# **FAX OPTION TYPE 3030**

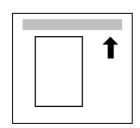
(Machine Code: B766)

# **SERVICE MANUAL**

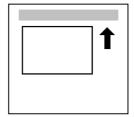
#### Conventions Used in this Manual

This manual uses several symbols.

Symbol	What it means	
•	Refer to section number	
CIT	See Core Tech Manual for details	
F	Screw	
	Connector	
$\mathbb{C}$	E-ring	
ℴ	Clip ring	
Į.	Clamp	



Lengthwise, SEF (Short Edge Feed)



Sideways, LEF (Long Edge Feed)

#### Cautions, Notes, etc.

The following headings provide special information:

### **AWARNING**

FAILURE TO OBEY WARNING INFORMATION COULD RESULT IN SERIOUS INJURY OR DEATH.

## **A**CAUTION

Obey these guidelines to ensure safe operation and prevent minor injuries.

#### **Important**

• Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

#### **IMPORTANT**

 ALWAYS OBEY THESE GUIDELINES TO AVOID SERIOUS PROBLEMS SUCH AS MISFEEDS, DAMAGE TO ORIGINALS, LOSS OF VALUABLE DATA AND TO PREVENT DAMAGE TO THE MACHINE. BOLD IS ADDED FOR EMPHASIS.

**NOTE:** This information provides tips and advice about how to best service the machine.

### **≜WARNING**

- 1. Never install telephone wiring during a lightning storm.
- 2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- 3. Never touch telephone wires that are not insulated or terminals unless the telephone line has been disconnected at the network interface.
- 4. Use caution when you install or modify telephone lines.
- 5. Do not use a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- 6. Do not use a telephone to report a gas leak in the vicinity of the leak.

## **∴** CAUTION

- 1. Switch off the main switch and disconnect the power cord before you install the fax unit.
- 2. The fax unit has a lithium battery. An explosion can occur if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard batteries in accordance with the manufacturer's instructions.

**Note to users in Australia:** Unit shall be connected to Telecommunication Network through a line cord which meets the requirements of ACA Technical Standard TS008.

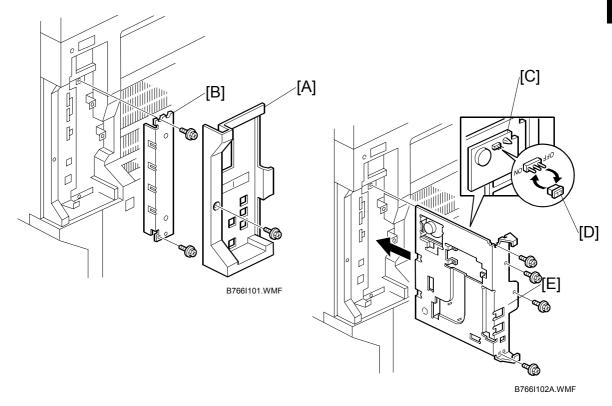
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## 1. INSTALLATION

## 1.1 FAX UNIT B766



#### **⚠**CAUTION

Do the following before you install this option:

- 1. Print out all data in the printer buffer if there is a printer option in the machine.
- 2. Turn off the main switch and disconnect the power cord and the network cable.
- 1. Remove the application cover [A] of the controller ( F x 1)
- 2. Remove the cover plate [B] ( x 2).
- 3. On the MBU [C], set the jumper [D] from OFF to ON.
- 4. Push down the MBU. Make sure that it is installed correctly **Important**: **SC819** occurs if the MBU is loose.
- 5. Insert the fax unit [E] into the slot and attach it ( x 3).

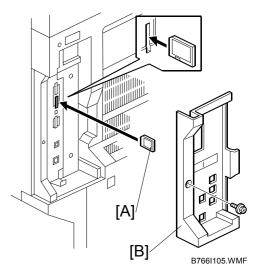
10 June 2005 FAX UNIT B766

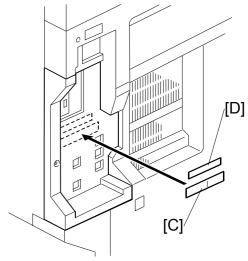
 If there is no HDD installed in the mainframe, insert the SD [A] that has the address book into Slot 2 of the controller board.

7. Attach the application cover [B] ( \$\hat{\mathcal{B}} \text{ x 1}).

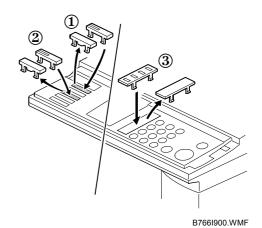
- 8. Attach the FCC decal [C] to the application cover as shown, if you do this procedure on the NA model. Go to the next step if you do not have the NA model.
- 9. Attach the serial number label [D] to the application cover as shown.

10. Replace the blank keytops with the new keytops ① Copy SW, ② Facsimile SW, ③ On Hook Dial on the operation panel.



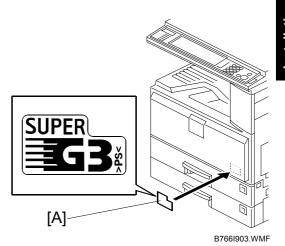






1-2

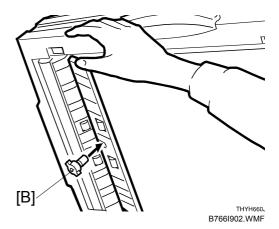
11. Attach the G3 decal [A] as shown.



- 12. If the ADF has been installed, install the stamp cartridge [B] in the ADF as shown.
- 13. Connect the telephone line to the "LINE" jack at the left of the machine.
- 14. Connect the machine's power cord.

  Then turn on the main power switch.

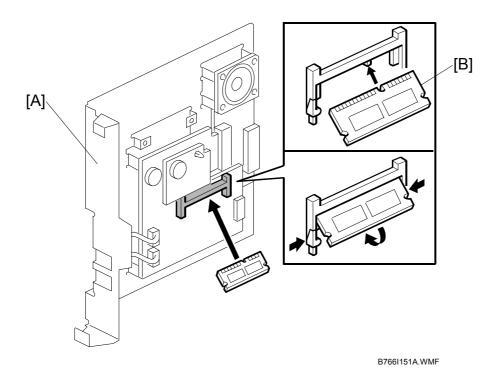
**NOTE:** The machine must be connected to a correctly grounded socket outlet.



#### **Important**

- After you turn the machine on, if you see a message that tells you the SRAM has been formatted due to a problem with SRAM, turn the machine off and on again to clear the message.
- 15. Be sure to set the clock (date and time) with the User Tools.
- 16. Go into service mode and program the serial number into the fax unit with **SP3102**. You can find the serial number on the serial number label (attached to the machine in Step 9).

# 1.2 OPTIONAL 32 MB MEMORY



- 1. Remove the FCU [A] from the machine. (**☞**1.1)
- 2. Attach the DIMM [B] to the FCU board as shown.

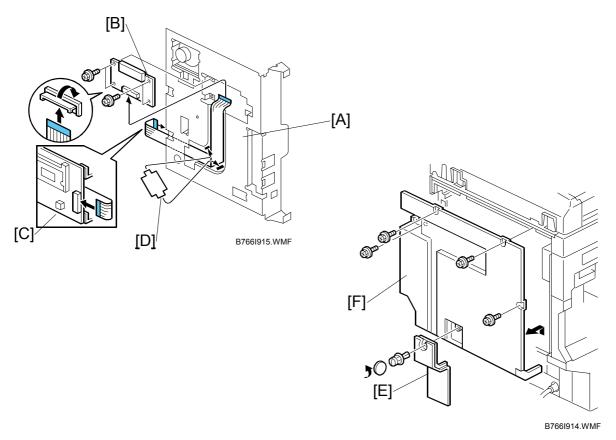
## 1.3 G3 INTERFACE UNIT B768

You can install one of these units (single-port option) or two of them (dual-port option).

## **⚠CAUTION**

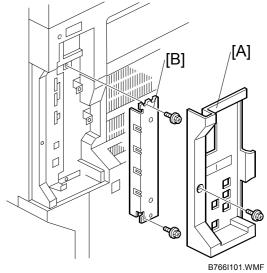
Do the following before you install this option:

- 1. Print out all data in the printer buffer if there is a printer option in the machine.
- Turn off the main switch and disconnect the power cord and the network.

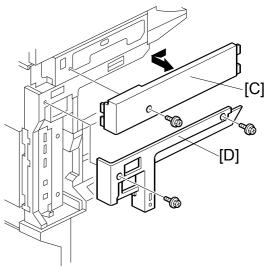


- 1. Connect the ribbon cable [A] the CCU DRV board [B].
- 2. Attach the CCU DRV board to the back of the G3 unit ( x 4).
- 3. Connect the ribbon cable to the FCU [C].
- 4. Attach the film plate [D] to keep the ribbon cable in the correct position.
- 5. Remove the connector cover [E] and disconnect the cable. Then remove the rear cover [F] of the copier ( F x 4)

- 6. Remove the application cover [A] of the controller ( x 1)
- 7. Remove the cover plate [B] ( x 2).



8. Remove the left scanner cover [C] ( x 1) and the cover below the scanner [D] ( \$\beta\$ x 2).



B766I103.WMF

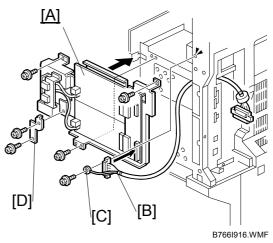
Do the procedures below for either the single-port or dual-port unit.

#### **Single Port**

- 1. Attach the G3 Unit [A] to the back of the mainframe ( x 3).
- 2. Connect the harness [B] to the CCU

NOTE: Attach the end of the harnesses without the clamp to the CCU I/F.

- 3. Fasten the ground wire [C] ( x 2).
  4. Attach the plate [D] ( x 2).



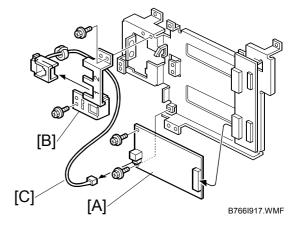
Single Port

#### **Dual Port**

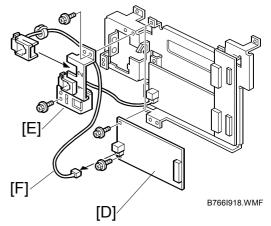
You need two G3 Interface Units to create the Dual G3 port.

Do the following if you install the second port for an installation where the single port is already installed:

- 1. Remove the G3 board [A] ( ℜ x 2, 
  □□ x 1) from a G3 interface unit.
- 2. Remove the bracket [B] ( x 2) and the harness [C].



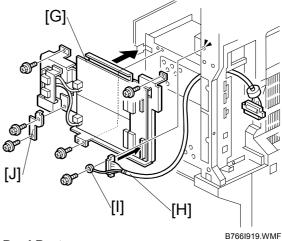
- 3. Install the G3 board [D] (removed in step 1) in the upper slot of the other G3 interface unit. You will install this unit in the machine.
- 4. Remove the bracket [E] ( x 2). Then install the harness [F] (removed in step 2).
- 5. Install the bracket [E] ( F x 2).



- 6. Attach the G3 Unit [G] to the back of the mainframe ( \$\hat{\beta}^2 \times 3 \).
- 5. Connect the harness [H] to the CCU I/F board (□ x 1)

**NOTE**: Attach the end of the harnesses without the clamp to the CCU I/F.

- 6. Fasten the ground wire [I] ( x 2).
- 7. Attach the plate [J] ( F x 2).



**Dual Port** 

#### FCU Unit (Single or Dual Port)

- Attach the harness clamp [A] to the notch.
- 2. Remove the FCU unit [B] ( x 2) if it has been installed.
- 3. Check the jumper [C]. Make sure that it is set to ON.
- 4. Insert the FCU Unit [B] about half way into the slot.

**NOTE**: Slide the ferrite core up slightly at [D] to allow insertion of the FCU unit.

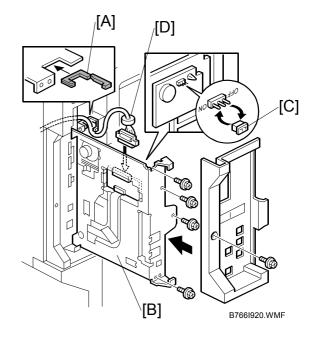
- 5. Connect the FCU harness [D] to the CCU DRV board.
- 6. Run the harness through the clamp. Then clamp the harness (⋈ x 1).
- 7. Insert the FCU unit fully into the controller slot. Then attach it ( \$\hat{x} \times 2 ).
- On the rear cover, use a cutter or pair of wire cutters to remove the knockout for Line 2 [E].
   -or-

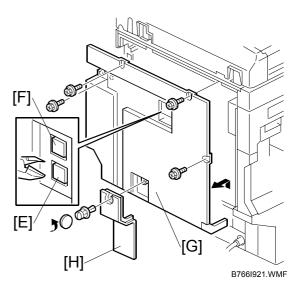
Remove the knockout for Line 2 and Line 3 [F] if you install the dual ports.

- 9. Reattach the rear cover [G] ( x 4) and connector cover [H].
- 10. Reassemble the machine.
- 11. Connect the telephone lines to the back of the machine at LINE 2 (single port) or LINE 2 and LINE 3 (dual port).
- 12. Connect the machine's power cord. Then turn the main switch on.
- 13. Go into the Fax SP mode and set Bit 1 of Communication Switch 16 to "1" if you install the single port.
  -or-

Go into the Fax SP mode and set **Bit 3** of Communication Switch **16** to "1" if you install the dual ports.

- 14. Print the system parameter list. Make sure that "G3-2" (single port) or "G3-3" (dual port) is listed as an option.
- 15. Set up the items required for PSTN-2 communication.





FCU 10 June 2005

# 2. REPLACEMENT AND ADJUSTMENT

## 2.1 FCU

1. When you replace the FCU board, remove the MBU board from the old FCU board and install it on the new FCU board.

Set the correct date and time with the User Tools: User Tools> System Settings> Timer Setting> Set Date/Time

#### NOTE:

- Do not turn off the battery switch (SW1).
- Do SP6101 to print the system parameters, and check the settings.



# 3. TROUBLESHOOTING

## 3.1 ERROR CODES

If an error code occurs, retry the communication. If the same problem occurs, try to fix the problem as suggested below. Note that some error codes appear only in the error code display and on the service report.

Code	Meaning	Suggested Cause/Action
0-00	DIS/NSF not detected within	Check the line connection.
	40 s of Start being pressed	Check the NCU - FCU connectors.
		The machine at the other end may be
		incompatible.
		Replace the NCU or FCU.
		Check for DIS/NSF with an oscilloscope.
		If the rx signal is weak, there may be a bad line.
0-01	DCN received unexpectedly	The other party is out of paper or has a jammed printer.
		The other party pressed Stop during communication.
0-03	Incompatible modem at the other end	The other terminal is incompatible.
0-04	CFR or FTT not received	Check the line connection.
	after modem training	Check the NCU - FCU connectors.
		Try changing the tx level and/or cable equalizer settings.
		Replace the FCU or NCU.
		The other terminal may be faulty; try sending to another machine.
		If the rx signal is weak or defective, there may be a bad line.
		Cross reference
		Tx level - NCU Parameter 01 (PSTN)
		Cable equalizer - G3 Switch 07 (PSTN)
		Dedicated Tx parameters - Section 4
0-05	Unsuccessful after modem	Check the line connection.
	training at 2400 bps	Check the NCU - FCU connectors.
		Try adjusting the tx level and/or cable equalizer.
		Replace the FCU or NCU.
		Check for line problems.
		Cross reference
		See error code 0-04.

Code	Meaning	Suggested Cause/Action
0-06	The other terminal did not	Check the line connection.
	reply to DCS	Check the FCU - NCU connectors.
		Try adjusting the tx level and/or cable equalizer
		settings.
		Replace the NCU or FCU.
		The other end may be defective or incompatible;
		try sending to another machine.
		Check for line problems.
		Cross reference
0.07	N	• See error code 0-04.
0-07	No post-message response from the other end after a	Check the line connection.
	page was sent	Check the FCU - NCU connectors.
	page was sent	Replace the NCU or FCU.  The state of t
		The other end may have jammed or run out of paper
		paper.
		The other end user may have disconnected the call.
		Check for a bad line.
		The other end may be defective; try sending to
		another machine.
0-08	The other end sent RTN or	Check the line connection.
	PIN after receiving a page,	Check the FCU - NCU connectors.
	because there were too	Replace the NCU or FCU.
	many errors	The other end may have jammed, or run out of paper or memory space.
		Try adjusting the tx level and/or cable equalizer settings.
		The other end may have a defective
	 	modem/NCU/FCU; try sending to another machine.
		Check for line problems and noise.
		Cross reference
		Tx level - NCU Parameter 01 (PSTN)
		Cable equalizer - G3 Switch 07 (PSTN)
	  -	Dedicated Tx parameters - Section 4
0-14	Non-standard post message	Check the FCU - NCU connectors.
	response code received	Incompatible or defective remote terminal; try
		sending to another machine.
	  -	Noisy line: resend.
		<ul> <li>Try adjusting the tx level and/or cable equalizer settings.</li> </ul>
		Replace the NCU or FCU.
		Cross reference
		• See error code 0-08.

Code	Meaning	Suggested Cause/Action
0-15	The other terminal is not capable of specific functions.	The other terminal is not capable of accepting the following functions, or the other terminal's memory is full.
		Confidential rx
		Transfer function
		SEP/SUB/PWD/SID
0-16	CFR or FTT not detected	Check the line connection.
	after modem training in confidential or transfer mode	Check the FCU - NCU connectors.
	confidential of transfer friede	Replace the NCU or FCU.  The adjusting the following addition and the annual and the second
		Try adjusting the tx level and/or cable equalizer settings.
		The other end may have disconnected, or it may be defective; try calling another machine.
		If the rx signal level is too low, there may be a line problem.
		Cross reference
		See error code 0-08.
0-20	Facsimile data not received	Check the line connection.
	within 6 s of retraining	Check the FCU - NCU connectors.
		Replace the NCU or FCU.      Charles for the group begans.
		Check for line problems.  The calling another factors are thing.
		<ul><li>Try calling another fax machine.</li><li>Try adjusting the reconstruction time for the first</li></ul>
		line and/or rx cable equalizer setting.
		Cross reference
		<ul> <li>Reconstruction time - G3 Switch 0A, bit 6</li> <li>Rx cable equalizer - G3 Switch 07 (PSTN)</li> </ul>
0-21	EOL signal (end-of-line)	Check the connections between the FCU, NCU, &
	from the other end not received within 5 s of the	line.
	previous EOL signal	Check for line noise or other line problems.  Page 2 of the NOUL or FOLL
		<ul><li>Replace the NCU or FCU.</li><li>The remote machine may be defective or may</li></ul>
		have disconnected.
		Cross reference
		Maximum interval between EOLs and between ECM frames - G3 Bit Switch 0A, bit 4
0-22	The signal from the other	Check the line connection.
	end was interrupted for more than the acceptable modem carrier drop time	Check the FCU - NCU connectors.
		Replace the NCU or FCU.      Defeating repeats to regional.
	(default: 200 ms)	Defective remote terminal.     Chack for line points or other line problems.
		Check for line noise or other line problems.      Try adjusting the acceptable modern carrier drop.
		Try adjusting the acceptable modem carrier drop time.
		Cross reference
		<ul> <li>Acceptable modem carrier drop time - G3 Switch 0A, bits 0 and 1</li> </ul>

Code	Meaning	Suggested Cause/Action
0-23	Too many errors during reception	<ul> <li>Check the line connection.</li> <li>Check the FCU - NCU connectors.</li> <li>Replace the NCU or FCU.</li> <li>Defective remote terminal.</li> <li>Check for line noise or other line problems.</li> <li>Try asking the other end to adjust their tx level.</li> <li>Try adjusting the rx cable equalizer setting and/or rx error criteria.</li> <li>Cross reference</li> <li>Rx cable equalizer - G3 Switch 07 (PSTN)</li> <li>Rx error criteria - Communication Switch 02, bits 0 and 1</li> </ul>
0-30	The other terminal did not reply to NSS(A) in Al short protocol mode	<ul> <li>Check the line connection.</li> <li>Check the FCU - NCU connectors.</li> <li>Try adjusting the tx level and/or cable equalizer settings.</li> <li>The other terminal may not be compatible.</li> <li>Cross reference</li> <li>Dedicated tx parameters - Section 4</li> </ul>
0-32	The other terminal sent a DCS, which contained functions that the receiving machine cannot handle.	Check the protocol dump list.     Ask the other party to contact the manufacturer.
0-52	Polarity changed during communication	Check the line connection.  Retry communication.
0-55	FCE does not detect the SG3-V34.	<ul><li>FCU firmware or board defective.</li><li>SG3-V34 firmware or board defective.</li></ul>
0-56	The stored message data exceeds the capacity of the mailbox in the SG3-V34.	SG3-V34 firmware or board defective.
0-70	The communication mode specified in CM/JM was not available (V.8 calling and called terminal)	<ul> <li>The other terminal did not have a compatible communication mode (e.g., the other terminal was a V.34 data modem and not a fax modem.)</li> <li>A polling tx file was not ready at the other terminal when polling rx was initiated from the calling terminal.</li> </ul>
0-74	The calling terminal fell back to T.30 mode, because it could not detect ANSam after sending CI.	<ul> <li>The calling terminal could not detect ANSam due to noise, etc.</li> <li>ANSam was too short to detect.</li> <li>Check the line connection and condition.</li> <li>Try making a call to another V.8/V.34 fax.</li> </ul>
0-75	The called terminal fell back to T.30 mode, because it could not detect a CM in response to ANSam (ANSam timeout).	<ul> <li>The terminal could not detect ANSam.</li> <li>Check the line connection and condition.</li> <li>Try receiving a call from another V.8/V.34 fax.</li> </ul>

Code	Meaning	Suggested Cause/Action
0-76	The calling terminal fell back to T.30 mode, because it could not detect a JM in	<ul> <li>The called terminal could not detect a CM due to noise, etc.</li> <li>Check the line connection and condition.</li> </ul>
	response to a CM (CM timeout).	Try making a call to another V.8/V.34 fax.
0-77	The called terminal fell back to T.30 mode, because it could not detect a CJ in response to JM (JM timeout).	<ul> <li>The calling terminal could not detect a JM due to noise, etc.</li> <li>A network that has narrow bandwidth cannot pass JM to the other end.</li> <li>Check the line connection and condition.</li> <li>Try receiving a call from another V.8/V.34 fax.</li> </ul>
0-79	The called terminal detected CI while waiting for a V.21 signal.	Check for line noise or other line problems.  If this error occurs, the called terminal falls back to T.30 mode.
0-80	The line was disconnected due to a timeout in V.34 phase 2 – line probing.	The guard timer expired while starting these phases. Serious noise, narrow bandwidth, or low signal level can cause these errors.
0-81	The line was disconnected due to a timeout in V.34 phase 3 – equalizer training.	<ul> <li>If these errors happen at the transmitting terminal:</li> <li>Try making a call at a later time.</li> <li>Try using V.17 or a slower modem using</li> </ul>
0-82	The line was disconnected due to a timeout in the V.34 phase 4 – control channel start-up.	<ul><li>dedicated tx parameters.</li><li>Try increasing the tx level.</li><li>Try adjusting the tx cable equalizer setting.</li></ul>
0-83	The line was disconnected due to a timeout in the V.34 control channel restart sequence.	<ul> <li>If these errors happen at the receiving terminal:</li> <li>Try adjusting the rx cable equalizer setting.</li> <li>Try increasing the tx level.</li> <li>Try using V.17 or a slower modem if the same error is frequent when receiving from multiple senders.</li> </ul>
0-84	The line was disconnected due to abnormal signaling in V.34 phase 4 – control channel start-up.	<ul> <li>The signal did not stop within 10 s.</li> <li>Turn off the machine, then turn it back on.</li> <li>If the same error is frequent, replace the FCU.</li> </ul>
0-85	The line was disconnected due to abnormal signaling in V.34 control channel restart.	<ul> <li>The signal did not stop within 10 s.</li> <li>Turn off the machine, then turn it back on.</li> <li>If the same error is frequent, replace the FCU.</li> </ul>
0-86	The line was disconnected because the other terminal requested a data rate using MPh that was not available in the currently selected symbol rate.	<ul> <li>The other terminal was incompatible.</li> <li>Ask the other party to contact the manufacturer.</li> </ul>
0-87	The control channel started after an unsuccessful primary channel.	<ul> <li>The receiving terminal restarted the control channel because data reception in the primary channel was not successful.</li> <li>This does not result in an error communication.</li> </ul>
0-88	The line was disconnected because PPR was transmitted/received 9 (default) times within the same ECM frame.	<ul> <li>Try using a lower data rate at the start.</li> <li>Try adjusting the cable equalizer setting.</li> </ul>

Code	Meaning	Suggested Cause/Action
2-11	Only one V.21 connection	Replace the FCU.
	flag was received	
2-12	Modem clock irregularity	Replace the FCU.
2-13	Modem initialization error	Turn off the machine, then turn it back on.
		Update the modem ROM.
0.00	IDIO	Replace the FCU.
2-23	JBIG compression or reconstruction error	Turn off the machine, then turn it back on.  Page 1999 the SYFUNG has and if the agree in
		Replace the EXFUNC board if the error is frequent.
2-24	JBIG ASIC error	Turn off the machine, then turn it back on.
		<ul> <li>Replace the EXFUNC board if the error is frequent.</li> </ul>
2-25	JBIG data reconstruction	JBIG data error
	error (BIH error)	Check the sender's JBIG function.
2-26	JBIG data reconstruction error (Float marker error)	Update the MBU ROM.
2-27	JBIG data reconstruction error (End marker error)	
2-28	JBIG data reconstruction error (Timeout)	
2-29	JBIG trailing edge maker	FCU defective
	error	Check the destination device.
2-50	The machine resets itself for a fatal FCU system error	If this is frequent, update the ROM, or replace the FCU.
2-51	The machine resets itself because of a fatal communication error	If this is frequent, update the ROM, or replace the FCU.
2-53	Snd msg() in the manual task is an error because the mailbox for the operation task is full.	The user did the same operation many times, and this gave too much load to the machine.
4-01	Line current was cut	Check the line connector.
		Check the connection between FCU and NCU.
		Check for line problems.
		Replace the FCU or the NCU.
4-10	Communication failed	Get the ID Codes the same and/or the CSIs     programmed correctly, then recond
	because of an ID Code mismatch (Closed Network)	programmed correctly, then resend.
	or Tel. No./CSI mismatch	The machine at the other end may be defective.
	(Protection against Wrong	
<b>5</b> 10	Connections)	
5-10	DCR timer expired	Replace the FCU.
5-20	Storage impossible because of a lack of memory	Temporary memory shortage.  Tend the CAE meaning.
5-21	Memory overflow	Test the SAF memory.     Poplace the ECLL or entired EXMEM heard.
5-23	Print data error when	Replace the FCU or optional EXMEM board     Toot the SAE memory
J-23	printing a substitute rx or	<ul><li>Test the SAF memory.</li><li>Ask the other end to resend the message.</li></ul>
	confidential rx message	Replace the FCU or optional EXMEM board.
5-25	SAF file access error	Replace the FCU or EXMEM board.
0 20	5/ 11 IIIC 000033 CITOI	Neplace the FOO of Exivicivi board.

