② DC bias output voltage adjustment
Adjust VR2 so that the output voltage is –310V ±5V
For measurement, use the high voltage tester (effective value meter).

DC-Bias
Output voltage check

- → DRUM

+ → DC-Bias

VR1 (MC output voltage adjustment volume)
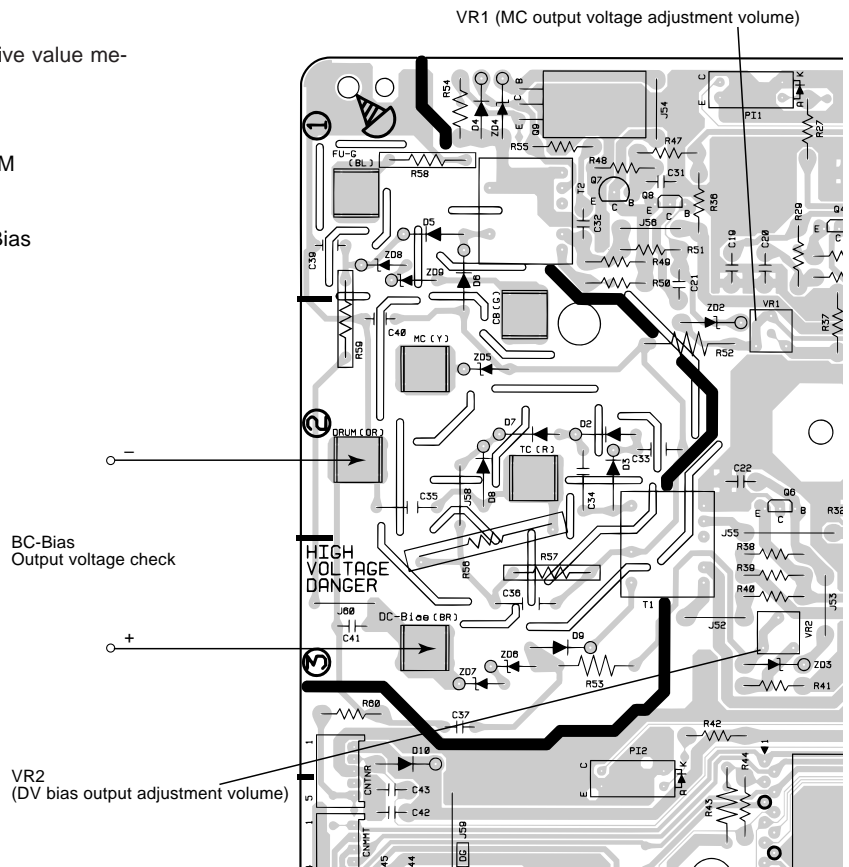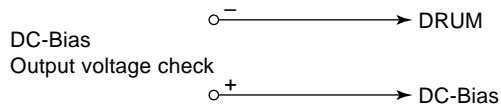
Fig.3

③ Transfer charger voltage check
After MC output voltage adjustment and DC bias output voltage adjustment, check transfer charger voltage.
Check that the output voltage is +3200V ~ +3700V.
For measurement, use a high voltage tester (effective value meter).

Transfer charger
Output voltage check

+ → D7
D8
- → DRUM
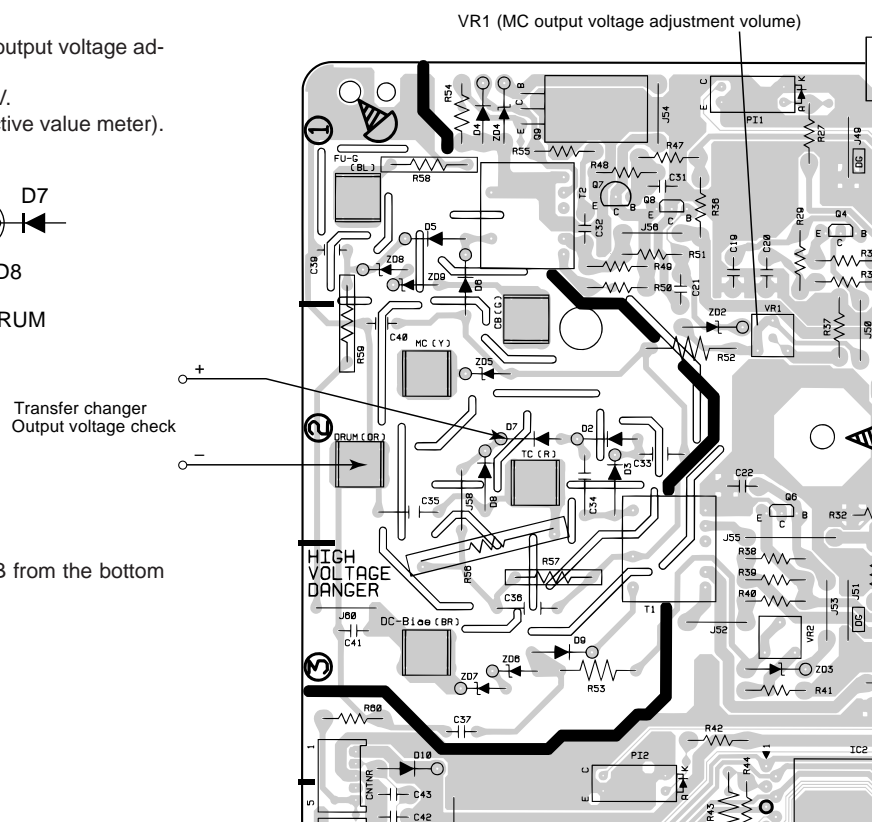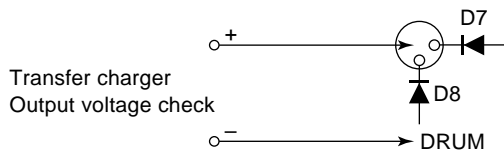
Note: For measurement, do not remove Printer PWB from the bottom plate.

VR1 (MC output voltage adjustment volume)

Fig.4

3. IC protectors replacement

ICPs (IC Protectors) are installed to protect the TX motor drive circuit and verification stamp drive circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:

(1) F100 (ICPS10) is installed in order to protect IC's from and overcurrent generated in the verification stamp drive circuit. If F100 is open, replace it with a new one.
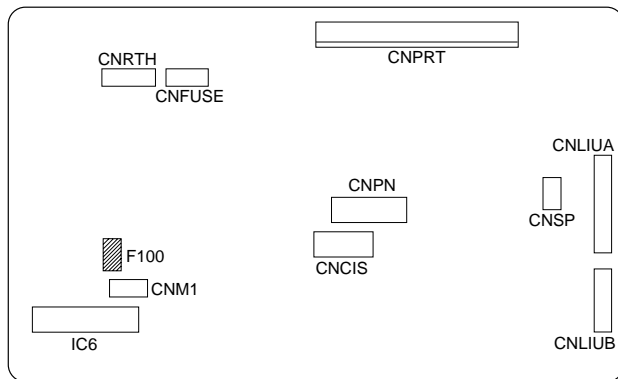
Control PWB (Bottom side)

Fig.5

4. Settings

(1) Dial mode selector

OPTION SETTING: DIAL MODE (Soft Switch No. SW2 DATA No. 1)
Use this to set the fax machine to the type of telephone line you are on.

• The factory setting is "TONE".

(step 1) Select "OPTION SETTING".

KEY: [FUNCTION] (4)

DISPLAY: | OPTION SETTING
PRESS ✕ or # |

(step 2) Select "DIAL MODE".

KEY: Push (#) until " | DIAL MODE | " is indicated because the number of (#)s changes by the models.

DISPLAY: | DIAL MODE
1= TONE, 2= PULSE |

(step 3) Select, using "1" or "2".

KEY: (1)

DISPLAY: | TONE SELECTED |

KEY: (2)

DISPLAY: | PULSE SELECTED |

(step 4) End, using the "STOP" key.

KEY: [STOP]

[2] Diagnostics and service soft switches

1. Operating procedure

Two kinds of diagnoses are supported.

1-1. Fax diagnosis

This diagnosis is concerned with the main body of fax which is used for production and service support.

Entering the diagnostic mode

Press $\boxed{\text{FUNC}} \rightarrow \boxed{9} \rightarrow \boxed{*} \rightarrow \boxed{8} \rightarrow \boxed{\#} \rightarrow \boxed{7}$, and the following display will appear.

