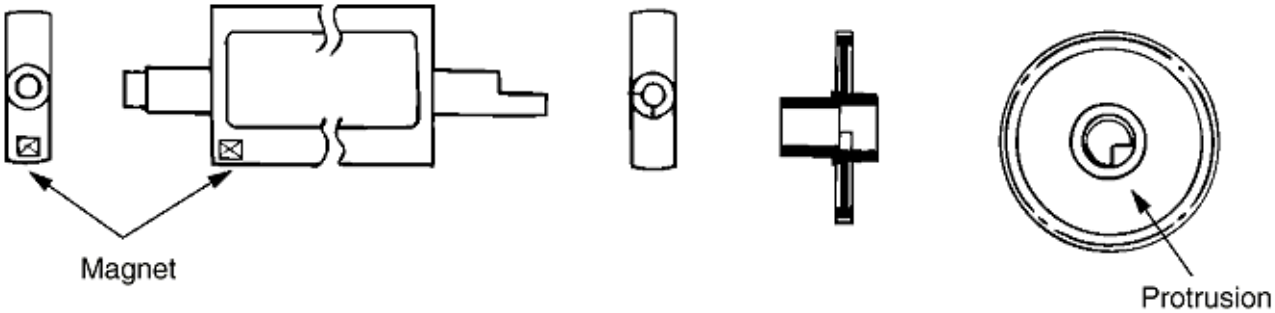
Operation during toner low state

Low Toner Alarm

Composition

The device consists of the stirring gear which rotates at a constant rate, the stirring bar and the magnet on the stirring bar. The stirring bar rotates through the link on the protrusion in the stirring gear.

The configuration of stirring bar in the figure below may differ. The principle of toner detection, however, remains the same.

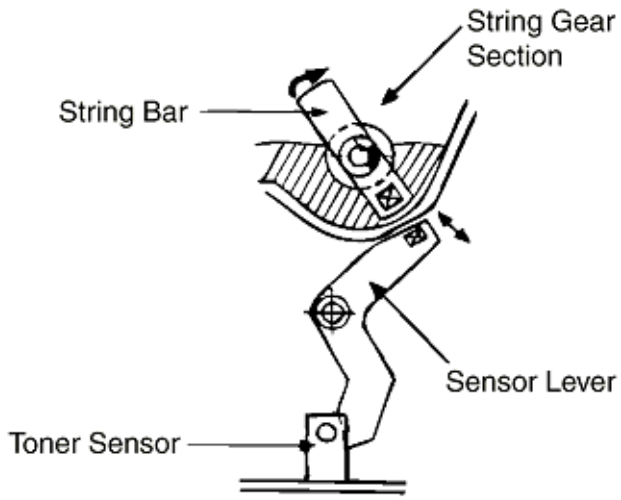


Stirring Bar Stirring Gear

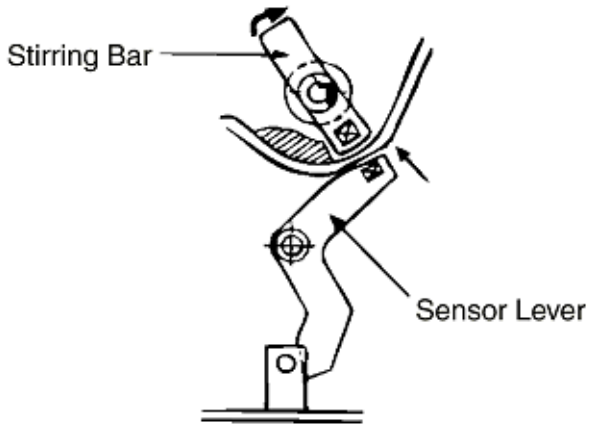
Operation

Toner Low is detected by monitoring the time interval between the encounter of the magnet set on the sensor lever and the magnet on the stirring bar.

Operation during toner full state

• The stirring bar rotates due to interlocking with the stirring gear. • When the magnet on the stirring bar reaches the maximum height, since the other end of the bar is being dipped in the toner. The stirring bar is pushed by the stirring gear.	

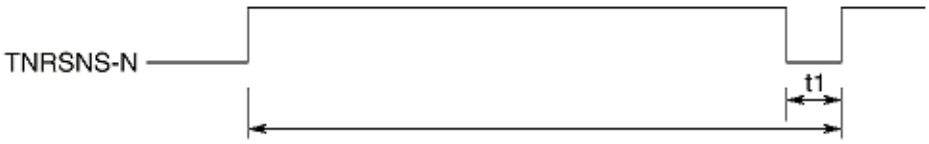
Operation during toner low state

Operation during toner low state	
• When the stirring bar reaches the maximum height, the small amount of toner at the other end of the bar offers little resistance. The bar falls to the minimum height due to its own weight. The interval when the bar contacts the magnet of the sensor level is long. By monitoring this time interval, toner low is detected.	

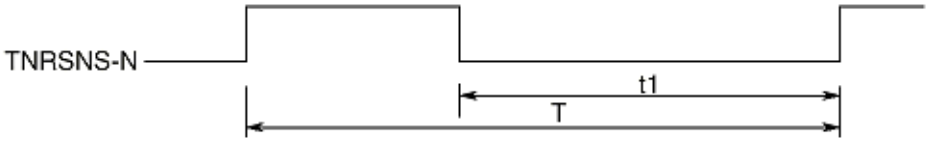
Low Toner Alarm

A check for low toner is carried out at all times when the drum is rotating (rotation in opposite direction is excluded).

- The toner sensor is not monitored while the drum motor is in halt.



TONER FULL state



- Toner Low is established when the toner low state is detected two times in a row.
- Toner Low is canceled when the toner full state is detected two times in a row.
- The Toner Sensor Alarm is activated when there is no change in the toner sensor for two cycles (6.5 sec. x 2) or more.

Printing Speed	T	t1 (Toner Exists)	Remarks
8 ppm	3.2 sec.	0.16 - 1.00 sec.	OKIFAX 5000 series

B.4 Other Special Cases

B.4.1 Manual Paper Feed

B.4.2 Cleaning

B.4.1 Manual Paper Feed

Turning on of the inlet sensors without the hopping operation indicates manual paper feeding for OKIFAX 5250 & OKIFAX 5400 (excluding when power is on).

B.4.2 Cleaning

The image drum needs regular cleaning.

The two kinds of cleaning are listed in the table below.

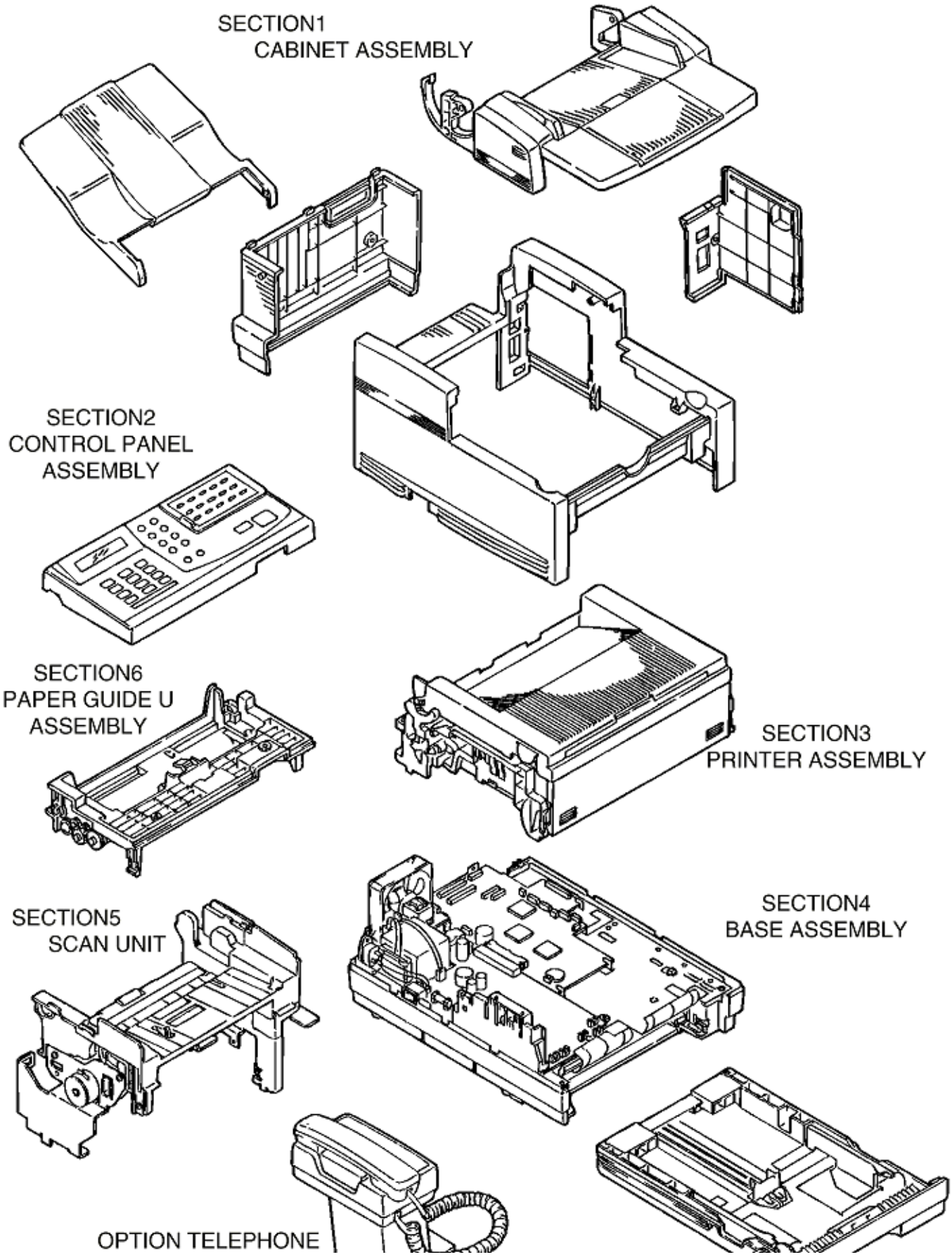
Cleaning Type	Function	Remarks
Cleaning	This cleaning removes the toner whose electric potential is 1) reversed due to poor electrification and/or 2) insufficient on the image drum surface. (Recovery of the toner to developing roller).	Cleaning is performed when the number of prints exceed 10 sheets or the one-job operation ends. (At the end of communication or copy operations)
CH (Charge Roller Cleaning)	This cleaning removes the residual toner on the charge roller surface. The toner is removed by moving to the recording paper from charging roller and image drum.	User operation

C.1 General Information

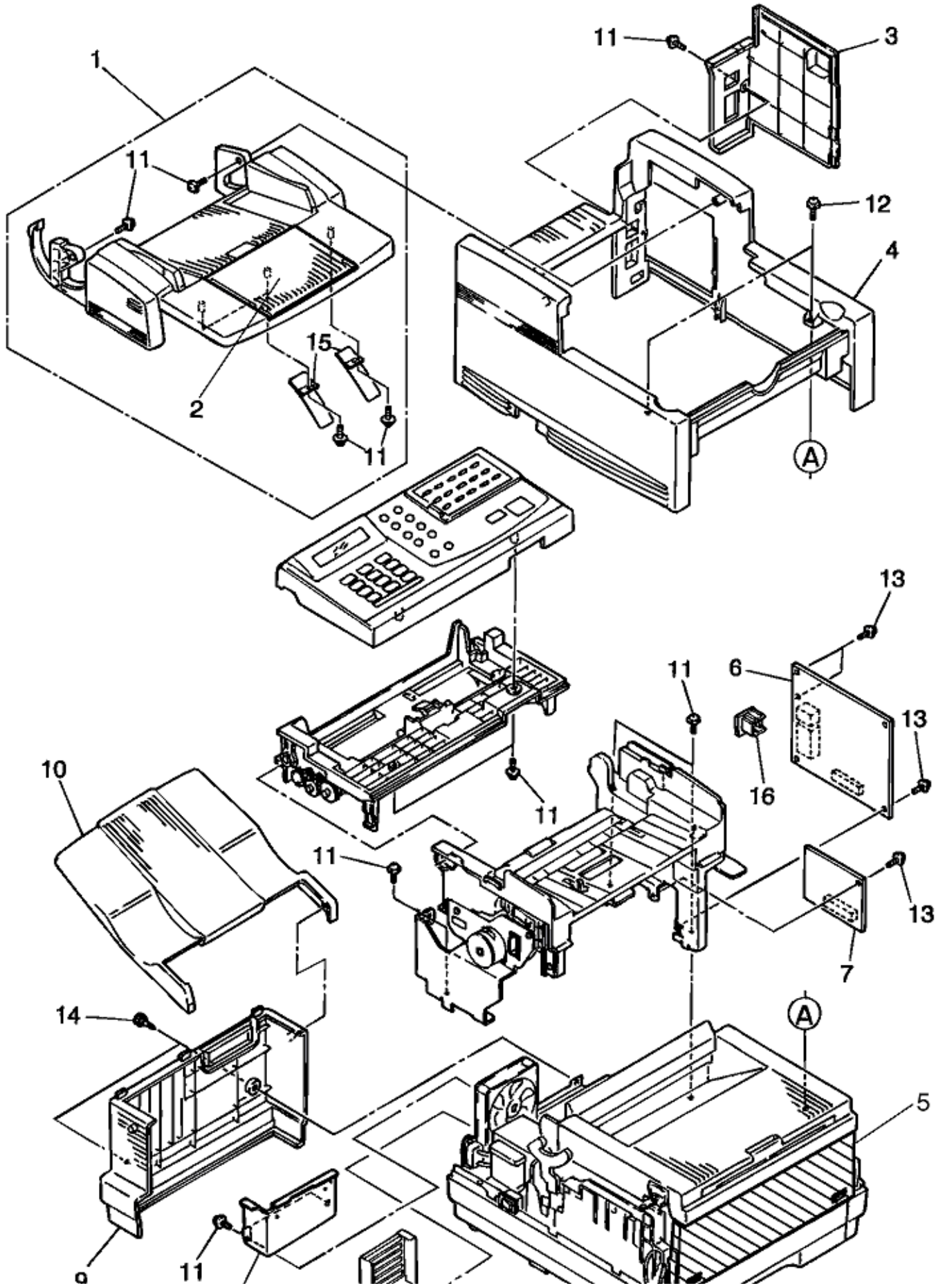
The OKIFAX 5250 and OKIFAX 5400 Circuit Diagrams contain component level repair information and are OKIDATA proprietary.

Assembly

ASSEMBLY


SECTION1
CABINET ASSEMBLY
SECTION2
CONTROL PANEL
ASSEMBLY
SECTION6
PAPER GUIDE U
ASSEMBLY
SECTION3
PRINTER ASSEMBLY
SECTION5
SCAN UNIT
SECTION4
BASE ASSEMBLY
OPTION TELEPHONE

1: Cabinet Assembly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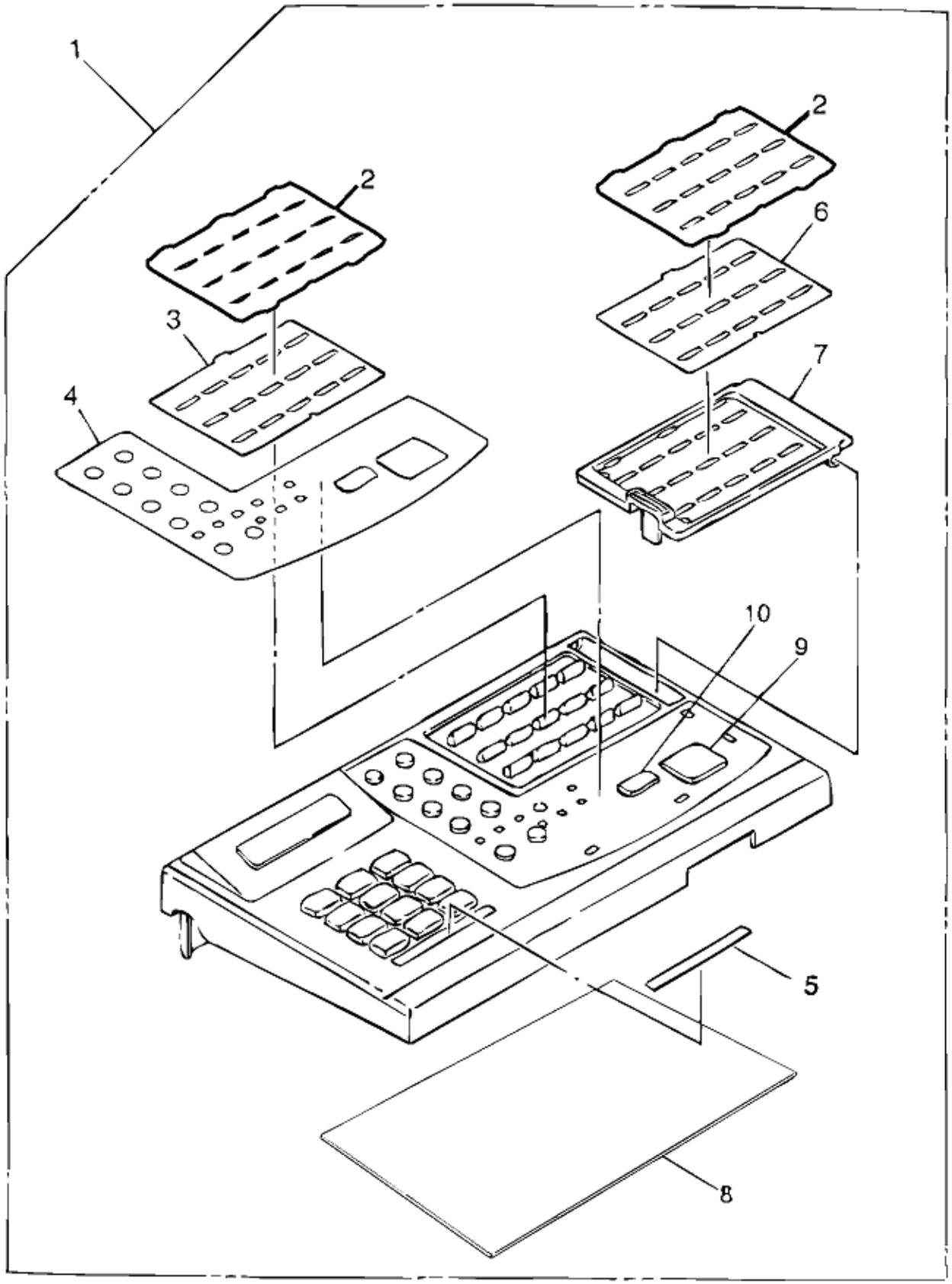
Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	1PA4120-1079G1	Hopper: Document assy.	1	50607301 RSPL
	2	2PP4120-1084P1	Tray: Sub Hopper	1	50220901 RSPL
	3	2PP4120-1091P1	Cover: NCU	1	53075901 RSPL
	4	1PP4120-1089P1	Cover: Main	1	53075801 RSPL
	5	2PA4083-6130G1	Guide: Manual Feed Assy (Gray)	1	51011001 RSPL
	6	40044501	Board-UNC	1	40044501 RSPL
	7	40274601	Board: S34 (OF5600)	1	40274601 RSPL
	8	3PP4120-1088P1	Plate: Partition	1	51019501 RSPL
	9	1PP4120-1090P1	Cover: Rear	1	5307601 RSPL
	10	1PP4120-1093P1	Tray: Stacker	1	50221001 RSPL
	11	N/A	Screw		N/A
	12	N/A	Screw		N/A
	13	N/A	Screw		N/A
	14	4PB4120-1136P1	Screw: Thumb	2	50317601 RSPL
	15	4PP4120-1161G1	Guide: Assist	3	51019601 RSPL
	16	223A7010P003	Cover: Modular Cap	1	53078001 RSPL
	17	40275501	Plate-guard	1	40275501 RSPL