Code	Meaning	Suggested Cause/Action
6-00	G3 ECM - T1 time out	Try adjusting the rx cable equalizer.
	during reception of facsimile data	Replace the FCU or NCU.
6-01	G3 ECM - no V.21 signal was received	
6-02	G3 ECM - EOR was received	
6-04	G3 ECM - RTC not detected	<ul> <li>Check the line connection.</li> <li>Check connections from the NCU to the FCU.</li> <li>Check for a bad line or defective remote terminal.</li> <li>Replace the FCU or NCU.</li> </ul>
6-05	G3 ECM - facsimile data frame not received within 18 s of CFR, but there was no line fail	<ul> <li>Check the line connection.</li> <li>Check connections from the NCU to the FCU.</li> <li>Check for a bad line or defective remote terminal.</li> <li>Replace the FCU or NCU.</li> <li>Try adjusting the rx cable equalizer</li> <li>Cross reference</li> <li>Rx cable equalizer - G3 Switch 07 (PSTN)</li> </ul>
6-06	G3 ECM - coding/decoding error	<ul><li>Defective FCU.</li><li>The other terminal may be defective.</li></ul>
6-08	G3 ECM - PIP/PIN received in reply to PPS.NULL	<ul> <li>The other end pressed Stop during communication.</li> <li>The other terminal may be defective.</li> </ul>
6-09	G3 ECM - ERR received	<ul> <li>Check for a noisy line.</li> <li>Adjust the tx levels of the communicating machines.</li> <li>See code 6-05.</li> </ul>
6-10	G3 ECM - error frames still received at the other end after all communication attempts at 2400 bps	<ul> <li>Check for line noise.</li> <li>Adjust the tx level (use NCU parameter 01 or the dedicated tx parameter for that address).</li> <li>Check the line connection.</li> <li>Defective remote terminal.</li> </ul>
6-21	V.21 flag detected during high speed modem communication	The other terminal may be defective or incompatible.
6-22	The machine resets the sequence because of an abnormal handshake in the V.34 control channel	<ul> <li>Check for line noise.</li> <li>If the same error occurs frequently, replace the FCU.</li> <li>Defective remote terminal.</li> </ul>
6-99	V.21 signal not stopped within 6 s	Replace the FCU.
13-17	SIP user name registration error	<ul> <li>Double registration of the SIP user name.</li> <li>Capacity for user-name registration in the SIP server is not sufficient.</li> </ul>
13-18	SIP server access error	<ul><li>Incorrect initial setting for the SIP server.</li><li>Defective SIP server.</li></ul>

Code	Meaning	Suggested Cause/Action
14-00	SMTP Send Error	Error occurred during sending to the SMTP server.
		Occurs for any error other than 14-01 to 16. For
		example, the mail address of the system
44.04	OMED O	administrator is not registered.
14-01	SMTP Connection Failed	Failed to connect to the SMTP server (timeout)
		because the server could not be found.
		The PC is not ready to transfer files.      SMTD conver not functioning correctly.
		<ul><li>SMTP server not functioning correctly.</li><li>The DNS IP address is not registered.</li></ul>
		Network not operating correctly.
		Destination folder selection not correct.
14-02	No Service by SMTP	SMTP server operating incorrectly, or the
14-02	Service (421)	destination for direct SMTP sending is not correct.
		Contact the system administrator and check that
		the SMTP server has the correct settings and
		operates correctly.
		Contact the system administrator for direct SMTP sending and check the sending destination.
14-03	Access to SMTP Server	Failed to access the SMTP server because the
	Denied (450)	access is denied.
		SMTP server operating incorrectly. Contact the
		system administrator to determine if there is a
		problem with the SMTP server and to check that the SMTP server settings are correct.
		Folder send destination is incorrect. Contact the
		system administrator to determine that the SMTP
		server settings and path to the server are correct.
		Device settings incorrect. Confirm that the user
		name and password settings are correct.
		Direct SMTP destination incorrect. Contact the
		system administrator to determine if there is a
		problem at the destination at that the settings at
14-04	Access to SMTP Server	the destination are correct.
1-7-04	Denied (550)	SMTP server operating incorrectly
14.05	. ,	Direct SMTP sending not operating correctly  Failed to access the SMTP server because the HDD.
14-05	SMTP Server HDD Full (452)	Failed to access the SMTP server because the HDD on the server is full.
		Insufficient free space on the HDD of the SMTP
		server. Contact the system administrator and
		check the amount of space remaining on the
		SMTP server HDD.
		<ul> <li>Insufficient free space on the HDD where the destination folder is located. Contact the system</li> </ul>
		administrator and check the amount of space
		remaining on the HDD where the target folder is
		located.
		Insufficient free space on the HDD at the target
		destination for SMTP direct sending. Contact the
		system administrator and check the amount of
		space remaining on the target HDD.

Code	Meaning	Suggested Cause/Action
14-06	User Not Found on SMTP	The designated user does not exist.
	Server (551)	The designated user does not exist on the SMTP server.
		<ul> <li>The designated address is not for use with direct SMTP sending.</li> </ul>
14-07	Data Send to SMTP Server Failed (4XX)	<ul> <li>Failed to access the SMTP server because the transmission failed.</li> <li>PC not operating correctly.</li> <li>SMTP server operating incorrectly</li> <li>Network not operating correctly.</li> <li>Destination folder setting incorrect.</li> <li>Direct SMTP sending not operating correctly.</li> </ul>
14-08	Data Send to SMTP Server Failed (5XX)	Failed to access the SMTP server because the transmission failed.  • SMTP server operating incorrectly  • Destination folder setting incorrect.  • Direct SMTP sending not operating correctly.  • Software application error.
14-09	Authorization Failed for Sending to SMTP Server	<ul> <li>POP-Before-SMTP or SMTP authorization failed.</li> <li>Incorrect setting for file transfer</li> </ul>
14-10	Addresses Exceeded	Number of broadcast addresses exceeded the limit for the SMTP server.
14-11	Buffer Full	The send buffer is full so the transmission could not be completed. Buffer is full due to using Scan-to-Email while the buffer is being used send mail at the same time.
14-12	Data Size Too Large	Transmission was cancelled because the detected size of the file was too large.
14-13	Send Cancelled	Processing is interrupted because the user pressed Stop.
14-30	MCS File Creation Failed	Failed to create the MCS file because:  The number of files created with other applications on the Document Server has exceeded the limit.  HDD is full or not operating correctly.  Software error.
14-31	UFS File Creation Failed	<ul> <li>UFS file could not be created:</li> <li>Not enough space in UFS area to handle both Scan-to-Email and IFAX transmission.</li> <li>HDD full or not operating correctly.</li> <li>Software error.</li> </ul>
14-32	Cancelled the Mail Due to Error Detected by NFAX	Error detected with NFAX and send was cancelled due to a software error.
14-33	No Mail Address For the Machine	Neither the mail address of the machine nor the mail address of the network administrator is registered.
14-34	Address designated in the domain for SMTP sending does not exist	Operational error in normal mail sending or direct SMTP sending.  • Check the address selected in the address book for SMTP sending.  • Check the domain selection.

Code   Meaning   Suggested Cause/Action     14-50   Mail Job Task Error   Due to an FCU mail job task error, the se cancelled:   • Address book was being edited during the notification mail.   • Software error.     14-51   UCS Destination Download Error   Not even one return notification can be d     • The address book was being edited.     • The number for the specified destination exist (it was deleted or edited after the created).     14-60   Send Cancel Failed   The cancel operation by the user failed to send operation.     14-61   Notification Mail Send Failed for All Destinations   All addresses for return notification mail for the POP3/IMAP4 server has not been     15-01   POP3/IMAP4 Server Not Registered   Registered   Registered   At startup, the system detected that the I of the POP3/IMAP4 server has not been	oreation of lownloaded: on does not job was o cancel the failed. P address registered
<ul> <li>Address book was being edited during the notification mail.</li> <li>Software error.</li> <li>UCS Destination Download Error</li> <li>The address book was being edited.</li> <li>The address book was being edited.</li> <li>The number for the specified destination exist (it was deleted or edited after the created).</li> <li>Send Cancel Failed</li> <li>The cancel operation by the user failed send operation.</li> <li>Notification Mail Send Failed for All Destinations</li> <li>All addresses for return notification mail for All Destinations</li> <li>POP3/IMAP4 Server Not</li> <li>At startup, the system detected that the I</li> </ul>	lownloaded: on does not job was cancel the failed. P address registered
the notification mail.  Software error.  14-51 UCS Destination Download Error  Not even one return notification can be d  The address book was being edited.  The number for the specified destination exist (it was deleted or edited after the created).  14-60 Send Cancel Failed  The cancel operation by the user failed to send operation.  All addresses for return notification mail for All Destinations  All addresses for return notification mail for All Destinations  At startup, the system detected that the I	lownloaded: on does not job was cancel the failed. P address registered
<ul> <li>14-51 UCS Destination Download Error</li> <li>Not even one return notification can be d</li> <li>The address book was being edited.</li> <li>The number for the specified destination exist (it was deleted or edited after the created).</li> <li>14-60 Send Cancel Failed</li> <li>The cancel operation by the user failed send operation.</li> <li>14-61 Notification Mail Send Failed for All Destinations</li> <li>All addresses for return notification mail for All Destinations</li> <li>At startup, the system detected that the I</li> </ul>	on does not job was cancel the failed.  P address registered
<ul> <li>Error</li> <li>The address book was being edited.</li> <li>The number for the specified destination exist (it was deleted or edited after the created).</li> <li>Send Cancel Failed</li> <li>The cancel operation by the user failed send operation.</li> <li>Notification Mail Send Failed for All Destinations</li> <li>All addresses for return notification mail for All Destinations</li> <li>POP3/IMAP4 Server Not</li> <li>At startup, the system detected that the Information</li> </ul>	on does not job was cancel the failed.  P address registered
The number for the specified destination exist (it was deleted or edited after the created).  14-60 Send Cancel Failed The cancel operation by the user failed to send operation.  14-61 Notification Mail Send Failed for All Destinations  15-01 POP3/IMAP4 Server Not At startup, the system detected that the I	o cancel the failed.  P address registered
exist (it was deleted or edited after the created).  14-60 Send Cancel Failed The cancel operation by the user failed to send operation.  14-61 Notification Mail Send Failed for All Destinations  15-01 POP3/IMAP4 Server Not At startup, the system detected that the I	o cancel the failed.  P address registered
send operation.  14-61 Notification Mail Send Failed for All Destinations  15-01 POP3/IMAP4 Server Not At startup, the system detected that the I	failed. P address registered
for All Destinations  15-01 POP3/IMAP4 Server Not At startup, the system detected that the I	P address registered
15-01 POP3/IMAP4 Server Not At startup, the system detected that the I	registered
	registered
Registered   of the POP3/IMAP4 server has not been	_
in the machine.	peen
15-02 POP3/IMAP4 Mail Account The POP3/IMAP4 mail account has not be	
Information Not Registered registered.	
15-03 Mail Address Not Registered The mail address has not been registered	d.
15-10 DCS Mail Receive Error Error other than 15-11 to 15-18.	
15-11 Connection Error The DNS or POP3/IMAP4 server could n found:	ot be
The IP address for DNS or POP3/IMAI not stored in the machine.	P4 server is
The DNS IP address is not registered.	
Network not operating correctly.	
15-12 Authorization Error POP3/IMAP4 send authorization failed:	
Incorrect IFAX user name or password	
Access was attempted by another dev the PC.	ice, such as
POP3/IMAP4 settings incorrect.	
15-13 Receive Buffer Full Occurs only during manual reception. Tra	
cannot be received due to insufficient but The buffer is being used for mail send or	•
Email.	ocan-to-
15-14 Mail Header Format Error The mail header is not standard format. F	
example, the Date line description is inco	
The e-mail is not in standard format. The boundary between parts of the e-mail, included header.	
15-16   Mail Size Receive Error   The mail cannot be received because it is	s too large
15-17 Receive Timeout May occur during manual receiving only l	
the network is not operating correctly.	200000
15-18 Incomplete Mail Received Only one portion of the mail was received	d.
15-31 Final Destination for The format of the final destination for the	
Transfer Request Reception request was incorrect. Format Error	

Code	Meaning	Suggested Cause/Action
15-39	Send/Delivery Destination	The transmission cannot be delivered to the final
	Error	destination:
		Destination file format is incorrect.
		Could not create the destination for the file
		transmission.
15-41	SMTP Receive Error	Reception rejected because the transaction
45.40	Off Dames Catavian Francis	exceeded the limit for the "Auth. E-mail RX" setting.
15-42	Off Ramp Gateway Error	The delivery destination address was specified with Off Ramp Gateway OFF.
15-43	Address Format Error	Format error in the address of the Off Ramp Gateway.
15-44	Addresses Over	The number of addresses for the Off Ramp Gateway exceeded the limit of 30.
15-61	Attachment File Format	The attached file is not TIFF format.
1001	Error	The diagned life to her this format.
15-62	TIFF File Compatibility Error	Could not receive transmission due to:
		Resolution error
		Image of resolution greater than 200 dpi without
		extended memory.
		Resolution is not supported.
		Page size error  The page size was larger than A2
		<ul><li>The page size was larger than A3.</li><li>Compression error</li></ul>
		·
		<ul> <li>File was compressed with other than MH, MR, or MMR.</li> </ul>
15-63	TIFF Parameter Error	The TIFF file sent as the attachment could not be received because the TIFF header is incorrect:
		The TIFF file attachment is a type not supported.
		The TIFF file attachment is corrupted.
		Software error.
15-64	TIFF Decompression Error	The file received as an attachment caused the TIFF decompression error:
		The TIFF format of the attachment is corrupted.
		Software error.
15-71	Not Binary Image Data	The file could not be received because the
		attachment was not binary image data.
15-73	MDN Status Error	Could not find the Disposition line in the header of the Return Receipt, or there is a problem with the
		firmware.
15-74	MSDN Message ID Error	Could not find the Original Message ID line in the
		header of the Return Receipt, or there is a problem with the firmware.
15-80	Mail Job Task Read Error	Could not receive the transmission because the
		destination buffer is full and the destination could
		not be created (this error may occur when receiving
		a transfer request or a request for notification of
		reception).

Code	Meaning	Suggested Cause/Action
15-81	Repeated Destination	Could not repeat receive the transmission because
	Registration Error	the destination buffer is full and the destination
		could not be created (this error may occur when
		receiving a transfer request or a request for
		notification of reception).
15-91	Send Registration Error	Could not receive the file for transfer to the final destination:
		<ul> <li>The format of the final destination or the transfer destination is incorrect.</li> </ul>
		Destinations are full so the final and transfer destinations could not be created.
15-92	Memory Overflow	Transmission could not be received because memory overflowed during the transaction.
15-93	Memory Access Error	Transaction could not complete due to a malfunction of SAF memory.
15-94	Incorrect ID Code	The machine rejected an incoming e-mail for
		transfer request, because the ID code in the
		incoming e-mail did not match the ID code
		registered in the machine.
15-95	Transfer Station Function	The machine rejected an incoming e-mail for
		transfer because the transfer function was
22.00	Osisia al la anthe accesa de dithe	unavailable.
22-00	Original length exceeded the	Divide the original into more than one page.
	maximum scan length	Check the resolution used for scanning. Lower the
		scan resolution if possible. Add optional page memory.
22-01	Memory overflow while	Wait for the files in the queue to be sent.
22-01	receiving	Delete unnecessary files from memory.
	receiving	Transfer the substitute reception files to an another
		fax machine, if the machine's printer is busy or out
		of order.
		Add an optional SAF memory card or hard disk.
22-02	Tx or rx job stalled due to	The job started normally but did not finish normally;
	line disconnection at the	data may or may not have been received fully.
	other end	Restart the machine.
22-04	The machine cannot store	Update the ROM
	received data in the SAF	Replace the FCU.
22-05	No G3 parameter confirmation answer	Defective FCU board or firmware.
23-00	Data read timeout during	Restart the machine.
	construction	Replace the FCU
25-00	The machine software	Update the ROM
	resets itself after a fatal	Replace the FCU.
	transmission error occurred	·
F0-xx	V.34 modem error	Replace the FCU.
F6-xx	SG3-V34 modem error	Update the SG3-V34 modem ROM.
		Replace the SG3-V34 board.
		Check for line noise or other line problems.
		Try communicating another V.8/V.34 fax.
		Try communicating another v.o/v.o4 lax.

# 3.2 IFAX TROUBLESHOOTING

Use the following procedures to determine whether the machine or another part of the network is causing the problem.

Communication Route	Item	Action	Remarks
General LAN	Connection with the LAN	<ul> <li>Check that the LAN cable is connected to the machine.</li> <li>Check that the LEDs on the hub are lit.</li> </ul>	
General LAIN	2. LAN activity	Check that other devices connected to the LAN can communicate through the LAN.	
	1. Network settings on the PC	Check the network settings on the PC.	<ul> <li>Is the IP address registered in the TCP/IP properties in the network setup correct? Check the IP address with the administrator of the network.</li> </ul>
Between IFAX and PC	Check that PC can connect with the machine	Use the "ping" command on the PC to contact the machine.	<ul> <li>At the MS-DOS prompt, type ping then the IP address of the machine, then press Enter.</li> </ul>
	3.LAN settings in the machine	<ul> <li>Check the LAN parameters</li> <li>Check if there is an IP address conflict with other PCs.</li> </ul>	<ul> <li>Use the "Network" function in the User Tools.</li> <li>If there is an IP address conflict, inform the administrator.</li> </ul>
Between machine and e- mail server	1.LAN settings in the machine	<ul> <li>Check the LAN parameters</li> <li>Check if there is an IP address conflict with other PCs.</li> </ul>	<ul> <li>Use the "Network" function in the User Tools.</li> <li>If there is an IP address conflict, inform the administrator.</li> </ul>

Communication Route	Item	Action	Remarks
	2.E-mail account on the server	<ul> <li>Make sure that the machine can log into the e-mail server.</li> <li>Check that the account and password stored in the server are the same as in the machine.</li> </ul>	Ask the administrator to check.
Between machine and e- mail server	3.E-mail server	Make sure that the client devices which have an account in the server can send/receive e-mail.	<ul> <li>Ask the administrator to check.</li> <li>Send a test e-mail with the machine's own number as the destination. The machine receives the returned e-mail if the communication is performed successfully.</li> </ul>
	1.E-mail account on the Server	<ul> <li>Make sure that the PC can log into the email server.</li> <li>Check that the account and password stored in the server are the same as in the machine.</li> </ul>	Ask the administrator to check.
Between e-mail server and internet	2. E-mail server	Make sure that the client devices which have an account in the server can send/receive e-mail.	<ul> <li>Ask the administrator to check.</li> <li>Send a test e-mail with the machine's own number as the destination. The machine receives the returned e-mail if the communication is performed successfully.</li> </ul>
	3. Destination e-mail address	Make sure that the e-mail address is actually used. Check that the e-mail address contains no incorrect characters such as spaces.	

Communication Route	ltem	Action	Remarks
Between e-mail server and internet	4. Router settings	Use the "ping" command to contact the router. Check that other devices connected to the router can sent data over the router.	Ask the administrator of the server to check.
Between e-mail server and internet	Error message by     e-mail from the     network of the     destination.	<ul> <li>Check whether e-mail can be sent to another address on the same network, using the application e-mail software.</li> <li>Check the error e-mail message.</li> </ul>	Inform the administrator of the LAN.

# 3.3 IP-FAX TROUBLESHOOTING

## **IP-Fax Transmission**

Cannot send by IP Address/Host Name

Che	eck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	Specified IP address/host name correct?	Check the IP address/host name.
3	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	IP address of local machine registered?	Register the IP address.
6	Remote terminal port number setting other than 1720?	Send by specifying the port number.
7	Specified port number correct?	Confirm the port number of the remote fax.
8	DNS server registered when host name specified?	Contact the network administrator.
9	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
10	Remote fax switched off or busy?	Check that the remote fax is switched on.
11	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the delay level.
		IPFAX SW 01 Bit 0 to 3
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.
12	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

## Cannot send via VoIP Gateway

Che	ck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	VoIP Gateway T.38 standard?	Contact the network administrator.
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power switched on?	Contact the network administrator.
5	Is the IP address/host name of the specified Gateway correct?	Check the IP address/host name.
6	Number of the specified fax correct?	Check the remote fax number.
7	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
8	Transmission sent manually?	Manual sending not supported.
9	IP address of local fax registered?	Register the IP address.
10	DNS registered when host name specified?	Contact the network administrator.
11	Remote fax a G3 fax?	Check that the remote fax is a G3 fax.
12	G3 fax is connected to VoIP gateway?	Check that G3 fax is connected.
13	Remote G3 fax turned on?	Check that G3 fax is switched on.
14	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
		Raise the network delay level. IPFAX SW 01 Bit 0 to 3
		IP-Fax bandwidth is the same as the DCS speed. Set IP-Fax SW00 Bit 6 to 1.

## Cannot send by Alias Fax number.

Che	ck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	Number of specified Alias fax correct?	Confirm the Alias of the remote fax.
		Error Code: 13-14
3	Firewall/NAT installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
4	Transmission sent manually?	Manual sending not supported.
5	Gatekeeper installed correctly?	Contact the network administrator.
6	Gatekeeper power switched on?	Contact the network administrator.
7	IP address/host name of Gatekeeper correct?	Check the IP address/host name.
8	DNS server registered when Gatekeeper host name specified?	Contact the network administrator.
9	Enable H.323 SW is set to on?	Check the settings.
		See User Parameter SW 34 Bit 0
10	IP address of local fax registered?	Register the IP address of the local fax.
11	Alias number of local fax registered?	Register the Alias number of the local fax.
12	Remote fax registered in Gatekeeper?	Contact the network administrator.
13	Remote fax a T.38 terminal?	Check whether the remote fax is a T38 terminal.
14	Remote fax switched off or busy?	Contact the network administrator.
15	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Raise the delay level. IPFAX SW 01 Bit 0 to 3
		Lower the modem transmission baud rate. IPFAX SW 05
16	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

## IP-Fax Reception

# Cannot receive by IP Address/Host name.

Che	eck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot breach the firewall. Send by using another method (Fax, Internet Fax)
3	IP address of local fax registered?	Register the IP address.
4	Port number specified at remote sender fax (if required)?	Request the sender to specify the port number.
5	Specified port number correct (if required)?	Request the sender to check the port number.
6	DNS server registered when host name specified on sender side?	Contact the network administrator. <b>Note</b> : The sender machine displays this error code if the sender fax is a Ricoh model.
7	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.  Lower the start modem reception baud rate on
		the receiving side. IPFAX SW06
8	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.

## Cannot receive by VoIP Gateway.

Che	eck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot breach the firewall. Request the remote fax to send by using another method (Fax, Internet Fax)
3	VoIP Gateway installed correctly?	Contact the network administrator.
4	VoIP Gateway power switched on?	Contact the network administrator.
5	IP address/host name of specified VoIP	Request the remote fax to check the IP
	Gateway correct on sender's side?	address/host name.
6	DNS server registered when host name specified on sender side?	Contact the network administrator.
7	Network bandwidth too narrow?	Request the network administrator to increase the bandwidth.
8	G3 fax connected?	Check that G3 fax is connected.
9	G3 fax power switched on?	Check that G3 fax is switched on.

## Cannot receive by Alias Fax number.

Che	eck Point	Action
1	LAN cable connected?	Check the LAN cable connection.
2	Firewall/NAT is installed?	Cannot the breach firewall. Request the remote fax to send by using another method (Fax, Internet Fax)
3	Gatekeeper installed correctly?	Contact the network administrator. <b>Note</b> : The sender machine displays this error code when the sender fax is a Ricoh model.
4	Power to Gatekeeper switched on?	Contact the network administrator. <b>Note</b> : The sender machine displays this error code when the sender fax is a Ricoh model.
5	IP address/host name of Gatekeeper correct on the sender's side?	Request the sender to check the IP address/host name.
		<b>Note</b> : The sender machine displays this error code when the sender fax is a Ricoh model.
6	DNS server registered when Gatekeeper host name specified on sender's side?	Contact the network administrator. <b>Note</b> : The sender machine displays this error code when the sender fax is a Ricoh model.
7	Enable H.323 SW is set to on?	Request the sender to check the settings. User Parameter SW 34 Bit 0 Note: Only if the remote sender fax is a Ricoh fax.
8	Local fax IP address registered?	Register the IP address.
9	Local fax Alias number registered?	Register the Alias number.
10	Network bandwidth too narrow?	Request the system administrator to increase the bandwidth.
		Lower the start modem reception baud rate on the receiving side. IPFAX SW06
11	Remote fax cancelled transmission?	Check whether the remote fax cancelled the transmission.
12	Local fax registered in Gatekeeper?	Contact the network administrator.  Note: The sender machine displays this error code when the sender fax is a Ricoh model.

## 4. SERVICE TABLES

## **ACAUTION**

Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the hard disk or memory, press the operation power switch to switch the power off, wait for the power LED to go off, and then switch the main power switch off.

**NOTE:** The main power LED (\*\*0) lights or flashes while the platen cover or ARDF is open, while the main machine is communicating with a facsimile or the network server, or while the machine is accessing the hard disk or memory for reading or writing data.