DIAG MODE
4000MU: ROM: FAM0*
2950MU: ROM: FAN0*
2950MC: ROM: FAP0*

```
        FAM0*
        FAN0*
        FAP0*
```

Then press the $\boxed{\text{START}}$ key. Select the desired item with the $\boxed{*}$ key and the $\boxed{\#}$ key or select with the rapid key.

Enter the mode with the $\boxed{\text{START}}$ key.

(Diag • specifications)

$\boxed{\text{FUNC}} \rightarrow \text{(9)(*)(8)(\#)(7)} \rightarrow$ | 4000MU: ROM: FAM0* |
| 2950MU: ROM: FAN0* |
| 2950MC: ROM: FAP0* |

START

01	START	SOFT SWITCH MODE
02	START	ROM & RAM CHECK
03	START	AGING MODE
04	START	PANEL KEY TEST
05	START	OPTICAL ADJUST MODE
06	START	CHECK PATTERN MODE
07	START	SIGNAL SEND MODE
08	START	MEMORY CLEAR MODE
09	START	AUTO FEEDER MODE
10	START	MOTOR AGING MODE
11	START	TEL. NUMBER SET
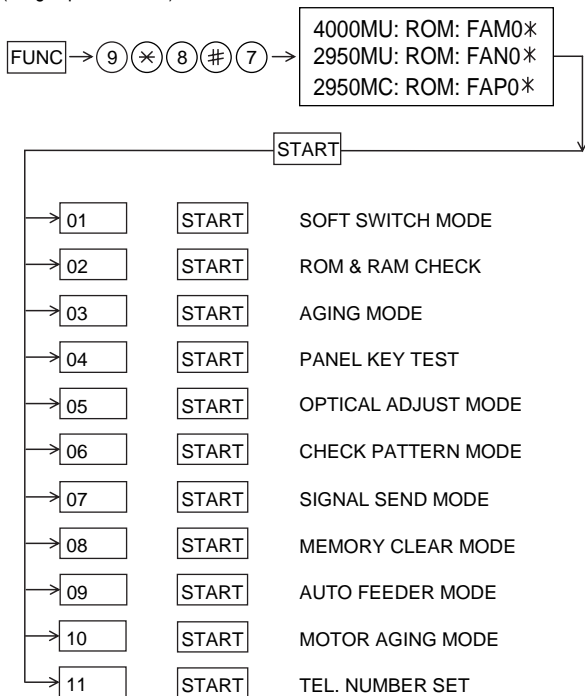
1-2. Print diagnosis

This diagnosis is concerned with the print which is used for production and service support.

Entering the diagnostic mode

Press $\boxed{\text{FUNC}} \rightarrow \boxed{9} \rightarrow \boxed{*} \rightarrow \boxed{8} \rightarrow \boxed{\#} \rightarrow \boxed{6}$, and the following display will appear.

PRINT DIAG MODE
PRESS START KEY

Then press the $\boxed{\text{START}}$ key. Select the desired item with $\boxed{*}$ the key and the $\boxed{\#}$ key or select with the rapid key.

Enter the mode with the $\boxed{\text{START}}$ key.

(Diag • specifications)

$\boxed{\text{FUNC}} \rightarrow \text{(9)(*)(8)(\#)(6)} \rightarrow \boxed{\text{PRINT DIAG MODE}} \rightarrow$

START

01	START	AREA PRINT MODE
02	START	CHECK PATTERN 1
03	START	CHECK PATTERN 2
04	START	CHECK PATTERN 3
05	START	PAPER FEED AGING
06	START	LIFE SET MODE
07	START	LIFE ALL CLEAR
08	START	LIFE ENTRY MODE
09	START	TOP ADJUST MODE
10	START	LIFE CLEAR MODE
11	START	MAIN CHARGER ADJUST
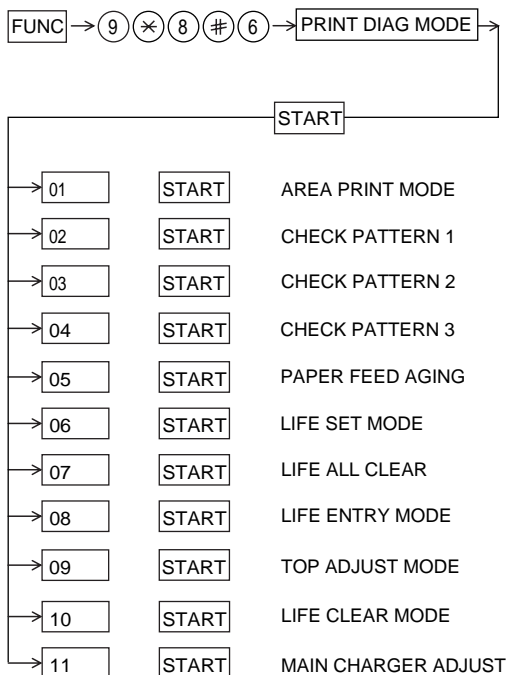
Memory clear when power is turned on

Pressing the START and STOP keys, turn on the main power, and the following message will be displayed.

MEMORY CLEAR?
YES: START

Press START key, the memory will be cleared to be ready for operation. Press COPY key, the memory will be cleared to be ready for process check.

If press the other keys, it will continue ready for operation as it is.

2. Diagnostic items description

2-1. Fax diagnosis

1) Soft switch mode

The soft switches are provided so that each operation mode can be set by using the operation panel.
In this mode, these switches can be checked and set.
The contents of these switches are backed up.

Soft switch mode screen

```
SOFT SWITCH MODE
SW01=00000000
```

Switch   1 2 3 4 5 6 7 8   :DATA No.
No.   Data

① Switch number selection
- Press START key for setting of the next soft switch. If the soft switch number is the final, pressing START key will exit the soft switch mode.
- Enter two digits of a soft switch number to set the switch number.

```
SOFT SWITCH MODE        SOFT SWITCH MODE        SOFT SWITCH MODE
SW02=00100000           SW1▮                    SW15=00100000
              1                         6
```

② Data number selection
The cursor position shows the data to be set.
Pressing # key moves the cursor to the right. If, however, the cursor is on data number 8, pressing # key shifts the cursor to data number 1 of the next switch number. If the switch number is the final, pressing # key will exit the soft switch mode.
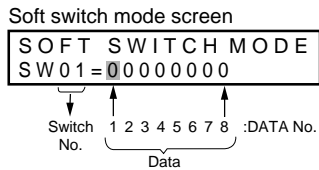Pressing ✕ key moves the cursor to the left. If, however, the cursor is on data number 1, pressing ✕ key shifts the cursor to data number 1 of the former switch number. If the switch number is 1, pressing ✕ key will not move the cursor and the error buzzer will sound.

③ Data setting method
Press the FUNCTION key, and the data at the position of the cursor will be reversed to 0 when it is 1, or to 1 when it is 0. (If the soft switch can not be changed at the bit the error buzzer will sound with the process not received.), When you press the START key or the # key and the cursor moves to the next switch position, the changes in the contents of the previous switch position will be saved. If you do not want to save your changes, press the STOP key.

④ Outputting method of soft switch list
In the soft switch mode, press the COPY/HELP key, and the soft switch list will be output.
If the recording paper runs out or is clogged, condition is held until recording paper is prepared, and an error buzzer doesn't ring.

⑤ Prohibition against changing individual pieces of data and synchronized data changes
At present, there is no prohibition against changing data individually and there is also no capability to make synchronized changes to data. (The ECM may be turned on or off while using image memory.)

2) ROM & RAM check

ROM executes the sum check, and RAM executes the matching test.
If any error occurs, the buzzer will inform it. (Refer to the following table). Finally, the result will be printed.

Number of buzzer sounds	Device checked
1 time <Short sound>	MAIN ROM
2 times <Short sounds>	S-RAM
3 times <Short sounds>	D-RAM
4 times <Short sounds>	CPU integrated ROM/RAM

The buzzer beep pattern is: on for 0.25 seconds and then off for 0.25 seconds.

3) Aging mode

If any document is set up in the first state (when started), copying will be executed. If it is not set up, "check pattern" of the print diagnosis is output at the intervals of 1 sheet/5 minutes. (A total of 10 sheets are output.)