2: Control Panel Assembly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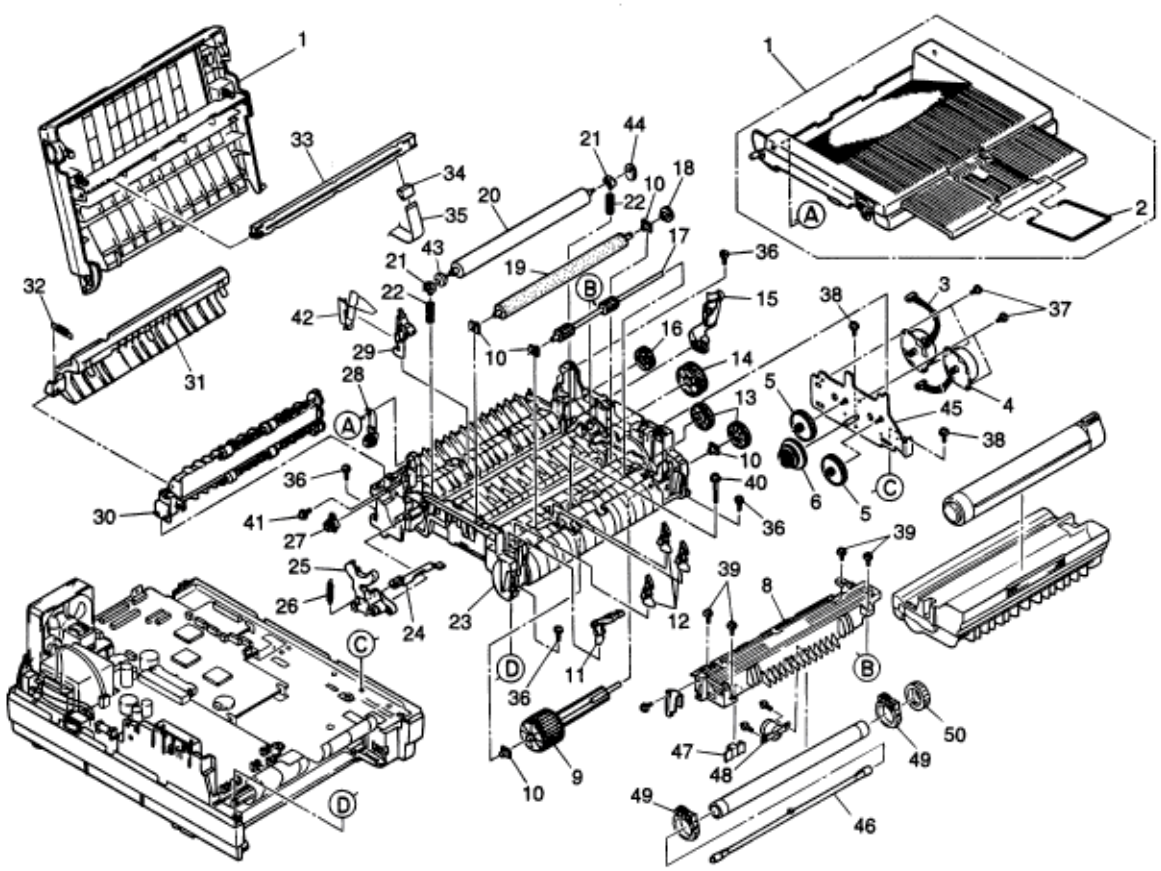
Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	40105301	Unit: Op Panel (OF5250	1	55083202 RSPL
	1b	40079101	Unit: Op Panel (OF5400)	1	40079109 RSPL
	2		Film: One-touch Cover	1	52203301 RSPL
	3		Sheet: One-touch (L)	1	52081310 RSPL
	4		Sheet	1	
	5		Label: Ten Key	1	
	6	40047001	Sheet: One Touch (OF5400)	1	40047001 RSPL
	7a	53077901	Cover: One-touch (OF5250)	1	53077901 RSPL
	7b	53076101	Cover: One-touch (OF5400)	1	53076101 RSPL
	8		Board: Op Panel Control (05W)	1	
	9		Button-Start (S)	1	
	10		Button-Stop (S)	1	

3A: Printer Assembly (1 of 2)

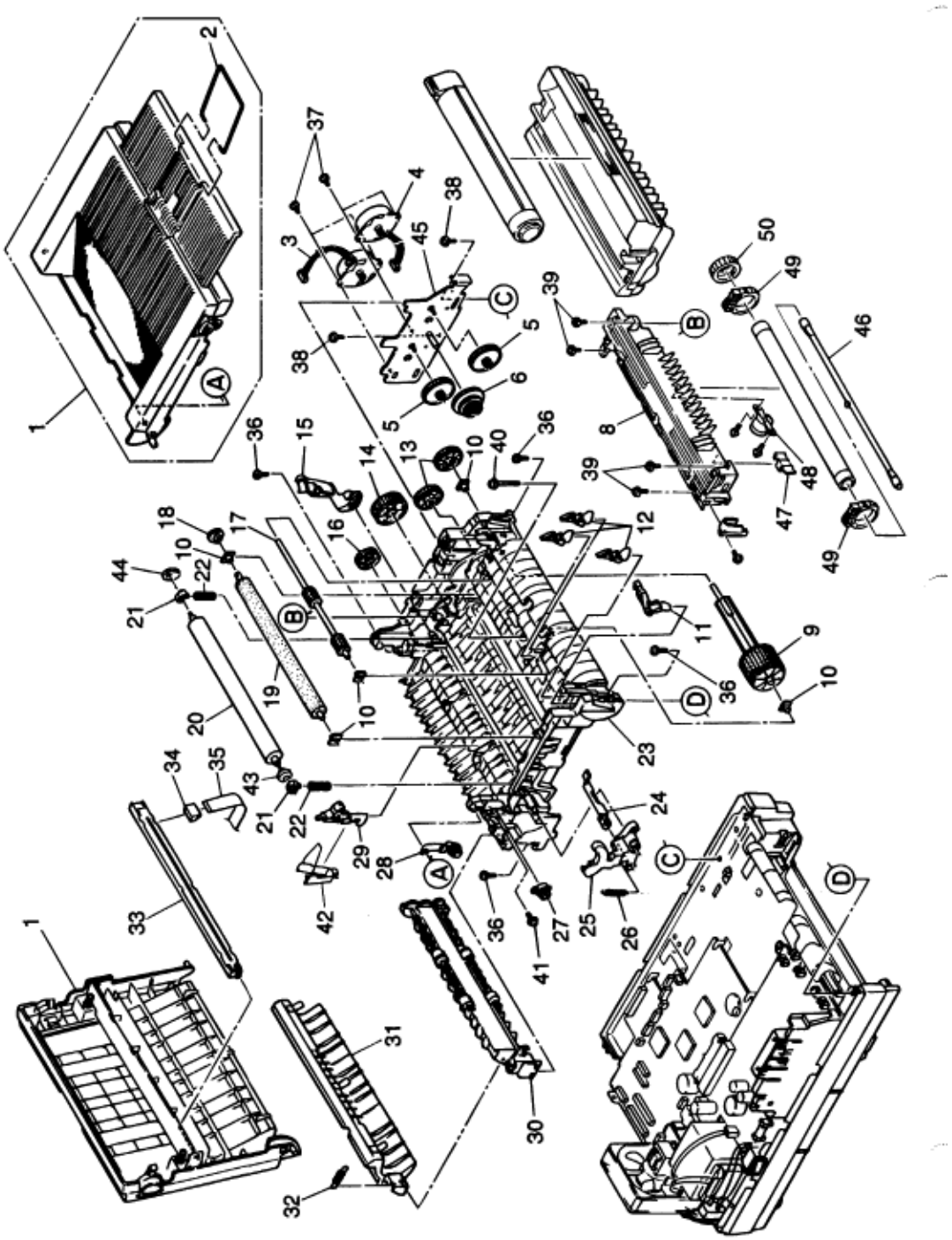


Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	2PA4120-1214G1	Cover: Stacker Assy	1	53077801 RSPL
	2	4PB3517-1567P1	Wire: Guide	1	51013801 RSPL
	3	4YB4120-1117P1	Motor: (Main)	1	56512701 RSPL
	4	4YB4120-1118P1	Motor: Registration	1	56512601 RSPL
	5	4PP4083-2593P1	Gear: Stepper Motor Idle	1	51225701 RSPL
	6	3PP4083-6076P1	Gear: Reduction	1	51229301 RSPL
	8a	2YX4120-1128G1	Fusing: Unit Assy (120V)	1	50220801 RSPL
	8b	2YX4120-1128G2	Fusing: Unit Assy (230V)	1	50220802 RSPL
	9	3PA4122-1295G1	Shaft: Hopping Roller Assy	1	50219601 RSPL
	10	4PP4083-6022P2	Bearing	5	51607402 RSPL
	11	4PP4083-6086G1	Sensor: Toner	1	50405501 RSPL
	12	4PP4083-6083P1	Plate: Sensor (Inlet)	3	51010701 RSPL
	13	4PB4083-6024P1	Gear: One-way Clutch	2	51228901 RSPL
	14	4PP4083-6080P1	Gear: Fuser Roller Idle	1	51229101 RSPL
	15	3PP4083-6054P1	Lever: Reset (R)	1	50805901 RSPL
	16	4PP4083-6081P1	Gear: Eject Roller Idle	1	51229201 RSPL
	17	3PB4083-6030P1	Roller: Registration	1	53342501 RSPL
	18	4PP4083-6042P1	Gear: Transfer Roller	1	
	19	4YB5084-7640P1	Roller: Transfer	1	50409301 RSPL
	20	3PB4083-6064P2	Roller: Back-up	1	53343701 RSPL

	21	4PP4083-6052P1	Bushing: Pressure Roller	2	51607601 RSPL
	22	4PP4083-6065P1	Spring: Bias	2	50925301 RSPL
	23	1PP4083-6035G001	Base: Lower Sub Assy	1	50223201 RSPL
	24	3PP4083-6058P1	Arm: Cover Open	1	53068901 RSPL
	25	3PP4083-6053P1	Lever: Reset (L)	1	50805801 RSPL
	26	4PP4083-6057P1	Spring: Stacker Cover Reset	1	50924201 RSPL
	27	4PB4083-6197P1	Gear: Stacker Cover Damper	1	51229401 RSPL
	28	4PP4083-6191G1	Arm: Stacker Cover Damper	1	53069101 RSPL
	29	4PA4083-6025G1	Plate: Sensor (Outlet)	1	51010802 RSPL
	30	2PA4120-1129G1	Roller: Exit Assy.	1	50409901 RSPL

* Part of Transfer Roller Assembly, P/N 53347001 (3PA4083-6246G001), which is an RSPL item.

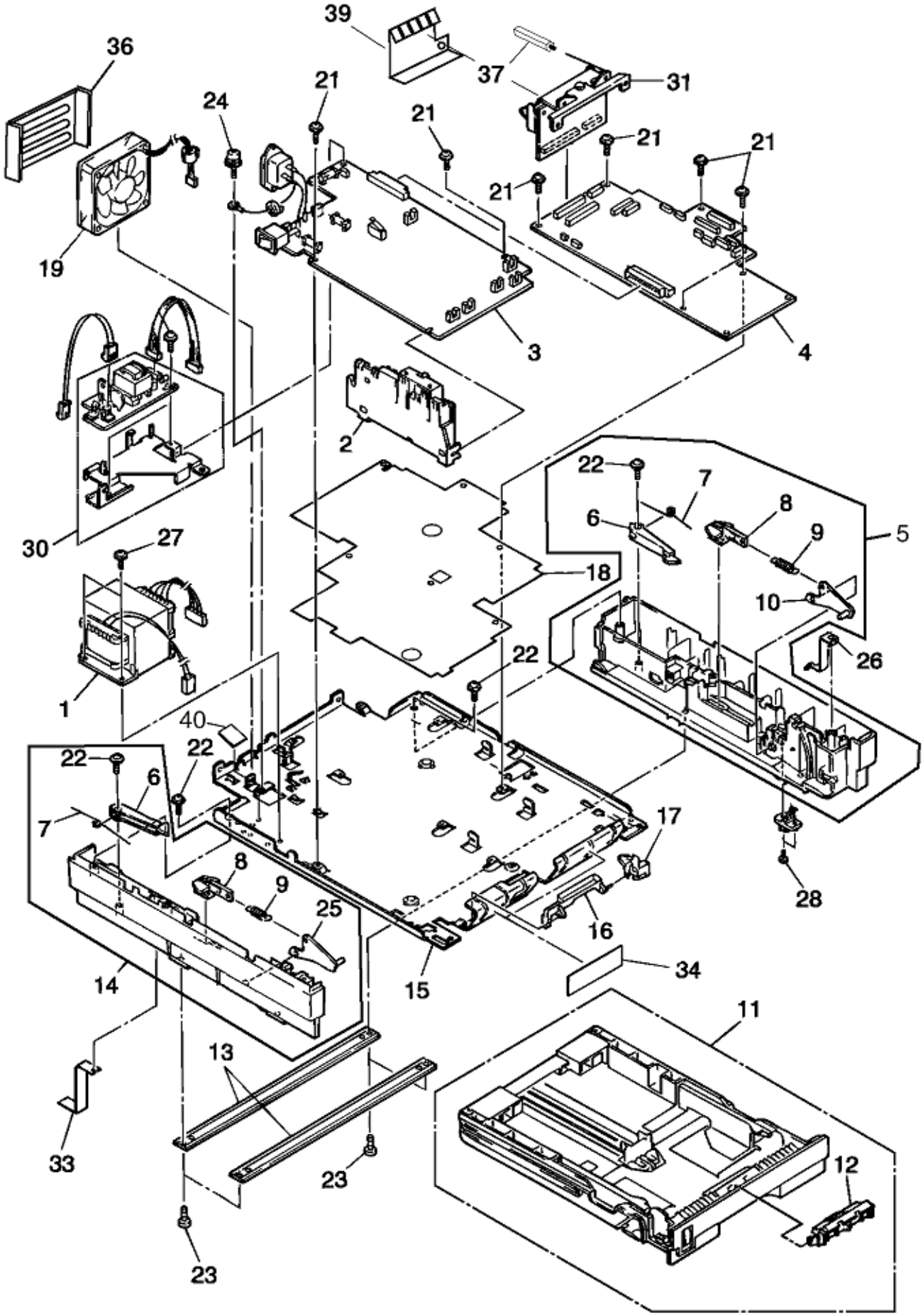
3B: Printer Assembly (2 of 2)



Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	31	2PA4120-1085G1	Guide: Release Assy.	1	51019201 RSPL

	32	4PP4120-1087P1	Spring: Release	1	50930001 RSPL
	33	4YA4116-1228G1	LED Head (1228G10	1	56112101 RSPL
	34	224A1286P0140	Connector: LED Cable	1	56730201 RSPL
	35	4YX4120-1124G1	Cable: LED Head Assy	1	56632401 RSPL
	36	N/A	Screw		N/A
	37	N/A	Screw		N/A
	38	N/A	Screw		N/A
	39	N/A	Screw		N/A
	40	N/A	Screw		N/A
	41	N/A	Screw		N/A
	42	4PA4120-1170G1	Wire: Sensor Assy.	1	40778901 RSPL
	43	4PP4120-1209P1	Washer: B	1	50517001 RSPL
	44	4PP4120-1210P1	Washer: C	1	50517201 RSPL
	45	3PP4083-6071G001	Bracket: Motor	1	51709901 RSPL

4A: Base Assembly (1 of 2)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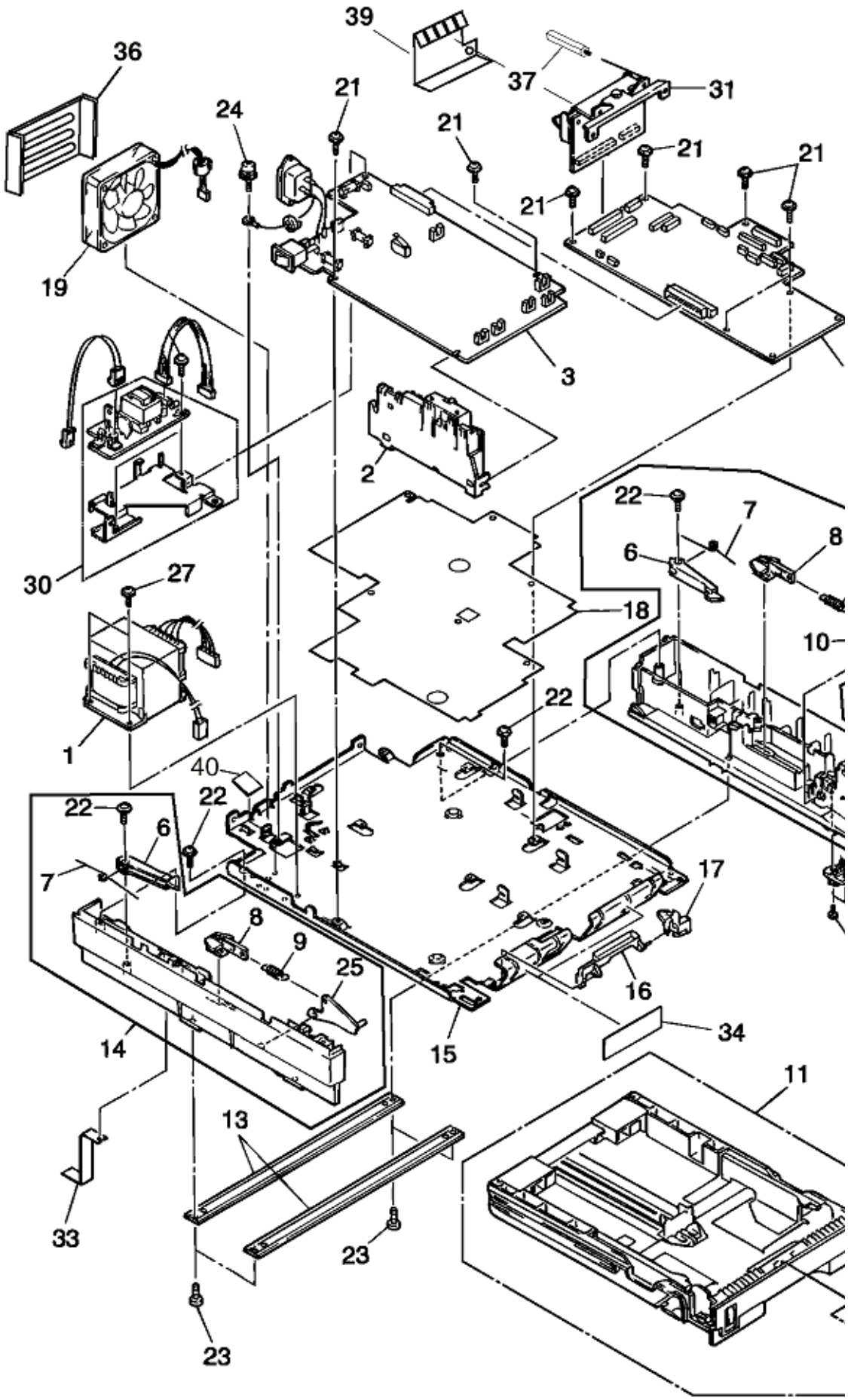
Rev.	No.	Oki-J and or OKI Parts Number	Description	Q'ty	Oki P/N & Remarks
	1a	4YB4049-7082P1	Transformer: 120 V	1	56414201 RSPL
	1b	4YB4049-7083P1	Transformer: 230 V	1	56414001 RSPL
	2	3PA4083-6090G1	Assy: Contact	1	56730001 RSPL
	3a	40319201	PWR Unit-ACDC DROP (120V)	1	40319201 RSPL
	3b	40035902	PWR Unit-ACDC DROP (230V)	1	40035902 RSPL
	4a	55083801	PCB: Main Controller Board E17 (OF5250)	1	55083801 RSPL
	4b	40476108	PCB: Main Controller Board E17 (OF5400)	1	40476108 RSPL
	5	2YX4076-7012G001	Guide: Cassette (R) Assy	1	51024301 RSPL
	6	3PP4083-7653P1	Lever: Lock Cassette	2	50808401 RSPL
	7	4PP4083-7655P1	Spring: Cassette Lock	2	50929501 RSPL
	8	4PP4122-1170P1	Block: Link Pull	2	53345201 RSPL
	9	4PP4083-7666P1	Spring: Sheet	2	50929901 RSPL
	10	4PP4083-7658G1	Link: Sheet (R)	1	50808601 RSPL
	11	1PA4120-1162G1	Cassette: Paper Assy (Gray)	1	50110501 RSPL
	12	3PP4083-5663G1	Frame: Separator Assy.	1	40259701 RSPL
	13	3PP4083-7660P1	Beam	2	51608801 RSPL
	14	2PA4076-7011G001	Guide: Cassette (L) Assy.	1	51024201 RSPL
	15	1PP4120-1078P001	Plate: Base	1	51018901 RSPL
	16	3PP4083-6154P1	Plate: Cassette Sensor	1	51011501 RSPL
	17	4PP4083-7667P1	Plate: Paper Supply Sensor	1	51019701 RSPL
	18	2PB4120-1103P1	Insulator	1	51711301 RSPL
	19	4YB4120-1119P1	Motor: Fan	1	56512801 RSPL
	20	40234201	Locking Card Spacer	1	N/A
	21	N/A	Screw		N/A
	22	N/A	Screw		N/A
	23	N/A	Screw		N/A
	24	N/A	Screw		N/A
	25	4PP4083-7657G1	Link: Sheet (L)	1	50808501 RSPL
	26	4PP4083-762P1	Plate: FG C	1	51023701 RSPL
	28	N/A	Screw		N/A
	29				N/A
	30		Plate Assy-SPSU (120V)		N/A

*Part of Base Assembly, P/N 51018901, which is an RSPL item.

