

MINOLTA

# Service Manual

The essentials of imaging

## **FAX of Di152f/Di183f/FX-1**

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# 1. Specifications

Item	Specifications										
<b>General</b>											
Compatibility	G3										
Multi access	Yes										
Applicable line	PSTN, PABX										
Modem board speed (bps)	33.6kbps, Automatic fall back										
Coding scheme	MH/MR/MMR/JBIG										
Dual line	No										
Internet fax	Option										
Error correction mode (ECM)	Yes										
Standard memory	4 MB										
Optional memory	8 MB										
<b>Transmission</b>											
Max. document size	A3										
Transmission speed	3.0 sec. ITU-T No.1, 33.6k with JBIG (A4-L)										
Broadcasting	143 Location per session										
	<table border="1"> <thead> <tr> <th>Function</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>One touch key</td> <td>27</td> </tr> <tr> <td>Speed dial</td> <td>100</td> </tr> <tr> <td>On the fly (Ten key)</td> <td>16</td> </tr> <tr> <td>Total</td> <td>143</td> </tr> </tbody> </table>	Function	Location	One touch key	27	Speed dial	100	On the fly (Ten key)	16	Total	143
	Function	Location									
	One touch key	27									
	Speed dial	100									
On the fly (Ten key)	16										
Total	143										
Memory TX	Yes										
Quick memory TX	Yes										
ADF TX	Yes										
Manual TX	Yes										
Timer TX	Yes										
Polling TX	Yes - 50 files										
Book TX	Yes										
Confidential mailbox TX	Yes										
Sub-address [SUB] capability	Yes										
Password [PWD] capability	Yes										
Relay initiate	Yes										
Relay broadcast	Yes										
Batch TX	Yes										
F code function	Yes										

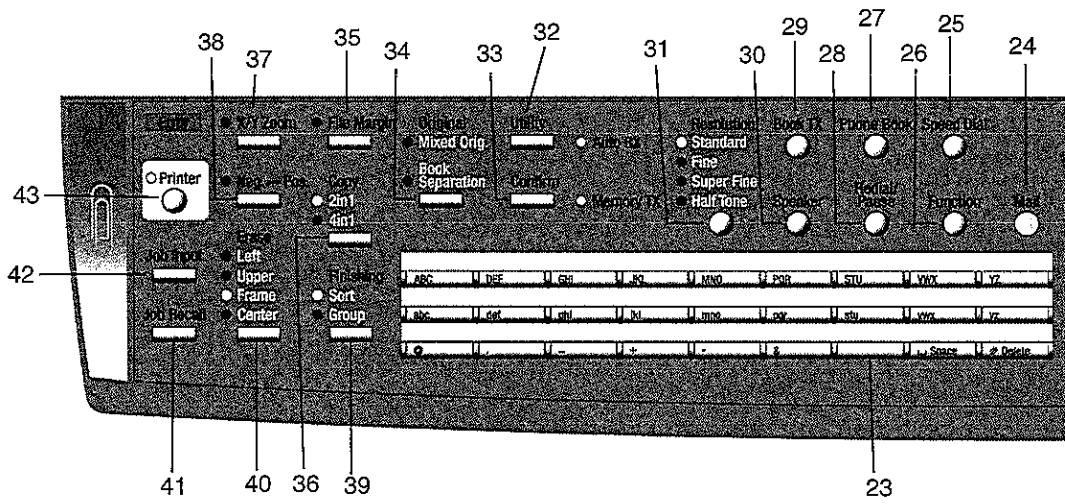
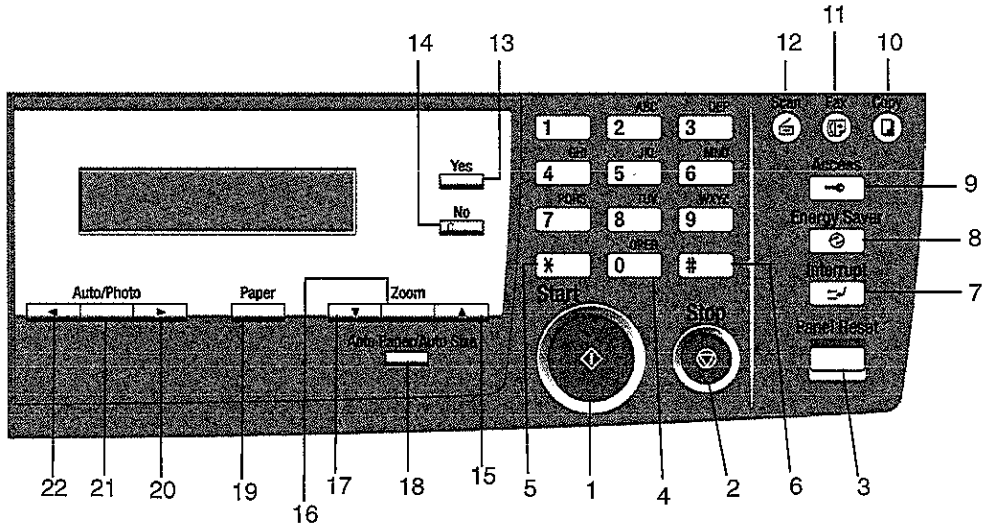
Item		Specifications
TX resolution		Standard: 203 × 98 dpi Fine: 203 × 196 dpi S-Fine: 406 × 392 dpi
<b>Receiving</b>		
Max. recording paper size		A3
Confidential mailbox RX		Yes
Selective polling reception		Yes
Memory RX		Yes
Memory RX mode		Yes
RX reduction		Yes
RX mode		Auto/Manual
Printing mode		100% Bottom cut Auto reduction (70% - 100%)
Footer		Yes
RX resolution		Standard: 203 × 98 dpi Fine: 203 × 196 dpi S-Fine: 406 × 392 dpi
<b>Dialing</b>		
Auto Dial	One-touch	27 key
	Speed dial	100
	Programming dial	4 key (No.24 - No. 27)
	Group dial	27
Auto redial		Yes
Last redial		Yes
Chain dial		Yes
Combination dial		Yes
Phone Book		Yes
On-hook dial		Yes
<b>Document Input ( ADF)</b>		
Scanner type		CCD
Size of document		A3
Max. effective scan width		4896 pixels per scanning line length of 300 mm ± 1%
Auto Document Feeder		50 pages
Contrast control		Normal/Dark/Light
Gray scale		256 levels
<b>Document output</b>		
Printer type		Laser

Item		Specifications
Printing resolution		600(H) × 600 (V) dpi
Smoothing		Yes
Continuous printing speed		15 ppm(Di152f) 18 ppm (Di183f)
<b>Report</b>		
TX confirmation report		Yes
TX error report		Yes
RX result report		Yes
Activity report		Yes
Memory data list		Yes
Memory image list		Yes
Key setting list		Yes
Broadcast result report		Yes
Relay broadcast report		Yes
Machine status list		Yes
Consumable order report		Yes
PCL configuration page		Yes
PCL font list		Yes
Backup RAM lost report		Yes
<b>Other Features</b>		
Speaker		Yes
Daylight saving time		Yes
Ext.phone connector		Option
RTC backup		2.5 years
Multi-copy		99 pages
Substitute receiving	No toner	Yes
	No paper	Yes
	Paper jam	Yes
<b>PC Function</b>		
RS232 Port function	LSD utility	
	Class 1 function	
	TWAIN driver	

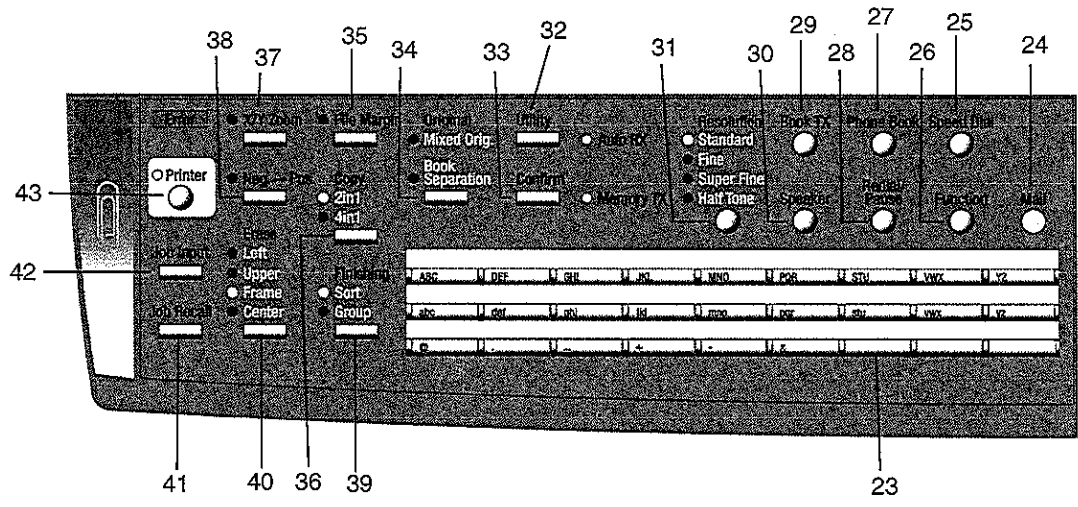
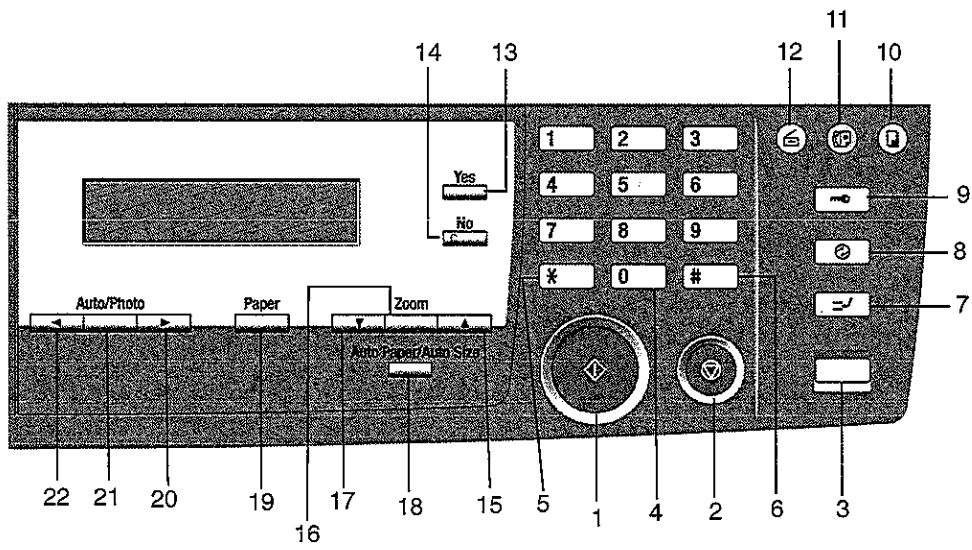


## 2. Panel Description

Except Europe Area



Europe Area



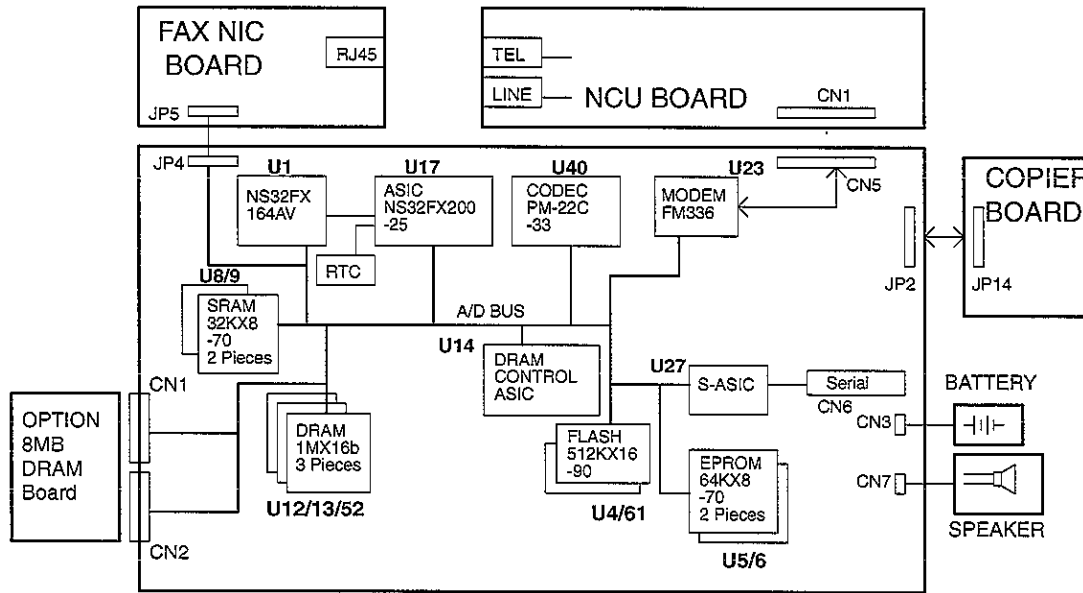
## Key Function

No.	Key	Function
1	Start Key	Starts a fax transmission. Starts copying.
2	Stop Key	Stops the fax transmission or reception. Stops the multi-page copy operation.
3	Panel Reset Key	<b>Return to the initial setting</b>
		Initial: Copy mode
		Number of Copies 1
		Zoom ratio: Full size
		Copy Function: Initial setting by user
		Density: Initial setting by user
		Copy mode: Initial setting by user
		Paper source: Initial setting by user
		Initial: Fax mode
		Standby: Date, Time, Memory volume, Message prompting of the document loading.
		Under communication: Communication status, Remote Station's ID, Memory volume, Message prompting of the document loading.
		RX in Memory: Number of RX pages, Memory volume, Message prompting of the document loading.
		RX in Mailbox: Display of Mailbox RX, Memory volume, Message prompting of the document loading.
		Machine Error: Error message
Substitute RX in Memory: Display of memory RX		
Number of RX pages: Content of error		
Timer TX in Memory: Display of standby and T		
Polling TX in Memory: Display of standby and P		
4	Numeric Key	Input fax number. Input numeral in registration of name. Input speed dial number. Specify fax function or utility item.
5	Tone Key	Send tone signal.
6	External Key	External / Internal function.
7	Interrupt Key	Sets the copier into, or lets it leave the Interrupt mode.
8	Energy Saver Key	Sets the copier into the Energy Saver mode.
9	Access Key	If default of Personal identification is ON, it changes from the present section and is made a section number input screen.
10	Copy Key	Change panel display to Copy mode.

No.	Key	Function
11	Fax Key	Change panel display to Fax mode.
12	Scan Key	Change panel display to Scan mode.
13	Yes Key	Validate the item and number or character entered.
14	No/Clear Key	Clear number or character entered. Back to the previous display.
15	Up Key	Used to select a preset enlargement or reduction ratio.
16	Zoom Key	With each press, a zoom ratio between $\times 0.50$ and $\times 2.00$ in 0.01 increments is selected.
17	Down Key	Used to specify the selection above or below in setting screens and menus.
18	Auto Paper Auto Size Key	Press to select either Auto Paper or Auto Size.
19	Paper Key	Press to select the paper size.
20	Right Key	Used to specify the scanning density of copies. Used to specify the selection at the left or right in setting screens.
21	Auto / Photo	
22	Left Key	
23	One-touch Dial Key	<ol style="list-style-type: none"> <li>1. One-touch dial 01 - 27</li> <li>2. Group dial 01 - 27</li> <li>3. Program dial 24 - 27</li> <li>4. Input "@" in registration of name.</li> <li>5. Input "." (dot signal) in registration of name.</li> <li>6. Input "_" in registration of name.</li> <li>7. Input "+" in registration of dial number.</li> <li>8. Input "-" (minus signal) in registration of dial number.</li> <li>9. Input symbols in registration of name.</li> <li>10. Input European font in registration of name.</li> <li>11. When entering a number or character, delete the character or the place with cursor.</li> <li>12. When entering a number or character, insert a space in the place with cursor.</li> </ol>
24	Mail Key	Change the function of One-touch key to either selection of the registered destination or input of character.
25	Speed Dial Key	Call Speed dial.
26	Function Key	Call Fax communication function.
27	Phone Book Key	Retrieval and call Registered dial.
28	Redeal/Pause Key	Call the last dialing number. When entering the dial number, insert a pause function in the place with cursor.

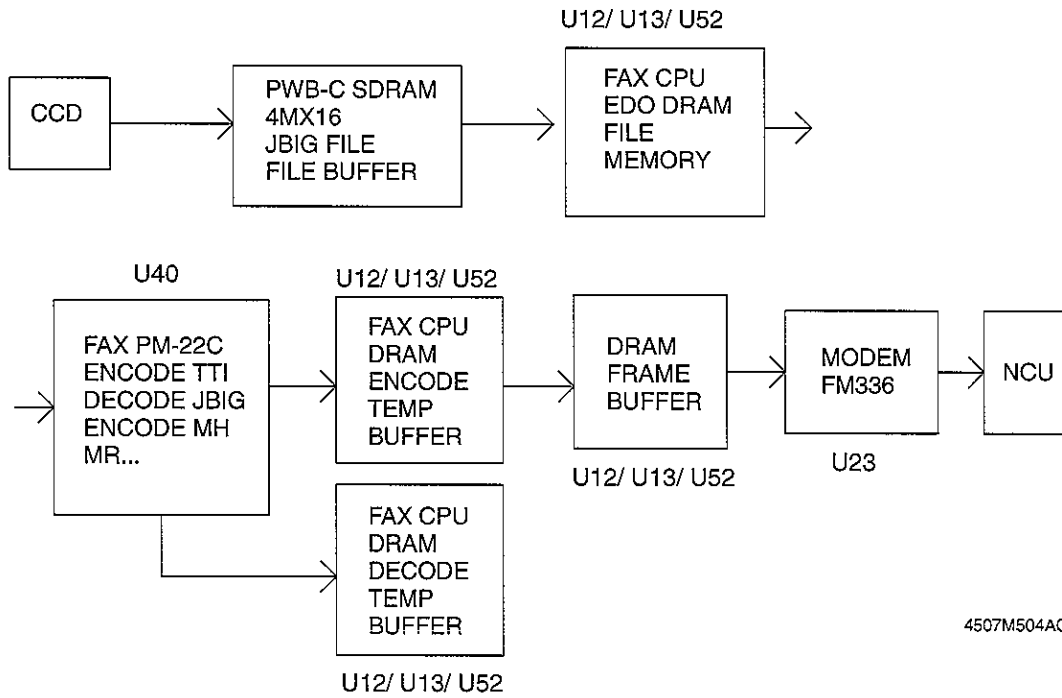
No.	Key	Function
29	Book TX Key	Call book TX function.
30	Speaker Key	Press to answer the call. Press again to hang up.
31	Resolution Key	Select the resolution and the image mode for transmission.
32	Utility Key	Set machine status, initial setting for copy, Fax operations and register dials.
33	Confirm Key	Display communication result. Display machine counter. Print report.
34	Original Key	Select the Book Document (page-by-page)/Book document (Spread).
35	File Margin Key	Press to select the File Margin mode.
36	Copy Key	Press to select the Copy mode.
37	X/Y Zoom Key	Press to make a copy with different zoom ratios set for X (horizontal) and Y (vertical) directions.
38	Neg.Pos. Key	Press to copy an original with the original tonal arrangements reversed.
39	Finishing Key	Press to select the finishing function.
40	Erase Key	Press to select the erase position.
41	Job Recall Key	Press to recall either one of the two jobs previously stored in memory.
42	Job Input Key	Press to select the Job Input mode. Two different jobs can be programmed.
43	Printer Lamp	Lit while data received from personal computer is being printed. Blinks while data is being transferred. For details, refer to the Printer Controller User Manual.

### 3. FAX CPU BLOCK DIAGRAM



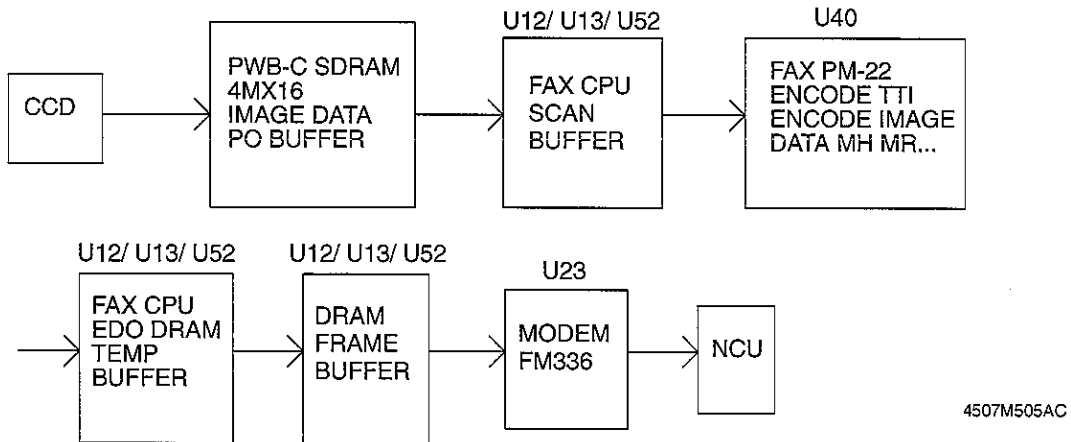
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#### 1. Memory TX Data Flow

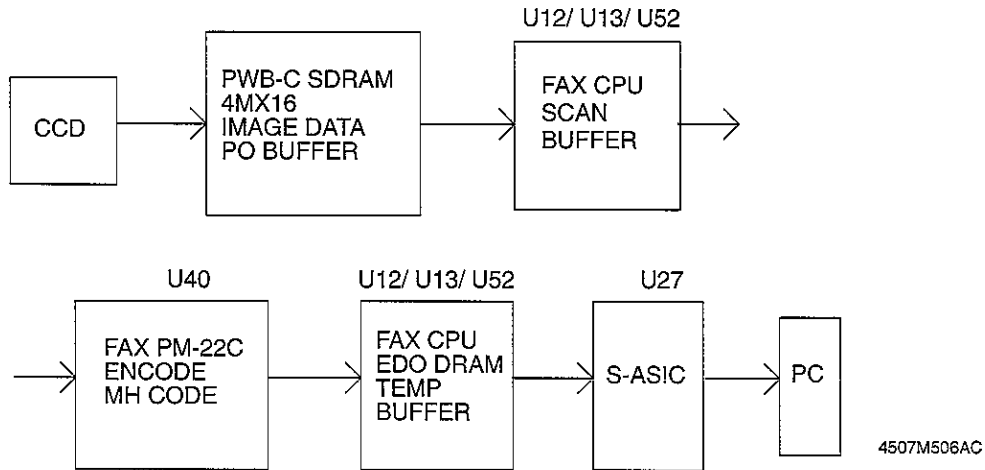


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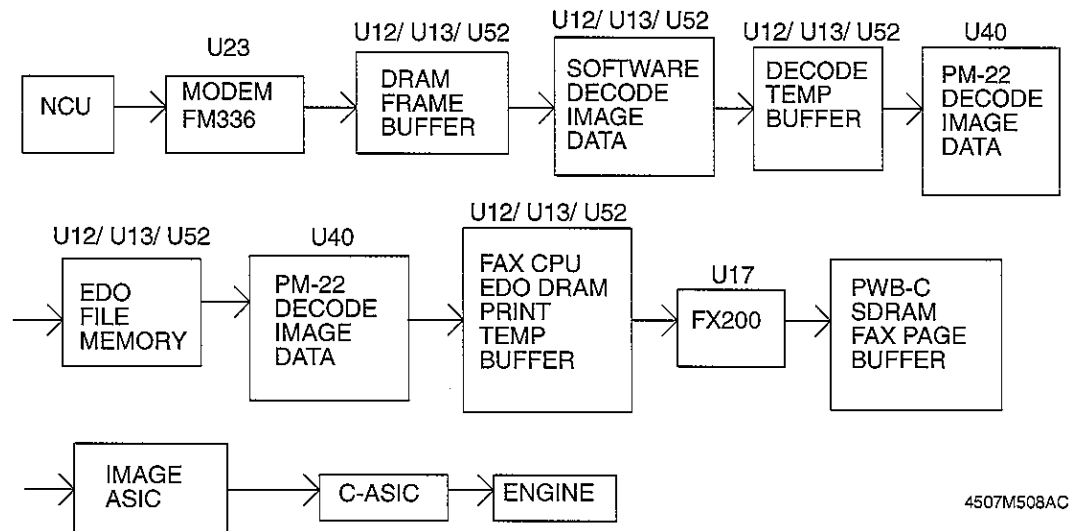
## 2. Hook TX Data Flow



## 3. TWAIN and CLASS1 Data Flow



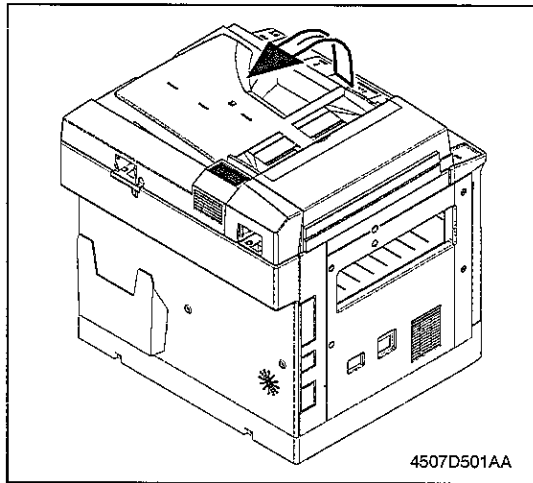
## 4. RX (NON ECM, MH or MR) and Print out Data Flow



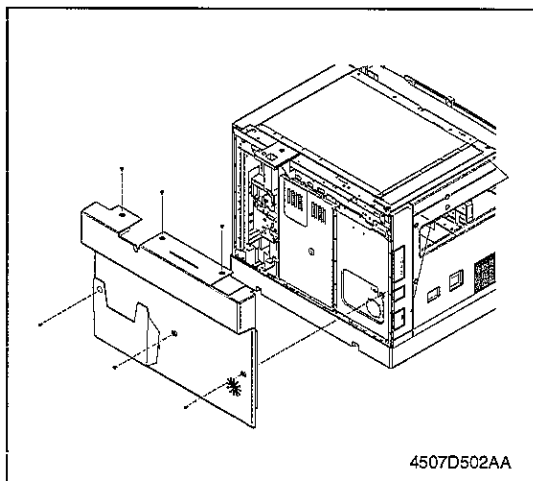
## 4. ASSEMBLY / DISASSEMBLY

### 4-1. Fax Controller Board Assembly and Disassembly

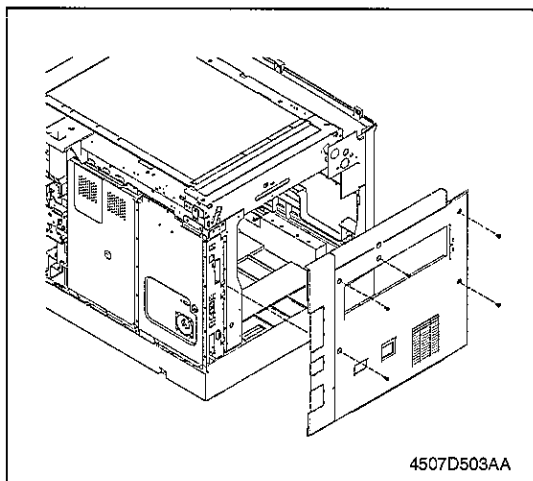
#### (1) With Printer Controller Board



1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.

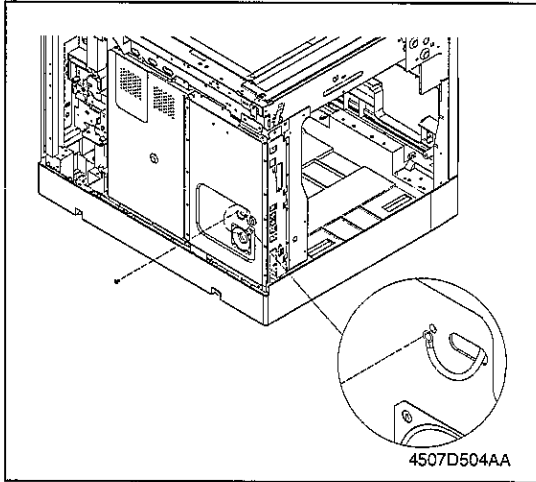


2. Remove the 6 screws to remove the Rear Cover.

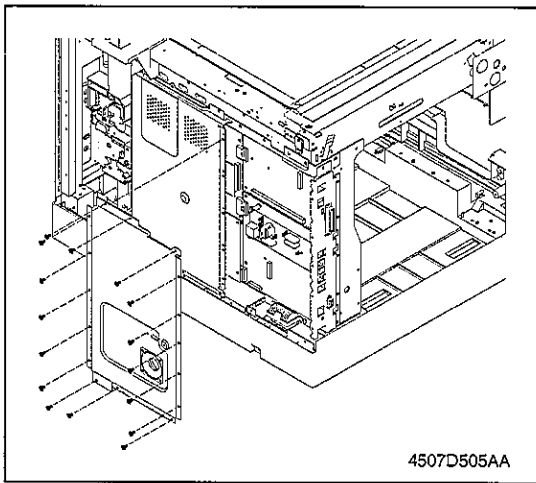


3. Remove the 5 screws to remove the Left Cover.





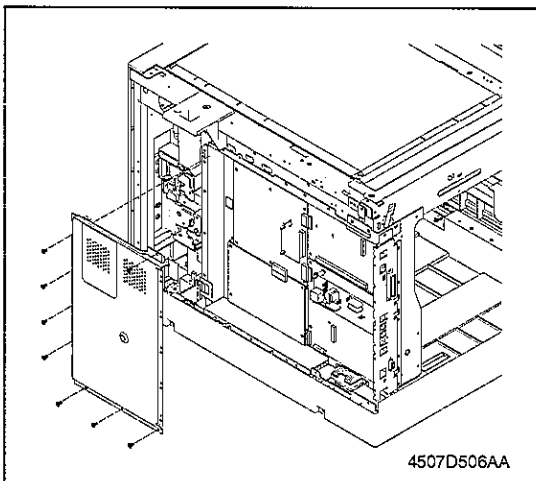
4. Remove the screw for the ground wire of the NCU Controller Board.



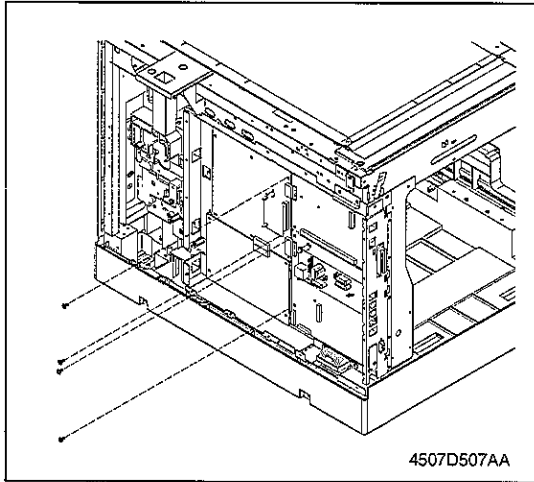
5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

**NOTE**

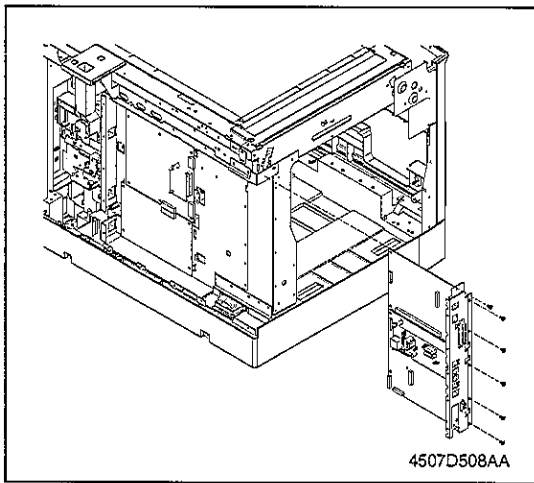
- Remove the Speaker Connector before removing the Fax Shield Cover Assembly.