4) Panel key test

This is used to check whether each key is normally operated or not. According to the key input, LCD is displayed.
1) When the START key is pressed while PANEL KEY TEST is being displayed, a test will start. Since all of the LEDs will light up in sequence until the test is finished, the LED operation can be checked as well.
2) Press all of the keys one at a time, but do not press the STOP key. Every time a key is pressed, the name of that key will appear in the display.
3) Finally, press the STOP key. If there was a key you pressed that was not detected when the STOP key is pressed, PANEL TEST NG! will be displayed. When all of the keys have been pressed and detected, PANEL TEST OK! will be displayed.
Then the display will go blank, which is OK. If there was an NG, any key which was not pressed or not detected will be printed in the result table. (For details about the printout format, see the list function specifications.)

5) Optical adjust mode

In this mode, the optical system is adjusted. Document feeding can be started by pressing the START key two times. It can be stopped by pressing the STOP key.

6) Check pattern mode

The effective printing area used will be according to the size specified. A copy of a pattern will be printed, and the printing will be complete.

7) Signal send mode

This mode is used to send various signals to the circuit during FAX communication. Every push of START key sends a signal in the following sequence.

[1] No signals (CML-ON)

[2] 14400bps (V. 33)

[3] 12000bps (V. 33)

[4] 14400bps (V. 17)

[5] 12000bps (V. 17)

[6] 9600bps (V. 17)

[7] 7200bps (V. 17)

[8] 9600bps (V. 29)

[9] 7200bps (V. 29)

[10] 4800bps (V27ter)

[11] 2400bps (V27ter)

[12]   300bps (FLAG)

[13] 2100Hz (CED)

[14] 1100Hz (CNG)

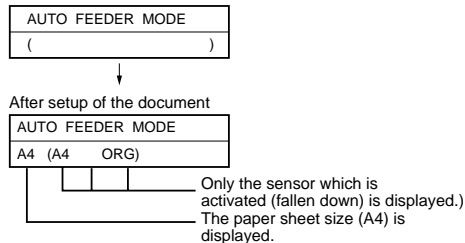[15] END

8) Memory clear mode

This mode is used to clear the backup memory and to reset to the factory default setting.
The content of each setting will be cleared. Then, the initialized list be output.

9) Auto feeder mode

The auto feed function can be checked by inserting and discharging the document. (After entering this mode, when a document is placed in the machine and the START key is pressed, the operation will start.0)

After this mode is activated, the document size A4(A4   ) and sensor information A4(A4   ORG) are displayed when the document sensor is turned.

```
AUTO  FEEDER  MODE
(                        )
```

↓

After setup of the document

```
AUTO  FEEDER  MODE
A4  (A4       ORG)
```

Only the sensor which is activated (fallen down) is displayed.)
The paper sheet size (A4) is displayed.

10) Motor aging mode

Regardless of the presence or absence of a document, the transmission system motor will continue to run until the STOP key is pressed. When the START key is pressed after this mode has been selected, the motor will run at the STANDARD mode speed. Then, when the image quality is changed using the RESOLUTION key, the motor will run at the speed used for that image quality.
(When HALF-TONE is selected, the motor will run at the FINE modespeed.)

11) TEL. number set

The function is used to simplify the registration of FAX/TEL No. during aging.

① The diagnosis mode is activated. If anything is not registered in the Rapid number 01 or any program or group is registered, it will pass the diagnosis without doing anything.

② The FAX number (including the substitutive destination) of the Rapid number 01 is copied to the Rapid numbers 02 thru 19.

③ FAX number of the Rapid number 01 is copied to SPEED key numbers 00 thru 99.

④ If any chain dial is not set in the Rapid number 01, the Rapid numbers 01 thru 19 and SPEED key numbers 00 thru 10 are registered in the group number 04.
If any chain dial is set, the group will be not produced but the chain dial setting alone of the Rapid number 01 will be reset.
(In all others except the Rapid number 01, the chain dials will be continuously set as they are.)

Rapid key	RXX	XX	: Rapid number
SPEED key	SXX	XX	: Speed key number

(12th and subsequential letters of the destination name registered in the Rapid number 01 will be discarded.)

2-2. Print diagnosis

Rapid key 01: Area print mode

The effective printing area frame is printed in the specified sheet size.

4mm
4mm
4mm   208mm   4mm
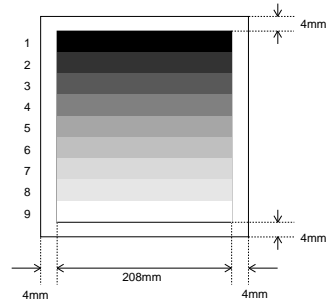
1. [Full black pattern]
2. [Intermediate tone 2 pattern]
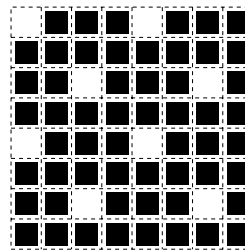
The left pattern is repeated.

3. [Intermediate tone 1 pattern]
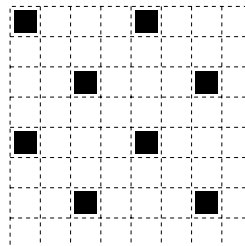
The left pattern is repeated.

4. [Mesh point pattern]
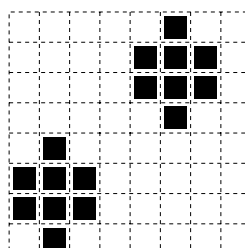
The left pattern is repeated.

5. [Longitudinal strip 2 pattern]
   Black 2 dot and white 2 dot are repeated in line.
6. [Lateral strip 2 pattern]
   Black 2 line and white 2 line are repeated.
7. [Longitudinal strip 1 pattern]
   Black 1 dot and white 1 dot are repeated in line.
8. [Lateral strip 1 pattern]
   Black 1 line and white 1 line are repeated.
9. [Full White pattern]

Rapid key 02: Check pattern 1

The lateral stripe 2 pattern is printed on one sheet.
(Black 2 line and white 2 line are repeated.)

Rapid key 03: Check pattern 2

The lateral stripe 2 pattern is printed on multiple pages.
Press the STOP key to end the printing.

Rapid key 04: Check pattern 3

The intermediate tone 1 is printed on one sheet.

Rapid key 05: Paper feed aging

The mode is used for aging related to the printing. In this mode, the following modes are provided.

①　Blank paper aging mode (ALL WHITE AGING)
②　Whole black print aging mode (ALL BLACK AGING)
③　4% printing aging mode (4% AGING)

After selecting the paper-feed aging mode in the print diagnosis mode, input the number of each mode above with the ten-key, and the mode will be executed. The detailed specifications of each mode are described as follows. Here, the operation in each mode is stopped only when the STOP key is pressed by the operator or a printing-impossible error occurs.

● Blank paper aging mode (ALL WHITE AGING)
In the mode, printing is continued in the whole white (white paper) printing pattern until the STOP key is pressed by the operator. (In the printing area)

● Whole black printing aging mode (ALL BLACK AGING)
In the mode, printing is continued in the whole black (whole black) printing pattern until the STOP key is pressed by the operator. (In the printing area)

Rapid key 06: Life set mode

The mode is used to set the life counter of the printer and the counter of the auto feeder at desired values. For setting, proceed with the following procedure.

①　When the life counter setting mode is selected, the following will be is displayed.

```
          ┌─────────────────────────────┐
          │                             │
          │   MACHINE = 0 0 0 1 2 3      │
          │                             │
          │   DRUM  LIFE = 0 0 0 1 2 3   │
          │                             │
          │   LIFE1 = 0 0 0 1 2 3        │
# key     │                             │   ✕ key
          │   LIFE2 = 0 0 0 1 2 3        │
          │                             │
          │   LIFE3 = 0 0 0 1 2 3        │
          │                             │
          │   FEEDER  LF = 0 0 0 1 2 3   │
          │                             │
          │   TONER  LF = 0 0 0 1 2 3    │
          │                             │
          └─────────────────────────────┘
```

The cursor blinks at the top data.

Seven counters can be selected with the "#" and "✕" keys.

②　In the state ①, input a desired setting number of 6 digits with the ten-key.

③　After input of 6 digits, shift to another counter with the "#" and "✕" keys as necessary. When all necessary counters are completely input, press the START key.

④　"STORED" will be displayed with the set values stored into the memory. For checking, retry this mode.