4B: Base Assembly (2 of 2)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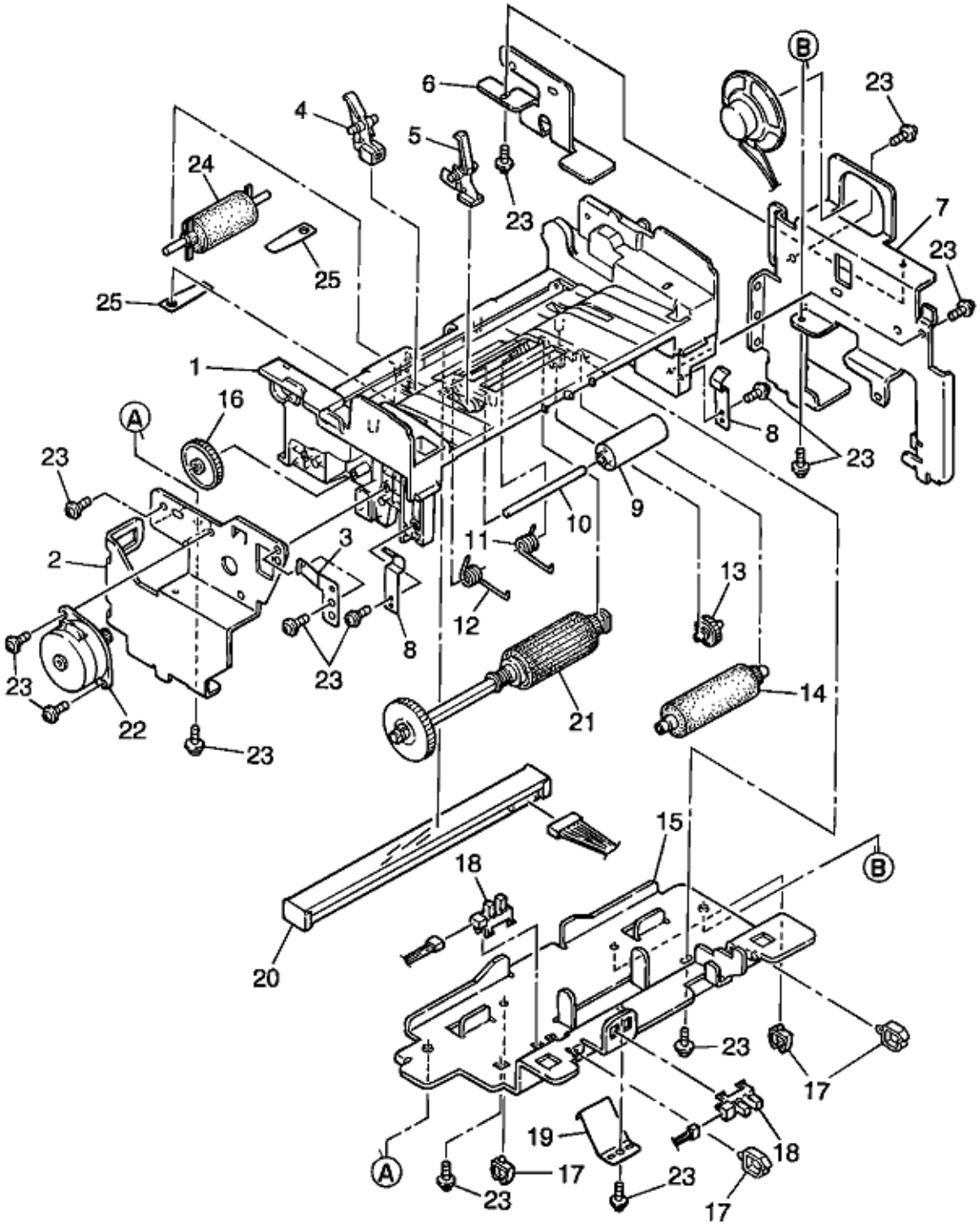
Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	31	40123401	Plate: Assembly (PC Interface) (OF5600)	1	40123401 RSPL
	32	4PP4120-1187P1	Plate: Earth (PCFX) (OF5600)	1	51024001 RSPL
	33	4PP4083-7665P001	FG Plate D	1	51023601 RSPL
	34	4YC4061-5115P001	Tape: Teflon	2	n/a
	35				
	36	40275501	Plate-Guard	1	40275501
	37	PB4120-1130P001	Screw-Hexagon	2	
	38	40545401	Sheet: Shield	1	
	39	4PP4120-1187P001	Plate Earth (PCFX)		

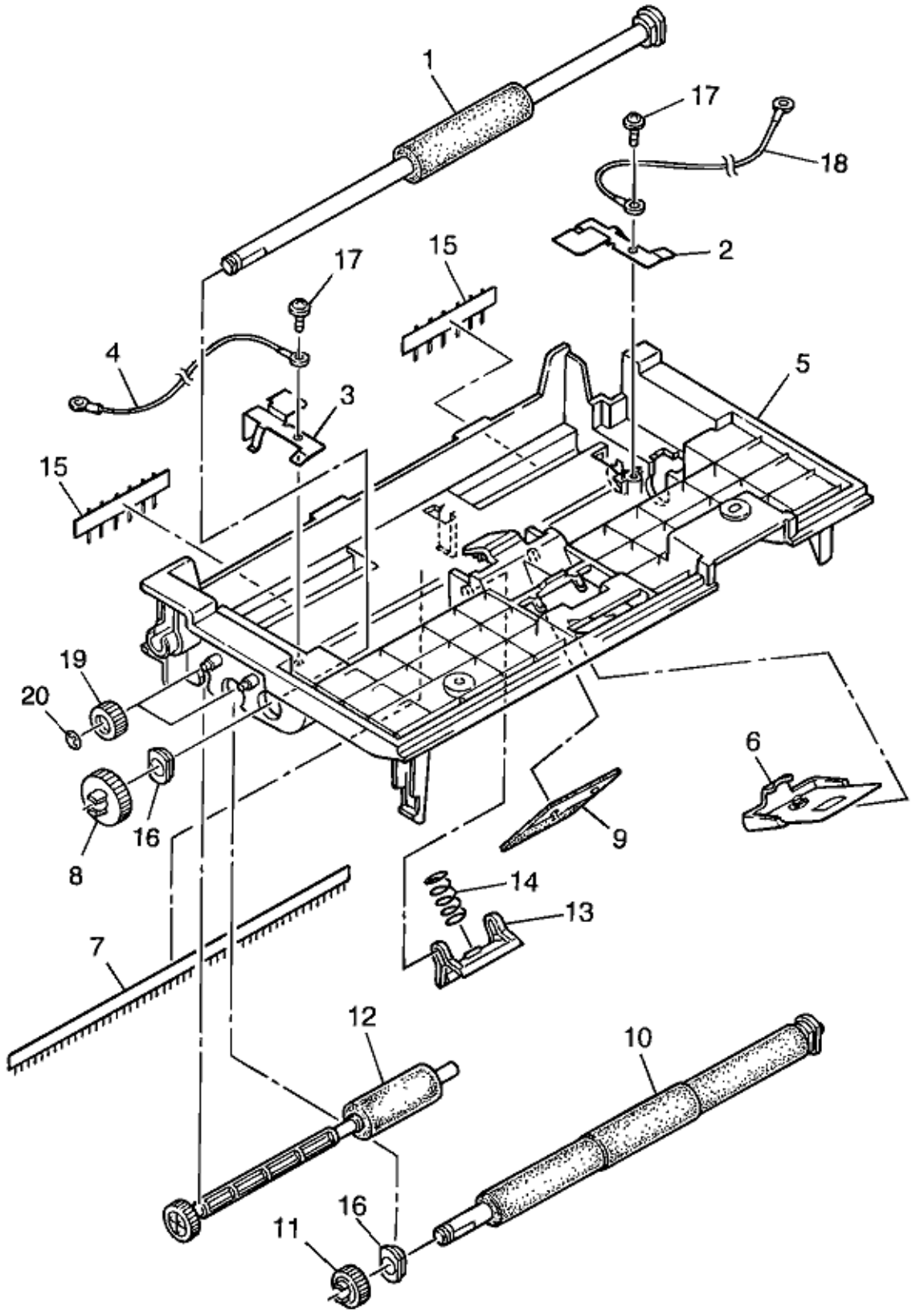
*Part of Base Assembly, P/N 51018901, which is an RSPL item.

5: Scan Unit



Rev.	No.	Oki-J Part Number	Description	Q'ty	Oki Data P/N
	1	1PP4120-1015P001	Frame: Scanner	1	53350701 RSPL
	2	2PP4120-1034P1	Base: Scanner (L)	1	50221101 RSPL
	3	4PP4120-1023P1	Plate: ADF Ground	1	51019901 RSPL
	4	4PP4120-1017P1	Lever: PC2	1	50808801 RSPL
	5	4PP4120-1016P1	Lever: PC1	1	50808701 RSPL
	6	3PP4120-1038P1	Pocket Plate	1	51020001 RSPL
	7	2PP4120-1037P1	Base: Scanner (R)	1	50221201 RSPL
	8	4PP4120-1032P1	Spring: Latch	2	50930101 RSPL
	9	4PP3529-5045P1	Roller: Pinch (Feed)	1	50406201 RSPL
	10	4PP4120-1020P1	Shaft: Pinch Roller	1	51113701 RSPL
	11	4PP4120-1022P1	Spring: Pinch R	1	50930301 RSPL
	12	4PP4120-1021P1	Spring: Pinch L	1	50930201 RSPL
	13	4PP3529-5033P1	Gear: ADF Idle	1	51229501 RSPL
	14	4PA3529-5082G1	Roller: Sub Assy.	1	50406101 RSPL
	15	2PP4120-1029P1	Plate: Scanner Bottom	1	51020101 RSPL
	16	4PP3529-5039P1	Gear: (Z81/15)	1	51236301 RSPL
	17	4PB3527-5803P1	Clamp: Mini	4	50708701 RSPL
	18	4YB4120-1137P1	Sensor: Photo	2	50410001 RSPL
	19	4PP4120-1030P1	Spring: Scanner	1	50930401 RSPL
	20b	40141401	Sensor: Contact Image Sensor-A4 (300 dpi)	1	40141401 RSPL
	21	3PA4120-1018G1	Roller: ADF Assy.	1	50410201 RSPL
	22	40047601	Motor: S (FX-VP)	1	40047601 RSPL
	23	N/A	Screw	1	N/A
	24	4PB4120-1024P001	Roller: Eject Pinch	1	50411501 RSPL
	25	4PP4120-1025P001	Spring: Eject Pinch	2	50932301 RSPL

6: Paper Guide U Assembly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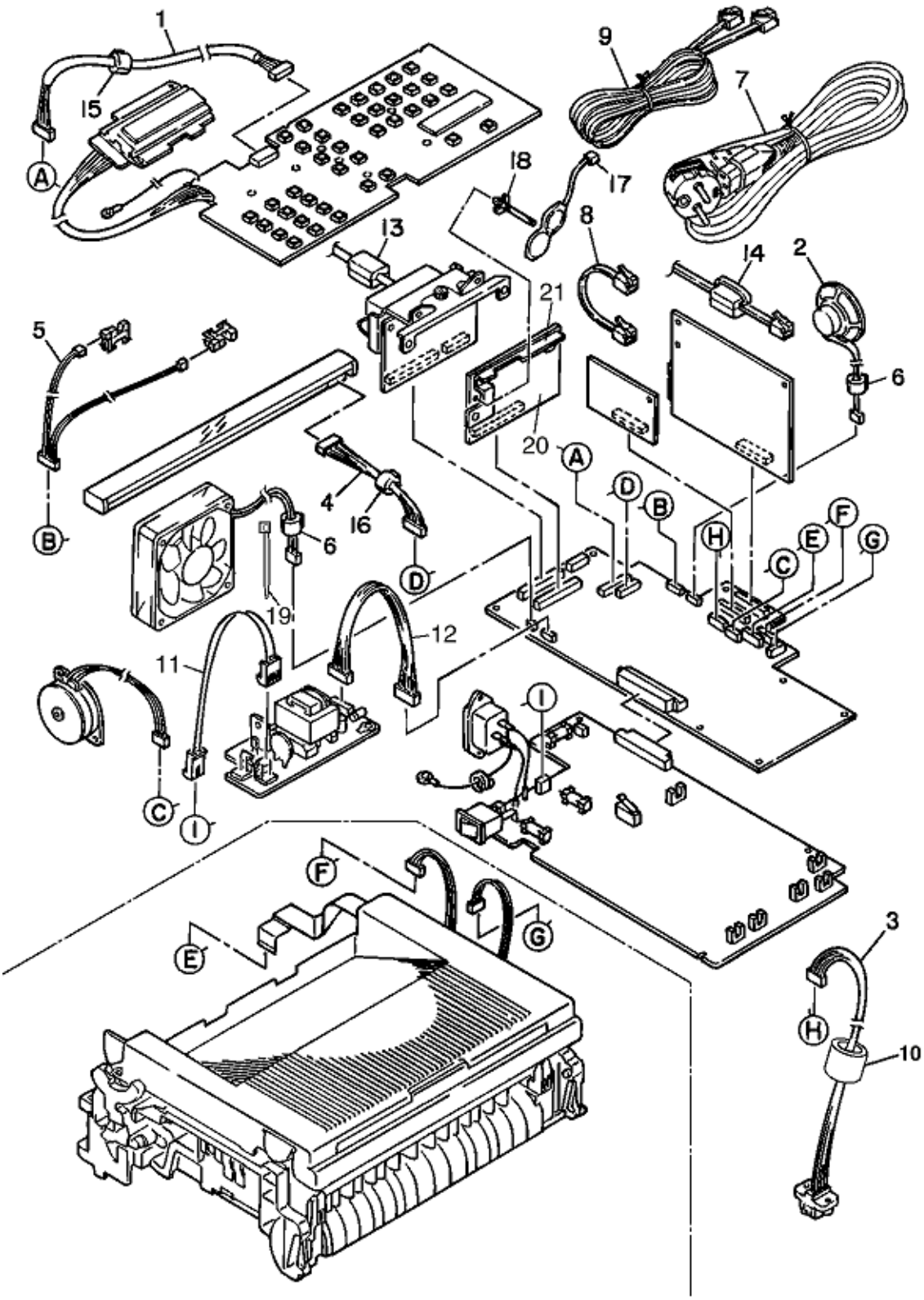
Rev.	No.	Oki-J Part Number	Description	Q'ty	Oki Data P/N & Remarks
	1	3PA4120-1045G1	Roller: Feed (1) Assy.	1	50410301 RSPL
	2	4PP4120-1226P001	Plate: Earth (SR)	1	51023801 RSPL
	3	4PP4120-1227P001	Plate: Earth (SL)	1	51023901 RSPL
	4	4YS4011-1714P2	Earth Cord (Ground Wire)	1	56634702
	5	1PP4120-1040P001	Guide: Paper (U)	1	51024501 RSPL
	6	4PA4120-1041G1	Plate: Pinch Assy.	1	51020501 RSPL
	7	4PB4120-1051P1	Brush: Ground	1	51305101 RSPL
	8	4PP3529-5035P1	Gear: Z28	1	51236401 RSPL
	9	4PA3529-5087G1	Rubber: Separation Assy.	1	53344901 RSPL
	10	3PA4120-1049G1	Roller: Sensor Assy.	1	51410501 RSPL
	11	4PP3529-5034P1	Gear: Z22	1	51236501 RSPL
	12	3PA4120-1052G1	Roller: Exit Assy.	1	51410401 RSPL
	13	4PP3527-5153P1	Plate: Back-up ADF	1	53339801 RSPL
	14	4PP4120-1044P1	Spring: ADF	1	50930501 RSPL
	15	4PB4120-1051P2	Brush: Ground	2	51305102 RSPL
	16	4PP3522-3568P1	Bearing	2	51608901 RSPL
	17	N/A	Screw		N/A
	18	4YS4011-1714P3	Earth Cord (Ground Wire)	1	N/A
	19	4PP3527-5034P001	Gear (Z16)	2	Part of Item 1
	20	4PB4013-3501P003	Ring: CS4-SUS	2	50709103 RSPL

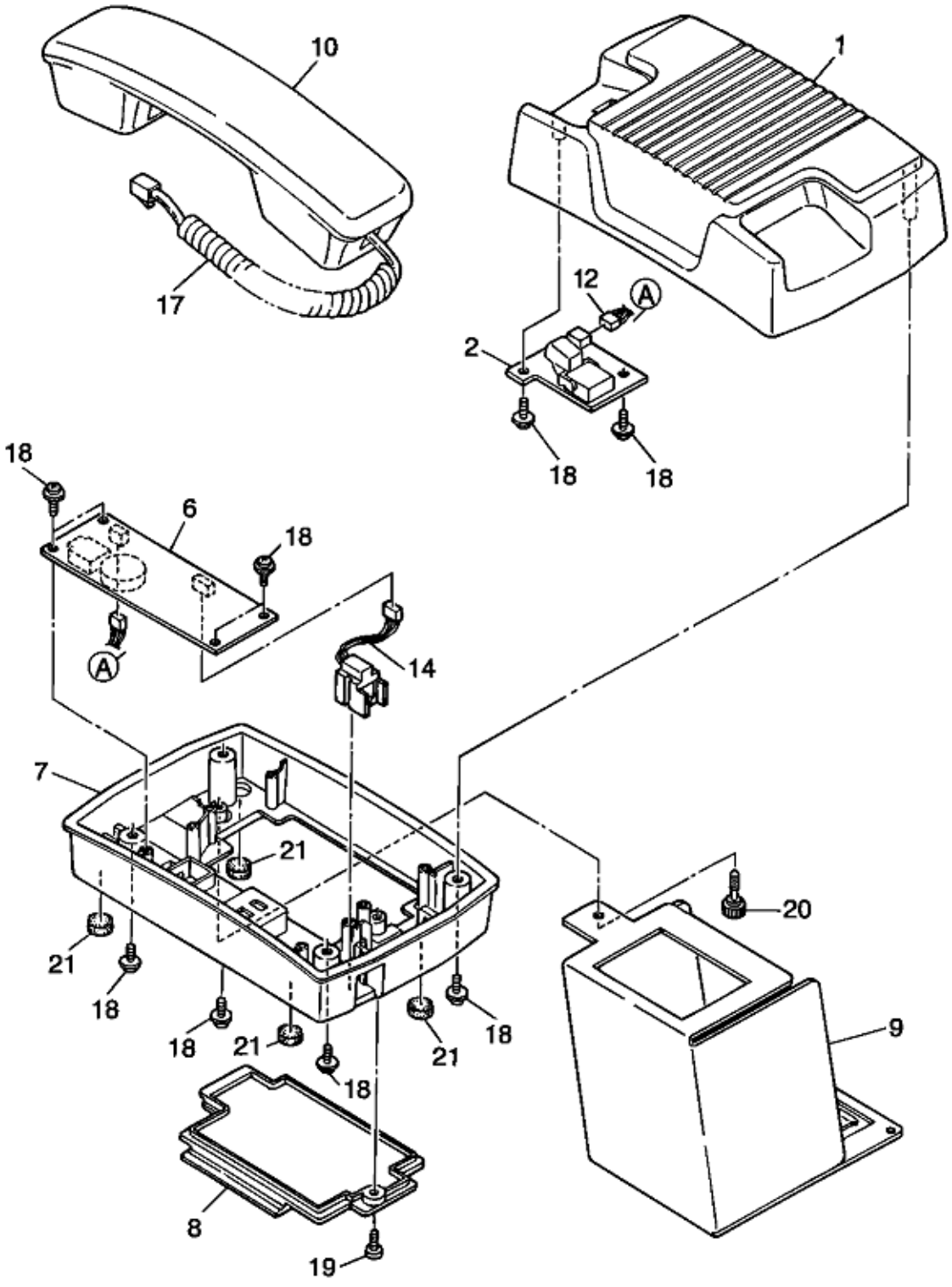
7: Cables



Rev	No.	Oki-J Part #	Description	Q'ty	Oki Part # & Remarks

	1	40040002	Cord: Op Panel Connection	1	40041002 RSPL
	2	4YB4120-1026P1	Speaker	1	57001701 RSPL
	3	3YS4111-3527P2	Cable: 2nd Tray Connector	1	56632801 RSPL
	4	4YS4111-3441P1	Cord: Connector (C1S)	1	56634501 RSPL
	5	4YS4111-3442P1	Cord: Connector (PC1/2)	1	56634601 RSPL
	6	105A1070C0001	Core: Ferrite D	2	55505201 RSPL
	7a	4YS3512-1485P1	Cord: AC Power	1	56618901 RSPL
	7b	236A6058P0001	Cord: AC 220V (pictured)	1	56631701 RSPL
	8	56635001	Cord (TEL1-TEL2)	1	56635001 RSPL
	9a	236A3161P2	Cord: Modular Telephone	1	56621001 RSPL
	10	105A1051C1003	Core: Ferrite	1	55505303 RSPL
	11	40048201	Connection Cord-Wire (PSU)	1	40048201
	12	40040101	Connection Cord-Wire (SPSU)	1	40040101
	13	105A1062C0002	0443-167251 Core	1	55505402
	14	105A1068C1004	5FC-8 Core	1	55505904
	15	105A1070C0004	TFC-23-11-14 Core	1	55505204
	16	105A1070C0003	Core: Ferrite	1	55505203 RSPL
	17	56306901	Secondary Battery		56306901 RSPL
	18	50702001	Snap Band		50702001 RSPL
	19		Tying Cord		
	20		Board-MEM		option
	21		Plate-MEM		