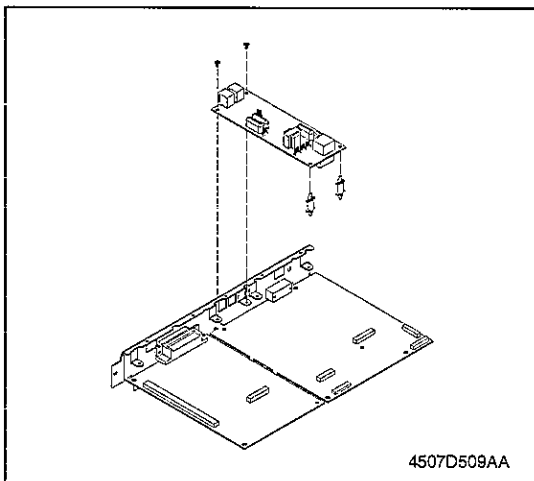
6. Remove the 8 screws to remove the Shield Cover Assembly.



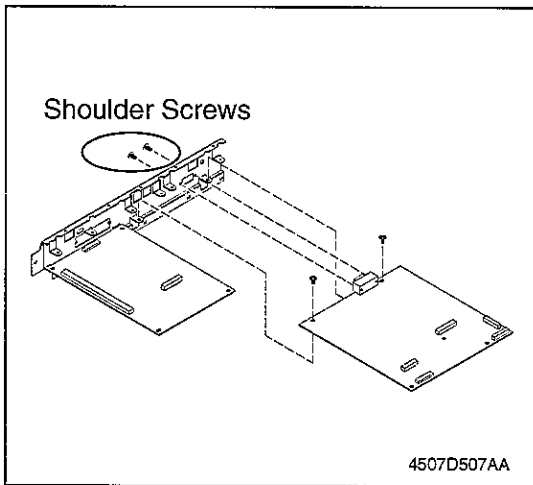
7. Remove the 4 screws for the Printer Controller Board and the Fax Controller Board.
8. Remove the Battery Connector.



9. Remove the 6 screws to remove the I/F Bracket Assembly.

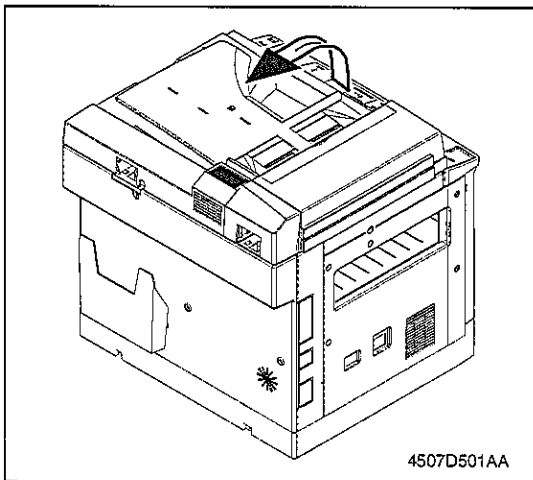


10. Remove the 2 screws and the 2 PWB Supports to remove the NCU Controller Board.

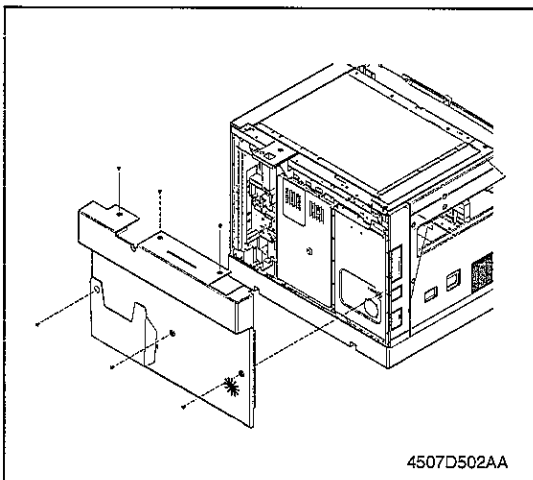


11. Remove the 2 screws, the 2 shoulder screws to remove the Fax Controller Board.

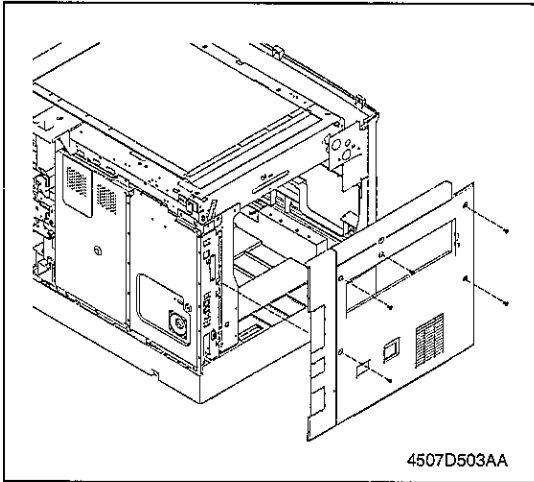
**(2) Without Printer Controller Board**



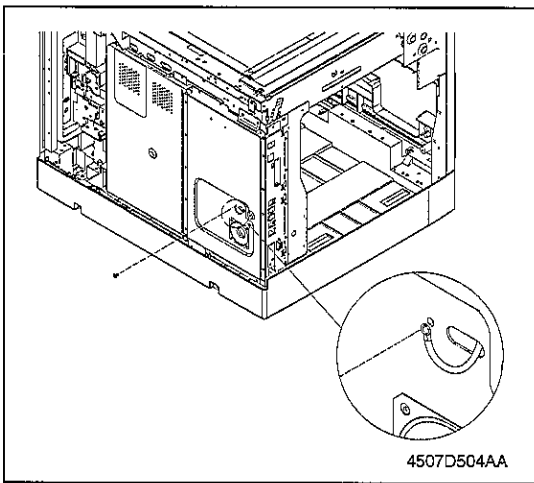
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



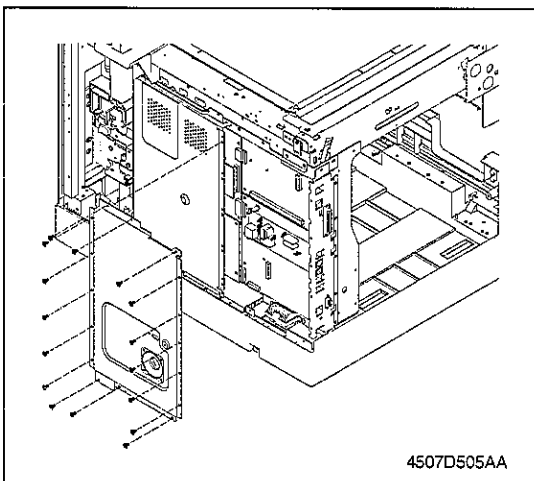
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



4. Remove the screw for the ground wire of the NCU Controller Board.

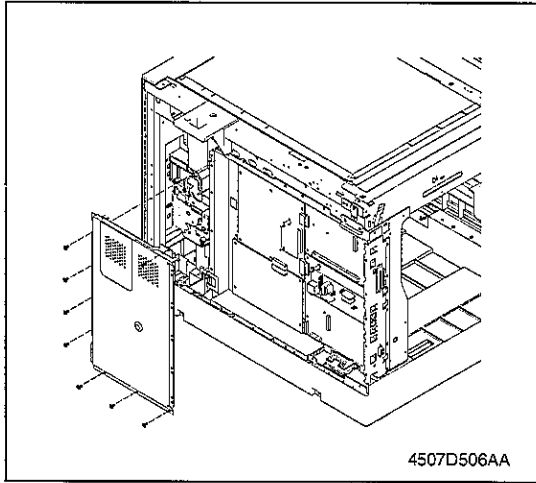


5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

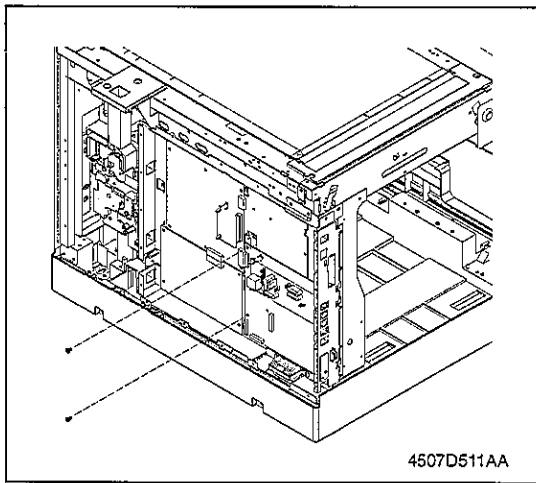
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**NOTE**

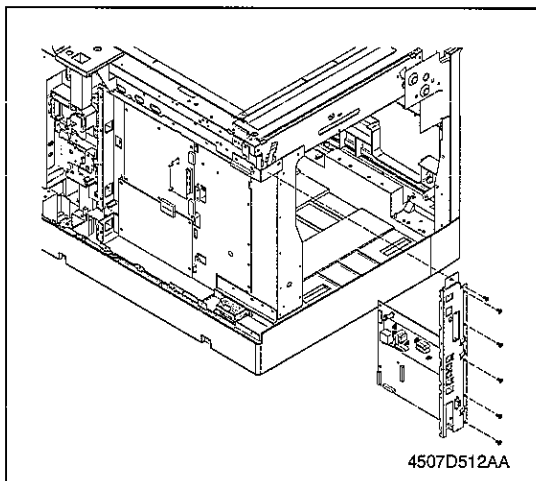
- Remove the Speaker Connector before removing the Fax Shield Cover Assembly.
-



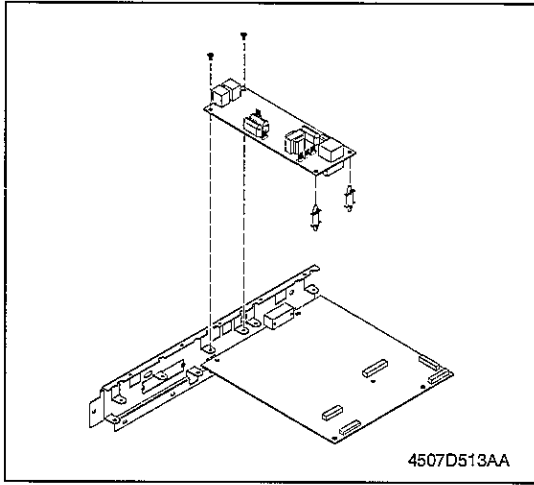
6. Remove the 8 screws to remove the Shield Cover Assembly.



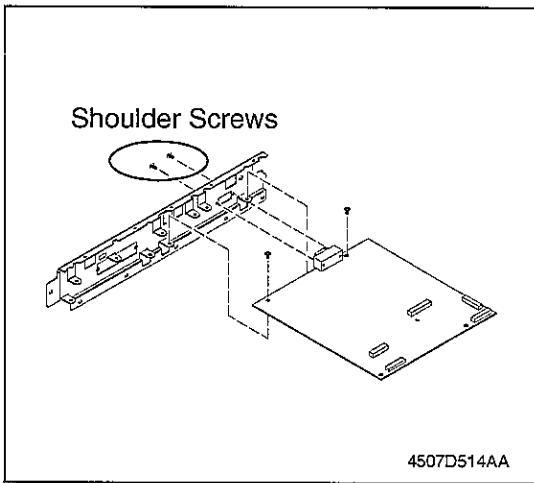
7. Remove the 2 screws for the Fax Controller Board.
8. Remove the Battery Connector



9. Remove the 6 screws to remove I/F Bracket Assembly.

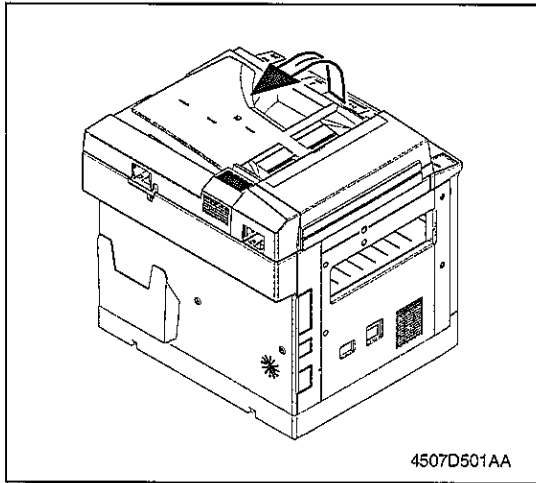


10. Remove the 2 screws and 2 PWB Supports to remove the NCU Controller Board.

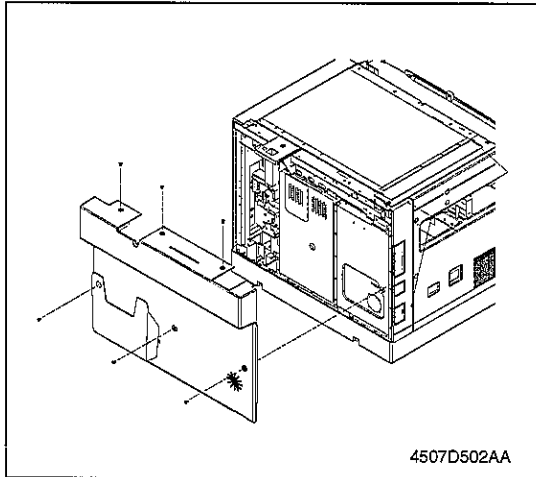


11. Remove the 2 screws, the 2 shoulder screws to remove the Fax Controller Board.

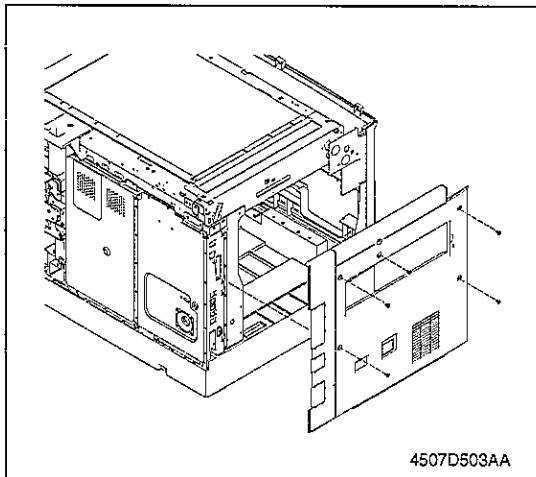
## 4-2. NCU Controller Board Assembly / Disassembly



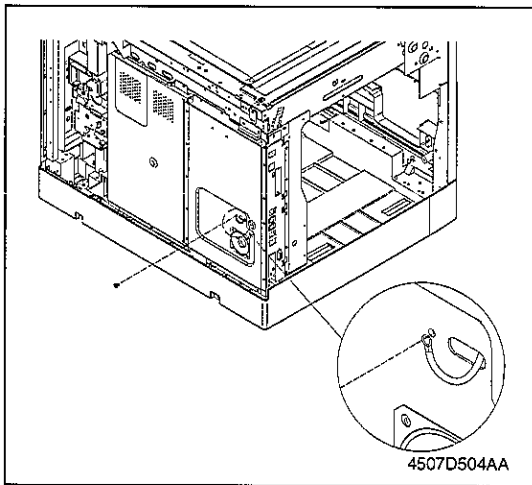
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



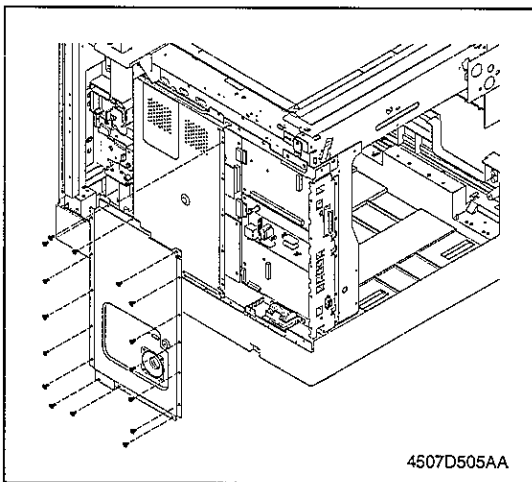
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



4. Remove the screw for the ground wire of the NCU Controller Board.

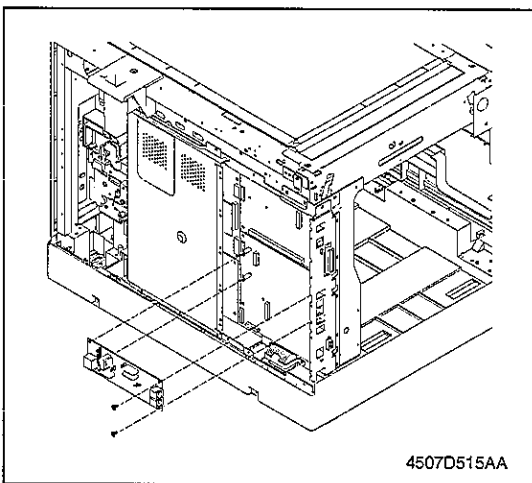


5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

---

**NOTE**

- *Remove the Speaker Connector before removing the Fax Shield Cover Assembly.*
- 

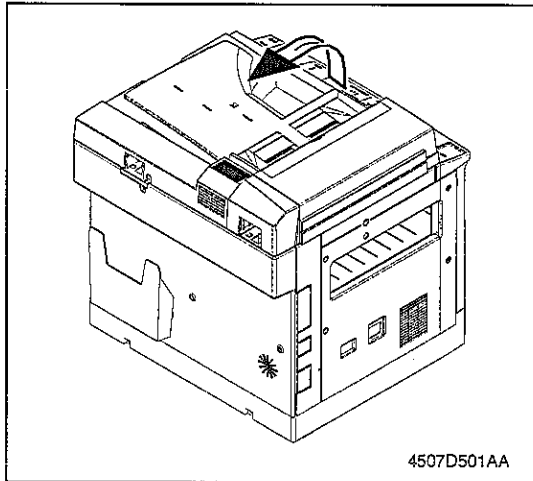


6. Remove the 2 screws and the 2 PWB Supports to remove the NCU Controller Board from the Fax Controller Board.

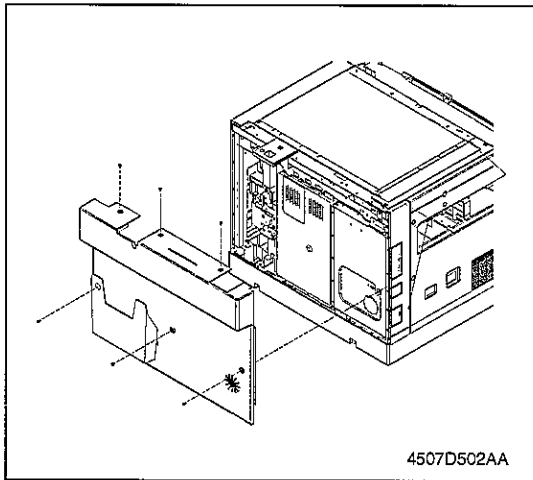


### 4-3. PWB-C Board Assembly / Disassembly

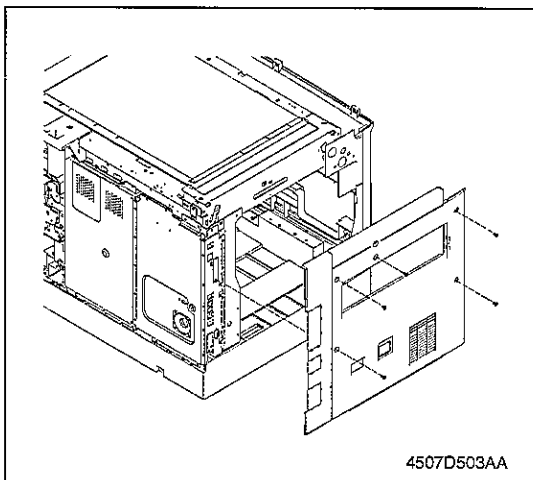
#### (1) With Fax Controller Board



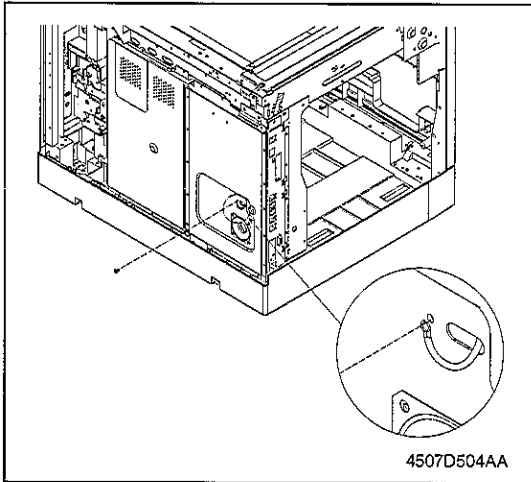
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



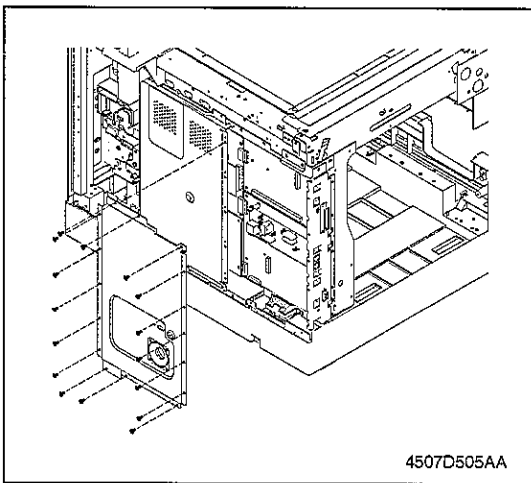
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



4. Remove the screw for the ground wire of the NCU Controller Board.

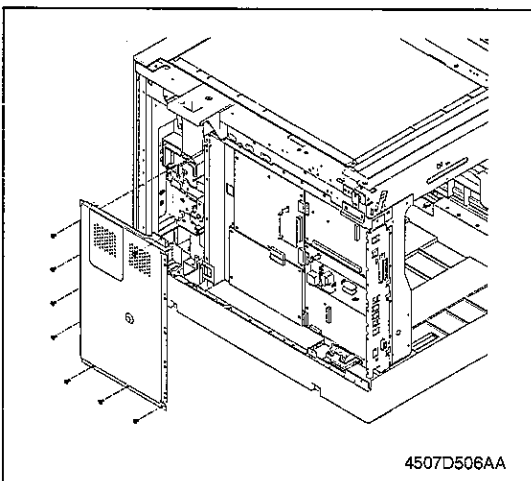


5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

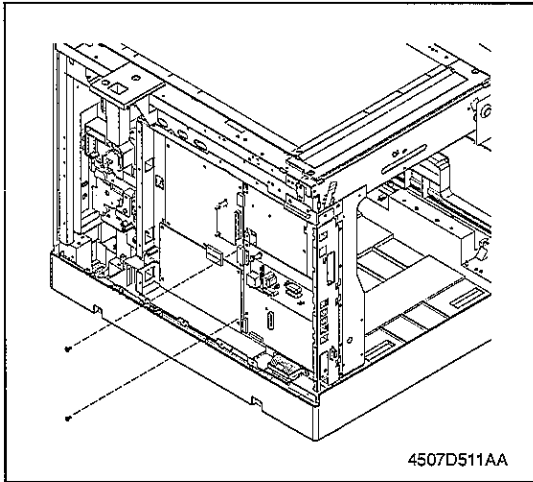
---

**NOTE**

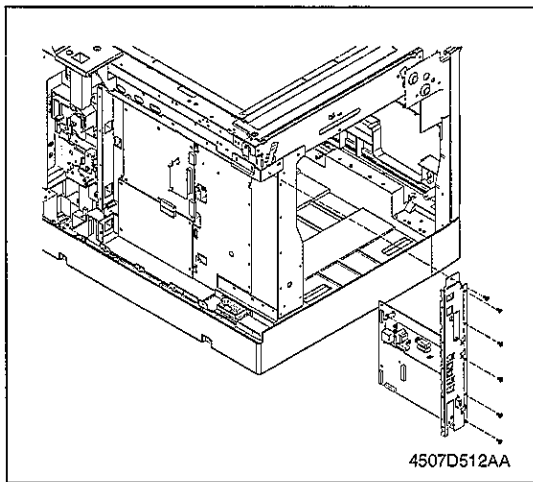
- Remove the Speaker Connector before removing the Fax Shield Cover Assembly.
- 



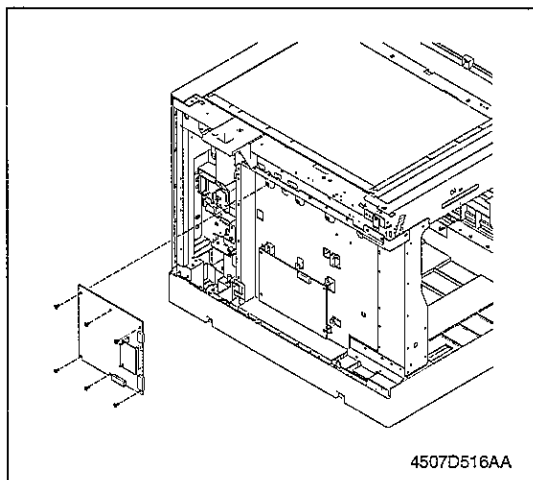
6. Remove the 8 screws to remove the Shield Cover Assembly.



7. Remove the 2 screws for the Fax Controller Board.
8. Remove the Battery Connector.

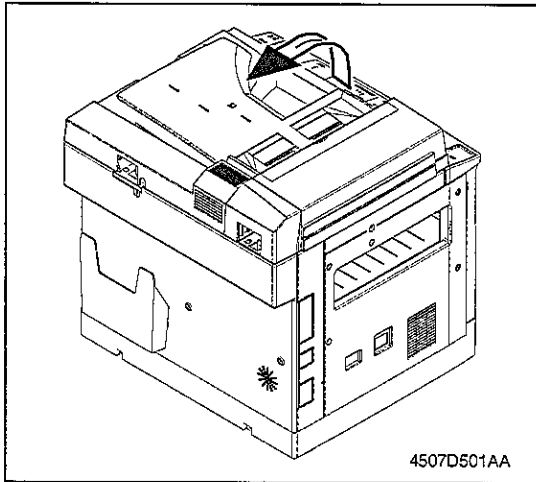


9. Remove the 6 screws to remove the I/F Bracket Assembly.

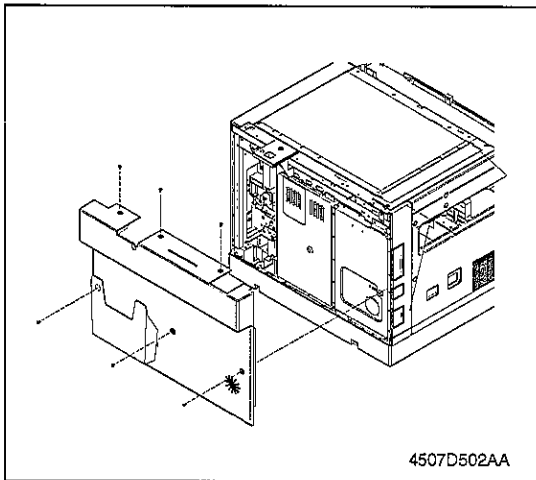


10. Remove all connectors on the PWB-C Board.
11. Remove the 6 screws to remove the PWB-C Board.

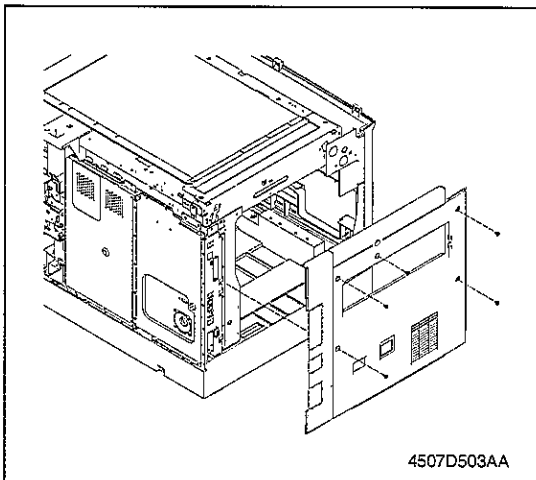
**(2) With Fax and Printer Controller Board**



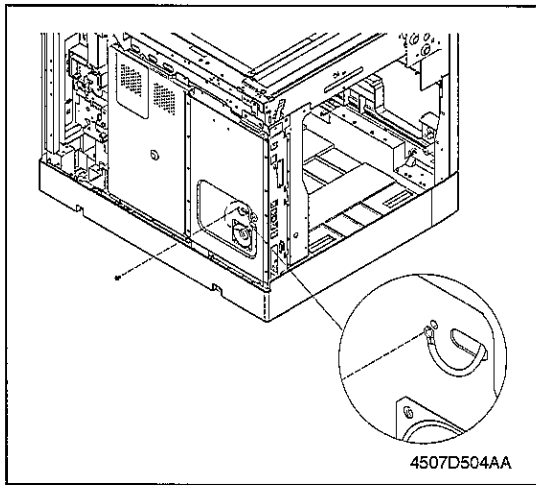
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



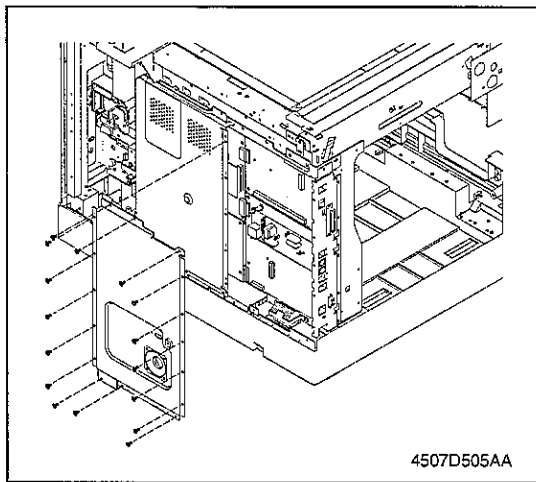
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



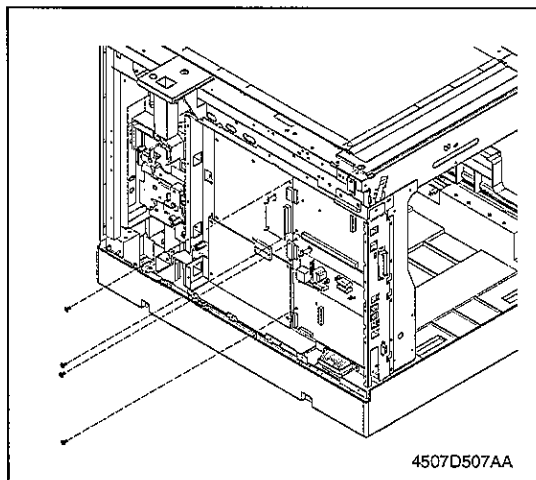
4. Remove the screw for the ground wire of the NCU Controller Board.



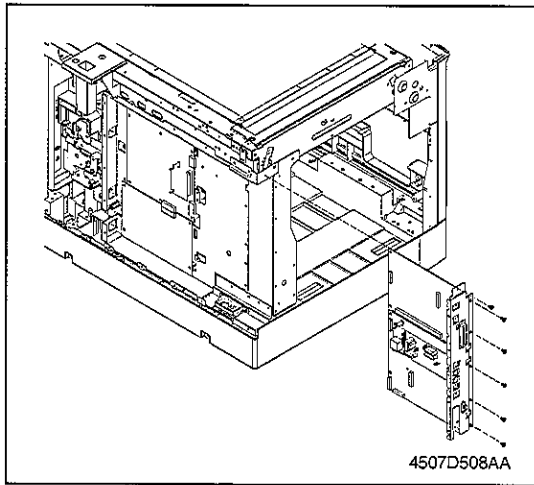
5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

**NOTE**

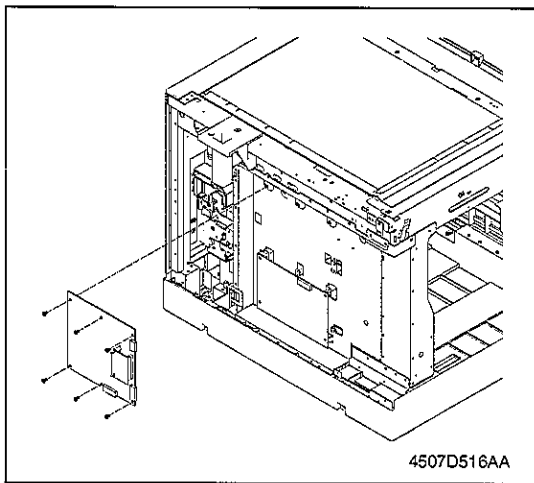
- Remove the Speaker Connector before removing the Fax Shield Cover Assembly.