### 4.1 SERVICE TABLES

### **SP1-XXX (Bit Switches)** • Section 4.2 Bit Switches

1	Mode No.		Function	
101	System Switch	,		
	001 – 032	00 – 1F	Change the bit switches for system settings for the fax option  Section 4.2 Bit Switches	
102	Ifax Switch			
	001 – 016	00 – 0F	Change the bit switches for internet fax settings for the fax option  Section 4.2 Bit Switches	
103	Printer Switch			
	001 – 016	00 – 0F	Change the bit switches for printer settings for the fax option  Section 4.2 Bit Switches	
104	104 Communication Switch			
	001 – 032	00 – 1F	Change the bit switches for communication settings for the fax option  Section 4.2 Bit Switches	
105	G3-1 Switch			
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the standard G3 board  Section 4.2 Bit Switches	
106	G3-2 Switch			
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the optional G3 board  Section 4.2 Bit Switches	
107	7 G3-3 Switch			
	001 – 016	00 – 0F	Change the bit switches for the protocol settings of the optional G3 board  Section 4.2 Bit Switches	
108	G4 Internal Switch			
	001 – 032	00 – 1F	Not used (Do not change the bit switches)	

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109	G4 Parameter Switch			
	001 – 016	00 – 0F	Not used (Do not change the bit switches)	
111	IP fax Switch			
	001 – 016	00 – 0F	Change the bit switches for optional IP fax parameters  Section 4.2 Bit Switches	

# SP2-XXX (RAM Data)

2	Mode No.		Function	
101	RAM Read/Write			
	001		Change RAM data for the fax board directly.  Section 4.5 Service RAM Addresses	
102	Memory Dump			
	001	G3-1 Memory Dump	Print out RAM data for the fax board.	
	002	G3-2 Memory Dump	Print out RAM data for the optional SG3 board.	
	003	G3-3 Memory Dump	Print out RAM data for the optional SG3 board.	
	004	G4 Memory Dump	Print out RAM data for the SiG4 board.	
103	G3-1 NCU Parameters			
	001 – 023	CC, 01 – 22	NCU parameter settings for the standard G3 board.  ► Section 4.3 NCU Parameters	
104	G3-2 NCU F			
	001 – 023	CC, 01 – 22	NCU parameter settings for the optional G3 board.  ➡ Section 4.3 NCU Parameters	
105	G3-3 NCU Parameters			
	001 – 023	CC, 01 – 22	NCU parameter settings for the optional G3 board.  ➡ Section 4.3 NCU Parameters	

## SP3-XXX (Tel Line Settings)

3		Mode No.	Function
101	Service Stati	ion	
	001	Fax Number	Enter the fax number of the service station.
	002	Select Line	Select the line type.
102	Serial Numb	er	71
	000		Enter the fax unit's serial number.
103	PSTN-1 Por	t Settings	
	001	Select Line	Select the line type setting for the G3-1 line. If the machine is installed on a PABX line, select "PABX", "PABX(GND)" or "PABX(FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-1 line.
	003	Memory Lock Disabled	If the customer does not want to receive transmissions using Memory Lock on this line, turn this SP on.
104	PSTN-2 Por		
	001	Select Line	Select the line setting for the G3-2 line. If the machine is installed on a PABX line, select "PABX", "PABX(GND)" or "PABX(FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-2 line.
	003	Memory Lock Disabled	If the customer does not want to receive transmissions using Memory Lock on this line, change this SP to on.
	004	Transmission Disabled	If you turn this SP on, the machine does not send any fax messages on the G3-2 line.
105	PSTN-3 Por	t Settings	
	001	Select Line	Select the line setting for the G3-3 line. If the machine is installed on a PABX line, select "PABX", "PABX(GND)" or "PABX(FLASH)".
	002	PSTN Access Number	Enter the PSTN access number for the G3-3 line.
	003	Memory Lock Disabled	If the customer does not want to receive transmissions using Memory Lock on this line, change this SP to on.
	004	Transmission Disabled	If you turn this SP on, the machine does not send any fax messages on the G3-3 line.
106	ISDN Port S	<u> </u>	
	001	Select Line	Not used (Do not change the bit switches)
	002	PSTN Access Number	
	003	Memory Lock Disabled	

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3		Mode No.	Function
106	004	Transmission	
		Disabled	
107	IPFAX Port S	Settings	
	001	H323 Port	
	002	SIP Port	
	003	RAS Port	
	004	Gatekeeper port	
	005	T.38 Port	
	006	SIP Server Port	
	007	IPFAX Protocol	Select "H323" or "SIP".
		Priority	
201	FAX SW		
	001 – 032	00 – 1F	

## SP4-XXX (ROM Versions)

4	Mode No.		Function
101	001	FCU ROM Version	Displays the FCU ROM version.
102	001	Error Codes	Displays the latest 64 fax error codes.
103	001	G3-1 ROM Version	Displays the G3-1 modem version.
104	001 G3-2 ROM Version		Displays the G3-2 modem version.
105	001 G3-3 ROM Version		Displays the G3-3 modem version.
106	001 G4 ROM Version		Not used (Do not change the bit switches)
107	001 Charge ROM Version		Not used (Do not change the bit switches)

## SP5-XXX (Initializing)

5		Mode No.	Function
101	Initialize SRA	AM	
	000		Initializes the bit switches and user parameters, user data in the SRAM, files in the SAF memory, and clock.
102	Erase All File	es	
	000		Erases all files stored in the SAF memory.
103	Reset Bit Sw	itches	
	000		Resets the bit switches and user parameters.
104	Factory settir	ng	
	000		Resets the bit switches and user parameters, user data in the SRAM and files in the SAF memory.
105	Initialize All E	Bit Switches	
	000		Initializes all the current bit switch settings.
106	Initialize Security Bit Switches		
	000		Initializes only the security bit switches. If you select automatic output/display for the user parameter switches, the security settings are initialized.

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## SP6-XXX (Reports)

6		Mode No.	Function
101	System Para	ameter List	•
	000		Touch the "ON" button to print the system parameter list.
102	2 Service Monitor Report		
	000		Touch the "ON" button to print the service monitor report.
103	G3 Protocol	Dump List	
	001	G3 All Communications	Prints the protocol dump list of all communications for all G3 lines.
	002	G3-1 (All Communications)	Prints the protocol dump list of all communications for the G3-1 line.
103	003	G3-1 (1 Communication)	Prints the protocol dump list of the last communication for the G3-1 line.
	004	G3-2 (All Communications)	Prints the protocol dump list of all communications for the G3-2 line.
	005	G3-2 (1 Communication)	Prints the protocol dump list of the last communication for the G3-2 line.
	006	G3-3 (All Communications)	Prints the protocol dump list of all communications for the G3-3 line.
	007	G3-3 (1 Communication)	Prints the protocol dump list of the last communication for the G3-3 line.
104	G4 Protocol	Dump List	
	001	Dch + Bch 1	Not used (Do not change the bit switches)
	002	Dch	
	003	Bch 1 Link Layer	
	004	Dch Link Layer	
	005	Dch +Bch 2	
	006	Bch 2 Link Layer	
105	All Files prin	It out	
	000		Prints out all the user files in the SAF memory, including confidential messages.  NOTE: Do not use this function, unless the customer is having trouble printing confidential messages or recovering files stored using the memory lock feature.
106	Journal Prin		T =
	001	All Journals	The machine prints all the communication records on the report.
	002	Specified Date	The machine prints all communication records after the specified date.

107	Log List Print out		
	001	All log files	These log print out functions are for
	002	Printer	designer use only.
	003	SC/TRAP Stored	
	004	Decompression	
	005	Scanner	
	006	JOB/SAF	
	007	Reconstruction	
	800	JBIG	
	009	Fax Driver	
	010	G3CCU	
	011	Fax Job	
	012	CCU	
	013	Scanner Condition	
108	IP Protocol Dump List		
	001	All Communications	Prints the protocol dump list of all
			communications for the IP fax line.
	002	1 Communication	Prints the protocol dump list of the last
			communication for the IP fax line.

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## SP7-XXX (Test Modes)

These are the test modes for PTT approval.

7	Function		
101	G3-1 Modem Tests		
102	G3-1 DTMF Tests		
103	Ringer Test		
104	G3-1 V34 (S2400baud)		
105	G3-1 V34 (S2800baud)		
106	G3-1 V34 (S3000baud)		
107	G3-1 V34 (S3200baud)		
108	G3-1 V34 (S3429baud)		
109	Recorded Message Test		
110	G3-2 Modem Tests		
111	G3-2 DTMF Tests		
112	G3-2 V34 (S2400baud)		
113	G3-2 V34 (S2800baud)		
114	G3-2 V34 (S3000baud)		
115	G3-2 V34 (S3200baud)		
116	G3-2 V34 (S3429baud)		
117	G3-3 Modem Tests		
118	G3-3 DTMF Tests		
119	G3-3 V34 (S2400baud)		
120	G3-3 V34 (S2800baud)		
121	G3-3 V34 (S3000baud)		
122	G3-3 V34 (S3200baud)		
123	G3-3 V34 (S3429baud)		
124	IG3-1 Modem Tests - Not used		
125	IG3-1 DTMF Tests - Not used		
126	IG3-1 V34 (S2400baud) - <b>Not used</b>		
127	IG3-1 V34 (S2800baud) - <b>Not used</b>		
128	IG3-1 V34 (S3000baud) - <b>Not used</b>		
129	IG3-1 V34 (S3200baud) - Not used		
130	IG3-1 V34 (S3429baud) - Not used		
131	IG3-2 Modem Tests - Not used		
132	IG3-2 DTMF Tests - Not used		
133	IG3-2 V34 (S2400baud) - <b>Not used</b>		
134	IG3-2 V34 (S2800baud) - Not used		
135	IG3-2 V34 (S3000baud) - Not used		
136	IG3-2 V34 (S3200baud) - Not used		
137	IG3-2 V34 (S3429baud) - Not used		

# SP9-XXX (Design Switch Mode)

9	Mode No.	Function
702	Design Switch <b>DFU</b>	

#### 4.2 BIT SWITCHES

#### **MARNING**

Do not adjust a bit switch or use a setting that is described as "Not used", as this may cause the machine to malfunction or to operate in a manner that is not accepted by local regulations. Such bits are for use only in other areas, such as Japan.

**NOTE:** Default settings for bit switches are not listed in this manual. Refer to the System Parameter List printed by the machine.

#### 4.2.1 SYSTEM SWITCHES

Syst	em Switch 00	SP No. 1-101-001	
No	FUNCTION	COMMENTS	
0	Dedicated transmission parameter programming <b>0</b> : Disabled <b>1</b> : Enabled	Set this bit to 1 before changing any dedicated transmission parameters.  Reset this bit to 0 after programming dedicated transmission parameters.	
1	Not used	Do not change	
2	Technical data printout on the Journal <b>0</b> : Disabled <b>1</b> : Enabled	1: Instead of the personal name, the following data are listed on the Journal for each G3 communication.	
	e.g. 0000 32V34 288/264 L0100 03 04  (1) (2)(3) (4) (5) (6) (7) (8)  (1): EQM value (Line quality data). A larger number means more errors.  (2): Symbol rate (V.34 only)  (3): Final modem type used  (4): Starting data rate (for example, 288 means 28.8 kbps)  (5): Final data rate  (6): Rx revel (refer to the note after this table for how to read the rx level)  (7): Total number of error lines that occurred during non-ECM reception.  (8): Total number of burst error lines that occurred during non-ECM reception.  Note:  EQM and rx level are fixed at "FFFF" in tx mode.  The seventh and eighth numbers are fixed at "00" for transmission records and ECM reception records.		
2	<b>Example:</b> 0000 32 V34 288/264 <b>L</b> <u>01</u> <u>00</u> 03 04  The four-digit hexadecimal value (N) after "L" indicates the rx level. The <u>high</u> byte is given first, followed by the <u>low</u> byte. Divide the decimal value of N by - 16 to get the rx level.		
	In the above example, the decimal So, the actual rx level is 256/-16	•/	

Syst	em Switch 00	SP No. 1-101-001
No	FUNCTION	COMMENTS
3	Not used	Do not change this setting.
4	Line error mark print	When "1" is selected, a line error mark is printed on
	0: OFF, 1: ON (print)	the printout if a line error occurs during reception.
5	G3/G4 communication	This is a fault-finding aid. The LCD shows the key
	parameter display	parameters (see below). This is normally disabled
	0: Disabled	because it cancels the CSI display for the user.
	1: Enabled	Be sure to reset this bit to 0 after testing.
6	Protocol dump list output after	This is only used for communication
	each communication	troubleshooting. It shows the content of the
	<b>0</b> : Off	transmitted facsimile protocol signals. Always reset
	<b>1:</b> On	this bit to 0 after finishing testing.
		If system switch 09 bit 6 is at "1", the list is only
		printed if there was an error during the
		communication.
7	Not used	Do not change the setting.

#### **G3 Communication Parameters**

Modem rate	336: 33600 bps 168: 16800 bps		
	312: 31200 bps 144: 14400 bps		
	288: 28800 bps 120: 12000 bps		
	264: 26400 bps 96: 9600 bps		
	240: 24000 bps 72: 7200 bps		
	216: 21600 bps 48: 4800 bps		
	192: 19200 bps 24: 2400 bps		
Resolution	S: Standard (8 x 3.85 dots/mm)		
	D: Detail (8 x 7.7 dots/mm)		
	F: Fine (8 x 15.4 dots/mm)		
	SF: Superfine (16 x 15.4 dots/mm)		
	21: Standard (200 x 100 dpi)		
	22: Detail (200 x 200 dpi)		
	44: Superfine (400 x 400 dpi)		
Compression mode	MMR: MMR compression		
	MR: MR compression		
	MH: MH compression		
	JBO: JBIG compression (Optional mode)		
	JBB: JBIG compression (Basic mode)		
Communication	ECM: With ECM		
mode	NML: With no ECM		
Width and	A4: A4 (8.3"), no reduction		
reduction	B4: B4 (10.1"), no reduction		
	A3: A3 (11.7"), no reduction		
I/O rate	0: 0 ms/line 10: 10 ms/line		
	25: 2.5 ms/line 20: 20 ms/line		
	5: 5 ms/line 40: 40 ms/line		
	Note:		
	"40" is displayed while receiving a fax message using AI short		
	protocol.		
L			

#### System Switch 01 - Not used (Do not change the factory settings.)

Syst	em Swi	itch 0	2	SP No. 1-101-003
No	FUNCTION			COMMENTS
0	Not used			Do not change these settings.
2	Force after transmission stall			With this setting on, the machine resets itself
	0: Off			automatically if a transmission stalls and fails to
	1: On			complete the job.
3	Not us	sed		Do not change these settings.
4	File re	tentio	n time	1: A file that had a communication error will not be
	<b>0</b> : Depends on User Parameter			erased unless the communication is successful.
	24 [18(H)]		)]	
	1: No limit			
5	Not used			Do not change this setting.
6-7	Memory read/write by RDS		nd/write by RDS	(0,0): All RDS systems are always locked out.
	Bit 7 6 Setting		Setting	(0,1), (1,0): Normally, RDS systems are locked out,
	0	0	Always disabled	but the user can temporarily switch RDS on to allow
	0	1	User selectable	RDS operations to take place. RDS will
	1	0	User selectable	automatically be locked out again after a certain
	1	1	Always enabled	time, which is stored in System Switch 03. Note that
				if an RDS operation takes place, RDS will not switch
				off until this time limit has expired.
				(1,1): At any time, an RDS system can access the
				machine.

Syst	stem Switch 03 SP No. 1-101-0		
No	FUNCTION	COMMENTS	
0	Length of time that RDS is	00 - 99 hours (BCD).	
to	temporarily switched on when		
7	bits 6 and 7 of System Switch	This setting is only valid if bits 6 and 7 of System	
	02 are set to "User selectable"	Switch 02 are set to "User selectable".	
		The default setting is 24 hours.	

Syst	em Switch 04	SP No. 1-101-005
No	FUNCTION	COMMENTS
0-2	Not used	Do not change these settings.
3	Printing dedicated tx parameters on Quick/Speed Dial Lists  0: Disabled  1: Enabled	1: Each Quick/Speed dial number on the list is printed with the dedicated tx parameters (10 bytes each).  The first 10 bytes of data are the programmed dedicated tx parameters; 34 bytes of data are printed (the other 24 bytes have no use for service technicians).
4-7	Not used	Do not change these settings.

System Switch 05 - Not used (Do not change the factory settings.)

System Switch 06		SP No. 1-101-007
No	FUNCTION	COMMENTS
0 to 7	Margin setting for Create Margin Transmission	71 to 99 (BCD) %. This setting determines the reduction ratio when the user uses the Create Margin Transmission feature.  Default setting:1001 0011 (93%)

System Switch 07 - Not used (Do not change the factory settings.)

System Switch 08 - Not used (Do not change the factory settings.)

Svst	em Switch 09	SP No. 1-101-010
No	FUNCTION	COMMENTS
0	Addition of image data from confidential transmissions on the transmission result report <b>0</b> : Disabled <b>1</b> : Enabled	If this feature is enabled, the top half of the first page of confidential messages will be printed on transmission result reports.
1	<ul> <li>Inclusion of communications on the Journal when no image data was exchanged.</li> <li>Disabled 1: Enabled</li> <li>Communications that reached phase C (metx/rx) of the T.30 protocol are listed on the Journal setup.</li> <li>Communications that reached phase A (cal setup) of T.30 protocol are listed on the Journal This will include telephone calls.</li> </ul>	
2	Automatic error report printout <b>0</b> : Disabled <b>1</b> : Enabled	O: Error reports will not be printed.     Error reports will be printed automatically after failed communications.
3	Printing of the error code on the error report  0: No 1: Yes	1: Error codes are printed on the error reports.
4	Not used	Do not change this setting.
5	Power failure report  0: Disabled 1: Enabled	1: A power failure report will be automatically printed after the power is switched on if a fax message disappeared from the memory when the power was turned off last.
6	Conditions for printing the protocol dump list  0: Print for all communications 1: Print only when there is a communication error	This switch becomes effective only when system switch 00 bit 6 is set to 1.  1: Set this bit to 1 when you wish to print a protocol dump list only for communications with errors.
7	Priority given to various types of remote terminal ID when printing reports 0: RTI > CSI > Dial label > Tel. number 1: Dial label > Tel. number > RTI > CSI	This bit determines which set of priorities the machine uses when listing remote terminal names on reports.  Dial Label: The name stored, by the user, for the Quick/Speed Dial number.

Syst	em Switch 0A	SP No. 1-101-011
No	FUNCTION	COMMENTS
0	Automatic port selection <b>0</b> : Disabled, <b>1</b> : Enabled	When "1" is selected, a suitable port is automatically selected if the selected port is not used.
1-2	Not used	Do not change these settings.
3	Continuous polling reception  0: Disabled 1: Enabled	This feature allows a series of stations to be polled in a continuous cycle. This will continue until the polling reception file is erased.  The dialing interval is the same as memory transmission.
4	Dialing on the ten-key pad when the external telephone is off-hook <b>0</b> : Disabled <b>1</b> : Enabled	<ul> <li>0: Prevents dialing from the ten-key pad while the external telephone is off-hook. Use this setting when the external telephone is not by the machine, or if a wireless telephone is connected as an external telephone.</li> <li>1: The user can dial on the machine's ten-key pad when the handset is off-hook.</li> </ul>
5	On hook dial  0: Disabled 1: Enabled	0: On hook dial is disabled.
6-7	Not used	Do not change the factory settings

System Switch 0B - Not used (Do not change the factory settings.)
System Switch 0C - Not used (Do not change the factory settings.)
System Switch 0D - Not used (Do not change the factory settings.)

Syst	em Switch 0E	SP No. 1-101-015
No	FUNCTION	COMMENTS
0-1	Not used	Do not change the settings.
2	Enable/disable for direct sending selection 0: Direct sending off 1: Direct sending on	Direct sending cannot operate when the capture function is on during sending. Setting this switch to "1" enables direct sending without capture. Setting this switch to "0" masks the direct sending function on the operation panel so it cannot be selected.
3	Action when the external handset goes off-hook  0: Manual tx and rx operation 1: Memory tx and rx operation (the display remains the same)	<ul> <li>0: Manual tx and rx are possible while the external handset is off-hook. However, memory tx is not possible.</li> <li>1: The display stays in standby mode even when the external handset is used, so that other people can use the machine for memory tx operation. Note that manual tx and rx are not possible with this setting.</li> </ul>
4-7	Not used	Do not change these settings.

Syst	ystem Switch 0F		SP No. 1-101-016
No	FUNCTION		COMMENTS
0 to	Country/area co	ode for functional	This country/area code determines the factory settings of bit switches and RAM addresses.
7	00: France	11: USA	However, it has no effect on the NCU parameter
	01: Germany	12: Asia	settings and communication parameter RAM
	02: UK	13: Japan	addresses.
	03: Italy	14: Hong Kong	Cross reference
	04: Austria	15: South Africa	NCU country code:
	05: Belgium	16: Australia	SP No. 2-103-001 for G3-1
	06: Denmark	17: New Zealand	SP No. 2-104-001 for G3-2
	07: Finland	18: Singapore	SP No. 2-105-001 for G3-3
	08: Ireland	19: Malaysia	
	09: Norway	1A: China	
	0A: Sweden	1B: Taiwan	
	0B: Switz.	1C: Korea	
	0C: Portugal	20: Turkey	
	0D: Holland	21: Greece	
	0E: Spain	22: Hungary	
	0F: Israel	23: Czech	
	10:	24: Poland	

System Switch 10		SP No. 1-101-017
No	FUNCTION	COMMENTS
0	Threshold memory level for	Threshold = N x 128 KB + 256 KB
to	parallel memory transmission	N can be between 00 - FF(H)
7		Default setting: 02(H) = 512 KB

Syst	System Switch 11 SP No. 1-101-01	
No	FUNCTION	COMMENTS
0	TTI printing position <b>0:</b> Superimposed on the page data <b>1:</b> Printed before the data leading edge	Change this bit to 1 if the TTI overprints information that the customer considers to be important (G3 transmissions).
1	TSI (G3) printing position <b>0:</b> Superimposed on the page data <b>1:</b> Printed before the data leading edge	Change this bit to 1 if the TSI (G3) overprints information that the customer considers to be important.
2	Not used	Do not change the factory settings.
3	TTI used for broadcasting  0: The TTIs selected for each Quick/Speed dial are used  1: The same TTI is used for all destinations	1: The TTI (TTI_1 or TTI_2) which is selected for all destinations during broadcasting.
4-7	Not used	Do not change the factory settings.

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System Switch 12		SP No. 1-101-019
No	FUNCTION	COMMENTS
0	TTI printing position in the main	TTI: 08 to 92 (BCD) mm
to	scan direction	Input even numbers only.
7		This setting determines the print start position for the TTI from the left edge of the paper. If the TTI is moved too far to the right, it may overwrite the file number which is on the top right of the page. On an A4 page, if the TTI is moved over by more than 50 mm, it may overwrite the page number.

System Switch 13 - Not used (do not change these settings)
System Switch 14 - Not used (do not change these settings)

Syst	em Switch 15	SP No. 1-101-022
No	FUNCTION	COMMENTS
0	Not used	Do not change the settings.
1	Going into the Energy Saver mode automatically  0: Enabled  1: Disabled	1: The machine will restart from the Energy Saver mode quickly, because the +5V power supply is active even in the Energy Saver mode.
2-3	Not used	Do not change these settings.
4-5	Interval for preventing the machine from entering Energy Saver mode if there is a pending transmission file.  Bit 5 4 Setting  0 0 1 min  0 1 30 min  1 0 1 hour  1 1 24 hours	If there is a file waiting for transmission, the machine does not go to Energy Saver mode during the selected period.  After transmitting the file, if there is no file waiting for transmission, the machine goes to the Energy Saver mode.
6-7	Not used	Do not change

System Switch 16		SP No. 1-101-023
No	FUNCTION	COMMENTS
0	Parallel Broadcasting  0: Disabled  1: Enabled	1: The machine sends messages simultaneously using all available ports during broadcasting.
1	Priority setting for the G3 line.  0: PSTN-1 > PSTN-2 or 3  1: PSTN-2 or 3 > PSTN-1	This function allows the user to select the default G3 line type. The optional SG3 unit(s) are required to use the PSTN-2 or 3 setting.
2-7	Not used	Do not change these settings.

System Switch 17 - Not used (do not change these settings)	
System Switch 18 - Not used (do not change these settings)	

System Switch 19		SP No. 1-101-026
No	FUNCTION	COMMENTS
0-5	Not used	Do not change the settings.
6	Extended scanner page memory after memory option is installed  0: Disabled  1: Enabled	O: After installing the memory expansion option, the scanner page memory is extended to 4 MB from 2 MB.  1: If this bit is set to 1 after installing the memory expansion option, the scanner page memory is extended to 12 MB. But the SAF memory decreases to 18 MB.
7	Special Original mode  0: Disabled  1: Enabled	1: If the customer frequently wishes to transmit a form or letterhead which has a colored or printed background, change this bit to "1". "Original 1" and "Original 2" can be selected in addition to the "Text", "Text/Photo" and "Photo" modes.

Syst	System Switch 1A		
No.	FUNCTION	COMMENTS	
0-7	LS RX memory capacity threshold setting 00-FF (0-1020 Kbyte: Hex)	Sets the value to x4KB. When the amount of available memory drops below this setting, RX documents are printed to conserve memory.  Initial setting 0x80 (512 KB)	

System Switch 1B - Not used (do not change these settings)
System Switch 1C - Not used (do not change these settings)

System Switch 1D		SP No. 1-101-030
No	FUNCTION	COMMENTS
0	RTI/CSI/CPS code display  0: Enable  1: Disable	O: RTI, CSI, CPS codes are displayed on the top line of the LCD panel during communication.  1: Codes are switched off (no display)
1	Not used	Do not change this setting.
2	Destination telephone number display limitation 0: OFF, 1: ON	When "1" is selected, the destination telephone number display is limited and redial is disabled.
3-7	Not used	Do not change these settings.

Syst	em Switch 1E	SP No. 1-101-031
No	FUNCTION	COMMENTS
0	Communication after the Journal data storage area has become full <b>0</b> : Impossible <b>1</b> : Possible	<ul> <li>0: When this switch is on and the journal history becomes full, the next report prints. If the journal history is not deleted, the next transmission cannot be received. This prevents overwriting communication records before the machine can print them.</li> <li>1: If the buffer memory of the communication records for the Journal is full, fax communications are still possible. But the machine will overwrite the oldest communication records.</li> <li>Note: This setting is effective only when Automatic Journal printout is enabled but the machine cannot print the report (e.g., no paper).</li> </ul>
1	Action when the SAF memory has become full during scanning  0: The current page is erased.  1: The entire file is erased.	O: If the SAF memory becomes full during scanning, the successfully scanned pages are transmitted.  1: If the SAF memory becomes full during scanning, the file is erased and no pages are transmitted.  This bit switch is ignored for parallel memory transmission.
2	RTI/CSI display priority 0: RTI 1: CSI	This bit determines which identifier, RTI or CSI, is displayed on the LCD while the machine is communicating in G3 non-standard mode.
3	File No. printing  0: Enabled  1: Disabled	1: File numbers are not printed on any reports.
4	Action when authorized reception is enabled but authorized RTIs/CSIs are <b>not yet</b> programmed  O: All fax reception is disabled 1: Faxes can be received if the sender has an RTI or CSI	If authorized reception is enabled but the user has stored no acceptable sender RTIs or CSIs, the machine will not be able to receive any fax messages.  If the customer wishes to receive messages from any sender that includes an RTI or CSI, and to block messages from senders that do not include an RTI or CSI, change this bit to "1", then enable Authorized Reception.  Otherwise, keep this bit at "0 (default setting)".
5-7	Not used	Do not change the settings

Syst	em Switch 1F	SP No. 1-101-032
No	FUNCTION	COMMENTS
0	Not used	Do not change the settings.
1	Report printout after an original jam during SAF storage or if the SAF memory fills up  0: Enabled 1: Disabled	<b>0:</b> When an original jams, or the SAF memory overflows during scanning, a report will be printed. Change this bit to "1" if the customer does not want to have a report in these cases.  Memory tx – Memory storage report  Parallel memory tx – Transmission result report
2	Not used	Do not change the settings.
3	Received fax print start timing (G3 reception) <b>0:</b> After receiving each page <b>1:</b> After receiving all pages	<ul><li>0: The machine prints each page immediately after the machine receives it.</li><li>1: The machine prints the complete message after the machine receives all the pages in the memory.</li></ul>
4-6	Not used	Do not change the factory settings.
7	Action when a fax SC has occurred  0: Automatic reset  1: Fax unit stops	<ul> <li>0: When the fax unit detects a fax SC code other than SC1201 and SC1207, the fax unit automatically resets itself.</li> <li>1: When the fax unit detects any fax SC code, the fax unit stops.</li> <li>Cross Reference</li> </ul>
		Fax SC codes - See "Troubleshooting"

## 4.2.2 I-Fax Switches

I-fax	Switch 00	SP No. 1-102-001
No	FUNCTION	COMMENTS
	Original Width of TX Attachment File	This setting sets the maximum size of the original that the destination can receive. (Bits 3~7 are reserved for future use or not used.)
0	A4	0: Off (not selected), 1: On (selected)
1	B4	If more than one of these three bits is set to "1", the
2	A3	larger size has priority. For example, if both Bit 2 and Bit 1 are set to "1" then the maximum size is
3-6	Reserved	
7	Not used	"A3" (Bit 2).  When mail is sent, there is no negotiation with the receiving machine at the destination, so the sending machine cannot make a selection for the receiving capabilities (original width setting) of the receiving machine. The original width selected with this switch is used as the RX machine's original width setting, and the original is reduced to this size before sending. The default is A4.  If the width selected with this switch is higher than the receiving machine can accept, the machine detects this and this causes an error.