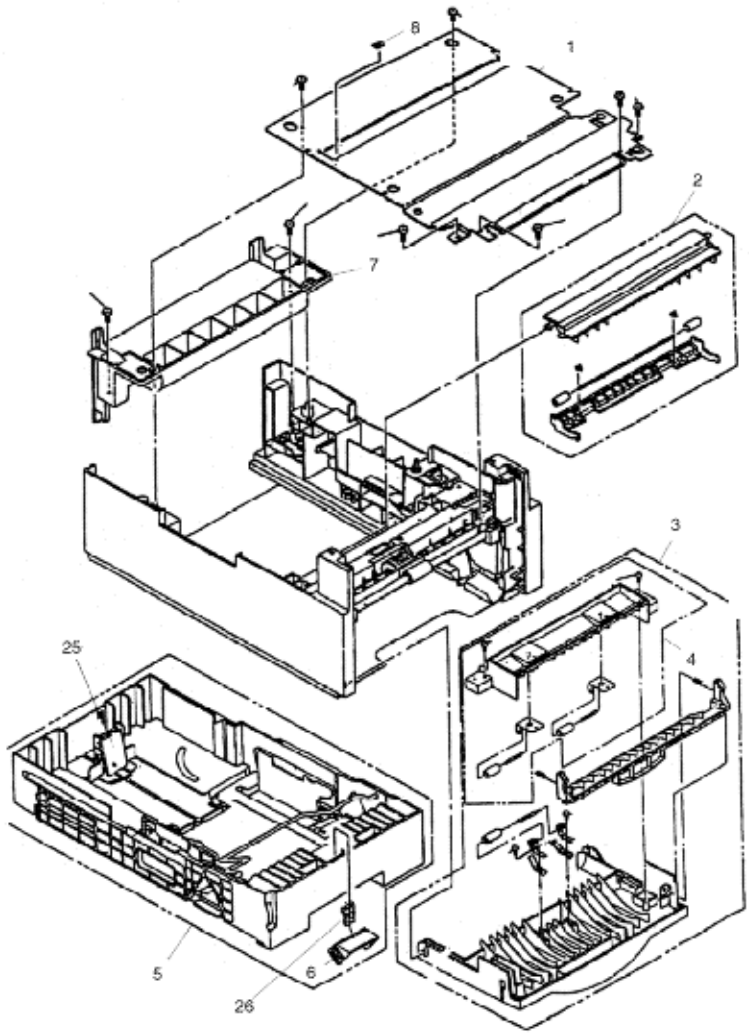
8: Option Telephone



Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	1PP4120-1095P011	Cradle	1	N/A
	2	4YA4129-1006G001	Board-Hook	1	N/A
	6	4YA4129-1005G001	Board-TELU	1	N/A
	7	1PP4120-1096P001	Base-Cradle	1	N/A

	8	3PP4120-1097P001	Cover-Terminal	1	N/A
	9	3PA4120-1140G001	Attachment-Assembly	1	N/A
	10	4YB3512-2029G004	Handset	1	N/A
	12	4YS4111-5552P001	Connection-Cord	1	N/A
	14	4YS4111-5551P001	Moduler-Jack Cord	1	N/A
	17	4YS3522-1252G002	Cord-Handset	1	56628101 RSPL
	18	N/A	Tapping-Screw	1	N/A
	19	N/A	Screw	1	N/A
	20	4PB4120-1136P001	Knob-Screw	1	N/A
	21	4PB4016-1960P001	Rubber-Foot	4	N/A

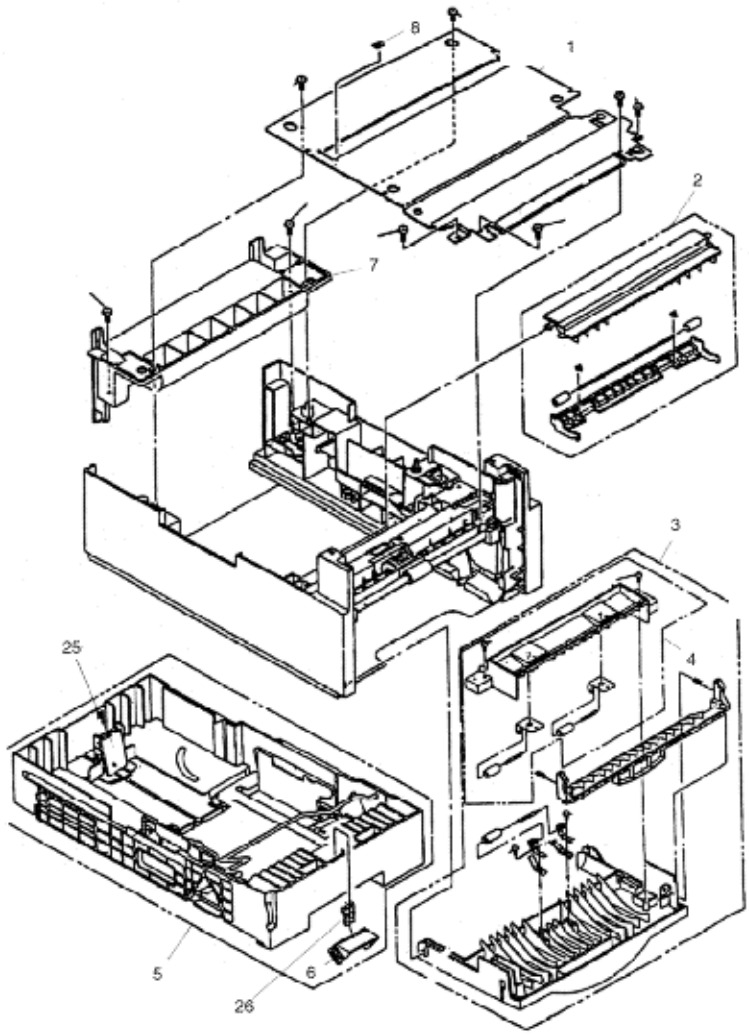
9A: Second Paper Feed (Option)



Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	1PP4122-1401P001	Plate: Upper	1	51023301
	2	3PA4122-1370G001	Guide: Sheet Assembly	1	50222001
	3	1PA4122-1369G001	Cover: Front Assembly	1	53075301
	4	3PA4122-1371G001	Guide: Inner Assembly	1	50221501
	5	1PA4122-1362G004	Cassette Assembly (2nd Tray)	1	50107304
	6	4PP4120-1009G001	Frame: Separation (F) Assembly	1	50222101
	7	1PP4122-1323P001	Cover: Rear	1	53075201
	8	4PB4122-1441P001	Ground: Stick Finger	1	51023401
	9	1PA4122-1366G001	Frame: Hopping Assembly	1	50222401
	10	4PP3522-3568P001	Bearing	1	51608901
	11	4PP4122-1207P001	Gear (Z70)	1	51239001
	12	3PP4122-1331P001	Sensor: Lever (P)	1	50411201
	13	3PA4122-1393G001	Roller: Feed Assembly	1	50222501
	14	3YS4111-3528P001	Cable & Connector	1	56633901

	15	3PB4122-1399P001	Motor: Pulse	1	56512201
	16	4PP4122-1384G001	Bracket	1	51712001
	17	4PP4122-1383P001	Gear (Z24)	2	51238901
	18	4PP4122-1226P001	Gear (Z87/Z60)	1	51239101
	19	4PP4122-1389P001	Plate: Bottom	1	51023201
	20	4PP4122-1365G001	Guide: 2nd Cassette (L) Assembly	1	50222301
	21	3PA4122-1367G001	Roller: Hopping Assy 2nd Tray	1	50409501
	22	1YX4122-1364G002	Guide: 2nd Cassette (R) Assembly	1	50222201
	23	4PB4122-1382P001	Clutch: One-way 2nd Tray	1	51401101
	24	4YA4046-1651G002	TQSB-2 PCB	1	55078102
	25	3PA4122-1372G001	Tail Guide Assembly	1	
	26	4PP4122-1238P002	Spring: Separation	1	50927502
	27	4PP4122-1184P001	Cassette Lock Lever	1	
	28	4PP4122-1347P001	Locks Spring	1	
	29	4PP4122-1217P001	Pull Block	1	
	30	4PP4122-1398P002	Sheet Spring	1	
	31	4PP4122-1339G001	Sheet Link (L)	1	
	32	4PP4122-1338G001	Sheet Link (R)	1	

9B: Second Paper Feed (Option)



Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	1PP4122-1401P001	Plate: Upper	1	51023301
	2	3PA4122-1370G001	Guide: Sheet Assembly	1	50222001
	3	1PA4122-1369G001	Cover: Front Assembly	1	53075301
	4	3PA4122-1371G001	Guide: Inner Assembly	1	50221501
	5	1PA4122-1362G004	Cassette Assembly (2nd Tray)	1	50107304
	6	4PP4120-1009G001	Frame: Separation (F) Assembly	1	50222101
	7	1PP4122-1323P001	Cover: Rear	1	53075201
	8	4PB4122-1441P001	Ground: Stick Finger	1	51023401
	9	1PA4122-1366G001	Frame: Hopping Assembly	1	50222401
	10	4PP3522-3568P001	Bearing	1	51608901
	11	4PP4122-1207P001	Gear (Z70)	1	51239001
	12	3PP4122-1331P001	Sensor: Lever (P)	1	50411201
	13	3PA4122-1393G001	Roller: Feed Assembly	1	50222501

	14	3YS4111-3528P001	Cable & Connector	1	56633901
	15	3PB4122-1399P001	Motor: Pulse	1	56512201
	16	4PP4122-1384G001	Bracket	1	51712001
	17	4PP4122-1383P001	Gear (Z24)	2	51238901
	18	4PP4122-1226P001	Gear (Z87/Z60)	1	51239101
	19	4PP4122-1389P001	Plate: Bottom	1	51023201
	20	4PP4122-1365G001	Guide: 2nd Cassette (L) Assembly	1	50222301
	21	3PA4122-1367G001	Roller: Hopping Assy 2nd Tray	1	50409501
	22	1YX4122-1364G002	Guide: 2nd Cassette (R) Assembly	1	50222201
	23	4PB4122-1382P001	Clutch: One-way 2nd Tray	1	51401101
	24	4YA4046-1651G002	TQSB-2 PCB	1	55078102
	25	3PA4122-1372G001	Tail Guide Assembly	1	
	26	4PP4122-1238P002	Spring: Separation	1	50927502
	27	4PP4122-1184P001	Cassette Lock Lever	1	RSPL
	28	4PP4122-1347P001	Locks Spring	1	
	29	4PP4122-1217P001	Pull Block	1	
	30	4PP4122-1398P002	Sheet Spring	1	
	31	4PP4122-1339G001	Sheet Link (L)	1	
	32	4PP4122-1338G001	Sheet Link (R)	1	

10: Miscellaneous

Whole Unit

Consumables

Options

Whole Unit

Model	Description	Part #
OF5250	120V English	62210701
OF5250	120V English / Latin American Spanish	62210702
OF5250	120V English / Brazilian Portuguese	62210703
OF5400	120V English	62210401
OF5400	120V English / Latin American Spanish	62210402
OF5400	120V English / Brazilian Portuguese	62210403

Consumables

Kit: Image Drum	P/N 56116901
Cartridge: Toner	P/N 52106701

Options

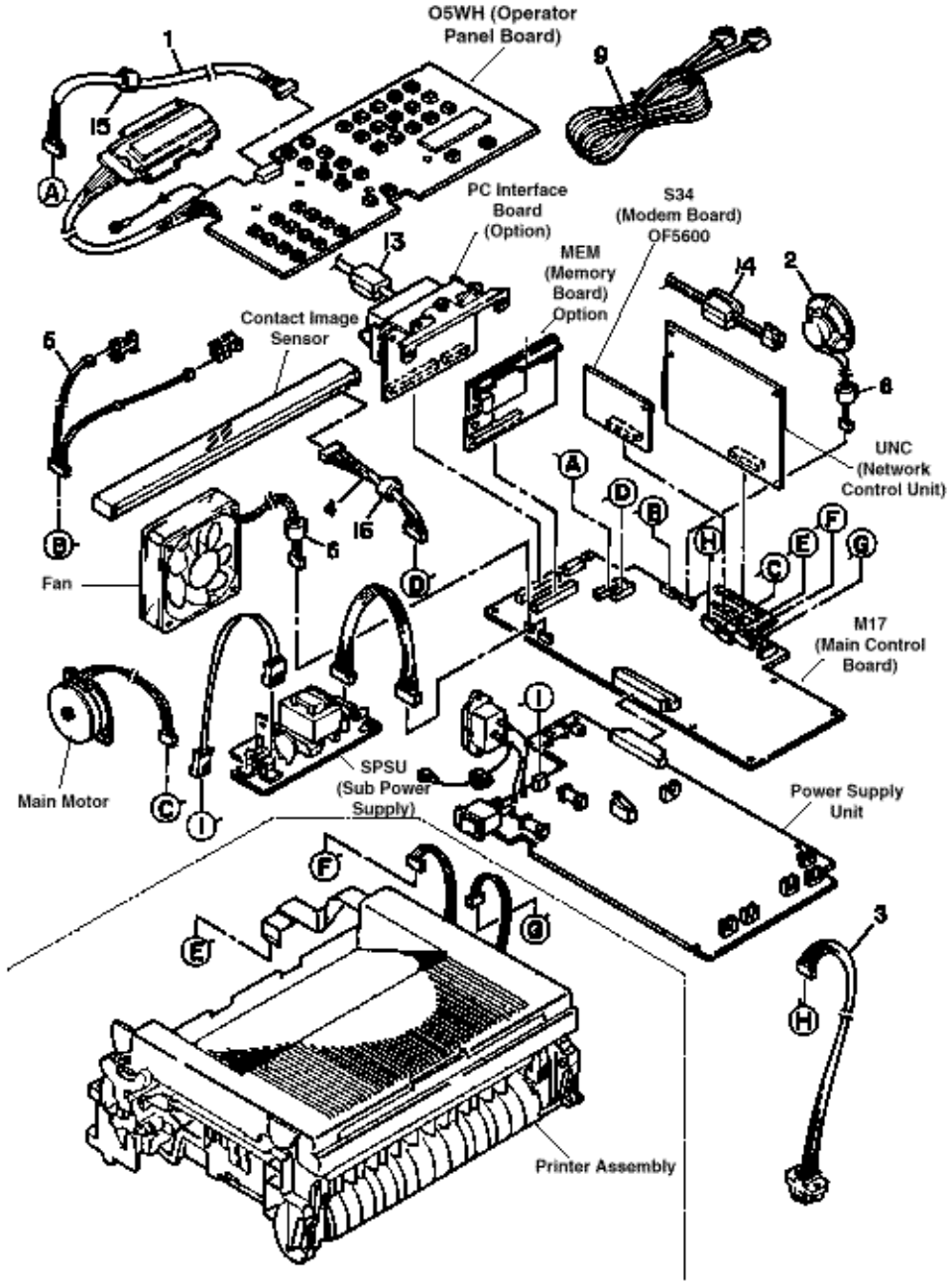
1 MB Memory, No Battery Backup	P/N 70029101
1.5 MB Memory, Battery Backup	P/N 70031501
2 MB Memory, No Battery Backup	P/N 70029201
2.5 MB Memory, Battery Backup	P/N 70031601
4 MB Memory	P/N 40231622
500 Sheet Letter/Legal Paper Tray	P/N 70029401
Printer Driver Kit (OKIFAX 5400 only)	P/N 58241701
Telephone Handset	P/N 70031801

Diagram

The boards used in the OKIFAX 5250 and OKIFAX 5400 are listed below.

- Main Control Board (E17)
- UNC-5 (Network Control Unit)
- Power Supply Unit
- O5WH (Operator Panel) Board
- S34 (Modem) Board MODEM (OKIFAX 5400 Only)
- CTR (PC Interface) Board Option
- MEM (Memory) Board Option
- TEL (Telephone Interface) Board Option
- HOOK (Hook) Board Option
- TQXB (Second Tray) Option

For more information, please refer to Appendix A, Board Descriptions.



Rev.	No.	Oki parts Number	Description	Q'ty	Remarks
	1	40040002	Cord: Op Panel Connection	1	40041002 RSPL
	2	4YB4120-1026P1	Speaker	1	57001701 RSPL
	3	3YS4111-3527P2	Cable: 2nd Tray Connector	1	56632801 RSPL
	4	4YS4111-3441P1	Cord: Connector (C1S)	1	56634501 RSPL
	5	4YS4111-3442P1	Cord: Connector (PC1/2)	1	56634601 RSPL
	6	105A1070C0001	Core: Ferrite D	2	55505201 RSPL
	7b	4YS3512-1485P1	Cord: AC Power	1	56618901 RSPL
	7c	236A6058P0001	Cord: AC 220V	1	56631701 RSPL
	9a	236A3161P2	Cord: Modular Telephone	1	56621001 RSPL
	9b	4YB3522-1297G1	Core: Ferrite	1	56634801 RSPL
	10	105A1051C1003	Core: Ferrite	1	55505303 RSPL

	11	40048201	Connection Cord-Wire (PSU)	1	N/A
	12	40040101	Connection Cord-Wire (SPSU)	1	N/A
	13	105A1062C0002	0443-167251 Core	1	N/A
	14	105A1068C1004	5FC-8 Core	1	
	15	105A1070C0004	TFC-23-11-14 Core	1	
	16	105A1070C0003	Core: Ferrite	1	55505203 RSPL
	17	4YB4120-1094P0001	Secondary Battery		56306901
	18	4LP-1466	Band: Snap		50702001
		55083401	PCB: Main Controller (OF5250) Main Assy	1	55083801 RSPL
		55083501	PCB: Main Controller (OF5400) Main Assy	1	40476108 RSPL
		40035901	PWR Unit-ACDC Drop (120V) Power Supply Unit		40319201 RSPL
		40035902	PWR Unit-ACDC Drop (230V) Power Supply Unit		40035902 RSPL
		40105308	Op Panel (OF5250)		55083202 RSPL
		40079108	Op Panel (OF5400)		40079109 RSPL
		40044501	UNC (Network Control Unit) Board		40044501 RSPL
			Memory Board: 1 MB, No Battery Backup		70029101 Option
			Memory Board: 1.5MB, Battery Backup		70031501 Option
			Memory Board: 2 MB, No Battery Backup		70029201 Option
			Memory Board: 2.5 MB, Battery Backup		70031601 Option
			Memory Board: 4 MB		40231622 Option
			PC Interface Board (Option)		58241701 Option
			S34 (Modem) Board (OKIFAX 5600-Plus)		40274601

1. Outline

1.1 Functions

1.2 External View and Component Names (Figure 1-1)

1.1 Functions

When the Second Paper Feeder is installed with the OKIFAX 5400 facsimile transceiver, the Second Paper Feeder is connected to the facsimile by a connector. The Second Paper Feeder supplies paper automatically through the operation of pulse motor (hopping), which is driven by signals sent from CPU of the Second Paper Feeder under the control of the facsimile.

The main functions are listed below.