6. Remove the 4 screws for the Fax Controller Board and the Printer Controller Board.
7. Remove the Battery Connector.

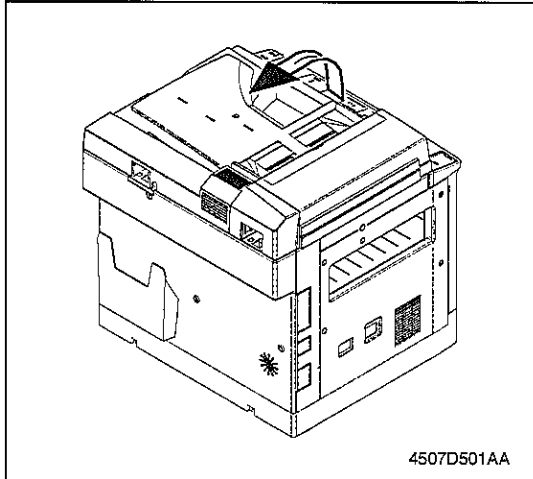


8. Remove the 6 screws to remove the I/F Bracket Assembly.

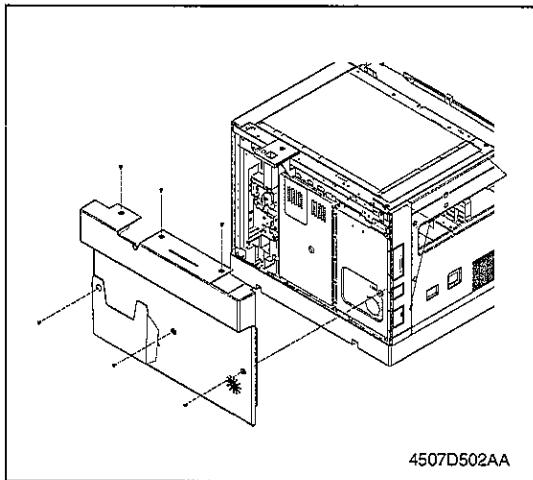


9. Remove all connectors on the PWB-C Board.
10. Remove the 6 screws to remove the PWB-C Board.

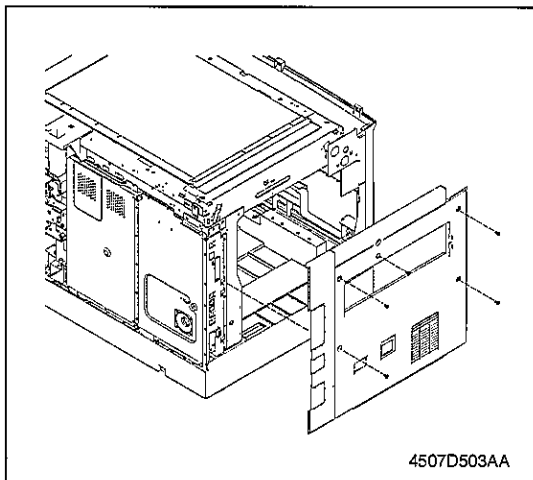
**(3) With Printer Controller Board**



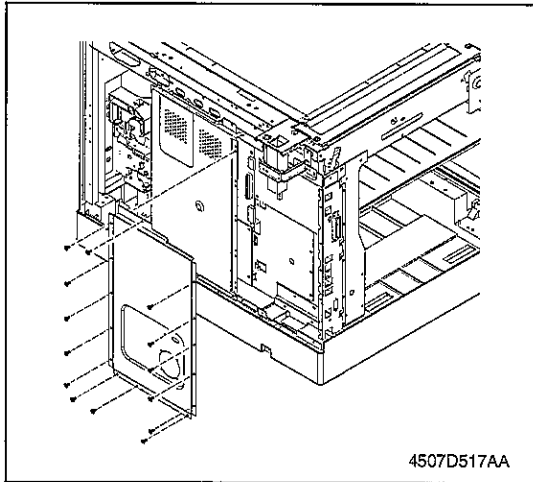
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



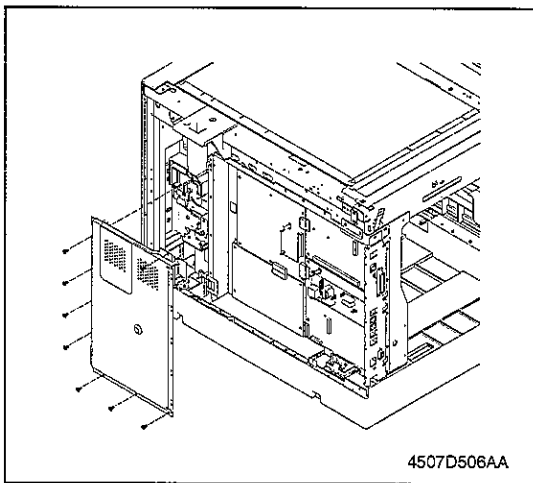
2. Remove the 6 screws to remove the Rear Cover.



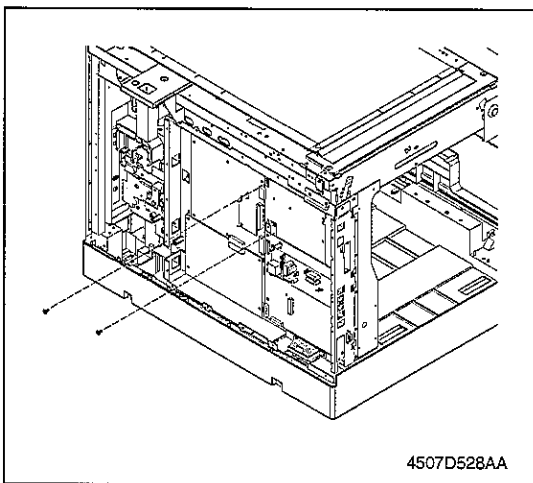
3. Remove the 5 screws to remove the Left Cover.



4. Remove the 16 screws to remove Fax Shield Cover.

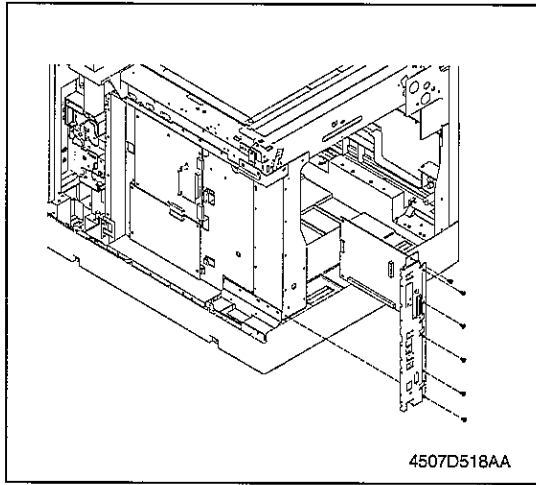


5. Remove the 8 screws to remove the Shield Cover Assembly.

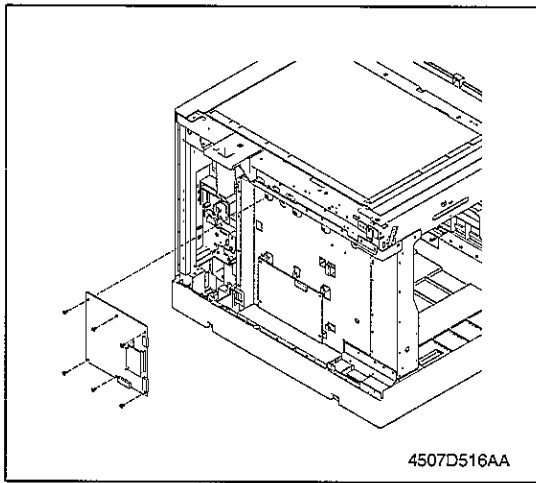


6. Remove the 2 screws for the Printer Controller Board.





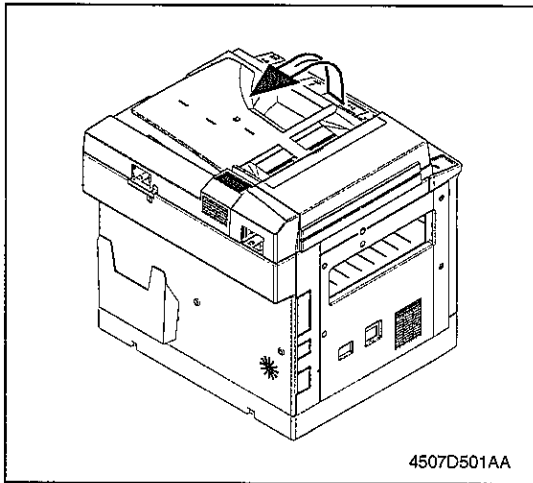
7. Remove the 6 screws to remove the I/F Bracket Assembly.



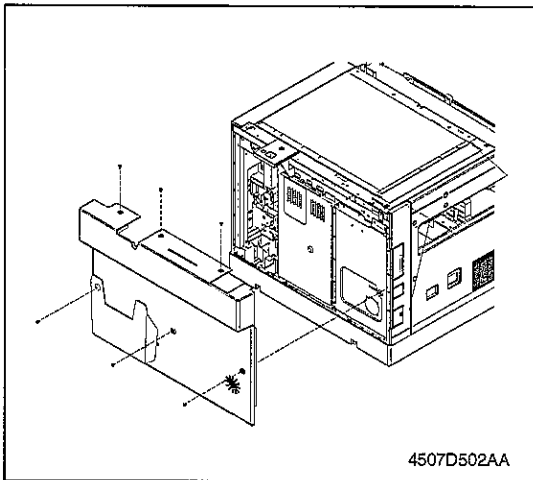
8. Remove all connectors on the PWB-C Board.
9. Remove the 6 screws to remove the PWB-C Board.

## 4-4. PWB-A Board Assembly / Disassembly

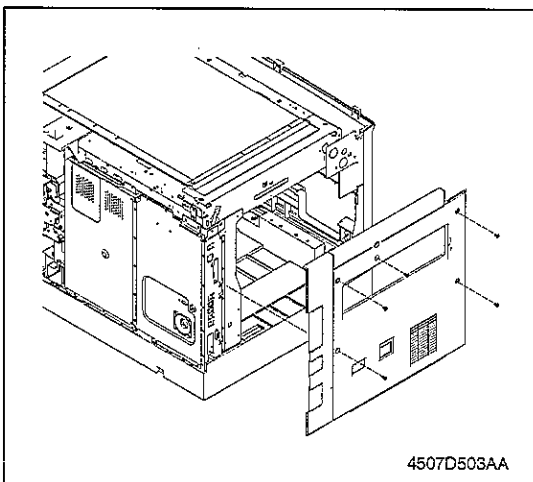
### (1) With Fax or Printer Controller Board



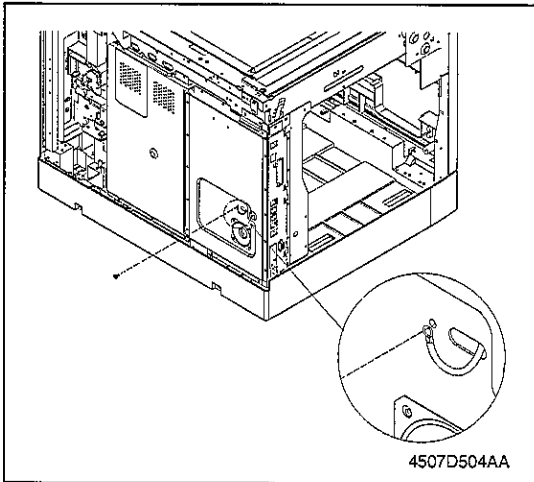
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



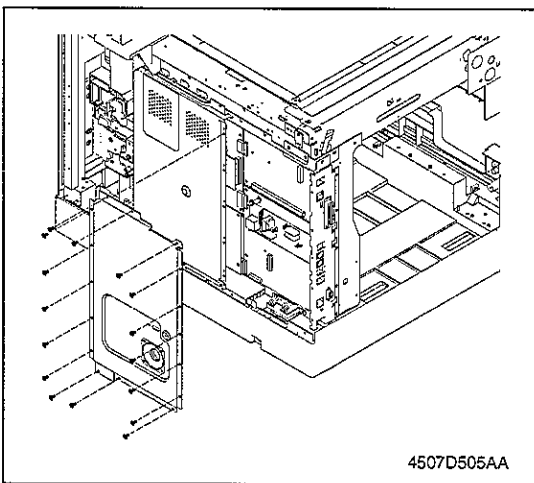
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



4. Remove the screw for the ground wire of the NCU Controller Board (With Fax Controller Board only)

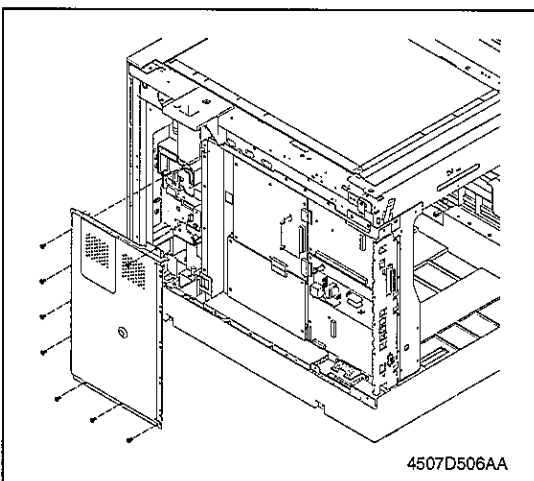


5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

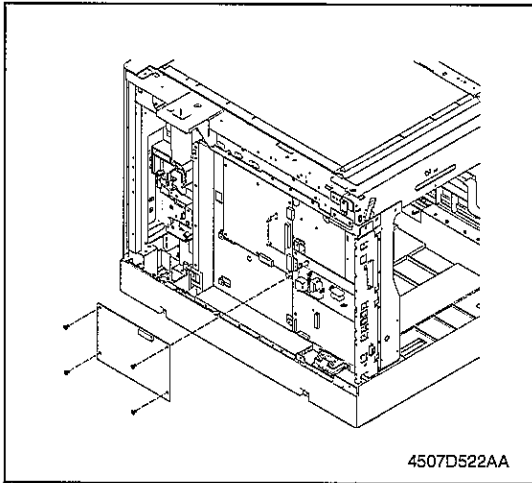
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**NOTE**

- Remove the Speaker Connector before removing the Fax Shield Cover Assembly. (With Fax Controller Board only)
- 

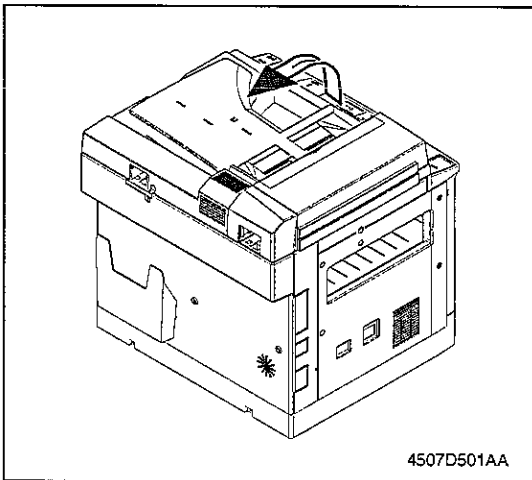


6. Remove the 8 screws to remove the Shield Cover Assembly.

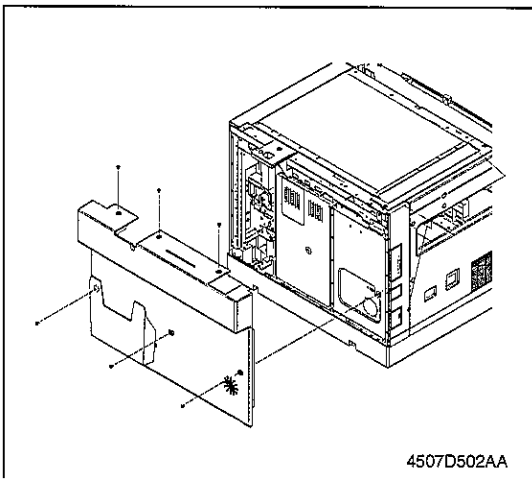


7. Remove all connectors on the PWB-A Board (except for PJ20).
8. Remove the 4 screws to remove the PWB-A Board.

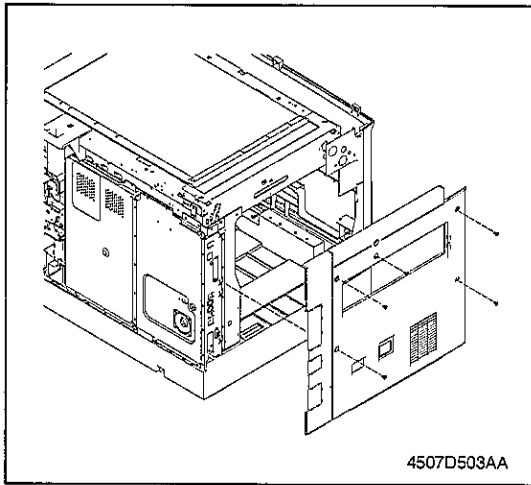
#### 4-5. Speaker and Battery Assembly / Disassembly



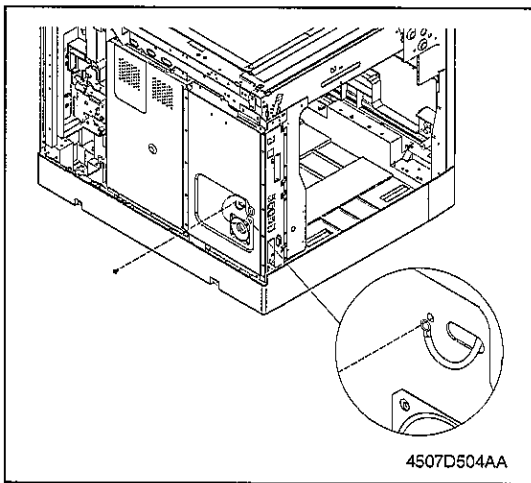
1. Turn off the power switch and remove the power cord, then raise the Automatic Document Feeder.



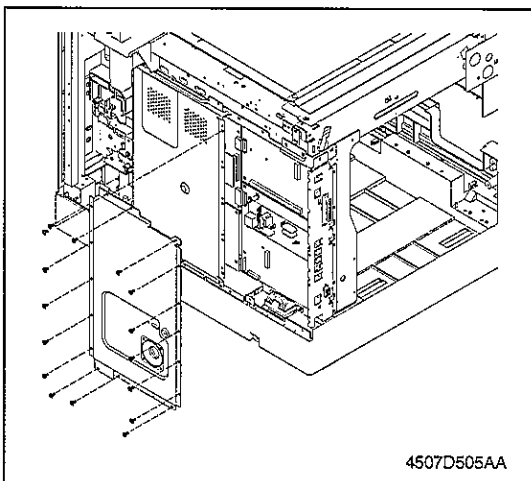
2. Remove the 6 screws to remove the Rear Cover.



3. Remove the 5 screws to remove the Left Cover.



4. Remove the screw for the ground wire of the NCU Controller Board.

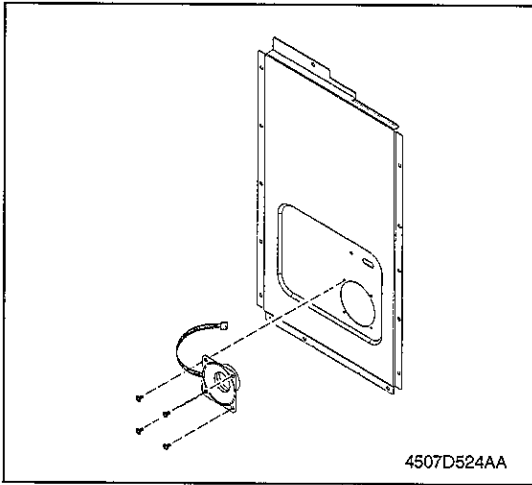


5. Remove the 16 screws to remove the Fax Shield Cover Assembly.

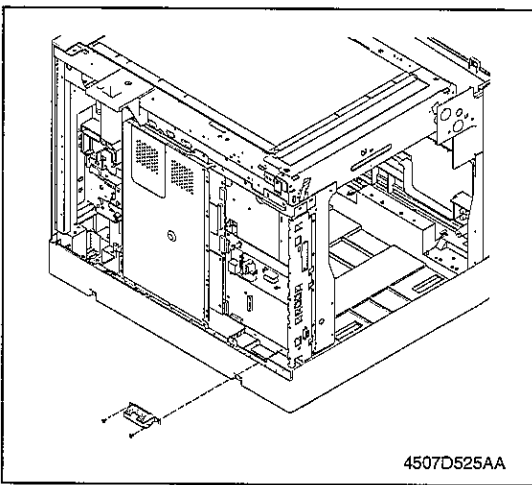
---

**NOTE**

- *Remove the Speaker Connector before removing the Fax Shield Cover Assembly.*
-



6. Remove the 4 screws to remove the Speaker.



7. Remove the Battery Connector for the Battery.
8. Remove the 2 screws to remove the Battery Fix Plate and the Battery.

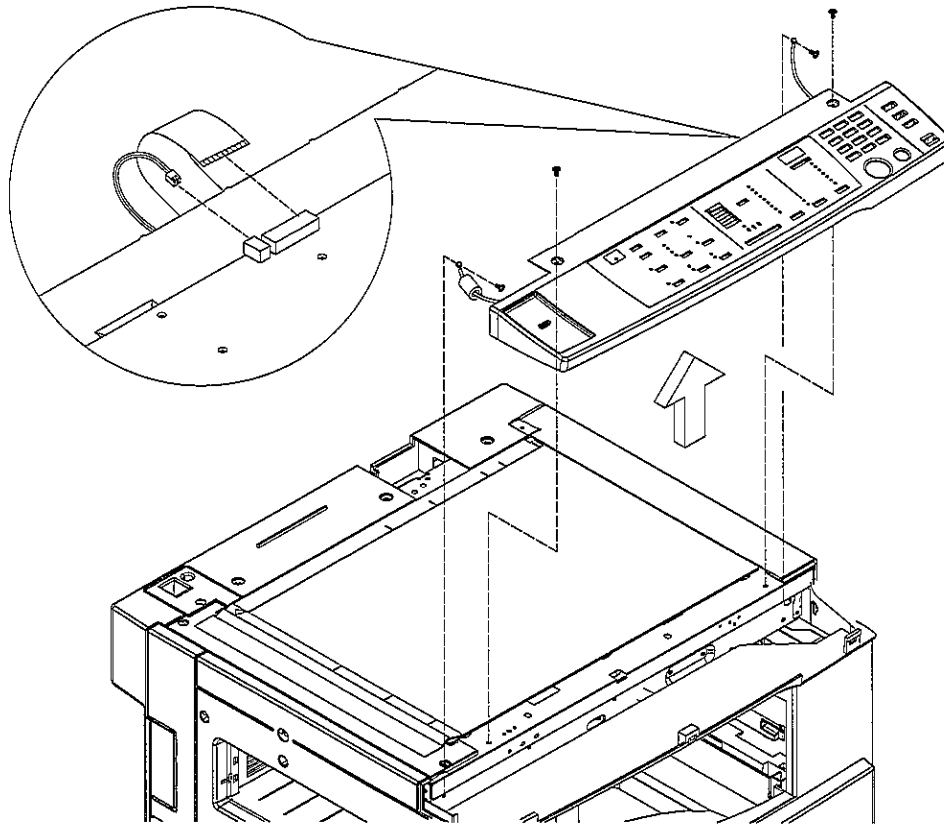
## 4-6. Fax Panel Assembly / Disassembly

- Remove the 4 screws to remove the Fax Controller Panel Assembly

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### **NOTE**

- *Remove the 2 connectors on the Fax Controller Board.*
- 

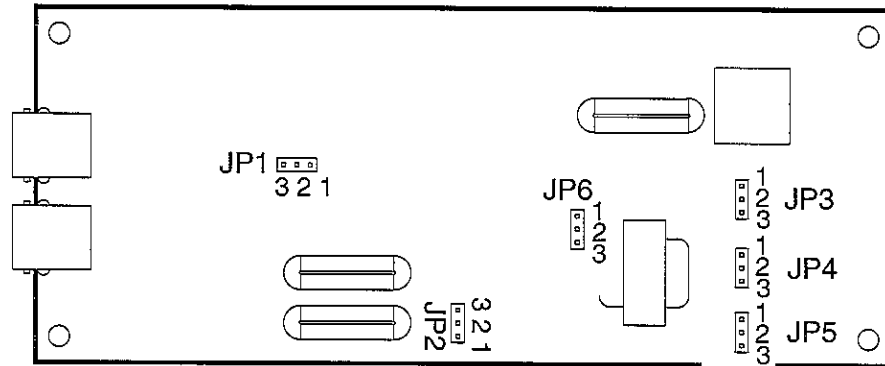


4507D526AA

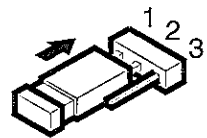
## 5. ADJUSTMENT

### 5-1. ADJUST JUMPER SWITCH ON NCU BOARD

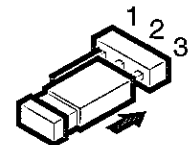
- Make the correct settings of the jumper switches at six places on the NCU Board according to the applicable marketing area.
- When the NCU Board has been replaced, check that the jumper switches are set as shown below.



4507D530AA



Setting --- 1,2



Setting --- 2,3

4507D529AA

#### \* Country Classification Jumper Switch Setting

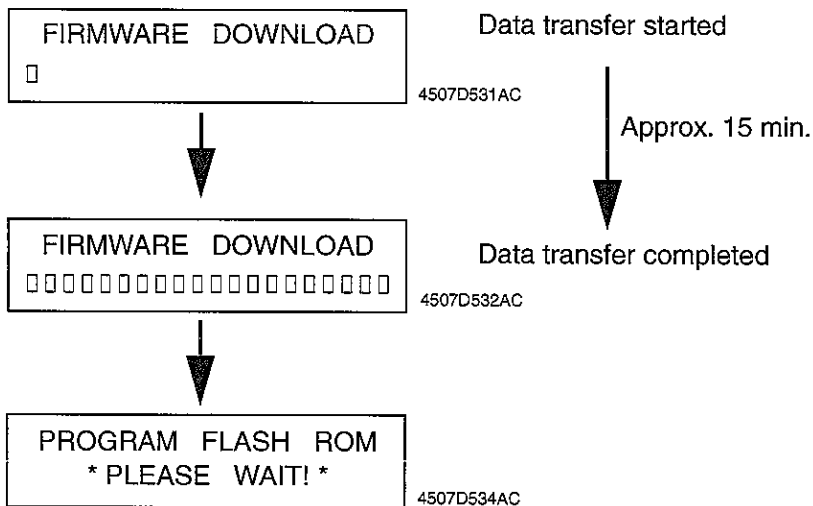
Type	JP1 ~ JP6	Country
STD	12,12,12,12,23,23	USA, Canada, singapore, Malaysia, Hong Kong, Russia, Iran, Bahrain, Qatar, Poland, Slovakia, Croatia, Czevh, Slovenia, Baltic, Romania, Ukraine, Kuwait, Philippine, Taiwan, UAE, Korea, New Zealand.
CTR-21	12,23,23,23,12,12	Finland, Iceland, Liechtenstein, Luxembourg, Norway, Sweden, Belgium, Cyprus, Denmark, France, Greece, Ireland, Italy, Netherlands, Switzerland, Germany, U.K, Portugal, Spain, Turkey, Hungary, Austria.
Australia	12,23,12,12,23,23	Australia, China.
South Africa	23,23,12,12,23,23	South Africa.



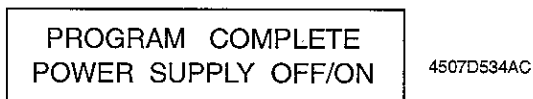
## 5-2. Upgrading Firmware

### (1) Upgrading Procedure Using RS-232C Interface

1. Turn OFF the Power Switch.
2. Connect the Fax Board to the host computer using the RS-232C cable (DB-9 connector).
3. Turn ON the Power Switch.
4. Start the host computer and start "DOS prompt" or "command prompt."
5. Type "mode\_com1:19,n,8,1" and then press the Enter key.  
**C:\>mode com1:19,n,8,1**
6. Check that the following message appears, indicating that the com1 device setting procedure is completed.  
**COM1: 19200,n,8,1-**
7. Type "copy\_/b" and then the upgrading source file name.  
**C:\>copy /b XXX.bin**
8. Type "com1" and then press the Enter key.  
**C:\>copy /b XXX.bin com1**
9. The following message appears on the Message Panel and transfer of firmware data is started. (Wait until data transfer is completed.)



10. The following message appears on the Message Panel, indicating that the firmware has been properly upgraded.



11. Type "exit" and then press the Enter key.  
**C:\>exit**
12. Make sure that the host computer exits from "DOS prompt" or "command prompt."
13. Turn OFF and then ON the Power Switch.

## (2) Upgrading Procedure Using Telephone Line (from fax machine to fax machine)

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### NOTE

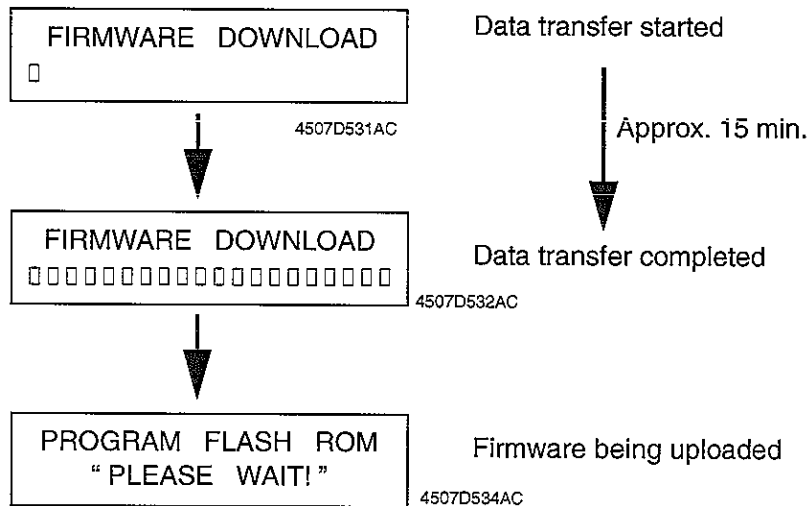
- The firmware transmitter fax machine must be loaded with the latest version of the firmware. If the firmware is not upgraded, do that by following the "Upgrading Procedure Using RS-232C Interface" described in the previous section.

- 
1. Set the REMOTE MONITOR to "FULL" in ADMIN.MANAGEMENT mode of Utility.(Firmware receiver fax machine)
  2. Set the firmware transmitter fax machine into the Service mode.  
Utility, Stop, 0, 0, Stop, 0, 1
  3. Select "5. Function."
  4. Select "Firmware Upload."
  5. Type the telephone number, to which the firmware receiver fax machine is connected.  
(The relevant one touch dial number may be used if the telephone number has been previously programmed in it.)
  6. Press the Start key. This starts transfer of the data.  
The Message Panel of the transmitter fax machine displays the same screen as that appearing during ordinary faxing.  
When the data transfer is completed, the ordinary standby screen reappears on the Message Panel.
  7. The firmware receiver fax machine receives the firmware data.  
The following message appears on the Message Panel, indicating that transfer of firmware data is started.

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### NOTE

- Do not use any of the printer and copier functions until upgrading of firmware is completed.