I-fax Switch 01		SP No. 1-102-002
No	FUNCTION	COMMENTS
	Original Line Resolution of TX Attachment File	These settings set the maximum resolution of the original that the destination can receive.
0	200x100 Standard	0: Not selected
1	200x200 Detail	1: Selected
2	200x400 Fine	If more than one of these three bits is set to "1", the
3	300 x 300 Reserve	higher resolution has priority. For example, if both
4	400 x 400 Super Fine	Bit 0 and Bit 2 are set to "1" then the resolution is
5	600 x 600 Reserve	set for "Bit 2 200 x 400.
6	Reserve	7
7	mm/inch	•

This setting selects mm/inch conversion for mail transmission.

0: Off (No conversion), 1: On (Conversion)

When on (set to "1"), the machine converts millimeters to inches for sending mail.

There is no switch for converting inches to millimeters.

**NOTE:** Unlike G3 fax transmissions which can negotiate between sender and receiver to determine the setting, mail cannot negotiate between terminals; the mm/inch selection is determined by the sender fax.

When this switch is Off (0):

- Images scanned in inches are sent in inches.
- Images scanned in mm are sent in mm.
- Images received in inches are transmitted in inches.
- Images received in mm are transmitted in mm.

When this switch is On (1):

- Images scanned in inches are sent in inches.
- Images scanned in mm are converted to inches.
- Images received in inches are transmitted in inches.
- Images received in mm are converted to inches.

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I-fax	I-fax Switch 02 SP No. 1-102-00		
No	FUNCTION	COMMENTS	
0	RX Text Mail Header Processing		
	This setting determines whether the header information is printed with text e-mails		
	when they are received.		
	0: Prints only text mail.		
	1: Prints mail header information attached to text mail.		
	When a text mail is received with this switch On (1), the "From" address and "Subject" address are printed as header information.		
	When a mail with only binary data is received (a TIFF-F file, for example), this setting is ignored and no header is printed.		
1	Output from Attached Document		
	This setting determines whether only the first page or all pages of an e-mail attachment are printed at the sending station when a transmission error occurs. This allows the customer to see which documents have not reached their intended destinations if sent to the wrong e-mail addresses, for example.  0: Prints 1st page only.  1: Prints all pages.		
2-3	Text String for Return Receipt		
		string output for the Return Receipt that confirms the	
	transmission was received norma	ally at the destination.	
	00: "Dispatched"		
Sends from PC mail a request for a Return Receipt. Receives the Return "dispatched" in the 2nd part:		r a Return Receipt. Receives the Return Receipt with	
	Disposition: Automatic	-action/MDN-send automatically; dispatched	
	The "dispatched" string is include	ed in the Subject string.	
	01: "Displayed"		
	Sends from PC mail a request for "displayed" in the 2nd part:	r a Return Receipt. Receives the Return Receipt with	
	_	c-action/MDN-send automatically; <u>displayed</u>	
	The "displayed" string is included	in the Subject string.	
	10: Reserved		
	11: Reserved	D 11 15 15AV 11 11 11 11	
	<b>NOTE:</b> A mail requesting a Return Receipt sent from an IFAX with this switch set to "00" (for "dispatched") received by Microsoft Outlook 2000 may cause an er If any setting other than "displayed" (01) causes a problem, change the sett to "01" to enable normal sending of the Return Receipt.		
4	Media accept feature	·	
	This setting adds or does not add	the media accept feature to the answer mail to	
	confirm a reception.	•	
	0: Does not add the media accep	ot feature to the answer mail	
	1: Adds the media accept feature		
	<b>NOTE:</b> Use this bit switch if a problem occurs when the machine receives an answer mail, which contains the media accept feature field.		
5-6	Not Used		

I-fax Switch 02		SP No. 1-102-003
No	FUNCTION	COMMENTS
7	Image Resolution of RX Text Ma	1
	This setting determines the image resolution of the received mail.	
	0: 200 x 200	
	1: 400 x 400	
		nstallation of the Function Upgrade Card in order to and Forward) memory to receive images at 400 x

I-fax	Switch 03	SP No. 1-102-004
No	FUNCTION	COMMENTS
0	Original Output at Transfer Station	n
	This setting determines whether the original is output at the transfer station when it is	
		iated the transfer transmission. This feature is the
	same as for G3 transfer transmis	
	0: Received original not output a	
		original is printed after the transfer station has
	transferred it to the destination transferred.	ns, so its output confirms that the original has been
1	Transfer Result Report	
•	·	ransfer Result Report is generated and returned to
	the transfer requestor.	Tansier Result Report is generated and returned to
	0: Returns the report after each	ransfer.
	1: Returns the report only if an e	
2	Destination Error Handling for Re	•
	This setting restricts transfer transmission based on whether the final destinations are	
	correct or not.	
	0: The transfer station transmits in them).	to correct destinations only (addresses with no errors
	·	it, the transfer station transfers no transmissions and
		n failure report to the requestor that initiated the
	4.6	the transfer initiator and the transfer station to
		nation addresses are correct or not. This setting
		Insfer station transfers the transmissions if there is a
	mistake in even one of the final d	estination addresses.
3	Polling ID Check for Reception of Transfer Request	
	This setting determines whether	the polling IDs of incoming transmissions are checked
	to ensure that the polling IDs mat	
		nessages that have matching polling IDs.
		ssages, even if the polling IDs do not match.
4-7	Not Used	

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I-fax	Switch 04	SP No. 1-102-005
No	FUNCTION	COMMENTS
0	Subject for Delivery TX/Memory	Transfer
		the RTI/CSI registered on this machine or the RTI/CSI bject lines of transferred documents.
	or CSI is used. Only one of th	nator in the Subject line. If this is used, either the RTI nese can be received for use in the subject line. On this machine in the Subject line.
		fer and deliver mail to a PC, the information in the the transmission originated can be used to determine er for each e-mail.
1	Subject corresponding to mail po	st database
	0: Standard subject	
	1: Mail post database subject	
	three cases:	by the mail post database subject in the following
	1) When the service technician s	ets the service (software) switch.
	2) When memory sending or deli server	very specified by F code is applied by the SMTP
	3) With relay broadcasting (1st st	age without the Schmidt 4 function).
	Note: This switch does not apply	for condition 3) when the RX system is set up for ode, sending with SMTP RX and when operators are
2-7	Not Used	

I-fax Switch 05		SP No. 1-102-006
No	FUNCTION	COMMENTS
0	Mail Addresses of SMTP Broadc	ast Recipients
	Mail Addresses of SMTP Broadcast Recipients  Determines whether the e-mail addresses of the destinations that receive transmissions broadcasted using SMTP protocol are recorded in the Journal. For example:  "1st destination + Total number of destinations: 9" in the Journal indicates a broadcast to 9 destinations.  0: Not recorded  1: Recorded	
1-7	Not Used	

I-fax Switch 06 - Not used (do not change the settings)	SP No. 1-102-007
I-fax Switch 07 - Not used (do not change the settings)	SP No. 1-102-008

I-fax Switch 08		SP No. 1-102-009
No	IO FUNCTION COMMENTS	
0-7	Memory Threshold for POP Mail	Reception
	This setting determines the amount of SAF (Store and Forward) memory. (SAF stores fax messages to send later for transmission to more than one location, and also holds incoming messages if they cannot be printed.) When the amount of SAF memory available falls below this setting, mail can no longer be received; received mail is then stored on the mail server.	
	00-FF (0 to 1024 KB: HEX)	
	<b>NOTE:</b> The hexadecimal numbe amount of memory.	r you enter is multiplied by 4 KB to determine the

I-fax Switch 09		SP No. 1-102-010
No	FUNCTION	COMMENTS
0-3	Not used	Do not change the settings
4-7	Restrict TX Retries	This setting determines the number of retries when connection and transmission fails due to errors.  01-F (1-15 Hex)

I-fax Switch 0A - Not used (do not change the settings)	SP No. 1-102-011
I-fax Switch 0B - Not used (do not change the settings)	SP No. 1-102-012
I-fax Switch 0C - Not used (do not change the settings)	SP No. 1-102-013
I-fax Switch 0D - Not used (do not change the settings)	SP No. 1-102-014
I-fax Switch 0E - Not used (do not change the settings)	SP No. 1-102-015

I-fax Switch 0F		SP No. 1-102-016
No	FUNCTION	COMMENTS
0	Delivery Method for SMTP RX Fi	les
	This setting determines whether files received with SMTP protocol are delivered or output immediately.	
	0: Off. Files received via SMTP a	re output immediately without delivery.
	1: On. Files received via SMTP a	re delivered immediately to their destinations.
1-7	Not used	

## 4.2.3 Printer Switches

Printer Switch 00		SP No. 1-103-001
No	FUNCTION	COMMENTS
0	Select page separation marks  0: Off  1: On	<ul> <li>0: If a 2 page RX transmission is split, [*] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page.</li> <li>1: If a 2 page RX transmission is split into two pages, for example, [*] [2] is printed in the bottom right corner of the 1st page and only a [2] is printed in the upper right corner of the 2nd page.</li> <li>Note: This helps the user to identify pages that have been split because the size of the paper is smaller than the size of the document received. (When A5 is used to print an A4 size document, for example.)</li> </ul>
1	Repetition of data when the received page is longer than the printer paper  0: Off  1: On	1: Default. 10 mm of the trailing edge of the previous page are repeated at the top of the next page.  0: The next page continues from where the previous page stopped without any repeated text.
2	Prints the date and time on received fax messages  0: Disabled 1: Enabled	This switch is only effective when user parameter 02 - bit 2 (printing the received date and time on received fax messages) is enabled.  1: The machine prints the received and printed date and time at the bottom of each received page.
3-7	Not used	Do not change the settings.

Printer Switch 01		SP No. 1-103-002
No	FUNCTION	COMMENTS
0-2	Not used	Do not change the settings.
3-4	Maximum print width used in the setup protocol  Bit 4 3 Setting  0 0 Not used  0 1 A3  1 0 B4  1 1 A4	These bits are only effective when bit 7 of printer switch 01 is "1".
5-6	Not used	Do not change the settings.
7	Received message width restriction in the protocol signal to the sender  0: Disabled  1: Enabled	<ul> <li>0: The machine informs the transmitting machine of the print width depending on the paper size available from the paper feed stations.</li> <li>Refer to the table on the next page for how the machine chooses the paper width used in the setup protocol (NSF/DIS).</li> <li>1: The machine informs the transmitting machine of the fixed paper width which is specified by bits 3 and 4 above.</li> </ul>

# Relationship between available paper sizes and printer width used in the setup protocol

Available Paper Size	Printer width used in the Protocol (NSF/DIS)
A4 or 8.5" x 11"	297 mm width
B5	256 mm width
A5 or 8.5" x 5.5"	216 mm width
No paper available (Paper end)	216 mm width

Print	ter Switch 02	SP No. 1-103-003		
No	FUNCTION	COMMENTS		
0	1st paper feed station usage for fax printing  0: Enabled  1: Disabled	O: The paper feed station can be used to print fax messages and reports.  1: The specified paper feed station will not be used		
1	2nd paper feed station usage for fax printing  0: Enabled  1: Disabled	for printing fax messages and reports.  Note: Do not disable usage for a paper feed station which has been specified by User Parameter Switch		
2	3rd paper feed station usage for fax printing  0: Enabled  1: Disabled	0F (15), or which is used for the Specified Cassette Selection feature.		
3	4th paper feed station usage for fax printing  0: Enabled  1: Disabled			
4	LCT usage for fax printing  0: Enabled  1: Disabled			
5-7	Not used	Do not change the settings.		

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Print	ter Switch 03	SP No. 1-103-004
No	FUNCTION	COMMENTS
0	Length reduction of received data  0: Disabled  1: Enabled	<ul> <li>0: Incoming pages are printed without length reduction.</li> <li>(Page separation threshold: Printer Switch 03, bits 4 to 7)</li> <li>1: Incoming page length is reduced when printing.</li> <li>(Maximum reducible length: Printer Switches 04, bits 0 to 4)</li> </ul>
1-3	Not used	Do not change the settings
4 to 7	Page separation setting when sub scan compression is forbidden 00-0F (0-15 mm: Hex) Default: 6 mm	<ul> <li>Page separation threshold (with reduction disabled with switch 03-0 above).</li> <li>For example, if this setting is set to "10", and A4 is the selected paper size:</li> <li>If the received document is 10 mm or less longer than A4, then the 10 mm are cut and only 1 page prints.</li> <li>If the received document is 10 mm longer than A4, then the document is split into 2 pages.</li> </ul>

Print	ter Switch 04	SP No. 1-103-005		
No	FUNCTION	COMMENTS		
0 to 4	Maximum reducible length when <maximum length="" reducible=""> = &lt; "N" is the decimal value of the bit</maximum>	. ,		
	Bit 4 3 2 1 0 Setting 0 0 0 0 0 0 mm 0 0 0 1 5 mm  0 0 1 0 0 20 mm (defau 1 1 1 1 1 155 mm	0 mm 5 mm 20 mm (default setting)		
5	For A5 sideways and B5 sideways paper <maximum length="" reducible=""> = <paper length=""> + 0.75 x (N x 5mm)  Length of the duplicated image on the next page, when page separation has taken</paper></maximum>			
6	place.			
7	Not used.	Do not change the setting.		

Printer Switch 05 - Not used (do not change the settings)

Print	er Switch 06	SP No. 1-103-007
No	FUNCTION	COMMENTS
0	Printing while a paper cassette is pulled out, when the Just Size Printing feature is enabled.  0: Printing will not start 1: Printing will start if another cassette has a suitable size of paper, based on the paper size selection priority tables.	Cross reference Just size printing on/off – User switch 05, bit 5
1-7	Not used.	Do not change the settings.

Print	ter Switch 07	SP No. 1-103-008
No	FUNCTION	COMMENTS
0	Reduction for Journal printing  0: Off  1: On	1: The Journal is reduced to 91% to ensure that there is enough space in the left margin for punch holes or staples.
2-3	Not used.	Do not change the settings.
4	List of destinations in the Communication Failure Report for broadcasting  0: All destinations  1: Only destinations where communication failure occurred	1: Only destinations where communication failure occurred are printed on the Communication Failure Report.
5-7	Not used.	Do not change the settings.

Printer Switch 08 - Not used (do not change the settings)
Printer Switch 09 - Not used (do not change the settings)
Printer Switch 0A - Not used (do not change the settings)
Printer Switch 0B - Not used (do not change the settings)
Printer Switch 0C - Not used (do not change the settings)
Printer Switch 0D - Not used (do not change the settings)

Prin	ter Swit	tch 0E		SP No. 1-103-015
No		FU	INCTION	COMMENTS
0	Paper size selection priority  0: Width  1: Length			<ul> <li>0: A paper size that has the same width as the received data is selected first.</li> <li>1: A paper size which has enough length to print all the received lines without reduction is selected first.</li> </ul>
1	Paper size selected for printing A4 width fax data  0: 8.5" x 11" size  1: A4 size			This switch determines which paper size is selected for printing A4 width fax data, when the machine has both A4 and 8.5" x 11" size paper.
2	Page separation  0: Enabled  1: Disabled			1: If all paper sizes in the machine require page separation to print a received fax message, the machine does not print the message (Substitute Reception is used).  After a larger size of paper is set in a cassette, the machine automatically prints the fax message.
3 to 4	Printing the sample image on reports  Bit 4 Bit 3 Setting  0 0 The upper half only  0 1 50% reduction in sub-scan only  1 0 Same size		Setting The upper half only 50% reduction in sub-scan only	"Same size" means the sample image is printed at 100%, even if page separation occurs.  User Parameter Switch 19 (13H) bit 4 must be set to "0" to enable this switch.  Refer to Detailed Section Descriptions for more on this feature.
5-6			1101 4004	Do not change the settings.
7	Equalizing the reduction ratio among separated pages (Page Separation)  0: Enabled  1: Disabled			O: When page separation has taken place, all the pages are reduced with the same reduction ratio.  1: Only the last page is reduced to fit the selected paper size when page separation has taken place. Other pages are printed without reduction.

Print	er Switch 0F	SP No. 1-103-016
No	FUNCTION	COMMENTS
0	Smoothing feature	(0, 0) (0, 1): Disable smoothing if the machine
to	Bit 1 Bit 0 Setting	receives halftone images from other manufacturers
1	0 0 Disabled	fax machines frequently.
	0 1 Disabled	
	1 0 Enabled	
	1 1 Not used	
2	Duplex printing	1: The machine always prints received fax
	0: Disabled	messages in duplex printing mode:
	1: Enabled	
3	Binding direction for Duplex	0: Sets the binding for the left edge of the stack.
	printing	1: Sets the binding for the top of the stack.
	0: Left binding	3
	1: Top binding	
4-7	Not used	Do not change the settings.

## **4.2.4 COMMUNICATION SWITCHES**

Com	munication Switch 00	SP No. 1-104-001
No	FUNCTION	COMMENTS
0 to 1	Compression modes available in receive mode  Bit 1 0 Modes	These bits determine the compression capabilities to be declared in phase B (handshaking) of the T.30 protocol.
	0 0 MH only 0 1 MH/MR 1 0 MH/MR/MMR 1 1 MH/MR/MMR/ JBIG	
2 to 3	Compression modes available in transmit mode  Bit 3 2 Modes 0 0 MH only 0 1 MH/MR 1 0 MH/MR/MMR 1 1 MH/MR/MMR/ JBIG	These bits determine the compression capabilities to be used in the transmission and to be declared in phase B (handshaking) of the T.30 protocol.
4	Not used	Do not change the settings.
5	JBIG compression method: Reception  0: Only basic supported 1: Basic and optional both supported	Change the setting when communication problems occur using JBIG compression.
6	JBIG compression method: Transmission <b>0</b> : Basic mode priority <b>1</b> : Optional mode priority	Change the setting when communication problems occur using JBIG compression.
7	Closed network (reception)  0: Disabled  1: Enabled	1: Reception will not go ahead if the polling ID code of the remote terminal does not match the polling ID code of the local terminal. This function is only available in NSF/NSS mode.

Com	munica	tion Sw	itch 01	SP No. 1-104-002
No		FUN	CTION	COMMENTS
0	ECM <b>0</b> : Off <b>1</b> : On			If this bit is set to 0, ECM is switched off for all communications. In addition, V.8 protocol and JBIG compression are switched off automatically.
1	Not use	ed		Do not change the setting.
2 to 3	Wrong connection prevention method  Bit 3 Bit 2 Setting  0 0 None  0 1 8 digit CSI  1 0 4 digit CSI  1 1 CSI/RTI		Setting None 8 digit CSI 4 digit CSI	<ul> <li>(0,1) - The machine will disconnect the line without sending a fax message, if the last 8 digits of the received CSI do not match the last 8 digits of the dialed telephone number. This does not work when manually dialed.</li> <li>(1,0) - The same as above, except that only the last 4 digits are compared.</li> <li>(1,1) - The machine will disconnect the line without sending a fax message, if the other end does not identify itself with an RTI or CSI.</li> <li>(0,0) - Nothing is checked; transmission will always go ahead.</li> <li>Note: This function does not work when dialing is done from the external telephone.</li> </ul>
4-5	Not used			Do not change the setting.
6 to 7	Maximum printable page length available  Bit 7 6 Setting  0 0 No limit  0 1 B4 (364 mm)  1 0 A4 (297 mm)  1 Not used		etting o limit I (364 mm)	The setting determined by these bits is informed to the transmitting terminal in the pre-message protocol exchange (in the DIS/NSF frames).

Com	munication Switch 02		SP No. 1-104-003
No	FUNCTION		COMMENTS
0	G3 Burst error threshold  0: Low 1: High	If there are more consecutive error lines in the received page than the threshold, the machine will send a negative response. The Low and High threshold values depend on the sub-scan resolution, and are as follows.	
		100 dpi	6(L) → 12(H)
		200 dpi	12(L) → 24(H)
		300 dpi	18(L) → 36(H)
		400 dpi	24(L) → 48(H)
1	Acceptable total error line ratio <b>0:</b> 5% <b>1:</b> 10%		ine ratio for a page exceeds the ratio, RTN will be sent to the other end.
2	Treatment of pages received with errors during G3 reception <b>0</b> : Deleted from memory without printing <b>1</b> : Printed	0: Pages re	ceived with errors are not printed.

Com	munication Switch 02	SP No. 1-104-003	
No	FUNCTION	COMMENTS	
3	Hang-up decision when a negative code (RTN or PIN) is received during G3 immediate transmission  0: No hang-up, 1: Hang-up	<ul><li>0: The next page will be sent even if RTN or PIN is received.</li><li>1: The machine will send DCN and hang up if it receives RTN or PIN.</li></ul>	
	3 17	This bit is ignored for memory transmissions or if ECM is being used.	
4-7	Not used	Do not change the settings.	

Com	munication Switch 03	SP No. 1-104-004		
No	FUNCTION	COMMENTS		
0	Maximum number of page	00 - FF (Hex) times.		
to	retransmissions in a G3 This setting is not used if ECM is switched on.			
7	memory transmission	Default setting - 03(H)		

Communication Switch 04 - Not used (do not change the settings)
Communication Switch 05 - Not used (do not change the settings)
Communication Switch 06 - Not used (do not change the settings)
Communication Switch 07 - Not used (do not change the settings)
Communication Switch 08 - Not used (do not change the settings)
Communication Switch 09 - Not used (do not change the settings)

Communication Switch 0A		SP No. 1-104-011
No	FUNCTION	COMMENTS
0	Point of resumption of memory transmission upon redialing <b>0:</b> From the error page <b>1:</b> From page 1	<ul><li>0: The transmission begins from the page where transmission failed the previous time.</li><li>1: Transmission begins from the first page, using normal memory transmission.</li></ul>
1-7	Not used	Do not change the settings.

Com	munication Switch 0B	SP No. 1-104-012
No	FUNCTION	COMMENTS
0	Use of Economy Transmission during a Transfer operation to end receivers  0: Disabled 1: Enabled	These bits determine whether the machine uses the Economy Transmission feature when it is carrying out a Transfer operation as a Transfer Station.
1	Use of Economy Transmission during a Transfer operation to the Next Transfer Stations <b>0</b> : Disabled <b>1</b> : Enabled	
2	Use of Label Insertion for the End Receivers in a Transfer operation  0: Disabled 1: Enabled	This bit determines whether the machine uses the Label Insertion feature when it is carrying out a Transfer operation as a Transfer Station.
ന	Conditions required for Transfer Result Report transmission 0: Always transmitted 1: Only transmitted if there was an error	<ul> <li>0: When acting as a Transfer Station, the machine will always send a Transfer Result Report back to the Requesting Station after completing the Transfer Request, even if there were no problems.</li> <li>1: The machine will only send back a Transfer Result Report if there were errors during communication, meaning one or more of the End Receivers could not be contacted.</li> </ul>
4	Printout of the message when acting as a Transfer Station <b>0:</b> Disabled <b>1:</b> Enabled	When the machine is acting as a Transfer Station, this bit determines whether the machine prints the fax message coming in from the Requesting Terminal.
5	Action when there is no fax number in the programmed Quick/Speed dials which meets the requesting terminal's own fax number  0: Transfer is disabled  1: Transfer is enabled	After the machine receives a transfer request, the machine compares the last N digits of the requesting terminal's own fax number with all the Quick/Speed dials programmed in the machine. (N is the number programmed in communication switch OC.)  O: If there is no matching number programmed in the machine, the machine rejects the transfer request.  1: Even if there is no matching number programmed in the machine, the machine accepts the transfer request. The result report will be printed at the transfer terminal, but will not be sent back to the requesting terminal.
6-7	Not used	Do not change the settings.

Com	munication Switch 0C	SP No. 1-104-013
No	FUNCTION	COMMENTS
0 to 4	Number of digits compared to find the requester's fax number from the programmed Quick/Speed Dials when acting as a Transfer Station	O0 – 1F (0 to 31 digits) After the machine receives a transfer request, the machine compares the own telephone number sent from the Requesting Terminal with all Quick/Speed Dials programmed in the machine, starting from Quick Dial 01 to the end of the Speed Dials. This number determines how many digits from the end of the telephone numbers the machine compares.  If it is set to 00, the machine will send the report to the first Quick/Speed Dial that the machine compared. If Quick Dial 01 is programmed, the machine will send the report to Quick 01. If Quick Dial 01 through 04 are not programmed and Quick Dial 05 is programmed, the machine will send the report to Quick 05.  Default setting – 05(H) = 5 digits
5-7	Not used	Do not change the settings.

Com	munication Switch 0D	SP No. 1-104-014
No	FUNCTION	COMMENTS
0	The available memory	00 to FF (Hex), unit = 4 kbytes
to	threshold, below which ringing	(e.g., 06(H) = 24 kbytes)
7	detection (and therefore reception into memory) is	One page is about 24 kbytes.
	disabled	The machine refers to this setting before each fax reception. If the amount of remaining memory is below this threshold, the machine cannot receive any fax messages.  If this setting is kept at 0, the machine will detect ringing signals and go into receive mode even if there is no memory available. This will result in communication failure.

Communication Switch 0E		SP No. 1-104-015
No	FUNCTION	COMMENTS
0 to 7	Minimum interval between automatic dialing attempts	06 to FF (Hex), unit = 2 s (e.g., 06(H) = 12 s) This value is the minimum time that the machine waits before it dials the next destination.

Communication Switch 0F – Not used (do not change the settings.)

Com	munication Switch 10	SP No. 1-104-017
No	FUNCTION	COMMENTS
0 to 7	Memory transmission: Maximum number of dialing attempts to the same destination	01 – FE (Hex) times

#### **Communication Switch 11** – Not used (do not change the settings.)

Com	munication Switch 12	SP No. 1-104-019
No	FUNCTION	COMMENTS
0	Memory transmission: Interval	01 – FF (Hex) minutes
to	between dialing attempts to the	
7	same destination	

#### Communication Switch 13 – Not used (do not change the settings.)

Com	Communication Switch 14			SP No. 1-104-021
No	FUNCTION			COMMENTS
0	Inch-to-mm conversion during transmission  0: Disabled 1: Enabled		· ·	O: In immediate transmission, data scanned in inch format are transmitted without conversion.  In memory transmission, data stored in the SAF memory in mm format are transmitted without conversion.  Note: When storing the scanned data into SAF memory, the fax unit always converts the data into mm format.  1: The machine converts the scanned data or stored data in the SAF memory to the format which was specified in the set-up protocol (DIS/NSF) before transmission.
1-5	Not us	ed		Do not change the factory settings.
6 to 7	Available unit of resolution in which fax messages are received			For the best performance, do not change the factory settings.
	Bit 7	Bit 6	Unit	The setting determined by these bits is informed to
	0	0	mm	the transmitting terminal in the pre-message
	0	1	inch	protocol exchange (in the DIS/NSF frames).
	1	0	mm and inch (default)	
	1	1	Not used	

#### Communication Switch 15 – Not used (do not change the settings)

Communication Switch 16		SP No. 1-104-023
No	FUNCTION	COMMENTS
0	Not used	Do not change the settings.
1	Optional G3 unit (G3-2) Change this bit to 1 when installing the fir G3 unit.  1: Installed  Change this bit to 1 when installing the fir G3 unit.	
2	Not used	
3	Select PSTN connection 0: Off 1: On	This switch enables the G3-2. 0: Off, no connection 1: Recognizes and enables G3-2. This switch can be used only after G3-2 has been installed.
4-7	Not used	Do not change the settings.