Paper that can be used:

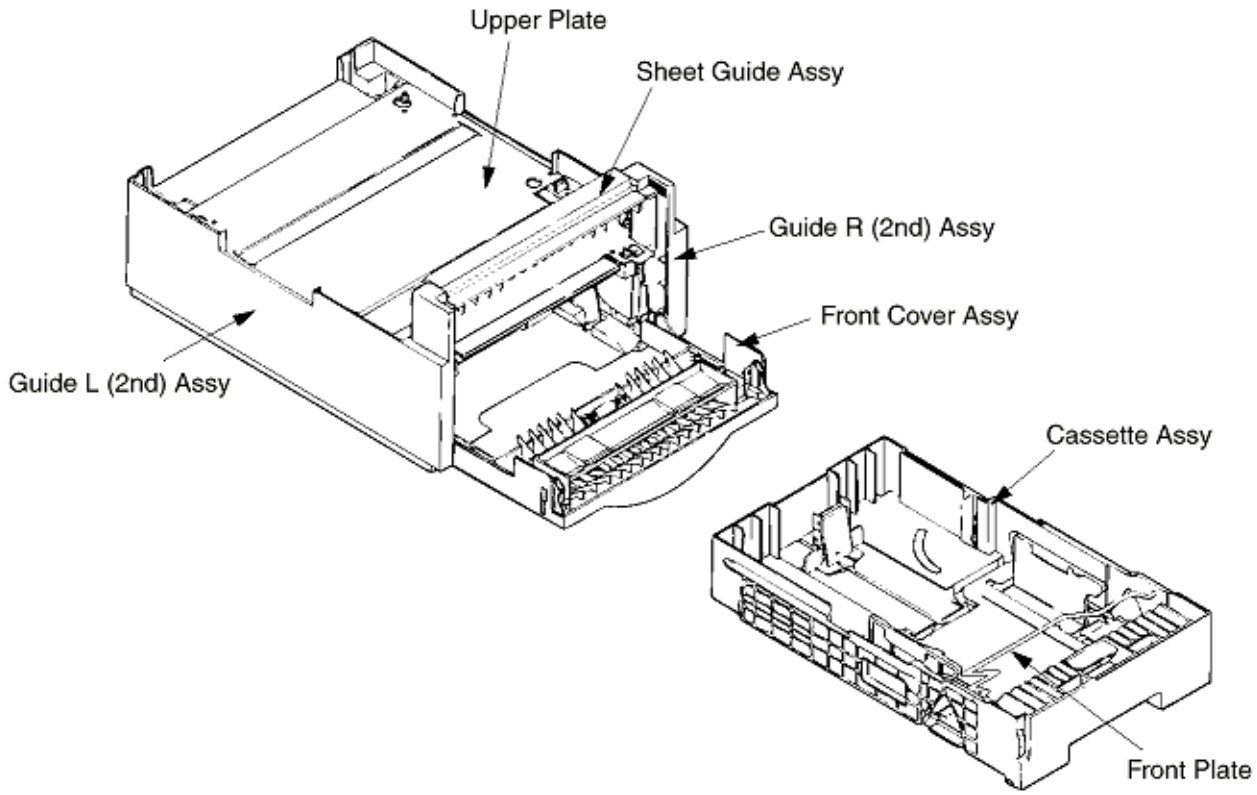
Paper Type

- Standard paper: Xerox 4200 (20-lb)
- Special paper: PPC sheets; use of envelopes or thick paper is not possible
- Cut sheet size: A4, Letter, Legal13, Legal14
- Special size: Paper width: 210 to 216 mm (8.27 to 8.5 inches); Paper length: 279.4 to 355.6 mm (11 to 14 inches)

Weight

- 16-lb to 24-lb (60 to 90 g/m^2)
- Paper setting quantity: 500 sheets of paper weighing 17.07 lb. (64 g/m^2)

1.2 External View and Component Names



2. Mechanism Description

2.1 General Mechanism

2.2 Hopper Mechanism

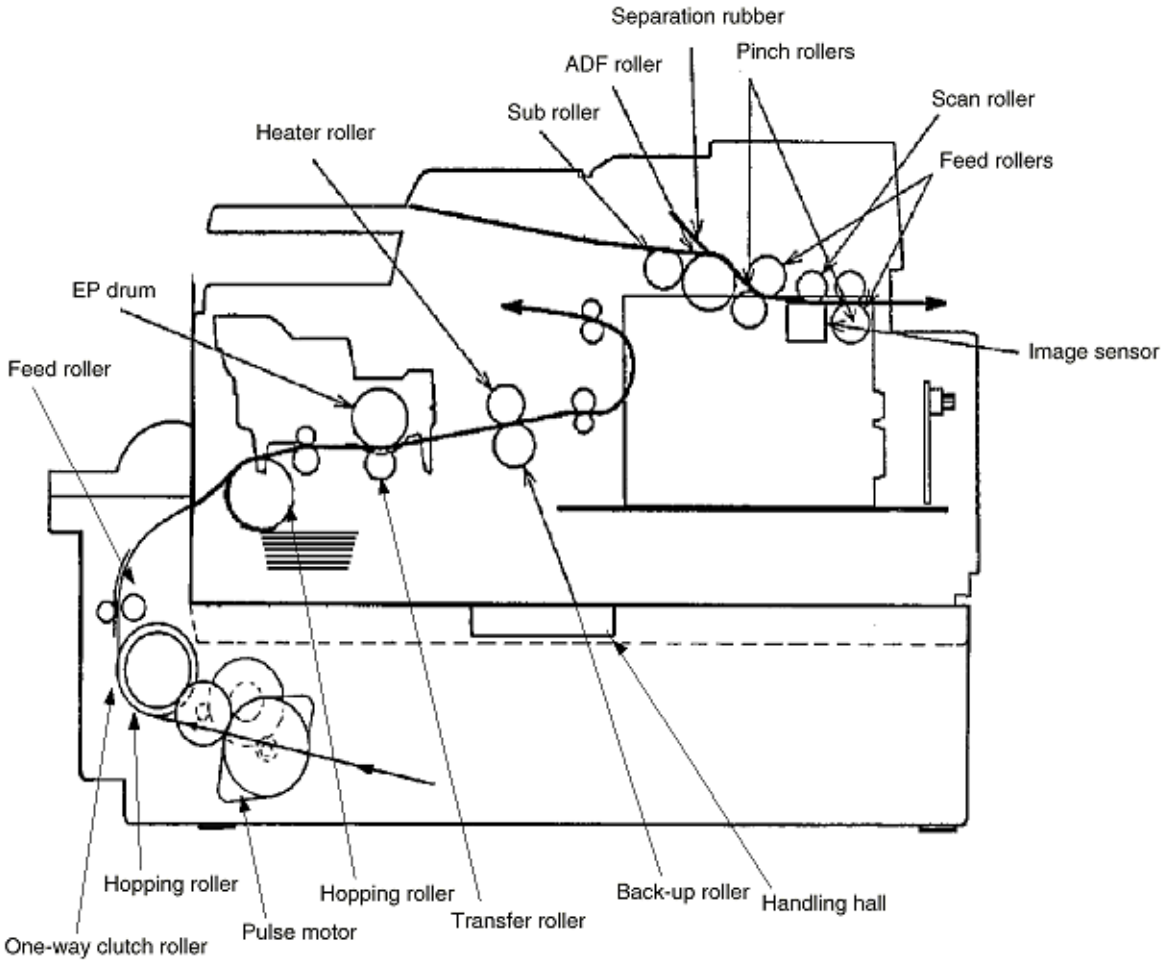
2.1 General Mechanism

The Second Paper Feeder feeds the paper into the facsimile by receiving the signal from the facsimile, which drives the pulse motor inside the Second Paper Feeder, and this motion is transmitted to rotate the one-way clutch of the hopping frame assembly. The paper is delivered from the hopper into the facsimile through the turning of the hopping roller and feed roller.

Once delivered into the facsimile, the paper is then controlled and fed through by pulse motor (registration) of the facsimile.

2.2 Hopper Mechanism

The hopper automatically feeds the facsimile with the paper being set, single sheet at a time. When the paper is loaded in the paper cassette, it is then transported by the pulse motor, carrying forward only a single sheet caught by the separation rubber at a time.



3. Parts Replacement

This section covers the procedures for the disassembly, reassembly and installations in the field. This section describes the disassembly procedures, and for reassembly procedures, basically proceed with the disassembly procedures in the reverse order.

3.3 Precautions Concerning Parts Replacement

3.2 Parts Layout

3.3 Hopping Roller Shaft Assy and One-Way Clutch Gear

3.1 Precautions Concerning Parts Replacement

(1) Parts replacements must be carried out, by first turning the facsimile power switch off "O" and removing the facsimile from the Second Paper Feeder.

(2) Do not disassemble the Second Paper Feeder if it is operating normally.

(3) Establish the extent of disassembly suitable for the purpose of the procedure, and do not disassemble any more than necessary.

(4) Only specified service tools may be used.

(5) Disassembly must be carried out according to the prescribed procedures. Parts may be damaged if such procedures are not followed.

(6) Small parts such as screws and collars can easily be lost, therefore these parts should be temporarily fixed in the original location.

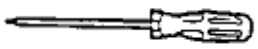
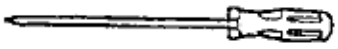
(7) When handling printed circuit boards, do not use any glove which may generate static electricity.

(8) Do not place the printed circuit boards directly on the equipment or floor.

Service Tools

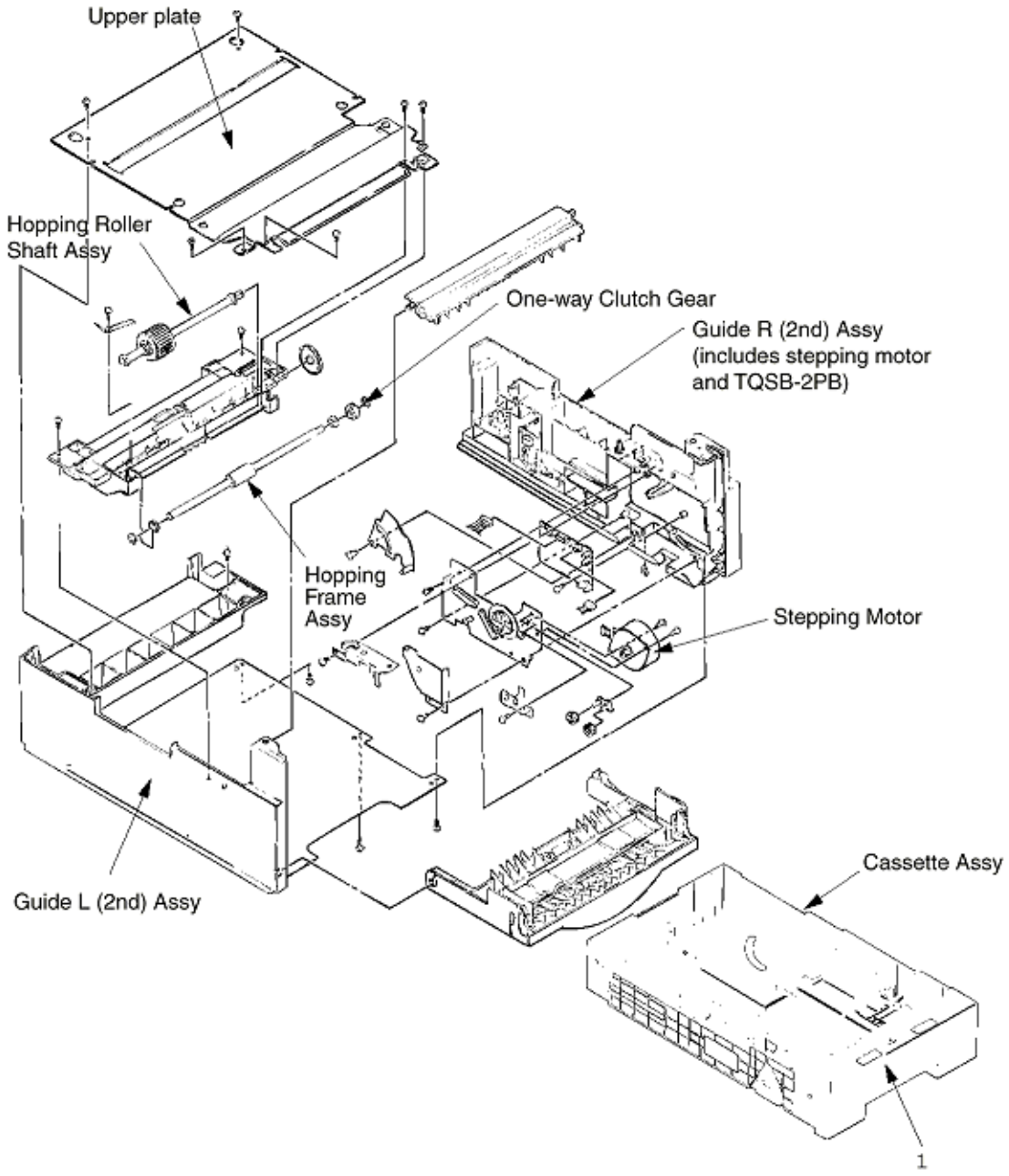
Below are shown the tools required for the replacement of parts.

Table 3-1 Service Tools

No.	Service Tools		Q'ty	Application	Remarks
1		No. 1-100 Philips screwdriver	1	2 ~ 2.5 mm screws	
2		No. 2-100 Philips screwdriver	1	3 ~ 5 mm screws	
3		No. 3-100 screwdriver	1		
4		Digital multimeter	1		
5		Pliers	1		

3.2 Parts Layout

This section describes the layout of the main components.



3.3 Parts Replacement Methods

This section describes the parts replacement methods for the components listed in the disassembly order diagram below.

Second Paper Feeder

Stepping motor (hopping) (3.3.1)

TQSB-2 PCB (3.3.2)

Hopping roller shaft assy and One-way clutch gear (3.3.3)

3.3.1 Stepping Motor (Hopping)

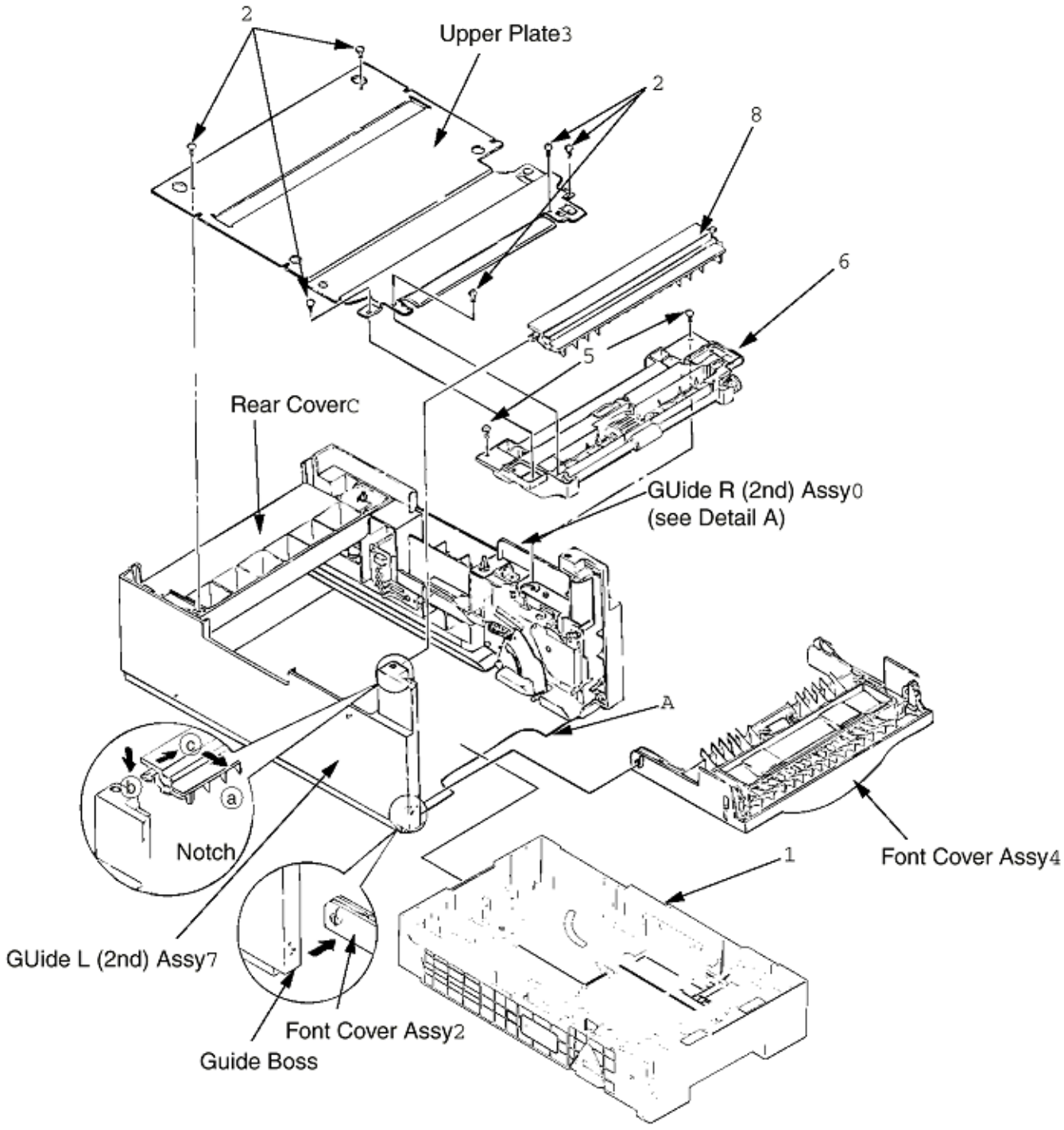
(1) Turn the facsimile power switch off, pull out the AC cord from the outlet. Remove the facsimile from the Second Paper Feeder.

(2) Take the paper cassette assy 1 out of Second Paper Feeder.

(3) Remove six screws 2 and remove the upper plate 3. Remove two screws 5 and remove the hopping frame assy 6.

(4) Remove the front cover assy 4 off the guide boss on the guide L (2nd) assy 7 by bending the guide L (2nd) assy 7 in the direction of the arrow shown in the magnified view below.

(5) Pull the sheet guide assy 8 in the direction of arrow A and also push in the direction of arrow B to unlock the notch, and bring the sheet guide assy 8 in the direction of arrow B to remove the sheet guide assy 8.



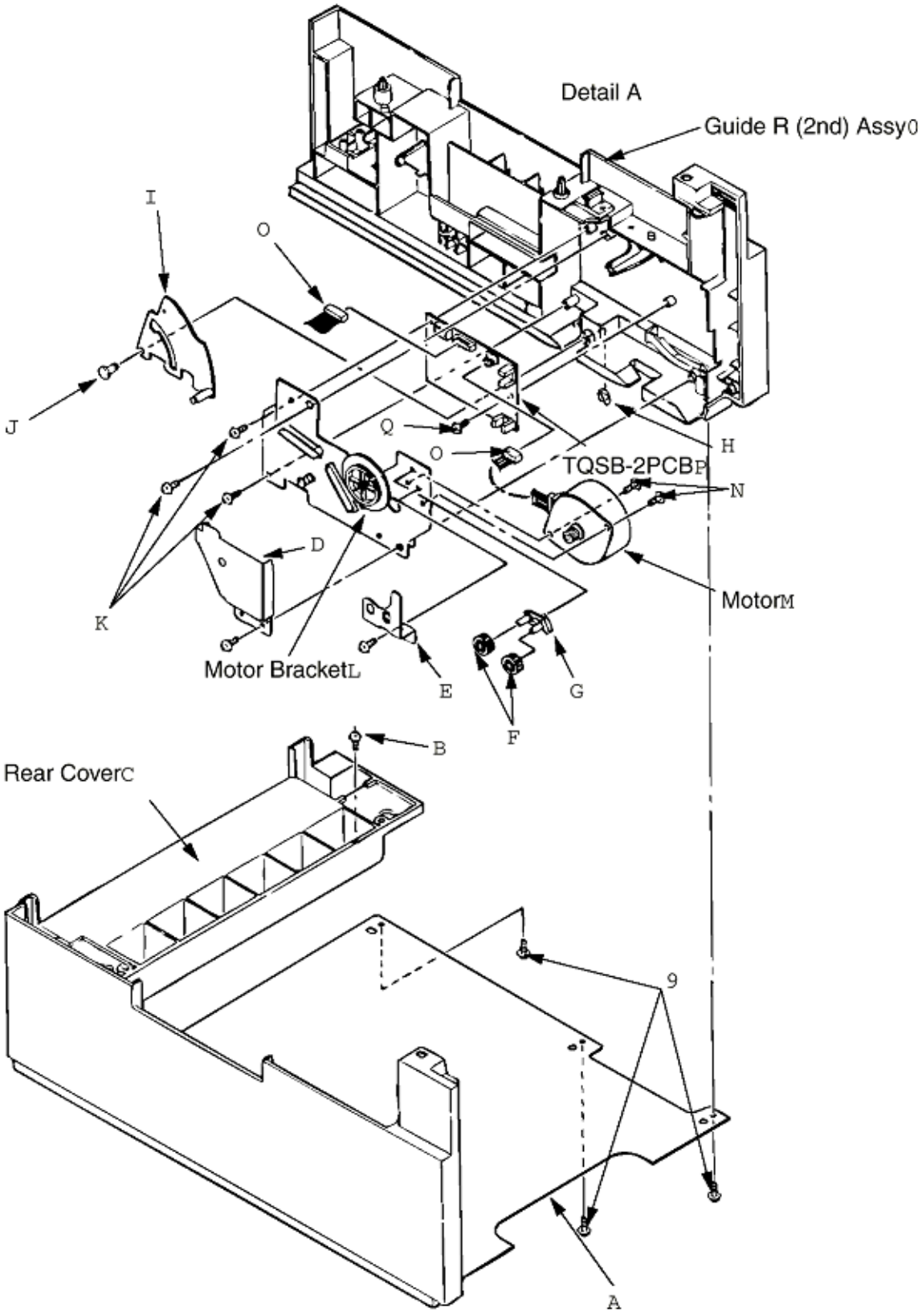
(6) Remove three screws 9 which are holding the guide R (2nd) assy 10 to the bottom plate 11. Remove the screw 12 which is keeping the rear cover 13 and guide R (2nd) assy 10. Remove the guide R (2nd) assy 10.

(7) Remove the protect (M) 14, guide bracket 15, planet gears 16 and planet gear bracket 17.

(8) Remove the E-ring 18 which is keeping the sheet link 19 on the guide R (2nd) assy 10, and pull out the hinge stand 20.

(9) Remove three remaining screws 21 which are keeping the motor on the motor bracket 22, and remove the connector off the Stepping Motor 23.

(10) Remove two screws 24 on the Stepping Motor 23.


Detail A
Guide R (2nd) Assy0
I
O
J
Q
O
H
TQSB-2PCBP
N
D
K
MotorM
Motor BracketL
E
G
F
B
Rear CoverC
9
A

3.3.2 TQSB2-PCB

(1) Remove the pulse motor (see 3.3.1).

(2) Remove the connector 25 from the TQSB-2PCB 26.

(3) Remove the screw 27 and remove the TQSB-2PCB 26.

Note: Refer to Detail A in previous section (see 3.3.1).