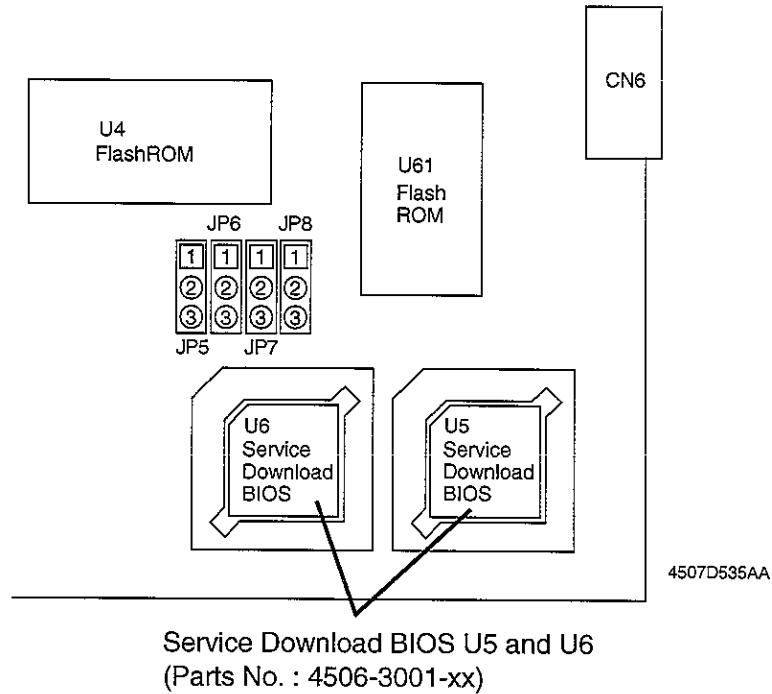
8. The following message appears on the Message Panel of the firmware receiver fax machine, indicating that upgrading of the firmware is completed.

PROGRAM COMPLETE POWER SUPPLY OFF/ON	4507D534AC
-----------------------------------------	------------

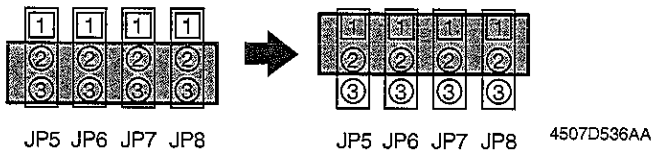
9. Turn OFF and ON the Power Switch of the firmware receiver fax machine.

### (3) Action Taken When Firmware Upgrading Fails

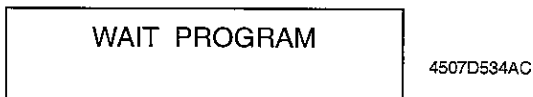
- Take the following action when upgrading of firmware is not completely properly.



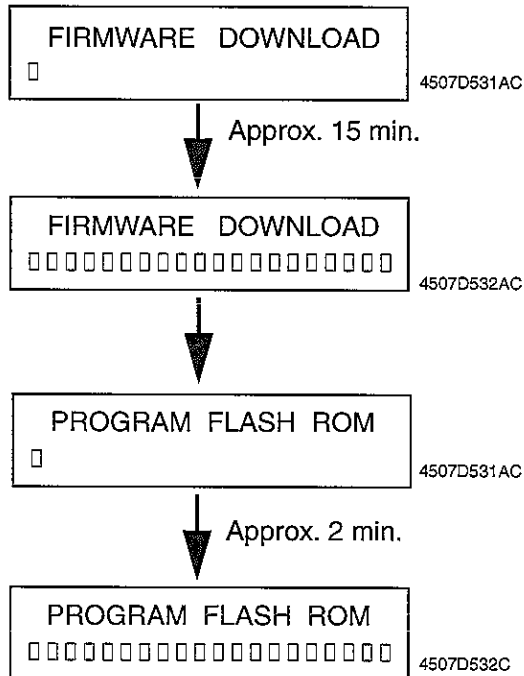
1. Turn OFF the Power Switch.
2. Change the setting for jumper switches JP5 to JP8 on the Fax Board from “2-3” to “1-2.”



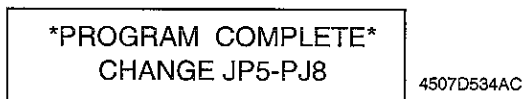
3. Mount “Service Download BIOS U5 and U6” on memory sockets U5 and U6 on the Fax Board.
4. Connect the Fax Board to the host computer using the RS-232C cable (DB-9 connector).
5. Start the host computer and start “DOS prompt” or “command prompt.”
6. Turn ON the Power Switch. The Message Panel will show the following message.



7. Type "mode\_com1:19,n,8,1" and then press the Enter key.  
**C:\>mode com1:19,n,8,1**
8. Check that the following message appears, indicating that the com1 device setting procedure is completed.  
**COM1: 19200,n,8,1-**
9. Type "copy\_/b" and then the upgrading source file name.  
**C:\>copy /b XXX.bin**
10. Type "com1" and then press the Enter key.  
**C:\>copy /b XXX.bin com1**
11. The following message appears on the Message Panel and transfer of firmware data is started. (Wait until data transfer is completed.)



12. The following message appears on the Message Panel, indicating that the firmware data has been properly transferred.



13. Type "exit" and then press the Enter key.  
**C:\>exit**
14. Make sure that the host computer exits from "DOS prompt" or "command prompt."
15. Turn OFF the Power Switch.
16. Change the setting for jumper switches JP5 to JP8 on the Fax Board from "1-2" to "2-3" (to return to the initial setting).
17. Remove "Service Download BIOS U5 and U6" from memory sockets U5 and U6 on the Fax Board.
18. Turn ON the Power Switch.

## 6. Service Mode Function

### 6-1. Description

#### (1) HOW TO ENTER INTO SERVICE MODE

- Press the following keys in this order to enter the Service mode:  
**UTILITY, STOP, 0, 0, STOP, 0, 1.**

---

**NOTE**

- *After exiting the Service mode, be sure to turn OFF and ON the Power Switch.*
- 

#### (2) KEY DEFINITION

Key	Definition
Left Key	Scroll Backward, Move Cursor Left
Right Key	Scroll Forward, Move Cursor Right
Up Key	Scroll Backward
Down Key	Scroll Forward
Start	Start Operation
Yes	Enter the selected Mode
No/Panel Reset Stop	Exit and return to next item
One Touch Key	Function Index
Numeric Key	Data Entry

### (3) FUNCTION ITEMS

No.	Function Items displayed on the LCD panel
1	SERVICE'S CHOICE
2	ADJUST
3	COUNTER
4	DISPLAY
5	FUNCTION
6	SOFT SWITCH
7	REPORT
8	ADMIN. REGISTRATION
9	FIXED ZOOM CHANGE
10	FACTORY TEST
11	CLEAR DATA
12	SECURITY

### (4) Setting Procedure

1. Call the Service mode to the screen.
2. Using the [Up] or [Down] key, select the desired function.
3. Press the Yes key to validate the function selected in step 2.  
\* Use the No key to undo the previous selection of the function.
4. For individual selection of subfunctions, use [Left] or [Right] key, or [Up] or [Down] key.
5. Press the Yes key to validate the selection.

## 6-2. SERVICE'S CHOICE

- The following function items are available.

No.	Function items displayed on the LCD panel
1	MARKETING AREA
2	SHIPMENT DESTINATION
3	MAINTENANCE COUNTER
4	IU LIFE STOP MODE
5	ID ADJUST
6	VG ADJUST
7	LEADING EDGE ERASE
8	TRAILING EDGE ERASE
9	VERTICAL EDGE ERASE
10	LOOP ADJUST (TRAY 1)
11	LOOP ADJUST (TRAY 2-5)
12	LOOP ADJUST (BYPASS)
13	PRIORITY FLS
14	TX SPEED
15	RX SPEED
16	TX LEVEL
17	RX LEVEL
18	DTMF LEVEL
19	CNG LEVEL
20	CED LEVEL
21	ECM MODE
22	CODING SCHEME
23	REPORT DESTINATION
24	TONER EMPTY REPORT
25	IU LIFE REPORT
26	MAINTENANCE REPORT
27	PROTOCOL REPORT
28	CUSTOMER ID



**(1) MARKETING AREA**

- Set the marketing area.
- If you change the marketing area, the soft switch (1-64) will change automatically.

**MARKETING AREA Setting Procedure**

Use the one touch key, or [Up] or [Down] key to select any number from 1 to 27.

One Touch	Marketing area	One Touch	Marketing area
1	STANDARD (Factory use only)	15	SOUTH AFRICA
2	U.S.A.	16	GREECE
3	TAIWAN	17	ISRAEL
4	SPAIN	18	AUSTRIA
5	ITALY	19	GERMANY
6	BELGIUM	20	FRANCE
7	NORWAY	21	UNITED KINGDOM
8	SWEDEN	22	AUSTRALIA
9	NETHERLANDS	23	CHINA
10	FINLAND	24	NEW ZEALAND
11	DENMARK	25	KOREA
12	SWITZERLAND	26	CZECH
13	IRELAND	27	SLOVAK
14	PORTUGAL		

Use the [Up] or [Down] key to select the number.

No.	Marketing area	No.	Marketing area
28	HUNGARY	38	HONG KONG
29	UKRAINE	39	PHILIPPINES
30	BALTIC	40	THAILAND
31	WEST EUROPE	41	INDONESIA
32	SLOVENIJA	42	OMAN
33	POLAND	43	UAE
34	ROMANIA	44	QATAR
35	RUSSIA	45	BAHRAIN
36	SINGAPORE	46	KUWAIT
37	MALAYSIA	47	SAUDI ARABIA
		48	JAPAN

## (2) SHIPMENT DESTINATION

- Set the shipping destination.

No.	Description
1	JAPAN
2	INCH
3	METRIC
4	CHINA

- Default :

Sales Country	Default	Sales Country	Default
Europe	METRIC	Korea	METRIC
South Africa/ Australia	METRIC	China	CHINA
Argentina	METRIC	USA/ Canada	INCH
Philippines	METRIC	Taiwan	METRIC

## (3) MAINTENANCE COUNTER

- The setting range of count value is 0-999999.
- It is used as guidelines for the number of copier to be made before the next maintenance time.
- Select the counting method of the maintenance counter.

### Setting Procedure

1. Select the setting value using the [Left] or [Right] key.
2. Press the Yes key.

\* When 1 or 2 is selected for the setting value, the count value entry screen automatically appears.

3. Type the count value from the 10-Key Pad.
4. Press the Yes key.

Setting value	Meaning	Specification	Default
0	NO COUNT	Nothing	○
1	PERMITS COPYING	Display "M1"	
2	INHIBITS COPYING	Display "CALL SERVICE (M1)"	

- When count value becomes zero, a minus count is performed. It is countable to -99999.

**(4) IU LIFE STOP MODE**

- The machine enters the IU Life Stop mode as soon as the count of the IU Life Counter reaches the life value which is calculated by an internal counter.
- The initial value of the IU Life Counter is 40,000.
- The IU Life Stop mode offers the following setting parameters:

Setting Value	Description	Default
STOP	Copying inhibited "M2" is displayed when the IU Life Counter reaches 40,000. The message "Call Service (M2)" is displayed and the print cycle is stopped when the IU Life Counter reaches 50,000.	<input type="radio"/>
CONTINUOUS	Copying permitted "M2" is displayed and the print cycle is continued when the IU Life Counter reaches 40,000.	

- When "Continuous" is selected, the IU Life Counter continues counting down even after it has read "0" and counts down to -99999. In this case, however, print quality is not guaranteed.

**(5) ID ADJUST**

- Adjust the printing density. The setting values are as follows.

Setting Value	Default
-3	
-2	
-1	
0	<input type="radio"/>
1	
2	
3	

**(6) VG ADJUST**

- Vary the Vg voltage to adjust image density.
- The function is used when a fog or a void occurs.
- Increase the setting value to eliminate void.
- Decrease the setting value to eliminate fog.

Setting value	Default
-2	
-1	
0	<input type="radio"/>
1	
2	

**(7) LEADING EDGE ERASE**

- Erase the leading edge image, the erase width ranging from zero to 5 mm.

Setting value	Default
0 mm	
1 mm	
2 mm	
3 mm	
4 mm	<input type="radio"/>
5 mm	

**(8) TRAILING EDGE ERASE**

- Erase the trailing edge image, the erase width ranging from zero to 5 mm.

setting value	Default
0 mm	
1 mm	
2 mm	
3 mm	
4 mm	<input type="radio"/>
5 mm	

**(9) VERTICAL EDGE ERASE**

- Erase the rear and front edges of the image.

Setting Value	Default
0 mm	
1 mm	
2 mm	
3 mm	
4 mm	<input type="radio"/>
5 mm	

**(10) LOOP ADJUST (TRAY1), (TRAY 2-5), (BYPASS)**

- Adjust the length of the loop to be formed in paper before the Synchronizing Roller.
- When a skew or misfeed occurs.
- Can adjust for MP, Bypass and Tray 2 to Tray 5, setting value as below. (Unit=mm)

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Setting Value	-3.9	-3.3	-2.8	-2.2	-1.7	-1.1	-0.6	0	0.6	1.1	1.7	2.2	2.8	3.3	3.9

**(11) PRIORITY FLS**

- Set the size of FLS.

Contents	Default
330 x 203	
330 x 210	<input type="radio"/>
330 x 216	
330 x 220	
337 x 206	

**(12) TX SPEED**

- Transmit start speed setting. Choose the mode from among the following. Default is V.34 33600.

Mode	Speed
V.34	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800
V.17	14400, 12000, 9600, 7200
V.33	14400, 12000
V.29	9600, 7200
V.27	4800, 2400

**(13) RX SPEED**

- Reception start speed setting. Choose the mode from among the following. Default is V.34 33600.

Mode	Speed
V.34	33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800
V.17	14400, 12000, 9600, 7200
V.33	14400, 12000
V.29	9600, 7200
V.27	4800, 2400

**(14) TX LEVEL**

- PSK/FSK signal output level.

Setting Value	Default
-2 dbm	
.	
.	
-9 dbm	<input type="radio"/>
.	
.	
-17 dbm	

**(15) RX LEVEL**

- Reception sensitivity level.

Setting Value	Default
-36 dbm	
.	
.	
-43 dbm	<input type="radio"/>
.	
.	
-49 dbm	

**(16) DTMF LEVEL**

- Dual tone output level.

Setting Value	Default
-2 dbm	
.	
.	
-10 dbm	<input type="radio"/>
.	
.	
-17 dbm	

**(17) CNG LEVEL**

- Calling tone output level.

Setting Value	Default
-2 dbm	
.	
.	
-11 dbm	<input type="radio"/>
.	
.	
-17 dbm	

**(18) CED LEVEL**

- Answer tone output level.

Setting Value	Default
-2 dbm	
.	
.	
-11 dbm	<input type="radio"/>
.	
.	
-17 dbm	

**(19) ECM MODE**

- Select error correction mode.

Setting Value	Description	Default
ON	When an error occurs during communication, re-send the frame where the error occurs.	<input type="radio"/>
OFF	Any error is ignored during communication.	

**(20) CODING SCHEME**

- Select compression method in TX/RX mode.

Setting Value	Default
JBIG	<input type="radio"/>
MMR	
MR	
MH	

## (21) REPORT DESTINATION

- Enter the telephone number for which the report is to be produced.
- Fax number specifications: An up-to-20-digit number that may consist of "0-9", "\*", and "#". (0-9, #, \*)
  
- When any of the following conditions happens, the report is sent to the destination.
  1. Toner-empty condition  
(Refer to (22) TONER EMPTY REPORT)
  2. The IU Life Counter exceeds the specifications.  
(Refer to (23) IU LIFE REPORT)
  3. The Maintenance Counter reaches a preset value.  
(Refer to (24) MAINTNANCE REPORT)
  
- \* The report will be produced at a timing of 20 min., 24 hours, 48 hours, and 72 hours after any of the above conditions has occurred until the condition disappears.
- \* If two or more conditions occur, only one report will be produced.

<Report sample>

SERVICE REPORT

NAME: ABC  
TEL: 886-3-4733507  
DATE: APR.10.2001 12:20

The FAX's following condition appears, the machine may not work correctly, the Fax already sent a report to your dealer automatically. They will contact you soon.

Toner status : Empty or Full  
Maintenance counter : 125  
Supplies life counter : 39938



## (22) TONER EMPTY REPORT

- Select to generate a report to a specific destination when toner empty status occurs in the engine.

Setting Value	Description	Default
OFF	Not to generate report.	<input type="radio"/>
ON	Generate a report to report destination.	

## (23) IU LIFE REPORT

- Select to generate the report when IU LIFE COUNTER becomes out of life.

Setting Value	Description	Default
OFF	Not to generate a report.	<input type="radio"/>
ON	Generate a report to destination.	

## (24) MAINTENANCE REPORT

- Select to generate the report when Maintenance counter becomes zero.

Setting Value	Description	Default
OFF	Not to generate report.	<input type="radio"/>
ON	To generate a report to report destination.	

## (25) PROTOCOL REPORT

- Print communication report. Choose one from among the following.

Setting Value	Description	Default
OFF	Disable T.30 communication report.	<input type="radio"/>
ON	Print T.30 communication report.	
ON (ERROR)	Print T.30 communication report when an error occurs.	

## (26) CUSTOMER ID

- Select to the maker name of this machine.

Setting Value	Description	Default
0	Minolta	<input type="radio"/>
1	Other	
2	Other	

### 6-3. ADJUST

- Following table lists all the adjustment items available for the machine.

No.	Indication on LCD	Description
1	PRN MAIN REGIST Ad1	Adjust print start position in the CD direction for MP Tray.
2	PRN SUB REGIST Ad2	Adjust print start position in the FD direction.
3	CCD MAIN ZOOM Ad3	Adjust horizontal the zoom ratio in the CD direction.
4	CCD SUB ZOOM Ad4	Adjust the zoom ratio in the FD direction.
5	CCD MAIN REGIST Ad5	Adjust scan start position in the FD direction.
6	CCD SUB REGIST Ad6	Adjust scan start position in the CD direction.
7	ADF SUB ZOOM Ad7	Adjust ADF zoom ratio in the FD direction.
8	ADF MAIN REGIST Ad8	Adjust ADF start reading position in the CD direction.
9	ADF SUB REGIST Ad9	Adjust ADF start reading position in the FD direction.
10	ADTC GAIN Ad10	ATDC sensor Gain Manual adjustment.
11	MODEL SETTING Ad11	_____
12	SERIAL NUMBER Ad12	This test is for factory adjustment only and should NOT be used.

#### (1) PRN MAIN REGIST Ad1

- Adjust the CD start position while printing using TRAY1.
- It is used when the PH Unit has been replaced.
- Press START key to copy for test.
- Press YES key to adjust setting..

Setting Value	Contents	Default
60	-4.0 mm	
61	-3.9 mm	
62	-3.8 mm	
.	.	
.	.	
98	-0.2 mm	
99	-0.1 mm	
100	0 mm	○
101	+0.1 mm	
102	+0.2 mm	
.	.	
.	.	
138	+3.8 mm	
139	+3.9 mm	
140	+4.0 mm	

**(2) PRN SUB REGIST Ad2**

- Adjust the FD start position while printing using TRAY1.
- It is used when the PH Unit has been replaced.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
67	-6.14 mm	
68	-5.95 mm	
69	-5.77 mm	
.	.	
.	.	
98	-0.37 mm	
99	-0.19 mm	
100	0 mm	○
101	+0.19 mm	
102	+0.37 mm	
.	.	
.	.	
130	+5.58 mm	
131	+5.77 mm	
132	+5.95 mm	
133	+6.14 mm	

**(3) CCD MAIN ZOOM Ad3**

- Adjust CD zoom ratio during CCD scanning.
- It is used when the PH Unit or CCD Unit has been replaced.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
97	-1.2 %	
98	-0.8 %	
99	-0.4 %	
100	0	○
101	+0.4 %	
102	+0.8 %	
103	+1.2 %	

#### (4) CCD SUB ZOOM Ad4

- Adjust vertical zoom ratio while CCD scanning.
- It is used when the PH Unit or the Scanner Drive Cables have been replaced, or when the Scanner has been removed.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
97	-1.2 %	
98	-0.8 %	
99	-0.4 %	
100	0	○
101	+0.4 %	
102	+0.8 %	
103	+1.2 %	

#### (5) CCD MAIN REGIST Ad5

- Adjust CD start position while CCD scanning.
- It is used when the PH Unit or CCD Unit has been replaced.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
20	-8.0 mm	
21	-7.9 mm	
22	-7.8 mm	
.	.	
.	.	
98	-0.2 mm	
99	-0.1 mm	
100	0 mm	○
101	+0.1 mm	
102	+0.2 mm	
.	.	
.	.	
178	+7.8 mm	
179	+7.9 mm	
180	+8.0 mm	

**(6) CCD SUB REGIST Ad6**

- Adjust FD start position while CCD scanning.
- It is used when the PH Unit or the Scanner Drive Cables have been replaced, or when the Scanner has been removed.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
60	-4.0 mm	
61	-3.9 mm	
62	-3.8 mm	
.	.	
.	.	
98	-0.2 mm	
99	-0.1 mm	
100	0 mm	○
101	+0.1 mm	
102	+0.2 mm	
.	.	
.	.	
138	+3.8 mm	
139	+3.9 mm	
140	+4.0 mm	

**(7) ADF SUB ZOOM Ad7**

- Adjust FD zoom ratio while ADF scanning.
- It is used when the machine is set up, the PH Unit or Scanner Drive Cables have been replaced, or the Scanner has been removed.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
87	94.8 %	
88	95.2 %	
89	95.6 %	
.	.	
.	.	
100	100 %	○
101	100.4 %	
102	100.8 %	
.	.	
.	.	
111	104.4 %	
112	104.8 %	
113	105.2 %	

**(8) ADF MAIN REGIST Ad8**

- Adjust FD start position while ADF scanning.
- It is used when the machine is set up, or the PH Unit or CCD Unit has been replaced.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
20	-8.0 mm	
21	-7.9 mm	
.	.	
.	.	
99	-0.1 mm	
100	0 mm	○
101	+0.1 mm	
.	.	
.	.	
179	+7.9 mm	
180	+8.0 mm	

**(9) ADF SUB REGIST Ad9**

- Adjust FD start position while ADF scanning.
- It is used when the PH Unit or Scanner Drive Cables have been replaced, or the Scanner has been removed.
- Press START key to copy for test.
- Press YES key to adjust setting.

Setting Value	Contents	Default
50	-5.0 mm	
51	-4.9 mm	
52	-4.8 mm	
.	.	
.	.	
98	-0.2 mm	
99	-0.1 mm	
100	0 mm	○
101	+0.1 mm	
102	+0.2 mm	
.	.	
.	.	
148	+4.8 mm	
149	+4.9 mm	
150	+5.0 mm	

**(10) ATDC GAIN Ad10**

- Adjust the ATDC Sensor voltage.
- It is used when an IU of another machine is to be used or the T/C control voltage is to be changed.
- The value, to which ATDC Sensor Automatic Adjustment has been adjusted, is to be the setting value.

Setting Value	Contents	Default
123	5.39V	
124	5.43V	
125	5.48V	
.	.	
.	.	
154	6.75V	
155	6.79V	○
156	6.84V	
.	.	
.	.	
184	8.06V	
185	8.11V	
186	8.15V	

**(11) Model Setting Ad11**

No.	Default
1	○
2	

**(12) Serial number Ad12**

- This test is for factory adjustment only and should NOT be used.

## 6-4. COUNTER

- The following counters can be shown on display.

No.	Indication on LCD
1	TOTAL COUNTER
2	SIZE COUNTER
3	PM COUNTER
4	MAINTENANCE COUNTER
5	SUPPLIES LIFE COUNT
6	APPLICATION COUNTER
7	MISFEED COUNTER
8	TROUBLE COUNTER
9	PAPER SIZE COUNTER

### (1) Total Counter

- Display the count of the Total Counter.
- The count system for the Total Counter is set by 6-13. SECURITY

### (2) Size Counter

- Display the count of the Size Counter.
- The count system for the Size Counter is set by 6-13. SECURITY

### (3) PM counter

- Counts the frequency of use of each of the different parts of the copier.
- The count should be cleared when the corresponding PM part is replaced. (see 6-12.CLEAR DATA)
- The element to count is as follows.

No.	PM counter	Indication on LCD
1	Bypass Tray	BYPASS
2	MP	TRAY 1
3	Tray 2	TRAY 2
4	Tray 3	TRAY 3
5	Tray 4	TRAY 4
6	Tray 5	TRAY 5
7	ADF	ADF
8	IR	IR
9	Ozone Filter	OZONE
10	Paper Dust Remover	CLEANING



**(4) Maintenance counter**

- Displays the current count value of the Maintenance Counter.

**(5) Supplies Life Counter**

- Displays the current count value of the Supplies Life Counter.

**(6) Application Counter**

- Displays the current count value of the Application Counter.

No.	Indication on LCD	Description
1	COPY PRINT	<ul style="list-style-type: none"><li>• Total number of copies made in copy mode.</li><li>• It counts at the time of discharge of a printed page.</li></ul>
2	FAX PRINT	<ul style="list-style-type: none"><li>• Number of printed pages for Fax RX.</li><li>• It counts at the time of discharge of a printed page.</li></ul>
3	REPORT PRINT	<ul style="list-style-type: none"><li>• Total number of printed pages for reports.</li><li>• It counts at the time of discharge of a printed page for report.</li></ul>
4	PC PRINT	<ul style="list-style-type: none"><li>• Total number of printed pages produced from PCL6.</li><li>• It counts at the time of discharge of a printed page.</li></ul>
5	TX PAGE	<ul style="list-style-type: none"><li>• Total number of Fax TX pages.</li><li>• Transmitting number of sheets counts at the time of the completion of transmitting.</li></ul>

**(7) Misfeed Counter**

- Count the number of times a misfeed occurs.
- A sheet of paper left in the machine is not counted.

No.	Description	Indication on LCD
1	Bypass Tray	BYPASS
2	MP Tray	TRAY 1
3	Tray 2	TRAY 2
4	Tray 3	TRAY 3
5	Tray 4	TRAY 4
6	Tray 5	TRAY 5
7	Paper pick-up/transport	PICK-UP/TSPT
8	Fuser	FUSER
9	Separator	SEPARATOR
10	ADF (Take-up)	ADF (PICK-UP)
11	ADF (Transport)	ADF (TSPT)
12	ADF (Exit)	ADF (EXIT)

### (8) Trouble counter

- Count the number of times a Trouble occurs.

No.	Counter name	Indication on LCD
1	Main motor error.	[C0000]
2	Fuser fan error.	[C0045]
3	Power fan error.	[C004E]
4	Toner bottle motor error.	[C0070]
5	Transfer voltage error.	[C0210]
6	Warm up error.	[C0500]
7	Low Temp. error.	[C0510]
8	High Temp. error.	[C0520]
9	Home sensor error.	[C0650]
10	Separator motor error.	[C0B60]
11	Shift motor error.	[C0B80]
12	ATDC sensor abnormal.	[C0F32]
13	ATDC adjustment abnormal.	[C0F33]
14	ASIC/ Memory error.	[C1200]
15	Polygon mirror motor error.	[C1300]
16	HSYNC Detect error.	[C13F0]
17	EEPROM Error.	[C1468]
18	IR Lamp malfunction.	[C14A3]
19	Communication with option error.	[C133B]
20	Modem error.	[C133C]
21	ROM checksum error.	[C133D]

- Service call troubleshooting

Service call	Detection Timing	Action
[C133B]	It is not possible to communicate with the Printer Board within a predetermined period of time during a print cycle.	Change the Printer Board or the Control Board.
[C133C]	An error is detected of the modem chip on the Fax Board when the Power Switch is turned ON.	Change the Fax Board.
[C133D]	An error is detected of the flash ROM chip on the Fax Board when the Power Switch is turned ON.	Change the Fax Board.

\* Refer to the service manual of the copy machine for the troubles other than the above-mentioned.

**(9) Paper Size Counter**

- Counts the number of sheets of paper used according to the size and type.

No.	Paper Size	Indication
1	A3L	A3L
2	B4L	B4L
3	A4L	A4L
4	A4C	A4C
5	B5L	B5L
6	B5C	B5C
7	A5L	A5L
8	A5C	A5C
9	FLSL	FLSL
10	11 × 17L	11 × 17L
11	11 × 14L	11 × 14L
12	Legal L	LEGAL L
13	Letter L	LETTER L
14	Letter C	LETTER C
15	Invoice L	INVOICE L
16	Invoice C	INVOICE C
17	Other	OTHER
18	APS PAPER	APS PAPER
19	NOT APS PAPER	NOT APS PAPER
20	FIXED PAPER	FIXED PAPER
21	OHP	OHP
22	THICK PAPER	THICK PAPER

## 6-5. Display

No.	Indication on LCD	Description
1	TONER DENSITY LEVEL	Display the ATDC sensor output (T/C ratio).
2	PROCESS CONTROL	Show Vg and Vb value from engine.
3	FAX ROM VER.	Display the FAX ROM version.
4	FAX RAM SIZE	Display the FAX Total memory size.
5	COPIER RAM SIZE	16 or 32 MB for Copier memory.
6	FNIC VER.	<ul style="list-style-type: none"> <li>• Version Information string for FNIC (I-FAX).</li> <li>• If the optional FNIC kit is not mounted, this item is not available.</li> </ul>
7	PC PRINTER VERSION	<ul style="list-style-type: none"> <li>• Version Information string for P/C.</li> <li>• If the optional printer kit is not mounted, "NOT AVAILABLE" is displayed.</li> </ul>
8	PC PRINTER RAM SIZE	<ul style="list-style-type: none"> <li>• Memory size for PCL printer.</li> <li>• If the optional printer kit is not mounted, this item is not available.</li> </ul>
9	SERIAL NO.	Show machine serial number.
10	PNIC VER.	<ul style="list-style-type: none"> <li>• Show "NOT AVAILABLE" if no PNIC kit.</li> <li>• If no PNIC is installed, "NOT AVAILABLE" is displayed.</li> </ul>
11	ENGINE F/W VER.	Show Engine F/W Ver.

## 6-6. FUNCTION

No.	Indication on LCD	Description
1	PAPER FEED TEST	Printing paper feeding test from selected Tray.
2	PROCESS CHECK	Select output of HV. This test is for factory adjustment only and should NOT be used.
3	ATDC SENSOR ADJUST	Automatic adjustment of ATDC sensor.
4	PRINT TEST PATTERN	Printing a pre-determined test pattern.
5	ADF FEED TEST	ADF feeding test.
6	COPY ADF GLASS AREA	Copy ADF glass area image.
7	CCD MOVE TO HOME	Moving Scanner to home position.
8	UPLOAD FIRMWARE	Uploading firmware to remote side machine.
9	FAX RES. COPY TEST	Fax resolution copy test.

### (1) PAPER FEED TEST

- Correct paper passage (paper transport path) is checked without involving any printing action.
- Select the paper source.
- Paper passage operation is checked.
  - Scanning is not carried out.
  - Perform a paper transport check until the paper tray is empty.
  - Start by the start key and stop with a stop key.
  - It cannot be operated at the time of warming up.
  - It cannot operate when paper is set on the Single Bypass Tray.
  - The counter does not count during test. (Total-counter etc.)

### (2) PROCESS CHECK

- This test is for factory adjustment only and should NOT be used.

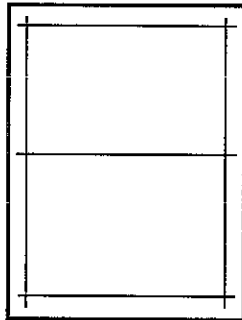
### (3) ATDC SENSOR ADJUST

- Automatic adjustment of ATDC sensor is performed.
- This test is used when the copier is set up, developer is changed, and the IU is replaced.
  - Adjustment is started with the YES key.
  - Stop automatically after adjustment. It is possible to stop with the "Stop" key in the middle of the adjustment sequence.

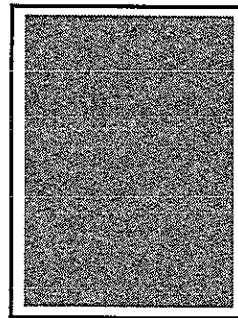
### (4) PRINT TEST PATTERN

- Prints the test pattern.
- Select the tray to be used.
- Select the pattern (either pattern 1 or pattern 2).

pattern 1



pattern 2



- This function is used to identify the specific functional unit, either the engine or the IR, which is responsible for an image problem that has occurred.
- The following are the specific operations.
  - Scanning is not carried out.
  - It cannot operate at the time of warming up.
  - Start with the "Start" key and stop with the "Stop" key.
  - It cannot be operated if paper is set on a Single Bypass Tray.
  - A printing paper source can be selected with "Paper" key, except Bypass tray [single /multi]. in the case of FAX model, select the printing paper source on the screen of the function mode.
  - The counters do not count. (Total-counter etc.)