Note:
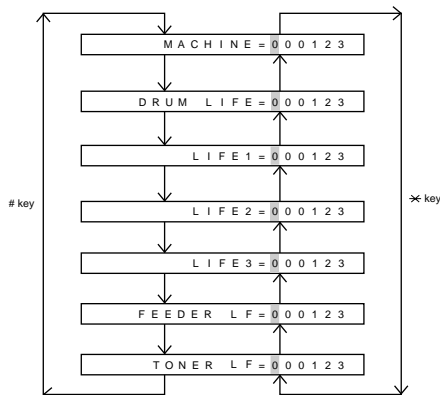This counter indicates the printer use conditions such as numbers of printed pages from the beginning of use. In the normal memory clear condition, the counter will not be reset.
In conditions including damaged memory contents caused by repairing the panel, this counter should be reset or cleared in addition to the ordinary memory clear.

Rapid key 07: Life all clear

The mode is used to clear the life counter of the printer of the counter of the auto feeder.

Note: The counter shows the operational state of the printer (e.g. how many sheets have been printed since start of use?). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset this counter in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 08: Life entry mode
(For Serviceman temporary counter)

The mode is used to set a desired value for the judgment value (alarm judgment counter value) of the general purpose life counters 1 thru 3 of the printer. If the life of a consumable part (developer, imprinter, etc) is set, the model which has the error display and RMS function will inform RMS when the counter reaches the set value. For setting, proceed with the following procedure.

①　When the life counter entry mode is selected, the following will be displayed.

```
          ┌─────────────────────────────┐
          │                             │
          │   LIFE1 = 0 0 0 1 2 3        │
          │                             │
# key     │   LIFE2 = 0 0 0 1 2 3        │   ✕ key
          │                             │
          │   LIFE3 = 0 0 0 1 2 3        │
          │                             │
          └─────────────────────────────┘
```
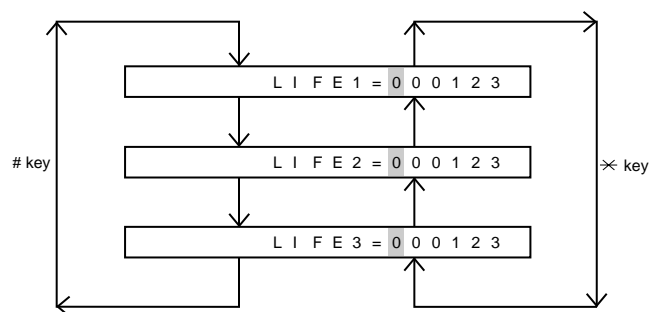
The cursor blinks at the top data.
Three counters can be selected with the "#" and "✕" keys.

②　In the state ①, input a desired setting number of 6 digits with the ten-key.

③　After input of 6 digits, shift to another counter with the "#" and "✕" keys as necessary. When all necessary counters are completely input, press the START key.

④　"STORED" will be displayed with the set values stored into the memory. For checking, retry this mode.

Note: The counter shows the operational state of the printer (how many sheets have been printed since start of use? and others). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset the counter or do the clear process in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 9: Top adjust mode

Adjust the top margin for printing on a page. You can enter any value from 0 to 99 using the ten-key keypad.
The standard (initial) value is 50.
When the setting is increased, the print start position will be moved closer to the beginning of page.
When the setting is decreased, the print start position will be moved further away from the beginning of page.

Rapid key 10: Life clear mode

The mode is used to respectively clear the life counter of the printer and the counter of the auto feeder. For setting, proceed with the following procedure.

① When the life counter clearing mode is selected, the following will be is displayed.

  Seven counters can be selected with the "#" and "✕" keys.

```
          ┌──────────────────────────────────┐
# key     │      MACHINE  LF  CLEAR          │     ✕ key
          ├──────────────────────────────────┤
          │      DRUM  LIFE  CLEAR           │
          ├──────────────────────────────────┤
          │         LIFE 1  CLEAR            │
          ├──────────────────────────────────┤
          │         LIFE 2  CLEAR            │
          ├──────────────────────────────────┤
          │         LIFE 3  CLEAR            │
          ├──────────────────────────────────┤
          │      FEEDER  LF  CLEAR          │
          ├──────────────────────────────────┤
          │      TONER  LIFE  CLEAR         │
          └──────────────────────────────────┘
```
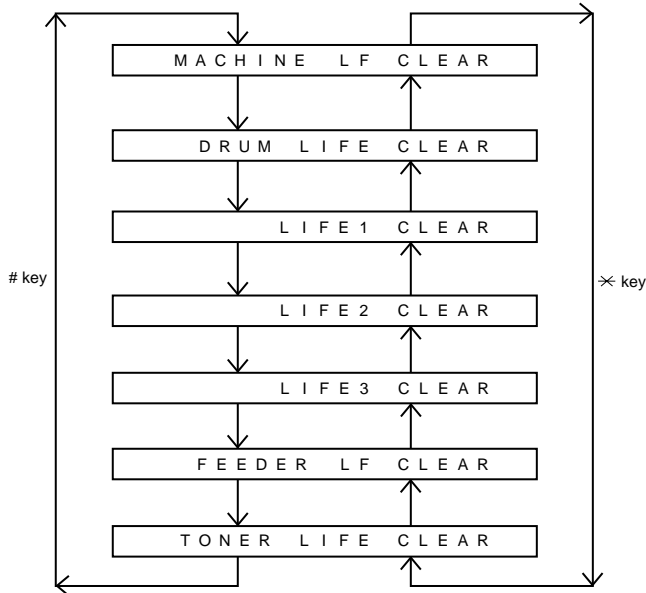
② In the state of ①, select the counter value you want to clear using the "#" key or the " ✕ " key, and then press the START key.

③ "CLEARED " will be displayed, and the counter value will be cleared. After clearing the counter value, another counter value can be cleared using the # or ✕ key, if desired. Press the STOP key to exit from the mode.

Note: The counter shows the operational state of the printer (how many sheets have been printed since start of use? and others). The ordinary memory does not reset the counter. Accordingly, it is necessary to reset the counter or do the clear process in addition to the ordinary memory clear if the content in the memory on the control PWB is broken because of PWB repair, etc. (In the production stage, it is necessary to execute this in the last process.)

Rapid key 11: Main charger adjust

This mode is used to control voltage of main charger.

3. How to make soft switch setting

To enter the soft switch mode, make the following key entries in sequence.

Press FUNCTION 9 ✳ 8 # 7 START 0 1 START

⇩

S F T S W 1 = 0 0 0 0 0 0 0 0

S F T S W 1 = 1 0 0 0 0 0 0 0   Press FUNCTION key.

S F T S W 1 = 1 0 0 0 0 0 0 0   Press # key.

S F T S W 1 = 1 0 0 0 0 0 0 0   Press ✳ key.

S F T S W 1 = 1 0 0 0 0 0 0 0   Bit1 - 8 are set.

Press START key during setting.

S F T S W 2 = 0 0 0 0 0 0 0 0

S F T S W 53 = 0 0 0 0 0 0 0 0   Soft SW2 - 53 are set.

• To finish the settings halfway between SW 1 and SW53, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW Nos. remain in effect.

The soft switch mode is terminated.