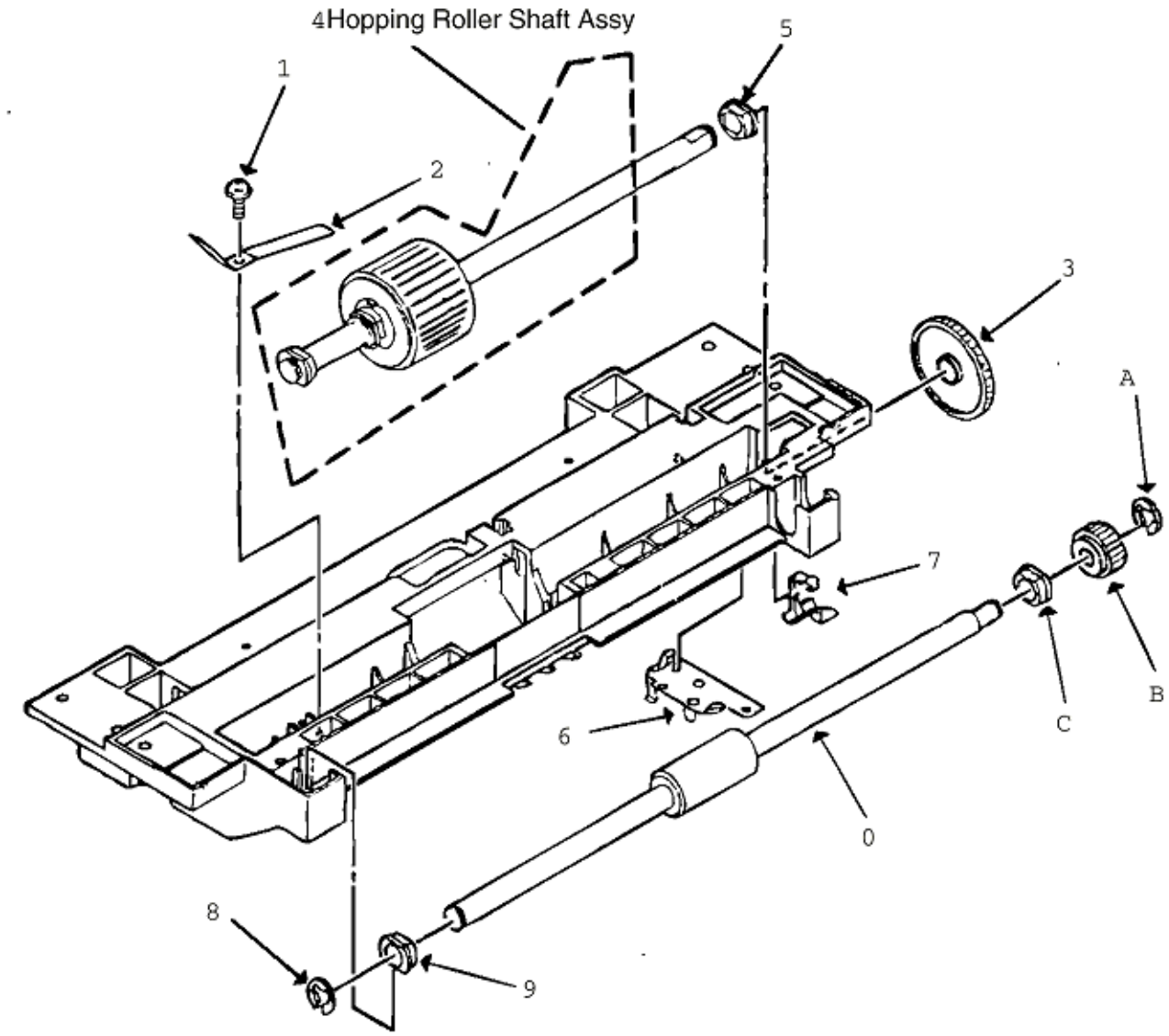
3.3.3 Hopping Roller Shaft Assy and One-way Clutch Gear

(1) Follow up to step (3) of 3.3.1 and remove the hopping frame assy.

(2) Remove the screw 1 and remove the earth plate 2. Remove the sensor lever 7 and remove the ground plate 6. Remove the gear 3 and remove the metal bush 5 and Hopping Roller shaft Assy 4.

(3) Remove the E-ring 11 and remove the one-way clutch gear 12 on the right side of the feed roller 10.

Note: The metal bush 13 also comes off. Be careful not to lose it.



4. Troubleshooting

4.1 Precautions Prior to the Troubleshooting

4.2 Preparations for the Troubleshooting

4.3 Troubleshooting Method

4.3.1 LCD Status Message List

4.1 Precautions Prior to the Troubleshooting

(1) Go through the basic checking list provided in the user's documentation.

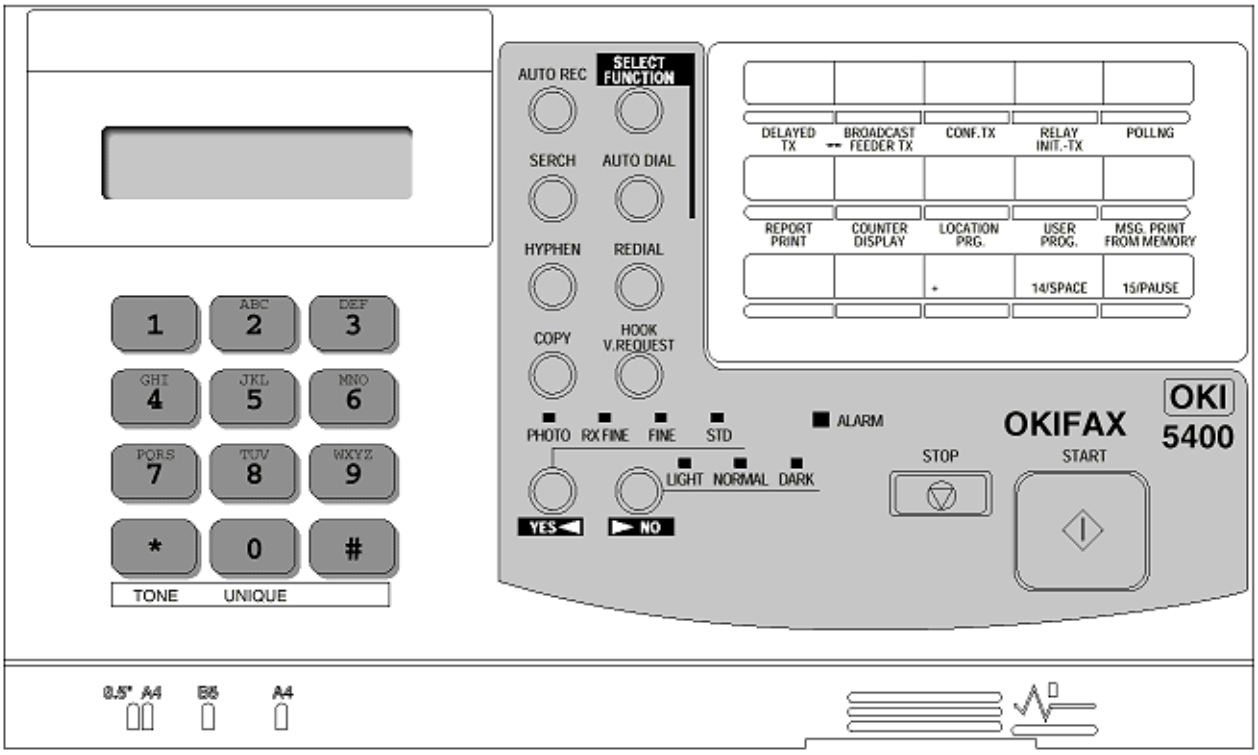
(2) Obtain as much information as you can from the user about the problem.

(3) Check in conditions similar to those in which the problem occurred.

4.2 Preparations for the Troubleshooting

(1) Display on the Operator panel

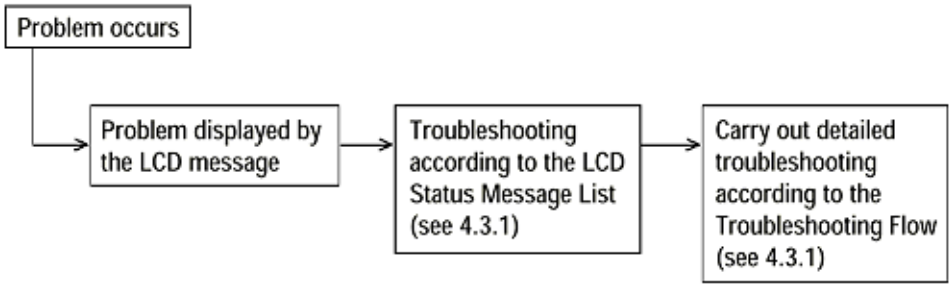
The status of the problem is displayed on the LCD (Liquid Crystal Display) on the Operator panel. Go through the appropriate troubleshooting procedures according to the messages displayed on the LCD.



Control Panel of OKIFAX 5400

4.3 Troubleshooting Method

When a problem occurs, go through the troubleshooting according to the following procedure.



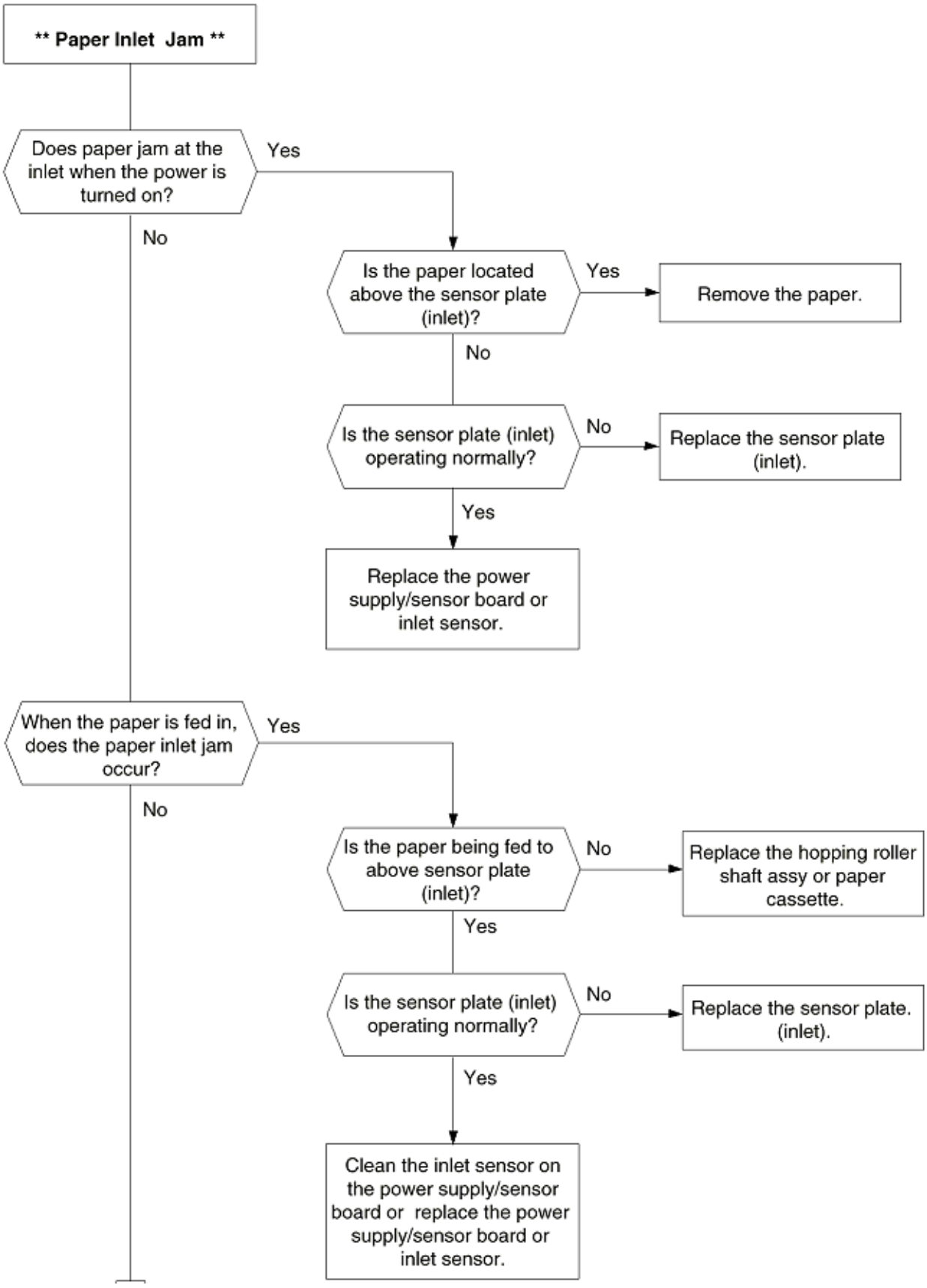
4.3.1 LCD Status Message List

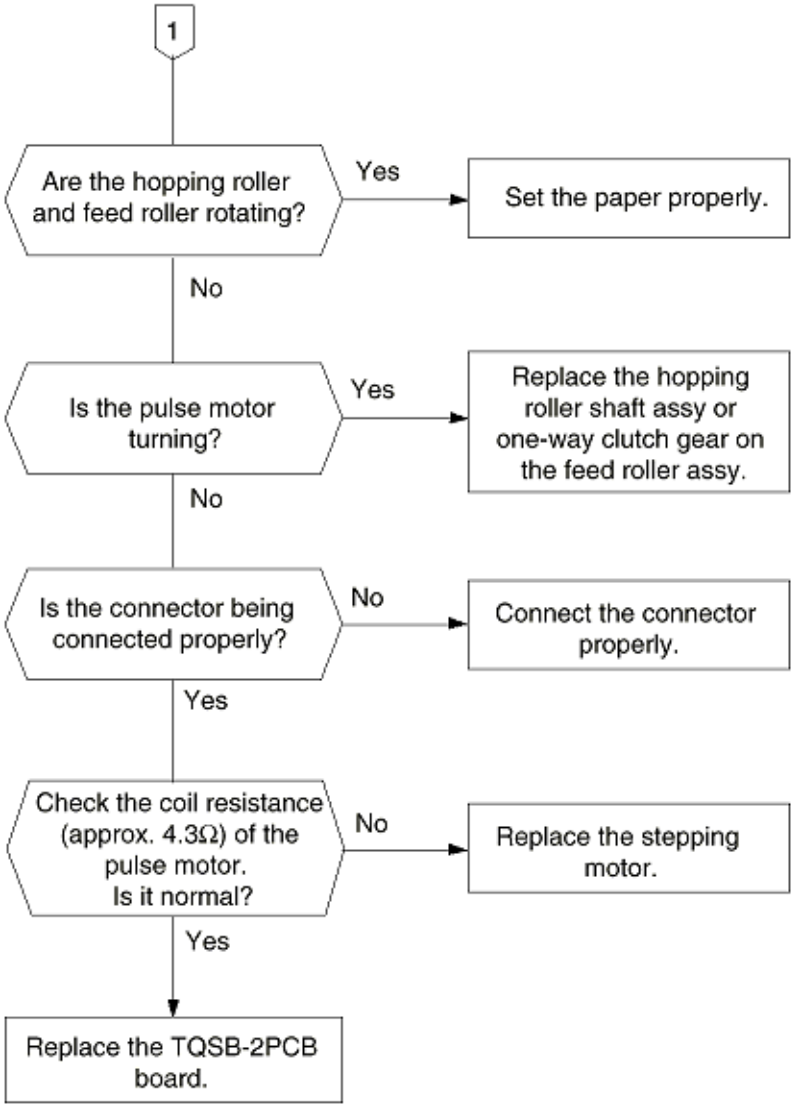
Classification	LCD Status Message	Description	Recovery method
Jam error (feeding) *1	[redacted] PAPER MIS-FEED[FAX] REPLACE PAPER	Notifies of occurrence of jam while the paper is being fed from Second Paper Feeder.	• Check the paper in the Second Paper Feeder. Carry out the recovery printing by opening and closing the cover, and turn the error display off. • When the problem occurs frequently, go through the Troubleshooting.
Jam error (ejection)	[redacted] PAPER JAM [FAX] REPLACE PAPER	Notifies of occurrence of jam while the paper is being ejected from the Second Paper Feeder.	• Check the paper in the Second Paper Feeder. Carry out the recovery printing by opening and closing the cover, and turn the error display off.
Paper size error	[redacted] PAPER JAM [FAX] REPLACE PAPER	Notifies of incorrect size paper feeding from Second Paper Feeder.	• Check the paper in the Second Paper Feeder. Also check to see if there was a feeding of multiple sheets. Carry out the recovery printing by opening and closing the cover, and turn the error display off.
Tray paper out *2	[redacted] NO PAPER [FAX] REPLACE PAPER	Notifies of no paper state when both cassettes (1st and 2nd) has no recording paper.	• Load the paper in Second Paper Feeder.

*1: Indicates the same message on the display, when 1st or 2nd cassette becomes jam error (feeding).

*2: However, if 1st cassette has recording paper, LCD indicates the standby mode on the display and alarm message does not indicate.

• (JAM error)


** Paper Inlet Jam **
Does paper jam at the inlet when the power is turned on?
Yes
No
Is the paper located above the sensor plate (inlet)?
Yes
Remove the paper.
No
Is the sensor plate (inlet) operating normally?
No
Replace the sensor plate (inlet).
Yes
Replace the power supply/sensor board or inlet sensor.
When the paper is fed in, does the paper inlet jam occur?
Yes
No
Is the paper being fed to above sensor plate (inlet)?
No
Replace the hopping roller shaft assy or paper cassette.
Yes
Is the sensor plate (inlet) operating normally?
No
Replace the sensor plate. (inlet).
Yes
Clean the inlet sensor on the power supply/sensor board or replace the power supply/sensor board or inlet sensor.

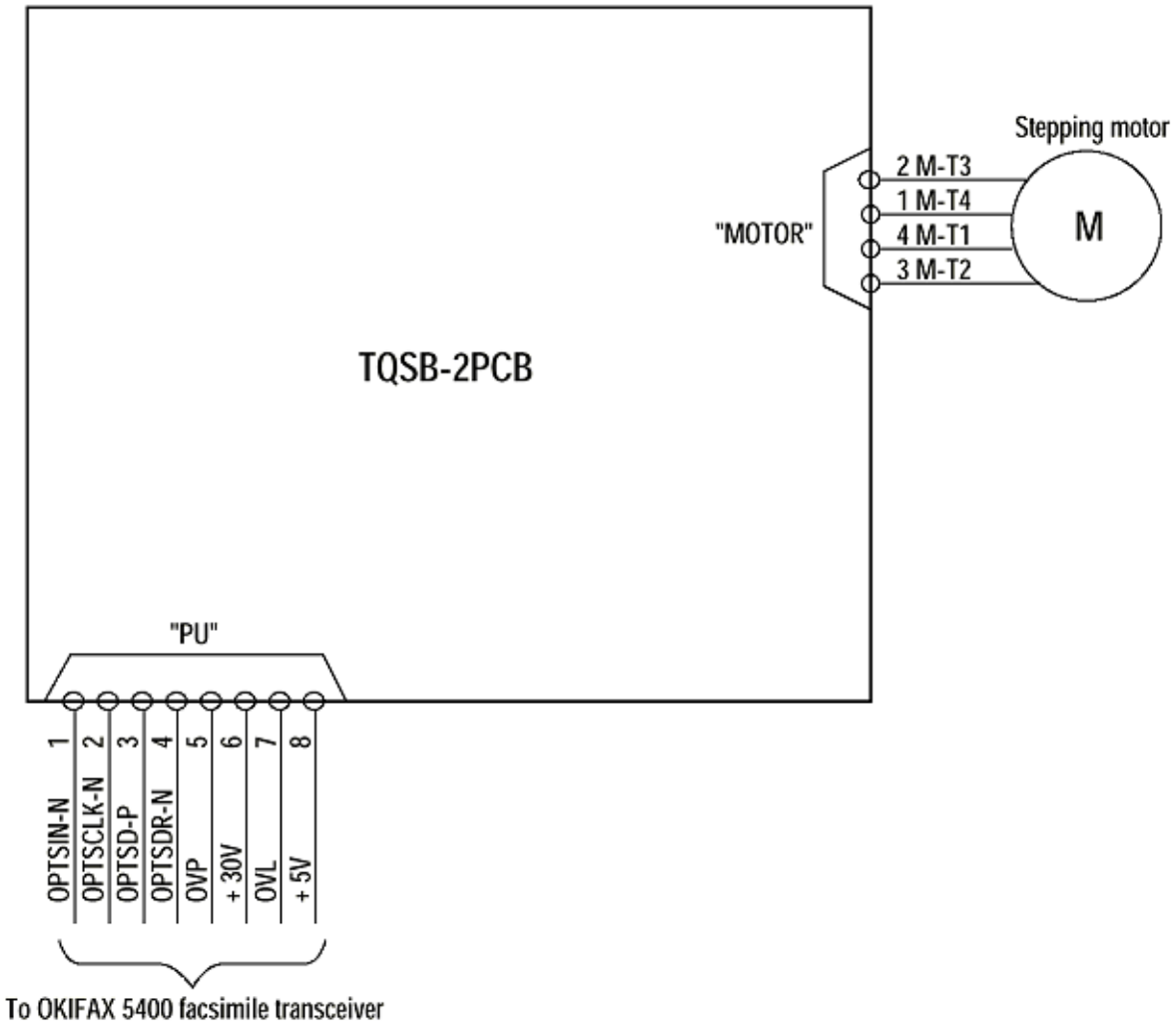

1
Are the hopping roller and feed roller rotating?
Yes
Set the paper properly.
No
Is the pulse motor turning?
Yes
Replace the hopping roller shaft assy or one-way clutch gear on the feed roller assy.
No
Is the connector being connected properly?
No
Connect the connector properly.
Yes
Check the coil resistance (approx. 4.3Ω) of the pulse motor. Is it normal?
No
Replace the stepping motor.
Yes
Replace the TQSB-2PCB board.