### (5) ADF FEED TEST

- Paper passage operation of ADF is checked.
  - Scanning is not carried out.
  - Performs an ADF document passage test until all of the set document are fed.
  - The test does not start if document is not loaded.
  - Start with the start key and stop with stop key.

#### **(6) COPY ADF GLASS AREA**

- Check to see if the glass within the scan area is scratched or dirty.

<Operation>

1. Place a gray chart (O.D.=0.3) on the glass.
2. The Scanner moves from the standby position to a point 2 mm to left of the ADF scanning position.
3. The Scanner starts reading the gray chart as it moves to the right.
4. The machine produces two prints (to distinguish dirt on the glass from printer image noise).

#### **(7) CCD MOVE TO HOME**

- This function is used for securing the Scanner in position for shipment.
- The Scanner moves from the standby position to the left.
- Use the Start key to move the Scanner to the left and the Stop key to return it back to the standby position.

#### **(8) UPLOAD FIRMWARE**

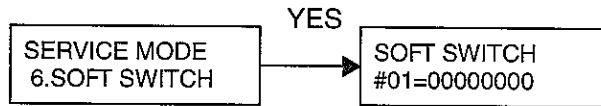
- Download firmware from this machine to remote side, after setup of remote side location.
- Machine will dial automatically and copy the EPROM data to remote side machine.
- For details, refer to ADJUSTMENT.

#### **(9) FAX RES. COPY TEST**

- Select CCD FAX or ADF FAX.
- The page to be transmitted is automatically printed.
- The data will not be transmitted to the machine on the other end.

## 6-7. SOFT SWITCH

- Refer to the chapter of soft switch for the explanation of soft switch.



- KEY DEFINITION FOR SOFTSWITCH

Key	Definition
↓	Soft Switch Number Forward.
↑	Soft Switch Number Backward.
YES	Update Soft Switch by current setting.
NO/STOP	Exit Soft Switch setting
ONE TOUCH	<ul style="list-style-type: none"><li>• 1-27 of the soft switch numbers uses and selects an one-touch key.</li><li>• 28-64 of the soft switch numbers uses and selects ↓ key.</li></ul>



## 6-8. REPORTING

- The following list is selected, and press YES key.
- After service mode ends, the list is automatically printed.

No.	Indication on LCD
1	SERVICE DATA LIST
2	ERROR CODE LIST
3	T.30 PROTOCOL LIST

### (1) SERVICE DATA LIST

- Print service data list report and Error log history list.
- Service Data list includes the following items:
  1. Report title
  2. Soft switch list
  3. Communication history and counter
  4. Mailbox ID & Password
  5. Relay BOX ID and Password
  6. RX in memory password
  7. Admin. password
  8. Section number password
  9. ROM ID

- Error log history list includes the following items:

No.	Item	Description
1	Index	Index number from 0 - 9999
2	Error	Error code number
3	Maker	NSF frame maker code
4	Tele.	Remote side or TX side telephone number for that transaction

1. SERVICE DATA LIST)

NAME:DALLAS  
TEL :1234567  
DATE:JUL.02'1998 11:55  
MARKETING AREA=STANDARD

SERVICE DATA LIST

-- SOFT SWITCH --

SW01-SW16 00 20 81 0C 00 00 07 61 00 81 10 80 10 00 01 03  
SW17-SW32 00 00 68 00 80 06 00 00 00 28 00 A7 14 68 00 00  
SW33-SW48 C0 02 10 8A 00 C1 01 08 04 80 80 04 00 02 00 89  
SW49-SW64 01 00 01 88 30 B0 F8 15 08 00 08 24 0F 00 80 07

--COMMUNICATION HISTORY & COUNTER --

000000: ECM RX TIME 000000: ECM TX TIME  
000001: G3 RX TIME 000000: G3 RX PAGE  
000000: V.17 14.4K 000000: V.17 12K  
000000: V.33 14.4K 000000: V.33 12K  
000000: V.17 9.6K 000000: V.17 7.2K  
000000: V.29 9.6K 000000: V.29 7.2K  
000000: V.27 4.8K 000001: V.27 2.4K  
000000: G3 TX TIME 000000: G3 TX PAGE  
000000: V.17 14.4K 000000: V.17 12K  
000000: V.33 14.4K 000000: V.33 12K  
000000: V.17 9.6K 000000: V.17 7.2K  
000000: V.29 9.6K 000000: V.29 7.2K  
000000: V.27 4.8K 000000: V.27 2.4K  
000007: V.34 RX TIME 000007: V.34 RX PAGE  
000002: 33.6K 000005: 31.2K  
000000: 28.8K 000000: 26.4K  
000000: 24.0K 000000: 21.6K  
000000: 19.2K 000000: 16.8K  
000000: 9.6K 000000: 7.2K  
000000: 4.8K 000000: 2.4K  
000001: V.34 TX TIME 000015: V.34 TX PAGE  
000001: 33.6K 000006: 31.2K  
000000: 28.8K 000000: 26.4K  
000000: 24.0K 000000: 21.6K  
000000: 19.2K 000000: 16.8K  
000000: 9.6K 000000: 7.2K  
000000: 4.8K 000000: 2.4K  
000007: JBIG TX TIME 000007: JBIG RX TIME  
000000: TOTAL COUNTER 000000: SIZE COUNTER  
000000: MAINTENANCE COUNTER 000000: SUPPLIES COUNTER  
000000: COPY PRINT 000000: FAX PRINT  
000000: REPORT PRINT 000000: PC PRINT

-- MAILBOX ID & PW --

NO.0 ID= PW= NO.1 ID= PW= NO.2 ID= PW=  
NO.3 ID= PW= NO.4 ID= PW= NO.5 ID= PW=  
NO.6 ID= PW= NO.7 ID= PW= NO.8 ID= PW=  
NO.9 ID= PW=

-- RELAY BOX ID & PW --

NO.0 ID= PW= NO.1 ID= PW= NO.2 ID= PW=  
NO.3 D= PW= NO.4 ID= PW=

-- SECTION PASSWORD --

NO.1 : NO.2 : NO.3 : NO.4 : NO.5 :  
NO.6 : NO.7 : NO.8 : NO.9 : NO.10 :  
NO.11 : NO.12 : NO.13 : NO.14 : NO.15 :  
NO.16 : NO.17 : NO.18 : NO.19 : NO.20 :

RX IN MEMORY:  
ADMIN.PASSWORD:

-ROM ID -  
06/14/2000 V0.25-3

## 2. ERROR LOG HISTORY LIST

The following table is the error log history. The table keeps the last 40 records only.

ERROR LOG HISTORY LIST
------------------------

Index	Error	Maker	Tele
0001 :	0070	49EE	88634733507
0002 :	00A0	49EE	
0003 :	0070	0000	
0004 :	0070	0000	
0005 :	0070	0000	
0006 :	0070	0000	
0007 :	0070	0000	
0008 :	0070	0000	
0009 :	0070	0000	
0010 :	0070	0000	
0011 :	0070	0000	
0012 :	0070	0000	
0013 :	0070	0000	
0014 :	0070	0000	
0015 :	0070	0000	
0016 :	0070	0000	
0017 :	0070	0000	
0018 :	0070	0000	
0019 :	0020	49EE	123
0020 :	0070	0000	

NSF signal 3rd. and 4th byte

Keep 20 digits of TSI or CSI

**(2) ERROR CODE LIST**

- Print out error code as following table.

ERROR CODE TABLE

CODE	ERROR TIMES	CODE	ERROR TIMES	CODE	ERROR TIMES
0001	00000000	0002	00000000	0003	00000000
0004	00000000	0005	00000000	0006	00000000
0007	00000000	0008	00000000	0009	00000000
000A	00000000	000B	00000000	000C	00000000
000D	00000000	000E	00000000	000F	00000000
0010	00000000	0011	00000000	0012	00000000
0013	00000000	0014	00000000	0015	00000000
0016	00000000	0017	00000000	0018	00000000
0019	00000000	001A	00000000	001B	00000000
001C	00000000	001D	00000000	001E	00000000
001F	00000000	0020	00000000	0021	00000000
0022	00000000	0023	00000000	0024	00000000
0025	00000000	0026	00000000	0027	00000000
0028	00000000	0029	00000000	002A	00000000
002B	00000000	002C	00000000	002D	00000000
002E	00000000	002F	00000000	0030	00000000
0031	00000000	0032	00000000	0033	00000000
0034	00000000	0035	00000000	0036	00000000
0037	00000000	0038	00000000	0039	00000000
003A	00000000	003B	00000000	003C	00000000
003D	00000000	003E	00000000	003F	00000000
0040	00000000	0041	00000000	0042	00000000
	00000000		00000000		00000000
	00000000		00000000		00000000
	00000000		00000000		00000000
	00000000		00000000		00000000
	00000000		00000000		00000000
00F7	00000000	00F8	00000000	00F9	00000000
00FA	00000000	00FB	00000000	00FC	00000000
00FD	00000000	00FE	00000000	00FF	00000000

**(3) T.30 PROTOCOL LIST**

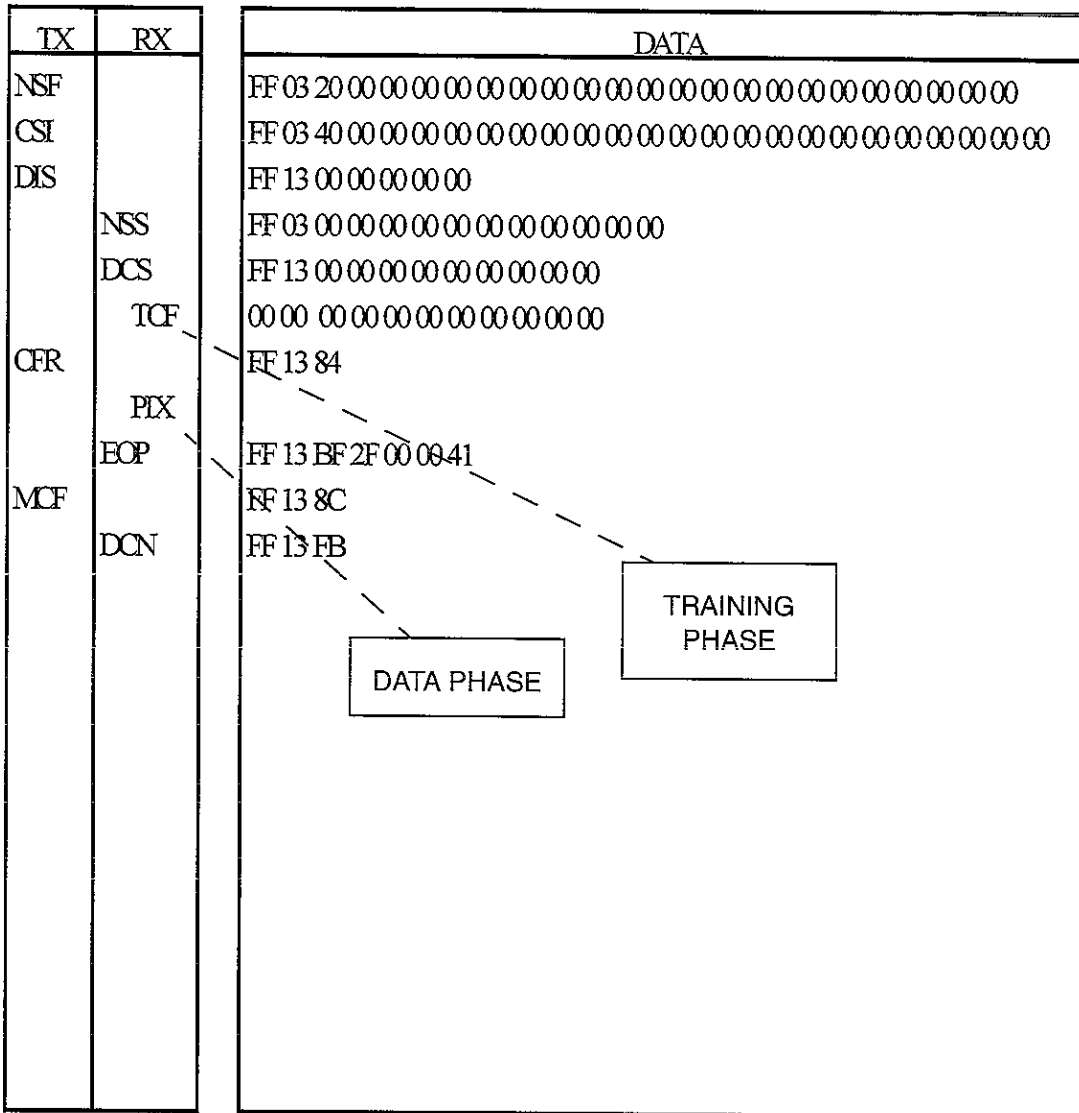
- Print out T.30 or V8 protocol after communication.
- 1. SESSION NUMBER
- 2. FUNCTION NAME
- 3. DESTINATION NAME/TELEPHONE NUMBER
- 4. COMMUNICATION DATE & TIME
- 5. TOTAL PAGE NUMBER FOR THIS SESSION
- 6. COMMUNICATION DURATION
- 7. COMMUNICATION SPEED AND ECM MODE
- 8. COMMUNICATION RESULT
- 9. T.30 COMMAND SENT BY LOCAL FAX
- 10. T.30 COMMAND RECEIVED FROM REMOTE FAX
- 11. T.30 FRAME THAT INCLUDE ADDRESS & CONTROL & DATA

1. V.17 COMMUNICATION

PROTOCOL MONITOR REPORT

NAME: ABC  
 TEL:886 3 4733507  
 DATE: APR.10'97 12:20

SESSION	FUNCTION	NO	DESTINATION STATION	DATE	TIME	PAGE	MODE	RESULT
0001	TX	01	ABC 22345678901234567890				ECM-12	OK





## 6-9. Administrator number registration

- The administrator number (0 to 999999) required for the Administrator mode of Utility is programmed or changed.

- The administrator mode has the following three modes.

### 1. AUTO SHUT OFF:

Select whether to enable or disable the auto power-off function.

### 2. COPY TRACK:

2.1 Copy track mode

2.2 Access No. REG.

2.3 Copy track data

### 3. Remote monitor

Setting value	Description	Default
LIMITED	Enable limited remote monitor function	<input type="radio"/>
FULL	Enable remote monitor function fully	
OFF	Disable remote monitor function	



## 6-10. Fixed zoom change

- Alter the fixed zoom ratios.
- Change the fixed zoom ratios for two steps of enlargement, and two steps of reduction.
- By the Shipment Destination, the setting range is as follows.

### Metric

Initial fixed zoom ratio	Setting range
Reduction 2 (70 %)	51 % --- 70 %
Reduction 1 (81 %)	71 % --- 99 %
Enlargement 1 (115 %)	101 % - 140 %
Enlargement 2 (141 %)	141 % - 199 %

### Inch

Initial fixed zoom ratio	Setting range
Reduction 2 (64 %)	51 % --- 64 %
Reduction 1 (78 %)	65 % --- 99 %
Enlargement 1 (121 %)	101 % --- 128 %
Enlargement 2 (129 %)	129 % --- 199 %

### China

Initial fixed zoom ratio	Setting range
Reduction 2 (70 %)	51 % --- 70 %
Reduction 1 (81 %)	71 % --- 99 %
Enlargement 1 (115 %)	101 % - 140 %
Enlargement 2 (141 %)	141 % - 199 %

## 6-11. FACTORY TEST

- This test is for factory adjustment only and should NOT be used.

## 6-12. CLEAR DATA

No.	Indication on LCD	Description
1	DRAM CLEAR	Delete all image memory.
2	SRAM CLEAR	Clear all user data.
3	TOTAL COUNTER	Not used
4	PM COUNTER	Delete PM counter one by one.
5	MEMORY CLEAR	All the contents of memory are cleared.
6	TOTAL CLEAR	Not used
7	MAINTENANCE COUNTER	Delete maintenance counter.
8	SUPPLIES LIFE COUNTER	Delete the supplies counter.
9	APPLICATION COUNTER	Delete application counter one by one.
10	MISFEED COUNTER	Delete various MISFEED counter one by one.
11	TROUBLE COUNTER	Delete trouble counter one by one.
12	PAPER SIZE COUNTER	Delete paper size counter one by one.

### (1) CLEAR DRAM

- Clear all data in the memory file and make all memory space available. The user data is not affected.

### (2) CLEAR SRAM

1. Clear user setting data.
2. Clear Fax registration data.
3. Clear all data in the memory, same as clear DRAM.
4. Reset Date/time to January 1 st. 2000.
5. Clear all counters.
6. Reset all setting item to default setting based on the current country code (before clear).

---

### NOTE

- Adjust data will be restored after clear SRAM.
- 

### (3) PM COUNTER

- Display content of PM counter. Press YES key to clear counter.

#### **(4) MEMORY CLEAR**

- All the contents of memory are cleared, the memory contain the contents memorized by the nonvolatile memory are cleared except an electronic counter.
- The following items are cleared (initialization):

- User choice
- Service choice
- Adjustment data
- Utility (Except Copy Track MODE, ACCES No., and COPY TRACK DATA.)
- Security mode
- Copy mode information
- FATAL information
- Jam compensation information
- Image data information
- The Content of program registration

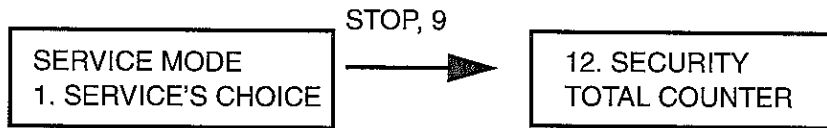
#### **(5) TOTAL CLEAR**

- All electronic counters are cleared.
- The following items are cleared (initialization).

- Total counter
- Size counter
- PM counter
- Maintenance counter
- Supplies life counter
- Counter by application
- Misfeed counter
- Trouble counter
- Paper size counter
- Section total counter
- Access No.

## 6-13. SECURITY

- To enter security, press STOP and 9 on the function menu.



Set up for an item involved in customer's expense calculation

No.	Indication on LCD
1	TOTAL COUNTER
2	SIZE COUNTER
3	PLUG-IN COUNTER
4	MACHINE COUNTER

### (1) Total Counter counting

Set up the count system for total counter.

Setting value	Contents	Default
0	1 count per 1 copy cycle	○
1	Multiple count-up	
2	Multiple count-up	

**(2) Size counter counting**

- Select the size of paper to be counted by the Size counter.

Setting value	Contents	Default
0	No count	
1	A3 L / Ledger L	<input type="radio"/>
2	A3 L / B4 L / Ledger L / Legal L	
3	A3 L / B4 L / FLS / Ledger L / Legal L / 11 x 14 L	

- In the case of the custom size paper, when the minimum paper length (CD/FD) of the contents of size counter count mode is exceeded, the machine considers it as setting size.

e.g. in the case of Size counter count mode = "2"

If CD [custom size] is more than 216 mm (Legal width), and FD [custom size] is more than 356 mm (Legal length), the machine considers it as setting size.

The count method

Size counter count mode	Except setting size			Setting Size		
	0	1	2	0	1	2
Total counter count mode	0	1	2	0	1	2
Total counter	$\alpha$			$\alpha$	$\beta$	$\beta$
Size counter	$\gamma$			$\alpha$	$\alpha$	$\beta$

$\alpha$  : 1 count

$\beta$  : 2 count

$\gamma$  : It does not count

**(3) Plug-in counter copying Enable/Disable**

- Select to enable or disable copying according to status of the Plug-in counter.

Setting value	Contents	Default
Enable	Permits copying even when the Plug-in Counter is not plugged in.	<input type="radio"/>
Disable	Inhibits copying when the Plug-in Counter is not plugged in.	

**(4) Machine counter**

Setting value	Contents	Default
Enable	Permits copying even when the Machine counter is not plugged in.	<input type="radio"/>
Disable	Inhibits copying when the Machine counter is not plugged in.	

## 7. Soft Switch Set

### 7-1. Description

- This machine is provided with a total of 64 soft switches used for making various adjustments. The initial values can be changed, defined to comply with the requirements unique to each individual country.
- The initial settings of the soft switches can be changed according to the marketing area. The settings can be changed when:  
The marketing area code is set in the Service mode.  
The marketing area code is set using the RSD utility software.  
SRAM is cleared using the Service mode. In this case, the initial settings are determined according to the current marketing area code.
- The bit status can be changed by the following methods:
  1. Use Soft Switch available as a Service Mode function.
  2. Use the RSD software function.

### 7-2. Default setting

#### (1) Country for each Marketing area

---

#### **NOTE**

- *A different country may be applicable depending on the communications standard.*
- 

Marketing area	Country
SETTING IN ACCORDANCE WITH EACH COUNTRY	SINGAPORE, MALAYSIA, HONG KONG, PHILIPPINES, THAILAND, INDOSIEA, OMAN, UAE, QATAR, BAHRAIN, KUWAIT, SAUDI ABRABIA, RUSSIA, ROMANIA, POLAND, SLOVENIJA, BALTIC, UKRAINE, HUNGARY, SOLOVAK, CZECH, KOREA, CHINA, ISRAEL, AUSTRALIA, SOUTH AFRICA, NEW ZERLAND, JAPAN, TAIWAN.
U.S.A	U.S.A, CANADA
WEST EUROPE  OR  SETTING IN ACCORDANCE WITH EACH COUNTRY	FINLAND, NORWAY, SWEDEN,BELGIUM, DENMARK, FRANCE, GREECE, IRELAND, NETHERLANDS, U.K., GERMANY, AUSTRIA, PORTUGAL, ITALY, SPAIN.
GERMANY	GERMANY (Remark: With DTS default Setting)

### 7-3. Soft Switch definition

(1) SOFT SWITCH: 01

Bit No.	Designation	Function	Initial Setting
8	TX START SPEED (Select transmit start speed for V.17 mode)	.	0
7		Speed \ Bit No. 8 7 6 5	0
6		V.17 14400 0 0 0 0	0
5		V.17 12000 0 0 0 1	0
		V.17 9600 0 0 1 0	
		V.17 7200 0 0 1 1	
		V.33 14400 0 1 0 0	
		V.33 12000 0 1 0 1	
		V.29 9600 0 1 1 0	
		V.29 7200 0 1 1 1	
RX START SPEED (Select receiving start speed for V.17 mode)	V.27 4800 1 0 0 0	0	
	V.27ter 2400 1 0 0 1		
	Speed \ Bit No. 4 3 2 1		
	V.17 14400 0 0 0 0		
	V.17 12000 0 0 0 1		
	V.17 9600 0 0 1 0		
	V.17 7200 0 0 1 1		
	V.33 14400 0 1 0 0		
	V.33 12000 0 1 0 1		
	V.29 9600 0 1 1 0		
V.29 7200 0 1 1 1			
V.27 4800 1 0 0 0			
V.27ter 2400 1 0 0 1			
4			0
3			0
2			0
1			0

(2) SOFT SWITCH: 02

Bit No.	Designation	Function	Initial Setting															
8			0															
7	Time between Phase C to Phase D signal	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Rx sensitivity</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>70 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>120 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>180 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>60 msec</td> </tr> </tbody> </table>	Bit 8	Bit 7	Rx sensitivity	0	0	70 msec	0	1	120 msec	1	0	180 msec	1	1	60 msec	0
Bit 8	Bit 7	Rx sensitivity																
0	0	70 msec																
0	1	120 msec																
1	0	180 msec																
1	1	60 msec																
6	Header TX selection Open to user	0: No 1: Yes	1															
5	Reserved		0															
4	Reserved		0															
3			0															
4	Transmit RTN signal Level criteria	<table border="1"> <thead> <tr> <th>Bit 3</th> <th>Bit 2</th> <th>Percentage of error line level</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>10%</td> </tr> <tr> <td>0</td> <td>1</td> <td>15%</td> </tr> <tr> <td>1</td> <td>0</td> <td>20%</td> </tr> <tr> <td>1</td> <td>1</td> <td>25%</td> </tr> </tbody> </table>	Bit 3	Bit 2	Percentage of error line level	0	0	10%	0	1	15%	1	0	20%	1	1	25%	0
Bit 3	Bit 2	Percentage of error line level																
0	0	10%																
0	1	15%																
1	0	20%																
1	1	25%																
1	Sent N.G Page	0: Send N.G page and up to 3 times for that page 1: Not resend that N.G page for G3 mode	0															

- Bit 1: If this bit is set to '0', N.G indicates our side detected RTN signal from other end. In this case machine can resend the same page up to three or just one time, and this use for G3 mode only.
- Bit 2-3: In G3 mode, if error line for each page meets the criteria setting, receiving machine will send RTN signal, in this case, some machine will resend the same page again. The retry times depend on transmission side.
- Bit 6: If this bit is set to '0', the header select function can not be changed by user, only changeable by serviceman in service mode.



(3) SOFT SWITCH: 03

Bit No.	Designation	Function	Initial Setting																																																																											
8	Send out NSF frame with station ID	1: Yes 0: No	1																																																																											
7	Number of Pause within phone number	0: No limitation 1: Max. up to 2 "P" within inputted telephone no.	0																																																																											
6	Re-dial prohibit for NO ANSWER	0: Continue to dial 1: Not allowed to re-dial if no any FAX signal or detected busy tone after dialing	0																																																																											
5	Reserved		0																																																																											
4	RX level setting	<table border="1"> <thead> <tr> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>RX level</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>-43 dBm</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>-44 dBm</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>0</td><td>-45 dBm</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>-46 dBm</td></tr> <tr><td>0</td><td>1</td><td>0</td><td>0</td><td>-47 dBm</td></tr> <tr><td>0</td><td>1</td><td>0</td><td>1</td><td>-48 dBm</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>-49 dBm</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>1</td><td>-42 dBm</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>-41 dBm</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>1</td><td>-40 dBm</td></tr> <tr><td>1</td><td>0</td><td>1</td><td>0</td><td>-39 dBm</td></tr> <tr><td>1</td><td>0</td><td>1</td><td>1</td><td>-38 dBm</td></tr> <tr><td>1</td><td>1</td><td>0</td><td>0</td><td>-37 dBm</td></tr> <tr><td>1</td><td>1</td><td>0</td><td>1</td><td>-36 dBm</td></tr> </tbody> </table>	Bit 4	Bit 3	Bit 2	Bit 1	RX level	0	0	0	0	-43 dBm	0	0	0	1	-44 dBm	0	0	1	0	-45 dBm	0	0	1	1	-46 dBm	0	1	0	0	-47 dBm	0	1	0	1	-48 dBm	0	1	1	0	-49 dBm	0	1	1	1	-42 dBm	1	0	0	0	-41 dBm	1	0	0	1	-40 dBm	1	0	1	0	-39 dBm	1	0	1	1	-38 dBm	1	1	0	0	-37 dBm	1	1	0	1	-36 dBm	0
Bit 4			Bit 3	Bit 2	Bit 1	RX level																																																																								
0			0	0	0	-43 dBm																																																																								
0			0	0	1	-44 dBm																																																																								
0			0	1	0	-45 dBm																																																																								
0			0	1	1	-46 dBm																																																																								
0			1	0	0	-47 dBm																																																																								
0			1	0	1	-48 dBm																																																																								
0			1	1	0	-49 dBm																																																																								
0			1	1	1	-42 dBm																																																																								
1	0	0	0	-41 dBm																																																																										
1	0	0	1	-40 dBm																																																																										
1	0	1	0	-39 dBm																																																																										
1	0	1	1	-38 dBm																																																																										
1	1	0	0	-37 dBm																																																																										
1	1	0	1	-36 dBm																																																																										
3			0																																																																											
2			0																																																																											
1			0																																																																											

- Bit 8: If this bit is set to 1, the answer machine will send the machine name (which is that set in INITIAL USER DATA of Utility Mode) by NSF frame after connection.
- Bit7: Can input Pause key to insert pause time between digits, this can put more than one "P" at the end of access telephone number during calling to other parties by using PBX system.

(4) SOFT SWITCH: 04

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Visible alarm for RTN signal (LCD)	0: No 1: Yes	1
3	Audible alarm for RTN signal	0: No 1: Yes	1
2	Reserved		0
1	Polarity change detection	0: Not to detect phase reverse during dialing & calling 1: Detect line phase reverse during dialing & calling	0

- Bit 3: The alarm lasts for 3 seconds after a negative signal is detected in G3 mode.
- Bit 4: The display message will stay put on the LCD for 3 seconds or until next incoming T30 signal.