Com	munication Switch 17	SP No. 1-104-024
No	FUNCTION	COMMENTS
0	SEP reception	0: Polling transmission to another maker's machine
	0: Disabled	using the SEP (Selective Polling) signal is disabled.
	1: Enabled	
1	SUB reception	0: Confidential reception to another maker's
	0: Disabled	machine using the SUB (Sub-address) signal is
	1: Enabled	disabled.
2	PWD reception	0: Disables features that require PWD (Password)
	0: Disabled	signal reception.
	1: Enabled	
3-6	Not used	Do not change the settings.
7	Action when there is no box	Change this setting when the customer requires.
	with an F-code that matches	
	the received SUB code	
	<b>0:</b> Disconnect the line	
	1: Receive the message	
	(using normal reception mode)	

Communication Switch 18 - Not used (do not change the settings)		
Communication Switch 19 - Not used (do not change the settings)		
Communication Switch 1A - Not used (do not change the settings)		

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Com	munication Switch 1B	SP No. 1-104-028
No	FUNCTION	COMMENTS
0 to 7	Extension access code (0 to 7) to turn V.8 protocol On/Off  0: On  1: Off	If the PABX does not support V.8/V.34 protocol procedure, set this bit to "1" to disable V.8. <b>Example:</b> If "0" is the PSTN access code, set bit 0 to 1. When the machine detects "0" as the first dialed number, it automatically disables V.8 protocol. (Alternatively, if "3" is the PSTN access code, set bit 3 to 1.)

Com	munication Switch 1C	SP No. 1-104-029
No	FUNCTION	COMMENTS
0	Extension access code (8 and	Refer to communication switch 1B.
to 1	9) to turn V.8 protocol On/Off  0: On  1: Off	<b>Example:</b> If "8" is the PSTN access code, set bit 0 to 1. When the machine detects "8" as the first dialed number, it automatically disables V.8 protocol. (If "9" is the PSTN access code, use bit 1.)
2-7	Not used	Do not change the settings.

Communication Switch 1D - Not used (do not change the settings)
Communication Switch 1E - Not used (do not change the settings)
Communication Switch 1F - Not used (do not change the settings)

## **4.2.5 G3 SWITCHES**

G3 Switch 00				SP No. 1-105-001
No	FUNCTION			COMMENTS
0	Monitor speaker during communication (tx and rx)			(0, 0): The monitor speaker is disabled all through the communication.
	Bit 1 0 0 1	0 1 0 1	Setting Disabled Up to Phase B All the time Not used	<ul><li>(0, 1): The monitor speaker is on up to phase B in the T.30 protocol.</li><li>(1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.</li></ul>
2	Monitor speaker during memory transmission 0: Disabled 1: Enabled			1: The monitor speaker is enabled during memory transmission.
3-7	Not used			Do not change the settings.

G3 S	Switch 01	SP No. 1-105-002
No	FUNCTION	COMMENTS
0	Not used	Do not change the settings.
1	Select V.8 protocol for manual RX function 0: No 1: Yes	This switch switches the V.8 protocol for manual receiving off and on.
2-3	Not used	Do not change the settings.
4	DIS frame length  0: 10 bytes 1: 4 bytes	1: The bytes in the DIS frame after the 4th byte will not be transmitted (set to 1 if there are communication problems with PC-based faxes which cannot receive the extended DIS frames).
5	Not used	Do not change the setting.
6	Forbid CED/AMsam output  0: Off  1: On (Forbid output)	Do not change this setting (Default: 0: Off), unless communication problem is caused by a CED or ANSam transmission.
7	Not used	Do not change the setting.

G3 S	Switch 02	SP No. 1-105-003
No	FUNCTION	COMMENTS
0	G3 protocol mode used  0: Standard and non-standard  1: Standard only	Change this bit to 1 only when the other end can only communicate with machines that send T.30-standard frames only.  1: Disables NSF/NSS signals (these are used in non-standard mode communication)
1-4	Not used	Do not change the settings.
5	Use of modem rate history for transmission using Quick/Speed Dials  0: Disabled  1: Enabled	<ul> <li>0: Communications using Quick/Speed Dials always start from the highest modem rate.</li> <li>1: The machine refers to the modem rate history for communications with the same machine when determining the most suitable rate for the current communication.</li> </ul>
6	Not Used	Do not change the settings.
7	Short preamble <b>0:</b> Disabled <b>1:</b> Enabled	Refer to Appendix B in the Group 3 Facsimile Manual for details about Short Preamble.

G3 S	Switch 03	SP No. 1-105-004
No	FUNCTION	COMMENTS
0	DIS detection number (Echo countermeasure)  0: 1  1: 2	<ul><li>0: The machine will hang up if it receives the same DIS frame twice.</li><li>1: Before sending DCS, the machine will wait for the second DIS which is caused by echo on the line.</li></ul>
1	Not Used	Do not change the settings.
2	V.8 protocol  0: Disabled  1: Enabled	<b>0:</b> V.8/V.34 communications will not be possible. <b>Note:</b> Do not set to 0 unless the line condition is always bad enough to slow down the data rate to 14.4 kbps or lower.
3	ECM frame size  0: 256 bytes  1: 64 bytes	Keep this bit at "0" in most cases.
4	CTC transmission conditions  0: After one PPR signal received  1: After four PPR signals received (ITU-T standard)	O: When using ECM in non-standard (NSF/NSS) mode, the machine sends a CTC to drop back the modem rate after receiving a PPR, if the following condition is met in communications at 14.4, 12.0, 9.6, and 7.2 kbps.  √NTransmit≤NRe send  NTransmit- Number of transmitted frames NResend- Number of frames to be retransmitted  1: When using ECM, the machine sends a CTC to drop back the modem rate after receiving four PPRs.  PPR, CTC: These are ECM protocol signals.  This bit is not effective in V.34 communications.
5	Modem rate used for the next page after receiving a negative code (RTN or PIN)  0: No change 1: Fallback	1: The machine's tx modem rate will fall back before sending the next page if a negative code is received. This bit is ignored if ECM is being used.
6	Not Used	Do not change the settings
7	Select detection of reverse polarity in ringing 0: Off 1: On	This switch is used to prevent reverse polarity in ringing on the phone line (applied to PSTN-G3 ringing). Do not change this setting  0: No detection → Outside Japan  1: Detection → Inside Japan only

G3 S	witch 04	SP No. 1-105-005
No	FUNCTION	COMMENTS
to 3	Training error detection threshold	0 - F (Hex); 0 - 15 bits If the number of error bits in the received TCF is below this threshold, the machine informs the sender that training has succeeded.
4-7	Not used	Do not change the settings.

G3 S	witch 05	SP No. 1-105-006
No	FUNCTION	COMMENTS
0	Initial Tx modem rate	These bits set the initial starting modem rate for
to	Bit 3 2 1 0 Setting (bps)	transmission.
3	0 0 0 1 2.4 k	
	0 0 1 0 4.8 k	Use the dedicated transmission parameters if you
	0 0 1 1 7.2 k	need to change this for specific receivers.
	0 1 0 0 9.6 k	
	0 1 0 1 12.0 k	If a modem rate 14.4 kbps or slower is selected, V.8
	0 1 1 0 14.4 k	protocol should be disabled manually.
	0 1 1 1 16.8 k	
	1 0 0 0 19.2 k	Cross reference
	1 0 0 1 21.6 k	V.8 protocol on/off - G3 switch 03, bit2
	1 0 1 0 24.0 k	'
	1 0 1 1 26.4 k	
	1 1 0 0 28.8 k	
	1 1 0 1 31.2 k	
	1 1 1 0 33.6 k	
	Other settings - Not used	
4	Initial modem type for 9.6 k or	These bits set the initial modem type for 9.6 and 7.2
to	7.2 kbps.	kbps, if the initial modem rate is set at these speeds.
5	Bit 5 Bit 4 Setting	
	0 0 V.29	
	0 1 V.17	
	1 0 V.34	
	1 1 Not used	
6-7	Not used	Do not change the settings.

G3 S	witch	06				SP No. 1-105-007
No			F	UN	CTION	COMMENTS
0 to	Bit 3	2	1	0	em rate <b>Setting (bps)</b>	These bits set the initial starting modem rate for reception.
3	0 0 0 0 0 1 1 1 1 1 1	0 0 1 1 1 0 0 0 0 1 1 1	1 0 0 1 1 0 0 1 1 0 0 1 1	0 1 0 1 0 1 0 1 0 1 0 1	2.4 k 4.8 k 7.2 k 9.6 k 12.0 k 14.4 k 16.8 k 19.2 k 21.6 k 24.0 k 26.4 k 28.8 k 31.2 k 33.6 k - Not used	Use a lower setting if high speeds pose problems during reception.  If a modem rate 14.4 kbps or slower is selected, V.8 protocol should be disabled manually.  Cross reference  V.8 protocol on/off - G3 switch 03, bit2
4 to	Mode recep	m tio	typo 1	es a	available for	The setting of these bits is used to inform the transmitting terminal of the available modem type for
7	0	0	0 1	1 0	<b>Setting</b> V.27ter V.27ter, V.29 V.27ter, V.29 V.33	the machine in receive mode.  If V.34 is not selected, V.8 protocol must be disabled manually.
	0	1	0	1	V.27ter, V.29, V.17/V.33 V.27ter, V.29, V.17/V33, V.34 - Not used	Cross reference V.8 protocol on/off - G3 switch 03, bit2

G3 S	G3 Switch 07			SP No. 1-105-008
No		FU	NCTION	COMMENTS
0	PSTN	l cable	equalizer	Use a higher setting if there is signal loss at higher
to	(tx mo	ode: Int	ernal)	frequencies because of the length of wire between
1	Bit 1	Bit 0	Setting	the modem and the telephone exchange.
	0	0	None	Use the dedicated transmission parameters for
	0	1	Low	specific receivers.
	1	0	Medium	
	1	1	High	Also, try using the cable equalizer if one or more of the following symptoms occurs.
				Communication error
				Modem rate fallback occurs frequently.
				<b>Note:</b> This setting is not effective in V.34 communications.

G3 Sv	witch 07	SP No. 1-105-008
No	FUNCTION	COMMENTS
2 to 3	PSTN cable equalizer (rx mode: Internal)  Bit 3 Bit 2 Setting  0 0 None  0 1 Low  1 0 Medium  1 1 High	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange.  Also, try using the cable equalizer if one or more of the following symptoms occurs.  Communication error with error codes such as 0-20, 0-23, etc.  Modem rate fallback occurs frequently.
		<b>Note:</b> This setting is not effective in V.34 communications.
4	PSTN cable equalizer (V.8/V.17 rx mode: External)  0: Disabled 1: Enabled	Keep this bit at "1".
5-7	Not used	Do not change the settings.

G3 Switch 08 - Not used (do not change the settings)
G3 Switch 09 - Not used (do not change the settings)

G3 Sv	vitch 0A	SP No. 1-105-011
No	FUNCTION	COMMENTS
1	Maximum allowable carrier drop during image data reception  Bit 1 Bit 0 Value (ms)  0 0 200  0 1 400  1 0 800  1 1 Not used	These bits set the acceptable modem carrier drop time.  Try using a longer setting if error code 0-22 is frequent.
2	Select cancellation of high- speed RX if carrier signal lost while receiving 0: Off 1: On	This switch setting determines if high-speed receiving ends if the carrier signal is lost when receiving during non-ECM mode
3	Not used	Do not change the settings
4	Maximum allowable frame interval during image data reception. <b>0:</b> 5 s <b>1:</b> 13 s	This bit set the maximum interval between EOL (end-of-line) signals and the maximum interval between ECM frames from the other end.  Try using a longer setting if error code 0-21 is frequent.
5	Not used	Do not change the settings.

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G3 Sv	vitch 0A	SP No. 1-105-011
No	FUNCTION	COMMENTS
6	Reconstruction time for the first line in receive mode  0: 6 s 1: 12 s	When the sending terminal is controlled by a computer, there may be a delay in receiving page data after the local machine accepts set-up data and sends CFR. This is outside the T.30 recommendation. But, if this delay occurs, set this bit to 1 to give the sending machine more time to send data.  Refer to error code 0-20.  ITU-T T.30 recommendation: The first line should come within 5 s of CFR.
7	Not used	Do not change the settings.

G3 Switch 0B Not used (do not change the settings).
G3 Switch 0C Not used (do not change the settings).
G3 Switch 0D Not used (do not change the settings).

G3 Switch 0E SP No 1-105-			
0-7	Set CNG send time interval		
	Some machines on the receiving second CNG interval.	g side may not be able to automatically switch the 3-	
	High order bit	3000-2250ms: 3000-50xNms	
		$3000 - 50 \text{ x Nms } 0F (3000 \text{ ms}) \le N \le FF (2250 \text{ ms})$	
	Low order bit	00-0E(3000-3700ms: 3000+50xNms	
		$3000 - 50 \text{ x Nms 0F } (3000 \text{ ms}) \le N \le 0F (3700 \text{ ms})$	

G3 S	Switch 0F	SP No. 1-105-016
No	FUNCTION	COMMENTS
0	Alarm when an error occurred in Phase C or later  0: Disabled 1: Enabled	If the customer wants to hear an alarm after each error communication, change this bit to "1".
1	Alarm when the handset is off-hook at the end of communication  0: Disabled  1: Enabled	If the customer wants to hear an alarm if the handset is off-hook at the end of fax communication, change this bit to "1".
2-7	Not used	Do not change the settings.

# 4.2.6 G3-2/3 SWITCHES

These switches require an optional G3 interface unit.

G3-3 switches are the same as for G3-2 switches.

G3-2	Switch	า 00		SP No. 1-106-001
No		FUN	ICTION	COMMENTS
0-1	Monitor speaker during communication (tx and rx)			(0, 0): The monitor speaker is disabled all through the communication.
	Bit 1 Bit 0 Setting 0 0 Disabled		Disabled	(0, 1): The monitor speaker is on up to phase B in the T.30 protocol.
	0 1 1	1 0 1	Up to Phase B All the time Not used	(1, 0): Used for testing. The monitor speaker is on all through the communication. Make sure that you reset these bits after testing.
2	Monitor speaker during memory transmission 0: Disabled 1: Enabled			1: The monitor speaker is enabled during memory transmission.
3-7	Not us	sed		Do not change the settings.

G3-2	Switch 01	SP No. 1-106-002
No	FUNCTION	COMMENTS
0-3	Not used	Do not change the settings.
4	DIS frame length  0: 10 bytes 1: 4 bytes	1: The bytes in the DIS frame after the 4th byte will not be transmitted (set to 1 if there are communication problems with PC-based faxes which cannot receive the extended DIS frames).
5	Not used	Do not change the setting.
6	Forbid CED/AMsam output  0: Off  1: On (Forbid output)	Do not change this setting, unless the communication problem is caused by a CED or ANSam transmission.
7	Not used	Do not change the setting.

G3-2	Switch 02	SP No. 1-106-003
No	FUNCTION	COMMENTS
0	G3 protocol mode used  0: Standard and non-standard  1: Standard only	Change this bit to 1 only when the other end can only communicate with machines that send T.30-standard frames only.  1: Disables NSF/NSS signals (these are used in non-standard mode communication)
1-4	Not used	Do not change the settings.
5	Use of modem rate history for transmission using Quick/Speed Dials  0: Disabled  1: Enabled	<ul> <li>0: Communications using Quick/Speed Dials always start from the highest modem rate.</li> <li>1: The machine refers to the modem rate history for communications with the same machine when determining the most suitable rate for the current communication.</li> </ul>
6	Not used	Do not change the settings.
7	Short preamble <b>0:</b> Disabled <b>1:</b> Enabled	Refer to Appendix B in the Group 3 Facsimile Manual for details about Short Preamble.

G3-2	Switch 03	SP No. 1-106-004
No	FUNCTION	COMMENTS
0	DIS detection number (Echo countermeasure)  0: 1 1: 2	<ul><li>0: The machine will hang up if it receives the same DIS frame twice.</li><li>1: Before sending DCS, the machine will wait for the second DIS which is caused by echo on the line.</li></ul>
1	Not used	Do not change the settings.
2	V.8 protocol  0: Disabled  1: Enabled	<b>0:</b> V.8/V.34 communications will not be possible. <b>Note:</b> Do not set to 0 unless the line condition is always bad enough to slow down the data rate to 14.4 kbps or lower.
3	ECM frame size  0: 256 bytes  1: 64 bytes	Keep this bit at "0" in most cases.

G3-2	Switch 03	SP No. 1-106-004
No	FUNCTION	COMMENTS
4	CTC transmission conditions  0: After one PPR signal received  1: After four PPR signals received (ITU-T standard)	<b>0:</b> When using ECM in non-standard (NSF/NSS) mode, the machine sends a CTC to drop back the modem rate after receiving a PPR, if the following condition is met in communications at 14.4, 12.0, 9.6, and 7.2 kbps.
		√NTransmit≤NRe send
		NTransmit- Number of transmitted frames NResend- Number of frames to be retransmitted
		1: When using ECM, the machine sends a CTC to drop back the modem rate after receiving four PPRs.
		PPR, CTC: These are ECM protocol signals.
		This bit is not effective in V.34 communications.
5	Modem rate used for the next page after receiving a negative code (RTN or PIN)  0: No change 1: Fallback	1: The machine's tx modem rate will fall back before sending the next page if a negative code is received. This bit is ignored if ECM is being used.
6	Not used	Do not change the settings.
7	Select detection of reverse polarity in ringing 0: Off 1: On	This switch is used to prevent reverse polarity in ringing on the phone line (applied to PSTN-G3 ringing). Do not change this setting  0: No detection → Outside Japan  1: Detection → Inside Japan only

G3-2	Switch 04	SP No. 1-106-005
No	FUNCTION	COMMENTS
0 to 3	Training error detection threshold	0 - F (Hex); 0 - 15 bits  If the number of error bits in the received TCF is below this threshold, the machine informs the sender that training has succeeded.
4-7	Not used	Do not change the settings.

G3-2	Switch	05		SP No. 1-106-006
No		FUN	CTION	COMMENTS
0	Initial T	x mode	m rate	These bits set the initial starting modem rate for
to			Setting (bps)	transmission.
3	_	0 0 1		
		0 1 0		Use the dedicated transmission parameters if you
		0 1 1		need to change this for specific receivers.
		1 0 0		
			12.0 k	If a modem rate 14.4 kbps or slower is selected, V.8
			14.4 k	protocol should be disabled manually.
			16.8 k	
			19.2 k	Cross reference
			21.6 k	V.8 protocol on/off - SG3 switch 03, bit2
			24.0 k	
			26.4 k	
			28.8 k	
	1		31.2 k	
	Othoria	1 1 0	33.6 k	
			- Not used	T
4			ype for 9.6 k or	These bits set the initial modern type for 9.6 and 7.2
to	7.2 kbp		0.40	kbps, if the initial modem rate is set at these speeds.
5	Bit 5	Bit 4	Setting	
	0	0	V.29	
	0	1	V.17	
	1	0	V.34	
	Nation	l l	Not used	De not also not the notified
6-7	Not use	ea		Do not change the settings.

G3-2	G3-2 Switch 06				SP No. 1-106-007
No		Fl	JNC	CTION	COMMENTS
0	Initial Rx	mc	der	n rate	These bits set the initial starting modem rate for
to	Bit 3 2	1	0	Setting (bps)	reception.
3	0 0	0	1	2.4 k	
	0 0	1	0	4.8 k	Use a lower setting if high speeds pose problems
	0 0	1	1	7.2 k	during reception.
	0 1	0	0	9.6 k	
	0 1	0	1	12.0 k	If a modem rate 14.4 kbps or slower is selected, V.8
	0 1	1	0	14.4 k	protocol should be disabled manually.
	0 1	1	1	16.8 k	
	1 0	0	0	19.2 k	Cross reference
	1 0	0	1	21.6 k	V.8 protocol on/off - SG3 switch 03, bit2
	1 0	1	0	24.0 k	, ,
	1 0	•	•	26.4 k	
	1 1	0	0	28.8 k	
	1 1	0	1	31.2 k	
	1 1	1	0	33.6 k	
	Other set	ting	gs -	Not used	

G3-2	G3-2 Switch 06					SP No. 1-106-007
No			Fl	JNC	CTION	COMMENTS
4	Modem	ty	ре	s a	vailable for	The setting of these bits is used to inform the
to	receptio	n				transmitting terminal of the available modem type for
7	Bit 7 6	;	5	4	Setting	the machine in receive mode.
	0 0	)	0	1	V.27ter	
	0 0	)	1	0	V.27ter, V.29	If V.34 is not selected, V.8 protocol must be
	0 0	)	1	1	V.27ter, V.29	disabled manually.
					V.33	·
	0 1		0	0	V.27ter, V.29,	Cross reference
					V.17/V.33	V.8 protocol on/off - SG3 switch 03, bit2
	0 1		0	1	V.27ter, V.29,	
					V.17/V33,	
					V.34	
	Other se	etti	ing	gs -	Not used	

G3-2	Switch 07		SP No. 1-106-008
No	FUNC	TION	COMMENTS
to 1	PSTN cable equ (tx mode: Interna Bit 1 Bit 0 0 0 0 1 1 0 1 1		Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange. Use the dedicated transmission parameters for specific receivers.  Also, try using the cable equalizer if one or more of the following symptoms occurs.  Communication error  Modem rate fallback occurs frequently.
			Note: This setting is not effective in V.34 communications.
to 3	PSTN cable equalizer (rx mode: Internal)  Bit 3 Bit 2 Setting  0 0 None  0 1 Low  1 0 Medium  1 1 High		Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange.  Also, try using the cable equalizer if one or more of the following symptoms occurs.  Communication error with error codes such as 0-20, 0-23, etc.  Modem rate fallback occurs frequently.  Note: This setting is not effective in V.34 communications.
4	PSTN cable equ (V.8/V.17 rx mod 0: Disabled 1: Enabled		Keep this bit at "1".
5-7	Not used		Do not change the settings.

G3-2 Switch 08 - Not used (do not change the settings)
G3-2 Switch 09 - Not used (do not change the settings)

G3-2	Switch 0A	SP No. 1-106-011
No	FUNCTION	COMMENTS
0 1	Maximum allowable carrier drop during image data reception  Bit 1 Bit 0 Value (ms)  0 0 200  0 1 400  1 0 800  1 Not used	These bits set the acceptable modem carrier drop time.  Try using a longer setting if error code 0-22 is frequent.
2	Select cancellation of high- speed RX if carrier signal lost while receiving 0: Off 1: On	This switch setting determines if high-speed receiving ends if the carrier signal is lost when receiving during non-ECM mode
3	Not used	Do not change the settings.
4	Maximum allowable frame interval during image data reception.  0: 5 s 1: 13 s	This bit set the maximum interval between EOL (end-of-line) signals and the maximum interval between ECM frames from the other end.  Try using a longer setting if error code 0-21 is frequent.
5	Not used	Do not change the settings.
6	Reconstruction time for the first line in receive mode  0: 6 s 1: 12 s	When the sending terminal is controlled by a computer, there may be a delay in receiving page data after the local machine accepts set-up data and sends CFR. This is outside the T.30 recommendation. But, if this delay occurs, set this bit to 1 to give the sending machine more time to send data.  Refer to error code 0-20.  ITU-T T.30 recommendation: The first line should come within 5 s of CFR.
7	Not used	Do not change the settings.

G3-2 Switch 0B- Not used (do not change the settings)
G3-2 Switch 0C- Not used (do not change the settings)
G3-2 Switch 0D - Not used (do not change the settings)
G3-2 Switch 0E - Not used (do not change the settings)
G3-2 Switch 0F - Not used (do not change the settings)

# 4.2.7 G4 INTERNAL SWITCHES

The G4 internal switches (SW00 to 1F) are displayed but do not change these settings.

# 4.2.8 G4 PARAMETER SWITCHES

The G4 parameter switches (SW00 to 0F) are displayed but do not change these settings.

## 4.2.9 IP FAX SWITCHES

IP Fax	Switch 00	SP No. 1-111-001
No.	FUNCTION	COMMENTS
0	Not used	Do not change this setting.
1	IP Fax Transport	Selects TCP or UDP protocol for IP-Fax
•	<b>0</b> : TCP, 1: UDP	
2	IP Fax single port selection	Selects single data port.
	0: OFF, 1: ON (enable)	
	IP Fax double ports (single data	Selects whether IP-Fax uses a double port.
3	port) selection	
	0: OFF, 1: ON (enable)	
4	IP Fax Gatekeeper	Enables/disables the gatekeeper for IP-Fax.
	0: OFF, 1: ON (enable)	
5	IP Fax T30 bit signal reverse	Reverses the T30 bit signal.
	0: LSB first, 1: MSB first	
	IP Fax max bit rate setting	When "0" is selected, the max bit rate does
6	0: Not affected, 1: Affected	not affect the value of the DIS/DCS.
		When "1" is selected, the max bit rate affects the value of the DIS/DCS.
	IP Fax received telephone number	When "0" is selected, fax data is received
	confirmation	without checking the telephone number.
	<b>0</b> : No confirmation, 1: Confirmation	When "1" is selected, fax data is received only
7		when confirming that the telephone number
		from the sender matches the registered
		telephone number in this machine. If this
		confirmation fails, the line is disconnected.

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IP Fax	IP Fax Switch 01 SP No. 1-111-002							
No.	FUNCTION	COMMENTS						
	IP Fax delay level setting Selects the acceptable delay level.			T =	T =	1	1	7
			Bit 3	Bit 2	Bit 1	Bit 0		
	Level 0 is the highest quality		0	0	0	0	Level 0	
0-3	Default is "0000" (level 0).		0	0	0	1	Level 1	
			0	0	1	0	Level 2	
			0	0	1	1	Level 3	]
	IP Fax preamble wait time setting			e pream	ble wait	t time.		
		[00	to 0f]					
4-7			ere are nbinatio		es in thi	s 4-bit b	oinary switc	h
		Wa	iting tin	ne: set v	alue le	vel x 10	0 ms	
		Ма	x: 0f (1	500 ms)	Min: 00	O (No wa	ait time)	
		The	e defaul	It is "000	00" (00H	H).		

IP Fax	Switch 02	SP No. 1-111-003
No.	FUNCTION	COMMENTS
0	IP Fax bit signal reverse setting  0: Maker code setting  1: Internal bit switch setting	When "0" is selected, the bit signal reverse method is decided by the maker code. When "1" is selected, the bit signal reverse method is decided by the internal bit switch.  NOTE: When communicating between IP Fax devices, LSB first is selected.)
1	IP Fax transmission speed setting <b>0</b> : Modem speed  1: No limitation	Selects the transmit speed for IP Fax communication.
2	SIP transport setting 0: TCP 1: UDP	This bit switch sets the transport that has priority for receiving IP Fax data. This function is activated only when the sender has both TCP and UDP.
3-7	Not used	Do not change these settings.

IP Fax	Switch 03	SP No. 1-111-004
No.	FUNCTION	COMMENTS
0	Effective field limitation for G3	Limits the effective field for standard G3
	standard function information	function information.
	<b>0</b> : OFF, 1: 4byte (DIS)	
1	Switching between G3 standard	Enables/disables switching between G3
	and G3 non standard	standard and G3 non-standard.
	<b>0</b> : Enable switching	
	1: G3 standard only	
2	Al modem rate function	Enables/disables the AI modem rate.
	0: OFF, <b>1</b> : ON (enable)	
3	ECM frame size selection at	Selects the ECM frame size for sending.
	transmitting	
	<b>0</b> : 256byte, 1: 64byte	
4	DIS detection times for echo	Sets the number of times for DIS to detect
	prevention	echoes.
	<b>0</b> : 1 time, 1: 2 times	
5	CTC transmission selection	When "0" is selected, the transmission
	<b>0</b> : PPRx1	condition is decided by error frame numbers.
	1: PPRx4	When "1" is selected, the transmission
		condition is based on the ITU-T method.
6	Shift down setting at receiving	Selects whether to shift down when negative
	negative code	codes are received.
	<b>0</b> : OFF, 1: ON	
7	Not used	Do not change this setting.