4. Soft switch description

• Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function 1				0		Initial setting	Remarks
SW1	1	Recall interval	Binary input	8 4 2 1					0	OPTION
	2		No. =	1 2 3 4					1	Set to 01~15
	3			0 1 0 1 (5 x 60 sec = 5 min)					0	
	4								1	
	5	Recall times	Binary input	8 4 2 1					0	OPTION
	6		No. =	5 6 7 8					0	Set to 0~10
	7			0 0 1 0 (Twice)					1	
	8								0	
SW2	1	Dial mode	Pulse				Tone		0	OPTION
	2	Reception mode	Auto				Manual		1	Recep key
	3	ECM mode	No				Yes		0	OPTION
	4	CNG detection in standby mode	No				Yes		0	OPTION
	5	Polling security	On				Off		0	FUNC +3
	6	Automatic cover sheet	No				Yes		1	OPTION
	7	Junk fax function in manual reception	Yes				No		0	
	8	Anti junk fax function	Yes				No		0	OPTION
SW3	1	Number of rings for auto receive	Binary input	8 4 2 1					0	OPTION
	2		No. =	1 2 3 4					1	
	3			0 1 0 0 (4 times)					0	
	4								0	
	5	Automatic switching manual to auto receive	Binary input	8 4 2 1					0	
	6	mode	No. =	5 6 7 8					0	
	7	(0: OFF)		0 0 0 0 (off)					0	
	8								0	

SW4		Communication results printout (transaction report)		Error	Err/Tmr/Mem	Send only	No print	Always		OPTION
	1		No. 1	0	0	0	1	1	0	
	2		No. 2	0	0	1	0	1	0	
	3		No. 3	1	0	0	0	0	1	
	4	Delay timer before line connect in auto dial	3 sec			0 sec			0	
		Delay timer of after line connect in auto dial		3.6 sec	3.0 sec	1.7 sec	3.0 sec			
	5		No. 5	1	1	0	0		0	
	6		No. 6	1	0	1	0		1	
		Number of CNG detect (STAND-BY mode)		1 pulse	2 pulses	3pulses	4 pulses			
	7		No. 7	0	0	1	0		0	
	8		No. 8	0	1	0	0		1	

SW5	1	Time format	24-hours			12-hours		0	
	2	Date format	Month-Day-Year			Day-Month-Year		1	
	3	Sender's information transmit	Off			On		0	
	4	Footer print	On			Off		0	
	5	Reserved						0	
	6	Substitute reception	Off			On		0	
	7	Substitute reception conditions	Reception disable without TSI			Reception enable without TSI		0	
	8	CSI transmission	Off			On		0	

SW NO.	DATA NO.	ITEM	Switch setting and function (1)	Switch setting and function (0)	Initial setting	Remarks
SW6	1	H2 mode	No	Yes	0	
	2	MH fixed	Yes	No (depends on remote machine)	0	
	3	Reserved			0	
	4	Reserved			0	
	5	Modem speed (DCS data reception speed)			1	
	6				0	
	7				0	
	8				0	

Modem speed (DCS data reception speed):

	V.17 14400	12000	9600	7200	V.29 9600	7200	V.27ter 4800	2400
No. 5	1	1	1	1	0	0	0	0
No. 6	0	0	0	0	0	0	0	0
No. 7	0	1	0	1	0	1	1	0
No. 8	0	0	1	1	1	1	0	0

SW NO.	DATA NO.	ITEM	Switch setting (1)	Switch setting (0)	Initial setting	Remarks
SW7	1	Reception speed fixed			0	When 14400BPS modem used, setting to 14400BPS is ignored.
	2				0	
	3	DIS receive acknowledgement during G3 transmission	Twice	0	0	
	4	Non modulated carrier for V.29 transmission mode	On	Off	0	
	5	EOL detect timer	25 sec	13 sec	0	
	6	Reserved			0	
	7	Reserved			0	
	8	Length limitation of copy/send/receive	No limit	Copy/Send:1m Receive:1.5m	0	

Reception speed fixed:

	NO	V.17-14400BPS	V.29-9600BPS	V.27ter-4800BPS
No. 1	0	1	0	1
No. 2	0	1	1	0

SW NO.	DATA NO.	ITEM	Switch setting (1)	Switch setting (0)	Initial setting	Remarks
SW8	1	Digital line equalization setting (Reception)			0	
	2				1	
	3	Dial pausing (sec/pause)	2sec	4sec	1	
	4	Signal transmission level	Binary input 16 8 4 2 1		0	
	5		No. = 4 5 6 7 8		1	
	6		0 1 0 0 0 (−8 dBm)		0	
	7				0	
	8				0	

Digital line equalization setting (Reception):

	0Km	1.8Km	3.6Km	7.2Km
No. 1	0	0	1	1
No. 2	0	1	0	1

SW NO.	DATA NO.	ITEM	Switch setting (1)	Switch setting (0)	Initial setting	Remarks
SW9	1	CED tone signal interval			0	
	2				0	
	3	Equalizer freeze control (MODEM)	On	Off	0	
	4	Equalizer freeze conditions	All	7200bps	0	
	5	CED detection time	500ms	1000ms	0	
	6	Reserved			0	
	7	Reserved			0	
	8	Busy tone detection (after auto dial)	Yes	No	1	

CED tone signal interval:

	75ms	500ms	750ms	1000ms
No. 1	0	0	1	1
No. 2	0	1	0	1

SW NO.	DATA NO.	ITEM	Switch setting (1)	Switch setting (0)	Initial setting	Remarks
SW10	1	Reserved			0	
	2	Reserved			0	
	3	CI off detection timer (Distinctive ring setting off only)			0	
	4				1	
	5	Distinctive ringing setting Factory setting : OFF			0	OPTION RING4/RING5 Canada Only
	6				0	
	7				0	
	8				0	

CI off detection timer:

	1200ms	1000ms	700ms	350ms
No. 3	0	1	0	1
No. 4	0	0	1	1

Distinctive ringing setting:

	OFF	STD	RING1	RING2	RING3	RING4	RING5
No. 5	0	0	1	0	1	0	1
No. 6	0	0	0	1	1	0	0
No. 7	0	0	0	0	0	1	1
No. 8	0	1	0	0	0	0	0

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SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW11		End buzzer			3sec	1sec	No Beep	No Beep		OPTION
	1		No. 1	0	0	1	1		0	
	2		No. 2	0	1	0	1		0	
	3	Communication error treatment in RTN sending mode (reception)	No communication error			Communication error			0	
	4	CNG transmission after auto dialing	No			Yes			0	
	5	Error criterion	10 ~ 20 %			5 ~ 10 %			0	
	6	Pulse to tone change by ⋇ key	On			Off			0	
	7	CNG transmission in manual transmission	No			Yes			0	
	8	Reserved							0	
SW12	1	DTMF signal transmission level (Low)	Binary input 16 8 4 2 1						0	
	2		No. = 1 2 3 4 5						1	
	3		0 1 0 0 0 (−4.0dBm)						0	
	4								0	
	5								0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW13	1	DTMF signal transmission level (High)	Binary input 16 8 4 2 1						0	
	2		No. = 1 2 3 4 5						0	
	3		0 0 1 0 0 (−2.0dBm)						1	
	4								0	
	5								0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW14	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							1	
	5	Reserved							1	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW15	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	