(5) SOFT SWITCH: 05

Bit No.	Designation	Function	Initial Setting																																																												
8	Push Button On/Off Timing (PB)	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Timing (ms)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>on:100/off:140</td> </tr> <tr> <td>0</td> <td>1</td> <td>on 70/off:70</td> </tr> <tr> <td>1</td> <td>0</td> <td>on 70/off:140</td> </tr> <tr> <td>1</td> <td>1</td> <td>on:90/off:90</td> </tr> </tbody> </table>	Bit 8	Bit 7	Timing (ms)	0	0	on:100/off:140	0	1	on 70/off:70	1	0	on 70/off:140	1	1	on:90/off:90	0																																													
Bit 8			Bit 7	Timing (ms)																																																											
0			0	on:100/off:140																																																											
0			1	on 70/off:70																																																											
1	0	on 70/off:140																																																													
1	1	on:90/off:90																																																													
7	0																																																														
6	Relation Between Dialed No. and No. of Dial Pulse	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>0</th> <th>1</th> <th>0</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Bit 5</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td># 1</td> <td>1</td> <td>9</td> <td>2</td> <td>x</td> </tr> <tr> <td># 2</td> <td>2</td> <td>8</td> <td>3</td> <td>x</td> </tr> <tr> <td># 3</td> <td>3</td> <td>7</td> <td>4</td> <td>x</td> </tr> <tr> <td># 4</td> <td>4</td> <td>6</td> <td>5</td> <td>x</td> </tr> <tr> <td># 5</td> <td>5</td> <td>5</td> <td>6</td> <td>x</td> </tr> <tr> <td># 6</td> <td>5</td> <td>4</td> <td>7</td> <td>x</td> </tr> <tr> <td># 7</td> <td>7</td> <td>3</td> <td>8</td> <td>x</td> </tr> <tr> <td># 8</td> <td>8</td> <td>2</td> <td>9</td> <td>x</td> </tr> <tr> <td># 9</td> <td>9</td> <td>1</td> <td>10</td> <td>x</td> </tr> <tr> <td># 0</td> <td>10</td> <td>10</td> <td>1</td> <td>x</td> </tr> </tbody> </table>	Bit 6	0	1	0	1	Bit 5	0	0	1	1	# 1	1	9	2	x	# 2	2	8	3	x	# 3	3	7	4	x	# 4	4	6	5	x	# 5	5	5	6	x	# 6	5	4	7	x	# 7	7	3	8	x	# 8	8	2	9	x	# 9	9	1	10	x	# 0	10	10	1	x	0
Bit 6			0	1	0	1																																																									
Bit 5			0	0	1	1																																																									
# 1			1	9	2	x																																																									
# 2			2	8	3	x																																																									
# 3			3	7	4	x																																																									
# 4			4	6	5	x																																																									
# 5			5	5	6	x																																																									
# 6			5	4	7	x																																																									
# 7			7	3	8	x																																																									
# 8			8	2	9	x																																																									
# 9	9	1	10	x																																																											
# 0	10	10	1	x																																																											
5	0																																																														
4	Dial pulse	0: 20 PPS 1: 10 PPS	0																																																												
3	Reserved		0																																																												
2	Dial Pulse Make Ratio Select (MR)	<table border="1"> <thead> <tr> <th>MR</th> <th>33%</th> <th>40%</th> <th>30%</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>Bit 2</td> <td>0</td> <td>0</td> <td>1</td> <td>x</td> </tr> <tr> <td>Bit 1</td> <td>0</td> <td>1</td> <td>0</td> <td>x</td> </tr> </tbody> </table>	MR	33%	40%	30%	X	Bit 2	0	0	1	x	Bit 1	0	1	0	x	1																																													
MR			33%	40%	30%	X																																																									
Bit 2			0	0	1	x																																																									
Bit 1	0	1	0	x																																																											
1	0																																																														

(6) SOFT SWITCH: 06

Bit No.	Designation	Function	Initial Setting															
8			0															
7	Ring On Time To ignore Ring Off Time at 1st Cycle (ms)	<table border="1"> <tr> <td>Time</td> <td>100</td> <td>50</td> <td>150</td> <td>800</td> </tr> <tr> <td>Bit 8</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>Bit 7</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> </table>	Time	100	50	150	800	Bit 8	0	1	0	1	Bit 7	0	0	1	1	0
Time	100	50	150	800														
Bit 8	0	1	0	1														
Bit 7	0	0	1	1														
6	Reserved		0															
5	Reserved		0															
4	Ring Off Time at 1 st Cycle To Approve Incoming Ring	<table border="1"> <tr> <td>Time</td> <td>1000</td> <td>250</td> <td>500</td> <td>100</td> </tr> <tr> <td>Bit 4</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>Bit 3</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> </table>	Time	1000	250	500	100	Bit 4	0	1	0	1	Bit 3	0	0	1	1	0
Time			1000	250	500	100												
Bit 4	0	1	0	1														
Bit 3	0	0	1	1														
3			0															
2	Pulse Cycle To Approve Ring Frequency	<table border="1"> <tr> <td>Cycle</td> <td>4</td> <td>2</td> <td>3</td> <td>1</td> </tr> <tr> <td>Bit 2</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>Bit 1</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> </table>	Cycle	4	2	3	1	Bit 2	0	1	0	1	Bit 1	0	0	1	1	0
Cycle			4	2	3	1												
Bit 2	0	1	0	1														
Bit 1	0	0	1	1														
1			0															

(7) SOFT SWITCH: 07

Bit No.	Designation	Function	Initial Setting																																																																																					
8	Dial tone or busy tone detection	0: Disable 1: Enable - Detect dial tone before dial	0																																																																																					
7	PSTN/PBX Setting	0: PSTN 1: PBX - Select PBX line type	0																																																																																					
6	PBX Dial Tone Detect	0: Not to detect dial tone before pre-fix number 1: Detect dial tone before the pre-fix number in PBX mode	0																																																																																					
5	Dial Mode Select	0: DTMF -PB 1: Pulse- DP	0																																																																																					
4	Tx Level Select for PSK/FSK (dBm)	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>-17</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-16</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-15</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-14</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-13</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-12</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-11</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-10</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>-9</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-8</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-7</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-6</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-5</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-4</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-3</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-2</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Level	Bit 4	Bit 3	Bit 2	Bit 1	-17	0	0	0	0	-16	0	0	0	1	-15	0	0	1	0	-14	0	0	1	1	-13	0	1	0	0	-12	0	1	0	1	-11	0	1	1	0	-10	0	1	1	1	-9	1	0	0	0	-8	1	0	0	1	-7	1	0	1	0	-6	1	0	1	1	-5	1	1	0	0	-4	1	1	0	1	-3	1	1	1	0	-2	1	1	1	1	0
Level			Bit 4	Bit 3	Bit 2	Bit 1																																																																																		
-17			0	0	0	0																																																																																		
-16			0	0	0	1																																																																																		
-15			0	0	1	0																																																																																		
-14			0	0	1	1																																																																																		
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-12			0	1	0	1																																																																																		
-11			0	1	1	0																																																																																		
-10			0	1	1	1																																																																																		
-9			1	0	0	0																																																																																		
-8			1	0	0	1																																																																																		
-7	1	0	1	0																																																																																				
-6	1	0	1	1																																																																																				
-5	1	1	0	0																																																																																				
-4	1	1	0	1																																																																																				
-3	1	1	1	0																																																																																				
-2	1	1	1	1																																																																																				
3	1																																																																																							
2	1																																																																																							
1	1																																																																																							

**(8) SOFT SWITCH: 08**

Bit No.	Designation	Function	Initial Setting																																																																																									
8	Sending RTN signal level	1: (Normal, Fine)=(6, 12) continue error line 0: (Normal, Fine)=(12,24) continue error line	0																																																																																									
7	Detect busy tone after dialing	0: Not to detect 1: Detect busy tone after dialing	1																																																																																									
6	Sending CED signal After connection	0: Not to send 1: Send CED signal before DIS signal after connection	1																																																																																									
5	Reserved		0																																																																																									
4	Redial Interval	<table border="1"> <thead> <tr> <th colspan="4">Bit</th> <th rowspan="2">Auto Dial Interval (min)</th> </tr> <tr> <th>4</th> <th>3</th> <th>2</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1,1,1,1,1,10,1,1,1</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>3,3,15,3,3</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>1,1,15</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>3,3</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>1,1,1</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>3,3,3</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>0</td> <td>1,1</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>3,3,3,3</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>1,1,1,1</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>2,2</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>5,5,5,5</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1,2,2,2</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>2,2,2,2,2,2,2,2,2,2</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>2,2,10,2,2,2</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>3,3,10,3,3,3,3</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>10,10,10,10,15,10</td> </tr> </tbody> </table>	Bit				Auto Dial Interval (min)	4	3	2	1	0	0	0	0	1,1,1,1,1,10,1,1,1	0	0	0	1	3,3,15,3,3	0	0	1	0	1,1,15	0	0	1	1	3,3	0	1	0	0	1,1,1	0	1	0	1	3,3,3	0	1	1	0	1,1	0	1	1	1	3,3,3,3	1	0	0	0	1,1,1,1	1	0	0	1	2,2	1	0	1	0	5,5,5,5	1	0	1	1	1,2,2,2	1	1	0	0	2,2,2,2,2,2,2,2,2,2	1	1	0	1	2,2,10,2,2,2	1	1	1	0	3,3,10,3,3,3,3	1	1	1	1	10,10,10,10,15,10	0
Bit				Auto Dial Interval (min)																																																																																								
4			3		2	1																																																																																						
0			0	0	0	1,1,1,1,1,10,1,1,1																																																																																						
0			0	0	1	3,3,15,3,3																																																																																						
0			0	1	0	1,1,15																																																																																						
0			0	1	1	3,3																																																																																						
0			1	0	0	1,1,1																																																																																						
0			1	0	1	3,3,3																																																																																						
0			1	1	0	1,1																																																																																						
0	1	1	1	3,3,3,3																																																																																								
1	0	0	0	1,1,1,1																																																																																								
1	0	0	1	2,2																																																																																								
1	0	1	0	5,5,5,5																																																																																								
1	0	1	1	1,2,2,2																																																																																								
1	1	0	0	2,2,2,2,2,2,2,2,2,2																																																																																								
1	1	0	1	2,2,10,2,2,2																																																																																								
1	1	1	0	3,3,10,3,3,3,3																																																																																								
1	1	1	1	10,10,10,10,15,10																																																																																								
3			0																																																																																									
2			0																																																																																									
1			1																																																																																									

- Bit 8: If error line above definition, machine will send RTN signal instead of MCF signal. This will cause the other party to send the same page again. (G3mode only)

(9) SOFT SWITCH: 09

Bit No.	Designation	Function	Initial Setting															
8	Ringer frequency detection	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Ringer frequency Range</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>10~75 Hz</td> </tr> <tr> <td>0</td> <td>1</td> <td>20~57.5Hz</td> </tr> <tr> <td>1</td> <td>0</td> <td>20~75Hz</td> </tr> <tr> <td>1</td> <td>1</td> <td>10~75Hz</td> </tr> </tbody> </table>	Bit 8	Bit 7	Ringer frequency Range	0	0	10~75 Hz	0	1	20~57.5Hz	1	0	20~75Hz	1	1	10~75Hz	0
Bit 8			Bit 7	Ringer frequency Range														
0			0	10~75 Hz														
0			1	20~57.5Hz														
1			0	20~75Hz														
1	1	10~75Hz																
7	0																	
6	Reserved		0															
5	TSI/CSI Append “+”	0: Not append “+” before send out TSI/CSI 1: Automatically insert “+”	0															
4	Reserved		0															
3	Header sending Position	0: Inside document around 5 mm in TX mode. 1: Outside the document	0															
2	Time from RX DIS signal to send DCS signal	<table border="1"> <thead> <tr> <th>Bit 2</th> <th>Bit1</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>70 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>120 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>180 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>240 msec</td> </tr> </tbody> </table>	Bit 2	Bit1	Description	0	0	70 msec	0	1	120 msec	1	0	180 msec	1	1	240 msec	0
Bit 2			Bit1	Description														
0			0	70 msec														
0			1	120 msec														
1			0	180 msec														
1	1	240 msec																
1	0																	

- Bit 3: The header will show at top of each transmitted page, including machine name, telephone number date & time and session number.
- Bit 5: When this bit is set to “1”, the “+” character will be placed in the first position on CSI and TSI command.

**(10) SOFT SWITCH: 10**

Bit No.	Designation	Function	Initial Setting
8	Print out RTN Page report	0: Not to Print 1: Print Out RTN page report after transaction for TX/RX RTN signal	1
7	Confirmation report Result field	0: Print "OK" 1: Print "NG" in case of sending or receiving RTN signal	0
6	Reserved		0
5	Reserved		0
4	Rx PIP T.30 command After send out MPS command	0: Send DCS at current speed 1: Return to Tx phase B waiting for DIS signal	0
3	Received DIS signal within reception	0: Repeat sending DIS/DTC again until time out 1: Disconnected after sending DCN signal	0
2	Transmission time limitation	1: Limit to 8 minutes from data phase 0: No any limitation until document jam	0
1	Audio alarm after communication fail	0: Not to alarm after transaction fail 1: Alarm 3 seconds after disconnected	1

- Bit 8: If this bit set to 1, machine will print out confirmation report after each transaction for TX/RX RTN signal.
- Bit 7: If this bit is set to 1, the result field will show "NG" instead of "OK" in the confirmation report and activity report or checking the result on the LCD.
- Bit 2: For Manual Tx only.



(11) SOFT SWITCH: 11

Bit No.	Designation	Function	Initial Setting
8	Decoding T30 signal and print out after communication	0: No 1: Yes	0
7	Detect dial tone after pre-fix number	0: No 1: Yes	0
6	Pulse Dial allowed to select	0: Yes 1: Not allowed	0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	DTMF High Frequency dB value	0: Base on SW19 (1-4) 1: High 1dB	0

- Bit 6: If this bit is set to 1, not allowed user to select Pulse dial, and this function open for serviceman to change.

**(12) SOFT SWITCH: 12**

Bit No.	Designation	Function	Initial Setting															
8	ECM Mode capability	1: Yes 0: No - also disable V.34 modem capability	1															
7	V.34 fall back level for V.34 TX.	<table border="1"> <thead> <tr> <th>Bit 7</th> <th>Bit6</th> <th>Level</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>0</td> <td>3</td> </tr> <tr> <td>1</td> <td>1</td> <td>4</td> </tr> </tbody> </table>	Bit 7	Bit6	Level	0	0	1	0	1	2	1	0	3	1	1	4	0
Bit 7			Bit6	Level														
0	0	1																
0	1	2																
1	0	3																
1	1	4																
6			0															
5	Send CTC After 4th PPR	0: Send CTC (Continue To Correct) 1: Send EOR (End Of Transmission)	0															
4	Reserved		0															
3	Send EOR After Lowest Speed	0: Send DCN (Redial) 1: Send EOR_xxx (Germany PTT)	0															
2	TCF transmission timing after DCS	<table border="1"> <thead> <tr> <th>Bit 2</th> <th>Bit1</th> <th>unit=msec</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>70</td> </tr> <tr> <td>0</td> <td>1</td> <td>80</td> </tr> <tr> <td>1</td> <td>0</td> <td>90</td> </tr> <tr> <td>1</td> <td>1</td> <td>100</td> </tr> </tbody> </table>	Bit 2	Bit1	unit=msec	0	0	70	0	1	80	1	0	90	1	1	100	0
Bit 2			Bit1	unit=msec														
0	0	70																
0	1	80																
1	0	90																
1	1	100																
1			0															

- Bit 1- 2: Delay time from FSK mode to PSK mode, this is used for G3 mode only, V.34 does not need this setting
- Bit 3: After lowest speed sending EOR\_xxx (End of this page Transmission), send next page, or sending DCN (disconnect, then redial)
- Bit 6-7: If level reads "1", machine will go down to next lower speed for next data phase.

**(13) SOFT SWITCH: 13**

Bit No.	Designation	Function	Initial Setting															
8	MR capability For G3	0: Yes 1: No	0															
7	Delay time between transaction	<table border="1"> <thead> <tr> <th>Bit 7</th> <th>Bit6</th> <th>unit=msec</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>20 seconds</td> </tr> <tr> <td>0</td> <td>1</td> <td>60 seconds</td> </tr> <tr> <td>1</td> <td>0</td> <td>120 seconds</td> </tr> <tr> <td>1</td> <td>1</td> <td>240 seconds</td> </tr> </tbody> </table>	Bit 7	Bit6	unit=msec	0	0	20 seconds	0	1	60 seconds	1	0	120 seconds	1	1	240 seconds	0
Bit 7			Bit6	unit=msec														
0			0	20 seconds														
0			1	60 seconds														
1			0	120 seconds														
1	1	240 seconds																
6	0																	
5	Super Fine printing capability for receiving	0: No. 1: Yes	1															
4	Reserved		0															
3	DTS mode (Der Telefax Standard)	0: No 1: Yes	0															
2	Send DTC signal if RX DIS signal in Polling RX mode	1: No -send DIS again 0: Yes	0															
1	Reserved		0															

- Bit 7 - 6: If set to 1, the time between each transaction will become longer, in this case machine will wait more time before start to dial next transaction.

**(14) SOFT SWITCH: 14**

Bit No.	Designation	Function	Initial Setting																																				
8	Pause between last dialed digit and 1st CNG (T=default time)	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>T</td> </tr> <tr> <td>0</td> <td>1</td> <td>T+400 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>T+800 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>T+1600 msec</td> </tr> </tbody> </table>	Bit 8	Bit 7	Description	0	0	T	0	1	T+400 msec	1	0	T+800 msec	1	1	T+1600 msec	0																					
Bit 8			Bit 7	Description																																			
0			0	T																																			
0			1	T+400 msec																																			
1	0	T+800 msec																																					
1	1	T+1600 msec																																					
7	0																																						
6	Memory size level To RX	1: Up to 128 K 0: Based on system configuration	0																																				
5	Reserved		0																																				
4	Reserved		0																																				
3	Time between V.34 ANSam signal and FSK DIS signal	<table border="1"> <thead> <tr> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>Timer</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>70 msec</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>80 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>100 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>120 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>140 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>160 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>60 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>50 msec</td> </tr> </tbody> </table>	Bit 3	Bit 2	Bit 1	Timer	0	0	0	70 msec	0	0	1	80 msec	0	1	0	100 msec	0	1	1	120 msec	1	0	0	140 msec	1	0	1	160 msec	1	1	0	60 msec	1	1	1	50 msec	0
Bit 3			Bit 2	Bit 1	Timer																																		
0			0	0	70 msec																																		
0			0	1	80 msec																																		
0			1	0	100 msec																																		
0			1	1	120 msec																																		
1			0	0	140 msec																																		
1	0	1	160 msec																																				
1	1	0	60 msec																																				
1	1	1	50 msec																																				
2	0																																						
1	0																																						

- Bit 6: If set to 1, machine will become manual RX mode if available memory size less than 128 K (manual RX mode: Press "Speaker" key and "Start" key, then machine can start receiving).

**(15) SOFT SWITCH: 15**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Remote side no document to be polled	0: Not to generate error report document to be polled 1: Generate error report after communication end	1

**(16) SOFT SWITCH: 16**

Bit No.	Designation	Function	Initial Setting															
8	Reserved		0															
7	Reserved		0															
6	Reserved		0															
5	Reserved		0															
4	Reserved		0															
3	Reserved		0															
2	Fax communication coding method	<table border="1"><thead><tr><th>Bit 2</th><th>Bit1</th><th>Coding Method</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>MMR</td></tr><tr><td>0</td><td>1</td><td>MR</td></tr><tr><td>1</td><td>0</td><td>MH</td></tr><tr><td>1</td><td>1</td><td>JBIG</td></tr></tbody></table>	Bit 2	Bit1	Coding Method	0	0	MMR	0	1	MR	1	0	MH	1	1	JBIG	1
Bit 2			Bit1	Coding Method														
0	0	MMR																
0	1	MR																
1	0	MH																
1	1	JBIG																
1			1															

(17) SOFT SWITCH: 17

Bit No.	Designation	Function	Initial Setting																																				
8	Reserved		0																																				
7	Reserved		0																																				
6	CED frequency	0: 2100 Hz 1: 1100 Hz	0																																				
5	Pause between off hook and CED signal	<table border="1"> <thead> <tr> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>Time=T=1.8sec. to 2.5sec.</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>Time=T+100 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>Time=T+200 msec</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>Time=T+300 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>Time=T+400 msec</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>Time=T+500 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>Time=T+600 msec</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>Time=T+700 msec</td> </tr> </tbody> </table>	Bit 5	Bit 4	Bit 3	Description	0	0	0	Time=T=1.8sec. to 2.5sec.	0	0	1	Time=T+100 msec	0	1	0	Time=T+200 msec	0	1	1	Time=T+300 msec	1	0	0	Time=T+400 msec	1	0	1	Time=T+500 msec	1	1	0	Time=T+600 msec	1	1	1	Time=T+700 msec	0
Bit 5			Bit 4	Bit 3	Description																																		
0			0	0	Time=T=1.8sec. to 2.5sec.																																		
0			0	1	Time=T+100 msec																																		
0			1	0	Time=T+200 msec																																		
0			1	1	Time=T+300 msec																																		
1			0	0	Time=T+400 msec																																		
1			0	1	Time=T+500 msec																																		
1	1	0	Time=T+600 msec																																				
1	1	1	Time=T+700 msec																																				
4	0																																						
3	0																																						
2	Inactivity Timer [T5]	<table border="1"> <thead> <tr> <th>Bit 2</th> <th>Bit 1</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>T5</td> </tr> <tr> <td>0</td> <td>1</td> <td>T5+20 sec</td> </tr> <tr> <td>1</td> <td>0</td> <td>T5+40 sec</td> </tr> <tr> <td>1</td> <td>1</td> <td>T5+60 sec</td> </tr> </tbody> </table>	Bit 2	Bit 1	Description	0	0	T5	0	1	T5+20 sec	1	0	T5+40 sec	1	1	T5+60 sec	0																					
Bit 2			Bit 1	Description																																			
0			0	T5																																			
0			1	T5+20 sec																																			
1	0	T5+40 sec																																					
1	1	T5+60 sec																																					
1	0																																						

• T5: 60 ± 5 sec in ITU-T standard

**(18) SOFT SWITCH: 18**

Bit No.	Designation	Function	Initial Setting																																																												
8	Reserved		0																																																												
7	Reserved		0																																																												
6	G3 mode training Quality level	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>Bit5</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>Training level 1</td> </tr> <tr> <td>1</td> <td>0</td> <td>Training level 2</td> </tr> <tr> <td>0</td> <td>1</td> <td>Training level 3</td> </tr> <tr> <td>1</td> <td>1</td> <td>Training level 4</td> </tr> </tbody> </table>	Bit 6	Bit5	Definition	0	0	Training level 1	1	0	Training level 2	0	1	Training level 3	1	1	Training level 4	0																																													
Bit 6			Bit5	Definition																																																											
0			0	Training level 1																																																											
1			0	Training level 2																																																											
0	1	Training level 3																																																													
1	1	Training level 4																																																													
5	0																																																														
4	Redefine re-dial Attempts counter	<table border="1"> <thead> <tr> <th>Number of times</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>2</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>3</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>4</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>5</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>6</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>7</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>8</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>9</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>10</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> </tbody> </table>	Number of times	Bit 4	Bit 3	Bit2	Bit 1	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	3	0	0	1	1	4	0	1	0	0	5	0	1	0	1	6	0	1	1	0	7	0	1	1	1	8	1	0	0	0	9	1	0	0	1	10	1	0	1	0	0
Number of times			Bit 4	Bit 3	Bit2	Bit 1																																																									
0			0	0	0	0																																																									
1			0	0	0	1																																																									
2			0	0	1	0																																																									
3			0	0	1	1																																																									
4			0	1	0	0																																																									
5			0	1	0	1																																																									
6			0	1	1	0																																																									
7			0	1	1	1																																																									
8	1	0	0	0																																																											
9	1	0	0	1																																																											
10	1	0	1	0																																																											
3	0																																																														
2	0																																																														
1	0																																																														

- Bit 1-4: The redial attempt times will follow bit 1-4, if these bits are not all setting "0". Otherwise the redial attempt times will follow bit 1 to 4 on SW08.
- Bit 5-6: Level 4 training check phases is most severe than level 3,2,1. Level 4 can keep lowest RX speed communication than level 3,2,1 when poor line condition.

(19) SOFT SWITCH: 19

Bit No.	Designation	Function	Initial Setting																																																																																					
8	CNG signal Level	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 8</th> <th>Bit 7</th> <th>Bit 6</th> <th>Bit 5</th> </tr> </thead> <tbody> <tr><td>-15 dBm</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-14 dBm</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-13 dbm</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-12 dBm</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-11 dBm</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-10 dBm</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-9 dBm</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-8 dBm</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>-7 dBm</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-6 dBm</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-5 dBm</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-4 dBm</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-3 dBm</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-2 dBm</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-1 dBm</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>Not used</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Level	Bit 8	Bit 7	Bit 6	Bit 5	-15 dBm	0	0	0	0	-14 dBm	0	0	0	1	-13 dbm	0	0	1	0	-12 dBm	0	0	1	1	-11 dBm	0	1	0	0	-10 dBm	0	1	0	1	-9 dBm	0	1	1	0	-8 dBm	0	1	1	1	-7 dBm	1	0	0	0	-6 dBm	1	0	0	1	-5 dBm	1	0	1	0	-4 dBm	1	0	1	1	-3 dBm	1	1	0	0	-2 dBm	1	1	0	1	-1 dBm	1	1	1	0	Not used	1	1	1	1	0
Level			Bit 8	Bit 7	Bit 6	Bit 5																																																																																		
-15 dBm			0	0	0	0																																																																																		
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-11 dBm			0	1	0	0																																																																																		
-10 dBm			0	1	0	1																																																																																		
-9 dBm			0	1	1	0																																																																																		
-8 dBm			0	1	1	1																																																																																		
-7 dBm			1	0	0	0																																																																																		
-6 dBm			1	0	0	1																																																																																		
-5 dBm			1	0	1	0																																																																																		
-4 dBm			1	0	1	1																																																																																		
-3 dBm			1	1	0	0																																																																																		
-2 dBm			1	1	0	1																																																																																		
-1 dBm			1	1	1	0																																																																																		
Not used	1	1	1	1																																																																																				
7	1																																																																																							
6	1																																																																																							
5	0																																																																																							
4	DTMF High Fre- quency level	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>-15 dBm</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-14 dBm</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-13 dbm</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-12 dBm</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-11 dBm</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-10 dBm</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-9 dBm</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-8 dBm</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>-7 dBm</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-6 dBm</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-5 dBm</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-4 dBm</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-3 dBm</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-2 dBm</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-1 dBm</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>Not used</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Level	Bit 4	Bit 3	Bit 2	Bit 1	-15 dBm	0	0	0	0	-14 dBm	0	0	0	1	-13 dbm	0	0	1	0	-12 dBm	0	0	1	1	-11 dBm	0	1	0	0	-10 dBm	0	1	0	1	-9 dBm	0	1	1	0	-8 dBm	0	1	1	1	-7 dBm	1	0	0	0	-6 dBm	1	0	0	1	-5 dBm	1	0	1	0	-4 dBm	1	0	1	1	-3 dBm	1	1	0	0	-2 dBm	1	1	0	1	-1 dBm	1	1	1	0	Not used	1	1	1	1	1
Level			Bit 4	Bit 3	Bit 2	Bit 1																																																																																		
-15 dBm			0	0	0	0																																																																																		
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-5 dBm			1	0	1	0																																																																																		
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-3 dBm	1	1	0	0																																																																																				
-2 dBm	1	1	0	1																																																																																				
-1 dBm	1	1	1	0																																																																																				
Not used	1	1	1	1																																																																																				
3	0																																																																																							
2	0																																																																																							
1	0																																																																																							



**(20) SOFT SWITCH: 20**

Bit No.	Designation	Function	Initial Setting																																																																																																						
8	Reserved		0																																																																																																						
7	Reserved		0																																																																																																						
6	Reserved		0																																																																																																						
5	Redefine redial interval over default setting that is based on Sw08 bit 1~4 (unit= minute)	<table border="1"> <thead> <tr> <th>Interval</th> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>2</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>3</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>4</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>5</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>6</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>7</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>14</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>15</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>16</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>17</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>18</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>19</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>20</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> </tbody> </table>	Interval	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	1	0	3	0	0	0	1	1	4	0	0	1	0	0	5	0	0	1	0	1	6	0	0	1	1	0	7	0	0	1	1	1	~	~	~	~	~	~	14	0	1	1	1	0	15	0	1	1	1	1	16	1	0	0	0	0	17	1	0	0	0	1	18	1	0	0	1	0	19	1	0	0	1	1	20	1	0	1	0	0	0
Interval			Bit 5	Bit 4	Bit 3	Bit 2	Bit 1																																																																																																		
0			0	0	0	0	0																																																																																																		
1			0	0	0	0	1																																																																																																		
2			0	0	0	1	0																																																																																																		
3			0	0	0	1	1																																																																																																		
4			0	0	1	0	0																																																																																																		
5			0	0	1	0	1																																																																																																		
6			0	0	1	1	0																																																																																																		
7			0	0	1	1	1																																																																																																		
~			~	~	~	~	~																																																																																																		
14			0	1	1	1	0																																																																																																		
15			0	1	1	1	1																																																																																																		
16	1	0	0	0	0																																																																																																				
17	1	0	0	0	1																																																																																																				
18	1	0	0	1	0																																																																																																				
19	1	0	0	1	1																																																																																																				
20	1	0	1	0	0																																																																																																				
4			0																																																																																																						
3			0																																																																																																						
2			0																																																																																																						
1			0																																																																																																						

(21) SOFT SWITCH: 21

Bit No.	Designation	Function	Initial Setting															
8	NSS signal before DCS	0: Not to send NSS signal if remote side is same model 1: Send NSS signal if remote side is same model	1															
7	CNG duration After Dialing(T1)	<table border="1"> <thead> <tr> <th>Bit 7</th> <th>Bit 6</th> <th>T1 Duration (unit=second)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>70</td> </tr> <tr> <td>0</td> <td>1</td> <td>40</td> </tr> <tr> <td>1</td> <td>0</td> <td>60</td> </tr> <tr> <td>1</td> <td>1</td> <td>120</td> </tr> </tbody> </table>	Bit 7	Bit 6	T1 Duration (unit=second)	0	0	70	0	1	40	1	0	60	1	1	120	0
Bit 7			Bit 6	T1 Duration (unit=second)														
0			0	70														
0			1	40														
1	0	60																
1	1	120																
6	0																	
5	T4 timer	0: 3.0 sec – Normal case 1: 4.5 sec	0															
4	Reserved		0															
3	DIS signal length	0: Normal length (bit 1~64) 1: 4 bytes DIS command – bit 1~32 only	0															
2	Increase default T1 Timing during calling	<table border="1"> <thead> <tr> <th>Bit 2</th> <th>Bit 1</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>T1 sec</td> </tr> <tr> <td>0</td> <td>1</td> <td>T1+30 sec</td> </tr> <tr> <td>1</td> <td>0</td> <td>T1+40 sec</td> </tr> <tr> <td>1</td> <td>1</td> <td>T1+60 sec</td> </tr> </tbody> </table>	Bit 2	Bit 1	Description	0	0	T1 sec	0	1	T1+30 sec	1	0	T1+40 sec	1	1	T1+60 sec	0
Bit 2			Bit 1	Description														
0			0	T1 sec														
0			1	T1+30 sec														
1	0	T1+40 sec																
1	1	T1+60 sec																
1	0																	

- Bit 1-2: T1 indicates the calling time after dialing, can adjust the T1 time longer by changing the default value. The default T1 timer depends on each country regulation.
- Bit 3: Some old machines can not accept DIS command over 4 bytes, and every time will fail. In this case you can set this bit to 1. If this bit is set to 1, JBIG and V8 capability will be disabled automatically.
- Bit 8: Sender machine' s name will show on the other party' s LCD or print on the report if remote side is the same model.