IP Fax	Switch 04	SP No. 1-111-005
No.	FUNCTION	COMMENTS
0	TCF error threshold	Sets the TCF error threshold level.
1		[00 to 0f]
2		The default is "1111" (0fH).
3		
4-7	Not used	Do not change these settings.

IP Fax	P Fax Switch 05 SP No. 1-111-006							
No.		FU	NCTION			COMMENTS		
0-3			setting for tra					
0-3	Sets the	e moder	n bit rate for	transmiss	sion. The default	is "0110" (14.4K bps).		
	Bit 4	Bit 3	Bit 2	Bit 1				
	0	0	0	1	2400 bps			
	0	0	1	1	4800 bps			
	0	0	1	1	7200 bps			
	0	1	0	0	9600 bps			
	0	1	0	1	12.0 Kbps			
	0	1	1	0	14.4 Kbps			
	0	1	1	1	16.8 Kbps			
	1	0	0	0	19.2 Kbps			
	1	0	0	1	21.6 Kbps			
	1	0	1	0	24.0 Kbps			
	1	0	1	1	26.4 Kbps			
	1	1	0	0	28.8 Kbps			
	1	1	0	1	31.2 Kbps			
	1	1	1	0	33.6 Kbps			
•	Modem	setting	for transmiss	sion				
4-5	Sets the	e moder	n for transmi	ssion.				
	The def	ault is "	00" (V29).					
	Bit 5	Bit 4						
	0	0	V29					
	0	1	V17					
	1	0	V34					
	1	1	Not used					
6-7	Not use	:d			Do not change	these settings.		

IP Fax	Sv	vitch 06	;		SP No. 1-111-007	
No.	FUNCTION			CTION		COMMENTS
		odem bi ets the n		_	-	ption ception. The default is "0110" (14.4K bps).
		Bit 7	Bit 6	Bit 5	Bit 4	
		0	0	0	1	V27ter
0-3		0	0	1	0	V27ter, V29
		0	0	1	1	V27ter, V29, V33 (invalid)
		0	1	0	0	V27ter, V29, V17
		0	1	0	1	V27ter, V29, V17, V34
		odem se	•	•		otion. The default is "0100" (V27ter, V29, V17).
		Bit 3	Bit 1	Bit 1		
		0	0	1	V27	27ter
4-7		0	1	0	V27	27ter, V29
		0	1	1	Not	ot used
		1	0	0	V27	27ter, V29, V17
		1	0	1	V27 V34	27ter, V29, V17, 34

IP Fax	Switch 07	SP No. 1-111-008
No.	FUNCTION	COMMENTS
0	TSI information	Adds or does not add TSI information to
	0: Not added, 1: Added	NSS(S).
1	DCN transmission setting at T1	Transmits or does not transmit DCN at T1
	timeout	timeout.
	<b>0</b> : Not transmitted, 1: Transmitted	
2	Not used	Do not change this setting.
3	Hang up setting at DIS reception	Sets whether the machine disconnects after
	disabled	DIS reception.
	0: No hang up	
	1: Hang up after transmitting DCN	
4	Number of times for training	Selects the number of times training is done at
	<b>0</b> : 1 time, 1: 2 times	the same bit rate.
5	Space CSI transmission setting at	When "0" is selected, frame data is enabled.
	no CSI registration	When "1" is selected, the transmitted data is
	<b>0</b> : Not transmitted, 1: Transmitted	all spaces.
6-7	Not used	Do not change these settings.

IP Fax	Switch 08				SP No	. 1-111-009		
No.	FUNCTION			COMM	ENTS			
0-1	T1 timer adjustment		Bit 1	Bit 0				
	Adjusts the T1 timer.		0	0	35 sec			
	The default is "00" (35 seconds).		0	1	40 sec			
			1	0	50 sec			
			1	1	60 sec			
2-3	T4 timer adjustment	L				। त		
2-3	T4 timer adjustment		Bit 3	Bit 2				
	Adjust the T4 timer.		0	0	3 sec			
	The default is "00" (3 seconds).		0	1	3.5 sec			
			1	0	4 sec			
			1	1	5 sec			
4-5	T0 timer adjustment					_		
	Bit 5 Bit 4							
	0 0 <b>75 sec</b>							
	0 1 120 sec							
	1 0 180 sec							
	1 1 240 sec							
	Adjusts the fail safe timer. This timer sets the interval between "setup" data							
	transmission and T.38 phase decision. If your destination return is late on the							
	network or G3 fax return is late, adjust the longer interval timer.							
	The default is "00" (75 seconds).	ŭ						
6-7	Not used	Do not cl	hange t	hese se	ttings.			

## 4.3 NCU PARAMETERS

The following tables give the RAM addresses and the parameter calculation units that the machine uses for ringing signal detection and automatic dialing. The factory settings for each country are also given. Most of these must be changed by RAM read/write (SP2-102), but some can be changed using NCU Parameter programming (SP2-103, 104 and 105); if SP2-103, 104 and 105 can be used, this will be indicated in the Remarks column. The RAM is programmed in hex code unless (BCD) is included in the Unit column.

**NOTE:** The following addresses describe settings for the standard NCU. Change the fourth digit from "5" to "6" (e.g. 680500 to 680600) for the settings for the first optional G3 interface unit and from "5" to "7" (e.g. 680700) for the settings for the second optional G3 interface unit.

Address	F	unction		Unit	R	emarks			
680500	Country/Area co	ode for N	ICU						
	Use the Hex value to program the country/area code directly into this address, or								
	use the decimal	value to	program it us	ing SP2-103-00	11				
	Country/Area	Decim	al Hex						
	France	00	00	Hong	Kong 20	14			
	Germany	01	01	South	Africa 21	15			
	UK	02	02	Austra	lia 22	16			
	Italy	03	03	New Z	ealand 23	17			
	Austria	04	04	Singap	ore 24	18			
	Belgium	05	05	Malays	sia 25	19			
	Denmark	06	06	China	26	1A			
	Finland	07	07	Taiwar	າ 27	1B			
	Ireland	80	08	Korea	28	1C			
	Norway	09	09	Greece	e 33	21			
	Sweden	10	0A	Turkey		20			
	Switzerland	11	0B	Greece	e 33	21			
	Portugal	12	0C	Hunga	ry 34	22			
	Holland	13	0D	Czech		23			
	Spain	14	0E	Poland	l 36	24			
	Israel	15	0F						
	USA	17	11						
	Asia	18	12						
680501	Line current det	ection ti	me	20 ms		ent detection is			
680502	Line current wa	it time			disabled.				
680503	Line current dro	p detect	time		Line curre detected contains I	if 680501			
680504	PSTN dial tone frequency upper limit (high byte)		Hz (BCD)	FF(H), tor	dresses contain ne detection is				
680505	PSTN dial tone (low byte)	frequen	cy upper limit		disabled.				

Address	Function	Unit	Remarks
680506	PSTN dial tone frequency lower limit	Hz (BCD)	If both addresses contain
	(high byte)	(= (= ;	FF(H), tone detection is
680507	PSTN dial tone frequency lower limit		disabled.
	(low byte)		
680508	PSTN dial tone detection time	20 ms	If 680508 contains FF(H),
680509	PSTN dial tone reset time (LOW)		the machine pauses for
68050A	PSTN dial tone reset time (HIGH)	]	the pause time (address
68050B	PSTN dial tone continuous tone time		68050D / 68050E).
68050C	PSTN dial tone permissible drop time		Italy: See Note 2.
68050D	PSTN wait interval (LOW)		
68050E	PSTN wait interval (HIGH)		
68050F	PSTN ring-back tone detection time	20 ms	Detection is disabled if this contains FF.
680510	PSTN ring-back tone off detection time	20 ms	
680511	PSTN detection time for silent period after ring-back tone detected (LOW)	20 ms	
680512	PSTN detection time for silent period after ring-back tone detected (HIGH)	20 ms	
680513	PSTN busy tone frequency upper	Hz (BCD)	If both addresses contain
	limit (high byte)		FF(H), tone detection is
680514	PSTN busy tone frequency upper limit (low byte)		disabled.
680515	PSTN busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680516	PSTN busy tone frequency lower limit (low byte)		disabled.
680517	PABX dial tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680518	PABX dial tone frequency upper limit (low byte)		disabled.
680519	PABX dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
68051A	PABX dial tone frequency lower limit (low byte)		uldusiou.
68051B	PABX dial tone detection time	20 ms	If 68051B contains FF,
68051C	PABX dial tone reset time (LOW)		the machine pauses for
68051D	PABX dial tone reset time (HIGH)		the pause time (680520 /
68051E	PABX dial tone continuous tone time		680521).
68051F	PABX dial tone permissible drop time		
680520	PABX wait interval (LOW)		
680521	PABX wait interval (HIGH)		
680522	PABX ringback tone detection time	20 ms	If both addresses contain
680523	PABX ringback tone off detection time	20 ms	FF(H), tone detection is disabled.
680524	PABX detection time for silent period after ringback tone detected (LOW)	20 ms	If both addresses contain FF(H), tone detection is disabled.

Address	Function	Unit	Remarks
680525	PABX detection time for silent	20 ms	
	period after ringback tone detected (HIGH)		
680526	PABX busy tone frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680527	PABX busy tone frequency upper limit (low byte)		disabled.
680528	PABX busy tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680529	PABX busy tone frequency lower limit (low byte)		disabled.
68052A	Busy tone ON time: range 1	20 ms	
68052B	Busy tone OFF time: range 1		
68052C	Busy tone ON time: range 2		
68052D	Busy tone OFF time: range 2		
68052E	Busy tone ON time: range 3		
68052F	Busy tone OFF time: range 3	20 ms	
680530	Busy tone ON time: range 4		
680531	Busy tone OFF time: range 4		
680532	Busy tone continuous tone detection time		
	required for detection (a setting of 4 cy OFF must be detected twice).  Tolerance (±)  Bit 1 0  0 0 75% Bits 2 and 3 mu  0 1 50% be kept at 0.  1 0 25%  1 1 12.5%	ust always	
680534	Bits 7, 6, 5, 4 - number of cycles requi		If both addresses contain
000334	upper limit (high byte)	TIZ (BCD)	FF(H), tone detection is
680535	International dial tone frequency	-	disabled.
000000	upper limit (low byte)		
680536	International dial tone frequency lower limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680537	International dial tone frequency lower limit (low byte)		disabled.
680538	International dial tone detection time	20 ms	If 680538 contains FF,
680539	International dial tone reset time (LOW)		the machine pauses for the pause time (68053D /
68053A	International dial tone reset time (HIGH)		68053E).
68053B	International dial tone continuous tone time		Belgium: See Note 2.
68053C	International dial tone permissible drop time		
68053D	International dial wait interval (LOW)		

Address	Function	Unit	Remarks
68053E	International dial wait interval (HIGH)		
68053F	Country dial tone upper frequency limit (HIGH)	Hz (BCD)	If both addresses contain FF(H), tone detection is
680540	Country dial tone upper frequency limit (LOW)		disabled.
680541	Country dial tone lower frequency limit (HIGH)		If both addresses contain FF(H), tone detection is
680542	Country dial tone lower frequency limit (LOW)		disabled.
680543	Country dial tone detection time	20 ms	If 680543 contains FF,
680544	Country dial tone reset time (LOW)		the machine pauses for
680545	Country dial tone reset time (HIGH)		the pause time (680548 / 680549).
680546	Country dial tone continuous tone time		
680547	Country dial tone permissible drop time	20 ms	
680548	Country dial wait interval (LOW)		
680549	Country dial wait interval (HIGH)		
68054A	Time between opening or closing the DO relay and opening the OHDI relay	1 ms	See Notes 3, 6 and 8. SP2-103-012 (parameter 11).
68054B	Break time for pulse dialing	1 ms	See Note 3. SP2-103-013 (parameter 12).
68054C	Make time for pulse dialing	1 ms	See Note 3. SP2-103-014 (parameter 13).
68054D	Time between final OHDI relay closure and DO relay opening or closing	1 ms	See Notes 3, 6 and 8. SP2-103-015 (parameter 14). This parameter is only valid in Europe.
68054E	Minimum pause between dialed digits (pulse dial mode)	20 ms	See Note 3 and 8. SP2- 103-016 (parameter 15).
68054F	Time waited when a pause is entered at the operation panel		SP2-103-017 (parameter 16). See Note 3.
680550	DTMF tone on time	1 ms	SP2-103-018 (parameter 17).
680551	DTMF tone off time		SP2-103-019 (parameter 18).
680552	Tone attenuation level of DTMF signals while dialing	-N x 0.5 -3.5 dBm	SP2-103-020 (parameter 19). See Note 5.
680553	Tone attenuation value difference between high frequency tone and low frequency tone in DTMF signals	-dBm x 0.5	SP2-103-021 (parameter 20). The setting must be less than –5dBm, and should not exceed the setting at 680552h above. See Note 5.

Address	Function	Unit	Remarks
680554	PSTN: DTMF tone attenuation level	-N x 0.5 -3.5	SP2-103-022 (parameter
000555	after dialling	dBm	21). See Note 5.
680555	ISDN: DTMF tone attenuation level after dialling -dBm x (		See Note 5
680556	Not used		Do not change the settings.
680557	Time between 68054Dh (NCU parameter 14) and 68054Eh (NCU parameter 15)	1 ms	This parameter takes effect when the country code is set to France.
680558	Not used		Do not change the setting.
680559	Grounding time (ground start mode)	20 ms	The Gs relay is closed for this interval.
68055A	Break time (flash start mode)	1 ms	The OHDI relay is open for this interval.
68055B	International dial access code (High)	BCD	For a code of 100:
68055C	International dial access code (Low)		68055B - F1 68055C - 00
68055D	PSTN access pause time 20 ms		This time is waited for each pause input after the PSTN access code. If this address contains FF[H], the pause time stored in address 68054F is used.  Do not set a number more than 7 in the UK.
68055E	Progress tone detection level, and cadence detection enable flags	Bit 7 Bit 6 Bit 9 0 0 0 0 0 1 0 1 0 1 0 0 1 1 0 Bits 2, 0 - Se	-25.0 -35.0 -30.0 -40.0 -49.0
68055F to	Not used		Do not change the settings.
680564	Long distance collings. (1901)	DCD	Fana and of O
680565 680566	Long distance call prefix (HIGH)  Long distance call prefix (LOW)	BCD BCD	For a code of 0: 680565 - FF 680566 - FF
680567 to 680571	Not used		Do not change the settings.
680572	Acceptable ringing signal frequency: range 1, upper limit	1000/ N (Hz).	SP2-103-003 (parameter 02).
680573	Acceptable ringing signal frequency: range 1, lower limit		SP2-103-004 (parameter 03).
680574	Acceptable ringing signal frequency: range 2, upper limit		SP2-103-005 (parameter 04).
680575	Acceptable ringing signal frequency: range 2, lower limit		SP2-103-006 (parameter 05).

Address	Function	Unit	Remarks		
680576	Number of rings until a call is detected	1	SP2-103-007 (parameter 06). The setting must not be zero.		
680577	Minimum required length of the first ring	20 ms	See Note 4. SP2-103-008 (parameter 07).		
680578	Minimum required length of the second and subsequent rings	20 ms	SP2-103-009 (parameter 08).		
680579	Ringing signal detection reset time (LOW)	20 ms	SP2-103-010 (parameter 09).		
68057A	Ringing signal detection reset time (HIGH)		SP2-103-011 (parameter 10).		
68057B to 680580	Not used		Do not change the settings.		
680581	Interval between dialing the last digit and switching the Oh relay over to the external telephone when dialing from the operation panel in handset mode.	20 ms	Factory setting: 500 ms		
680582	Bits 0 and 1 - Handset off-hook detection  Bit 1 0 Setting 0 0 200 ms 0 1 800 ms Other Not used  Bits 2 and 3 - Handset on-hook detection Bit 3 2 Setting 0 0 200 ms 0 1 800 ms Other Not used  Bits 4 to 7 - Not used				
680583 to 6805A0	Not used		Do not change the settings.		
6805A1	Acceptable CED detection frequency upper limit (high byte)	BCD (Hz)	If both addresses contain FF(H), tone detection is		
6805A2	Acceptable CED detection frequency upper limit (low byte)		disabled.		
6805A3	Acceptable CED detection frequency lower limit (high byte)	If both addresses contain FF(H), tone detection is			
6805A4	Acceptable CED detection frequency lower limit (low byte)	disabled.			
6805A5	CED detection time	20 ms ± 20 ms	Factory setting: 200 ms		
6805A6	Acceptable CNG detection frequency upper limit (high byte)  BCD (Hz)  If both addresses conta				
6805A7	Acceptable CNG detection frequency upper limit (low byte)	disabled.			

Address	Function	Unit	Remarks
6805A8	Acceptable CNG detection frequency	BCD (Hz)	If both addresses contain
000540	lower limit (high byte)		FF(H), tone detection is disabled.
6805A9	Acceptable CNG detection frequency lower limit (low byte)		uisabieu.
6805AA	Not used		Do not change the
			setting.
6805AB	CNG on time	20 ms	Factory setting: 500 ms
6805AC	CNG off time	20 ms	Factory setting: 3000 ms
6805AD	Number of CNG cycles required for detection		The data is coded in the same way as address 680533.
6805AE	Not used		Do not change the settings.
6805AF	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (high byte)	Hz (BCD)	If both addresses contain FF(H), tone detection is disabled.
6805B0	Acceptable AI short protocol tone (800Hz) detection frequency upper limit (low byte)		
6805B1	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (high byte)	Hz(BCD)	If both addresses contain FF(H), tone detection is disabled.
6805B2	Acceptable AI short protocol tone (800Hz) detection frequency lower limit (low byte)		
6805B3	Detection time for 800 Hz Al short protocol tone	20 ms	Factory setting: 360 ms
6805B4	PSTN: Tx level from the modem	-N – 3 dBm	SP2-103-002 (parameter 01).
6805B5	PSTN: 1100 Hz tone transmission level	- N 6805B4 - 0 See Note 7.	0.5N 6805B5 –3.5 (dB)
6805B6	PSTN: 2100 Hz tone transmission level	- N6805B4 - 0 See Note 7.	0.5N 6805B6 –3 (dB)
6805B7	PABX: Tx level from the modem	- dBm	
6805B8	PABX: 1100 Hz tone transmission level	- N 6805B7 - (	0.5N 6805B8 (dB)
6805B9	PABX: 2100 Hz tone transmission level	- N 6805B7 - (	0.5N 6805B9 (dB)
6805BD	Modem turn-on level (incoming signal detection level)	-37-0.5N (dBm)	
6805BE to 6805C6	Not used		Do not change the settings.
6805C7	Bits 0 to 3 – Not used.  Bit 4 – V.34 protocol dump <b>0:</b> Simple,  Bits 5 to 7 – Not used.	1: Detailed (de	efault)
6805C8 to	Not used		Do not change the settings.
6805D9			
6805DA	T.30 T1 timer	1 s	

Address		Fu	unction	1			Unit	Remarks
6805E0 bit 3	Maximum wait time for post message						<b>0</b> : 12 s <b>1</b> : 30 s	1: Maximum wait time for post message (EOP/EOM/MPS) can be changed to 30 s. Change this bit to "1" if communication errors occur frequently during V.17 reception.
6805E3	voltage/ externa	setting f DP dete	ction fo	or an ne.			0: Auto 1: Fixed V	Do not change these settings
	Fixed) f	or an ex	ternally	conne	ected		e settings (1: e.	
	Bit 7	Bit 6	Bit 5	Bit 4				
	0	0	0	0			used	
	0	0	0	1		2.75		
	0	0	1	0		5.5		
	1	0	0	0		22 \		
	1	1	1	1			25 V	
6805E4		ts the lev		Bit	1	0	<b>RT=0</b> (Low)	
		signal, E				1	RT=1 (High	
		call sigi	naı	Bit	3 _	0	RZ=0 (High)	
	impeda	nce				1	RZ=1	
							(Composite)	
6805E5		ts the rin		Bit		0	RT=0 (Low)	If any setting is changed,
		n metho	od, Bit			1	RT=1 (High	select a setting that is
	1 sets t	ne ring on metho	d	Bit	1 _	0	Use RDTP	higher than the default setting.
	when fix		u			1	Use RDTN	setting.
	Here is a summary of the voltages for of off-hook for DP detection.				tages	s for	the detection	
	Bit 7	Bit 6	В	it 5	Bit	t <b>4</b>		]
	0	0		0	C	)	Not used	]
	0	0		0	1		2.75 V	]
	0	0		1	C	)	5.5 V	]
	1	0		0	О	)	22 V	
	1	1		1	1		41.25 V	

#### **NOTES**

- 1. If a setting is not required, store FF in the address.
- 2. Italy and Belgium only

RAM address 68055E: the lower four bits have the following meaning.

Bit 2 - 1: International dial tone cadence detection enabled (Belgium)

Bit 1 - Not used

Bit 0 - 1: PSTN dial tone cadence detection enabled (Italy)

If bit 0 or bit 2 is set to 1, the functions of the following RAM addresses are changed.

680508 (if bit 0 = 1) or 680538 (if bit 2 = 1): tolerance for on or off state duration (%), and number of cycles required for detection, coded as in address 680533.

68050B (if bit 0 = 1) or 68053B (if bit 2 = 1): on time, hex code (unit = 20 ms) 68050C (if bit 0 = 1) or 68053C (if bit 2 = 1): off time, hex code (unit = 20 ms)

- 3. Pulse dial parameters (addresses 68054A to 68054F) are the values for 10 pps. If 20 pps is used, the machine automatically compensates.
- 4. The first ring may not be detected until 1 to 2.5 wavelengths after the time specified by this parameter.
- 5. The calculated level must be between 0 and 10.

The attenuation levels calculated from RAM data are:

High frequency tone:  $-0.5 \times N680552/680554-3.5 \text{ dBm}$ 

- 0.5 x N680555 dBm

Low frequency tone:  $-0.5 \times (N680552/680554 + N680553) -3.5 \text{ dBm}$ 

 $-0.5 \times (N680555 + N680553) dBm$ 

**NOTE:** N<sub>680552</sub>, for example, means the value stored in address 680552(H)

- 6. 68054A: Europe Between Ds opening and Di opening, France Between Ds closing and Di opening
  - 68054D: Europe Between Ds closing and Di closing, France Between Ds opening and Di closing
- 7. Tone signals which frequency is lower than 1500Hz (e.g., 800Hz tone for Al short protocol) refer to the setting at 6805B5h. Tones which frequency is higher than 1500Hz refer to the setting at 6805B6h.
- 8. 68054A, 68054D, 68054E: The actual inter-digit pause (pulse dial mode) is the sum of the period specified by the RAM addresses 68054A, 68054D, and 68054E.

## 4.4 DEDICATED TRANSMISSION PARAMETERS

There are two sets of transmission parameters: Fax and E-mail

Each Quick Dial Key and Speed Dial Code has eight bytes of programmable parameters allocated to it. If transmissions to a particular machine often experience problems, store that terminal's fax number as a Quick Dial or Speed Dial, and adjust the parameters allocated to that number.

The programming procedure will be explained first. Then, the eight bytes will be described.

### 4.4.1 PROGRAMMING PROCEDURE

- 1. Set the bit 0 of System Bit Switch 00 to 1.
- 2. Enter Address Book Management mode ([User Tools]> System Settings> Key Operator> Address Book Management).
- 3. Select the address book that you want to program.
- 4. For the fax parameter, select "Fax Dest.", for the E-mail parameter, select "E-mail", then press "Start". Make sure that the LED of the Start button lights green.
- 5. The settings for the switch 00 are now displayed. Press the bit number that you wish to change.
- 6. To scroll through the parameter switches, either:
- 7. Select the next switch: press "Next"

Select the previous switch: "Prev." until the correct switch is displayed. Then go back to step 6.

- 8. After the setting is changed, press "OK".
- 9. After finishing, reset bit 0 of System Bit Switch 00 to 0.

Service Tables

## 4.4.2 PARAMETERS

### Fax Parameters

The initial settings of the following fax parameters are all FF(H) - all the parameters are disabled.

### Switch 00

### **FUNCTION AND COMMENTS**

ITU-T T1 time (for PSTN G3 mode)

If the connection time to a particular terminal is longer than the NCU parameter setting, adjust this byte. The T1 time is the value stored in this byte (in hex code), multiplied by 1 second.

# Range:

0 to 120 s (00h to 78h)

FFh - The local NCU parameter factory setting is used.

Do not program a value between 79h and FEh.

Switc	Switch 01						
No	FUNCTION	COMMENTS					
0 to 4	Tx level  Bit 4 3 2 1 0 Setting  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  :	If communication with a particular remote terminal often contains errors, the signal level may be inappropriate. Adjust the Tx level for communications with that terminal until the results are better.  If the setting is "Disabled", the NCU parameter 01 setting is used.					
	0 1 1 1 1 -15 1 1 1 1 1 Disabled	<b>Note:</b> Do not use settings other than listed on the left.					
5 to 7	Cable equalizer  Bit 7 6 5 Setting  0 0 0 None  0 0 1 Low  0 1 0 Medium  0 1 1 High  1 1 1 Disabled	Use a higher setting if there is signal loss at higher frequencies because of the length of wire between the modem and the telephone exchange when calling the number stored in this Quick/Speed Dial.  Also, try using the cable equalizer if one or more of the following symptoms occurs.  • Communication error with error codes such as 0-20, 0-23, etc.  • Modem rate fallback occurs frequently.  Note: Do not use settings other than listed on the left.  If the setting is "Disabled", the bit switch setting is used.					

Swite	ch 02	
No	FUNCTION	COMMENTS
0 to 3	Initial Tx modem rate  Bit3 2 1 0 Setting (bps)  0 0 0 0 Not used 0 0 0 1 2,400 0 0 1 0 4,800 0 0 1 1 7,200 0 1 0 0 9,600 0 1 0 1 12,000 0 1 1 0 14,400 0 1 1 1 16,800 1 0 0 1 21,600 1 0 0 1 21,600 1 0 1 0 24,000 1 0 1 1 26,400 1 1 0 0 28,800 1 1 0 1 31,200 1 1 1 0 33,600 1 1 1 1 Disabled	If training with a particular remote terminal always takes too long, the initial modem rate may be too high. Reduce the initial Tx modem rate using these bits.  For the settings 14.4 or kbps slower, Switch 04 bit 4 must be changed to 0.  Note: Do not use settings other than listed on the left. If the setting is "Disabled", the bit switch setting is used.
4 -	Other settings: Not used	December of the continue
4-7	Not used	Do not change the settings.

Swit	ch 03			
No	FUNCTION			COMMENTS
0	Inch-mm conversion before tx		ersion before tx	The machine uses inch-based resolutions for
1	Bit 1	Bit 0	Setting	scanning. If "inch only" is selected, the printed copy
	0	0	Inch-mm	may be slightly distorted at the other end if that
			conversion	machine uses mm-based resolutions.
			available	
	0	1	Inch only	If the setting is "Disabled", the bit switch setting is
	1	0	Not used	used.
	1	1	Disabled	
2			ction method	(0, 1): Use this setting if echoes on the line are
to	Bit 3	Bit 2	•	interfering with the set-up protocol at the start of
3	0	0	First DIS or	transmission. The machine will then wait for the
			NSF	second DIS or NSF before sending DCS or NSS.
	0	1	Second DIS or	15 (1
	4	^	NSF Not wood	If the setting is "Disabled", the bit switch setting is
	1	0	Not used	used.
4	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1	Disabled	If transprincions to a specific destination always and
4	V.8 pro	DIOCOI		If transmissions to a specific destination always end
	<b>0</b> : Off <b>1</b> : Disa	blod		at a lower modem rate (14,400 bps or lower), disable V.8 protocol so as not to use V.34 protocol.
	1. DISC	ibieu		· · · · · · · · · · · · · · · · · · ·
				<b>0:</b> V.34 communication will not be possible.
				If the setting is "Disabled", the bit switch setting is used.