SW NO.	DATA NO.	ITEM	Switch setting and function 1					Switch setting and function 0	Initial setting	Remarks
SW16	1	Reserved							1	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							1	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW17		Speaker volume (3 stages)		High	High	Middle	Low			Using Volume key
	1		No. 1	0	0	1	1		1	
	2		No. 2	0	1	0	1		0	
		Hand-set receiver volume (3 stages)		High	High	Middle	Low			Using Volume key
	3		No. 3	0	0	1	1		1	
	4		No. 4	0	1	0	1		0	
		Ringer volume (4 stages)		Off	High	Middle	Low			Using Volume key
	5		No. 5	0	0	1	1		1	
	6		No. 6	0	1	0	1		0	
		Key volume		Off	High	Low	Low			
	7		No. 7	0	0	1	1		1	
	8		No. 8	0	1	0	1		0	
SW18	1	Reserved							1	
	2	Auto reception in PC I/F mode	FAX					PC	1	FUNC + #
	3	Summer time setting	No					Yes	1	FUNC + 3
	4	Sender's phone number setting	Cannot change					Change allowed	0	
	5	Polling key	Yes					No	0	OPTION
	6	Activity report print	Automatic printout					No printout when memory full	0	OPTION
	7	Total communication hours and pages print	Off					On	0	
	8	Line density selection	Fine					Standard	0	OPTION
SW19		Density adjustment (when Fine/STD mode)		Normal	Faint	Deep	Deep (when Dark mode)			
	1		No. 1	0	0	1	1		0	
	2		No. 2	0	1	0	1		0	
		Density adjustment (when Half-tone mode)		Normal	Faint	Deep	Deep (when Dark mode)			
	3		No. 3	0	0	1	1		0	
	4		No. 4	0	1	0	1		0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							1	
	8	Reserved							0	
SW20	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	F.A.S.T (RMS) mode	On					Off	1	
	8	Quick on-line	Yes					No	1	OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function 1			0			Initial setting	Remarks
SW21	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							1	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW22	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW23	1	Automatic reduce of receive	Auto			100%			1	OPTION
	2	Cut off mode (COPY mode)	Continue			Cut-off			0	OPTION
		Paper set size		Letter	Legal	A4	Letter			OPTION
	3		No. 3	0	0	1	1		0	
	4		No. 4	0	1	0	1		0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW24		DTMF detection time		50ms	80ms	100ms	120ms			
	1		No. 1	0	0	1	1		0	
	2		No. 2	0	1	0	1		0	
	3	Protection remote reception (5✂✂) detect	Yes			No			0	OPTION
	4	Reserved							0	
	5	Remote operation code figures by external	Binary input 8 4 2 1						0	OPTION
	6	tel (0 ~ 9)	No. = 5 6 7 8 (Data No.)						1	
	7		EX 0 1 0 1						0	
	8		eg. 5✂✂						1	
SW25	1	Busy tone detection ON/OFF time (Shorter duration)	350ms			150ms			0	
		Busy tone detection ON/OFF time		650ms	900ms	2700ms	900ms			
	2	(Longer duration)	No. 2	0	0	1	1		0	
	3		No. 3	0	1	0	1		1	
	4	Busy tone continuous sound detect time	10sec			5sec			1	
	5	Busy tone detect continuation sound detect	No			Yes			0	
	6	Busy tone detect intermittent sound detect	No			Yes			0	
		Busy tone detection pulse number		2pulses	4pulses	6pulses	10pulses			
	7		No. 7	0	0	1	1		0	
	8		No. 8	0	1	0	1		1	
SW26	1	TAD connect	Yes			No			0	Recep key
	2	Fax switching when A.M. full	Yes			No			0	OPTION
		Selection time of quiet detection		30sec	40sec	50sec	60sec			
	3		No. 3	0	0	1	1		0	
	4		No. 4	0	1	0	1		1	
		Number of CNG detect (AM mode)		1pulse	2pulses	3pulses	4pulses			
	5		No. 5	0	0	1	1		0	
	6		No. 6	0	1	0	1		1	
	7	Reserved							0	
	8	Reserved							1	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW27	1	Quiet detect time	Binary input 8 4 2 1		0	OPTION
	2		No. = 1 2 3 4		1	
	3		0 1 0 0 (4sec)		0	
	4				0	
	5	Quiet detect start timing	Binary input 8 4 2 1		0	
	6		No. = 5 6 7 8		1	
	7		0 1 0 1 (5sec)		0	
	8				1	
SW28	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW29	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW30	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW31	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW32	1	Reserved			0	
	2	Reserved	2 – 16		0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW33	1	Reserved			0	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW34	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW35	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			1	
SW36	1	Reserved			1	
	2	Reserved			1	
	3	Reserved			1	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			1	
	7	Reserved			0	
	8	Reserved			0	
SW37	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW38	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW39	1	Reserved			0	
	2	Reserved	2 – 17		0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW40	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW41	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW42	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW43	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW44	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW45	1	Reserved			0	
	2	Reserved	2 – 18		0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW46	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW47	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW48	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW49	1	Reserved			1	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW50	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW51	1	Reserved			0	
	2	Reserved	2 – 19		0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW52	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			1	
	5	Reserved			1	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			0	
SW53	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			1	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			1	
	8	Reserved			1	

• Soft switch function description

SW1 No. 1 ~ No. 4 Recall interval

Choice is made for a recall interval for speed, rapid dial numbers, ten key +START and search + START. Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

SW1 No. 5 ~ No. 8 Recall times

Choice is made as to how many recall times should be made. Use a binary number to program this.

SW2 No. 1 Dial mode

Switch the type according to the telephone circuit connected to the fac-simile.

0: TONE DIAL

1: PULSE DIAL

SW2 No. 2 Reception mode

Auto/manual receiving mode is set.

SW2 No. 3 ECM mode

Used to determine ECM mode function. Refer to the following table.

SW2- No. 3 ECM mode		0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
SW6- No. 2 MH fixed		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Compression method	ECM MMR mode	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No
	ECM MR mode	Yes	No	Yes	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No
	ECM MMH mode	Yes	Yes	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No
	ECM MH mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No
	MR mode	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	MH mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(Depending on remote machine)

SW2 No. 4 CNG detection in standby mode

The CNG signal detection function during stand-by stops.

0: Yes

1: No

SW2 No. 5 Polling security

This switch is employed to enable or disable the polling operation using the ID code verification function, in order to prevent unauthorized poll-ing operation.

SW2 No. 6 Automatic cover sheet

When "0" (=YES) is selected, the cover sheet is automatically sent after transmission of the original to notify the receiver of the number of origi-nal sheets transmitted.

SW2 No. 7 Junk fax function in manual reception

It is set whether JUNK-FAX is functioned in the manual receiving mode or not.

SW2 No. 8 Anti junk fax function

This function is used to receive data from a specific remote machine (station registered in entry mode). It is the function that refused a recep-tion in the case that TSI of remote machine matched with fax number of the station registered.

0: No

1: Yes

SW3 No. 1 ~ No. 4 Number of rings for auto receive

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to nine rings using a binary number. If the soft switch was set to 1, a direct connec-tion is made to the facsimile. If it was set to 0 accidentally, receive ring is set to 1. If it was above 9, receive rings are set to 9.

SW3 No. 5 ~ No. 8 Automatic switching manual to auto receive mode (0: OFF)

This setting allows machine to switch from manual to Auto Receive mode. Setting this number to 0 forces machine to stay in Manual receive mode. Entering the binary number 0 forces the machine to remain in the manual answer mode. If a number between 1 and 9 is entered, the machine will go into the answer mode after the given number of rings. However, it can be used as an ordinary telephone if the handset is taken off the hook before this programmed number is finished. If entry of a number above 9 by accident, it will be set to 9. In this case, it must be corrected to the proper number.

SW4 No. 1 ~ No. 3 Communication results printout (transaction report)

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No.1 : 1 No.2 : 1 No.3 : 0 are set, printing is always on (printed ever if it is normally ended).

000 : Error, timer and memory sending/receiving

010 : Sending

110 : Continuous printing

100 : Not printed

001 : Communication error

SW4 No. 4 Delay timer before line connect in auto dial

Delay time between the dial key input and line connection under the auto dial mode.

SW4 No. 5, No. 6 Delay timer of after line connect in auto dial

Delay time between the line connection and dial data output under the auto-dial mode.

SW4 No. 7, No. 8 Number of CNG detect (STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW5 No. 1 Time format

When this switch is set to "0", time is displayed in 12-hour system.

When set to "1", 24-hour system.

SW5 No. 2 Date format

Used to select date display/print formats.

0: DAY-Month-Year

1: Month-DAY-Year

SW5 No. 3 Sender's information transmit

When it is set at 0, sender's name, sending page number and so on are automatically printed in the recording paper on the receiving side during transmission. Thus, the sender can be known on the receiving side.

0: Applied

1: Not applied

SW5 No. 4 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW5 No. 5 Reserved

Set to "0".

SW5 No. 6 Substitute reception

Selection of substitute reception in the case of recording paper exhausted or paper jam. If set to "NO", auto receive is disabled even when the receive memory is ready to receive.

Substitute reception is not performed even during receive operation.

SW5 No. 7 Substitute reception conditions

Selection of substitute reception according to existence of TEL number from transmitting side. Initial setting allows substitute reception without CSI. If set to "no", the receiver cannot receive any documents

SW5 No. 8 CSI transmission

CSI signal contains the sender's phone number registered in the machine. If this switch is set to "1", no sender's name will be printed at the receiving side.

SW6 No. 1 H2 mode

Used to determine reception of H2 mode (15 sec transmission mode). When set to OFF, H2 mode reception is inhibited even though the transmitting machine has H2 mode function.

SW6 No. 2 MH fixed

Normally set to allow automatic selection of MH and MR mode according to the remote side.
If set to 1, the mode is fixed to MH and is useful if the remote side is a MH only unit ; or a lot of image distortion is met due to a bad line.

SW6 No. 3, No. 4 Reserved

Set to "0".

SW6 No. 5 ~ No. 8 Modem speed (DCS data reception speed)

Used to determine the initial modem speed. The default is 14400BPS(V.17). It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for the fallback procedure.

SW7 No. 1, No. 2 Reception speed fixed

The transferable speed of modem in the receiving mode is set.

SW7 No. 3 DIS receive acknowledgement during G3 transmission

Used to make a choice of whether reception of NSF (DIS) is acknowledged after receiving two NSFs (DISs) or receiving one NSF (two DISs).