5. Connection Diagram

5.1 Interconnection Diagram

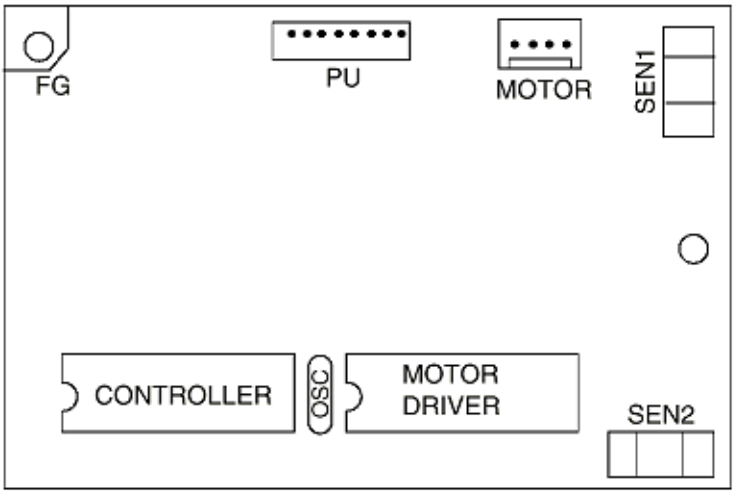
5.2 PCB Layout

5.1 Interconnection Diagram



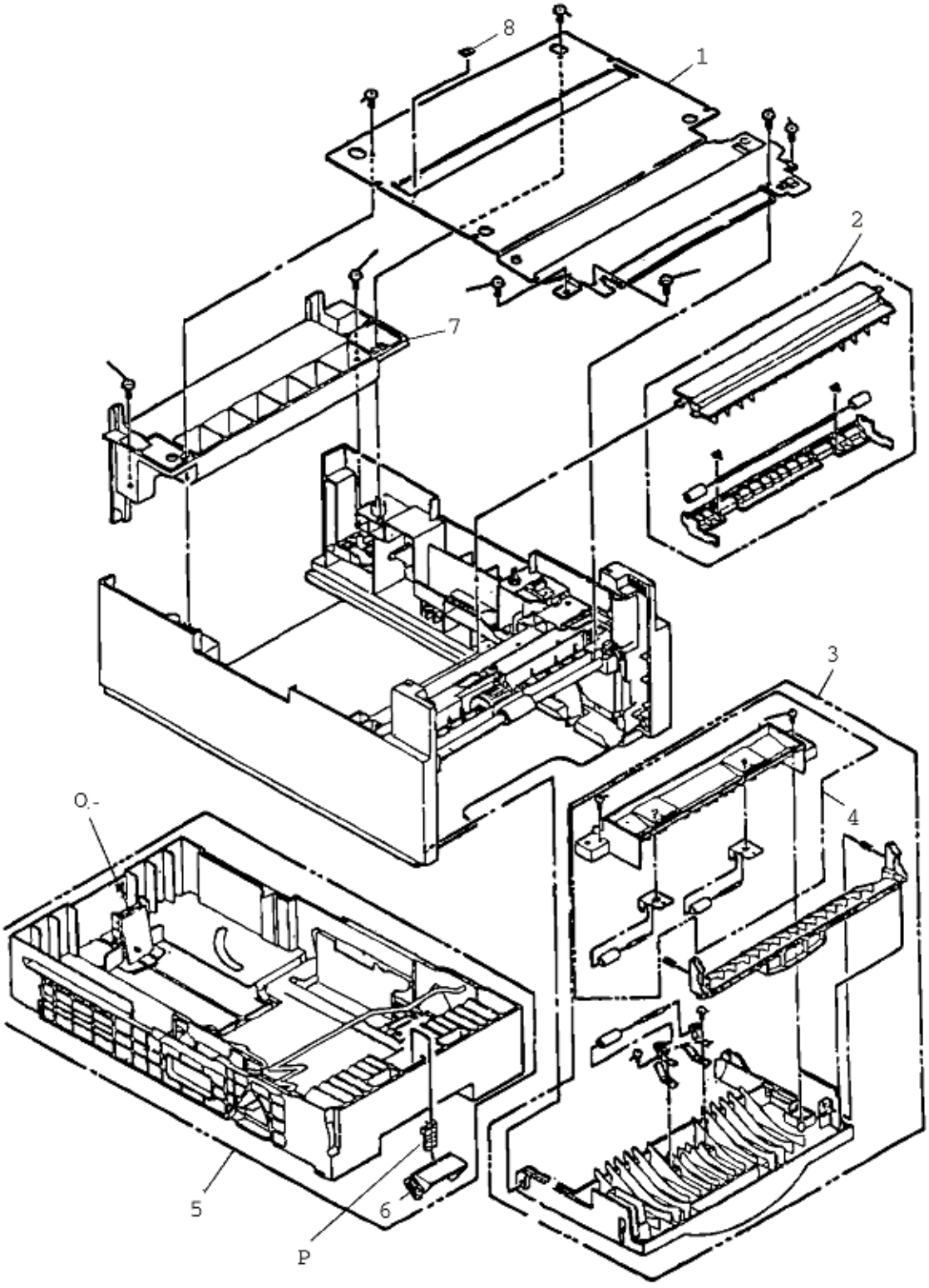
5.2 PCB Layout

TQSB-2PCB

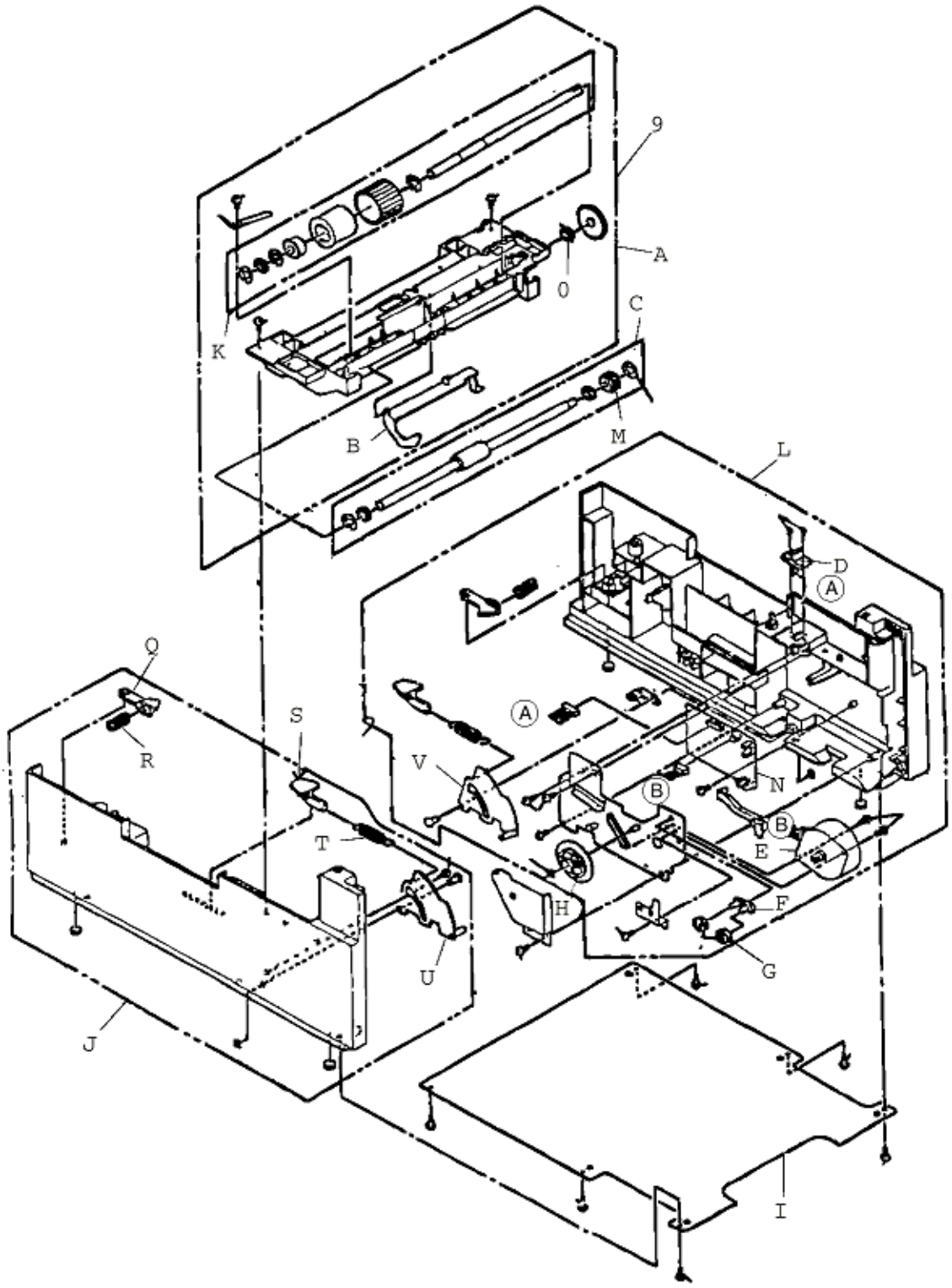


6. Parts List

1: Cabinet and Cassette Assembly



2: Paper Feeder



Rev.	No.	Oki-J Part Number	Description	Q'ty	Oki Data P/N
	1	1PP4122-1401P001	Plate: Upper	1	51023301

	2	3PA4122-1370G001	Guide: Sheet Assembly	1	50222001
	3	1PA4122-1369G001	Cover: Front Assembly	1	53075301
	4	3PA4122-1371G001	Guide: Inner Assembly	1	50221501
	5	1PA4122-1362G004	Cassette Assembly (2nd Tray)	1	50107304
	6	4PP4120-1009G001	Frame: Separation (F) Assembly	1	53345801
	7	1PP4122-1323P001	Cover: Rear	1	53075201
	8	4PB4122-1441P001	Ground: Stick Finger	1	51023401
	9	1PA4122-1366G001	Frame: Hopping Assembly	1	50222401
	10	4PP3522-3568P001	Bearing	1	51608901
	11	4PP4122-1207P001	Gear (Z70)	1	51239001
	12	3PP4122-1331P001	Sensor: Lever (P)	1	50411201
	13	3PA4122-1393G001	Roller: Feed Assembly	1	50222501
	14	3YS4111-3528P001	Cable & Connector	1	56633901
	15	3PB4122-1399P001	Motor: Pulse	1	56512201
	16	4PP4122-1384G001	Bracket	1	51712001
	17	4PP4122-1383P001	Gear (Z24)	2	51238901
	18	4PP4122-1226P001	Gear (Z87/Z60)	1	51239101
	19	2PP4122-1389P001	Plate: Bottom	1	51023201
	20	1PA4122-1365G001	Guide: 2nd Cassette (L) Assembly	1	50222301
	21	3PA4122-1367G001	Roller: Hopping Assy 2nd Tray	1	50409501
	22	1YX4122-1364G002	Guide: 2nd Cassette (R) Assembly	1	50222201
	23	4PB4122-1382P001	Clutch: One-way 2nd Tray	1	51401101
	24	4YA4046-1651G002	TQSB-2 PCB	1	55078102
	25	3PA4122-1372G001	Tail Guide Assembly	1	
	26	4PP4122-1238P002	Spring: Separation	1	50927502 RSPL
	27	4PP4122-1184P001	Cassette Lock Lever	1	
	28	4PP4122-1347P001	Locks Spring	1	
	29	4PP4122-1217P001	Pull Block	1	
	30	4PP4122-1398P002	Sheet Spring	1	
	31	4PP4122-1339G001	Sheet Link (L)	1	
	32	4PP4122-1338G001	Sheet Link (R)	1	

Introduction

All RMCS stands for the Remote Management Center System. RMCS refers to setting registration data and conducting the following types of maintenance operations from a remote location. (Refer to Figure 1)

The purpose of this system is to speed up customer service and reduce maintenance costs.

RMCS model for FX050 series is only Model 20.

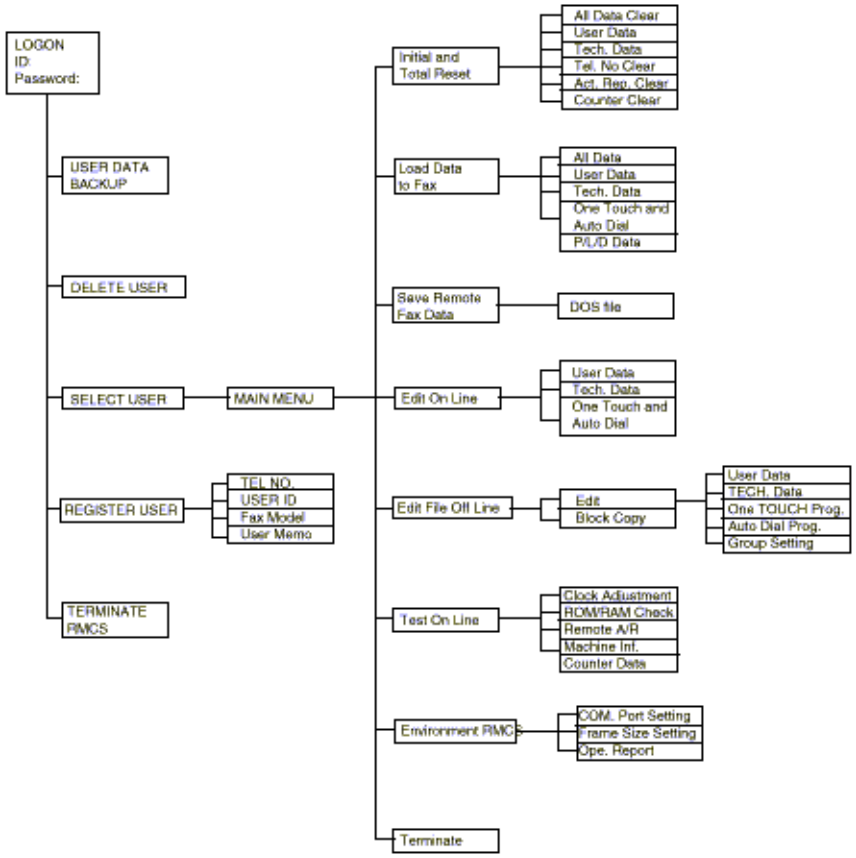


Figure 1 Remote Management Center System (RMCS)

1. Notes to Users

1.1 Identifying the Packaged Contents

1.2 Required Devices

1.3 Connectable Peripheral Equipment

1.1 Identifying the Packaged Contents

Before using this system, the packaged contents with the package list. Contact your dealer if any component from the package.

1.2 Required Devices

The following devices and software are required to operate this system.

Personal computer	IBM PC/AT or compatible model
Internal memory	300KB or more
Extended memory	1MB or more
Fixed disk drive	20MB or more
Display	CGA/EGA/VGA type
FX-050 series facsimile	
PC-I/F card	P050 (Ver.PA2 or later)
RS-232C cable	25-pin female connector
Telephone line	Public telephone line or two-way local channel
Operating system	PC-DOS Ver.3.1 or later

This system requires ANSI.SYS for screen control.

Confirm the following line in the CONIG.SYS file, if not found please add to write the command.

DEVICE=C:¥DOS¥ANSI.SYS

This system uses EMS memory. In case of memory manager consisted of those EMM386.EXE or similar types is used by configuration without EMS function, you should remark it does not work.

EXP.: DEVICE=C:¥DOS¥EMM386.EXE NOEMS

Cannot use in settings of the COM port which connect to PC-I/F excluding default.

Comx	SERIAL PORT START ADDRESS	SERIAL PORT END ADDRESS	IRQ
COM1	3F8	3FF	IRQ4
COM2	2F8	2FF	IRQ3
COM3	3E8	3EF	IRQ4
COM4	2E8	2EF	IRQ3

1.3 Connectable Peripheral Equipment

Printer	
Mouse	Microsoft mouse or equivalent
Telephone	

To use a mouse, a mouse driver program is required. This program is automatically incorporated by the installation program.

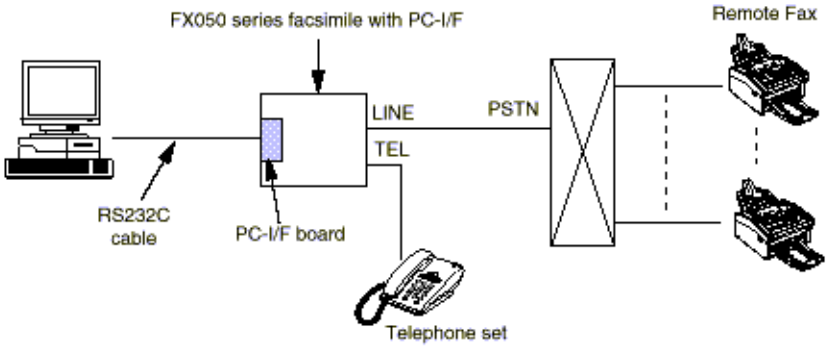
2. Setup

2.1 Mounting

Conceptual connection diagram of RMCS with other devices

This system (RMCS Model 20) is used FX050 series Facsimile with PC-I/F.

Conceptual connection diagram of RMCS Model 20 with other devices



No problem is caused for the basic operation of this system even if no telephone set connected.

2.1.1 Mounting Procedures

1) Before operation, disconnect the power plug of the IBM PC/AT from the system plug socket.

2) Disconnect the power plug of FX050 series Facsimile, too and set PC-I/F board to the Facsimile.

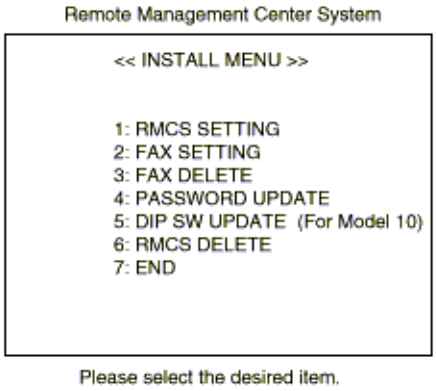
3) Connect RS232C cable between COM. Port of the IBM PC/AT and PC-I/F board of the Fac-simile.

4) Connect the power plug of the IBM PC/AT and the Facsimile and turn their power switch on.

2.2 Installation

When the PC/AT is activated by using the hard disk, insert an RMCS system disk into drive A. When C>_ is displayed, enter commands as shown below to activate the installation program.

C> A:[Enter]
A> INST[Enter]



Select processing with the numeric keypad.

[1] Register the RMCS basic system.

[2] Register the facsimile model number.

[3] Delete the facsimile model number.

[4] Update the password.

[5] Update the dip switches.

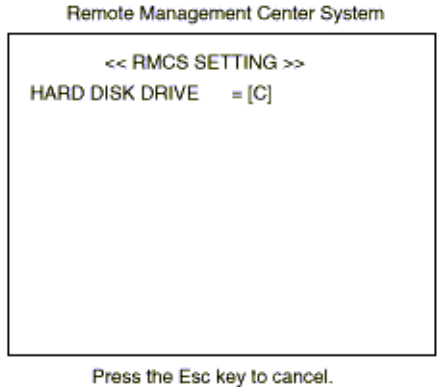
[6] Delete the RMCS basic system.

[7] End of the Menu.

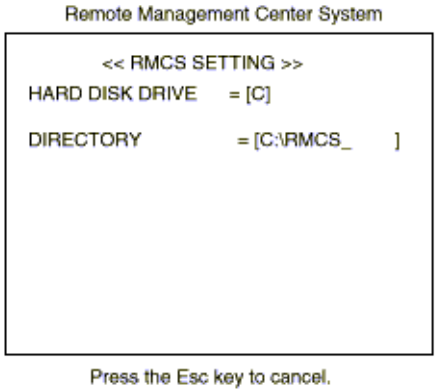
Each processing from [1] to [6] is described later.

2.2.1 Registering the RMCS Basic System

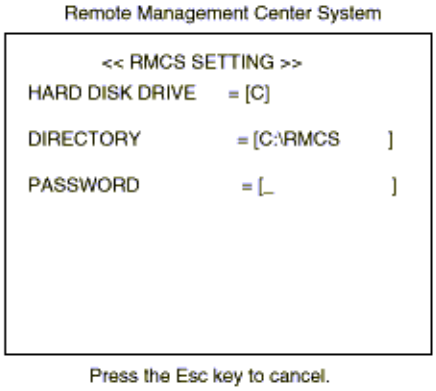
The flow of new registration is different from that of updating. First, the flow of new registration is described below.



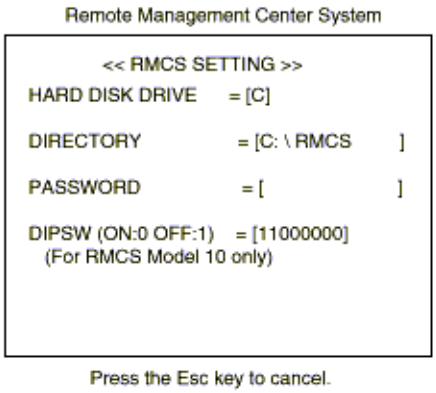
1) Enter the drive No. used to register the system.



2) Enter the directory name with up to eight alphanumeric characters.

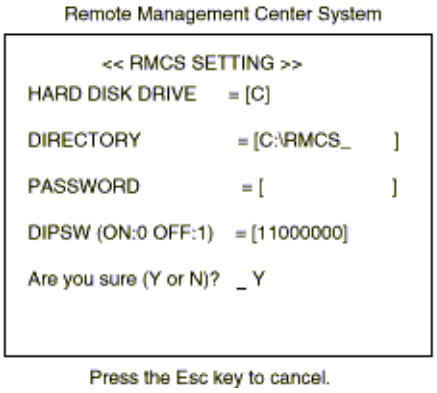


3) Register a password of up to 15 alphanumeric characters excluding [\],["]. If the system operator is not defined, password registration not required.