Swit	ch 03			
No		FUN	ICTION	COMMENTS
5		smit mo only	modes available de	This bit determines the capabilities that are informed to the other terminal during transmission. If the setting is "Disabled", the bit switch setting is used.
6 7	Bit 7 0 0 1	during tr Bit 6 0 1 0 1	ansmission Setting Off On Not used Disabled	For example, if ECM is switched on but is not wanted when sending to a particular terminal, use the (0, 0) setting.  Note that V.8/V.34 protocol and JBIG compression are automatically disabled if ECM is disabled. If the setting is "Disabled", the bit switch setting is used.

Switch 04 - Not used (do not change the settings)
Switch 05 - Not used (do not change the settings)
Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)
Switch 09 - Not used (do not change the settings)

# E-mail Parameters

The initial settings of the following e-mail parameters are all "0" (all parameters disabled).

Switch	00	
No	FUNCTION	COMMENTS
0	HM Compression mode for e-mail attachments  0: Off 1: On	Switches HM compression on and off for files attached to e-mails for sending.
1	HR Compression mode for e-mail attachments  0: Off  1: On	Switches HR compression on and off for files attached to e-mails for sending.
2	MMR Compression mode for e-mail attachments  0: Off 1: On	Switches MMR compression on and off for files attached to e-mails for sending.
3-6	Not used	Do not change these settings.
7	Designates the bits to reference for compression method of e-mail attachments  0: Registered (Bit 0 to 6)  1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits 00, 01, 02.

Switch	01	
No	FUNCTION	COMMENTS
0	Original width of e-mail attachment: A4  0: Off 1: On	Sets the original width of the e-mail attachment as A4.
1	Original width of e-mail attachment: B4  0: Off 1: On	Sets the original width of the e-mail attachment as B4.
2	Original width of e-mail attachment: A3  0: Off 1: On	Sets the original width of the e-mail attachment as A3.
3-6	Not used	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments <b>0</b> : Registered (Bit 0 to 6)  1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02 above. The "1" selection ignores the selections of Bits 00, 01, 02.

Switch 02		
No	FUNCTION	COMMENTS
0	Line resolution of e-mail attachment: 200 x 100  0: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x100.
1	Line resolution of e-mail attachment: 200 x 200  0: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x 200.
2	Line resolution of e-mail attachment: 200 x 400  0: Off 1: On	Sets the line resolution of the e-mail attachment as 200 x 400.
3	Not used	Do not change these settings.
4	Line resolution of e-mail attachment: 400 x 400  0: Off 1: On	Sets the line resolution of the e-mail attachment as 400 x 400.
5-6	Not used	Do not change these settings.
7	Designates the bits to reference for original size of e-mail attachments  0: Registered (Bit 0 to 6)  1: No registration.	The "0" selection (default) references the settings for Bits 00, 01, 02, 04 above. The "1" selection ignores the selections of Bits 00, 01, 02, 04.

Switch 03 - Not used (do not change the settings)
Switch 04 - Not used (do not change the settings)
Switch 05 - Not used (do not change the settings)
Switch 06 - Not used (do not change the settings)
Switch 07 - Not used (do not change the settings)
Switch 08 - Not used (do not change the settings)
Switch 09 - Not used (do not change the settings)

# Service Tables

# 4.5 SERVICE RAM ADDRESSES

# **ACAUTION**

Do not change the settings which are marked as "Not used" or "Read only."

## 680001 to 680004(H) - ROM version (Read only)

680001(H) - Revision number (BCD)

680002(H) - Year (BCD)

680003(H) - Month (BCD)

680004(H) - Day (BCD)

680006 to 680015(H) - Machine's serial number (16 digits - ASCII)

680018(H) - Total program checksum (low)

**680019(H)** - Total program checksum (high)

680020 to 68003F(H) - System bit switches

680050 to 68005F(H) - Printer bit switches

680060 to 68007F(H) - Communication bit switches

680080 to 68008F(H) - G3 bit switches

680090 to 68009F(H) - G3-2 bit switches

6800A0 to 6800AF(H) - G3-3 bit switches

6800D0(H) - User parameter switch 00 (SWUER\_00): Not used

6800D1(H) - User parameter switch 01 (SWUSR\_01): Not used

### 6800D2(H) - User parameter switch 02 (SWUSR 02)

Bit 0: Forwarding mark printing on forwarded messages 0: Disabled, 1: Enabled

Bit 1: Center mark printing on received copies

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 2: Reception time printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 3: TSI print on received messages 0: Disabled, 1: Enabled

Bit 4: Checkered mark printing

(This switch is not printed on the user parameter list.)

0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Not used

Bit 7: Not used

# 6800D3(H) - User parameter switch 03 (SWUSR\_03: Automatic report printout)

Bit 0: Transmission result report (memory transmissions) 0: Off, 1: On

Bit 1: Not used

Bit 2: Memory storage report 0: Off, 1: On

Bit 3: Polling reserve report (polling reception) 0: Off, 1: On

Bit 4: Polling result report (polling reception) 0: Off, 1: On

Bit 5: Transmission result report (immediate transmissions) 0: Off, 1: On

Bit 6: Polling clear report 0: Off, 1: On

Bit 7: Journal 0: Off, 1: On

# 6800D4(H) - User parameter switch 04 (SWUSR\_04: Automatic report printout)

Bit 0: Automatic confidential reception report output 0: Off, 1: On

Bit 1: Automatic communication failure report and transfer result report output

0: Off, 1: On

Bits 2 to 3: Not used

Bit 4: Indicates the parties 0: Not indicated, 1: Indicated

Bit 5: Include sender's name on reports 0: Off, 1: On

Bit 6: Not used

Bit 7: Inclusion of a sample image on reports 0: Off, 1: On

### 6800D5(H) - User parameter switch 05 (SWUSR\_05)

Bit 0: Substitute reception when the base copier is in an SC condition

0: Enabled, 1: Disabled

Bits 1 and 2: Condition for substitute rx when the machine cannot print messages (Paper end, toner end, jam, and during night mode)

Bit 2 1 Setting

0 0 The machine receives all the fax messages.

0 1 The machine receives the fax messages with RTI or CSI.

1 0 The machine receives the fax messages with the same ID code.

1 1 The machine does not receive anything.

Bit 3: Not used

Bit 4: Not used

Bit 5: Just size printing 0: Off, 1: On

Bit 6: Not used

Bit 7: Add paper display when a cassette is empty 0: Off, 1: On

### 6800D6(H) - User parameter switch 06 (SWUSR 06)

Bits 0 to 5: Not used

Bit 6: Scan sequence in Book transmission

0: Left page then right page, 1: Right page then left page

Bit 7: Not used

#### 6800D7(H) - User parameter switch 07 (SWUSR 07)

Bits 0 and 1: Not used

Bit 2: Parallel memory transmission 0: Off, 1: On

Bits 3 to 7: Not used

# Service Tables

### 6800D8(H) - User parameter switch 08 (SWUSR 08)

Bits 0 and 1: Not used.

Bit 2: Authorized reception

- 0: Only faxes from senders whose RTIs/CSIs are specified for this feature are accepted.
- 1: Only faxes from senders whose RTIs/CSIs are not specified for this feature are accepted.

Bits 3 to 7: Not used.

### 6800D9(H) - User parameter switch 09 (SWUSR 09): Not used

### 6800DA(H) - User parameter switch 10 (SWUSR 0A)

Bit 0: Not used

Bit 1: 2 into 1 0: Off, 1: On

Bit 2: Not used

Bit 3: Page reduction 0: Off, 1: On

Bit 4: Not used

Bit 5: Reception file printout 0: Disabled, 1: Enabled

Bit 6: Use both e-mail notification and printed reports to confirm the transmission

results 0: Off, 1: On

Bit 7: Not used

# 6800DB(H) - User parameter switch 11 (SWUSR\_0B)

Bit 0: Not used

Bit 1: Not used

Bits 2 to 5: Not used

Bit 6: Printout of messages received while acting as a forwarding station

0: Off, 1: On

Bit 7: Polling Standby duration 0: Once, 1: No limit

## 6800DC(H) - User parameter switch 12 (SWUSR\_0C): Not used

6800DD(H) - User parameter switch 13 (SWUSR 0D): Not used

### 6800DE(H) - User parameter switch 14 (SWUSR 0E)

Bit 0: Message printout while the machine is in Night Printing mode 0: On, 1: Off

Bit 1: Maximum document length detection

0: Double letter, 1: Longer than double-letter (well log) - up to 1,200 mm

Bit 2: Batch transmission 0: Off. 1: On

Bit 3: Fax mode settings, such as resolution, before a mode key (Copy/Fax/Printer /Scanner) is pressed

0: Not cleared, 1: Cleared

Bits 4 to 6: Not used

Bit 7: Manual service call (sends the system parameter list to the service station)

0: Off, 1: On

### 6800DF(H) - User parameter switch 15 (SWUSR 0F)

(This switch is not printed on the user parameter list.)

Bits 0, 1 and 2: Cassette for fax printout

Bit 2 1 0 Setting

0 0 1 1st paper feed station

0 1 0 2nd paper feed station0 1 1 3rd paper feed station

1 0 0 4th paper feed station

1 0 1 LCT

Other settings Not used

Bits 3 and 4: Not used

Bit 5: Using the cassette specified by bits 0, 1 and 2 above only 0: On, 1: Off

Bits 6 and 7: Not used

## 6800E0(H) – User parameter switch 16 (SWUSR\_10)

(This switch is not printed on the user parameter list.)

Bits 0 and 1: Not used

Bit 2: Paper size selection priority for an A4 size fax message when A4/LT size paper is not available.

0: A3 has priority, 1: B4 has priority

Bits 3 to 7: Not used

## 6800E1(H) – User parameter switch 17 (SWUSR\_11)

Bit 0: IFAX Group Destination Selection/Release Method

0 Priority Select Mode

Select the priority destination according to input mode. The Group button reflects either email or fax input mode. Released as soon as the entry mode is selected, regardless of the current entry mode.

1 All Select Mode

Acquires all registered members regardless of entry mode. If both email and fax are registered, both are selected. The Group button reflects either email or fax input mode. All registered members are released, regardless of the entry mode. If both email/fax are registered, both are released.

Bit 1: Not used

Bit 2: Inclusion of the "Add" button when a sequence of Quick/Speed dials is selected for broadcasting

0:Not needed, 1: Needed

Bits 3 to 6: Not used

Bit 7: Press "Start" key without an original when using the on hook dial or the external telephone,

0: displays "Cannot detect original size".

1: Receives fax messages.

#### 6800E2(H) - User parameter switch 18 (SWUSR 12)

Bit 0: TTI date 0: Off, 1: On Bit 1: TTI sender 0: Off, 1: On Bit 2: TTI file number 0: Off, 1: On 0: Off, 1: On 0: Off, 1: On

Bit 4 to 7: Not used

#### 6800E3(H) - User parameter switch 19 (SWUSR\_13)

Bit 0: Offset sort function for the fax (only using the shift tray on the 1,000 sheet finisher)

0: Disabled, 1: Enabled

Bit 1: Journal format

- 0: The Journal is separated into transmissions and receptions
- 1: The Journal is separated into G3-1, G3-2, and G3-3 communications

Bit 2: Action when the paper cassette that was selected by the specified cassette selection feature becomes empty.

(This switch is not printed on the user parameter list.)

- 0: The machine will not print any received files until paper is added.
- 1: The machine will use other cassettes to print received files that are not specified by this feature.
- Bit 3: 90° image rotation during B5 portrait Tx

(This switch is not printed on the user parameter list.)

0: Off, 1: On

- Bit 4: Reduction of sample images on reports to 50% in the main scan and subscan directions. (This switch is not printed on the user parameter list.)
- 0: Technician adjustment (printer switch 0E bits 3 and 4), 1: 50% reduction

Bit 5: Use of A5 size paper for reports

(This switch is not printed on the user parameter list.)

0: Off, 1: On

Bits 6 and 7: Not used

#### 6800E4(H) - User parameter switch 20 (SWUSR\_14)

Bit 0: Automatic printing of the LAN fax result report

0: Off, 1: On

Bit 1: Not used.

Bits 2 to 5: Store documents in memory which could not be printed from PC fax (LAN fax) driver

Bit	<b>5</b>	4	3	2	Setting
	0	0	0	0	0 min.
	0	0	0	1	1 min.
			$\hat{\mathbf{U}}$		$\hat{\mathbb{T}}$
	1	1	1	0	14 min.
	1	1	1	1	15 min

Bits 6 and 7: Not used.

#### 6800E5(H) - User parameter switch 21 (SWUSR\_15)

Bit 0: Print results of sending reception notice request message

0: Disabled (print only when error occurs), 1: Enabled

Bit 1: Respond to e-mail reception acknowledgment request

0: Disabled, 1: Enabled

Bit 2: Not used

Bit 3: File format for forwarded folders 0: TIFF, 1:PDF

Bit 4: Transmit Journal by E-mail 0: Disabled, 1: Enabled

Bit 5: Not used

Bit 6: Network error display 0: Displayed, 1: Not displayed

Bit 7: Transmit error mail notification 0: Enabled, 1: Disabled

#### 6800E6(H) - User parameter switch 22 (SWUSR\_16)

(This switch is not printed on the user parameter list.)

Bit 0: Dial tone detection (PSTN 1) 0: Disabled, 1: Enabled

Bit 1: Dial tone detection (PSTN 2) 0: Disabled, 1: Enabled

Bit 2: Dial tone detection (PSTN 3) 0: Disabled, 1: Enabled

Bits 3 to 7: Not used

#### 6800E7(H) - User parameter switch 23 (SWUSR\_17): Not used

#### 6800E8(H) - User parameter switch 24 (SWUSR\_18)

Bits 0 and 1: File retention time (Cross reference: System switch 02 bit 4)

Bit 1 0 Setting

0 0 File retention impossible

0 1 24 hours

1 0 File retention impossible

1 1 72 hours

Bits 2 to 7: Not used

#### 6800E9(H) - User parameter switch 25 (SWUSR\_19)

Bit 0 and 1: Not used

Bit 2: Not used

Bit 3: Not used

Bit 4: RDS operation

0: Not acceptable

1: Acceptable for the limit specified by system switch 03

**NOTE:** This bit is only effective when RDS operation can be selected by the user (see system switch 02).

Bits 5 to 7: Not used

# 6800EA(H) to 6800EF(H) - User parameter switch 26 to 31 (SWUSR\_1A to 1F) : Not used

#### 6800F0(H) - User parameter switch 32 (SWUSR 20)

Bit 0: Quotation priority for a destination when there is no destination of the specified type

0: Paper output priority

Priority order

1. IP-fax destination, 2. Fax Number, 3. E-mail address, 4. Folder

1: Electric putout order

Priority order

1. E-mail address, 2. Folder, 3. IP-fax destination, 4. Fax number

Bits 1 to 7: Not used

#### 6800F1(H) - User parameter switch 33 (SWUSR 21): Not used

#### 6800F2(H) - User parameter switch 34 (SWUSR 22)

Bit 0: Gatekeeper server used with IP-Fax 0: Disabled, 1: Enabled

Bit 1: SIP server used with IP-Fax 0: Disabled, 1: Enabled

```
Service
Tables
```

```
680100 to 68010F(H) - G4 Parameter Switches – Not used
680110 to 68012F(H) - G4 Internal Switches - Not used
680170 to 68017F(H) - IFAX Switches
680180 to 68018F(H) - IP-FAX Switches
680190 to 6801AF(H) - Service station's fax number (SP3-101)
6801B0 to 6801B9(H) - Own fax PABX extension number
6801BA to 6801C3(H) - Own fax number (PSTN)
6801C4 to 6801D7(H) - Own fax number (ISDN G4) - Not used
6801D8 to 6801E3(H) - The first subscriber number (ISDN G3) - Not used
6801E4 to 6801EF(H) - The second subscriber number (ISDN G3) – Not used
6801F0 to 6801FB(H) - The first subscriber number (ISDN G4) - Not used
6801FC to 680207(H) - The second subscriber number (ISDN G4) - Not used
680208 to 68021B(H) - PSTN-1 RTI (Max. 20 characters - ASCII) - See the
                       following note.
68021C to 68022F(H) - PSTN-2 RTI (Max. 20 characters - ASCII) - See the
                       following note.
680230 to 680246(H) - PSTN-3 RTI (Max. 20 characters - ASCII) - See the
                       following note.
680247 to 680286(H) - TTI 1 (Max. 64 characters - ASCII) - See the following note.
680287 to 6802C6(H) - TTI 2 (Max. 64 characters - ASCII) - See following note.
6802C7 to 680306(H) - TTI 3 (Max. 64 characters - ASCII) - See following note.
680307 to 68031A(H) - PSTN-1 CSI (Max. 20 characters - ASCII)
68031B to 68032E(H) - PSTN-2 CSI (Max.20 characters - ASCII)
68032F to 680342(H) - PSTN-3 CSI (Max.20 characters - ASCII)
680343(H) - Number of PSTN-1 CSI characters (Hex)
680344(H) - Number of PSTN-2 CSI characters (Hex)
680345(H) Number of PSTN-3 CSI characters (Hex)-
NOTE: If the number of characters is less than the maximum (20 for RTI, 64 for
       TTI), add a stop code (00[H]) after the last character.
680380 to 680387(H) - Last power off time (Read only)
  680380(H) - 01(H) - 24-hour clock, 00(H) - 12-hour clock (AM),
              02(H) - 12-hour clock (PM)
  680381(H) - Year (BCD)
  680382(H) - Month (BCD)
  680383(H) - Day (BCD)
  680384(H) - Hour
  680385(H) - Minute
  680386(H) - Second
  680387(H) - 00: Monday, 01: Tuesday, 02: Wednesday, ......, 06: Sunday
680394(H) - Optional equipment (Read only – Do not change the settings)
Bit 0: Page Memory
                      0: Not installed, 1: Installed
Bit 1: SAF Memory
                      0: Not installed, 1: Installed
Bits 2 to 7; Not used
```

```
680395(H) - Optional equipment (Read only – Do not change the settings)
Bits 0 to 3: Not used
Bit 4: G3-2
                      0: Not installed, 1: Installed
Bit 5: G3-3
                      0: Not installed, 1: Installed
Bit 6 and 7: Not used
680406 to 68040A – Option G3 board (G3-2) ROM information (Read only)
  680406(H) - Suffix (BCD)
  680407(H) - Version (BCD)
  680408(H) - Year (BCD)
  680409(H) - Month (BCD)
  68040A(H) - Day (BCD)
68040B to 68040F – Option G3 board (G3-3) ROM information (Read only)
  68040B(H) - Suffix (BCD)
  68040C(H) - Version (BCD)
  68040D(H) - Year (BCD)
  68040E(H) - Month (BCD)
  68040F(H) - Day (BCD)
680410(H) - G3-1 Modem ROM version (Read only)
680412(H) - G3-2 Modem ROM version (Read only)
680414(H) - G3-3 Modem ROM version (Read only)
680420(H) - Number of multiple sets print (Read only)
680476(H) - Time for economy transmission (hour in 24h clock format - BCD)
680477(H) - Time for economy transmission (minute - BCD)
680492(H) - Transmission monitor volume 00 - 07(H)
680493(H) - Reception monitor volume 00 - 07(H)
680494(H) - On-hook monitor volume 00 - 07(H)
680495(H) - Dialing monitor volume 00 - 07(H)
680496(H) - Buzzer volume 00 - 07(H)
680497(H) - Beeper volume 00 - 07(H)
69ED04 to 69F003(H) - SIP server address (Read only)
  69ED04(H) - Proxy server - Main (Max. 128 characters - ASCII)
  69ED84(H) - Proxy server - Sub (Max. 128 characters - ASCII)
  69EE04(H) - Redirect server - Main (Max. 128 characters - ASCII)
  69EE04(H) - Redirect server - Sub (Max. 128 characters - ASCII)
  69EF04(H) - Registrar server - Main (Max. 128 characters - ASCII)
  69EF04(H) - Registrar server - Sub (Max. 128 characters - ASCII)
69F004(H) - Gatekeeper server address - Main (Max. 128 characters - ASCII)
69F084(H) - Gatekeeper server address - Sub (Max. 128 characters - ASCII)
69F104(H) - Arias Number (Max. 128 characters - ASCII)
69F184(H) - SIP user name (Max. 128 characters - ASCII)
69F204(H) - Gateway address information (Max. 128 characters - ASCII)
```

Service Tables

**6A0DC0(H)** - Stand-by port number for H.232 connection **6A0DC2(H)** - Stand-by port number for SIP connection **6A0DC4(H)** - RAS port number

6A0DC6(H) - Gatekeeper port number

6A0DC8(H) - Port number of data waiting for T.38

6A0DCA(H) - Port number of SIP server

**6A0DCC(H)** - Priority for SIP and H.323 0: H.323, 1: SIP

**6A0DCD(H)** - SIP function 0: Disabled, 1: Enabled **6A0DCE(H)** - H.323 function 0: Disabled, 1: Enabled

**6BEBFE(H)** – Dial tone detection frequency – Upper limit (High) Defaults: NA: 06, EU: 06, ASIA: 06

**6BEBFF(H)** – Dial tone detection frequency – Upper Limit (Low) Defaults: NA: 50, EU: 50, ASIA: 50

**6BEC00(H)** – Dial tone detection frequency – Lower Limit (High) Defaults: NA: 03, EU: 02, ASIA: 02

**6BEC01(H)** – Dial tone detection frequency – Lower Limit (Low) Defaults: NA: 60, EU: 90, ASIA: 90

**6BEC02(H)** –Dial tone detection waiting time (20 ms) Defaults: NA: 64, EU 64, ASIA: 64

**6BEC03 to 6BEC04** – Dial tone detection monitoring time (20 ms) Defaults

# Area 6BEC03 6BEC04 NA F4 01 EU F4 01 ASIA F4 01

6BEC05(H) - Dial tone detect judge time (20 ms)

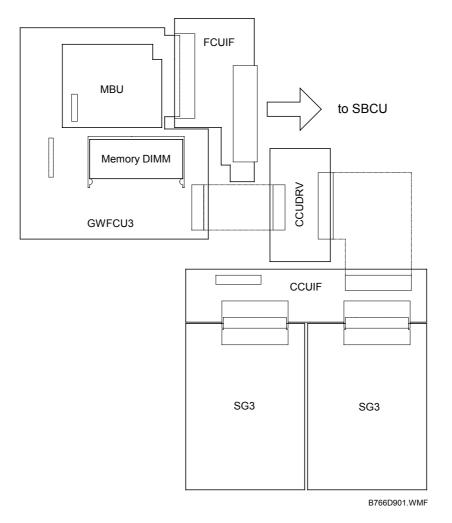
Defaults: NA: 64, EU: 1B, ASIA: 32

**6BEC06(H)** – Dial tone disconnect permission time (20 ms)

Defaults: NA: 11, EU: 0F, ASIA: 11

#### 5. DETAILS

#### 5.1 OVERVIEW



The basic fax unit consists of two PCBs: an FCU and an MBU.

The FCU controls all the fax communications and fax features, in cooperation with the controller board. The MBU contains the ROM and SRAM. Also, the FCU has an NCU circuit.

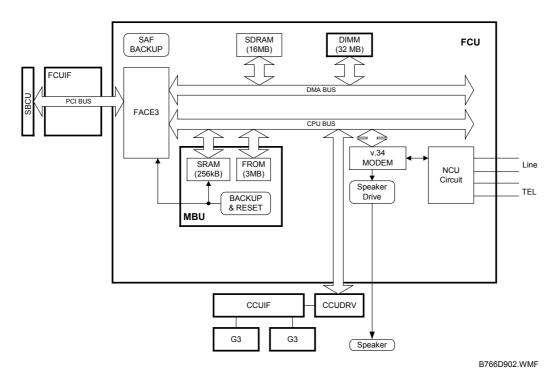
#### **Fax Options:**

- 1. Extra G3 Interface option: This provides one more analog line interface. This allows full dual access. Two extra G3 interface options can be installed.
- 2. Memory Expansion: This expands the SAF memory and the page memory (used for image rotation); without this expansion, the page memory is not big enough for image rotation at 400 dpi, so transmission at 400 dpi is not possible.

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#### 5.2 BOARDS

#### 5.2.1 FCU



The FCU (Facsimile Control Unit) controls fax communications, the video interface to the base copier's engine, and all the fax options.

#### FACE3 (Fax Application Control Engine)

- CPU
- Data compression and reconstruction (DCR)
- DMA control
- Clock generation
- DRAM backup control

#### Modem (FAME)

V.34, V33, V17, V.29, V.27ter, V.21, and V.8

#### **DRAM**

• The 16 MB of DRAM is shared as follows.

SAF memory : 4MB Working memory : 4MB Page memory : 8MB

The SAF memory is backed up by a rechargeable battery.

#### Memory Back-up

A Rechargeable battery backs up the SAF memory (DRAM) for 1 hour.

#### 5.2.2 MBU

On this board, the flash ROM contains the FCU firmware, and the SRAM contains the system data and user parameters. Even if the FCU is changed, the system data and user parameters are kept on the MBU board.

#### **ROM**

 3MB flash ROMs for system software storage 2MB (16bit x 1MB) + 1MB (16bit x 512K)

#### **SRAM**

• The 256 KB SRAM for system and user parameter storage is backed up by a lithium battery.

#### Memory Back-up

• A lithium battery backs up the system parameters and programmed items in the SRAM, in case the base copier's main switch is turned off.

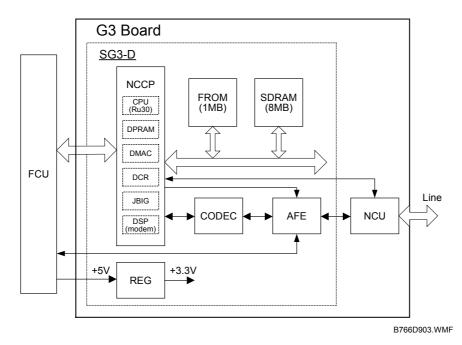
#### **Switches**

Ī	Item	Description
	SW1	Switches the SRAM backup battery on/off.

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#### **5.2.3 SG3 BOARD**



The SG3 board allows up to three simultaneous communications when used in combination with the FCU and optional G3 boards. The NCU is on the same board as the common SG-3 board. This makes the total board structure smaller. But, the specifications of the SG3 board do not change.