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW7 No. 4 Non modulated carrier for V.29 transmission mode

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT Recommendation, it may be permitted to send a non-modulated carrier before the image signal to avoid an echo suppression problem.

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW7 No. 5 EOL detect timer

25 seconds or 13 seconds are selected for the detection timer of EOL (end of line). This is effective against communication trouble on a specific type of long EOL.

0: 13 seconds

1: 25 seconds

SW7 No. 6, No. 7 Reserved

Set to "0".

SW7 No. 8 Length limitation of copy/send/receive

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 1m for copy or transmit, and 1.5 meters for receive.

It is possible to set it to "No limit" to transmit/receive a long document, such as a computer print form, etc. (In this case, the receiver/transmitter must also be set to no limit.)

SW8 No. 1, No. 2 Digital line equalization setting (Reception)

The specific line equalizer is inserted.

No. 1	No. 2	
0	0	The line equalizer built in the modem is turned off.
0	1	Line equalizer corresponding to 1.8 km
1	0	Line equalizer corresponding to 3.6 km
0	1	Line equalizer corresponding to 7.2 km

SW8 No. 3 Dial pausing (sec/pause)

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW8 No. 4 ~ No. 8 Signal transmission level

Used to control the signal transmission level in the range of –0dB to –31dB.

SW9 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppresser switch, causing a communication problem. Though this soft switch is normally set to "00", it should be change the time between CED tone and DIS signal from 75ms to 1000ms to eliminate the communication problem caused by echo.

SW9 No. 3 Equalizer freeze control (MODEM)

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received. Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW9 No. 4 Equalizer freeze conditions

Setting which specifies SW9 No.3 control only in condition of 7200bps modem speed.

SW9 No. 5 CED detection time

The detection time of the CED signal from the called side in the auto calling mode is set.

SW9 No. 6, No. 7 Reserved

Set to "0".

SW9 No. 8 Busy tone detection (after auto dial)

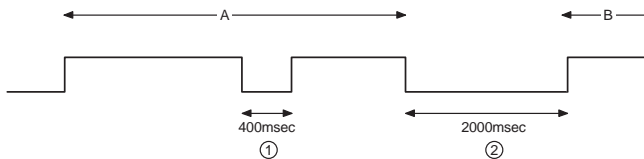this is used to set busy tone detection in auto dialing.

SW10 No.1, No. 2 Reserved

Set to "0".

SW10 No. 3, No. 4 CI off detection timer (Distinctive ring setting off only)

Set the minimum time period of CI signal interruption which affords to be judged as a CI OFF section with 50ms steps.

(Example)

01 : 700ms (CI interruption>700ms:Judged as a CI OFF section)
The section ① is not judged as a CI OFF section, the CI signal A is counted as one signal.
The section ② is judged as a CI OFF section, the CI signal B is considered as the second signal.

11: 350ms (CI interruption>350ms: Judged as a CI OFF section)
The section ① is judged as a CI OFF section, and the CI signal A is counted as two signals.
The section ② is judged as a CI OFF section, and the CI signal B is considered as the third signal.

SW10 No. 5 ~ No. 8 Distinctive ringing
Factory setting : OFF

When the ringing setting is turned off, all of the CI signal are received. When any of the standard, and ring patterns 1 through 4 or 5 is selected for the ringing setting, only the selected CI signal is received.

CI signal patterns

The CI signal patterns consists of the standard pattern, and ring patterns 1 through 9. The standard pattern is the conventional one.

SW11 No. 1, No. 2 End buzzer

The sounding length of the buzzer for normal end of operation set.

SW11 No. 3 Communication error treatment in RTN setting mode (reception)

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

SW11 No. 4 CNG transmission after auto dialing

When set to "0", this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case. CNG transmission can be performed in the auto dial mode.

SW11 No. 5 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW11 No. 6 Pulse to tone change by ✳

When setting to 1, the mode is changed by pressing the ✳ key from the pulse dial mode to the tone dial mode.

SW11 No. 7 CNG transmission in manual transmission

CNG signal sending ON/OFF in case of manual transmission is set.

SW11 No. 8 Reserved

Set to "0".

SW12 No. 1 ~ No. 5 DTMF signal transmission level (Low)

The transmission level of DTMF signal is adjusted. (lower frequency)

00000 : 0 dBm

↓

11111 : -15.5 dBm

SW12 No. 6 ~ No. 8 Reserved

Set to "0".

SW13 No. 1 ~ No. 5 DTMF signal transmission level (High)

The transmission level of DTMF signal is adjusted. (higher frequency)

00000 : 0 dBm

↓

11111 : -15.5 dBm

SW13 No. 6 ~ No. 8 Reserved

Set to "0".

SW14 No. 1 ~ No. 3 Reserved

Set to "0".

SW14 No. 4 , No. 5 Reserved

Set to "1".

SW14 No. 6 ~ No. 8 Reserved

Set to "0".

SW15 No.1 ~ No. 8 Reserved

Set to "0".

SW16 No. 1 Reserved

Set to "1".

SW16 No. 2 ~ No. 4 Reserved

Set to "0".

SW16 No. 5 Reserved

Set to "1".

SW16 No. 6 ~ No. 8 Reserved

Set to "0".

SW17 No. 1, No. 2 Speaker volume (3 stages)

Used to adjust sound volume from a speaker.

SW17 No. 3, No. 4 Hand-set receiver volume (3 stages)

Used to adjust sound volume from a handset receiver volume.

SW17 No. 5, No. 6 Ringer volume (4 stages)

Used to adjust ringing volume.

SW17 No. 7, No. 8 Key volume

Key buzzer volume:
The sound volume of key inputting buzzer and other buzzers is set.

SW18 No. 1 Reserved

Set to "1".

SW18 No. 2 Auto reception in PC I/F mode

Automatic receiving of I/F mode:
Which receives the call is determined.

SW18 No. 3 Summer time setting

The day light saving function ON/OFF is set.

SW18 No. 4 Sender's phone number setting

Whether the registered sender's phone number can be changed or not is selected. If it is set at 1, the phone number of the sender can not be registered or changed. Set 1 in order to prevent careless change of the sender's phone number.

    0: Change allowed

    1: Cannot change

SW18 No. 5 Polling key

If this switch is set to 1, the last of Rapid key works as polling key.

SW18 No. 6 Activity report print

Whether the communication record table is automatically printed or not, it is selected if the number of communication data is excessive. Regardless of the setting of this selection, communication record table can be printed at all times by operating the keys.

        FUNCTION + "2" + "#" + "START"

When the communication record table is printed, the memorized content of the data sent and received up to now will be all cleared (erased). If No (non-printing) is set, the oldest data will be erased when the number of memorized items is excessive.

    0: No (first data lost when memory is full)

    1: YES (when memory is full)

SW18 No. 7 Total communication hours and pages print

Whether the total time of communication and total number of sheets are recorded in the communication record table or not is selected.

    0: Recorded.

    1: Not recorded.

SW18 No. 8 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution Key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW19 No. 1 , No. 2 Density adjustment (when Fine/STD mode)

This is used for density adjustment in fine/standard mode. Adjust the density according to that of frequently used original.
Set to "Dark" for darker reading (either in the auto or the dark mode) of light original. Set to "Light" for lighter reading (either in the auto or the dark mode) of dark original.
Set to "Dark only in dark mode" for darker reading only in the dark mode.

SW19 No. 3 , No. 4 Density adjustment (when Half-tone mode)

This is used for density adjustment in the half tone. Setting procedures are the same as SW19 No. 1, No. 2.

SW19 No. 5, No. 6 Reserved

Set to "0".

SW19 No. 7 Reserved

Set to "1".

SW19 No. 8 Reserved

Set to "0".

SW20 No. 1 ~ No. 6 Reserved

Set to "0".

SW20 No. 7 F.A.S.T (RMS) mode

Used to determine a function of remote maintenance system (F.A.S.T).

SW20 No. 8 Quick on-line

It is selected whether auto dial call is activated in the memory input mode when one document is completely read or when all pages are completely read.

SW21 No. 1, No. 2 Reserved

Set to "0".

SW21 No. 3 Reserved

Set to "1".

SW21 No. 4 ~ No. 8 Reserved

Set to "0".

SW22 No.1 ~ No. 8 Reserved

Set to "0".

SW23 No. 1 Automatic reduce of receive

If set to 1, it is reduced automatically.