4) When you use RMCS Model 10, set the dip switches on the RMCS card. Normally, you need only press [Enter]. When an other extension slot and conflicting address space are being used, change the address space with the dip switches, then set the contents by using 1 and 0. When you use RMCS Model 20, you need only press [Enter].

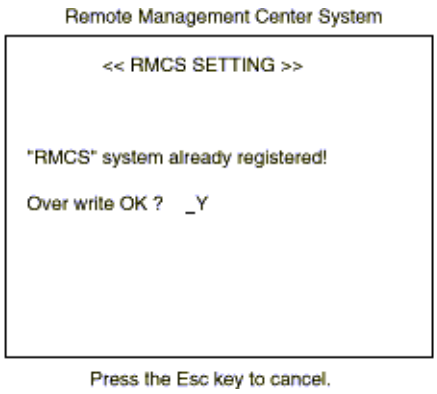
OFF corresponds to 1 and ON to 0. Therefore set the dip switches to 11000000 in the following case.



5) When the setting is correct, enter [Y]. The system is now registered. If not correct, enter [N]. Then repeat from step 1) again.

When registering the system, also register ANSI.SYS required for screen control and MOUSE.SYS for using the mouse.

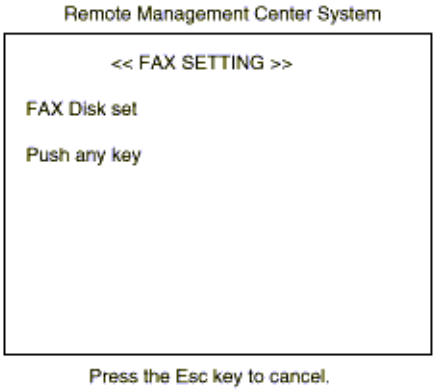
If RMCS is already set in the IBM PC/AT, RMCS SETTING MENU is displayed as below.



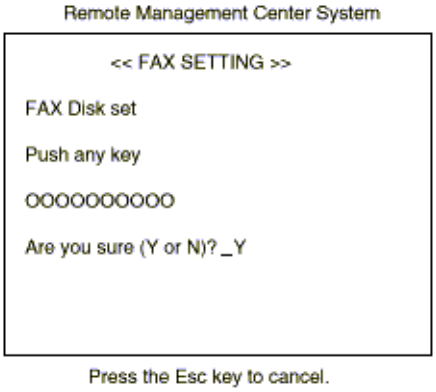
6) When updating, enter [Y]. Then updating status. When not updating, enter [N].

2.2.2 Registering the Facsimile Model No.

1) Search the directory in which the system is registered. When the system is found, register the model number.



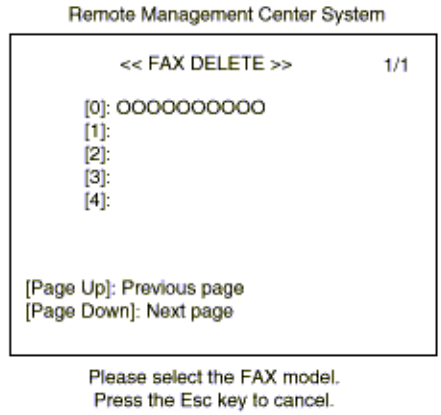
2) Insert a disk corresponding to the model into drive A, then press any key. The model number is displayed and the confirmation screen is displayed.



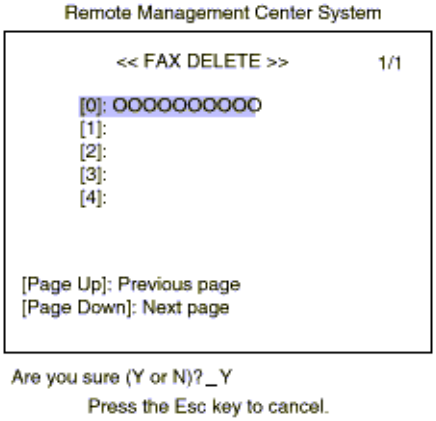
3) When the model number to be registered is correct, enter [Y]. The program corresponding to the model number is now registered. If not correct, enter [N]. Then repeat from step 1) again.

2.2.3 Deleting the Facsimile Model No.

1) Search the directory in which the system is registered. When the system is found, a list of registered models is displayed.



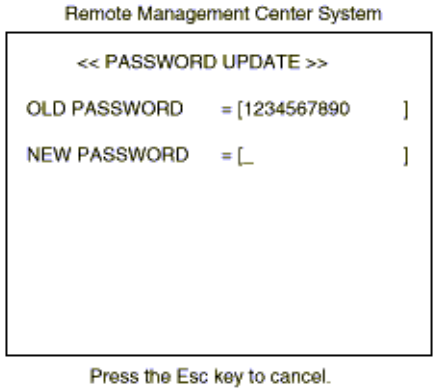
2) Select the model number to be deleted. This number is then displayed in inverse video. The confirmation screen is also displayed.



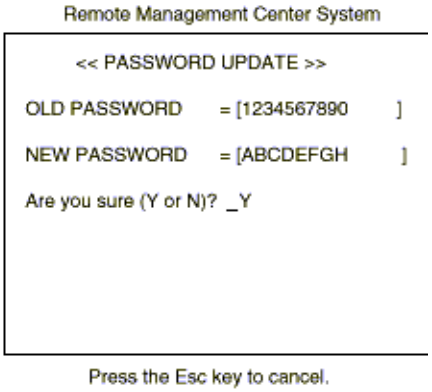
3) When the model number deleted is correct, enter [Y]. The program corresponding to the model number is now deleted. If not correct, enter [N]. Then repeat from step 1) again.

2.2.4 Updating the Password

1) Search the directory in which the system is registered. When the system is found, the old password is displayed on the screen. You are prompted to enter a new password.



2) Register a new password of up to 15 alphanumeric characters excluding [\], ["]. Press [Enter] to display the confirmation screen.

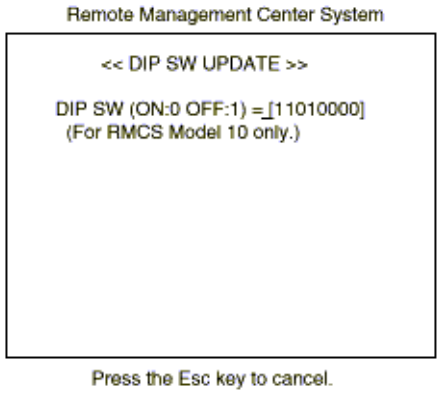


3) When the setting is correct, enter [Y]. The password is now updated. If not correct, enter [N]. Then repeat from step 1) again. If the system operator does not define the PASSWORD, PASSWORD is not checked when RMCS starting.

2.2.5 Updating the Dip Switches

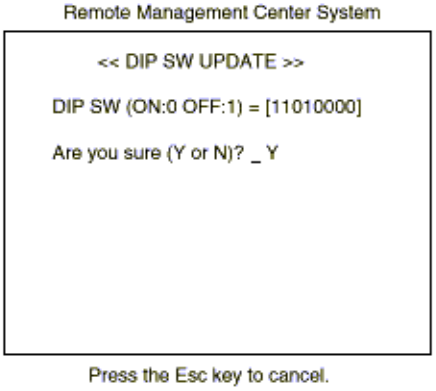
This setting is available for only RMCS Model 10.

1) Search the directory in which the system is registered. When the system is found, the dip switch setting is displayed.



For the detail of setting, refer to 2.2.1 of Appendix G.

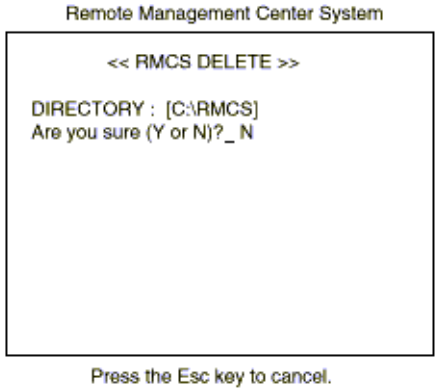
After setting is completed, press [Enter]. Then the screen for verification is displayed.



3) When the setting is corrected, enter [Y]. The dip switches are now updated. If not correct, enter [N]. Then repeat from step 1) again.

2.2.6 Deleting the RMCS Basic System

1) When to delete, enter [Y], then whole RMCS system is deleted. When not to delete, enter [N]. The installation menu appears.



3. RMCS Basic Operation

3.1 Activating and Terminating the system

3.1.1 To Activate

3.1.2 Entering the ID and Password

3.2 TEL Directory

3.2.1 To Terminate

3.2.2 Selecting Destination Drive

3.3 Main Menu

3.4 Environment Setting

3.1 Activating and Terminating the system

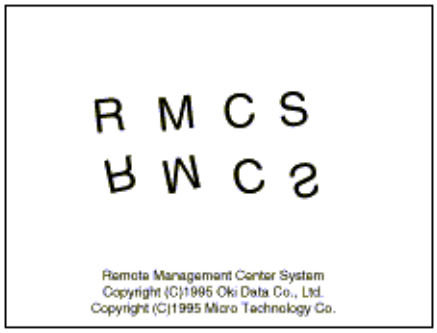
Before Activating the system

If the facsimile terminal is equipped with a selector function to "enable" or "unable" remote maintenance, set to "enable" in advance.

3.1.1 To Activate

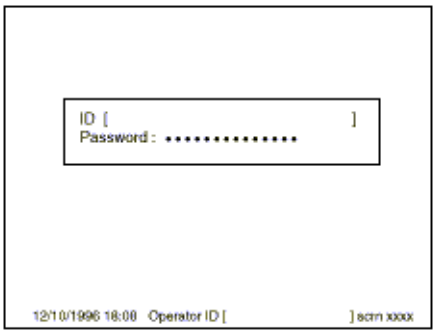
Enter the following command in the PC-DOS command input state.

C>RMCS



After completing the necessary preparations, the ID and password entry screen is displayed.

3.1.2 Entering the ID and Password



The ID is recorded in the operation report as part of the system operator history. Enter up to 50 alphanumeric characters except ["], [\] for the ID.

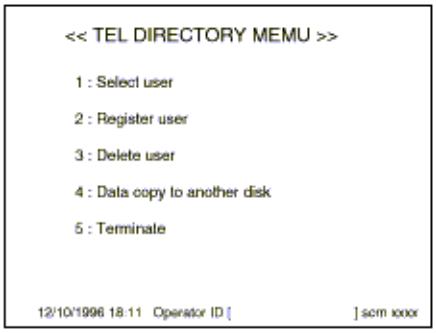
Enter the password registered at installation. When the correct password is entered. TEL Directory menu screen is displayed.

If you enter wrong password three times, ID and password entry screen is closed and return to the PC-DOS command input state.

3.2 TEL Directory

You can select such services (items) registration and deletion of information related to users.

There are two ways to specify an item: select by using the up arrow key and the down arrow key, then press [Enter] or enter the number before the item.

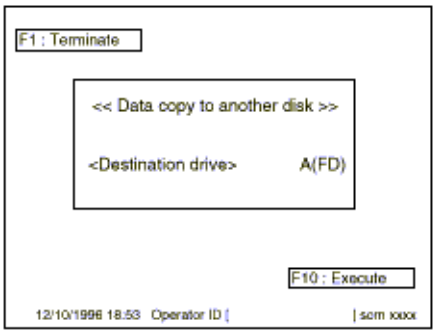


3.2.1 To Terminate

To terminate this system select "Terminate" on TEL directory menu screen or the main menu screen to return to PC-DOS.

Caution: After terminating remote management, restore the original facsimile terminal setting.

3.2.2 Selecting Destination Drive



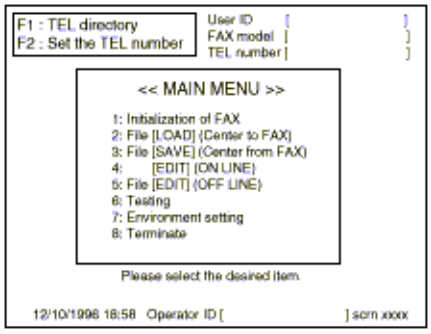
Now, select the destination drive. Press [Space] to change the drive name.

Select "Terminate" to stop processing and return to the TEL directory menu screen.

Select "Execute" to copy user information between the drives and return to the TEL directory menu screen.

3.3 Main Menu

The main menu screen varies according to FAX models.



There are two ways to specify an item: select by using the [up arrow] and [down arrow] keys, then press [Enter] or enter the number before each item.

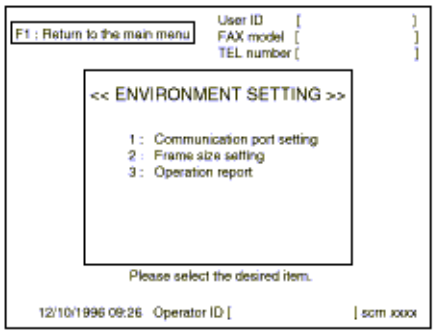
"Environment Setting" details are described later.

Submenus can also be specified by using the function keys.

Press [F1] to return to TEL directory menu screen.

Press [F2] to display the TEL number setting screen when you want to change the number registered into the user information file temporarily.

3.4 Environment Setting



Selecting "ENVIRONMENT SETTING" on the main menu to display this screen.

Communication port setting:

Select communication port to connect the IBM PC/AT and PC-I/F.

Frame size setting:

Select a frame size for each frame to transfer TEL number data and program/language/default data during execution of File [LOAD] (Center to FAX) and [EDIT] (ON LINE).

Operation report:

The operation report displays the transmission status.

Press [F1] to return to the main menu screen.

4. Message Modifying Tool

4.1 Activating the Program

4.2 Modifying Message

4.2.1 File Selection

4.3 Saving Message

4.3.1 Confirmation

4.4 Loading Message

4.4.1 Confirmation

4.5 Other Message File

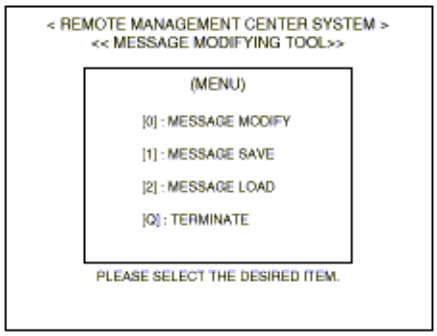
4.1 Activating the Program

After the computer finishes booting from the hard drive, insert the RMCS system disk into drive A. When C>_ is displayed, enter the following commands to activate the program.

C>A:[Enter]

A> SCRNED [Enter]

Then the screen for menu selection is displayed.

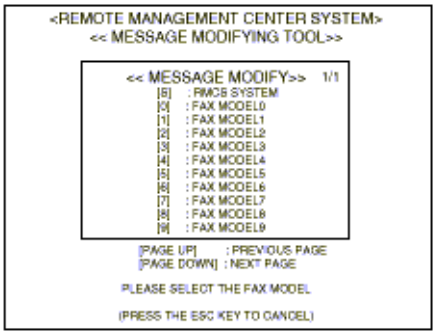


- Press [0] - [2] to display a screen for FAX model selection of each service.
- Press [Q] to terminate the program and return to PC-DOS.

4.2 Modifying Message

File selection:

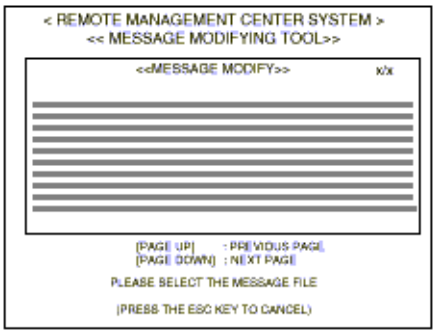
Select "MESSAGE MODIFY" on the menu screen, then the following screen is displayed.



Enter the key No. indicated on the left of the model to modify. Then the screen for file selection is displayed.

- Press [Page Up] or [Page Down] to scroll the screen back to the previous page or up to the next page.
- Press [Esc] to terminate the FAX model selection and return to the menu screen.

4.2.1 File Selection



Select the message title to modify.

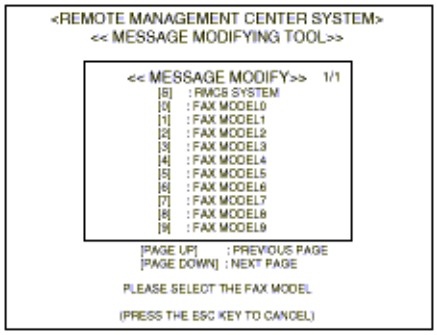
Select the position with [up arrow key], [down arrow key], [<---] and [--->] keys, and press the [Enter] key, then the position is selected.

- Press [Page Up] or [Page Down] to scroll the screen back to the previous page or up to the next page.
- Press [Esc] to terminate the title selection and return to the FAX model selection screen.

4.3 Saving Message

Model Selection:

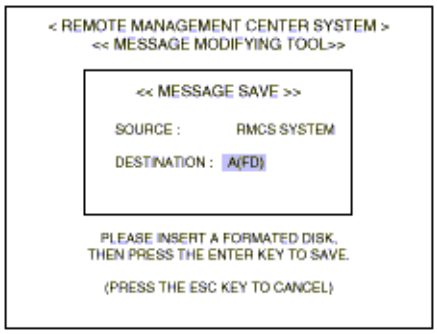
Select "MESSAGE SAVE" on the menu screen. then the following screen is displayed.



Enter the key number indicated on the left side of the model with messages to store.

- Press [Page Up] or [Page Down] to scroll the screen back to the previous page or up to the next page.
- Press [Esc] to terminate the FAX model selection and return to the menu screen.

4.3.1 Confirmation



Select a drive with the [Space] key.

Since it is assumed that data is stored on a floppy disk, you can select drive A or drive B.

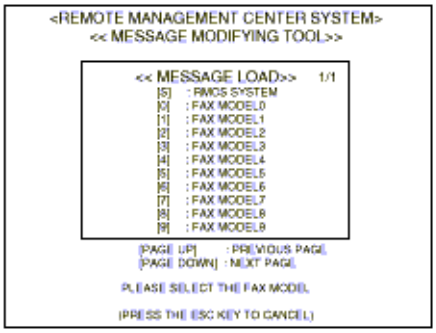
When setup is ready, insert a formatted floppy into the drive and press the [Enter] key, then saving is initiated.

- Press [Esc] to terminate saving message and return to the main menu screen.

4.4 Loading Message

Model Selection:

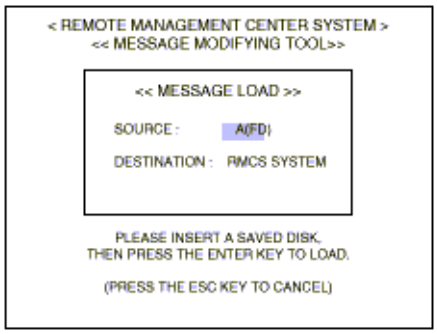
Select "MESSAGE LOAD" on the menu screen, the following screen is displayed.



Enter the key number indicated on the left side of the model with a message reset.

- Press [Page Up] or [Page Down] to scroll the screen back to the previous page or up to the next page.
- Press [Esc] to terminate the FAX model selection and return to the menu screen.

4.4.1 Confirmation



Select a drive with the [Space] key.

It is assumed that a message is loaded on the machine from the floppy disk, you can select drive A or drive B.

When setup is ready, insert a floppy disk which stores the message into the drive and press the [Enter] key.

- Press [Esc] to terminate loading message and return to the main menu screen.

4.5 Other Message File

In addition to the "scrn OOOO. lx" file, the following message files are available.

RMCS SYSTEM	
err_mess. tx	Error message text
rms_env. tx	Operator ID text
sc OOOO p. tx	Printing screen text
u_print. tx	Printing text
rms_env2. tx	New user text
online tx. tx	"ON LINE" text
inst. tx	install text

FAX MODEL	
sc OOOO p. tx	Printing screen text
online tx. tx	"ON LINE" text
scrnerr. tx	Error message text

H.1 General Information

OKIDATA's Product Service Bulletins contain technical information obtained after product release.

Firmware updates, part number changes, and procedural changes are some of the subjects covered by these bulletins.

The Product Service Bulletins are distributed via OKIDATA's Web Site, and Faxable Facts.

Use this section to store any hardcopy Product Service Bulletin information you obtain from these sources.

OKIDATA'S Web Site

OKIDATA's Web Site provides easy access to OKIDATA's product and service information. The Business Partner Exchange (BPX) provides Dealer-Only information to OKIDATA's sales and service providers. The information covers ALL OKIDATA products, and is constantly updated.

OKIDATA's Web Site address is: **www.okidata.com**

OKIDATA's Web Site for Resellers address is: **http:\\bpx.okidata.com**

I. General Information

Recommended Spare Parts Lists (RSPL's) contain the current part numbers, descriptions, and pricing information for OKIDATA product spare parts.

The Recommended Spare Parts Lists are distributed via OKIDATA's BPX Web site.

Use this section to store any hardcopy RSPL information you obtain from these sources.

OKIDATA'S Web Site

OKIDATA's Web Site provides easy access to OKIDATA's product and service information. The Business Partner Exchange (BPX) provides Dealer-Only information to OKIDATA's sales and service providers. The information covers ALL OKIDATA products, and is constantly updated.

OKIDATA's Web Site address is: **www.okidata.com**