(22) SOFT SWITCH: 22

Bit No.	Designation	Function	Initial Setting																																																																																					
8	Detect busy tone before dial	1: Check busy tone within dial tone detection 0: Not to check	0																																																																																					
7	Regard dial tone as busy tone after dialing	1: Yes - Check dial tone after dialing 0: No	0																																																																																					
6	Check Busy tone method	0: Measure tone by input energy over threshold 1: By PTT regulation tone frequency	0																																																																																					
5	Reserved		0																																																																																					
4	CED signal output level	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>-15 dBm</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-14 dBm</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-13 dbm</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-12 dBm</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-11 dBm</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-10 dBm</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-9 dBm</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-8 dBm</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>-7 dBm</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-6 dBm</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-5 dBm</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-4 dBm</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-3 dBm</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-2 dBm</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-1 dBm</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>Not used</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Level	Bit 4	Bit 3	Bit 2	Bit 1	-15 dBm	0	0	0	0	-14 dBm	0	0	0	1	-13 dbm	0	0	1	0	-12 dBm	0	0	1	1	-11 dBm	0	1	0	0	-10 dBm	0	1	0	1	-9 dBm	0	1	1	0	-8 dBm	0	1	1	1	-7 dBm	1	0	0	0	-6 dBm	1	0	0	1	-5 dBm	1	0	1	0	-4 dBm	1	0	1	1	-3 dBm	1	1	0	0	-2 dBm	1	1	0	1	-1 dBm	1	1	1	0	Not used	1	1	1	1	0
Level			Bit 4	Bit 3	Bit 2	Bit 1																																																																																		
-15 dBm			0	0	0	0																																																																																		
-14 dBm			0	0	0	1																																																																																		
-13 dbm			0	0	1	0																																																																																		
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-9 dBm			0	1	1	0																																																																																		
-8 dBm			0	1	1	1																																																																																		
-7 dBm	1	0	0	0																																																																																				
-6 dBm	1	0	0	1																																																																																				
-5 dBm	1	0	1	0																																																																																				
-4 dBm	1	0	1	1																																																																																				
-3 dBm	1	1	0	0																																																																																				
-2 dBm	1	1	0	1																																																																																				
-1 dBm	1	1	1	0																																																																																				
Not used	1	1	1	1																																																																																				
3	1																																																																																							
2	1																																																																																							
1	0																																																																																							

**(23) SOFT SWITCH: 23**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(24) SOFT SWITCH: 24**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

(25) SOFT SWITCH: 25

Bit No.	Designation	Function	Initial Setting																																				
8	International dial tone frequency index	0: Same as dial tone frequency range 1: Fix. Refer to bit 5~7	0																																				
7	International dial tone frequency index	<table border="1"> <thead> <tr> <th>Bit 7</th> <th>Bit 6</th> <th>Bit 5</th> <th>Frequency (Hz)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>375~462</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>310~380</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>462~580</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>570~630</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>300~370</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>reserved</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>1100~1185</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>reserved</td> </tr> </tbody> </table>	Bit 7	Bit 6	Bit 5	Frequency (Hz)	0	0	0	375~462	0	0	1	310~380	0	1	0	462~580	0	1	1	570~630	1	0	0	300~370	1	0	1	reserved	1	1	0	1100~1185	1	1	1	reserved	0
Bit 7			Bit 6	Bit 5	Frequency (Hz)																																		
0			0	0	375~462																																		
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0			1	0	462~580																																		
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1			0	0	300~370																																		
1			0	1	reserved																																		
1	1	0	1100~1185																																				
1	1	1	reserved																																				
6			0																																				
5			0																																				
4	Flash key time in ON hook key dial	<table border="1"> <thead> <tr> <th>Bit 4</th> <th>Bit 3</th> <th>Flash time</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>100 ms</td> </tr> <tr> <td>0</td> <td>1</td> <td>80 ms</td> </tr> <tr> <td>1</td> <td>0</td> <td>60 ms</td> </tr> <tr> <td>1</td> <td>1</td> <td>50 ms</td> </tr> </tbody> </table>	Bit 4	Bit 3	Flash time	0	0	100 ms	0	1	80 ms	1	0	60 ms	1	1	50 ms	0																					
Bit 4			Bit 3	Flash time																																			
0			0	100 ms																																			
0			1	80 ms																																			
1	0	60 ms																																					
1	1	50 ms																																					
3			0																																				
2	Reserved		0																																				
1	Reserved		0																																				

(26) SOFT SWITCH: 26

Bit No.	Designation	Function	Initial Setting																																																																																						
8	Dial tone detection time before disconnected	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Time (unit=sec)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>10</td> </tr> <tr> <td>0</td> <td>1</td> <td>15</td> </tr> <tr> <td>1</td> <td>0</td> <td>20</td> </tr> <tr> <td>1</td> <td>1</td> <td>25</td> </tr> </tbody> </table>	Bit 8	Bit 7	Time (unit=sec)	0	0	10	0	1	15	1	0	20	1	1	25	0																																																																							
Bit 8			Bit 7	Time (unit=sec)																																																																																					
0			0	10																																																																																					
0			1	15																																																																																					
1			0	20																																																																																					
1	1	25																																																																																							
7	0																																																																																								
6	Dial tone insensitivity (0~-40 dBm)	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 6</th> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>-1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>-2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>-3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>-4</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>-39</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>-40</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>-41</td> <td colspan="6" rowspan="10" style="text-align: center; vertical-align: middle;">setting disable</td> </tr> <tr> <td>-42</td> </tr> <tr> <td>-43</td> </tr> <tr> <td>-44</td> </tr> <tr> <td>-45</td> </tr> <tr> <td>-46</td> </tr> <tr> <td>-47</td> </tr> <tr> <td>-48</td> </tr> <tr> <td>-49</td> </tr> <tr> <td>-50</td> </tr> </tbody> </table>	Level	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	0	0	0	0	0	0	0	-1	0	0	0	0	0	1	-2	0	0	0	0	1	0	-3	0	0	0	0	1	1	-4	0	0	0	1	0	0	~	~	~	~	~	~	~	~	~	~	~	~	~	~	-39	1	0	0	1	1	1	-40	1	0	1	0	0	0	-41	setting disable						-42	-43	-44	-45	-46	-47	-48	-49	-50	1
Level			Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1																																																																																	
0			0	0	0	0	0	0																																																																																	
-1			0	0	0	0	0	1																																																																																	
-2			0	0	0	0	1	0																																																																																	
-3			0	0	0	0	1	1																																																																																	
-4			0	0	0	1	0	0																																																																																	
~			~	~	~	~	~	~																																																																																	
~			~	~	~	~	~	~																																																																																	
-39			1	0	0	1	1	1																																																																																	
-40			1	0	1	0	0	0																																																																																	
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(27) SOFT SWITCH: 27

Bit No.	Designation	Function	Initial Setting																																																																																					
8	Reserved		0																																																																																					
7	Reserved		0																																																																																					
6	Reserved		0																																																																																					
5	Reserved		0																																																																																					
4	Immunity for Dial Tone receiver	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>-0 dBm</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-1 dBm</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-2 dBm</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-3 dBm</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-4 dBm</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-5 dBm</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-6 dBm</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-7 dBm</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>-8 dBm</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>-9 dBm</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>-10 dBm</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>-11 dBm</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>-12 dBm</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>-13 dBm</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>-14 dBm</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>-15 dBm</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Level	Bit 4	Bit 3	Bit 2	Bit 1	-0 dBm	0	0	0	0	-1 dBm	0	0	0	1	-2 dBm	0	0	1	0	-3 dBm	0	0	1	1	-4 dBm	0	1	0	0	-5 dBm	0	1	0	1	-6 dBm	0	1	1	0	-7 dBm	0	1	1	1	-8 dBm	1	0	0	0	-9 dBm	1	0	0	1	-10 dBm	1	0	1	0	-11 dBm	1	0	1	1	-12 dBm	1	1	0	0	-13 dBm	1	1	0	1	-14 dBm	1	1	1	0	-15 dBm	1	1	1	1	0
Level			Bit 4	Bit 3	Bit 2	Bit 1																																																																																		
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-3 dBm			0	0	1	1																																																																																		
-4 dBm			0	1	0	0																																																																																		
-5 dBm			0	1	0	1																																																																																		
-6 dBm			0	1	1	0																																																																																		
-7 dBm			0	1	1	1																																																																																		
-8 dBm			1	0	0	0																																																																																		
-9 dBm			1	0	0	1																																																																																		
-10 dBm			1	0	1	0																																																																																		
-11 dBm			1	0	1	1																																																																																		
-12 dBm			1	1	0	0																																																																																		
-13 dBm	1	1	0	1																																																																																				
-14 dBm	1	1	1	0																																																																																				
-15 dBm	1	1	1	1																																																																																				
3			0																																																																																					
2			0																																																																																					
1			0																																																																																					

- Bit 1-4: Line input energy must be lower this level before dialing.

(28) SOFT SWITCH: 28

Bit No.	Designation	Function	Initial Setting																																																																																					
8	Time to dial after dial tone on the line	<table border="1"> <thead> <tr> <th>Time</th> <th>Bit 8</th> <th>Bit 7</th> <th>Bit 6</th> <th>Bit 5</th> </tr> </thead> <tbody> <tr><td>0 ms</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>100</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>200</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>300</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>400</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>500</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>600</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>700</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>800</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>900</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>1000</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1100</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>1200</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>1300</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1400</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>1500 ms</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Time	Bit 8	Bit 7	Bit 6	Bit 5	0 ms	0	0	0	0	100	0	0	0	1	200	0	0	1	0	300	0	0	1	1	400	0	1	0	0	500	0	1	0	1	600	0	1	1	0	700	0	1	1	1	800	1	0	0	0	900	1	0	0	1	1000	1	0	1	0	1100	1	0	1	1	1200	1	1	0	0	1300	1	1	0	1	1400	1	1	1	0	1500 ms	1	1	1	1	1
Time			Bit 8	Bit 7	Bit 6	Bit 5																																																																																		
0 ms			0	0	0	0																																																																																		
100			0	0	0	1																																																																																		
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900			1	0	0	1																																																																																		
1000			1	0	1	0																																																																																		
1100			1	0	1	1																																																																																		
1200			1	1	0	0																																																																																		
1300			1	1	0	1																																																																																		
1400			1	1	1	0																																																																																		
1500 ms	1	1	1	1																																																																																				
7	0																																																																																							
6	1																																																																																							
5	0																																																																																							
4	CED duration time within calling period	<table border="1"> <thead> <tr> <th>Time</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>0 ms</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>100 ms</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>200 ms</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>300 ms</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>400 ms</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>500 ms</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>600 ms</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>700 ms</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>800 ms</td><td>1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>900 ms</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>1000 ms</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1100 ms</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>1200 ms</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>1300 ms</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1400 ms</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>1500 ms</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Time	Bit 4	Bit 3	Bit 2	Bit 1	0 ms	0	0	0	0	100 ms	0	0	0	1	200 ms	0	0	1	0	300 ms	0	0	1	1	400 ms	0	1	0	0	500 ms	0	1	0	1	600 ms	0	1	1	0	700 ms	0	1	1	1	800 ms	1	0	0	0	900 ms	1	0	0	1	1000 ms	1	0	1	0	1100 ms	1	0	1	1	1200 ms	1	1	0	0	1300 ms	1	1	0	1	1400 ms	1	1	1	0	1500 ms	1	1	1	1	0
Time			Bit 4	Bit 3	Bit 2	Bit 1																																																																																		
0 ms			0	0	0	0																																																																																		
100 ms			0	0	0	1																																																																																		
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1500 ms	1	1	1	1																																																																																				
3	1																																																																																							
2	1																																																																																							
1	1																																																																																							

- Bit 1-4: The CED duration time level for automatic transmission.



(29) SOFT SWITCH: 29

Bit No.	Designation	Function	Initial Setting																																																																																																						
8	Reserved		0																																																																																																						
7	Reserved		0																																																																																																						
6	Reserved		0																																																																																																						
5	Time To Dial after seize the line when dial tone detected (Unit= 200 msec)	<table border="1"> <thead> <tr> <th>Time</th> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>0 s</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>0.2 s</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>0.4 s</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>0.6 s</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>0.8 s</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>1.0 s</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1.2 s</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>1.4 s</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>5.2 s</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>5.4 s</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>5.6 s</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>5.8 s</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>6.0 s</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>6.2 s</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Time	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	0 s	0	0	0	0	0	0.2 s	0	0	0	0	1	0.4 s	0	0	0	1	0	0.6 s	0	0	0	1	1	0.8 s	0	0	1	0	0	1.0 s	0	0	1	0	1	1.2 s	0	0	1	1	0	1.4 s	0	0	1	1	1	~	~	~	~	~	~	~	~	~	~	~	~	5.2 s	1	1	0	1	0	5.4 s	1	1	0	1	1	5.6 s	1	1	1	0	0	5.8 s	1	1	1	0	1	6.0 s	1	1	1	1	0	6.2 s	1	1	1	1	1	1
Time			Bit 5	Bit 4	Bit 3	Bit 2	Bit 1																																																																																																		
0 s			0	0	0	0	0																																																																																																		
0.2 s			0	0	0	0	1																																																																																																		
0.4 s			0	0	0	1	0																																																																																																		
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1.4 s			0	0	1	1	1																																																																																																		
~			~	~	~	~	~																																																																																																		
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5.2 s			1	1	0	1	0																																																																																																		
5.4 s			1	1	0	1	1																																																																																																		
5.6 s	1	1	1	0	0																																																																																																				
5.8 s	1	1	1	0	1																																																																																																				
6.0 s	1	1	1	1	0																																																																																																				
6.2 s	1	1	1	1	1																																																																																																				
4			0																																																																																																						
3			1																																																																																																						
2			0																																																																																																						
1			0																																																																																																						

(30) SOFT SWITCH: 30

Bit No.	Designation	Function	Initial Setting																																																																																						
8	Pause Delay Time Within Digits Ex. 002Pxxxxxx	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Description(unit=second)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>2.0</td> </tr> <tr> <td>0</td> <td>1</td> <td>2.5</td> </tr> <tr> <td>1</td> <td>0</td> <td>3.0</td> </tr> <tr> <td>1</td> <td>1</td> <td>3.5</td> </tr> </tbody> </table>	Bit 8	Bit 7	Description(unit=second)	0	0	2.0	0	1	2.5	1	0	3.0	1	1	3.5	0																																																																							
Bit 8			Bit 7	Description(unit=second)																																																																																					
0			0	2.0																																																																																					
0			1	2.5																																																																																					
1			0	3.0																																																																																					
1	1	3.5																																																																																							
7	1																																																																																								
6	Signal tone sensitivity (dBm) After Dial for busy tone	<table border="1"> <thead> <tr> <th>Level</th> <th>Bit 6</th> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>-1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>-2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>-3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>-4</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>-39</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>-40</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>-41</td> <td colspan="6" rowspan="10">Setting disable</td> </tr> <tr> <td>-42</td> </tr> <tr> <td>-43</td> </tr> <tr> <td>-44</td> </tr> <tr> <td>-45</td> </tr> <tr> <td>-46</td> </tr> <tr> <td>-47</td> </tr> <tr> <td>-48</td> </tr> <tr> <td>-49</td> </tr> <tr> <td>-50</td> </tr> </tbody> </table>	Level	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	0	0	0	0	0	0	0	-1	0	0	0	0	0	1	-2	0	0	0	0	1	0	-3	0	0	0	0	1	1	-4	0	0	0	1	0	0	~	~	~	~	~	~	~	~	~	~	~	~	~	~	-39	1	0	0	1	1	1	-40	1	0	1	0	0	0	-41	Setting disable						-42	-43	-44	-45	-46	-47	-48	-49	-50	1
Level			Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1																																																																																	
0			0	0	0	0	0	0																																																																																	
-1			0	0	0	0	0	1																																																																																	
-2			0	0	0	0	1	0																																																																																	
-3			0	0	0	0	1	1																																																																																	
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-39			1	0	0	1	1	1																																																																																	
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5	0																																																																																								
4	1																																																																																								
3	0																																																																																								
2	0																																																																																								
1	0																																																																																								

**(31) SOFT SWITCH: 31**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(32) SOFT SWITCH: 32**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(33) SOFT SWITCH: 33**

Bit No.	Designation	Function	Initial Setting
8	V.27 Echo protection tone	0: Off 1: On	1
7	V.17 Echo protection tone	0: Off 1: On	1
6	V.29 Echo protection tone	0: Off 1: On	0
5	Compromise Equalize enable (CEQ) in the transmit path (TCEQ)	0: No 1: Yes	0
4	Compromise Equalize enable (CEQ) in the receiver path (RCEQ)	0: No 1: Yes	0
3	RLSD Turn on after valid training	0: OFF 1: ON	0
2	Increase EQM Gain for more lower speed connection	0: OFF 1: ON	0
1	Reserved		0

- Bit 2: This bit when set to 1 is to increase EQM value in the modem DSP for a more reliable connection, this for G3 RX mode only.
- Bit 3: This function determines successful training and valid data. If this bit is set to "1", the "RLSD" signal will be active after modem detects valid training. This procedure improves the connection of the G3 mode at low receive levels and the confidence level.
- Bit 4-5: V.17,V.29 and V.27 only

**(34) SOFT SWITCH: 34**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Password capability in DIS/DTC frame	0: No 1: Yes	1
1	Reserved		0

(35) SOFT SWITCH: 35

Bit No.	Designation	Function	Initial Setting																								
8	Dial tone table switch time	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Switch time (unit=second)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>0</td> <td>3</td> </tr> <tr> <td>1</td> <td>1</td> <td>4</td> </tr> </tbody> </table>	Bit 8	Bit 7	Switch time (unit=second)	0	0	1	0	1	2	1	0	3	1	1	4	0									
Bit 8			Bit 7	Switch time (unit=second)																							
0			0	1																							
0			1	2																							
1			0	3																							
1	1	4																									
7	0																										
6	Dial tone frequency upper range index	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>Bit 5</th> <th>Bit 4</th> <th>Frequency Range</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>375Hz~462Hz</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>310Hz~380Hz</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>462Hz~580Hz</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>570Hz~630Hz</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>300Hz~370Hz</td> </tr> </tbody> </table> <p>See Bit 1~3 (This upper range value must be higher than lower range value that defined in bit 1~3)</p>	Bit 6	Bit 5	Bit 4	Frequency Range	0	0	0	375Hz~462Hz	0	0	1	310Hz~380Hz	0	1	0	462Hz~580Hz	0	1	1	570Hz~630Hz	1	0	0	300Hz~370Hz	0
Bit 6			Bit 5	Bit 4	Frequency Range																						
0			0	0	375Hz~462Hz																						
0			0	1	310Hz~380Hz																						
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0			1	1	570Hz~630Hz																						
1	0	0	300Hz~370Hz																								
5	1																										
4	0																										
3	Dial tone frequency Low range index	<table border="1"> <thead> <tr> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>Frequency Range</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>375Hz~462Hz</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>310Hz~380Hz</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>462Hz~580Hz</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>570Hz~630Hz</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>300Hz~370Hz</td> </tr> </tbody> </table>	Bit 3	Bit 2	Bit 1	Frequency Range	0	0	0	375Hz~462Hz	0	0	1	310Hz~380Hz	0	1	0	462Hz~580Hz	0	1	1	570Hz~630Hz	1	0	0	300Hz~370Hz	0
Bit 3			Bit 2	Bit 1	Frequency Range																						
0			0	0	375Hz~462Hz																						
0			0	1	310Hz~380Hz																						
0	1	0	462Hz~580Hz																								
0	1	1	570Hz~630Hz																								
1	0	0	300Hz~370Hz																								
2	0																										
1	0																										

(36) SOFT SWITCH: 36

Bit No.	Designation	Function	Initial Setting																																																												
8	Re-dial attempts continue fail counter	0: No any limitation 1: limit up to bit 1~4	1																																																												
7	Reserved		0																																																												
6	Reserved		0																																																												
5	Reserved		0																																																												
4	Re-dial attempts fail limitation counter	<table border="1"> <thead> <tr> <th>Counter</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>2</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>3</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>4</td><td>0</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>5</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>6</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>13</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>14</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>15</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	Counter	Bit 4	Bit 3	Bit 2	Bit 1	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	3	0	0	1	1	4	0	1	0	0	5	0	1	0	1	6	0	1	1	0	~	~	~	~	~	13	1	1	0	1	14	1	1	1	0	15	1	1	1	1	1
Counter			Bit 4	Bit 3	Bit 2	Bit 1																																																									
0			0	0	0	0																																																									
1			0	0	0	1																																																									
2			0	0	1	0																																																									
3			0	0	1	1																																																									
4			0	1	0	0																																																									
5			0	1	0	1																																																									
6			0	1	1	0																																																									
~			~	~	~	~																																																									
13	1	1	0	1																																																											
14	1	1	1	0																																																											
15	1	1	1	1																																																											
3	0																																																														
2	1																																																														
1	0																																																														

- Bit 8: The redial fail counter will plus 1 for each auto dialing, unless user interruption or after finish communication. If the counter is over the setting in bit 1~4 and Bit set to 1, then the machine will stop redial unless user interruption or enter the communication phase.

**(37) SOFT SWITCH: 37**

Bit No.	Designation	Function	Initial Setting																														
8	Polling Tx type for V.34 modem	0: V.34 1: V.17	0																														
7	Auto dial learning for V.34 modem	0: Yes- skip V.34 handshaking with remote side 1: No - retry from V.8 handshake	0																														
6	Rx start symbol rate for V.34 modem	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>Bit 5</th> <th>Bit 4</th> <th>symbol rate</th> <th>Max. speed</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>3429</td> <td>33.6k</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>3200</td> <td>31.2k</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>3000</td> <td>26.4k</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>2800</td> <td>24.0k</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>2400</td> <td>21.6k</td> </tr> </tbody> </table>	Bit 6	Bit 5	Bit 4	symbol rate	Max. speed	0	0	0	3429	33.6k	0	0	1	3200	31.2k	0	1	0	3000	26.4k	0	1	1	2800	24.0k	1	0	0	2400	21.6k	0
Bit 6			Bit 5	Bit 4	symbol rate	Max. speed																											
0			0	0	3429	33.6k																											
0			0	1	3200	31.2k																											
0			1	0	3000	26.4k																											
0	1	1	2800	24.0k																													
1	0	0	2400	21.6k																													
5			0																														
4			0																														
3	Tx start symbol rate for V.34 modem	<table border="1"> <thead> <tr> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>symbol rate</th> <th>Max. speed</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>3429</td> <td>33.6k</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>3200</td> <td>31.2k</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>3000</td> <td>26.4k</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>2800</td> <td>24.0k</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>2400</td> <td>21.6k</td> </tr> </tbody> </table>	Bit 3	Bit 2	Bit 1	symbol rate	Max. speed	0	0	0	3429	33.6k	0	0	1	3200	31.2k	0	1	0	3000	26.4k	0	1	1	2800	24.0k	1	0	0	2400	21.6k	0
Bit 3			Bit 2	Bit 1	symbol rate	Max. speed																											
0			0	0	3429	33.6k																											
0			0	1	3200	31.2k																											
0			1	0	3000	26.4k																											
0	1	1	2800	24.0k																													
1	0	0	2400	21.6k																													
2			0																														
1			0																														



**(38) SOFT SWITCH: 38**

Bit No.	Designation	Function	Initial Setting															
8	Fine tune of 33.6/31.2 k receiving speed For V.34 modem	1: Yes 0: No - modem default setting	1															
7	Set/Reset V.34 Transmit Level Deviation	0: Reset 1: Set	1															
6	V.34 Flag number between ECM frame	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>Bit 5</th> <th>Flags number</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>8</td> </tr> <tr> <td>0</td> <td>1</td> <td>16</td> </tr> <tr> <td>1</td> <td>0</td> <td>4</td> </tr> <tr> <td>1</td> <td>1</td> <td>2</td> </tr> </tbody> </table>	Bit 6	Bit 5	Flags number	0	0	8	0	1	16	1	0	4	1	1	2	0
Bit 6			Bit 5	Flags number														
0			0	8														
0			1	16														
1			0	4														
1	1	2																
5	0																	
4	Phase 2 Guard tone power level (V.34)	0: normal power level 1: -7 db of normal power level	0															
3	Reserved		0															
2	Reserved		0															
1	V.8 /V.34 Capability	0: No 1: Yes	1															

- Bit 8: This bit when set to 1 can get higher speed communication for V.34 under the same line condition.

**(39) SOFT SWITCH: 39**

Bit No.	Designation	Function	Initial Setting															
8	Disable V.34 Tx for V.34 modem	1: Yes 0: No	0															
7	Disable V.34 Rx for V.34 modem	1: Yes 0: No	0															
6	Flags number in ECM frame for V.34 modem	<table border="1"> <thead> <tr> <th>Bit 6</th> <th>Bit 5</th> <th>Flags number</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>0</td> <td>3</td> </tr> <tr> <td>1</td> <td>1</td> <td>4</td> </tr> </tbody> </table>	Bit 6	Bit 5	Flags number	0	0	1	0	1	2	1	0	3	1	1	4	0
Bit 6			Bit 5	Flags number														
0	0	1																
0	1	2																
1	0	3																
1	1	4																
5			0															
4	Manual Tx mode for V.34 modem	0: V.8 - start handshake from V.8 1: V.17	0															
3	Switch from V.17 to V.34 if DIS bit 6 set after received DIS	0: Yes - start V.8 handshaking.but only first time 1: No - Continue start with V.17	0															
2	Delay time in primary channel for V.34 transmit after CFR or MCF signal	<table border="1"> <thead> <tr> <th>Bit 2</th> <th>Bit 1</th> <th>Delay time (unit=second)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>200</td> </tr> <tr> <td>0</td> <td>1</td> <td>100</td> </tr> <tr> <td>1</td> <td>0</td> <td>300</td> </tr> <tr> <td>1</td> <td>1</td> <td>500</td> </tr> </tbody> </table>	Bit 2	Bit 1	Delay time (unit=second)	0	0	200	0	1	100	1	0	300	1	1	500	0
Bit 2			Bit 1	Delay time (unit=second)														
0	0	200																
0	1	100																
1	0	300																
1	1	500																
1			0															

(40) SOFT SWITCH: 40

Bit No.	Designation	Function	Initial Setting																																				
8	V.34 TX start speed	<table border="1"> <thead> <tr> <th>Bit 8</th> <th>Bit 7</th> <th>Bit 6</th> <th>Speed (bps)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>33.6k</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>31.2k</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>28.8k</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>26.4k</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>24.0k</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>21.6k</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>19.2k</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>16.8k</td> </tr> </tbody> </table>	Bit 8	Bit 7	Bit 6	Speed (bps)	0	0	0	33.6k	0	0	1	31.2k	0	1	0	28.8k	0	1	1	26.4k	1	0	0	24.0k	1	0	1	21.6k	1	1	0	19.2k	1	1	1	16.8k	0
Bit 8			Bit 7	Bit 6	Speed (bps)																																		
0			0	0	33.6k																																		
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0			1	0	28.8k																																		
0			1	1	26.4k																																		
1			0	0	24.0k																																		
1			0	1	21.6k																																		
1	1	0	19.2k																																				
1	1	1	16.8k																																				
7	0																																						
6	0																																						
5	V.34 CI signal byte number	<table border="1"> <thead> <tr> <th>Bit 5</th> <th>Bit 4</th> <th>Byte number</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>30 bytes</td> </tr> <tr> <td>0</td> <td>1</td> <td>9 bytes</td> </tr> <tr> <td>1</td> <td>0</td> <td>15 bytes</td> </tr> <tr> <td>1</td> <td>1</td> <td>60 bytes</td> </tr> </tbody> </table>	Bit 5	Bit 4	Byte number	0	0	30 bytes	0	1	9 bytes	1	0	15 bytes	1	1	60 bytes	0																					
Bit 5			Bit 4	Byte number																																			
0			0	30 bytes																																			
0			1	9 bytes																																			
1	0	15 bytes																																					
1	1	60 bytes																																					
4	1																																						
3	V.34 RX start speed	<table border="1"> <thead> <tr> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>Speed (bps)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>33.6k</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>31.2k</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>28.8k</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>26.4k</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>24.0k</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>21.6k</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>19.2k</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>16.8k</td> </tr> </tbody> </table>	Bit 3	Bit 2	Bit 1	Speed (bps)	0	0	0	33.6k	0	0	1	31.2k	0	1	0	28.8k	0	1	1	26.4k	1	0	0	24.0k	1	0	1	21.6k	1	1	0	19.2k	1	1	1	16.8k	0
Bit 3			Bit 2	Bit 1	Speed (bps)																																		
0			0	0	33.6k																																		
0			0	1	31.2k																																		
0			1	0	28.8k																																		
0			1	1	26.4k																																		
1			0	0	24.0k																																		
1			0	1	21.6k																																		
1	1	0	19.2k																																				
1	1	1	16.8k																																				
2	0																																						
1	0																																						

**(41) SOFT SWITCH: 41**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(42) SOFT SWITCH: 42**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(43) SOFT SWITCH: 43**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(44) SOFT SWITCH: 44**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Pre-Rotation engine	0: OFF 1: ON-The machine starts warming up on receipt of a ringer.	1
2	Reserved		0
1	Reserved		0

**(45) SOFT SWITCH: 45**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(46) SOFT SWITCH: 46**

Bit No.	Designation	Function	Initial Setting
8	Daylight savings timer	0: No 1: Yes	0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	RX Print	0: RX one page then print one page 1: Start to print after receiving all pages.	0
3	Default TX mode	0: Memory TX 1: ADF TX	0
2	Header for FAX TX	0: Off 1: On-Transmit header at top of each page.	1
1	The model name, if it is yet to be registered, will be printed at the top of the page.	0: No 1: Yes	0

- Bit 2: Some country such as U.S.A. PTT regulation, must send header at top of each page.

**(47) SOFT SWITCH: 47**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	RX mode	0: Auto RX mode 1: Manual RX mode	0
5	Footer	0: Off 1: On – Print footer information at each of received page	0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Disable CNG sending	0: No 1: Yes	0

- Bit 5: The footer shows machine number, receiving time, remote side TSI number, session and page number.
- Bit 1: Machine will continue to send CNG if can not detect remote side signal over 3 seconds.

**(48) SOFT SWITCH: 48**

Bit No.	Designation	Function	Initial Setting
8	Activity report	0: No 1: Yes	0
7	Reservation report	0: No 1: Yes	0
6	Tx Result report	0: No 1: Yes	0
5	RX result report	0: No 1: Yes	0
4	Error report	0: No 1: Yes	1
3	Error report for I-fax and Network scanner	0: No 1: Yes	0
2	Reserved		0
1	Broadcast Report	0: Not to print 1: Print	1



(49) SOFT SWITCH: 49

Bit No.	Designation	Function	Initial Setting																									
8	Ring no. limitation	0: Based on user setting from 1 to 16 1: Based on user setting, but must be 1~4 rings	0																									
7	Reserved		0																									
6	Print RX Mailbox Report method	0: Based on RX RESULT REPORT setting 1: Always printing	0																									
5	Redial method if Communication fail	0: Redial again 1: Based on redial time interval	0																									
4	No. of rings	<table border="1"> <thead> <tr> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>No. of rings</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>16</td> </tr> </tbody> </table>	Bit 4	Bit 3	Bit 2	Bit 1	No. of rings	0	0	0	0	1	0	0	0	1	2	~	~	~	~	~	1	1	1	1	16	0
Bit 4			Bit 3	Bit 2	Bit 1	No. of rings																						
0			0	0	0	1																						
0			0	0	1	2																						
~			~	~	~	~																						
1	1	1	1	16																								
3	0																											
2	0																											
1	1																											

**(50) SOFT SWITCH: 50**

Bit No.	Designation	Function	Initial Setting
8	Transmit or cancel after time out in "Memory TX"	0: Cancel and print out 1: Transmission	0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

- Bit 8: Can select cancel this job and print out report or start to send in case of time when memory full condition occurs

**(51) SOFT SWITCH: 51**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Send unsend page mode for memory transmission	<ul style="list-style-type: none"><li>• Select the starting page for retransmission if an error occurs in the middle of a memory transmission. 0: From error page 1: From start page</li></ul>	0
1	Reserved		0

**(52) SOFT SWITCH: 52**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(53) SOFT SWITCH: 53**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

(54) SOFT SWITCH: 54

Bit No.	Designation	Function	Initial Setting																								
8	Report /LCD Date/ Time type	0: Digits format 1: Alpha numeric format	1																								
7	Report /LCD Date/ time format	<table border="1"> <thead> <tr> <th>Bit 7</th> <th>Bit 6</th> <th colspan="2">Date/Time (ex. March,25,1997)</th> </tr> <tr> <th colspan="2"></th> <th>Report</th> <th>LCD</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>'2001 MAR.25</td> <td>MAR.25</td> </tr> <tr> <td>1</td> <td>0</td> <td>25.MAR'2001</td> <td>25.MAR</td> </tr> <tr> <td>0</td> <td>1</td> <td>MAR.25 2001</td> <td>MAR.25</td> </tr> <tr> <td>1</td> <td>1</td> <td>MAR.25 2001</td> <td>MAR.25</td> </tr> </tbody> </table>	Bit 7	Bit 6	Date/Time (ex. March,25,1997)				Report	LCD	0	0	'2001 MAR.25	MAR.25	1	0	25.MAR'2001	25.MAR	0	1	MAR.25 2001	MAR.25	1	1	MAR.25 2001	MAR.25	0
Bit 7			Bit 6	Date/Time (ex. March,25,1997)																							
			Report	LCD																							
0			0	'2001 MAR.25	MAR.25																						
1			0	25.MAR'2001	25.MAR																						
0	1	MAR.25 2001	MAR.25																								
1	1	MAR.25 2001	MAR.25																								
6	1																										
5	Memory near full capacity for scanning	<p>A memory near-full condition is detected when the space available for use in memory becomes less than the setting.</p> <table border="1"> <thead> <tr> <th>Bit 5</th> <th>Bit 4</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>16K</td> </tr> <tr> <td>0</td> <td>1</td> <td>64K</td> </tr> <tr> <td>1</td> <td>0</td> <td>80K</td> </tr> <tr> <td>1</td> <td>1</td> <td>128K</td> </tr> </tbody> </table>	Bit 5	Bit 4	Description	0	0	16K	0	1	64K	1	0	80K	1	1	128K	1									
Bit 5			Bit 4	Description																							
0	0	16K																									
0	1	64K																									
1	0	80K																									
1	1	128K																									
4	0																										
3	Reserved		0																								
2	Reserved		0																								
1	Reserved		0																								

**(55) SOFT SWITCH: 55**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(56) SOFT SWITCH: 56**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(57) SOFT SWITCH: 57**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(58) SOFT SWITCH: 58**

Bit No.	Designation	Function	Initial Setting
8	Time out from PSK to FSK delay time (Phase-C to Phase-D)	0: 6 sec 1: 30 sec	0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

- Bit 8: The timer depends on each country regulation.