SW23 No. 2 Cut off mode (COPY mode)

When in copy, if the scanned data is out of the range of recording, the operator has one of the choices below using the switch

1: Continue: Data is printed onto the next page with the last 20mm also printed at the beginning of the next page
0: Cut off.   Data scanned out of the limit is cut off (a page is printed.)

SW23 No. 3, No. 4 Paper set size

At present a size of the record paper.

    00: LETTER

    01: LEGAL

    10: A4

SW23 No. 5 ~ No. 8 Reserved

Set to "0".

SW24 No. 1, No. 2 DTMF detection time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5 ✕ ✕). The longer the detection time is, the error detection is caused by noises.

SW24 No. 3 Protection remote reception (5 ✕ ✕) detect

Used to set the function of remote reception (5 ✕ ✕). When set to "1", the remote reception function is disabled.

SW24 No. 4 Reserved

Set to "0".

SW24 No. 5 ~ No. 8 Remote operation code figures by external tel (0 ~ 9)

Remote operation codes can be changed from 0 through 9. if set to greater than 9, it defaults to 9. The "5 ✕ ✕" is not changed.

SW25 No. 1 Busy tone detection ON/OFF time (Shorter duration)

The initial value of detection is set according to electric condition.
The set value is changed according to the local switch board. (Errone-ous detection of sound is reduced.)
Normally the upper limit is set to 900msec. and the lower limit to 150msec.
If erroneous detection is caused by sound, etc., adjust the detection range.
The lower limit can be set in the range of 350msec to 150msec.

SW25 No. 2, No. 3 Busy tone detection ON/OFF time (Longer duration)

Similarly to SW-25 No.1, the set value can be varied.
The upper limit can be set in the range of 650msec to 2700msec.

SW25 No. 4 Busy tone continuous sound detect time

Set detecting time busy tone for 5 seconds or as is PTT.

SW25 No. 5 Busy tone detect continuation sound detect

Used to select detection of the continuous sound of certain frequency.

SW25 No. 6 Busy tone detect intermittent sound detect

Used to select detection of the intermittent sound of certain frequency.

SW25 No. 7, No. 8 Busy tone detection pulse number

Used to set detection of Busy tone intermittent sounds.

SW26 No. 1 TAD connect

When connecting the answering machine to the extension telephone jack.

SW26 No. 2 Fax switching when A.M. full

If the answering machine's memory (tape) is full and there is no re-sponse, the machine automatically switches to Fax reception.

SW26 No. 3, No. 4 Selection time of quiet detection

The switch which sets the time from the start of detection function to the end of the function.

SW26 No. 5, No. 6 Number of CNG detect (AM mode)

Used for detection of CNG in 1 to 4 pulses.

SW26 No. 7, Reserved

Set to "0".

SW26 No. 8, Reserved

Set to "1".

SW27 No. 1 ~ No. 4 Quiet detect time

When an answering machine is connected, if a no sound status is de-tected for a certain period of time, the machine judges it as s transmis-sion from a facsimile machine and automatically switches to the FAX mode.

SW27 No. 5 ~ No. 8 Quiet detect start timing

Inserts a pause before commencing quit detection.

    0000: 0 seconds

    1111 : 15 seconds

SW28 No. 1 ~ No. 8 Reserved

Set to "0".

SW29 No. 1 ~ No. 8 Reserved

Set to "0".

SW30 No. 1 ~ No. 8 Reserved

Set to "0".

SW31 No. 1 ~ No. 8 Reserved

Set to "0".

SW32 No. 1 ~ No. 8 Reserved

Set to "0".

SW33 No. 1 Reserved

Set to "0".

SW33 No. 2 Reserved

Set to "1".

SW33 No. 3 ~ No. 8 Reserved

Set to "0".

SW34 No. 1 ~ No. 4 Reserved

Set to "0".

SW34 No. 5, No. 6 Reserved

Set to "1".

SW34 No. 7 Reserved

Set to "0".

SW34 No. 8 Reserved

Set to "1".

SW35 No. 1, No. 2 Reserved

Set to "1".

SW35 No. 3 Reserved

Set to "0".

SW35 No. 4 ~ No. 6 Reserved

Set to "1".

SW35 No. 7 Reserved

Set to "0".

SW35 No. 8 Reserved

Set to "1".

SW36 No. 1 ~ No. 6 Reserved

Set to "1".

SW36 No. 7, No. 8 Reserved

Set to "0".

SW37 No. 1 ~ No. 8 Reserved

Set to "0".

SW38 No. 1 ~ No.8 Reserved

Set to "0".

SW39 No. 1 ~ No.8 Reserved

Set to "0".

SW40 No. 1 ~ No.8 Reserved

Set to "0".

SW41 No. 1 ~ No.8 Reserved

Set to "0".

SW42 No. 1 ~ No.8 Reserved

Set to "0".

SW43 No. 1 ~ No.8 Reserved

Set to "0".

SW44 No. 1 ~ No.8 Reserved

Set to "0".

SW45 No. 1 ~ No.8 Reserved

Set to "0".

SW46 No. 1 ~ No.8 Reserved

Set to "0".

SW47 No. 1 ~ No.8 Reserved

Set to "0".

SW48 No. 1 ~ No.8 Reserved

Set to "0".

SW49 No. 1 Reserved

Set to "1".

SW49 No. 2 ~ No.8 Reserved

Set to "0".

SW50 No. 1 ~ No.8 Reserved

Set to "0".

SW51 No. 1 ~ No.8 Reserved

Set to "0".

SW52 No. 1 ~ No.3 Reserved

Set to "0".

SW52 No. 4, No. 5 Reserved

Set to "1".

SW52 No. 6 Reserved

Set to "0".

SW52 No. 7 Reserved

Set to "1".

SW52 No. 8 Reserved

Set to "0".

SW53 No. 1, No. 2 Reserved

Set to "0".

SW53 No. 3 Reserved

Set to "1".

SW53 No. 4 ~ No. 6 Reserved

Set to "0".

SW53 No. 7, No. 8 Reserved

Set to "1".

[3] Troubleshooting

1. Fax troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

- Increase the transmission level SOFT SWITCH 8-4, 5, 6, 7, 8
  May be used in case [1] [2] [3].

- Decrease the transmission level SOFT SWITCH 8-4, 5, 6, 7, 8
  May be used in case [3].

- Apply line equalization SOFT SWITCH 8-1, 2
  May be used in all cases.

- Slow down the transmission speed SOFT SWITCH 6-5, 6, 7, 8
  May be used in case [2] [3].

- Replace the LIU PWB.
  May be used in all cases.

- Replace the control PWB.
  May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO:	ATT:		Ref.No. :
CC:	ATT:		Date :
FM:			Dept :
			Sign :

***** Facsimile communication problem *****			Ref.No.:
From: Mr.	Fax Tel No.:		Date:
Our customer	Name	Tel No.
	Address	Fax No.
	Contact person	Model name
Other party	Name	Tel No.
	Address	Fax No.
	Contact person	Model name
Problem mode	Line: Domestic / international	Mode: G3	Phase: A. B. C. D.
	Reception / Transmission	Automatic reception / Manual reception
		Automatic dialing / Manual dialing / Others
Frequency: %	ROM version:
Confirmation item		Please mark problem with an X. No problem is: 0
Comment		
Countermeasure		

A1	A2	B1	B2	C1	C2	D1	D2	E1	E2

Transmission level setting is (   ) dB at our customer

Transmission level (   ) dBm
Reception level (   ) dBm
By level meter at B1 and B2

**** Please attach the G3 data and activity report on problem. ****

[4] Error code table

1. Communication error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc.
		Cannot recognize NSS signal (FIF code etc)
2	CFR	Disconnects line during reception (carrier missing etc)
3	FTT	Disconnects line by fallback
4	MCF	Disconnects line during reception of multi page
		Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response on receiver side or DCN signal received* (transmitter side)
8	–	Owing to error in some page the error could not be corrected although the specified number of error retransmission was attempted.
11	–	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	–	Error occurred just after fallback.
13	–	Error occurred after a response to retransmission end command was received.

G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal
		Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	–	Error occurred upon completion of reception of all pages.
9	–	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	–	Error occurred during partial page or physical page reception.
11	–	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	–	Error occurred during or just after fallback.
13	–	Error occurred after the retransmission end command was received.