#### NCCP (New Communication Control Processor)

- Controls the SG3 board.
- CPU (RU30)
- DPRAM (Dual Port RAM): Handshaking with the FCU is done through this block.
- DMA controller
- JBIG
- DSP V34 modem (RL5T892): Includes the DTMF Receiver function
- DCR for MH, MR, MMR, and JBIG compression and decompression

#### **FROM**

1Mbyte flash ROM for SG3 software storage and modem software storage

#### **SDRAM**

4Mbyte DRAM shared between ECM buffer, line buffer, and working memory

#### AFE (Analog Front End)

Analog processing

#### CODEC (COder-DECoder)

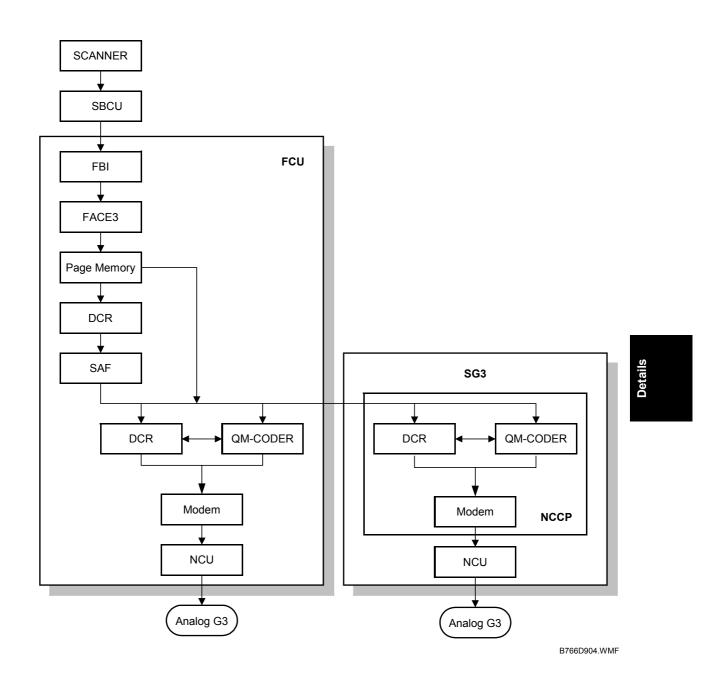
A/D & D/A conversions for modem

#### REG

• Generates +3.3 V from the +5V from the FCU

### 5.3 VIDEO DATA PATH

#### 5.3.1 TRANSMISSION



10 June 2005 VIDEO DATA PATH

#### Memory Transmission and Parallel Memory Transmission

The base copier's scanner scans the original at the selected resolution in inch format. The SBCU processes the data and transfers it to the FCU.

**NOTE:** When scanning a fax original, the SBCU uses the MTF, independent dot erase and thresholding parameter settings programmed in the fax unit's scanner bit switches, not the copier's SP modes.

Then, the FCU converts the data to mm format, and compresses the data in MMR or raw format to store it in the SAF memory. If image rotation will be done, the image is rotated in page memory before compression.

At the time of transmission, the FCU decompresses the stored data, then recompresses and/or reduces the data if necessary for transmission. The NCU transmits the data to the line.

#### Immediate Transmission

The base copier's scanner scans the original at the resolution agreed with the receiving terminal. The SBCU video processes the data and transfers it to the FCU.

**NOTE:** When scanning a fax original, the SBCU uses the MTF, independent dot erase and thresholding parameter settings programmed in the fax unit's scanner bit switches, not the copier's SP modes.

Then the FCU stores the data in page memory, and compresses the data for transmission. The NCU transmits the data to the line.

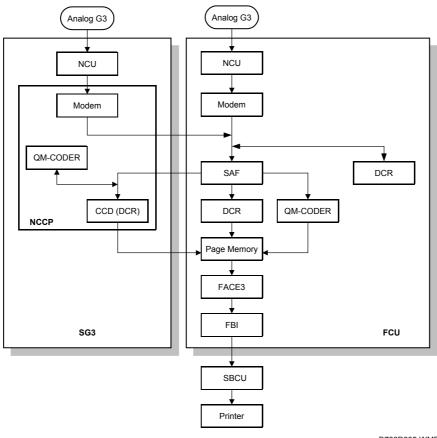
#### JBIG Transmission

- **Memory transmission:** If the receiver has JBIG compression, the data goes from the DCR to the QM-Coder. Then the NCU transmits the data to the line. When an optional G3 unit (SG3) is installed and PSTN2 is selected as the line type, JBIG compression is available, but only for the PSTN-2 line.
- Immediate transmission: If the receiver has JBIG compression, the data goes from the page memory to the QM-Coder. Then the NCU transmits the data to the line. When an optional G3 unit (SG3) is installed and PSTN2 is selected as the line type, JBIG compression is available, but only for the PSTN-2 line.

#### **Adjustments**

 Priority for the line used for G3 transmissions (PSTN 1/PSTN 2 or 3): System switch 16 bit 1

#### 5.3.2 RECEPTION



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First, the FCU stores the incoming data from either an analog line to the SAF memory. (The data goes to the FACE3 at the same time, and is checked for error lines/frames.)

The FCU then decompresses the data and transfers it to page memory. If image rotation will be done, the image is rotated in the page memory. The data is transferred to the SBCU.

If the optional G3 unit is installed, the line that the message comes in on depends on the telephone number dialled by the other party (the optional G3 unit has a different telephone number from the main fax board).

#### **JBIG Reception**

When data compressed with JBIG comes in on PSTN-1 (the standard analog line), the data is sent to the QM-CODER for decompression. Then the data is stored in the page memory, and transferred to the SBCU.

When data compressed with JBIG comes in on PSTN-2 (optional extra analog line), the data is sent to the QM-CODER on the SG3 board for decompression.

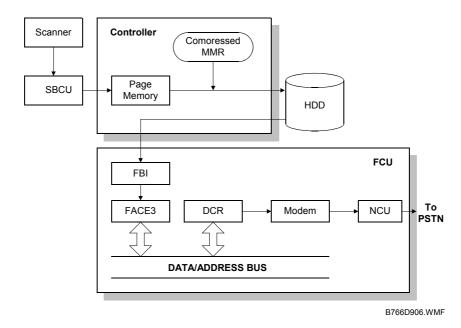
### **5.4 FAX COMMUNICATION FEATURES**

#### 5.4.1 MULTI-PORT

When the optional extra G3 Interface Unit is installed, communication can take place at the same time through the two or three lines at once.

Option	Available Line Type	Available protocol Combinations	
Standard only	PSTN	G3	
Extra G3 Interface Unit (single)	PSTN + PSTN	G3 + G3	
Extra G3 Interface Unit (double)	PSTN + PSTN +PSTN	G3 + G3 +G3	

#### 5.4.2 DOCUMENT SERVER



The base copier's scanner scans the original at the selected resolution. The IPU video processes the data and transfers it to the controller board.

Then the controller stores the data in the page memory for the copier function, and compresses the data in MMR (by software) to store it in the HDD. If image rotation will be done, the image is rotated in the page memory before compression.

For transmission, the stored image data is transferred to the FCU. The FCU decompresses the image data, then recompresses and/or reduces the data if necessary for transmission. the NCU transmits the data to the line.

The documents can be stored in the HDD (Document Server) from the fax application. The stored documents in the document sever can be used for the fax transmission in many times. More than one document and the scanned document can be combined into one file and then the file can be transmitted.

- When using the document server, the SAF memory is not used.
- The document is compressed with MMR and stored.
- Up to 9,000 pages can be stored. (1 file: Up to 1,000 pages) from the fax application.
- Only stored documents from the fax application can be transmitted.
- Scanned documents are given a name automatically, such as "FAX001". But it is possible to change the file name, user name and password.
- Up to 30 files can be selected at once.

**NOTE:** 1) The compression method of the fax application is different from the copy application. The storing time is longer than the copier storing.

2) When selecting "Print 1st page", the stored document will be reduced to A4 size.

#### 5.4.3 INTERNET MAIL COMMUNICATION

#### Mail Transmission

This machine supports T.37 full mode. (ITU-, RFC232). The difference between T.37 simple mode and full mode is as follows.

Function	T.37 Simple Mode	T.37 Full Mode
Resolution	200 x 100	200 x100
	200 x 200	200 x 200
		200 x 400
		400 x 400 (if available)
RX Paper Width	A4	A4, B4, A3
RX Data Compression Method	MH	MH (default), MR, MMR,
Signals	Image data transmission only	Image data transmission, exchange of capability information between the two terminals, and acknowledgement of receipt of fax messages

#### Data Formats

The scanned data is converted into a TIFF-F formatted file.

The fields of the e-mail and their contents are as follows:

Field	Content
From	Mail address of the sender
Reply To	Destination requested for reply
То	Mail address of the destination
Bcc	Backup mail address
Subject	From CSI or RTI (Fax Message No. xxxx)
Content Type	Multipart/mixed
	Attached files: image/tiff
Content Transfer Encoding	Base 64, 7-bit, 8-bit, Quoted Printable
Message Body	MIME-converted TIFF-F (MIME standards specify how files are attached to e-mail messages)

#### **Direct SMTP Transmission**

Internet Fax documents can be sent directly to their destinations without going through the SMTP server. (Internet Faxes normally transmit via the SMTP server.)

For example:

e-mail address: gts@ricoh.co.jp

SMTP server address: gts.abcd.com

In this case this feature destination e-mail address (gts@ricoh.co.jp) is read as the SMTP server address "gts.abcd.com" and the transmissions bypass the SMTP server.

#### Selectable Options

These options are available for selection:

- With the default settings, the scan resolution can be either standard or detail. Inch-mm conversion before TX depends on IFAX SW01 Bit 7. Detail resolution will be used if Super Fine resolution is selected, unless Fine resolution is enabled with IFAX SW01.
- The requirements for originals (document size, scan width, and memory capacity) are the same as for G3 fax memory TX.
- The default compression is TIFF-F format.
- IFAX SW00: Acceptable paper widths for sending
- IFAX SW09: Maximum number of attempts to the same destination

#### Secure Internet Transmission

• SMTP Authentication:

User Tools> System Settings> File Transfer> SMTP Authentication

POP Before SMTP:

User Tools> System Settings> File Transfer> POP Before SMTP

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#### Mail Reception

This machine supports three types of e-mail reception:

- POP3 (Post Office Protocol Ver. 3.)
- IMAP4 (Internet Messaging Access Protocol)
- SMTP (Simple Mail Transfer Protocol)

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – Mail Reception

#### POP3/IMAP4 Mail Reception Procedure

The machine automatically picks up e-mail from the server at an interval which is adjustable in the range 2 to 1440 min. in 1-minute steps:

User Tools> System Settings> File Transfer> E-mail Reception Interval

#### SMTP Reception

- The IFAX must be registered as an SMTP server in the MX record of the DNS server, and the address of the received mail must specify the IFAX.
- Enable SMTP reception:

User Tools> System Settings> File Transfer> Reception Protocol

Even if the MX record on the DNS server includes the IFAX, mail cannot be received with SMTP until SMTP reception is enabled:

However, if SMTP reception is selected and the machine is not registered in the MX record of the DNS server, then either IMAP4 or POP3 is used, depending on the setting:

User Tools> System Settings> File Transfer> Reception Protocol

#### Mail Delivery Conditions: Transferring Mail Received With SMTP

- The machine must be set up for SMTP mail delivery:
   User Tools> Facsimile Features> E-mail Settings> SMTP RX File Delivery Settings
- 2) If the user wishes to limit this feature so that the machine will only deliver mail from designated senders, the machine's "Auth. E-mail RX" feature must be set (User Tools> Facsimile Features> E-mail Settings> SMTP RX File Delivery Settings).
- 3) If the "SMTP RX File Delivery Setting" is set to 0 to prohibit SMTP receiving, and if there is mail designated for delivery, then the machine responds with an error. (User Tools> Facsimile Features> E-mail Settings> SMTP RX File Delivery Settings)
- 4) If the quick dial, speed dial, or group dial entry is incorrect, the mail transmission is lost, and the IFAX issues an error to the SMTP server and outputs an error report.

#### Auth. E-mail RX

In order to limit access to mail delivery with IFAX, the addresses of senders must be limited using the Access Limit Entry. Only one entry can be registered.

1) Access Limit Entry

For example, to limit access to @IFAX.ricoh.co.jp:

gts@IFAX.ricoh.co.jp Matches and is delivered.

gts@IFAX.abcde.co.jp Does not match and is not delivered. IFAX@ricoh.co.jp Does not match and is not delivered.

#### 2) Conditions

• The length of the Access Limit Entry is limited to 127 characters.

- If the Access Limit Entry address and the mail address of the incoming mail do not match, the incoming mail is discarded and not delivered, and the SMTP server responds with an error. However, in this case an error report is not output.
- If the Access Limit Entry address is not registered, and if the incoming mail specifies a delivery destination, then the mail is delivered unconditionally.

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#### Handling Mail Reception Errors

#### Abnormal files

When an error of this type occurs, the machine stops receiving and commands the server to erase the message. Then the machine prints an error report and sends information about the error by e-mail to the sender address (specified in the "From" or "Reply-to" field of the message). If there is an incomplete received message in the machine memory, it will be erased.

The machine prints an error message when it fails to send the receive error notification after a certain number of attempts.

The following types of files are judged to be abnormal if one or more of the following are detected:

1. Unsupported MIME headers.

Supported types of MIME header

Header	Supported Types
Content-Type	Multipart/mixed, text/plain, message/rfc822 Image/tiff
Charset	US-ASCII, ISO 8859 X. Other types cannot be handled, and some garbage may appear in the data.
Content-Transfer-Encoding	Base 64, 7-bit, 8-bit, Quoted Printable

- 2. MIME decoding errors
- 3. File format not recognized as TIFF-F format
- 4. Resolution, document size, or compression type cannot be accepted

#### Remaining SAF capacity error

The machine calls the server but does not receive e-mail if the remaining SAF capacity is less than a certain value (the value depends on IFAX Switch 08. The e-mail will be received when the SAF capacity increases (for example, after substitute reception files have been printed). The error handling method for this type of error is the same as for "Abnormal files".

If the capacity of the SAF memory drops to zero during reception, the machine operates in the same way as when receiving an abnormal file (refer to "Abnormal files" above).

#### Secure Internet Reception

To enable password encryption and higher level security:

User Tools> System Settings> File Transfer> POP3/IMAP4 Settings> Encryption (set to "On")

# Details

#### Transfer Request: Request By Mail

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – Transfer Request

The fields of the e-mail and their contents are as follows:

Field	Content
From	E-mail address of the requesting terminal
То	Destination address (Transfer Station address)
Bcc	Backup mail address
Subject	From TSI (Fax Message No. xxxx)
Content-Type	Multipart/mixed Text/Plain (for a text part), image/tiff (for attached files)
Content-Transfer-Encoding	Base 64, 7-Bit, 8-bit, Quoted Printable
Mail body (text part)	RELAY-ID-: xxxx (xxxx: 4 digits for an ID code) RELAY: #01#*X#**01
Message body	MIME-converted TIFF-F.

#### E-Mail Options (Sub TX Mode)

The following features are available as options for mail sending: entering a subject, designating the level of importance, confirming reception of the mail.

#### Subject and Level of Importance

You can enter a subject message with: Sub TX Mode> E-mail Options

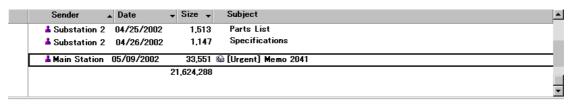
The Subject entry for the mail being sent is limited to 64 characters. The subject can also be prefixed with an "Urgent" or "High" notation.

#### How the Subject Differs According to Mail Type

Mail Type	1	2		3	
Subject Entry		Entry Condition			
		1. "CSI" ("RTI")		Fax Message No.	
No Subject		2. "RTI" CSI not registered		+	
Entry		3. "CSI"	RTI not registered	File No.	
		4. None CSI, RTI not registered			
		1. "CSI" ("RTI")		Normal:	
Confirmation of Reception	From	2. "RTI"	CSI not registered	Return Receipt (dispatched). You can select "displayed" with IFAX SW02 Bits 2 and 3.	
		3. "CSI"	RTI not registered	Error:	
		4. None	CSI, RTI not registered	Return Receipt (processed/error)	
Mail delivery,	From	RTI or CSI of the station designated for delivery	Mail delivery	Fax Message No. + File	
memory transfer, SMTP		RTI or CSI of sender	Mail sending from G3 memory		
receiving and delivery		Mail address of sender	Memory sending	Number	
		Mail address of sender	SMTP receiving and delivery (Off Ramp Gateway)		
Mail error notification		Error Message N	No. xxxx From CSI (RTI)		

Items ① ② ③ of the table above are in the Subject.

#### Subjects Displayed on the PC



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# etails

#### E-mail Messages

After entering the subject, you can enter a message with:

Sub TX Mode> E-mail Options

An e-mail message (up to 5 lines) can be pre-registered with:

User Tools> System Settings> File Transfer> Program/Change/Delete E-mail Message

#### **Limitations on Entries**

Item	Maximum
Number of Lines	5 lines
Line Length	80 characters
Name Length	20 characters

#### Message Disposition Notification (MDN)

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – E-mail Options

The network system administrator can confirm whether a sent mail has been received correctly or not. This confirmation is done in four steps.

- 1. Send request for confirmation of mail reception. To enable or disable this request (known as MDN):
  - Sub TX Mode> E-mail Options
- 2. Mail reception (receive confirmation request)
- 3. Send confirmation of mail reception
- 4. Receive confirmation of mail reception

The other party's machine will not respond to the request unless the two conditions below are met:

- The other party's machine must be set up to respond to the confirmation request.
- The other party's machine must support MDN (Message Disposition Notification).
- Setting up the Receiving Party -

The receiving party will respond to the confirmation request if:

- The "Disposition Notification To" field is in the received mail header (automatically inserted in the 4th line in the upper table on the previous page, if MDN is enabled), and
- 2) Sending the disposition notification must be enabled (User Parameter Setting SW21 (15 [H]) Bit 1 for this model). The content of the response is as follows:

Normal reception: "Return Receipt (dispatched)" in the Subject line IFAX SW02 (Bit 2, 3) "Return Receipt (displayed)" in the Subject line

Error: "Return Receipt (processed/error)" in the Subject line

#### **Handling Reports**

- 1. Sending a Request for a Return Receipt by Mail
  - After the mail sender transmits a request for a return receipt, the mail sender's journal is annotated with two hyphens (--) in the Result column and a "Q" in the Mode column.
- 2. Mail Receipt (Request for Receipt Confirmation) and Sending Mail Receipt Response

After the mail receiver sends a response to the request for a return receipt, the mail receiver's journal is annotated with two hyphens (--) in the Result column and an "A" in the Mode column.

- 3. Receiving the Return Receipt Mail
  - After the mail sender receives a return receipt, the information in the mail sender's journal about the receipt request is replaced, i.e. the journal is annotated with "OK" in the Result column.
  - When the return receipt reports an error, the journal is annotated with an "E" in the Result column.
  - The arrival of the return receipt is not recorded in the journal as a separate communication. Its arrival is only reported by the presence of "OK" or "E" in the Result column.
  - If the mail address used by the sender specifies a mailing list (i.e., a Group destination; the machine sends the mail to more than one location. See "How to set up Mail Delivery"), the Result column of the Journal is updated every time a return receipt is received. For example, if the mailing list was to 5 destinations, the Result column indicates the result of the communication with the 5<sup>th</sup> destination only. The results of the communications to the first 4 destinations are not shown.

#### **Exceptions:**

If one of the communications had an error, the Result column will indicate E, even if subsequent communications were OK.

If two of the communications had an error, the Journal will indicate the destination for the first error only.

#### Report Sample

DATE	TIME	ADDRESS MODE TIME	PAGE	RESULT
MAY. 5	10:15	fuser_01@dom1g. ricoh. co. Mail SM 0'09"	2	
	10:16	fuser_01@dom1g. ricoh. co. Mail SMQ 0'05"	1	
	10:17	s_tadashi@domlg. ricoh. co. Mail SMQ 0'09"	2	OK
	10:19	m_masataka@dom1g. ricoh. co. Mail SMA 0'05"	1	

B766D909.WMF

# etails

#### 5.5 IP-FAX

#### What is IP-FAX?

For details: Core Technology Manual – Facsimile Processes – Faxing from a PC – Internet/LAN Fax Boards – IP-FAX

#### T.38 Packet Format

TCP is selected by default for this machine, but you can change this to UDP with IPFAX SW 00 Bit 1.

#### **UDP Related Switches**

IP-Fa	IP-Fax Switch 01						
No.	FUNCTION	COMMENTS					
0-3	Select IP FAX Delay Level Bit 3 2 1 0 Setting 0 0 0 0 Level 0 0 0 0 1 Level 1 0 0 1 0 Level 2 0 0 1 1 Level 3	Raise the level by selecting a higher setting if too many transmission errors are occurring on the network.  If TCP/UDP is enabled on the network, raise this setting on the T.30 machine. Increasing the delay time allows the recovery of more lost packets.  If only UDP is enabled, increase the number of redundant packets.  Level 1~2: 3 Redundant packets  Level 3: 4 Redundant packets					

#### **Settings**

User parameter switch 34 (22[H]), bit 0

IP-Fax Gate Keeper usage 0: No, 1: Yes

IP Fax Switches: Various IP-FAX settings (see the bit switch table)

# pec.

#### 6. SPECIFICATIONS

#### **6.1 GENERAL SPECIFICATIONS**

Type: Desktop type transceiver

Circuit: PSTN (max. 3ch.)

**PABX** 

Connection: Direct couple

Original Size: Book (Face down)

Maximum Length: 432 mm [17 ins] Maximum Width: 297 mm [11.7 ins]

ARDF (Face up)

(Single-sided document)

Length: 128 - 1200 mm [5.0 - 47.2 ins] Width: 105 - 297 mm [4.1 - 11.7 inch]

(Double-sided document)

Length: 128 - 432 mm [5.0 - 17 inch] Width: 105 - 297 mm [4.1 - 11.7 inch]

Scanning Method: Flat bed, with CCD

Resolution: G3

8 x 3.85 lines/mm (Standard) 8 x 7.7 lines/mm (Detail) 8 x 15.4 line/mm (Fine) Note1

16 x15.4 line/mm (Super Fine) See Note 1

200 x 100 dpi (Standard) 200 x 200 dpi (Detail)

400 x 400 dpi (Super Fine) See Note 1

NOTE: 1. Optional Expansion Memory required

Transmission Time: G3: 3 s at 28800 bps; Measured with G3 ECM using

memory for an ITU-T #1 test document (Slerexe letter) at

standard resolution

Data Compression: MH, MR, MMR

**JBIG** 

Protocol: Group 3 with ECM

Modulation: V.34, V.33, V.17 (TCM), V.29 (QAM),

V.27ter (PHM), V.8, V.21 (FM)

Data Rate: G3: 33600/31200/28800/26400/24000/21600/

19200/16800/14400/12000/9600/7200/4800/2400 bps

Automatic fallback

I/O Rate: With ECM: 0 ms/line

Without ECM: 2.5, 5, 10, 20, or 40 ms/line

Memory Capacity: ECM: 128 KB

SAF

Standard: 4 MB

With optional Expansion Memory: 28 MB (4 MB+ 24

MB)

Page Memory

Standard: 4 MB (Print: 2 MB + Scanner: 2 MB)
With optional Expansion Memory: 12 MB (4 MB + 8

MB)

(Print 8 MB + Scanner: 4 MB)

#### 1. CAPABILITIES OF PROGRAMMABLE ITEMS

The following table shows how the capabilities of each programmable item will change after the optional Fax Function Upgrade Unit is installed.

Item	Standard
Quick Dial	2000
Groups	100
Destination per Group	500
Destinations dialed from the ten-key pad overall	500
Programs	100
Auto Document	6
Communication records for Journal stored in the	200
memory	
Specific Senders	30

The following table shows how the capabilities of the document memory will change after the optional Fax Function Upgrade Unit and the Expansion Memory are installed.

	Without the Expansion Memory	With the Expansion Memory
Memory Transmission file	400	400
Maximum number of page for memory transmission	1000	1000
Memory capacity for memory transmission ( Note1)	320	2240

**NOTE:** Measured using an ITU-T #1 test document (Slerexe letter) at the standard resolution, the auto image density mode and the Text mode.

#### IFAX SPECIFICATIONS

#### Connectivity

Local area network Ethernet 100base-Tx/10base-T IEEE1394 (IP over 1394) IEEE802.11b (wireless LAN)

#### Resolution

Main scan: 400 dpi, 200 dpi

**Sub scan:** 400 dpi, 200 dpi, 100 dpi

NOTE: To use 400 dpi, IFAX SW01 Bit

4 must be set to "1".

#### **Transmission Time**

1 s (through a LAN to the server) Condition: ITU-T #1 test document

(Selerexe Letter)
MTF correction: OFF

TTI: None

Resolution: 200 x 100 dpi

Communication speed: 10 Mbps Correspondent device: E-mail server Line conditions: No terminal access

#### **Document Size**

Maximum message width is A4/LT. **Note**: To use B4 and A3 width, IFAX SW00 Bit 1 (B4) and/or Bit 2 (A3) must be set to "1".

#### E-mail File Format

Single/multi-part MIME conversion

Image: TIFF-F (MH, MR, MMR)

#### **Protocol**

Transmission:
SMTP, TCP/IP
Reception:
POP3, SMTP, IMAP4, TCP/IP

#### **Data rate**

100 Mbps(100base-Tx) 10 Mbps (10base-T)

#### **Authentication method**

SMTP-AUTH POP before SMTP A-POP

#### Remark

The machine must be set up as an email client before installation. Any client PCs connected to the machine through a LAN must also be e-mail clients, or some features will not work (e.g. Autorouting).

Spec.

#### 6.2 IP-FAX SPECIFICATIONS

Network: LAN: Local Area Network

Ethernet/10base-T, 100base-TX,

IEEE1394 (IP over 1394), IEEE802.11b (wireless LAN)

Scan line density: 8 x 3.85 lines/mm, 200x100dpi (standard character),

8 x 7.7lines/mm, 200x200dpi (detail character),

8 x 15.4lines/mm (fine character: optional expansion

memory required),

16 x 15.4lines/mm, 400x400dpi (super fine character: optional expansion memory required)

Original size: Maximum A3 or 11"x 17" (DLT)

Maximum scanning size: Standard: A3, 297mm x 432mm

Irregular: 297mm x 1200mm

Transmission protocol: Recommended: T.38 Annex protocol,

TCP, UDP/IP communication

Compatible machines: IP-Fax compatible machines

IP-Fax transmission

function:

Specify IP address and send fax to an IP-Fax

compatible fax through a network.

Also capable of sending fax from a G3 fax

connected to the public telephone lines via a VoIP

gateway.

IP-Fax reception function: Receive a fax sent from an IP-Fax compatible fax

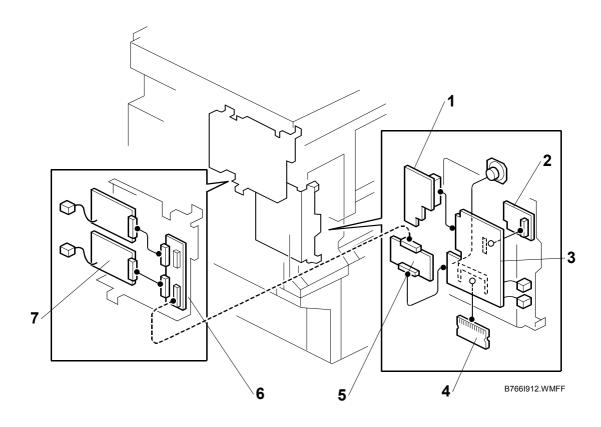
through a network.

Also capable of receiving fax from a G3 fax connected the public telephone lines via a VoIP

gateway.

### spec.

# 6.3 FAX UNIT CONFIGURATION



Component	Code	No.	Remarks
FCU		3	
MBU	B766	2	Included with fax unit
FCU Interface		1	
CCU Drive Board		5	
Interface Board	B768	6	Included with optional G3 unit.
G3 Board		7	
Expansion Memory	G578	4	Common with J-C2.
Handset Type 1018	B433		USA only. Common with J-C2
Marker Type 30	H903		Refill for stamp ink.