**(59) SOFT SWITCH: 59**

Bit No.	Designation	Function	Initial Setting																																																																																																						
8	Reserved		0																																																																																																						
7	Reserved		0																																																																																																						
6	Reserved		0																																																																																																						
5	Time Between GMT GMT Greenwich Mean Time	<table border="1"> <thead> <tr> <th>Bit 5</th> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>Time between GMT</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>2</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>3</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>4</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td><td>5</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>6</td></tr> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>7</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>12</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td><td>-1</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>-2</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>-3</td></tr> <tr><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td><td>~</td></tr> <tr><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td><td>-11</td></tr> <tr><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>-12</td></tr> </tbody> </table>	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Time between GMT	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	2	0	0	0	1	1	3	0	0	1	0	0	4	0	0	1	0	1	5	0	0	1	1	0	6	0	0	1	1	1	7	~	~	~	~	~	~	0	1	1	0	0	12	1	0	0	0	1	-1	1	0	0	1	0	-2						-3	~	~	~	~	~	~	1	1	0	1	1	-11	1	1	1	0	0	-12	0
Bit 5			Bit 4	Bit 3	Bit 2	Bit 1	Time between GMT																																																																																																		
0			0	0	0	0	0																																																																																																		
0			0	0	0	1	1																																																																																																		
0			0	0	1	0	2																																																																																																		
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0			0	1	0	0	4																																																																																																		
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0			0	1	1	0	6																																																																																																		
0			0	1	1	1	7																																																																																																		
~			~	~	~	~	~																																																																																																		
0			1	1	0	0	12																																																																																																		
1			0	0	0	1	-1																																																																																																		
1			0	0	1	0	-2																																																																																																		
					-3																																																																																																				
~	~	~	~	~	~																																																																																																				
1	1	0	1	1	-11																																																																																																				
1	1	1	0	0	-12																																																																																																				
4			0																																																																																																						
3			0																																																																																																						
2			0																																																																																																						
1			0																																																																																																						

- Bit1-5: This value must be entered correctly, or E-mail headers will be wrong. A good reference web site may be found at <http://greenwichmeantime.com>  
Available range are:12 to -12, in one hour increments. The default setting is zero. Those bit only available if I-FAX kit installed.



**(60) SOFT SWITCH: 60**

Bit No.	Designation	Function	Initial Setting
8	Stripe End mode for JBIG	0: SDNORM 1: SDRST	0
7	Reserved		0
6	Quick memory Tx	0: Ineffective 1: Effective	1
5	B4/A3 declaration for Ledger	0: A3 size 1: B4 size	0
4	The width of TX Ledger	0: A3 Size 1: B4 Size	0
3	Print Mailbox RX image even if password is not correct	0: No 1: Yes	0
2	Off hook alarm after communication	0: Alarm 1: No alarm after communication	0
1	Display destination selection within TX Phase C	0: Local Name or telephone number 1: Display and report Remote telephone number	1

- Bit 5: If set to 0, machine will indicate A3 printing capability in DIS command if machine has Ledger Paper.
- Bit 4: If set to 0, The width of Ledger is handled as A3 size, but the Zoom ratio is not performed. If set to 1, the width of Ledger is handled as B4. However, when the transmission is performed at the same zoom ratio, image will be lost. Therefore transmission is started after reducing the width of the image.
- Bit 3: If bit 3 set to "1", machine will print out the incoming page even through password is not correct.

(61) SOFT SWITCH: 61

Bit No.	Designation	Function	Initial Setting																																								
8	Reserved		0																																								
7	Reserved		0																																								
6	Reserved		0																																								
5	Reserved		0																																								
4	Max. No. of rings	<table border="1"> <thead> <tr> <th>Bit 4</th> <th>Bit 3</th> <th>Bit 2</th> <th>Bit 1</th> <th>No. of rings</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>2</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>3</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>4</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>5</td> </tr> <tr> <td>~</td> <td>~</td> <td>~</td> <td>~</td> <td>~</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>16</td> </tr> </tbody> </table>	Bit 4	Bit 3	Bit 2	Bit 1	No. of rings	0	0	0	0	1	0	0	0	1	2	0	0	1	0	3	0	0	1	1	4	0	1	0	0	5	~	~	~	~	~	1	1	1	1	16	1
Bit 4			Bit 3	Bit 2	Bit 1	No. of rings																																					
0			0	0	0	1																																					
0			0	0	1	2																																					
0			0	1	0	3																																					
0			0	1	1	4																																					
0			1	0	0	5																																					
~	~	~	~	~																																							
1	1	1	1	16																																							
3			1																																								
2			1																																								
1			1																																								

**(62) SOFT SWITCH: 62**

Bit No.	Designation	Function	Initial Setting
8	Reserved		0
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

**(63) SOFT SWITCH: 63**

Bit No.	Designation	Function	Initial Setting
8	# key definition in PBX mode	1: default is internal 0: default is external	1
7	Reserved		0
6	Reserved		0
5	Reserved		0
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Tx Result report with image	0: Yes 1: No	0

- Bit 8: if this bit set to 1, the # key is used to access PSTN line instead of the pre-fix number which is dialed in front of the TEL No. If this bit set to 0, the pre-fix number is used automatically to access PSTN line when the TEL No. is dialed.
- Bit 1: If this bit set to "0", the first page image will not append at the bottom of error report or OK report

**(64) SOFT SWITCH: 64**

Bit No.	Designation	Function	Initial Setting
8	Manufacture code	0: NEC of Japan 1: TECO of Taiwan	0
7	Reserved		0
6	Print RX error report on RX side if no FAX signal is detected	0: No 1: Yes	0
5	10 PPS & 20 PPS Selectable by user	0: No 1: Yes	1
4	Reserved		0
3	Reserved		0
2	Reserved		0
1	Reserved		0

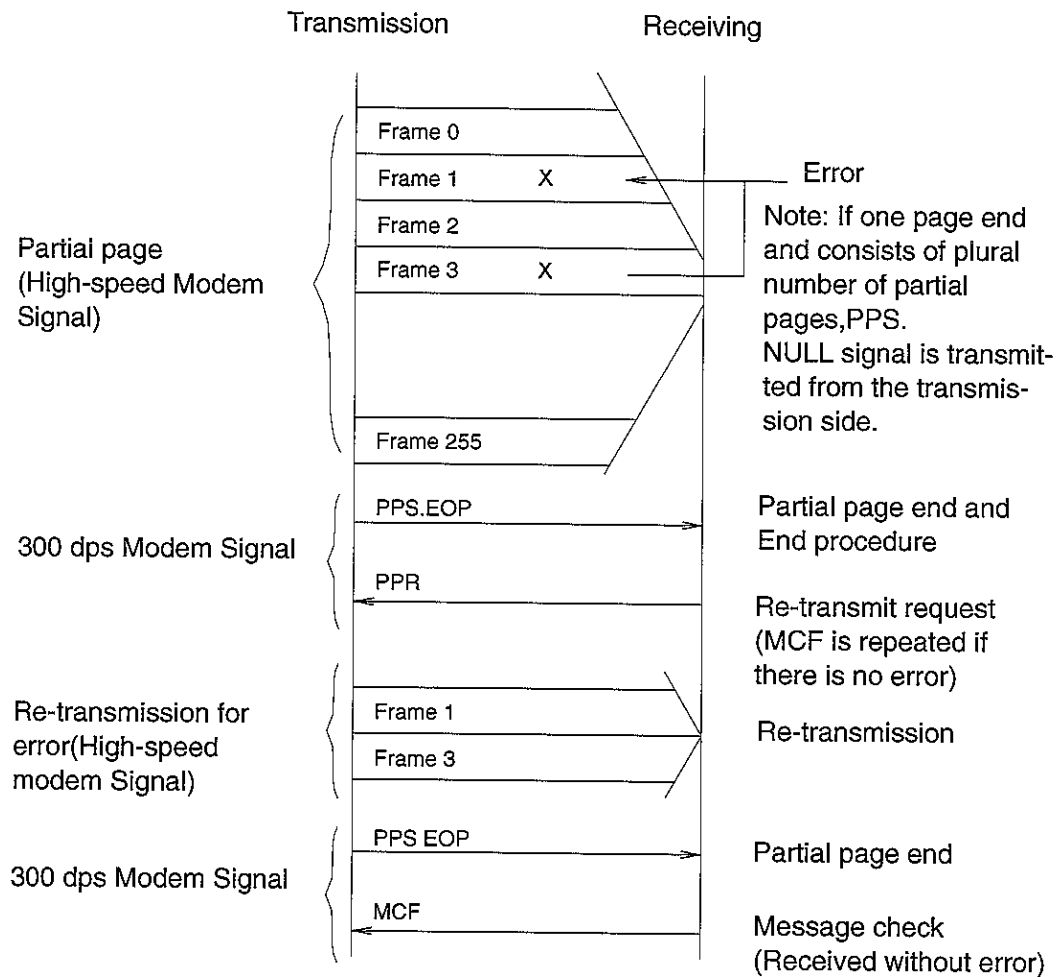
- Bit 6: If this bit set to 0, Machine does not print a RX error report if no Fax signal from the other party is detected.
- Bit 5: Prevents user to change PPS if this bit set to "0".

## 8. Fax Protocols

### 8-1. G3 ECM (G3 Error Correction Mode)

- G3 ECM is the error correction system newly recommended by Consultative Committee of International Telephone & Telegraph of 1988.
- By G3 ECM, documents are divided into blocks (called partial page) for transmission. If any error takes place in any frame (one partial page consists of 256 frames) on a partial page, the receiving party generates the retransmit request with erroneous frame numbers.

Here is an example where frame 1 and frame 3 are subjected to error:

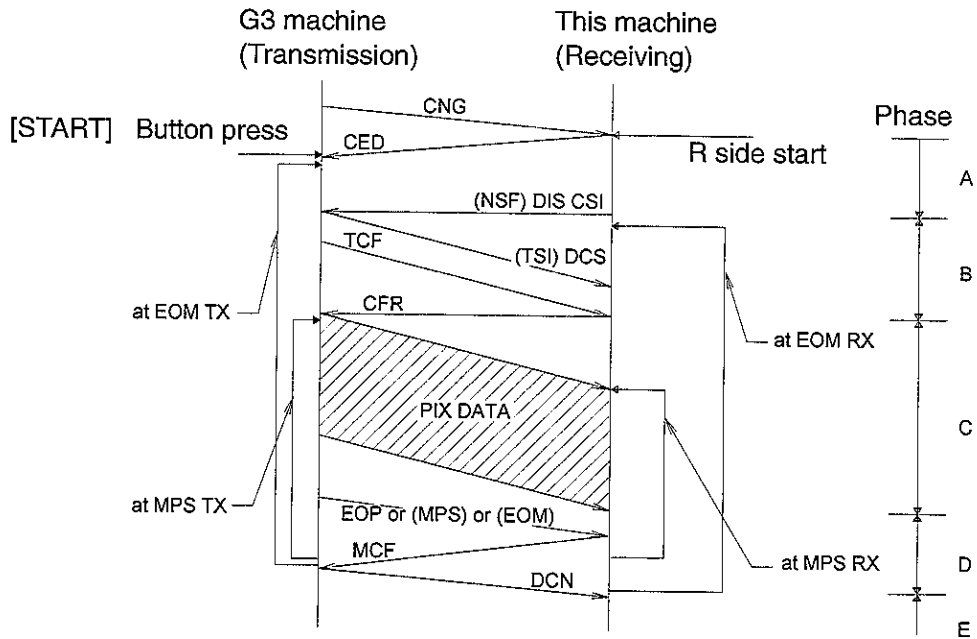
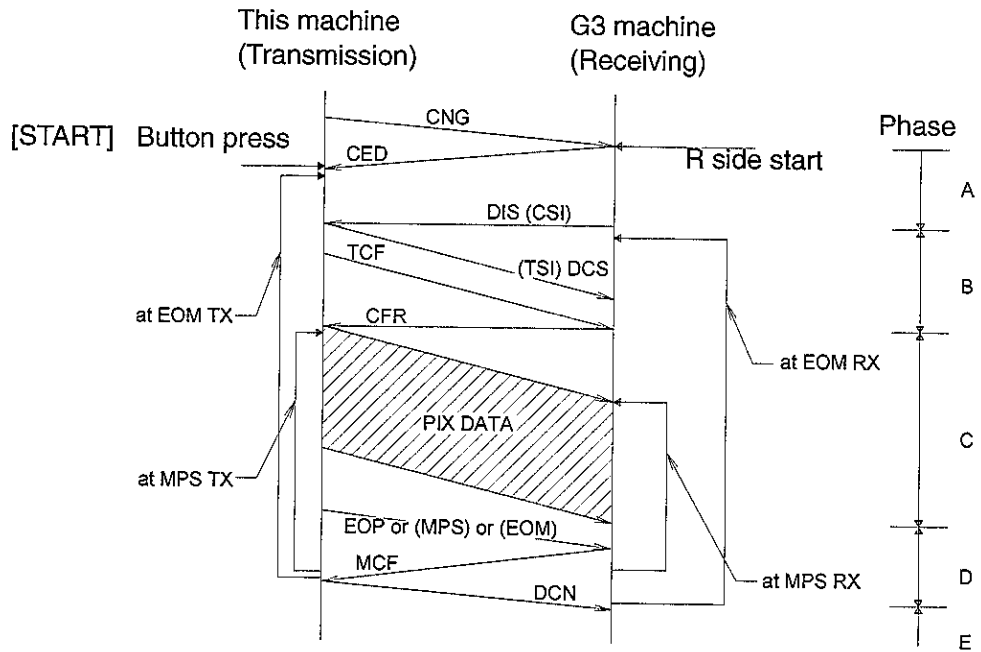


4507M501AA

## 8-2. Line Control

### (1) Procedure of G3 mode communication

- Basic communications diagram of G3 mode.



4507M502AA

Drawing: Line Control

### 8-3. How to analyze the T30 protocol monitor

- DCS or DIS
- Hex Data as printed on page.
- Example : 1) 2) 3) 4)  
FF 13 83 00468800

1. FF means address.
2. 13 means Last Control Field.
3. FCF, Facsimile Control Field. 83=DCS, 80=DIS
4. FIF, Facsimile Information Field.

	0 0	4 6	8 8	0 0
t	0000 0000	0100 0110	1000 1000	0000 0000
Bit No.	8 7 6 5 4 3 2 1	16 15 14 13 12 11 10 9	24 23 22 21 20 19 18 17	32 31 30 29 28 27 26 25
Note	#11=1, #12=0 7200bp #15=1 R8X7.7 Lines/mm (Fine Mode) #19=0, #20=1 Unlimited Paper Length			

- Hex-Binary Conversion List

Hex	Binary	Hex	Binary
0	0000	8	1000
1	0001	9	1001
2	0010	A	1010
3	0011	B	1011
4	0100	C	1100
5	0101	D	1101
6	0110	E	1110
7	0111	F	1111

• DIS / DCS Bit Allocation Table

DIS (DTC)	Bit No.	DCS
Reserved	1 - 5	Reserved
V.8 capabilities	6	Invalid
"0" = 256 octets preferred "1"=64 octets preferred	7	Invalid
Reserved	8	Reserved
Ready to transmit a facsimile document (polling)	9	Set to "0"
Receiver fax operation	10	Receiver fax operation
Data signalling rate	11, 12, 13, 14,	Data signalling rate
V.27 <i>ter</i> fall-back mode	0, 0, 0, 0	2400 bit/s, Rec. V.27 <i>ter</i>
Rec. V.27 <i>ter</i>	0, 1, 0, 0	4800 bit/s, Rec. V.27 <i>ter</i>
Rec. V.29	1, 0, 0, 0	9600 bit/s, Rec. V.29
Rec. V.27 <i>ter</i> and V.29	1, 1, 0, 0	7200 bit/s, Rec. V.29
Not used	0, 0, 1, 0	Invalid
Reserved	0, 1, 1, 0	Invalid
Not used	1, 0, 1, 0	Reserved
Invalid	1, 1, 1, 0	Reserved
Not used	0, 0, 0, 1	14,400 bit/s, Rec. V.17
Reserved	0, 1, 0, 1	12,000 bit/s, Rec. V.17
Not used	1, 0, 0, 1	9600 bit/s, Rec. V.17
Rec. V.27 <i>ter</i> , V.29, and V.17	1, 1, 0, 1	7200 bit/s, Rec. V.17
Not used	0, 0, 1, 1	Reserved
Reserved	0, 1, 1, 1	Reserved
Not used	1, 0, 1, 1	Reserved
Reserved	1, 1, 1, 1	Reserved
R8 × 7.7 lines/mm and/or 200 × 200 pels/25.4 mm	15	R8 × 7.7 lines/mm and/or 200 × 200 pels/25.4 mm
Two-dimensional coding capability	16	Two-dimensional coding



DIS (DTC)	Bit No.	DCS
Recording width capabilities	17,18	Recording width
Scan line length 215 mm ± 1%	(0, 0)	Scan line length 215 mm ± 1%
Scan line length 215 mm ± 1% and scan line length 255 mm ± 1% and scan line length 303 mm ± 1%	(0, 1)	Scan line length 303 mm ± 1%
Scan line length 215 mm ± 1% and scan line length 255 mm ± 1%	(1, 0)	Scan line length 255 mm ± 1%
Invalid	(1, 1)	Invalid
Recording length capability	19, 20	Recording length
A4 (297 mm)	(0, 0)	A4 (297 mm)
Unlimited	(0, 1)	Unlimited
A4 (297 mm) and B4 (364 mm)	(1, 0)	B4 (364 mm)
Invalid	(1, 1)	Invalid
Minimum scan line time capability at the receiver	21, 22, 23	Minimum scan line time
20 ms at 3.85 1/mm: T <sub>7.7</sub> = T <sub>3.85</sub>	(0,0,0)	20 ms
40 ms at 3.85 1/mm: T <sub>7.7</sub> = T <sub>3.85</sub>	(0,0,1)	40 ms
10 ms at 3.85 1/mm: T <sub>7.7</sub> = T <sub>3.85</sub>	(0,1,0)	10 ms
5 ms at 3.85 1/mm: T <sub>7.7</sub> = T <sub>3.85</sub>	(1,0,0)	5 ms
10 ms at 3.85 1/mm: T <sub>7.7</sub> = 1/2 T <sub>3.85</sub>	(0,1,1)	
20 ms at 3.85 1/mm: T <sub>7.7</sub> = 1/2 T <sub>3.85</sub>	(1,1,0)	
40 ms at 3.85 1/mm: T <sub>7.7</sub> = 1/2 T <sub>3.85</sub>	(1,0,1)	
0 ms at 3.85 1/mm: T <sub>7.7</sub> = T <sub>3.85</sub>	(1,1,1)	Invalid
Extension field 0: Without 1: With	24	Extension field 0: Without 1: With
Reserved	25	Reserved
Uncompressed mode	26	Uncompressed mode
ECM	27	ECM
Set to "0"	28	Frame size 0 = 256 octets Frame size 1 = 64 octets
Reserved	29 - 30	Reserved
T.6 coding capability	31	T.6 coding enabled
Extend field	32	Extend field
Field not valid capability	33	Field not valid capability
Multiple selective polling capability	34	Set to "0"
Polled SubAddress	35	Set to "0"
T.43 coding	36	T.43 coding
Plane interleave	37	Plane interleave
Reserved	38 - 39	Reserved

DIS (DTC)	Bit No.	DCS
Extend field	40	Extend field
R8 x 15.4 lines/mm	41	R8 x 15.4 lines/mm
300 x 300 pels/25.4 mm	42	300 x 300 pels/25.4 mm
R16 x 15.4 lines/mm and/or 400 x 400 pels/25.4 mm	43	R16 x 15.4 lines/mm and/or 400 x 400 pels/25.4 mm
Inch based resolution preferred	44	Resolution type selection "0": metric based resolution "1" : Inch based resolution
Metric based resolution preferred	45	Don't care
Minimum scan line time capability for higher resolutions. "0" : $T_{15.4} = T_{7.7}$ "1" : $T_{15.4} = 1/2 T_{7.7}$	46	Don't care
Selective polling	47	Set to "0"
Extend field	48	Extend field
SubAddressing capability	49	SubAddressing transmission
Password	50	Sender Identification trans- mission
Ready to transmit a data file (polling)	51	Set to "0"
Reserved	52	Reserved
Binary File Transfer (BFT)	53	Binary File Transfer (BFT)
Document Transfer Mode (DTM)	54	Document Transfer Mode
Electronic Data Interchange (EDI)	55	Electronic Data Interchange (EDI)
Extend field	56	Extend field
Basic Transfer Mode (BTM)	57	Basic Transfer Mode (BTM)
Reserved	58	Reserved
Ready to transmit a character or mixed mode document (polling)	59	Set to "0"
Character mode	60	Character mode
Reserved	61	Reserved
Mixed mode (Annex D/T.4)	62	Mixed mode (Annex D/T.4)
Reserved	63	Reserved
Extend field	64	Extend field
Processable mode 26 (Rec. T. 505)	65	Processable mode 26 (Rec. T. 505)
Digital network capability	66	Digital network capability
Duplex and half duplex capabilities		Duplex and half duplex capa- bilities
Half duplex operation only	(0)	Half duplex operation only
Duplex and half duplex operation	(1)	Duplex operation

DIS (DTC)	Bit No.	DCS
JPEG coding	68	JPEG coding
Full color mode	69	Full color mode
Set to "0"	70	Preferred Huffman tables

## 9. Error Code

### 9-1. Reception

Code	Possible Causes of Error.
01	No G3 signal received within 35 sec. in manual receive mode.
03	Received DIS after sending DIS signal.
04	Received DCN after sending DTC signal.
06	Detect busy tone within receiving phase B.
09	Can not receive any signal within 35 sec. in manual polling mode.
10	Received DCN signal after sending DTC signal in polling RX.
11	Can not receive any correct response after sending three DTC signals.
12	Remote side Password does not match in polling RX/our side no file to be polled.
13	Can not receive carrier signal within 6 sec. after sending CFR in data phase C.
14	Can not receive T.30 signal after sending FTT signal.
15	Line polarity change within receiving phase B~D.
16	Receive DCN signal after sending FTT signal.
17	Can not receive any response from remote side after sending type of xxx_EOM signal.
18	Can not detect energy within 6 sec. after sending FTT command.
19	Received DCN signal after sending CFR signal.
1A	No energy on line over 6 sec. within phase C before any corrected ECM frame.
1D	Detect FSK signal, but did not receive any command within 6 sec.
1E	In phase C, have detected FSK signal, but did not receive any command within 6 sec.
20	Can not correct frame within 6 sec., or in non-ECM mode, one decoding line over 6 sec.
21	Remote-side disconnect at phase C (V.17).
22	Owing to noise interference on the line, receiving side can't receive correct data within specified time (no ECM).
29	Mailbox password not programmed or matched for mailbox receiving.
30	Did not receive any signal within 6 sec.at phase D.
31	Received incorrect signal at phase D (not EOP, MPS, EOM, DCS PPS_Q, PPS_Q,etc).
32	Did not receive carrier signal within 6 sec.after sending MCF. or RTP, RTN signal.
33	Received DCN signal at phase D within pages (not last page).
3F	Remote side TSI not programmed in machine one touch or speed dial directory.
40	Did not receive carrier signal within 6 sec. after sending CTR.
41	Did not receive carrier signal within 6 sec. after sending PPR.
42	Did not receive correct signal after sending RNR signal.
43	Received incorrect signal at phase D in ECM mode.

Code	Possible Causes of Error.
44	Did not receive carrier signal /FSK signal within 6 sec. after sending MCF in ECM mode.
45	Did not receive any correct signal after sending RNR response with ERR signal.
46	Receive incorrect signal when sending RNR response with ERR signal.
47	Did not receive correct signal after sending ERR signal.
48	Did not receive correct signal after receiving PPS_PRI_Q or PRI_Q, EOR_PRI_Q.
49	Did not receive correct signal after sending PIP/PIN signal within 13 sec.
4A	Line energy over threshold lasts for 60 seconds after MCF and can not detect FSK or carrier signal in ECM mode.
4B	Can not detect correct FSK signal even though detected FSK tone within 6 sec.
4C	Command hand shake fail when V.34 RX.
4E	Receive DCN signal after sending DIS in V.34.
4F	Remote side disconnected after sending ANSam in V.8 phase.
50	Did not receive any correct signal after sending CJ signal in V.8 phase.
51	Did not receive phase 3 signal after phase 2 within 20 seconds in V.34.
52	Did not receive phase 4 signal after phase 3 within 20 seconds in V.34.
53	Modem disconnect after phase 4 in V.34.
54	Remote side disconnected after phase 4 in V.8.
55	Receive incorrect signal after sending DIS signal in V.34.
56	Modem disconnect after sending CFR in V.34.
57	Did not detect image signal within 6 seconds after sending CFR.
58	Did not detect image signal within 6 seconds after modem enter to primary phase in V.34.
5A	Modem can not detect any correct ECM frame within 3 minutes in phase C.
5B	Did not detect phase 5 signal after primary channel within 6 seconds.
5C	Detect busy tone within control channel after phase C.
5D	Remote-side disconnect at phase C (V.34).
5E	Did not detect control channel signal after received RCP frame within 6 seconds.
5F	Did not detect silence after sending JM signal for polling TX function.
60	There are no bulletin files to be polled in V.34.
61	Machine can not detect V.21 or V.8 signal within 35 seconds.
62	Modem disconnect in phase D after our side sending out flag sequence in control channel.
63	Did not receive any flag sequence in control channel within 6 seconds in phase D.
64	Did not detect any control channel signal in phase D within 60 seconds even though energy still on the line.
65	Did not detect any control channel signal within 60 seconds after detect silence in phase D.
66	Did not receive T.30 signal or carrier signal after sending CFR in V.34.

Code	Possible Causes of Error.
70	User presses stop key during receiving.
71	Memory full during receiving.

## 9-2. Transmission

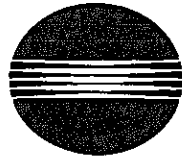
Code	Possible Causes of Error.
80	Did not detect any G3 signal within 35 sec. specified by ITU-T in phase B.
81	Received DTC signal in transmission phase.
82	Transmitting unit receives a signal other than DIS or DTC. and DCN in phase B.
83	Detected FSK signal, but did not receive any signal within 35 seconds.
84	Detect DCN signal in phase B.
85	Transmitting unit sending DCS 3 times consecutively, but each time receiver responds with DIS/DTC.
86	Detected response signal other than DTC, DIS, FTT, DCN or CFR after sending DCS.
87	Training attempt has failed because speed unit cannot adjust to low lower speed.
88	Received DCN signal after sending out DCS signal.
89	Remote side no mailbox function or not compatible.
8A	Remote side not enough memory for relay initiate.
8B	Receiver's protocol of DIS is received, but it is not compatible with our machine.
8C	Remote side not enough memory for relay initiate.
8D	Receiver's protocol of DIS is received, but remote side can't receive document temporary, may be run out of paper or other reason.
8E	Remote side CSI number not defined in machine one touch or speed dial directory.
8F	Modem not ready to receive V.34 data during 6 seconds after receiving CFR signal.
90	Called side document not ready for our polling.
91	Sending out DCS+TCF signal 3 times consecutively but no signal in response from receiver.
92	Remote side disconnected during transmitting phase.
93	Received DCN signal after sending out DCS signal for V.34.
94	It is over 4 minutes to TX a ECM block (64K).
99	Remote side disconnect after primary channel.
9A	Did not detect any signal after sending CI signal.
9C	Received DCN after sending DTC in V.34 polling RX.
9D	Remote side hang up before V.34 modem enters PHASE 2 state in V.34 polling RX.
9F	Did not receive any response from other side after sending PPS_EOM signal.
A0	User stops or cancels transmission job.

Code	Possible Causes of Error.
A1	Document JAM during transmission
AE	Did not finish V.8 procedure or detect V.21 signal after CM signal within 30 seconds.
AF	Modem can not enter into control channel after TX side sends out RCP signal for V.34.
B0	Did not receive any command after our side retry three DCS signal in V.34 TX.
B1	Did not finish V.8 procedure or detect V.21 signal after ANSam signal within 35 seconds.
B2	Did not detect phase 2 signal after our side sending CJ signal within 30 seconds.
B3	Did not detect correct V.21 or JM signal after sending CM signal.
B4	Did not detect correct phase 2 signal within 25 second after CM/JM signal exchange.
B5	Did not detect phase 3 signal after PHASE 2 within 25 seconds.
B6	Did not detect phase 4 signal within 25 seconds after CM/JM exchange.
B7	Did not detect phase 5 signal after phase 4 within 30 seconds.
B8	Remote side disconnect after our side sent DCS signal in V.34.
B9	Receive T.30 signal other than DIS,DCS,CFR after sending DCS signal in V.34.
BA	Did not receive correct signal after our side sent DTC signal in V.34.
BB	Every time our side received DIS signal after sending DTC in V.34.
BC	Modem not ready within 10 second after entering primary channel in V.34.
BD	Can not detect correct V.21 or JM signal after detected FSK frequency.
BE	Remote side no document to be polled after V8 handshaking.
BF	Capability not match after V8 handshaking.
C0	Remote side disconnect before entering primary channel in V.34.
C1	At phase-D, transmitting unit sends out EOP 3 times consecutively, but receives no answer from receiving unit.
C2	Remote side disconnect after sending out V.8 CM signal.
C4	After sending MPS signal, the received signal is not one of MCF, RTN, PIP, PIN, RTP, DCN.
C5	Received DCN signal after sending MPS signal.
C9	At phase-D, sending MPS 3 times consecutively, but no answer from receiving unit.
CA	After sending EOP signal, the received signal is not one of MCF, RTN, PIP, PIN, PRI-EOP, DCN.
CB	After sending EOP signal, the received signal is DCN signal.
CC	After sending EOM signal, the received signal is not one of MCF, RTN, PIP, PIN, RTP, DCN.
CD	At phase-D, transmitting unit sends out EOM 3 times consecutively, but receives no answer.
CE	At phase-D, transmitting unit sends out EOM, but receives DCN.
CF	Received incorrect signal after sending DTC signal for V.34 polling.

Code	Possible Causes of Error.
D0	Received ERR signal after sending EOR_NULL.
D1	ECM TX received wrong command in phase D after PPS-EOP. (not PPR, MCF, PIP, PIN, .....).
D2	Receive DCN after send command PPS-EOP.
D3	Received DCN after sending PPS_NULL signal.
D4	Received DCN after sending PPS_EOM signal.
D8	Did not detect correct phase 3 signal for polling within 25 seconds.
D9	Did not detect correct phase 3 signal after detecting silence after phase 2.
DA	Did not detect phase 4 signal within 30 seconds or remote side hang up over 6 seconds.
DB	Did not receive any T.30 signal within 15 seconds in phase 4.
DC	Received T.30 signal in phase 4 other than DCS,DIS or DTC.
DD	Remote side not the same model or no mailbox ID defined for mailbox TX.
E0	At phase-D, transmitting unit sends out PPS_NULL 3 times consecutively but receives no answer.
E1	Received incorrect response after sending PPS_NULL.
E2	Did not receive any response in RR response procedure after sending PPS_NULL.
E4	At phase-D, transmitting unit sends out PPS_MPS 3 times consecutively but no answer.
E5	Received incorrect response after sending PPS_MPS.
E6	Did not receive any response in RR response procedure after sending PPS_MPS.
E7	Received DCN after sending PPS_MPS.
E8	At phase-D, transmitting unit sends out PPS_EOP 3 times consecutively but no answer.
E9	Receive PIN signal after sent last page three times.
EA	Did not receive any response in RR response procedure after sending PPS_EOP.
EB	At phase-D, transmitting unit sends out PPS_EOM 3 times consecutively but no answer.
EC	Received incorrect response after sending PPS_EOM.
ED	Did not receive any response in RR response procedure after sent out PPS_EOM.
EE	At phase-D, transmitting unit sends out EOR_NULL 3 times consecutively but no answer.
EF	Received incorrect response after sending EOR_NULL.
F0	Did not receive any response procedure after sending EOR_NULL.
F1	At phase-D, transmitting unit sends out EOR_MPS 3 times consecutively but no answer.
F2	Received incorrect response after sending EOR_MPS.
F3	Received ERR signal after sending EOR_MPS.



Code	Possible Causes of Error.
F4	Did not receive any response in RR response procedure after sending EOR_MPS.
F5	At phase-D, transmitting unit sends out EOR_EOP 3 times consecutively but no answer.
F6	Received incorrect response after sending EOR_EOP.
F7	After Received ERR, our side can not receive response after sending EOR_EOP command.
F8	At phase-D, transmitting unit sends out EOR_EOM 3 times consecutively but no answer.
F9	Received incorrect response after sending EOR_EOM.
FA	Received ERR signal after sending EOR_EOM.
FB	Did not receive any response in RR response procedure after sending EOR_EOM.
FC	Did not receive any response after sending CTC.
FD	Can't speed down to lower speed in ECM mode.
FE	Memory full for transmission.
FF	Redial all fail.



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